

**STATE OF NEVADA  
DEPARTMENT OF TRANSPORTATION**

**FY 2009**

**PERFORMANCE MEASURES PLAN**



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## INTRODUCTION

The Department has developed performance measures among the four major divisions that were developed to support the achievement of the seven Department Strategic Plan Goals, which are to:

1. Optimize safety
2. Be in touch with and responsive to our customers
3. Innovate
5. Be the employer of choice
6. Deliver timely and beneficial projects and programs
5. Effectively preserve and manage our assets
7. Efficiently operate the transportation system

These performance measures are designed to quantify progress in meeting those goals. The fifteen performance measure topics are listed below. The following performance measures plan includes the actual performance measures, annual and ultimate targets, the performance measure champions, brief discussion of the strategy plan support, measurement and supporting data, and short and long range strategies. Additionally, an annual evaluation of the performance measures is included.

### ADMINISTRATION DIVISION

1. Reduce Work-Place Accidents
2. Provide Employee Training
3. Improve Employee Satisfaction
4. Streamline Agreement Execution Process
5. Improve Customer Outreach/Satisfaction

### PLANNING DIVISION

6. Reduce Congestion on the State System

### OPERATIONS DIVISION

7. Streamline Project Delivery: Schedule and Estimate from Bid Opening to Construction Completion
8. Maintain State Roadways
9. Maintain State Fleet
10. Maintain State Facilities
11. Provide Continuity of Business Operations

### ENGINEERING DIVISION

12. Reduce Fatal Crashes
13. Streamline Project Delivery: Schedule And Estimate after NEPA To Bidding
14. Maintain State Bridges
15. Streamline Permitting Process

# 1. REDUCE WORK PLACE ACCIDENTS

## Performance Measure:

Number of work place injuries and illnesses per 100 employees and number of injuries and illnesses requiring medical attention per 100 employees as documented through annual OSHA 300 Log Reporting data. Data is based on calendar year per federal reporting requirements.

Ultimate Target: Zero

Yearly Target: 10 % Reduction

## Champion:

Human Resources Manager  
Safety and Loss Control Manager

Support Divisions: All

## Strategy Plan Support:

Safety extends to all aspects of the Department from the roadways to the office. Identifying and reducing risk to the Department, our employees and the public is continuous. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize Safety and Be the Employer of Choice.

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## Measurement and Supporting Data:

Calendar Year	2004	2005	2006	2007	2008	Baseline		CY 2009	
						Ave	Ave/4	Mid-Year	End
Injuries/Employees	15.6	22.6	12.0	15.7	12.44	13.67	3.42	10.29	-
Medical/Employees	7.7	9.2	6.3	7.0	7.9	7.62	1.90	7.5	-

The annual Baseline is the average of 2004 through 2008 values while the quarterly Baseline is ¼ of that annual average. The quarterly Baseline is compared to the quarterly progress report. For the first half for calendar year 2009, the injury rate indicator was on target with a decrease >15%. This is assuming a straight-line projected injury rate, which is usually not the case due to an increase in injuries in the winter months due to the level of overtime and severe weather during that time of year.

## Strategies for Improvement:

Short range to next reporting:

Safety Specialist position was filled in February 2009. after. The Safety Specialist has proven valuable by increasing the safety presence in the field and availability to staff for questions and general safety assistance. Safety related training has increased to some minor degree. Safety training will continue to increase as the training database is developed, which will better inform management as to required safety training and track those employees who are

compliant with safety training required specifically for the tasks they perform such as trenching & excavating, sand and gravel operations, respiratory protection, scaffolding and utility notification. Work has commenced and will continue in cooperation with the Training Section to develop a Learning Management System and database that will be accessible to managers to track required safety training.

Long range:

- 1) Identify and implement means to reach staff with increased safety messages in order to bring safety to the forefront of their thoughts and actions, including but not limited to a monthly newsletter, brief communication to targeted work groups pertaining to safety issues specific to them, participating in NDOT academies and annual meetings as workload permits.
- 2) Increase ratio of staff in the Safety and Loss Control Section to total number of NDOT employees, which has had three staff since 1969. This will provide improved support and consultation services to the Divisions and Districts on a consistent and continued basis and aid in maintaining agency compliance with State and federal safety regulations. This is requisite if the department's safety program is to perform at optimum and to attain compliance with State and federal safety requirements.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the semi-annual target met?** Yes

**What 'Strategies for Improvement' were successful?** Completion of the hiring process for a Safety Specialist has increased the presence of safety in the field but it is too early to identify this as a reason for improved performance. Cooperative efforts between the Training Section and Safety and Loss Control to work and plan for the implementation of a Learning Management System (LMS) have been very productive. Actions to move some training components to NEATS such as class registration have been slow. It is still unclear whether NEATS will be able to generate the reports and to track training expiration dates as requisite. Steps have been taken to get all the Training Coordinators and District safety staff to list all their safety training classes, excluding equipment training, on NEATS but this has not been done. Parameters for entering classes such as limiting to a specific location and insuring all class titles start with "NDOT Safety" to facilitate identification has been established and course titles are being entered as time permits and the need arises.

**What 'Strategies for Improvement' were not successful? Why?** Efforts to upgrade the Safety Specialist position in order to hire a competent and professional level staff were completed but constraints on the series description necessitated changing the position to Loss Control Coordinator per the Department of Personnel (DOP). The discussions with the DOP extended the time in which to fill the vacancy and compounded the backlog of work for the Safety Manager. This resulted in databases such as the Vehicle Accident Database and Worker Comp reporting to fall as far as 2 years behind. Reports of accidents and injuries are integral to the safety program in order to identify areas of need and focus for the Districts and Divisions. In order to achieve effective program oversight and insure compliance, the number

of staff in the Safety and Loss Control Section must increase. Federal OSHA was created in 1970 and the requirements for compliance have increased ever since, yet the safety staff at NDOT has remained the same.

**What new 'Strategies for Improvement' will be initiated in FY2010?**

**Short range to next reporting:** 1) Increased outreach efforts; 2) improving current databases and updating the information so that relevant reports can be generated for management; 3) evaluate the benefit of an Employee Safety Survey in order to assess the agency's culture or attitude as it pertains to safety; and 4) continue cooperative efforts with the Training Section to implement a LMS.

**Long range:** To take the information from the Employee Safety Survey and to evaluate it to determine areas of need within the safety program. Due to the lack of staff and ever increasing workload, hiring a consultant to evaluate NDOT's Safety Program, to identify areas needing improvement and assisting with implementation of solutions would be a possibility; however, budget constraints may prevent moving forward with such an action.

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

**Is there a better performance measure that should be considered?** No

**Will meeting the next yearly target have a fiscal impact? If so, explain.** Fiscal impact would be to a minor degree. Consulting services are estimated to be less than \$70,000.00 for long term assistance. Hiring additional safety staff within the Safety and Loss Control Section would have a fiscal impact due to the increase in staffing. However, those costs should be recouped in the long term with the realization of decreased worker injuries and associated costs.

## 2. PROVIDE EMPLOYEE TRAINING

Performance Measure:

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

Ultimate Target: 100%

Annual Target: 15%

Champion:

Human Resources Manager  
Employee Development Manager

Support Divisions: All

Strategy Plan Support:

Training of the workforce keeps them safe in the workplace. It also provides the skills and abilities to excel at their duties and to maintain staff expertise. This benefits the Department and our customers by having qualified staff. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety by providing adequate training for supervisors, be the employer of choice. Both NAC and Matrix training will be required.

Summary FY09:

Six of 8 training classes met or exceeded the Ultimate Target. By encouraging employees to track their own compliance with state mandated training plus heightened management oversight, it is likely the Ultimate Target for all state mandated courses will be met within a year or two.

