Part IV. PROJECT DETAIL FY 2014 - FY 2018

A. ENTERPRISE FUND PROJECTS

1. AIRPORT ENTERPRISE FUND

PROJECT: AIR-14 -1 **DEPARTMENT PRIORITY: 1 of 20**

Project Working Title: **RUNWAY 6 ENGINEERED MATERIAL ARRESTING SYSTEM (EMAS) RETROFIT/RECONSTRUCTION – ADDITIONAL FUNDING**
Project Location: 480 Barnstable Road, Hyannis

Project Description: The original Runway 6 Engineered Material Arresting System (EMAS) bed was installed in 2003 to prevent concerns related to aircraft overshoots and undershoots on runways that do not meet FAA Runway Safety Area (RSA) requirements. The installation on Runway 6 primarily consists of light weight concrete blocks with a concrete cement top board. A field strength test and feasibility study was completed on October 14, 2012 and confirmed the need to replace selected blocks not suitable for retrofit tops and to retrofit the remaining blocks. Exact costs will not be available until mid-November 2012.

Project Justification: The Barnstable Municipal Airport (BMA) EMAS is a "first generation" system with a projected 10-year lifespan. The BMA was visited by the Engineered Arresting Systems Corporation (ESCO), who originally installed Runway 6 EMAS bed, in 2009 and in 2012 as part of an FAA project to investigate and determine if airports which have EMAS beds are qualified to receive this new top board. It was determined that Barnstable Municipal Airport is eligible for this replacement. This new top board will extend the life of the EMAS bed and provide better adherence of paint requiring less maintenance by the Airport. An inspection has confirmed this requirement and the need to completely replace selected blocks.

Impact of Denial/Postponement: This is a Federal Aviation Administration (FAA) priority safety requirement. The EMAS bed will not be better protected and will increase the risk of failure if used to prevent an overshoot or undershoot. The BMA will continue to provide frequent maintenance of the EMAS bed costing more money and lack of replacement will increase the risk of loss of life and property.

Project Cost Estimates: Construction: $200,000

Project Estimated Completion Date: Winter 2013

Project Cost/Description FY 2014 and Follow-On Years:

2014	$200,000	Additional funding for retrofit

Source of Funding: Funding by FAA (90%) (AIP and /or FAA Discretionary Funds), MassDOT AD (7.5%), and local share (2.5%) from airport enterprise funds.

Operating Budget Impact: None

EMASS System Route 28 side of Airport

PROJECT: AIR-14 -2 **DEPARTMENT PRIORITY: 2 of 20**

Project Working Title: **REPLACE AIRFIELD LIGHTING REGULATORS AND FAA MANDATORY RUNWAY HOLD POSITION SIGNS (RHPS)**
Project Location: 480 Barnstable Road, Hyannis

Project Description: The Airfield Lighting Regulators control mandated airfield lighting and navigational equipment and have reached the end of their useful life and must be replaced; and the mandated Runway Hold Position Signs must be replaced to meet revised Federal Aviation Administration (FAA) safety standards on airports.

Project Justification: Airfield lighting regulators control and provide the means for required lighting for aircraft to navigate into and upon the airfield; and for mandated airfield operating equipment associated with aircraft operations. The runway hold position signs are required on runways and taxiways to assist the control tower and aircraft in providing safe airfield operations and for "hold short" requirements to prevent aircraft runway incursions and prevent collisions. Airfield, runway and taxiway lighting and signage is a continuous program essential to maintaining our airport systems to meet safety and FAA FAR Part 91 mandated airport certification requirements.

Impact Of Denial/Postponement: To deny or postpone funding will have significant potential flight safety consequences with regard to airport operations; and continues to affect the ability of pilots to prevent avoidable airport and mid-air collisions, with resultant loss of life or significant injuries.

Project Cost Estimates: Construction $260,000

Project Estimated Completion Date: 2014

Project Cost/Description FY 2014 and Follow-On Years:

2014	$260,000	Design and Construction

Source of Funding: Reimbursable funding by FAA (90%) (AIP and/or FAA Discretionary), MassDOT AD (7.5%), and local share (2.5%).

PROJECT: AIR-14 -3	DEPARTMENT PRIORITY: 3 of 20

Project Working Title: **DESIGN; AND CONSTRUCT THE MAIN TERMINAL RAMP – PHASE 2; AND CONSTRUCT THE AIRCRAFT DEICING PAD; AND THE RELOCATION AND RECONSTRUCTION OF ALL OF TAXIWAY ALPHA FROM RUNWAY 33 END TO RUNWAY 15 END; AND MISCELLANEOUS AIRFIELD IMPROVEMENTS**

Project Location: 480 Barnstable Road, Hyannis

Project Description: This project includes: (1) Phase 2 of the design and reconstruction of the proposed main terminal aircraft parking apron of approximately 220,000 square feet and is sized to handle peak period activity, primarily by air carrier aircraft, various turbo-prop aircraft, and charter jet aircraft, including a portion of taxiway Alpha to and from the aircraft parking positions, which are now constrained, and will conform to FAA design standards in Advisory Circular No. 150/5300-13; and (2) the construction of a 43,000 square foot de-icing area is being provided for the de-icing of aircraft during winter conditions; and (3) the relocation and reconstruction of Taxiway Alpha which is not in compliance with airport design criteria.

