FY 2012-2015 SHA Business Plan

Performance Excellence Division, Administrator's Office, SHA
VERSION 3/6/2012

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The Plan

Mission, Vision, Values and Goals

SHA Mission: Provide a safe, well-maintained, reliable highway system that enables mobility choices for all customers and supports Maryland's communities, economy and environment.

Vision for SHA: Provide a world-class highway system.

SHA Values:
Excellence In Our People - SHA employees are energetic, loyal and supportive of one another. We encourage each other to reach our highest potential and are committed to gaining the skills, knowledge and training to achieve our goals.
Excellence In Our Work - As a team, we strive to know the needs of our internal and external customers. We fulfill commitments in a timely and accurate manner, using resources responsibly, and observing all legal, moral and ethical standards.
Excellence In Our Relationships - We value each other's opinions and ideas as well as those of our customers. We earn the respect and trust of our internal and external customers through fairness, honesty, integrity and open communication. We accept responsibility and are accountable for our performance.
Excellence In Our Work Environment - SHA provides a professional environment that is committed to putting the safety of its people and customers first. We strive to continually improve the workplace by rewarding accomplishments and encouraging employee involvement at all levels of the organization.

SHA Business Plan Key Performance Area Goals:

- Improve highway safety in Maryland.
- Support Maryland's economy and communities through enabling reliable movement of people and goods.
- Maintain a high quality highway system.
- Effectively manage project delivery and financial, workforce, information technology and civil rights programs.
- Develop and maintain Maryland state highways in an environmentally responsible manner.
- Work together to serve our customers and listen to their priorities and needs.

HIGHWAY SAFETY

GOAL: IMPROVE HIGHWAY SAFETY IN MARYLAND

Objective 1.1 Traffic Injury and Fatality Reduction

Reduce the annual number of traffic-related fatalities on all roads in Maryland from 592 in 2008 to 475 or fewer (19.8% reduction) by December 31, 2015, and reduce the annual number of persons injured on all roads in Maryland from 48,148 in 2008 to fewer than 40,000 (16.8% reduction) by December 31, 2015.

Performance measures:

- Annual number of traffic fatalities on all Maryland roads.
- Annual number of personal injuries on all Maryland roads.

- Annual traffic fatality rate per 100 million miles traveled on all roads in Maryland.
- Personal injury rate per 100 million miles traveled on all roads in Maryland.
- Rate of bicyclist fatalities per 1 million Maryland residents.
- Rate of bicyclist injuries per 1 million Maryland residents.
- Number of bicyclist fatalities on all roads in Maryland.
- Number of bicyclist injuries on all roads in Maryland.
- Number of non-fatal crashes involving commercial vehicles.
- Number of non-fatal crashes involving motorcycles.
- Number of non-fatal crashes involving young drivers.
- Number of non-fatal crashes involving aggressive driving.
- Number of non-fatal temporary traffic control (TTC) zone crashes.
- Number of non-fatal crashes involving impaired driving.
- Annual number of non-fatal crashes on all roads in Maryland.
- Annual number of vehicle passenger fatalities for children under age 5.
- Annual number of vehicle passenger fatalities for children age 5-9.
- Annual number of young children fatalities.
- Annual number of senior citizen passenger fatalities.
- Annual number of senior citizen fatalities.
- Annual number of vehicle passenger injuries for children under age 5.
- Annual number of vehicle passenger injuries for children age 5-9.
- Annual number of young children injuries.
- Annual number of senior citizen passenger injuries.
- Annual number of senior citizen injuries.
- Annual number of fatalities due to drowsy driving.

Strategies:

- Annually conduct 10 road safety audits with preference at high priority locations crash areas.
- All districts review fatal crash assessment and other safety reports issued by OOTS and annually set targets to reduce the number of crashes in over-represented categories.
- All districts review wet weather related crash locations with pavement sections experiencing low friction ratings and develop action plans to address.
- Develop and implement a comprehensive communications and marketing plan that addresses high priority traffic safety issues.

Objective 1.2 Pedestrian Safety

Reduce the annual number of pedestrian fatalities from 115 in 2008 to 92 or fewer (19.8% reduction) by December 31, 2015, and reduce the annual number of pedestrian injuries from 2,469 in 2008 to 2,050 or fewer (16.8% reduction) by December 31, 2015.

Performance measures:

- Annual number of pedestrian fatalities on all Maryland roads.
- Annual number of pedestrians injured on all roads.
- Rate of pedestrian fatalities per 1 million Maryland residents.
- Rate of pedestrian injuries per 1 million Maryland residents.
- Annual number of pedestrian fatalities for children under age 5.
- Annual number of pedestrian fatalities for children age 5-9.
- Annual number of senior citizen pedestrian fatalities.

- Annual number of pedestrian injuries for children under age 5.
- Annual number of pedestrian injuries for children age 5-9.
- Annual number of senior citizen pedestrian injuries.

Strategies:

- Develop a process to identify and address high priority pedestrian crash locations on an annual basis.
- Annually conduct three road safety audits at high priority pedestrian crash locations.

Objective 1.3 Commercial Vehicle Injury and Fatality Reduction

Reduce the five-year average for commercial motor vehicle related fatalities from 80 (CY 2004-CY 2008) to 70 or fewer (12% reduction) by December 31, 2015, and reduce the five-year average for commercial motor vehicle related injuries from 3,093 (CY 2004-CY 2008) to fewer than 2,900 (6% reduction) by December 31, 2015.

Performance measures:

- Annual number of fatalities in traffic accidents involving heavy trucks on all roads.
- Annual number of persons injured in traffic accidents involving heavy trucks on all roads.
- Annual number of fatal crashes involving commercial vehicles.

Strategies:

- Increase compliance with federal motor carrier safety regulations (FMCSR) and Maryland size and weight laws through the deployment of additional virtual weigh stations (VWS) by December 15, 2015.
- Increase the number of enforcement agencies participating in the motor carrier safety program from 25 to 30 by December 31, 2015.

Objective 1.4 Occupant Protection

NOTE: Responsibility for this objective was moved to the Motor Vehicle Administration (MVA) in October 2011.

Performance measures:

- Observed seat belt use rate.
- Annual number of citations issued for seat belt violations during Click It or Ticket and Chief's Challenge campaigns.

Objective 1.5 Impaired Driving

NOTE: Responsibility for this objective was moved to the MVA in October 2011.

Performance measures:

- Number of impaired driving related fatalities on all roads.
- Number of impaired driving related injuries on all roads.

Objective 1.6 Temporary Traffic Control Zones

Reduce the annual number of traffic fatalities in temporary traffic control (TTC) zones from 7 in 2008 to 5 or fewer (29% reduction) by December 31, 2015, and reduce the annual number of persons injured in TTC zones from 1,067 in 2008 to fewer than 850 (20% reduction) by December 31, 2015.

Performance measures:

- Annual number of TTC zone traffic fatalities on all roads.
- Annual number of TTC zone traffic injuries on all roads.
- Annual number of TTC zone crashes on all roads.
- Speed camera data - number of vehicles exceeding speed threshold in work zone I-695 at Charles Street.

- Speed camera data – number of vehicles exceeding speed threshold in work zone ICC at I-95, MD 198 to MD 212.
- Speed camera data – number of vehicles exceeding speed threshold in work zone I-95 Section 100.
- Speed camera data – number of vehicles exceeding speed threshold in work zone I-695/MD 26.
- Speed camera data – number of vehicles exceeding speed threshold in work zone MD 295/I-195 to I-695.

Strategies:

- Develop and implement a program to increase the percentage of work zones achieving a grade B or higher.
- Implement speed management techniques to improve compliance with speed limits in work zones.

Objective 1.7 Aggressive Driving

Note: Responsibility for this objective was moved to the MVA in October 2011.

Performance measures:

- Annual number of aggressive driving fatalities on all roads in Maryland.
- Annual number of aggressive driving injuries on all roads in Maryland.

Objective 1.8 High-Risk Drivers

NOTE: Responsibility for this objective was moved to the MVA in October 2011.

Performance measures:

- Annual number of fatalities involving motorcycles.
- Annual number of fatalities involving young drivers (defined as drivers age 16-20).
- Annual number of fatalities involving older drivers (defined as drivers age 65 and older).
- Annual number of injuries involving motorcycles.
- Annual number of injuries involving young drivers (age 16-20).
- Annual number of senior citizen driver injuries.

Objective 1.9 Infrastructure

Reduce the number of intersection related fatalities from 153 in 2008 to 123 or fewer (19.8%) by December 31, 2015, and reduce the number of intersection related injuries from 20,135 in 2008 to fewer than 16,744 (16.8%) by December 31, 2015. Reduce the number of lane departure fatalities from 288 in 2008 to 260 or fewer (10%) by December 31, 2015, and reduce the number of lane departure injuries from 11,063 in 2008 to fewer than 9,950 (10%) by December 31, 2015.

Performance measures:

- Number of intersection related fatalities.
- Number of intersection related injuries.
- Number of lane departure fatalities.
- Number of lane departure injuries.