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**Measurement and Supporting Data:**

General Department Training Requirements (Updated March 2004)					Fiscal Year 2009	
Requirement	Who is Required to Attend	# of Employees Needing Training	Frequency of Training	# of Employees Needing Training Per Year	# of Employees Trained	% of Compliance
Employee Appraisal	Supervisors and Managers	428	Every 9 Years	48	71	148%
Progressive Discipline	Supervisors and Managers	428	Every 9 Years	48	56	117%
EEO	Supervisors and Managers	428	Every 9 Years	48	34	71%
Interviewing and Hiring	Supervisors and Managers	428	Every 9 Years	48	72	150%
Grievance Procedures	Supervisors and Managers	428	Every 9 Years	48	79	165%
Alcohol/Drug Program	Supervisors and Managers	428	Every 9 Years	48	3	6%
Sexual Harassment Prevention	All Employees	1754	Every 2 Years	877	1877	214%
Hazardous Communication Training	All Employees	1754	New Hires		Not Tracked	

Requirement	Who is Required to Attend	# of Employees Needing Training		# of Hours of Training Needed Per Year	# of Hours of Qualified Training	% of Compliance
40 Hours of Supervisor/Manager Training Every 3 Years	Supervisors and Managers	428		5,707	6,670	117%

## **Strategies for Improvement:**

### **Short range to next reporting:**

- Implement a Learning Management System database that will be accessible to managers and employees to track each employee, their training needs and progress to desired goals. Database will also generate reports of results and needs of organization and employees.
- Create and implement a promotional campaign to encourage NDOT employees to achieve the requisite level of compliance with state mandated training courses.
- Provide more training opportunities that will improve the skills of employees utilizing a wider variety of delivery methods, to include instructor-led, video conferencing, web-conferencing, and blended-elearning.
- Identify safety training that was conducted in 2007 and 2008 in order to establish a safety training baseline and needs assessment for 2009.

### **Long range:**

- Facilitate division training matrix update biennially to include safety training topics, and timeframe / conditions under which refresher training would be required. This will be implemented in the short term, but due to manpower limitations, we expect it will be a long-term project.
- Do more training needs analysis, course development, and training outreach by increasing Training Officer Staff.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Were the targets met?** Yes, the Ultimate Target of 100% was exceeded, while the Annual Target of 15% was missed slightly, largely due to the quality update of the Leadership Academy program. Program revisions necessitated the cancellation and postponement of several courses during March-May of 2009.

### **What ‘Strategies for Improvement’ were successful?**

1. Providing more Sexual Harassment class dates and related announcements brought NDOT into compliance.
2. Revising the Leadership Academy program reduced operating costs, provided more NDOT relevant content, and brought program competencies in alignment with NDOT leadership competencies.
3. We are now in compliance with six out of eight classes in FY09, compared to five out of eight classes in FY08.

### **What ‘Strategies for Improvement’ were not successful? Why?**

Though significant progress was achieved in the planning, approval and research for a training tracking database, that effort did not, in itself, help us meet our FY09 goal. We expect the fruits of these efforts to be realized in FY10.

**What new ‘Strategies for Improvement’ will be initiated in FY2010?**

**Short range to next reporting:**

1. Select and implement a Learning Management Systems database.
2. Increase the library of elearning course offerings to better meet the learning needs of NDOT divisions.
3. Begin facilitating the update of division training matrices, to include developing a table of training required by position number.
4. Add eight new leadership course offerings to our training calendar.
5. Initiate blended online training courses on program management and office skills.
6. Inaugurate training and informational events utilizing a combination of video conferencing and web conferencing technology.
7. Create and implement a promotional campaign to encourage NDOT employees to achieve the requisite level of compliance with state mandated training courses.

**Long range strategy:**

To gather information in such a way as to be able to identify by supervisor, who has the required training hours and who does not. This will be accomplished with the Learning Management System tracking database implementation. Once the LMS is implemented, it will be a tool to encourage individual diligence and management oversight.

**Does this performance measure effectively measure what is desired?**

Once the new database is in place, this performance measure will effectively measure our compliance with mandatory training. Training of the workforce keeps them safe in the workplace. It also provides the skills and abilities to excel at their duties and to maintain staff expertise. This benefits the Department and our customers by having qualified staff. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety by providing adequate training for supervisors, Be the employer of choice.

**Is there a better performance measure that should be considered?**

It is recommended that we continue to track the metrics stated within the present Performance Measure. Ultimately, with the expected benefits realized that our current strategies focus on, we can progress to the next logical step in training section accountability: training results.

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

If we want to include more employees in the Leadership Academy or CPM Program to help them meet the requirement for refresher training, it will affect our budget. Offering college classes to increase skill levels, whether instructor-led or web-based, have adverse fiscal impact. Up to this point we have been able to absorb those costs in our Category 04 funds. This year, the Learning Management System will add to our cost, though we expect to share the burden with Safety and EEO. As we add training programs, increase quality, and implement better oversight, we also reap the cost-enhancing benefits that technology brings to reduced administrative costs that are reflected throughout the organization. We are more diligent with our operating costs and we expect to deliver savings through delivery of more on-line programs.

### 3. IMPROVE EMPLOYEE SATISFACTION

Performance Measure:

Percentage rating obtained from employees' satisfaction surveys.

Ultimate Target: Overall rating of 80%. Annual Target: Overall rating 75%

Champion: Chief Human Resources

Support Divisions: All

Strategy Plan Support:

Positive employee moral is critical to the success of the workplace. It is the backbone of a skilled and dedicated workforce and essential in attracting and retaining a quality staff. A satisfied workforce will excel at their duties. This benefits the Department and our customers. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Be the employer of choice, Deliver timely and beneficial projects and programs, effectively preserve and manage our assets, and efficiently operate the transportation system.

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Measurement and Supporting Data:

2007 FY (Base Number)	70%	
2008 FY	67%	
2009 FY	Rating	Change

#### **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

##### **Was the annual target met?**

No. Sixty-seven percent (67%) of employees are extremely (20%) or somewhat satisfied (47%) with NDOT as an employer as compared to seventy percent (70%) last year.

The 2008 Performance Measure Survey was launched on July 14, 2008 and closed on August 15, 2008. 764 employees responded to the 2008 survey.

The 2009 Performance Measure Survey was launched on July 13, 2009, and closed on August 2, 2009. 616 employees responded to the 2009 survey.

##### **What 'Strategies for Improvement' were successful?**

The Department of Transportation implemented strategies to improve communication by management from the top down to keep our employees informed and to update our

Transportation Policies and create new work manuals. These strategies appeared to have positive results. Employees who strongly or somewhat agree that management communicates the missions/goals of NDOT have increased three percent (3%.) Employees who strongly agreed or somewhat agreed that management applies policy decisions consistently throughout NDOT has increased seven percent (7 %.)

**What ‘Strategies for Improvement’ were not successful? Why?**

The overall target was to increase employee satisfaction from seventy percent (70%) to seventy-five percent (75%.) A review of the comments for those employees who are somewhat dissatisfied or extremely dissatisfied indicates that eighteen percent (18%) commented on furloughs, pay, and or benefits. The current economic environment and overall State pay and benefits have a direct impact on the satisfaction of NDOT employees.

**What new ‘Strategies for Improvement’ will be initiated in FY2009?**

**Short range to next reporting:**

1. Continue to improve on communications from management to employees including the Director’s Report and Division Head Staff Meetings.
2. Continue to update Transportation Policies and new work manuals.
2. Implement a NDOT Ethics Policy.
3. Encourage and require supervisory training in compliance with regulations that include communication, management styles, and coaching. This strategy directly correlates with Performance Measure #2.
4. Implement lunchtime training sessions to assist employees with real life issues such as financial planning, stress management, and other topics to assist them during this time of economic downturn.

**Long range:**

Continue conducting and analyzing annual satisfaction surveys and make appropriate recommendations the Director’s Office to improve employee satisfaction

**Does this performance measure effectively measure what is desired?**

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Be the employer of choice, Deliver timely and beneficial projects and programs, effectively preserve and manage our assets, and efficiently operate the transportation system.

**Is there a better performance measure that should be considered?**

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

#### 4. STREAMLINE AGREEMENT EXECUTION PROCESS

Performance Measure:

Percentage of Agreements executed within 45 days from when division submits agreement to the date when it is fully executed.

Ultimate Target: 95%

Annual Target: 50%

Champion: Asst. Director Administrative Services  
Chief of Administrative Services

Support Divisions: All (*modify when the specific level of agreement is identified*)

Strategy Plan Support:

Agreements are the core of all of our business practices, and must be completed prior to any action being taken. A delay has a tremendous impact in the operations of the Department. This performance measure works toward meeting the Department of Transportation Strategic Plan goals as follows: Speeding up the agreement process will help deliver timely and beneficial projects and programs. It also assists with being responsive to our customers.