Project Justification: (1) The terminal parking apron/ramp surfaces are over 20 years old, and have grossly exceeded their life expectancy. Pavement composition is inadequate to handle the current design of aircraft that frequent the airport, and shows serious signs of deterioration. All apron areas have been maintained through daily maintenance, and are in fair to good condition. The new apron is needed to improve the efficiency and safety of aircraft operations within the apron area, as well as, to meet existing and future aircraft space requirements. There are no adequate facilities on the airport to support aircraft deicing; however, current practices have been accepted until this project can be completed. (2) An aircraft deicing pad will ensure deicing operations are environmentally safe and significantly decreases the potential for ground water contamination. (3) This Taxiway Alpha reconstruction project is the final step in a multi-year process to acquire necessary abutting properties, and correct the alignment of Taxiway Alpha to bring it into compliance with the FAA airport layout and separation criteria requirements. It should also be noted that realignment of the taxiway is a significant safety enhancement for aircraft operations affecting runways 15 and 33.

Work Accomplished Prior Project: Phase 1 Construction of New Terminal Aircraft Parking Ramp and Installation of Sediment Control Units in the Stormwater Drainage System was completed in FY2012.

Impact Of Denial/Postponement: To deny or postpone funding of this capital project will have a negative impact on safe airport operations, aircraft safety, passenger comforts, and affected security initiatives. Any substantial delay in design and construction of Phase 2 of the Main Terminal ramp, and construction of the Aircraft deicing area, will result in a loss of revenue, and an unfavorable economic impact on the Town of Barnstable. In addition, it will seriously affect the safety of aircraft operating on the ramps and taxiways, and could also jeopardize the safety of aircraft and passengers. Denial of a deicing pad will seriously hinder safe aircraft operations during winter conditions and will increase the threat for ground water contamination. The inability to complete this project will prolong non-compliance with federal operating guidelines. In addition, aircraft and vehicular ground safety would be negatively affected due to continued decreased separation standards.

Project Cost Estimates: Design $480,000 Construction $7,320,000

Project Cost/Description FY 2014 and Follow-On Years:

FY	Cost	Project Description/Components
2014	$7,800,000	Design, Project Management and Construction

Source of Funding: Reimbursable Funding by FAA (AIP and Discretionary 90%), MassDOT AD (7.5%), and local share (2.5%) airport enterprise funds.

Operating Budget Impact: None – replacement of existing fixed pavement and consolidates deicing operations into one location

Supplemental Information: The current layout of the taxiway has been allowed by the Federal Aviation Administration (FAA) due to constraints previously imposed by commercial properties abutting the airport. Necessary abutting properties outside the airport have been acquired to complete the relocation and reconstruction and it is now necessary to bring "Taxiway Alpha" into compliance with FAA separation criteria requirements from taxiway Delta to the approach end of Runway 15. All FAA funding is subject to further appropriation and grant approval.

PROJECT: AIR-14 -4 **DEPARTMENT PRIORITY: 4 of 20**

Project Working Title: **CONSTRUCT NEW FUEL FARM**
Project Location: 480 Barnstable Road, Hyannis

Project Description: Install three 20,000 gallon above ground jet fuel storage tanks.

Project Justification: The existing 20,000 gallon jet fuel underground storage tank (UST) (circa 1993) does not contain enough capacity to meet the fuel sales demand. Fuel demand has increased at the airport and is projected to continue to grow. Installation of the three (3) new storage tanks will meet the growing aviation demand and enhance service to airlines and general aviation customers. More importantly, these tanks will greatly reduce potential threat of ground water pollution, which is always a paramount environmental concern. The existing 20,000 gallon jet fuel UST was converted to jet fuel service in 1992. Following construction of the new storage tanks, the existing 20,000 gallon jet fuel UST will be removed from the ground. Due to the new location of the Jet-A fuel farm adjacent to Gate F, and the installation of the new airport access road, the north ramp 1980'sT-Hangar was demolished and the tenants relocated. The project has already been 100% permitted through the Cape Cod Commission Development of Regional Impact approved in January 2007.