Strategies:

- Implement "Human Factors & Designing for Mature Drivers" course statewide.
- Identify and eliminate roadway drop offs.

MOBILITY/ECONOMY

GOAL: SUPPORT MARYLAND'S ECONOMY AND COMMUNITIES THROUGH ENABLING RELIABLE MOVEMENT OF PEOPLE AND GOODS

Objective 2.1 Travel Reliability

Achieve an annual user cost savings of at least $1.1 billion as a result of congestion management.

Performance measures:

- Annual user cost savings due to congestion management.
- Annual user cost savings due to incident management.
- Annual user cost savings due to implemented recurring congestion projects.
- Annual user cost savings due to signal retiming program.
- Reduction in incident congestion delay.
- Average incident duration.
- Number of roadway patrol hours logged.
- Number of assists provided.
- Number of incident responses.
- Total number of roadway assists and incident responses.
- Number of customer communications responses.
- Percent of state highway system with congested conditions.
- Percent of time with at least 85% of posted speed maintained on freeways/expressways.
- Percent reduction in average speed (travel time index) on freeways/expressways during peak periods.
- Number of bottlenecks on freeways and expressways.
- Percent of freeway lane-miles with average annual volumes at or above congested levels.
- Percent of arterial lane-miles with average annual volumes at or above congested levels.
- Number of emergency preparedness exercises in which SHA participated.
- Reduction in vehicle miles traveled through park and ride usage.
- Total number of spaces of SHA-operated statewide park and ride facilities.
- Average weekday utilization of SHA-operated statewide park and ride facilities.

Strategies:

- Develop a reporting plan for aggregating annual user cost savings for incident management, signal retiming and recurring congestion by June 30, 2012.
- Reduce incident congestion delay to achieve a user cost savings of at least $1 billion annually.
- Conduct local, state and regional coordination and collaboration activities to enhance congestion mitigation and response as well as emergency preparedness annually.
- Identify regionally significant routes on the state highway system for congestion monitoring, analysis and reporting purposes by June 30, 2012.
- Identify, analyze and rank the bottlenecks on state highways quarterly by location, facility type, congestion type, duration and average and worst queue length.
- Perform before/after studies annually to evaluate project benefits for recurring congestion related projects.
- Develop a statewide annual mobility report for SHA that highlights state of congestion, traffic trends and benefits of SHA policies, programs, and projects.
- Quantify annual mobility improvements realized as a result of the signal timing program annually.

- Participate in local and regional emergency preparedness exercises annually.
- Develop a methodology and/or an analysis of INRIX data to determine the performance measurement of winter and emergency management effectiveness by June 30, 2012.
- Implement strategies to quantify and increase park and ride usage annually.
- Coordinate activities with other modals, MPOs, agencies and local agencies for effective transportation demand management (TDM) through ride-sharing, carpooling, and congestion management.

Objective 2.2 Freight Mobility

Reduce the cost of delay on freight mobility by $X annually.

Performance measures:

- Number of bottlenecks along the statewide freight network.
- Amount of time savings for trucks due to delay reduction gained by implementing the CVISN program.
- Amount of delay on roadway system due to bottlenecks along statewide freight network.
- Amount of delay for trucks due to bottlenecks.

Strategies:

- Develop a strategic freight plan which includes a freight corridor map listing intermodal facilities (rail, airports and ports) and distribution centers in Maryland by December 31, 2011.
- Identify and prioritize bottlenecks along statewide truck corridors within the freight network annually.
- Increase amount of electronic screening/virtual weigh stations (VWS) installed from one to five to decrease truck delay along the freight corridors/network by June 30, 2016.
- Provide real-time (511) information for trucks throughout Maryland using GPS along freight corridors by June 30, 2014.
- Provide educational outreach for freight stakeholders annually.
- Develop a system plan and baseline data for measuring delay reduction along the freight corridors/network and establish baseline data by June 30, 2012.

Objective 2.3 Traveler Information Dissemination

Provide reliable and accessible real-time modal choice information to travelers and other stakeholders at all times.

Performance measures:

- Number of highway miles covered by SHA/CHART cameras.
- Total cameras viewable by CHART.
- Number of controllable cameras.
- Number of view-only cameras.
- Number of 511 calls received.
- Number of My Maryland 511 registered users.
- Number of hits on CHART website.
- Number of page views on CHART website.
- Number of CHART web mobile page views.
- Percent of time SHA/CHART cameras are operable.
- Number of page views on 511 websites.
- Number of Maryland 511 Twitter followers.

Strategies:

- Continue to improve CHART's capabilities for providing traffic information to regional integrated transportation data collection and distribution systems annually.
- Participate in regional coordination committees to develop and expand external transportation data collection and distribution systems annually.
- Provide enhancements to the 511 service annually.
- Improve traveler information capabilities annually to ensure reliable information to travelers and stakeholders.

Objective 2.4 Bicycle Facilities

Increase the directional miles of bicycle facilities (bicycle lanes, shared-use paths and shared-lanes denoted with the use of pavement markings) by 2% annually based on FY 2011 data.

Performance measures:

- Number of directional miles improved (pavement markings installed) for bicycle access based on FY 2011 data.
- Percent increase in bicycle lanes.
- Percent increase in shared-use paths.
- Percent increase in shared-lanes that include pavement marking designating a shared space for vehicles and bicycles.
- Percentage of state-owned roadway centerline miles with a bicycle level of comfort (BLOC) grade "D" or better.
- Percent of eligible SHA roadways within three miles of a transit facility improved for bicycles.

Strategies:

- Develop SHA bicycle master plan by June 30, 2013.
- Review and revise current SHA bicycle and pedestrian design guidelines by December 31, 2011.
- Implement public outreach plan to share SHA's proactive bicycle program with the bicycle advocates and public by December 31, 2011.
- Continuously improve GIS database to provide additional layers to support implementation of SHA bicycle master plan.
- Focus bicycle improvements on roadways in the vicinity of transit facilities.

Objective 2.5 Pedestrian Facilities

Increase the directional miles of sidewalks by 2% annually based on FY 2011 data.

Performance measures:

- Percent of sidewalks that meet ADA compliance.
- Percent of all pedestrian signals that are APS equipped.
- Directional miles of newly constructed sidewalk.
- Directional miles of reconstructed sidewalk.
- Percent of state-owned roadway directional miles within priority funding areas that have sidewalks.
- Percent of state-owned roadway directional miles within Urban areas that have sidewalks.
- Percent reduction in total network gap for sidewalks.
- Percent of eligible SHA roadways within one mile of a transit facility improved with sidewalks.

Strategies:

- Track all capital program projects to ensure 100% ADA compliance annually.
- Program and construct projects to specifically address non-compliant elements on existing facilities through Fund 33 annually.
- Perform field verification on completed projects and update GIS database to reflect compliance along SHA's sidewalk system annually.
- Convert 100% of existing signals to APS by June 30, 2016.
- Program and construct improvements to increase directional miles of Urban roadways with sidewalk by 2% annually.
- Annually work with urban counties and local governments to leverage matching funds under Fund 79.

Objective 2.6 Economic Development

Support Maryland's Smart, Green and Growing initiative to implement priority economic development initiatives annually.

Performance measures:

No measures for this objective.

Strategies:

- Open the Intercounty Connector (ICC) between I-270 and I-95 by June 30, 2012.
- Complete funded portions of the Base Realignment and Closure (BRAC) improvement program on time and on budget.
- Support transit-oriented development projects and improved vehicular access to rail stations annually.
- Develop a methodology for assessing economic development benefits realized from the access permit program by June 30, 2012.

SYSTEM PRESERVATION AND MAINTENANCE

GOAL: MAINTAIN A HIGH QUALITY HIGHWAY SYSTEM

Objective 3.1 Overall Pavement Condition

Maintain annually at least 84% of the SHA pavement network in acceptable overall pavement condition (cracking, rutting, and ride).

Performance measures:

- Percentage of SHA network in acceptable overall pavement condition.
- Percentage of SHA pavement network in acceptable rutting condition.
- Percentage of SHA pavement network in acceptable cracking condition.
- Fiscal year dollar amount programmed for all system preservation funding categories.
- Fiscal year to date dollar amount expended.
- Percent of fiscal year to date dollar amount expended vs. programmed.
- Number of lane-mile years accomplished through rehabilitation.
- Number of lane-mile years accomplished through pavement preservation.
- Tons of hot mix asphalt (HMA) produced.
- Cubic yards of Portland cement concrete (PCC) produced.
- Cost per lane-mile year to improve an area-wide project under the Fund 77 program.
- Cost per lane-mile year to improve a single advertised project under the Fund 77 program.
- Percentage of the planned benefit target achieved for service life under the Fund 77 program.
- CTP amount programmed for Fund 77 in dollars.

- Actual expenditures for Fund 77 in dollars.
- Percentage of spent/programmed for Fund 77.
- Percentage of Fund 77 budget allocated to paving items.