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Measurement and Supporting Data: Use agreement log.

	Total	Quarterly*
2007 FY (Base Number)	5%	
2008 FY – Third Quarter	59%	92%
2008 FY – Fourth Quarter	54%	85%
2009 FY – First Quarter	51%	74%
2009 FY – Second Quarter	31%	25%

During the second quarter of 2009 138 agreements were submitted and 155 were executed, 48 within 45 days with a range of one day to 184 days. Average days for execution were 48 but only 31% of the total was below 45 days. Overall percentage below 45 was 46%. \*If analyzed only on a quarterly basis with a percentage submitted and processed during the quarter, overall 59% were processed in 45 days. There were 23 agreements during the year that were over 150 days and they averaged 283 days to process. 16 were agreements with other governments, 2 with railroads, 1 with RTC and 3 were for our Information Services Division.

Strategies for Improvement:

Short range to next reporting:

Update agreement manuals and forms for recent legislation. Conduct Agreement training for Department staff, consultants, contractors, and local government agencies. A review of the process for district contracts is currently underway.

Long range:

Formally assess the agreement process every three years. There has been a lot of work done with local public agencies to speed up the process by creating an acceptable contract template.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

### **Was the annual target met?**

The target was not met by 4% for total agreements processed during the year. On a quarterly basis, agreements submitted and executed in a quarter, 59% were processed in 45 days, which exceeds the 50% target.

**What ‘Strategies for Improvement’ were successful?** It is too soon to evaluate the strategies that have been implemented.

**What ‘Strategies for Improvement’ were not successful? Why?**

**What new ‘Strategies for Improvement’ will be initiated in FY2010?**

#### **Short range to next reporting:**

Agreement Services will be implementing a new tracking mechanism using an existing Excel database. The tracking feature will allow us to set parameters for every division we send the agreements to and if the time frames are exceeded, we will receive a notification so we can follow up with the specific division for resolution. We believe this will help us keep a better eye on the processing time to avoid unnecessary delays in agreements getting stuck in one division.

**Long range:**

**Does this performance measure effectively measure what is desired?**

It measures the time for processing agreements however much of the time is with the second party, which NDOT has minimal impact.

**Is there a better performance measure that should be considered?** It is too soon to evaluate.

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

## 5. IMPROVE CUSTOMER SATISFACTION

Performance Measure:

Numerical ratings obtained from public opinion and customer/user surveys.

Annual Target: **To be determined**

Ultimate Target:

Annual increases in public opinion and customer/user ratings.

Champion: Chief of the Communications Office

Support Divisions:

Districts, Public Information, Program Development, Intermodal Planning, Right of Way  
Others to be determined

Strategy Plan Support:

Public opinion, user (customer), and elected official surveys will assess public information and outreach activities, customer processes, and how well the Department is performing in the eyes of our customers. This is important so we know that we are doing the right things to be transparent, accountable, and efficient. This performance measure works toward meeting the Department of Transportation Strategic Plan goal to be in touch with and responsive to our customers.

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Measurement and Supporting Data:

2009 FY (Base Number)	N/A – this is a new measure
2010 FY	Rating

The customer surveys are currently being conducted under contract with UNR as part of a maintenance and operations division survey. The results are expected by September 30, 2009.

Strategies for Improvement:

Short range to next reporting:

Rigorously assess the results of the surveys to determine specific areas for improvement (such as more concerted or varied public outreach techniques, better and more user friendly customer processes in dealing with contractors/trucking industry/consultants, etc.). The survey is expected to provide statistically valid results for each district, and strategies will be formulated for each district, as well as statewide, based on the results.

Long range:

Constant improvement over the reporting periods (once per year), and determine whether the survey instruments adequately ask the questions we want answered.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

### **Was the annual target met?**

The survey is being conducted under contract with UNR as part of a maintenance and operations division survey. The results are expected by September 30, 2009.

### **What ‘Strategies for Improvement’ were successful?**

The survey is ongoing and will not be completed until September 30, 2009.

### **What ‘Strategies for Improvement’ were not successful? Why?**

The survey has not been completed yet.

### **What new ‘Strategies for Improvement’ will be initiated in FY2010?**

This will be determined once we see the results of the survey.

### **Short range to next reporting:**

Once the results of the survey are compiled, strategies for improvement will be formulated. The survey is expected to provide statistically valid results for each district, and strategies will be formulated for each district, as well as statewide, depending on the results.

### **Long range:**

Constant improvement over the survey reporting periods. It is anticipated that surveys will be conducted annually. We also need to determine whether the survey instruments adequately ask the questions we want answered

### **Does this performance measure effectively measure what is desired?**

Do not know as yet, but we believe it will.

### **Is there a better performance measure that should be considered?**

No.

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

We are currently formulating a request for proposal to solicit a firm to assist in statewide public outreach efforts. As part of that, polling will be conducted on this specific performance measure. There will be a cost, but it is as yet undetermined.

## 6. REDUCE CONGESTION ON STATE SYSTEM

### Performance Measure:

Percentage of daily vehicle miles traveled that occur at Level of Service E (unstable traffic flow) or worse on the state system. This measure has been labeled as the ‘system congestion index.’

The establishment of targets is requiring further analysis.

Ultimate Target: **To be determined based on fiscal analysis** Yearly Target: **To be determined based on fiscal analysis**

Champion: Assistant Director – Planning  
Chief Traffic Information

### Support Divisions:

Roadway Systems, Location, Program Development, Design, Construction, Districts, Maintenance and Operations, Intermodal Planning

### Strategy Plan Support:

This performance measure addresses congestion on our state highway system. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: By reducing congestion, the probability of collisions is reduced that will help optimize safety, be in touch with and responsive to our customers by reducing the level of congestion, and efficiently operate the transportation system by reducing the level of congestion.

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### Measurement and Supporting Data:

2008 FY – Fourth Quarter (Base Number)                      9%

The level of congestion, 9% of daily vehicle miles traveled occurring at Level of Service E (unstable traffic flow) or worse on the state system, has recently been determined. The values for the ultimate and annual targets will be determined after a fiscal analysis of the cost of achieving different levels is completed prior to the 2011 legislative session.

### Strategies for Improvement:

Short range to next reporting:

The first challenge is to develop the capability of calculating the current value electronically through the use of integrated databases. Then we will be able to explore innovative ideas to provide funding for highway improvements – Public Private Partnerships, leasing air rights above state highways, constructing quiet pavements in lieu of sound walls, and collect impact fees from major land developments.

Every capacity project will be evaluated to identify the improvement in the performance measure that was realized by completion of the project.

Be sure that any and all permits to access state highways will add sufficient capacity to accommodate the trips the permit applicant will add to the highway.

Encourage the development and expansion of transit systems that will reduce peak period traffic flows.

Study potential travel behavior trends that may be affected by e-commerce, home based employment, and high fuel prices.

Planning has conducted meetings to clarify and refine the problem. Cost effective solutions are being evaluated. The committee is not on track to have implementable ideas any time soon, but progress is being made.

Long range:

Work with other state agencies to demonstrate the concept of the Neighborhood Employment Center where state employees with significant commute distances can work at a local employment center with computer video communication with home office. The centers will enable some state workers to walk, bike or jog to work. At most, workers would have a short commute to a center.

Establish a demonstration program that would offer an opportunity for some NDOT employees to work at home part-time.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met?** Targets have not yet been determined.

**What ‘Strategies for Improvement’ were successful?** Strategies for improvement have not been developed yet.

**What ‘Strategies for Improvement’ were not successful? Why?** Strategies for improvement have not been developed yet.

**What new ‘Strategies for Improvement’ will be initiated in FY2010?**

**Short range to next reporting:** Develop the ability to electronically determine the performance measure value.

**Long range:** Develop a process that will serve as the foundation for a policy that will ensure every “capacity” improvement project has a measurable improvement to the performance

measure. The process will also identify necessary levels of funding required to achieve target levels.

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

**Is there a better performance measure that should be considered?** Yes, there are several including person hours of delay. However, we must first develop the ability to measure existing person hours of delay which is much more complex an endeavor than is measuring % VMT occurring at LOS E.

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

Even though targets have not been established, any target that reduces congestion will require an increase in the current revenue stream to the Department.