Impact Of Denial/Postponement: Denial or Postponement will force continuation of our inability to meet on-time demand for jet fueling services, and increases the risks for fuel spills; continue to negatively

impact required fuel settlement time before use; and will continue to increase our costs by purchasing fuel in smaller lots driving our retail costs upward with resultant loss of revenue by diversion of aircraft owners to other airports and degradation of service to our aircraft customers.

Project Cost Estimates: Construction $810,000

Project Estimated Completion Date: 2014

Project Cost/Description FY 2014 and Follow-On Years:

2014	$810,000	Construction

Source of Funding: Airport Enterprise Funds (20%) and reimbursable funding by MassDOT AD (80%) ASMP Program.

Operating Budget Impact: Replaces existing facility – more efficient operations

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Existing Fuel Farm

PROJECT: AIR-14 -5 **DEPARTMENT PRIORITY: 5 of 20**

Project Working Title: **CONSTRUCT EAST RAMP SEWER EXTENSION**
Project Location: 480 Barnstable Road, Hyannis, MA 02601

Project Description: The proposed project will provide municipal sewer service to existing buildings located on the East Ramp, and accommodate future growth in this area. The Airport will require existing facilities on the East Ramp that use an on-site septic system to connect to the Town sewer at the time of lease renewal. Installation of municipal sewer will remove these discharges from within the Zone of Contribution (Zone 2) to the Maher well field municipal drinking water wells. The proposed project will include the installation of approximately 5,700 feet of gravity fed sewer line extending to each existing structure, and along the East Ramp to accommodate future growth. Gravity fed sewer lines will discharge to a 7,000 gallon pumping station located approximately 200 feet southeast of the Hexagon hangar. Approximately 2,350 feet of 4-inch force main will connect the pumping station to existing gravity sewer, located on the southern side of the Runway 15/33 runway protection zone (Figure 1). The proposed 7,000 gallon pumping station will feature a natural gas/propane fired emergency backup generator and system alarm station.

Project Justification: The proposed project will eliminate the need for six on-site septic systems and accommodate future growth on the East Ramp. Completion of the proposed project will allow the Airport to meet the Cape Cod Commission Regional Policy Plan (RPP) performance requirements for both Potential Public Water Supply Areas (< 1 part per million (ppm) nutrient loading), and Wellhead Protection Areas (< 5 ppm nutrient loading) for proposed future growth. The project will also meet the Marine Water Recharge Area and Water Quality Improvement Area performance standards of the RPP. These requirements were evaluated in greater detail in the August 2010 Draft Master Plan, the September 2012 Final Environmental Impact Report, and are required by the Town of Barnstable Growth Management Department and Water Department.

Work Accomplished Prior Project: Design will commence upon completion of EIR, Cape Cod Commission Development Agreement, and revised Airport Master Plan.

Impact Of Denial/Postponement: Future growth on the East Ramp is contingent upon the completion of the proposed project, as the RPP performance standards require that future development maintain or improve upon existing conditions. Completion of the proposed project is a key element in realizing future growth opportunities on the East Ramp. The EIR, and the August 2010 Draft Master Plan requires the connection of existing structures to municipal sewer at time of lease renewal.

Project Cost Estimates: Construction $634,000

Project Estimated Completion Date: 2014

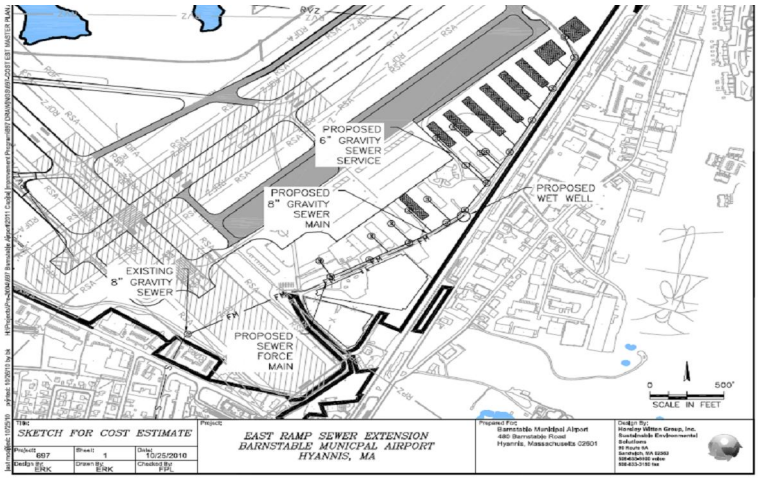
Project Cost/Description FY 2014 and Follow-On Years:

2014	$634,000	Construction

Source of Funding: **N**ot eligible for FAA reimbursement. MassDOT AD ASMP grant at 80%, and 20% local share from the Airport Enterprise Fund Reserves. Potential betterments, impact fees, user fees, development fees, connection fees, and so forth, to be developed.