Strategies:

- Implement our pavement preservation program approved by FHWA (in May 2011) that will strategically utilize system preservation activities.
- Promote and expand the beneficial use of recycled materials for highway applications in an environmentally responsible manner.
- Develop a process to monitor and report the ride quality of bridge approaches and decks to evaluate the performance of different methods for design and construction.
- Develop and implement the business process improvements to characterize the quality of materials and construction on completed highway projects (construction and material quality index).

Sub-Objective 3.1A Ride Quality

Maintain annually at least 84% (CY 2002 pavement conditions) of the SHA pavement network in acceptable riding quality condition.

Performance measures:

- Percentage of SHA pavement network in acceptable ride condition.
- Number of lane-mile years accomplished through resurfacing under the Fund 77 program.
- Percentage of lane-miles with new construction or rehabilitation under the Fund 77 program with acceptable ride quality.
- Percentage of lane-miles with new construction or rehabilitation with acceptable ride quality.

Strategies:

- Develop a statewide preservation plan to maximize pavement performance under the Fund 77 program by May 1 each year.
- Take steps to meet budget and benefit goals by district and functional class for each fiscal year as defined in the project selection tool.
- Design and implement a new project selection tool that will be easily accessible by all districts by June 1, 2013.
- Enhance optimization program to include improved reporting tools, improved project selection tool, and mapping capabilities by June 1, 2013.

Objective 3.2 Statewide Maintenance Index

Annually maintain 84% of the state highway network in overall preferred maintenance condition.

Performance measures:

- Number of lane-miles on the Maryland state highway network.
- Percentage of the Maryland SHA network in overall preferred maintenance condition (84% goal).
- Average maintenance activity expenditures per lane-mile.
- Maintenance activity expenditures.

Strategies:

- Develop the business process improvements to accurately capture operating activities and expenditures to be used to determine system preservation activity priorities.

Sub-Objective 3.2A Traffic/Safety

Annually, improve/maintain 87% of the state highway traffic and safety elements in overall preferred condition.

Performance measures:

- Number of lane-miles on the Maryland state highway network.
- Number of roadside miles on the Maryland state highway network.
- Number of average vehicle miles traveled (AVMT) on the Maryland state highway network.
- Number of pavement markings on the Maryland state highway network.
- Number of linear feet of guardrail on the Maryland state highway network.
- Percentage of the Maryland state highway traffic and safety elements in overall preferred condition.
- Average expenditures per AVMT/lane mile.
- Number of square feet of pavement markings placed.
- Percentage of pavement markings functioning as intended.
- Average cost per square foot of pavement marking placed.
- Number of linear feet of guardrail repaired/replaced.
- Number of guardrail end treatments repaired/replaced.
- Percentage of guardrail functioning as intended.
- Average cost to repair/replace each linear foot of guardrail.
- Number of linear miles of roadside maintained for brush and tree activity.
- Percentage of roadway free from encroachment of brush and trees.
- Average cost per linear foot of brush and tree maintenance.

Strategies:

- Enhance the coordination of landscape plantings with the location of signs to minimize the potential for obstructions to the sign in the future.
- Continue to develop pavement marking, guardrail and drainage maintenance business processes until they are mature enough to independently follow an asset management approach.

Sub-Objective 3.2B Roadside

Annually, improve/maintain 79% of the state highway roadside elements in an overall preferred condition.

Performance measures:

- Number of roadside miles on the Maryland state highway network.
- Number of lane-miles on the Maryland state highway network.
- Number of mowable acres on the Maryland state highway network.
- Number of linear feet of ditches on the Maryland state highway network.
- Number of culverts on the Maryland state highway network.
- Number of inlets on the Maryland state highway network.
- Number of open-section roadside miles on the Maryland state highway network.
- Percentage of the Maryland state highway roadside elements in overall preferred condition.
- Average expenditures per roadside mile.
- Number of acres mowed.
- Number of mowing cycles.
- Percentage of SHA roadside miles with acceptable mowing.
- Average cost per acre mowed.
- Number of truck loads of litter collected.
- Percentage of SHA roadside miles with acceptable litter levels.

- Average cost per truck load of litter removed.
- Number of linear feet of ditches maintained.
- Percentage of ditches in an environmentally responsible condition.
- Average cost per linear foot of ditch maintained.
- Number of linear feet of culverts maintained.
- Percentage of culverts in an environmentally responsible condition.
- Average cost per linear foot of culvert maintained.
- Number of inlets maintained.
- Percentage of inlets in an environmentally responsible condition.
- Average cost per inlet maintained.
- Linear miles of shoulders graded.
- Percentage of open-section roadside miles in an environmentally responsible condition.
- Average cost per open-section roadside miles maintained.
- Linear miles of roadway/shoulders swept.
- Number of sweeping cycles.
- Number of truck loads of debris removed.
- Percentage of lane-miles free of loose material or debris.
- Average cost per linear mile swept.
- Average cost per truck load of debris collected.

Strategies:

- Implement a vegetation management program that minimizes acres mowed and encourages native vegetation.
- Continue to develop drainage maintenance business processes until it is mature enough to independently follow an asset management approach.
- Develop and coordinate a maintenance program that meets the total maximum daily load (TMDL) requirements for the Chesapeake Bay Clean Water Act.

Objective 3.3 Structure Condition

Maintain all structures along SHA highway network so that there is no adverse effect on their safe use by emergency vehicles, school buses and vehicles servicing the economy of an area, evaluated annually.

Performance measures: See sub-objectives below.

Strategies: See sub-objectives below.

Sub-Objective 3.3A Bridge Condition on National Highway System

Maintain 100% of the bridges along SHA portion of the National Highway System (NHS) so that all legally loaded vehicles can safely traverse, evaluated annually.

Performance measures:

- Percentage of bridges along SHA portion of the NHS that will allow all legally loaded vehicles to safely traverse.
- Number of structurally deficient SHA NHS bridges (that are not affected by long term planning) that are not advertised for improvements within five years from the time they are identified as a high priority.
- Number of SHA's NHS bridges for which repairs were made or initiated.
- Number of SHA's NHS bridges for which improvements were made or initiated.
- Dollars spent on repairs to SHA's NHS bridges.
- Dollars spent on improvements to SHA's NHS bridges.

- Number of structurally deficient SHA NHS bridges at beginning of each calendar year.
- Number of bridges along SHA portion of the NHS at beginning of each calendar year.
- Additional number of SHA NHS bridges rated as structurally deficient during the calendar year.
- Percentage of structurally deficient SHA NHS bridges (that are not affected by long term planning) that are not advertised for improvements within five years from the time they are identified as a high priority.

Strategies:

- Assign a high priority to engineering follow up and completion of repairs to SHA's NHS structures with reported structural deficiencies to prevent a weight posting situation.
- All of SHA's NHS bridges whose ratings indicate a borderline structural condition shall have an engineering follow up review within six months of the most recent inspection and if repairs are required, they shall be initiated within one year from the date when the work was established.
- Pursue sufficient additional funding to perform necessary remedial repairs and/or improvement work in order to prevent a weight restriction from being imposed on an SHA NHS bridge.
- Always have open-end construction contractors and design consultants on board to perform emergency repairs as necessary to ensure the safety of SHA NHS structures.
- Identify structurally deficient SHA NHS bridges that are candidates for a deck replacement and/or rehabilitation. Commence preliminary engineering activities on these structures and continue plan development to a structural/final review stage so that an inventory of shelf rehabilitation projects would be ready for advertisement should additional funding become available.
- For water scour critical, any other identified crossings, evaluate immediately structural condition and scour protection after any serious storm event at their locations. If necessary, emergency work will be initiated immediately and evaluation and need for a formal study and possible additional permanent scour counter measures shall take place.
- Where applicable, notify the OPPE and OHD that existing structurally deficient structures are not being addressed in a timely manner because future geometrics at a structure location are not being made available and/or the overall scope of the project necessary to make a replacement bridge functional is too costly.

Sub-Objective 3.3B Bridge Condition for Entire SHA Highway Network

Maintain all bridges along SHA highway network, including those identified as weight restricted and structurally deficient, so that there is no adverse effect on their safe use by emergency vehicles, school buses and vehicles servicing the economy of an area, evaluated annually.

Performance measures:

- Percentage of SHA bridges identified as weight restricted and/or structurally deficient where there is no adverse effect on their safe use by emergency vehicles, school buses and vehicles servicing the economy of an area.