**7. STREAMLINE PROJECT DELIVERY: SCHEDULE AND ESTIMATE FROM BID OPENING TO CONSTRUCTION COMPLETION**

Performance Measure:

Percentage of projects within established range of cost estimate and schedule to completion

Yearly Target:

Reduce number of projects falling outside of estimated schedule range by 25% starting in fiscal year 2009.

Improve number of projects falling within the estimated budget range by 25% in FY 2009.

Ultimate Target: 100%

Champion:

- Assistant Director – Operations
- Assistant Director – Engineering
- Chief Construction Engineer
- District Engineers

Support Divisions: Districts, All Division

Strategy Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals by providing timely, beneficial construction projects using innovative project delivery methods. This measure helps to optimize safety for road users, be in touch with and responsive to our customers (road users), and efficiently operate the transportation system.

Measurement and Supporting Data:

New measure and will need time to generate data for the measure.

	% completed Within budget	% completed within schedule
FY 2008 – End of Third Quarter (Base Number)	-	-
FY 2008 – End of Fourth Quarter	100	100
FY 2009 – End of First Quarter	100	100
FY 2009 – End of Second Quarter	100	100
FY 2009 – End of Third Quarter	100	100
FY 2009 – End of Fourth Quarter	100	33
FY 2009 – Summary	100	83

The Performance Measure for end of the fourth quarter FY 2009 is based on the following projects:

**Contract 3347- I 80 FROM 0.89 MILES EAST OF PUMPERNICKEL VALLEY INTERCHANGE TO THE BEGINNING OF CONCRETE PAVEMENT.**

- This project was originally scheduled for completion early May 2009. The contractor got off to a late start due to permitting issues at the Material Site and the bankruptcy of a major asphalt cement supplier. This project should be complete in the first quarter FY 2010 under budget.

**Contract 3359- Valley View Boulevard, North of Sahara Avenue (SR 589) to El Camino Avenue**

- This project was completed last quarter on time and within budget.

**Contract 3360- SR 170, Bunkerville Road, at the Virgin River Bridge (B-89), 0.96 Miles South of Mesquite Boulevard**

- This project was originally scheduled for completion May 2009. Working Days were suspended due to a delay in delivery of structural steel and bearing pads. Also, a possible differing site conditions issue was encountered with the construction and repair of CIDH foundations at Piers 3 and 4 which contributed to the schedule delay. This project should be complete by the second quarter FY 2010. .

**Strategies for Improvement:**

**Short range to next reporting:**

- Improve the quality of design to reduce problems during construction.
- Schedule bidding to take advantage of market variations.
- Minimize change orders which extend the project duration.
- Provide better coordination with parties involved in concurrent work.
- Provide realistic project schedules
- Provide better predictions for weather and other delays

**Long range:**

- Continue and enhance training of personnel.

**Additional Background:**

Percentage of projects constructed within established budget.

This measurement is tracked the same way we were tracking change order percentages which was misleading because the number included dollars spent on quantity overruns, i.e., the contract paid to date.

The budget number is the contract award amount plus the contingency amount. In the past the contingency amount has been 3% or less. The proposal for the FY 09 work program is to change the programmed contingency to 7% for contracts up to \$3 million, 5% for \$3 to \$25 million and 3% for contracts over \$25 million which would be more realistic. Approximately 60% of the FY

07 contracts completed by 7-01-08 were within the budget. The FY 09 goal is suggested at 50% because of the impact of the escalation clauses, and change orders dealing with the asphalt shortage will have on the FY 08 numbers and the proposed changes of the contingency rate has not yet gone into effect.

Value added change orders count against this measurement. With dramatic price increases this type of change might become common. Asphalt and fuel escalation clauses in contacts reduce the probability of inflated bids because the contractor will not need to hedge their bids.

#### Percentage of projects completed by the scheduled completion date.

There was no similar tracking of this type of information before this performance measurement was developed. We are now tracking the contract schedules from bid date to the calendar date of the last working day charged.

The scheduled completion date is the bid date plus award period (30 days), plus Notice to proceed period (this varies from 30 to 90 days based on the projects complexity, location and size), plus the contract working days (working days are projected on the calendar allowing for planned suspensions, such as winter shut, weather days, holidays and special events). Working days added by change order count against this measurement.

### **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met?** Yes, and Ultimate Target as well.

#### **What ‘Strategies for Improvement’ were successful?**

- Improve the quality of design to reduce problems during construction.
- Minimize change orders which extent the project duration.
- Provide better coordination with parties involved in concurrent work.
- Provide realistic project schedules.
- Continue and enhance training of personnel.

#### **What ‘Strategies for Improvement’ were not successful? Why?**

- Schedule bidding to take advantage of market variations.  
Is not successful because we are not looking at market variations. Variations can be very volatile and difficult to predict. This may not be a realistic strategy. It does not appear we schedule bidding for seasonal variations either. We should consider the time of the year when scheduling bidding.
- Provide better predictions for weather and other delays.  
Is not being incorporated into baseline schedules. We are working on that.

**What new ‘Strategies for Improvement’ will be initiated in FY2010?** New additions are recommended.

**Short range to next reporting:**

- Develop better methods for tracking Contract expenses
- Develop more realistic Contract estimated budget ranges
- Develop more sophisticated methods for project scheduling

**Long range:**

- Effectively project Contract costs and schedules

**Does this performance measure effectively measure what is desired?**

Not really in regards to schedule performance. Quarterly data is being compiled on only those projects scheduled to be complete in that quarter. It does not review all active Contracts in that quarter. Will look at taking more of a Time vs. Earned Value approach. This will be addressed before the end on the first quarter FY 2010.

Not really in regards to budget performance. Contracts completed in the previous quarter are no longer being considered in the measure. Yet expenditures may still being encountered due to completing Change Orders and Contract Closeouts.

**Is there a better performance measure that should be considered?**

This performance measure is not a direct measure of NDOT’s performance due to many factors beyond our control (increased / decreased competition, contractor bids, market forces, acts of God, contractor expertise). But time and money are important factors in any construction project. And they are an important indicator of NDOT’s performance and we need to continue to measure it.

Not convinced the yearly targets on 25% improvement have real meaning. Setting a quarterly / annual goal for all projects may be better (i.e. 90% on time and within budget). The ultimate target of 100% should be maintained.

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

Yes. Monitoring schedule and budget performance have fiscal impacts due to contractor payments, increased labor costs, increased administration costs, etc... They must be monitored to minimize those impacts.

## 8. MAINTAIN STATE ROADWAYS

### Performance Measure:

Percentage of state maintained pavements needing annual preservation in order to maintain the pavement International Roughness Index (IRI) rating of fair or better condition.

Yearly target: Due to the 2009 ARRA funds being released, the percentage of centerline miles preserved is up from the previous year, 6% vs. 3%, but we are not meeting the required amount of 8% to keep us at status quo due to the funding limits for overlay/reconstruction projects.

Ultimate Target: 100%

### Champion:

Assistant Director – Operations  
Chief - Materials Division

### Support Divisions:

Materials, Maintenance, Construction, Design, Project Management, Operations Analysis, and Districts

### Strategy Plan Support:

Proactive pavement has a huge benefit is maximizing limited funds. Being proactive instead of reactive (maintaining a high percentage) is more cost effective (4:1) in utilizing transportation project dollars. Pavement condition is also directly related to user vehicle maintenance and safety, and highway capacity. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: optimize safety and be in touch with and responsive to our customers by providing smooth, quality pavements. The effectively preserve and manage our assets goal is supported by implementing the Department's pavement preservation program.

For the Department to keep current with present roadway conditions, approximately \$300 million is needed annually for overlays and reconstruction, which averages almost 8% (centerline miles) of the total system. As of 2009, 1,028 center lane miles of the statewide 5,323 center lane miles of NDOT maintained highway are in need of overlay or reconstruction, which totals approximately \$570 million in costs (paving and ancillary).

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### Measurement and Supporting Data:

- FY 2008 – Preservation action of 3% was achieved, while the preservation needs were at 24%.
- FY 2009 - Preservation action of 6% is expected, while the preservation needs are actually decreased to 19%. This decrease from FY 2008 is due to: the unusually low construction prices because of the economic recession, the ARRA funds that financed many overlay/reconstruction projects and the increased use of betterment

funds for roadway maintenance. In the long term the back log will continue to increase dramatically.