- Number of structurally deficient SHA bridges (that are not affected by long term planning) that are not advertised for improvements within five years from the time they are identified as a high priority.
- Number of SHA bridges that are structurally deficient and/or weight restricted for which repairs were made or initiated.
- Dollars spent on repairs to structurally deficient and/or weight restricted SHA bridges.
- Number of SHA bridges that are structurally deficient and/or weight restricted for which improvements were made or initiated.
- Dollars spent on improvements to structurally deficient and/or weight restricted bridges.
- Number of SHA bridges at beginning of each calendar year.
- Number of SHA bridges that are structurally deficient at beginning of each calendar year.
- Number of SHA bridges that are only weight restricted at beginning of each calendar year.
- Number of SHA bridges that are structurally deficient and weight restricted at beginning of each calendar year.
- Additional number of SHA bridges rated as structurally deficient during the calendar year based on latest bridge inspection data.
- Number of SHA bridges that received inquiries from customers and SHA districts regarding adverse impacts resulting from a weight posting during the calendar year.
- Percentage of structurally deficient SHA bridges (that are not affected by long term planning) that are not advertised for improvements within five years from the time they are identified as a high priority.
- Number of SHA bridges posted with a weight restriction.
- Percentage of bridges along the SHA network that will allow legally loaded vehicles to safely traverse.

Strategies:

- Whenever inspections of weight posted bridges or structurally deficient bridges indicate that repairs are necessary to prevent a weight posting or the lowering of the existing allowable weight restriction, the work to prevent this shall be given top priority, and where possible, complete actual construction 18 months from the date when the need for the work was established.
- If complaints are received from delivery services and/or businesses concerning a bridge weight posting, the maximum detour length for delivery vehicles in an area will be determined and the work required to reduce the weight posting to raise the posted weight limit to allow previously banned delivery vehicles to safely cross the bridge will be evaluated. If merited, where detour is long, number of vehicles denied is excessive and funding is available, structural action will be taken to modify or eliminate the weight posting to accommodate industry needs.
- Pursue sufficient additional funding to perform necessary remedial repairs and/or improvement work to prevent a weight posting or a reduction in the lowering of the existing allowable weight restriction limit from being imposed on an SHA bridge.

- Always have open-end construction contractors and design consultants on board to perform emergency repairs as necessary to ensure the safety of all SHA structures.
- Identify structurally deficient SHA bridges that are candidates for a deck replacement and/or rehabilitation. Commence preliminary engineering activities on these structures and continue plan development to a structural/final review stage so that an inventory of shelf rehabilitation projects would be ready for advertisement should additional funding become available.
- For water scour critical, any other identified crossings, evaluate immediately structural condition and scour protection after any serious storm event at their locations. If necessary, emergency work will be initiated immediately and evaluation and need for a formal study and possible additional permanent scour counter measures shall take place.
- Where applicable, notify OPPE and OHD that existing structurally deficient structures are not being addressed in a timely manner because future geometrics at a structure location are not being made available and/or the overall scope of the project necessary to make a replacement bridge functional is too costly.

Sub-Objective 3.3C Small Structure Condition

Maintain all small structures (retaining walls, culverts, and bridges 20 feet or less in length) and noise walls along the SHA highway network so that no such structure impedes the safe travel of all legally loaded vehicles, evaluated annually.

Performance measures:

- Percentage of SHA small structures that will allow the safe, unimpeded travel of all legally loaded vehicles.
- Number of SHA small structures for which repairs/improvements were made or initiated.
- Dollars spent on repairs/improvements to SHA small structures.
- Number of SHA small structures at the beginning of each calendar year.
- Number of SHA small structures that have been identified for required structural work at the beginning of each calendar year.
- Number of SHA noise walls for which repairs were made or initiated.
- Dollars spent on repairs to SHA noise walls.
- Number of SHA small structures that have a weight restriction at the beginning of each calendar year.
- Number of SHA small structures that had a weight restriction imposed during the calendar year.

Strategies:

- Whenever inspection reports indicate that a small structure is in need of structural work in order to prevent an imminent adverse effect on traffic, the work to prevent this shall be given top priority.
- If complaints are received from delivery services and/or businesses concerning a small structure weight posting, the maximum detour length for delivery vehicles in an area will be determined and the work required to raise the posted weight limit to allow previously banned delivery vehicles to safely cross the bridge to utilize the small structure will be evaluated. If merited, where detour is long, number of vehicles denied is excessive and funding is available,

structural action will be taken to modify or eliminate the weight posting to accommodate industry needs.

- Pursue sufficient additional funding to perform necessary remedial repairs and/or improvement work to prevent a weight posting or the lowering of the existing allowable weight restriction from being imposed on SHA small structures.
- Always have open-end construction contractors and design consultants on board to perform emergency repairs as necessary to ensure the safety of all SHA small structures.
- For water scour critical, any other identified crossings, evaluate immediately structural condition and scour protection after any serious storm event at their locations. If necessary, emergency work will be initiated immediately and evaluation and need for a formal study and possible additional permanent scour counter measures shall take place.

Objective 3.4 Winter

Regain bare pavement of interstate and primary SHA roadways in four hours or less after the end of frozen precipitation during all winter storms.

Performance measures:

- Number of lane-miles on the Maryland state highway network.
- Inches of snowfall by district and statewide.
- Pounds of salt used per lane-mile per inch of snow.
- Percentage of events when shops reported a time four hours or less to regain bare pavement after a winter storm.
- Number of hours required to regain bare pavement after a winter storm.
- Total winter dollars expended per lane-mile per inch of snowfall.

Strategies:

- Implement Maintenance Decision Support System (MDSS) as a pilot, then expand statewide.
- Evaluate current snow and ice removal practices nationally in an effort to improve SHA operations (i.e., scheduling methods, resource allocation, equipment use, etc.).
- Continue to explore new technologies to remove snow and ice more efficiently and effectively (i.e., new materials, spreaders, plows, etc.).
- Review and revise the snow removal contract to better meet SHA operational needs.
- Maintain adequate staffing levels that are available to plow snow at any time.
- Develop a winter index number.
- Work with CHART to enhance and implement new requirements of the Emergency Operations Reporting System that incorporate efficiencies of the eSnowbook.
- Collect salt usage data at the route level, to coincide with TMDL requirements per watershed.
- Implement automatic vehicle location (AVL) for winter operations.

Objective 3.5 Asset Management

Consistently facilitate and promote the use of an asset management philosophy for decision making in SHA.

Performance measures:

- Number of highway assets identified to be monitored.
- Number of highway assets with adequate inventory and condition data.

- Number of highway assets with adequate decision support tools.
- Number of highway assets with all system preservation activities eligible for federal funding.

Strategies:

- Create an electronic inventory process to record the existence, attributes and condition of highway assets to engage organizational capabilities within the asset data warehouse.
- Modify the condition assessment program to electronically collect and store the conditions of highway assets.
- Identify the initial and repair costs as well as define the treatment and service life for individual assets and the benefit added to the network.
- Develop performance models that estimate future conditions and service life expectations for individual assets.
- Develop the decision support tools that assist in making sustainable program investments with both capital and operating expenditures.
- Refine and implement the business process improvements that allow for project delivery of system preservation activities using an asset management philosophy with FHWA concurrence.
- Complete the update link with inventory and condition information after completion of system preservation activities utilizing an eGIS application.
- Utilize the Asset Management Steering Committee to coordinate and provide consistency across SHA in the development of all business processes related to highway assets and their management.
- Collect supporting data and develop justification to be more efficient in our asset management business process and data collection by taking advantage of electronic hand held devices in SHA field operations.

Sub-Objective 3.5A Line Striping

Annually maintain 98% of the line striping on the state highway network in acceptable condition.

Performance measures:

- Number of stripe miles on the Maryland state highway network.
- Number of stripe miles addressed.
- Percentage of SHA stripe miles functioning as intended.
- Average cost per stripe mile.
- Number of stripe miles with durable material (not paint) on the Maryland state highway network.

Strategies:

- Develop a plan to annually update inventory and condition information for line striping on SHA network.
- Utilize existing research data coupled with information gathered internally to establish service life and cost estimates for the various potential material types for line striping.
- Develop the life cycle cost analysis, performance modeling and decision support tools needed to make the best selection of system preservation activities for line striping.
- Evaluate and adjust policies accordingly to recommend the best use of durable products and material to maximize long term line striping performance with available budget resources.

- Obtain approval from FHWA to utilize federal funding for system preservation activities for line striping.
- Develop the contract vehicles necessary to utilize the system preservation activities for line striping.

Sub-Objective 3.5B Lighting

Annually maintain 85% of the lighting on the state highway network in operational condition.

Performance measures:

- Number of lights maintained by SHA.
- Number of lights repaired/replaced.
- Percentage of SHA roadway lighting functioning as intended.
- Average cost per light repaired/replaced.

Strategies:

- Develop a decision support tool for the selection of capital lighting projects that will consider historical data on percentage of lights lit and maintenance expenditure data by location or interchange.
- Develop an electronic monitoring and reporting process to consistently identify the number of operating lights and the maintenance expenditures by location, type of repairs, etc., on a monthly basis across all seven districts.
- Develop a statewide roadway lighting reduction program.
- Investigate and pilot alternative technologies such as LED roadway lighting.

Sub-Objective 3.5C Signs

Annually maintain 95% of the signs on the state highway network in acceptable condition.

Performance measures:

- Number of signs on the Maryland state highway network.
- Number of signs repaired/replaced.
- Percentage of SHA signs functioning as intended.
- Average cost per sign repaired/replaced.