- State Highway Preservation Report

#### Strategies for Improvement:

##### Short range to next reporting:

“1. Maintain our Interstate system at a high level of serviceability along with our principal arterials-non interstate by applying timely overlays, where possible, and reconstructing inferior segments.

2. Maintain our non-Interstate principal arterials by applying maintenance treatments such as chip seals and flush seals.

3. To apply seal coats or other short-term treatments to all other routes.” [2009 Preservation Report.]

##### Long range:

“1. Continue to maintain our Interstate system and high-volume roads at a high level of serviceability by applying timely overlays and reconstructing inferior segments.

2. Continue to maintain our non-Interstate principal arterials, minor arterials, and other moderate volume roads at a modest to high level of serviceability by applying timely overlays and reconstructing inferior segments.

3. To further develop economically sound methods to improve our low-volume roads and maintain them at a limited, but acceptable, level of serviceability.

4. To continue coordinating and integrating our routine pavement maintenance activities with planned overlay and reconstruction work.” [2009 Preservation Report.]

5. Work with Legislature to provide sufficient funding to reach the ultimate target.

#### **Background Information**

The Pavement Analysis Section collects pavement condition data and ride data only in the odd years. In addition, ride is collected in the even years for the National Highway System, only.

Roadway Categories

Category	Description
1 Concrete	Controlled Access PCCP
1 Asphalt	Controlled Access Asphalt
2	ESAL > 540 OR ADT > 10,000
3	540 >= ESAL >405 OR 1600 < ADT <= 10,000 + NHS
4	405 >= ESAL > 270 OR 400 < ADT <= 1600
5A	280 < ADT <=400
5B	120 < ADT <= 280
5C	ADT ≤ 120

PCCP – Portland cement concrete pavement

The ride quality shown in the graph, “Condition of the System Based on Ride Quality from 1980 to 2007” is based on the following criteria:

Condition	Slope Variance 1980 to 1992	International Roughness Index (IRI) thresholds from FHWA 1992 to 2007
Good	0 to 7	< 95
Fair	8 to 10	95 to 170
Poor	> 10	> 170

The IRI thresholds that have been used by NDOT where Roadway Category is considered included in the graph, “Performance of Roadway System per Year Based on IRI Data”:

Condition	Interstate	Non-IR NHS, and STP w/ ADT >805	Low Volume Roads
Good	< 71	< 100	< 95
Fair	71 to 105	100 to 130	95 to 170
Poor	> 105	> 130	> 170

Percent of the System receiving construction or maintenance betterment (preservation action)

Year	Centerlane Miles	% of System
2008	172.00	3
2007	108.44	2
2006	261.31	5
2005	410.91	8
2004	240.32	5
2003	223.42	4
2002	314.17	6
2001	265.22	5
2000	388.09	7
1999	714.19	13

**ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met?**

No, current funding levels do not allow for meeting the target. The ARRA funds allocated to overlays did improve when compared to the previous year.

**What ‘Strategies for Improvement’ were successful?**

The additional ARRA funds improved on the percentage when comparing 2009 (expected) vs. 2008. The Pavement Analysis section of the Materials Division has added maintenance treatments to the Pavement Management System data base. There is a good coordination effort among the Districts, Maintenance and Operations, and the Materials Divisions.

**What ‘Strategies for Improvement’ were not successful? Why?**

Reconstructing inferior segments of the Interstate system is very costly. Current funding levels do not allow for any reconstruction effort except in cases where concurrent capacity improvements occur. Approximately 1% of the Interstate system needs reconstruction.

**What new ‘Strategies for Improvement’ will be initiated in FY2009?**

**Short range to next reporting:**

The District maintenance forces will see increased demand for both preventive and reactive maintenance treatments in able to keep up with maintenance needs on higher category roads that have been traditionally received overlays.

**Long range:**

Review of our system, incorporating state of the art practices and new technologies and materials.

**Does this performance measure effectively measure what is desired?**

The IRI is a worldwide standard for measuring pavement smoothness and is used throughout the United States.

Although pavement deterioration eventually shows up in the pavement smoothness measurements (IRI), the decline in pavement smoothness measurements lags behind of the pavement condition decline (damage may exist before can be seen in IRI). However, the condition of the pavements is monitored in the Pavement Management System.

The target is to maintain the current level of service and it includes the proactive treatments as established by the minimum operating condition of the road network as defined by the 3R program. Maintenance activities are not included but if not performed, the road network deteriorates faster or operated under unsafe conditions.

**Is there a better performance measure that should be considered?**

No, the IRI is an important performance measure as it is meaningful to the public as well as transportation professionals.

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

We would like to stay committed to the philosophy that "Good roads cost less." Proactively applying well-timed treatments and other technologies to pavements can actually extend its lifetime and reduce costly, time consuming rehabilitation and reconstruction projects with associated traffic disruptions. Proactive pavement treatments and maintenance will extend the lifetime of the roadway for a minimal investment. Such activities will cost far less than replacing pavements prematurely or postponing work until a more expensive rehabilitation is required. The cumulative effect of systematic, successive preservation treatments is to postpone costly rehabilitation and reconstruction. Additionally, performing a series of successive pavement preservation treatments during the life of a pavement is less disruptive to uniform traffic flow than the long closures normally associated with reconstruction projects.

## 9. MAINTAIN DEPARTMENT FLEET

### Performance Measures:

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

(A) Percentage of fleet requiring replacement – this measure is the percentage of the fleet that have reached the age or mileage that requires replacement.

(B) Percentage of fleet in compliance with condition criteria – this measure is the percentage of the fleet that is maintained as per Department preventive maintenance requirements so that the expected life span of our vehicles is not compromised. As the fleet is maintained on the mileage and/or hourly requirements, compliance has been met.

### Annual Target:

(A) Declining Rate of 1% per year

(B) Increasing rate of 1% per year.

### Ultimate Targets:

(A) 10%

(B) 95% rate of compliance for mileage/hourly requirements

### Champion:

Equipment Superintendent of Equipment Division

### Support Divisions:

Districts

Divisions

### Strategy Plan Support:

The vehicles in the fleet are important to deliver projects and maintain a safe highway system. Equipment in good condition ensures the ability to perform NDOT's business practices and provides a safe and secure tool for staff. These performance measures work towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Be the employer of choice, Deliver timely and beneficial projects and programs, Effectively preserve and manage our assets, and Efficiently operate the transportation system.

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Measurement and Supporting Data:	(A)	(B)	Change	
	Replacement Criteria Measured Annually	Condition Criteria Measured Quarterly	(A)	(B)
2007 FY (Base Number)	38.65 %	60.30 %		
2008 FY – Final	34.96%	62.55 %	-3.69%	+2.75 %
2009 FY – First Quarter		64.45 %		+4.15 %
2009 FY – Second Quarter		67.26 %		+6.96 %
2009 FY – Third Quarter		63.96 %		+3.66 %

2009 FY – Fourth Quarter		69.96 %		+9.66 %
2009 FY – Final	39.18 %	66.30 %	+0.56 %	+6.00 %

The FY 09 budget adversely affected the fleet replacement and maintenance program.

Strategies for Improvement:

Short range to next reporting:

- (A) 1. Revise replacement criteria by increasing usage criteria in selected class codes
- 2. Removing age criteria in other specified class codes.
- 3. Implement policy controls for equipment replacement.
- (B) 1. Analyze quarterly Preventive Maintenance (PM) due and accomplished on core fleet.
- 2. Develop enforceable policy for non-compliance of PM standards.

Long range:

- (A) 1. Reduce fleet size by usage assessments.
- 2. Minimize retention of replaced vehicles.
- (B) 1. Perform annual fleet condition audit.
- 2. Develop Predictive Maintenance Program.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met?** No on A. Yes on B.

**What ‘Strategies for Improvement’ were successful?**

- (A) Minimize retention of replaced vehicles

**What ‘Strategies for Improvement’ were not successful? Why?**

**What new ‘Strategies for Improvement’ will be initiated in FY2010?**

**Short range to next reporting:**

- (A) 1. Removing age criteria in other specified class codes.
- (B) 1. Develop enforceable policy for non-compliance of PM standards.

**Long range:**

- (A) 1. Reduce fleet size by usage assessments.
- (B) 1. Perform annual fleet condition audit.
- 2. Develop Predictive Maintenance Program.

**Does this performance measure effectively measure what is desired?**

**Is there a better performance measure that should be considered?**

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

There is concern likely budget limitations will not allow measures to be attained.

## 10. MAINTAIN STATE FACILITIES

Performance Measure:

Percentage of building facilities that comply with regulatory building and safety codes.

Annual Target: Increase by 3%

Ultimate Target: 100%

Champion: Chief Maintenance Engineer

Support Divisions: Districts, Administrative Services

Strategy Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Be the employer of choice, Effectively preserve and manage our assets, and Efficiently operate the transportation system.

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Measurement and Supporting Data:

2007 FY (Base Number)	82 Percent
2008 FY – Third Quarter	82 Percent
2008 FY – Fourth Quarter	82 Percent

Strategies for Improvement:

Short range to next reporting:

Currently, 82 % of our facilities are compliant with regulatory building and safety codes. This means that 18% of our facilities violate a safety or building code in some manner. Our short-range strategies are to continue our efforts in prioritizing our condition assessment data and scheduling deferred maintenance work. We have begun assessing and prioritizing ADA deficiencies in Highway Rest Areas, as well as, other NDOT Facilities. Design work for these projects will commence in FY 09.

Long range:

Our current Long-Range Plan is to increase the total code compliant building facilities from 82% to 84% by the end of FY 2010. We will then focus on making yearly increases of 2 % per year over the next 8 years. This goal will then allow the Department to achieve the ultimate target of 100% fully compliant building facilities by FY 2018. Because of substantial budget reductions to the Architecture Program (67% reduction), we have need to extend the time of 100% facility compliance from FY 2013 to FY 2017.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met? YES**

In 2009 a list of NDOT residences (52+) was made, and a chart categorizing common deficiencies/improvements (code, energy, maintenance) is under development. Three residences at the Blue Jay Maintenance Station were completely rewired. The HQ building ADA parking and first floor restrooms were upgraded to ADA codes. The HQ 1<sup>st</sup> floor was fully equipped with fire sprinklers as well as the 4<sup>th</sup> floor in a previous FY - (the 2<sup>nd</sup> and 3<sup>rd</sup> floor remain to be fully equipped).

**What ‘Strategies for Improvement’ were successful? We are still gathering critical information and prioritizing our work plan. Use of in-house assessment databases, specifically developed for this performance measure, has already proven extremely valuable in the prioritization process. The list of NDOT residences with categories of deficiencies/improvements helps track previous improvements completed, current improvements and future improvements. The residence list and chart will show which residences have not been upgraded in each common category.**

**What ‘Strategies for Improvement’ were not successful? Why?\_N/A**

**What new ‘Strategies for Improvement’ will be initiated in FY2010?**

**Short range to next reporting:**

In FY2010 a HQ Lab addition will be bid. This project includes fully equipped with fire sprinklers all spaces in the older sections of the Lab building. This is a code and insurance requirement. Other projects that improve code and energy efficiency are planned for the 2010 FY Work Program that is being approved.

**Long range:** Defined work plan with prioritized projects, tied to Architecture’s budget, will be used as a roadmap for successful accomplishment of goals and objectives.

**Does this performance measure effectively measure what is desired? YES**

**Is there a better performance measure that should be considered? NO**

**Will meeting the next yearly target have a fiscal impact? If so, explain. Yes – The majority of the Architecture budget is spent on maintenance, repair, and major upgrades – many of these projects include code and safety issues. Therefore, items that pertain to this specific Performance Measure are constantly being worked on.**

## 11. EMERGENCY MANGEMENT, SECURITY AND CONTINUITY OF OPERATIONS

Performance Measure:

The percent of work efforts completed in the following areas, on a biennial basis:

1. Develop and complete seven emergency plans for the Department
  - Continuity of Operations Plan
  - State Level Emergency Operations Plan
  - District Level Emergency Operations Plan
  - Southern Nevada Evacuation Plan
  - Infrastructure Security Plan
  - Mobile Fleet Security Plan
  - Department Access Management Plan
2. Provide training and education to appropriate personnel for each plan.
3. Test and exercise the plans.
4. Update plans to accommodate changes in departmental processes, federal guidelines, etc.

Ultimate Target: 100%

Annual Target: 50% for FY 2009  
75% for FY 2010

Champion: Assistant Director – Operations  
Assistant Chief Operations Engineer

Support Divisions: All

Strategy 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. Being prepared and ready for an emergency is paramount in keeping systems operating during such times, as well as being in a position to respond to health and safety issues. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to:

*Optimize safety* by decreasing NDOT response and recovery times during a major disaster,

*Be in touch with and responsive to our customers* by ensuring we are prepared to quickly and effectively respond to major emergency issues which affect our customers,

*Innovate* to incorporate the most up-to-date methods of responding to and recovering from emergencies/disasters,

*Deliver timely and beneficial projects and programs* such as an emergency training and exercises program to ensure NDOT is as prepared as possible for emergencies/disasters,

*Effectively preserve and manage our assets* by ensuring NDOT is prepared to quickly respond to emergencies to prevent additional damage, and

*Efficiently operate the transportation system* by ensuring NDOT is prepared to restore transportation infrastructure as soon as possible following an emergency/disaster.

Measurement and Supporting Data:

2007 FY (Base Number)	N/A - this is a new performance measure
2008 FY	25% completion (Target Met)
2009 FY	50% completion (Target Met)
2010 FY	75% completion (Planned)
2011 FY	100% completion (Planned)

Strategies for Improvement:

Short range to next reporting:

50 % completion of the education, training and exercising for FY 2008 & FY 2009 has been accomplished.

In 2009, we conducted a functional exercise to test our capability of physically setting up the NDOT Emergency Operation Center (EOC); we are also testing management’s ability to effectively operate the NDOT EOC during this functional exercise. An After Action Report will be completed after the exercise to identify areas of improvement.

In January of 2010 we are conducting a Table Top Exercise for District I. In May of 2010 we are involved with NLE-2010 in District I. This major exercise is being conducted by FEMA and is affecting all ESF’s within the state. This exercise involves Federal participants along with State and County participants. These two exercises will test Districts I’s capabilities.

Within the next year we will complete the Continuity of Operations Plan (COOP). We will combine the State Level Emergency Operations plan and the District Emergency operations Plan. Completion of this work, including the related training and exercising should enable us to meet our 75% goal for FY 2010.

Within the next year we will also combine the Mobile Fleet Security Plan with the Facility and Infrastructure Security Plan.

By combining the State Level Emergency Operations Plan and the District Emergency Operations Plan as well as the Mobile Fleet Security Plan with the Facility and Infrastructure Security Plan, we will reduce redundancies within these plans.

Long range:

Continue combining Department exercises and training with exercises planned by other entities and agencies to enable us to meet the following goals:

75% completion third year  
100% is expected by the end of 4 years.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met? Yes**

**What ‘Strategies for Improvement’ were successful?**

By conducting a table top exercise along with a functional exercise we were able to identify areas that needed improvement. These improvements were identified in the After Action Reports, and we have updated the plans to reflect these changes.

**What ‘Strategies for Improvement’ were not successful? None. Why?**

**What new ‘Strategies for Improvement’ will be initiated in FY2010?**

**Short range to next reporting:**

We will continue to complete and/or update plans, as well as exercise and train appropriate personnel to reach the 75% goal.

**Long range:**

We will continue to complete, combine and/or update plans, as well as exercise and train appropriate personnel to reach subsequent goals.

**Does this performance measure effectively measure what is desired? Yes, however, this is possible because we revised the original performance measure to accurately reflect the work that is done in the Emergency Operations/Security area.**

**Is there a better performance measure that should be considered? No, however, we suggest renaming it to “EMERGENCY MANGEMENT, SECURITY AND CONTINUITY OF OPERATIONS”.**

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

We use approximately \$500.00 of Cat 04 funds per exercise to purchase supplies/materials for our exercises. We are working with Financial Management to add funding to our budget in this category so that we can continue to meet our goals in the future.

## 12. REDUCE FATAL CRASHES

### Performance Measure:

Number of fatalities on Nevada's streets and highways.