Strategies:

- Implement a sign management system which will inventory and assess the condition of signs on the state network with implementation by July 2012.
- Create and implement a system to electronically capture the accomplishment of new signs installed and existing signs maintained.

MANAGING OUR AGENCY

GOAL: EFFECTIVELY MANAGE PROJECT DELIVERY AND FINANCIAL, WORKFORCE, INFORMATION TECHNOLOGY AND CIVIL RIGHTS PROGRAMS

Objective 4.1 Financial Management

Achieve excellence in managing our agency in the area of financial management.

Performance measures: See sub-objectives below.

Strategies: See sub-objectives below.

Sub-Objective 4.1A Vendor Invoices

Annually, pay 99% or better of all vendor invoices within 30 days of receipt.

Performance measures:

- Quantity of invoices reviewed.
- Percentage of acceptable invoices paid on time.

Strategies:

- Monitor invoices based on OOF's monthly accounts payable aging report (weekly).
- Train employees on the proper manner for handling invoices.
- Review the status of all late invoices based on OOF's report by index.
- Monthly finance meeting with administrator and deputy administrators, and publishing on Intranet website for senior management team.

Sub-Objective 4.1B Operating Budget

Manage operating budget targets at or below 1% of the annual amended appropriation.

Performance measures:

- Percentage of operating expenditures of budget.
- Dollars appropriated for operating budget.
- Dollars expended for operating budget.

Strategies:

- Provide operating program expenditure data to offices/districts.
- Generate monthly finance report to monitor districts' contract expenditures.
- Meetings with districts and deputies on a monthly basis.
- Monthly finance meeting with administrator and deputy administrators, and publish on Intranet website for senior management team.

Sub-Objective 4.1C Capital Program

Manage the capital program submitted in the third quarter CTP for the budget year to within 95% to 110% for federal funds and 90% to 100% for state funds.

Performance measures:

- Total dollars appropriated for capital budget.
- Total dollars expended for capital budget.
- Percentage of total capital expended in capital budget.
- Federal dollars appropriated in capital budget.
- Percentage of federal dollars expended in capital budget.
- State dollars appropriated for capital budget.
- State dollars expended in capital budget.
- Percentage of state dollars expended in capital budget.
- Dollars expended for state budget.

Strategies:

- Update forecast letter and distribute to program managers (monthly).
- Obtain data from offices/districts in order to provide accurate information for forecasting expenditures.
- Meetings with districts, fund managers, deputies on a more frequent basis.
- Monthly finance meeting with administrator and deputy administrators, and publish on Intranet website for senior management team.

Sub-Objective 4.1D A&G Expenditures

Annually, manage the expenditures at or below the administrative and general (A&G) budget.

Performance measures:

- Percentage of A&G expenditures of budget.
- A&G budget.
- Dollars expended for A&G.

Strategies:

- Distribute A&G reports to offices/districts.

- Provide A&G training to all offices/districts as needed.
- Monthly finance meeting with administrator and deputy administrators, and publish on Intranet website for senior management team.

Sub-Objective 4.1E Fixed Assets

Account for 100% of fixed assets during the annual physical inventory.

Performance measures:

- Number of missing items.
- Dollar amount of missing items.
- Percentage of fixed assets missing.
- Percentage of dollar amount of missing items.

Strategies:

- Provide training to senior manager and accountable officers as needed.
- Remove old, excess, obsolete items as soon as identified.
- Establish best practices for items that are prone to personal use - assignment and responsibility, citations and security.
- Establish and maintain Intranet web page for best practices.
- Field inspections by inventory management section (IMS) - sample of items.

Sub-Objective 4.1F Materials and Supplies Inventory

Annually, maintain the number and dollar amount of adjustments made to the materials and supplies inventory to 3% or less of the total inventory balance.

Performance measures:

- Number of material and supply items.
- Total number of inventory adjustments.
- Percentage of inventory adjusted in dollars.
- Percentage of inventory items adjusted.

Strategies:

- Provide training to Bradley system users to reduce the need for adjustments.
- Adjustments have to be analyzed to see if they are true adjustments and not system errors.
- Train IMS employees in Bradley system both as manager and end-user.
- Establish IMS position as a material and supply resource person dealing with field offices and liaison with IT office.
- Office of Audits (OA) and IMS will conduct adjustment audit.

Sub-Objective 4.1G Overtime Usage

Annually, manage non-emergency overtime to less than 100% of the overtime budget.

Performance measures:

- Percentage of non-winter emergency overtime budget expended.
- Total dollar expenditures for non-winter emergency overtime.
- Total dollar amount budgeted for overtime.
- Total overtime hours.
- Winter emergency overtime hours.
- Non-winter emergency and routine overtime hours.

Strategies:

- Meetings with districts and deputies on a more frequent basis.
- Monthly finance meeting with administrator and deputy administrators, and publish on Intranet website for senior management team.

Sub-Objective 4.1H Internal Controls

Ensure that SHA completes the organization-wide risk assessment and corrects 100% of all deficiencies.

Performance measures:

- Number of offices completing the assessment.
- Number of deficiencies identified.
- Percentage of deficiencies corrected.

Strategies:

- Ensure that X% of reoccurring commodity purchases have commodity contracts in place to reduce the number of procurements made at the shop level.
- Ensure that X% of maintenance contracts over $25,000 have district-wide contracts in place to reduce the number of procurements made at the shop level.
- Maintain zero coding errors on the additional elements screen for POs and BPOs.
- Ensure that 100% of the employees designated as procurement offices are fully trained.
- Ensure the consultant invoice verification checklist is fully completed for 100% of all A/E contract invoices.

Sub-Objective 4.1I Compliance with Small Procurement Policies

Ensure that SHA achieves and sustains at least 95% compliance with the 16 SHA small procurement policies and procedures most often cited for non-compliance in previous audits.

Performance measures:

- Percentage of compliance with the 16 SHA small procurement policies and procedures most often cited for non-compliance in previous audits for all SHA offices.
- Percentage of compliance with the 16 SHA small procurement policies and procedures most often cited for non-compliance in previous audits for all SHA shops.
- Percentage of compliance with the 16 SHA small procurement policies and procedures most often cited for non-compliance in previous audits for all of SHA.

Strategies:

- Train all credit card holders and maintenance shop procurement staff.
- OA will conduct audits of a sample of SHA maintenance shops and SHA offices each year. OA will pick 12 of the 16 policies and procedures most often cited for noncompliance. All 28 SHA maintenance shops and those SHA offices involved in a significant amount of small procurement will be audited on an annual or bi-annual basis. Those offices involved in some, but not significant, amounts of small procurement will be audited on at least a triennial basis. The frequency of audits generally will be determined based upon the results of prior audits and employee turnover.
- Issue audit report to management at the conclusion of each internal audit.
- Obtain corrective action plans from management to correct weaknesses found during audits.
- Office of Procurement and Contracts (OPC) will continue procurement certification and training.

- OOF will conduct annual reviews of credit card transactions to determine compliance with small procurement procedures, credit card guidelines, and COMAR Title 21 regulations.
- OPC, OA and OOF will meet quarterly to identify at-risk areas (i.e., particular shops, certain personnel, reoccurring audit findings) for appropriate training and/or actions.

Objective 4.2 Project Delivery

Meet project delivery targets.

Performance measures: See sub-objectives below.

Strategies: See sub-objectives below.

Sub-Objective 4.2A Design Schedule

Advertise 90% of capital improvement projects valued at more than $1 million within 30 days of the ad date initially established at the time of construction funding.

Performance measures:

- Percentage of projects (valued at more than $1 million) advertised within 30 days of the original estimated ad date in the ad schedule.
- Number of projects (valued at more than $1 million) that achieve this time frame.
- Number of projects advertised.

Strategies: No strategies for this objective.

Sub-Objective 4.2B Bid Openings

Bid openings for 90% of the capital improvement projects valued at more than $1 million occur within 21 days of the bid open date initially established at the time of project advertisement.

Performance measures:

- Percentage of projects valued at more than $1million with a bid opening within 3 weeks of bid opening date at time of actual advertisement date.
- Number of project that achieve this timeframe.
- Number of project that did not achieve this timeframe.
- Number of Bid Openings.

Strategies:

- Evaluate project bid delays to identify major contributing factors. Develop strategies to address future projects to potentially avoid future delays.
- Implement improved project delivery process and propose SHA-wide changes where deemed necessary to improve delivery performance.

Sub-Objective 4.2C Construction Schedule

On time project delivery is met 90% of the time, annually, on majors (Fund 70, 71, 72), sound barrier (Fund 26), bridge (Fund 80) and community safety and enhancement (Fund 84) projects as based on the end-of-season (EOS) date established at the time of construction.

Performance measures:

- Percentage of projects (Funds 26, 70, 71, 72, 80, 84) that meet the EOS date 90% of the time.
- Total number of projects (Funds 26, 70, 71, 72, 80, 84) that achieve the EOS date.
- Total number of projects (Funds 26, 70, 71, 72, 80, 84) reported.

Strategies:

- Through Total Quality in Construction Council (TQIC), OOC will monitor and review the status of all projects listed in the construction project report spreadsheet on a bi-monthly basis.
- Review projects for compliance with contract requirements, approved schedules and contractor submitted revised schedules on a monthly basis.
- Provide timely written notification to contractors when projects fall behind schedule.
- All district construction offices will review and update the construction project report spreadsheet located in ProjectWise on a monthly basis.

Sub-Objective 4.2D Cost Estimates

90% of capital improvement projects valued at more than $1 million have low bids that are within 110% of the initial amount of construction funding approved (based on preliminary form 42/25C).

Performance measures:

- Percentage of capital improvement projects valued at more than $1 million that did not exceed 110% of the estimated cost at the time the projects are funded for construction.
- Number of capital improvement projects valued at more than $1 million that did not exceed 110% of estimated bid.

Strategies:

- Develop project-stat tracking system to identify project costs. Data set current benchmark based upon FY 2007 data.
- Evaluate project cost overruns/under-runs in FY 2007 to identify major contributing factors. Develop strategies to address future project issues and improve cost estimating process.
- Implement improved project cost estimating process and propose SHA-wide changes where deemed necessary to significantly improve estimating.

Sub-Objective 4.2E Change Orders

Annually, maintain construction change orders at or under 10% of the total construction contract expenditures.

Performance measures:

- Percentage of construction change orders.
- Dollar amount of change orders.
- Number of change orders.
- Dollar value of contract awarded.

Strategies:

- Reduction in errors and/or omissions in project plans and specifications annually.
- Develop and maintain a database for tracking errors and omissions by June 30, 2013.
- Monitor the change order expenditures vs. construction phase expenditures on a quarterly basis.

Objective 4.3 Workforce Management

Achieve excellence in managing our agency in the area of workforce management.

Performance measures: See sub-objectives below.

Strategies: See sub-objectives below.

Sub-Objective 4.3A Strategic Staffing

Utilize a strategic and collaborative approach to staffing.

Performance measures:

- Number of critical positions with established replacement plans.
- Number of supplemental staff to include temporary, contractual, agency temps and consultants.
- Number of managers, supervisors and stakeholders training in the vacancy and accountability process.

Strategies:

- Assist SHA management in identifying critical positions and developing replacement plans for all such positions.
- Report to senior leadership the number of SHA supplemental staff – temporary and contractual employees (obtained from human resources).
- Report to senior leadership the number of SHA supplemental staff – agency temps and consultants (obtained from the consultant database).
- Develop and deliver training to stakeholders (senior management, ad chiefs, hiring supervisors/managers and human resources) on utilizing a collaborative process that illustrates the process and emphasizes stakeholder accountability in strategically filling vacant positions.

Sub-Objective 4.3B Recruitment and Retention

Limit vacancy rate to 5% or less annually by utilizing a strategic, integrated approach to staffing.

Performance measures:

- Retention rates by office/classification.
- Percent of vacant allocated PINs.
- Number of filled positions.
- Number of vacant positions.
- Days to fill a vacancy.
- Vacancy rate.
- Turnover rate – resignations only, all non-performance related.

Strategies:

- Recruitment - resume out-of-state on-campus visits when budget allows.
- Recruitment - when possible, utilize the rate and refer (R&R) program for qualified offices (must meet certain requirements). Seek official approval of R&R program.
- Recruitment - internships.
- Recruitment - continue/increase SHA presence on campus.
- Recruitment - increase pool of underrepresented candidates for positions throughout SHA as identified in workforce utilization analysis.
- Recruitment - expand involvement/outreach to high schools to encourage students to seek careers in transportation.
- Recruitment - continue to implement strategies for positions that are difficult and/or critical to fill.
- Recruitment - review and monitor recruitment process and seek opportunities to expedite and/or allow concurrent activities.
- Recruitment - pay issues.
- Recruitment - expand outreach utilizing social media tools (Linked In and Skype are currently being pursued).
- Retention - improve recognition activities and more timely feedback to employees.

- Retention - provide full and timely disclosure of any funding or budgetary changes that impact employee earnings or benefits.
- Retention - periodic evaluation of workload.
- Retention - track and review exit interviews.
- Retention - develop peer mentoring/on-boarding for new employees.
- Retention - marketing of existing opportunities.
- Retention - market accomplishments, recognition and awards.
- Retention - develop work quality activities within offices.
- Retention - evaluate step entry level for lower level positions (FMTs).
- Retention - revisit employee survey with respect to retention.
- Retention – pay issues.

Sub-Objective 4.3C Knowledge Management

Ensure employee awareness of, access to and use of the most current policies and procedures and key processes through an SHA-wide knowledge management (KM) portal.

Performance measures:

- Number of key processes and number of current policies.
- Number of key policies and documented processes published to the portal.
- Percent complete.
- Number of FAQs posted on the SHA-wide KM portal.
- Percent of RCs participating.

Strategies:

- Each office/district validates and documents their key policies, procedures and processes and enters them through an SHA-wide KM portal by June 30, 2015.
- On a quarterly basis, each RC will create, validate and update as needed, FAQs answering their most relevant questions.
- Placeholder: Strategy for communication/marketing benefits.

Sub-Objective 4.3D Succession Planning

Systematically plan for succession for 90% of at-risk positions by increasing SHA bench strength in employee knowledge, skills and abilities by June 30, 2015.

Performance measures:

- Number of identified vacant at-risk positions.
- Percent of functional organization charts completed.
- Percent of standard operating procedures (SOPs) documented.
- Number of at-risk positions eligible to retire in five years.
- Number of succession planning activities completed for at-risk positions.
- Number of training and development activities completed for at-risk positions.

Strategies:

- Annually, identify at-risk positions.
- Identify training and development needs and other succession planning activities for 90% of at-risk positions by one year prior to incumbent's retirement eligibility date.
- Develop desk manuals on critical tasks for at-risk positions by January 1, 2013.
- All RCs develop 90% of key office SOPs by July 1, 2014.
- SHA to publish a succession planning best practices resource guide by March 2012.

- Annually, incorporate succession planning activities into the PDP process for at-risk positions.

Sub-Objective 4.3E SHA University/Training and Development

Annually, complete 80% of SHA-sponsored training and development activities as requested on professional development plans (PDPs).

Performance measures:

- Percentage of training and development activities offered.
- No-Show rate.
- Number of training and development activities requested.
- Percentage of training and development activities completed.

Strategies:

- Local areas will annually develop PDPs for all employees.
- Local areas will annually review PDPs to ensure that training requests are appropriate and achievable.
- Local areas will annually ensure that adequate resources are available to fulfill PDP requests.
- Monitor PDPs using Learning Management System (LMS) – ongoing.
- Report PDP completions on a quarterly basis to stakeholders.
- Utilize technology to facilitate increased training availability (e.g., e-learning, webinars, blended learning).

Sub-Objective 4.3F Core Training

Ensure 90% of employees have completed online SHA core training (training required by federal and/or state regulation or law) within one month of hire.

Performance measures:

- Percentage of employees completing core training within 30 days of hire.

Strategies:

- Partner with hiring managers, administrative chiefs and local UTCs to ensure methodology is understood and core training is available to personnel with or without ready access to online resources.
- Provide reminder notifications to employees who have not completed training.
- Monitor completions and provide monthly tracking reports.

Sub-Objective 4.3G Onsite Consultant Training

Ensure 95% of onsite/field consultants, as required by the onsite/field consultant training policy, have completed the required SHA core training (training required by federal and/or state regulation or law) prior to beginning work with SHA.

Performance measures:

- Percentage of consultants completing core training prior to beginning work.

Strategies:

- Provide access to online core courses for the consultant community.
- Monitor completions and provide monthly tracking reports.
- Partner with local areas and use OCTS to monitor consultants who became covered by the policy at a later date than initial hire.

Sub-Objective 4.3H Mandated Training

Designated personnel will complete job-specific mandated training (as required by federal and/or state regulation or policy).

Performance measures:

- Percent of designated personnel completing mandated training.

Strategies:

- Phase One: Identify positions or functions that require mandated training by December 31, 2011.
- Phase Two: Assess current level of personnel needed to be trained by June 30, 2012.
- Phase Three: Monitor completions and provide monthly tracking reports.

Sub-Objective 4.3I Workplace Injuries

Annually, sustain the number of lost work days due to workplace injuries at 17 or less per 100 employees.

Performance measures:

- Number of recorded injuries.
- Percentage of injuries reported to Injured Workers' Insurance Fund (IWIF) within three days.
- Total number of restricted days.
- Overall workers' compensation cost.
- Total number of lost work days.
- Severity rate (number of lost work days per 100 employees).
- Number of IWIF claims.
- Number of employees with three or more claims within the previous 12-month period.
- Observed seat belt use rate for SHA employees at the 707/211 headquarters.