Ultimate Target: Zero

Annual Target: Reduce fatalities by 100 lives

Champion: Chief Traffic/Safety Engineer

Support Divisions: All

### Strategy Plan Support:

All drivers and highway system users should expect a safe highway system. Through efforts of engineering, enforcement, education, emergency response and the will of the highway users, fatal crashes can be eliminated. The strategies for this performance measure will be based on the Nevada Strategic Highway Safety Plan. This performance measure also works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Deliver timely and beneficial projects and programs, Effectively preserve and manage our assets, and Efficiently operate the transportation system.

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### Measurement and Supporting Data:

2003 CY	362 fatalities
2004 CY	398 fatalities
2005 CY	421 fatalities
2006 CY	432 fatalities
2007 CY	372 fatalities
2008 CY	324 fatalities

### Strategies for Improvement:

#### Short range to next reporting:

- Market and implement the State's Strategic Highway Safety Plan
- Continue to implement cost effective improvements to keep vehicles in their lane
- Increase pedestrian safety by constructing crosswalk refuge islands and upgrading signals
- Follow the principles of access management
- Implement geometric intersection improvements
- Cooperate with and support the Office of Traffic Safety's efforts with public education programs for TV/radio 'spots' to increase safer behavior by the public.
- Analyze crash data to locate site with a high number of run-off-road crashes and install shoulder and centerline rumble strips

#### Long range:

- Spend NDOT's safety funds on a wide variety of engineering strategies

- Team with and share funding with non-traditional partners to increase the effectiveness of NDOT's safety funds

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

### **Was the annual target met?**

No.

### **What 'Strategies for Improvement' were successful?**

The evaluation period has not been long enough to determine what NDOT strategies have been effective. The current reduction is most likely a result of the coordinated work by all of our partners in implementing the strategies of the Strategic Highway Safety Plan.

### **What 'Strategies for Improvement' were not successful? Why?**

Same answer as above.

### **What new 'Strategies for Improvement' will be initiated in FY2010?**

#### **Short range to next reporting:**

Given the short duration for implementation of our strategies the Safety Division does not contemplate revising our short term strategies. We will continue to implement strategies identified in the Strategic Highway Safety Plan and working closely with our safety partners to continue to reduce fatal crashes.

#### **Long range:**

Review and update the Nevada Strategic Highway Safety plan.

### **Does this performance measure effectively measure what is desired?**

No. This measure is an indicator of how the entire State is performing in regards to reducing traffic fatalities. The Department can not hope to achieve the goal without the cooperation and assistance of our partners in the areas of law enforcement, education, emergency medical response and other local agencies.

### **Is there a better performance measure that should be considered?**

Yes. If the desire is to measure the NDOT performance then a measure more closely aligned to our program and that can be directly influenced by this Department should be considered.

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

Yes. The Department will continue to spend funds for improving the safety of the State's transportation system. We will also continue working with our partners to take advantage of opportunities to reduce the severity and frequency of motor vehicle crashes throughout the State.

13. STREAMLINE PROJECT DELIVERY: SCHEDULE AND ESTIMATE AFTER NEPA APPROVAL TO BIDDING

Performance Measure:

Percentage of projects completed within range of established estimate and schedule after the environmental process.

Annual target:

Reduce number of projects falling outside of estimated schedule range by 25% starting in fiscal year 2009.

Improve number of projects falling within the estimated budget range by 25% in FY 2009.

Ultimate Target: 100% of projects completed in the scheduled fiscal year and falling within the estimated budget range.

Champion:

Assistant Director – Engineering  
Project Management Chief  
Chief Roadway Design Engineer

Support Divisions:

All units within the Department that are involved with project development.

Strategy Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Be in touch with and responsive to our customers, Deliver timely and beneficial projects and programs, Optimize safety and effectively preserve and manage our assets. Goals are met by:

- Keeping NDOT customers apprised of project risks, opportunities, costs, scope and scheduling issues;
- Implementing standards to improve communication, coordination, and decision making resulting in efficient delivery of projects;
- Focusing and managing available resources towards implementing projects that preserves NDOT's assets, improves safety and relieves congestion.

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Measurement and Supporting Data:

2008 FY – End of Third Quarter	100% (both projects on schedule and w/i budget.)
2008 FY – End of Fourth Quarter	No change
2009 FY – End of First Quarter	No change (17% on schedule, 71% on budget)
2009 FY – End of Second Quarter	On Target

## Strategies for Improvement – Project Management Division

### Project Management Division Strategies

#### Short range to next reporting:

- Implement new guidelines for developing project scope, cost & schedule by end of December 2008.
- Establish base numbers for all projects by end of Feb. 2008.
- Monitor/evaluate new procedures and implement corrective actions by end of December 2009.
- Define roles and responsibilities of project teams by end of December 2009.
- Improve project development process and linkage between planning and engineering divisions by end of December 2009.
- Work toward establishing a Project Management Office (refer to long range strategies).

#### Long Range:

##### Establish a Project Management Office responsible for:

- Program (Portfolio) Management:
  - Organizing, managing and prioritizing transportation projects based on resource availability
- Project management support functions to include:
  - Developing and implementing Department's Project Management process (development and application of guidelines, tools, standards, and techniques to project activities to meet project requirements)
  - Development and implementation of Risk management guidelines
  - Development and implementation of Cost Estimation Validation Process (CEVP).
  - Development of project scheduling tools and guidelines
  - Providing project management training
- Project Delivery Methods
  - Standardizing and upkeep of project delivery methods to include: Design-bid- build, Design-bid and Public Private Partnership methods.
  - Develop and implement reporting and tracking protocols for project's managed by local agencies.

### **ANNUAL EVALUATION OF PERFORMANCE MEASURE (Roadway Design and PM Divisions combined)**

#### **Was the annual target met?**

Yes

#### **What 'Strategies for Improvement' were successful? .**

- Guidelines for cost estimating and the newly developed Wizard Cost Estimating tool have allowed project teams to develop reasonable and defensible cost estimate ranges.
- It's too early to assess impact of guidelines for project scheduling

- It's too early to assess impacts of the project management guidelines and processes on project delivery

**What 'Strategies for Improvement' were not successful? Why?**

- None at this point. Need to assess impacts and benefits of new processes over a longer period of time.

**What new 'Strategies for Improvement' will be initiated in FY2010?**

**Short range to next reporting:**

- Develop internal (PM division) policies and procedures to ensure project management guidelines are followed.
- Develop and implement project management training.
- Develop standard major milestones and deliverables for both Design-Bid-Build and Design-Build.
- Monitor/evaluate project management guidelines and implement corrective actions

**Long range:**

Should be revised to improve departmental wide processes for project delivery. Strategies will be developed based on the following objectives:

- **Streamline existing policies and procedures:** existing policies, processes, procedures are reviewed and streamlined in support of new procedures to ensure cost savings occur and projects delivered on time.
- **Train staff:** PMs and project teams are trained on the intent and usage of the PM Guidelines; their roles/responsibilities and their authorities.
- **Ensure sustained and widespread usage of PM guidelines:** Ensure PMs within all divisions are developing project management plans, schedules and estimates per PM guidelines for projects that they are responsible for.
- **Establish functional project teams:** Decision making authority is lowered, project teams are empowered and they are working as a high performing team
- **Assess performance of project teams:** ensure team members are following the guidelines, participating in development of project's costs and schedules; and most importantly working together as a high performing team.
- **Outreach to local agencies:** Ensure new project development processes including cost estimating, scoping process, scheduling and reporting requirements are acceptable by local agencies. Creating consistency between the Department and local agencies on how project costs, schedules are developed, tracked and reported will improve project delivery.
- **Demonstrate leadership support:** Create a sustained outreach effort to demonstrate Front Office's full support of the new processes.
- **Create a unified strategic annual work plan based on available resources:** Department's Programs and projects should be prioritized annually and delivered based on direct input of resource manager's to minimize project delays and improve

cost savings. This will ensure that the Department's core project development resources are effectively used in support of delivering an annual work plan.

- **Assess effectiveness & Performance of new processes:** identify objectives are met, develop and implement corrective actions.

**Does this performance measure effectively measure what is desired?**

This measure should be revised to include annual targets based on deliverables and milestones.

**Is there a better performance measure that should be considered?**

See below for proposed changes.

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

No

**PROPOSED CHANGES**

Performance Measure:

Percentage of projects meeting their established construction estimate and schedule targets.