Strategies:

- Perform a comprehensive workplace safety inspection at each SHA facility annually.
- Responsible manager will address safety recommendations within 30 days.
- Annually, deliver three safety training experiences at each facility.
- Each safety representative will present quarterly discussions emphasizing safety priorities at, e.g., local town meetings, equipment meetings, safety management team meetings, personnel meetings, etc.
- Participate in National Safety Month campaign in June each year.
- Promote safety awareness (e.g., SHA safety exhibit, deliver presentations and training, attend conferences and seminars, partner with other agencies) at public sector conferences four times a year.
- Track and discuss injuries reported to IWIF beyond three days at bi-monthly safety management team meetings.

Sub-Objective 4.3J Safety-Sensitive Employees

Annually, conduct 75% of random drug and alcohol testing for SHA's safety-sensitive employees.

Performance measures:

- Percentage of safety-sensitive employees who are randomly drug/alcohol tested per month/year.
- Number of safety-sensitive employees who are randomly drug/alcohol tested.
- Total number of safety-sensitive employees.

Strategies:

- Randomly drug/alcohol test 75% of safety-sensitive employees per year.
- Send electronic reminders to administrative chiefs to ensure all safety-sensitive employees complete training of the MDOT Substance Abuse Policy and acknowledge completion of the training.

- Investigate why safety-sensitive employees miss random testing when their name has been selected.
- Notify senior managers of safety-sensitive employees who miss random testing without a valid excuse.

Objective 4.4 Civil Rights Program Management

Achieve excellence in managing our agency in the area of civil rights program management.

Performance measures: See sub-objectives below.

Strategies: See sub-objectives below.

Sub-Objective 4.4A D/MBE Compliance

Achieve the annual state goal of awarded contracts to disadvantaged and minority business enterprises (D/MBEs).

Performance measures:

- Total dollars paid to D/MBEs.
- Percentage of closed-out contracts that met the contract goal for D/MBE (by contract type).
- D/MBE percentage of awarded contracts.

Strategies:

- Increase data integrity by partnering with A/E, construction, and maintenance offices.
- OPC, working with Office of Equal Opportunity, will include comprehensive MBE language in training manuals.
- OEO will partner with Office of Construction in reviewing and setting D/MBE contract goals.
- Conduct final close-out report on all contracts to monitor project D/MBE participation.
- Partner with industry representatives/firms to conduct outreach with resource tools to assist disadvantaged and minority businesses.
- Fully implement iFMIS system for all applicable SHA contracts by July 2012.

Sub-Objective 4.4B Workplace Diversity

To achieve a SHA workforce that reflects the diversity of the customers that we serve.

Performance measures:

- Diversity percentages of new hires by office.
- Number of employees who have completed the core diversity awareness training course.

Strategies:

- Conduct a workforce analysis and present to hiring managers, quarterly.
- Create an agency-driven approach to attracting, hiring and targeting populations based on current census demographics (e.g., Hispanics).
- Promote an inclusive environment through continuous learning and cultural competence experiences and events that demonstrates SHA's commitment to workplace diversity.
- Develop and offer online and face-to-face training to all offices to ensure that employees have access to the mandatory diversity training.
- Introduce future workers to careers in transportation and engineering through partnerships and relationships with stakeholders.

Sub-Objective 4.4C Title VI

Ensure agency (special emphasis areas), sub-recipients and contractors are nondiscriminatory/compliant in its delivery of programs, services and activities receiving federal financial assistance.

Performance measures:

- Number of compliance reviews conducted on internal programs, sub-recipients and contractors.
- Number of outreach/training sessions provided.
- Number of attendees at outreach/training sessions.

Strategies:

- Internal – conduct Title VI compliance reviews on the agency's special emphasis areas.
- Internal – provide training to the district EEOs on internal compliance reviews.
- Sub-recipients – conduct Title VI compliance reviews on sub-recipients.
- Sub-recipients – provide training to the district EEOs on external compliance reviews.
- Contractors – conduct contractor compliance reviews on federal aid projects.
- Contractors – provide outreach/training to contractors on the compliance review process.

Sub-Objective 4.4D Title VII

Ensure agency is nondiscriminatory in its employment practices (e.g., hiring, promotions, disciplinary actions and performance evaluations).

Performance measures:

- Number of employees trained.
- Number of inquiries and complaints resolved through the counseling program.

Strategies:

- Ensure that every employee is aware of the Title VII civil rights programs by June 2012.
- Implement EEO counseling program in coordination with MDOT and TSHRS.
- Train one-third of SHA employees annually on Title VII civil rights programs (sexual harassment, discrimination, employee rights and responsibilities and ADA) by June 2012.
- Investigate inquiries and complaints within TSHRS timeframes.

Sub-Objective 4.4E On-the-Job Training (OJT)

Provide OJT training opportunities to underserved populations in the highway construction industry within Maryland.

Performance measures:

- Number of people who participate in OJT training programs.
- Number of OJT training programs offered.
- Number of participants placed in employment opportunities.

Strategies:

- Partner with Maryland community college network and industry stakeholders to provide OJT training components.
- Work with state and local agencies, community organizations and advocacy groups to identify underserved populations.

Objective 4.5 Information Technology Management

Achieve excellence in managing our agency in the area of information technology management.

Performance measures: See sub-objectives below.

Strategies: See sub-objectives below.

Sub-Objective 4.5A Business Process Improvement through IT Enhancements

Annually demonstrate process improvements to ten business processes through implementation, enhancement or consolidation of IT systems.

Performance measures:

- Individual processes.
- Number of IT systems improved.

Strategies:

- Develop and implement a clearly defined process and procedure to initiate an IT project request.
- Develop and implement a clear prioritization process to get IT projects completed.

Sub-Objective 4.5B Managing Data Effectively

Improve the quality of government (SHA) information available to its employees and the general public.

Performance measures:

- Number of data sources.
- Percent complete.

Strategies:

- Develop a data management plan by June 2013.
- Establish roles and responsibilities of data governance by June 2013.
- Establish a data management framework by December 2014.

ENVIRONMENTAL COMPLIANCE AND STEWARDSHIP

GOAL: DEVELOP AND MAINTAIN MARYLAND STATE HIGHWAYS IN AN ENVIRONMENTALLY RESPONSIBLE MANNER

Objective 5.1 Water Quality and Natural Resources

Provide a positive contribution to Chesapeake Bay water quality by annually achieving 100% compliance with water quality and natural resources laws and regulations.

Performance measures:

- Number of pounds per year of nitrogen pollution abated.
- Number of pounds per year of phosphorus pollution abated.
- Number of pounds per year of sediment abated.
- Number of acres of untreated pavement retrofitted for stormwater management (SWM) controls each fiscal year.
- Combined annual cost in dollars of total maximum daily load (TMDL) program.

Strategies:

- Address water quality and natural resources goals through development and implementation of a green asset management plan.
- Watershed implementation plan (WIP) – develop comprehensive programs to reduce pollutant loads from SHA right-of-way.
- Communicate SHA environmental initiatives and accomplishments for Chesapeake Bay restoration to internal and external customers through effective use of training and web-based messaging and other social media.
- Pursue banking opportunities for project mitigation and TMDL compliance for wetlands, streams and forests.

Objective 5.2 Environmental Compliance on Construction Projects

Improve construction monitoring, inspection and close-out processes to ensure 100% compliance with environmental standards and regulations.

Performance measures:

- Number of individuals trained on new effluent limitation requirements each fiscal year.
- Number of active construction projects with erosion and sediment control permits.
- Number of erosion and sediment control quality assurance (QA) inspections performed.
- Number of SHA employees, consultants and contractors certified for erosion and sediment control.
- Percentage of compliance on erosion and sediment control ratings.
- Number of non-compliance findings ("D" or "F" ratings).
- Number of projects with non-compliance findings.

Strategies:

- Implement erosion and sediment control GAP analysis recommendations.
- Develop training for effluent limitation requirements.
- Implement effluent limitation training, including procedures for districts to comply with NPDES stormwater construction activity permit requirements.
- Improve construction training, tracking and closeout procedures to ensure all permit requirements are met prior to closeout.

Objective 5.3 Environmental Compliance on SHA Highways and at SHA Facilities

Integrate sustainable strategies to maintain SHA highways and facilities in an environmentally sensitive manner and ensure 100% compliance with applicable environmental regulations and standards.

Performance measures:

- Number of acres of roadside planted/replanted in no/low maintenance groundcovers or native meadows.
- Number of road salt management best practices pilot projects implemented each fiscal year.
- Number of staff trained in each district each fiscal year for winter maintenance activities involving use of road salt.
- Number of SHA operations and maintenance staff (sign, signal shops, labs and maintenance staff) receiving environmental compliance training each fiscal year.
- Percentage of SWM facilities rated as functionally adequate each fiscal year.
- Number of SHA buildings and maintenance facilities assessed annually.
- Number of non-compliance findings for SHA buildings and maintenance facilities.
- Number of SHA buildings and maintenance facilities with non-compliance findings.
- Number of non-compliance findings addressed according to schedule for SHA buildings and maintenance facilities.
- Percentage of targeted non-compliance findings addressed for SHA buildings and maintenance facilities.
- Acres of Canada thistle identified in SHA right-of-way each calendar year.
- Acres of phragmites identified in SHA right-of-way each calendar year.
- Acres of Canada thistle treated each calendar year.
- Acres of phragmites treated each calendar year.
- Number of Partnership Planting projects completed each calendar year.

Strategies:

- Move to a more sustainable vegetation management approach based on individualized plans for every major highway corridor (includes US and interstate routes) and a general plan for non-targeted roads based on highway classification, context, and geographical area.
- Improve invasive species control outcomes through innovative vegetation management techniques.
- Develop and implement a salt management plan.
- Continue to work to achieve and maintain 90% functionality in SHA stormwater management facilities.
- Bring and maintain all SHA buildings and maintenance facilities into compliance with environmental laws and regulations by 2015.
- Environmental Compliance and Stewardship co-chairs shall periodically attend SHA maintenance council meetings to facilitate discussion on what and how the maintenance community is doing to promote environmental stewardship and sustainability.
- Implement Partnership Planting projects to enhance the appearance of communities adjacent to state highways.

Objective 5.4 Climate Change Mitigation

Reduce greenhouse gas (GHG) emissions by continuing to increase usage of alternative fuels, fleet and congestion management and emissions reduction strategies in highway maintenance and construction.

Performance measures:

- Annual percentage increase in use of E-85 in the SHA light fleet.
- Annual carbon footprint (CO2e) calculated for total SHA fuel usage.
- Annual percentage increase in the number of flex-fuel vehicles added to the SHA fleet each fiscal year.
- Annual reduction in GHG resulting from congestion management projects.
- Annual usage of alternative fuels.
- Percent of fuel usage that is alternative fuel.
- Total fuel usage of the SHA light fleet.

Strategies:

- Reduce GHG emissions through fuel and fleet management practices.
- Reduce GHG emissions through improved construction performance (such as adding specs to contracts, requiring contractors to follow contract specifications, building an inventory of opportunities for GHG reduction in construction activities).
- Reduce GHG emissions through roadside maintenance policies and activities.
- Measure reductions in GHG emissions obtained through congestion management strategies.
- Develop a carbon management program that operates to reduce SHA's carbon footprint while saving energy and enhancing sustainability credentials.
- Reduce GHG emissions through education, outreach and training.

Objective 5.5 Climate Change Adaptation

Implement strategies to manage SHA assets, modify business practices and adapt infrastructure to climate change.

Performance measures:

- Number of SHA facilities with adaptation strategies documented in the SHA Climate Adaptation Plan.

- Number of state-maintained lane-miles with adaptation strategies documented in the SHA Climate Adaptation Plan.
- Number of SHA bridges, structures and culverts with adaptation strategies documented in the SHA Climate Adaptation Plan.
- Number of traffic signals where battery back-ups have been installed.

Strategies:

- Develop a long-term strategic climate change plan.
- Work with OOTS to identify traffic signals vulnerable to power loss and develop plan to provide battery back-up systems.

Objective 5.6 Recycled Materials Usage

Adopt a green materials management approach to reduce waste and achieve higher levels of re-use and recycling.

Performance measures:

- Total non-Maryland Recycling Act (MRA) tons recycled each calendar year.
- Total MRA tons recycled each calendar year.
- MRA recycling rate each calendar year.
- Tons of reclaimed concrete aggregate used annually on SHA paving projects to replace virgin graded aggregate base (GAB).
- Tons of fly ash used annually in SHA concrete pavement applications.
- Tons of blast furnace slag used annually as aggregate in SHA concrete pavement applications.
- Number of recyclable material applications covered by SHA policies or specifications.
- Percent of recycled asphalt pavement (RAP) used annually on SHA paving projects (expressed as a percent of the total hot mixed asphalt (HMA) tonnage placed on state roadways).
- Tons of RAP used annually in HMA on SHA paving projects.

Strategies:

- Create a recycling clearinghouse or business unit to coordinate facility and equipment recycling initiatives and efforts and develop policy and programs to identify resources and uses, create or promote markets, facilitate procurement services and revenue streams.
- Increase re-uses of recycled materials in SHA construction projects through strategies that are environmentally friendly and prioritize performance and safety.
- Increase contractor recycling of highway construction by-products and waste.
- Evaluate opportunities to salvage and recycle concrete, aggregate and rebar from bridge demolition.

Objective 5.7 Energy Conservation

Reduce energy consumption for highways and other facilities through an ongoing process of researching and implementing new technologies and business processes while continuing to encourage an SHA-wide conservation culture.

Performance measures:

- Annual percentage reduction in kilowatt hours resulting from LED conversion of traffic signals.
- Percentage of poles eliminated each fiscal year under the SHA lighting reduction program.

Strategies:

- Develop an SHA policy for best management practices to reduce usage and conserve energy in highway lighting, signage and signals.
- Implement SHA-wide strategies to reduce energy usage at SHA building facilities, including strategies to influence individual behavior and education and training for building maintenance staff.

CUSTOMER COMMUNICATIONS, SERVICE AND SATISFACTION

GOAL: WORK TOGETHER TO SERVE OUR CUSTOMERS AND LISTEN TO THEIR PRIORITIES AND NEEDS

Objective 6.1 Overall Satisfaction

Biennially, attain an overall customer (registered Maryland driver) satisfaction composite rating of at least 4 "satisfied" on a 5-point scale.

Performance measures:

- Number of registered Maryland drivers surveyed.
- Maryland driver satisfaction rating.
- Percent of customers rating SHA overall "B" or better.
- Satisfaction rating from external customers who have contacted SHA through the Customer Care Management System (CCMS).

Strategies:

- Institutionalize customer bill of rights.
- Respond to every customer service request by the end of the next business day and resolve issues by the date given.
- Develop tools and mechanisms to follow up with SHA customers such as an enhancement to Customer Care Management System (CCMS) with an automatic survey.
- Improve communication on the Internet.
- Recognize employees and publicize positive customer feedback on the SHA Intranet.
- Develop customer service training course materials and provide training.
- Continue to use Customer Care Management System (CCMS) as a tool.
- Provide guidance to project managers on when and how to conduct customer outreach.

Objective 6.2 Stakeholder/Partner Satisfaction

Quarterly, conduct a qualitative assessment of stakeholder and partner groups on how well SHA captures customer priorities, specifically focusing on communication, the degree to which the groups work together, how issues are resolved and where there is active participation.

Performance measures:

No measures for this objective.

Strategies:

- D/MBE stakeholder/partner outreach and communication.
- ADA stakeholder/partner communication.
- Environmental stakeholder/partner outreach and communication with a focus on TMDL.
- ACEC/MD stakeholder/partner outreach and communication.
- MTBMA stakeholder/partner outreach and communication.
- Asphalt stakeholder/partner outreach and communication.
- Concrete stakeholder/partner outreach and communication.
- Aggregate stakeholder/partner outreach and communication.

- Freight shippers and haulers stakeholder/partner outreach and communication.

Objective 6.3 Process Improvement to Enhance Customer Service

Improve key processes in a manner that is more transparent and efficient to enhance customer service.

Performance measures:

- Time to deliver a Transportation Enhancement Program (TEP) project.
- Number of outdoor advertising and junkyard licenses processed within stated deadline.
- Number of outdoor advertising permits processed within stated deadline.
- Response time for outdoor advertising and junkyard complaints.

Strategies:

- Conduct TEP process review and make improvements.
- Finalize ownership of the Outdoor Advertising Program.
- Inventory signs that have received a permit from SHA and catalogue in a database.
- Establish an Outdoor Advertising/Junkyard Stakeholder group.
- Review the process for approving local speed camera requests and increase visibility/clarity for local jurisdictions on the SHA Internet.
- Improve coordination and clarify roles between SHA and the State Treasurer's Office regarding claims.

Objective 6.4 Internal Customer Service

To achieve a rating of 80% favorable from the SHA employee survey on satisfaction with internal customer service and communications within SHA.

Performance measures:

- Percent favorable rating from employee survey on satisfaction with internal customer service and communications.

Strategies:

- Modify the SHA employee survey by April 1, 2012, to include selective questions to gauge both internal customer service and communications.
- Conduct research on basic customer service competencies and how to incorporate them into the hiring and promotion process.
- Implement the Customer Bill of Rights as an internal customer service standard.
- Develop a one-page customer service guideline for employees.
- Put the Customer Bill of Rights into the employee entrance packet.
- Implement workplace conduct guidelines.
- Hold discussions at the senior management team meeting about managers using Town Hall meetings on a regular basis to discuss customer service expectations and about how SHA managers can support each other to stay on track with good internal communications.
- Conduct random third-party samples of internal and external customer responses within SHA.
- Conduct office-to-office partnering sessions.
- Conduct training on internal customer competencies and behavior expectations.