Annual target:

- 70% of projects meeting their established annual milestones and deliverables targets.
- 70% of projects falling within established construction estimate range.

Ultimate Target: 100% of projects meet their established construction estimate and schedule targets

Champion:

Assistant Director – Engineering  
Project Management Chief  
Chief Roadway Design Engineer

Support Divisions:

All units within the Department that are involved with project development.

Strategy Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Be in touch with and responsive to our customers, Deliver timely and beneficial projects and programs, Optimize safety and effectively preserve and manage our assets. Goals are met by:

- Keeping NDOT customers apprised of project risks, opportunities, costs, scope and scheduling issues;
  - Implementing standards to improve communication, coordination, and decision making resulting in efficient delivery of projects;
  - Focusing and managing available resources towards implementing projects that preserves NDOT's assets, improves safety and relieves congestion.
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#### Measurement and Supporting Data:

2008 FY – End of Third Quarter  
 2008 FY – End of Fourth Quarter  
 2009 FY – End of First Quarter  
 2009 FY – End of Second Quarter

#### **Procedure:**

1. Track 3R and Major Projects
2. Measure performance for the final design phase of projects only.
3. Baselines for Major Projects are established either after completion of NEPA or approval of the Finance Plan (not all project will require a finance plan).
4. Baselines for 3R projects are established at the time the 3R report is approved by Director's Office.
5. Baselines are established and reported in ranges: cost (\$xx - \$xx), final design (xx to xx) per PM guidelines. These baselines will not change unless the definition/scope of project changes. For example: Boulder City Bypass Phase 1 or CC Freeway Phase 2: we have broken these projects into smaller packages for delivery. These smaller packages will be our new baselines for measurement.
6. Performance measurement will be based on annual reporting: Sept to Sept.
7. Performance measurement will be based on annual targets for projects. Targets are:
  - a. Major milestones and deliverables identified to be accomplished during period of measurement. Example: Project baselines for project x are: Final Design: 2011-2013. Major milestones/deliverables for this project for 2011 are: Geotechnical report, drainage report and 30% design. If these milestones/deliverables are met in 2011, then the project is on target.
  - b. Construction estimate - Yearly measurement of construction estimate: Target is met as long as updated construction estimate is within established baselines.
8. Annual targets will be established by Chief Roadway Design and Chief Project M

## 14. MAINTAIN STATE BRIDGES

### Performance Measure:

Percentage of Department owned bridges which are eligible for federal funding and are categorized as structurally deficient or functionally obsolete. Base figure is 37 of 1,045 bridges (*State Highway Preservation Report – 2007*).

Ultimate Target: Zero%

Yearly Target: Reduce the percentage of Department owned structurally deficient or functionally obsolete bridges by one bridge biennially.

### Champion:

Chief Structures Engineer

### Support Divisions:

Design, Project Management and Districts

### Strategy Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Innovate, Deliver timely and beneficial projects and programs, and effectively preserve and manage our assets. These goals can be met in the following ways: Safety for the motoring public will be optimized by replacing structurally deficient and rehabilitating functionally obsolete bridges. The Structures 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 effectively preserve and manage Department assets.

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### Measurement and Supporting Data:

2007 FY – There are 37 State owned bridges in Nevada that are structurally deficient or functionally obsolete and are eligible for federal funding. Additionally, there are 34 bridges needing repair/replacement owned by local agencies that are also eligible for federal funding.

### Strategies for Improvement:

#### Short range to next reporting:

Evaluate programmed projects for possible preservation actions, corrective maintenance and risk reduction activities and include these activities into project scope as appropriate.

NDOT Structures Division provides information regarding state bridge policies and practices to local agencies in order to cooperate with and assist them.

#### Long range:

Perform bridge rehabilitation and replacement as allowed under the Highway Bridge Program. Continue to utilize preservation strategies to extend performance and serviceability of elements commonly causing deterioration of structures. These include repairs such as deck repair/replacement, deck overlays, replacement of bridge joints, fatigue crack repair and repainting of steel structures. Maintain seismic retrofit program and scour mitigation program to minimize risks from these extreme events.

Seek additional funds to reduce the time frame of eliminating structurally deficient or functionally obsolete bridges, which is estimated to take at least 76 years with present funding level, based on the current number of deficient bridges. This time frame will increase as Nevada's bridges age and the number of bridges categorized as structurally deficient or functionally obsolete increases.

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met?** The target is expected to be met.

**What 'Strategies for Improvement' were successful?** It is too soon to evaluate the strategies.

**What 'Strategies for Improvement' were not successful? Why?**

**What new 'Strategies for Improvement' will be initiated in FY2010?**

**Short range to next reporting:** While not a new strategy, the Structures Division typically includes updated inventory data on newly constructed and other replaced bridges that are a part of major construction and are not a funded through the Highway Bridge Program.

**Long range:** Structures Division will seek and implement innovative Bridge Management strategies, to improve bridge asset management processes.

**Does this performance measure effectively measure what is desired?** The Department's bridge database uses the number of bridges, rather than a percentage; therefore, the number of bridges is a better performance measure indicator.

**Is there a better performance measure that should be considered?** It is recommended that the Performance Measure be changed from 'percentage' to 'number'.

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

## 15. STREAMLINE PERMITTING PROCESS

### Performance Measure:

Percentage of permits issued or rejected within 45 days of receipt.

Ultimate Target: 95%

Annual Target: 95%

Champion: Chief Right of Way

### Support Divisions:

Districts, Project Management, Design, Traffic/Safety and Others as needed

### Strategy Plan Support:

Every encroachment to connect or work on state right of way requires a permit. This is a large area of our customer service. We must be assured the impact to the system is safe and will not negatively compromise the system, but we must meet the customer's needs for a timely response for their economic development. The majority of permits are relatively simple; however some are very complicated and require an extended technical review, thus the reason for the goal being less than 100%. Current estimates are that 90% of permits are issued or rejected within 60 days. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to Optimize safety, Be in touch with and responsive to our customers, Innovate, and Deliver timely and beneficial projects and programs.

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### Measurement and Supporting Data:

2007 FY (Base Number)	90%
2008 FY – Third Quarter	93%
2008 FY – Fourth Quarter	95%
2009 FY – First Quarter	95%
2009 FY – Fourth Quarter	96%

### Strategies for Improvement:

Short range to next reporting: The goal has always been 95%. The long range goal is to never fall below 95% for any given quarter.

There is a new Transportation Policy has been finalized that sets fixed review times for the various sections who must review permits. Revision of TP if and when necessary.

The Right-of-Way Division is working toward doing permit applications on line. This will shorten the process. The goal is to not only have 95% success within the required 45 days but also to gradually shorten the time frames as much as possible.

Implement access management recommendations contained in Corridor Studies. This is an area where very little has been accomplished. Further coordination with Planning, Safety, Environmental and Roadway Design is necessary.

Long range: The conversion to the IRWIN system is not complete and must be accomplished in the next six months.

Achievement of the ultimate target is expected within the first year; consequently, a long range strategy is not needed

## **ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met?** Yes

**What ‘Strategies for Improvement’ were successful?** Development of the Encroachment Permit Processing Time Schedule TP, which allowed for timely processing of encroachment permits. The new policy established simultaneous reviews by affected Divisions rather than previous method of sequential review. The TP established 10 day maximum response time for each Division.

**What ‘Strategies for Improvement’ were not successful? Why?** The IRWIN system is not yet complete.

**What new ‘Strategies for Improvement’ will be initiated in FY2009?**

Several changes have now been implemented that should enable the Department to attain the ultimate target of 95%. The new Transportation Policy regarding the permit processing time schedule has been completed and has been in effect since July 1<sup>st</sup>. The new procedure has implemented simultaneous review by all affected Divisions with established dates for the completion of those reviews. The permits database has been modified to establish the exact number of days that a permit has been in process so that instantaneous reports can be developed for specified time frames to measure performance. The report will indicate by percentage rate how many permits are being completed within the specified time frame. The report will also list those that fall outside of the time frame so that permit processing personnel can review those individually to determine why they were not completed within the time frame and what might be done to again improve on performance.

**Does this performance measure effectively measure what is desired?** YES

**Is there a better performance measure that should be considered?** NO

**Will meeting the next yearly target have a fiscal impact? If so, explain.** The IRWIN system is expensive but has been a part of the yearly budget for many years, including fiscal 2010.