Operating Budget Impact: New fixed system with potential additional DPW WPCD maintenance costs in out years to be determined

Supplemental Information: Horsley Witten conceptual figure entitled “East Ramp Sewer Extension Barnstable Municipal Airport Hyannis, MA.



East Ramp Sewer Extension

PROJECT: AIR-14 -6 **DEPARTMENT PRIORITY: 6 of 20**

Project Working Title: **AIRPORT FIXED BASE OPERATIONS (FBO) BUILDING**
Project Location: 480 Barnstable Road, Hyannis

Project Description: Design, permit and construct a new Fixed Base Operations (FBO) facility to be manned and operated by the Airport. The new facility will either be an addition to the existing Aircraft Rescue and Firefighting Building (ARFF) or a new stand alone building on a location to be determined on the East Ramp. The estimated size of the building/addition is approximately 2,500 square feet, single story, wood frame, asphalt shingle roof structure. The FBO facility will provide general aviation passenger lounges; pilot and crew rest areas; flight planning capability; kitchen and catering food storage areas; bathrooms; office spaces; a general reception area and waiting area; and other services as needed. In accordance with a recently completed Environmental Impact Report approved by MEPA, and a soon to be completed Development Agreement with the Cape Cod Commission and the Town of Barnstable, the facility will also be required to connect to the Town sewer system regardless of its location.

Project Justification: As a result of Airport Commission strategic planning, and customer requests for enhanced services for general aviation aircraft, including corporate and charter jet services, it has been determined that the Airport must provide enhanced high quality facilities and services to generate better customer relations and meet demands, better pilot and passenger services, and better business management in order to retain and increase general aviation business and revenues for the airport. It has been determined that such a facility should be constructed on the East Ramp and should either be an addition to the existing Aircraft Rescue and Firefighting Building (ARFF), or a new dedicated building – both of which should have airside and landside access, which may require moving of the airport fences and security systems. A complete architectural and engineering review of the ARFF Building will be completed in FY2013; and an airport consultant will complete research on demand and required facilities at the airport in FY2013.

Impact of Denial/Postponement: To deny or postpone funding of this capital project will have significant potential for adverse operational and customer demand consequences with regard to airport operations and revenue generation.

Project Cost Estimates: Design $102,000

Project Estimated Completion Date: 2015

Project Cost/Description FY 2014 and Follow-On Years:

2014	$ 102,000	Permitting and Project Design
2015	$1,205,000	Construction

Source of Funding: Not eligible for FAA reimbursable funding. Potential MassDOT ASMP program grants would be 80% reimbursable. For ineligible items, full cost would be born by the Airport Enterprise Fund Reserves and short term borrowing.

Operating Budget Impact: The FBO will provide customary accommodations for the convenience of users, including pilot lounge area, information services, direct telephone/internet service connections to the Flight Service Station and the U. S. Weather Bureau, and courtesy vehicle ground transportation to and from other areas of the airport. The FBO will also coordinate apron services and assistance to aircraft, including parking and tie down services, and sale and into-plane delivery of aviation fuels.

PROJECT: AIR-14 -7 **DEPARTMENT PRIORITY: 7 of 20**

Project Working Title: **AIRPORT PASSENGER TERMINAL AND BUILDING ENHANCEMENTS**
Project Location: 480 Barnstable Road, Hyannis

Project Description: The new Airport passenger terminal is a fully operational structure, built on a limited budget, and is in need of new additional enhancements to ensure that we continue to operate a safe, comfortable and efficient facility for the benefit of our customers – whether they are passengers on our air carriers, or they are tenants that operate within the new terminal, or they are employees of the airport. In FY2014, we are recommending that we continue this process by adding back into the project the design for a new baggage carousel and secure passenger arrival gate canopy, radiant heat at the exterior baggage canopy, a new Flight Information Display system, and a new lighting control system to reduce lighting costs. In addition, the Airport Rescue and Fire Fighting Building (ARFF) is 20 years old and has suffered from deferred maintenance and is in need of various upgrades to be determined by a complete engineering and architectural review of the building that should be completed in FY2013.

Project Justification: During the design and construction phases of the new passenger terminal, many items in the original design were either eliminated or reduced in size in order for the project to remain within budget – so-called design enhancements or a value engineering process. This included such items as a baggage carousel, exterior canopies, extended ticketing baggage belt, polished concrete instead of terrazzo floors, brick exterior siding instead of terra cotta wall cladding, elimination of an expensive landscape irrigation system, and so forth. Some of these items will never be replaced, however, this project is to continuously review the operational status of the facility and as funding permits, to add some of these amenities back into the new terminal and add enhancements as necessary, especially if new and expanded air carrier service becomes a reality. The ARFF building structural and system review will become the basis for a new long range preventative maintenance and capital plan for the structure; however, several building systems now appear to be in jeopardy of imminent failure.

Impact of Denial/Postponement: To deny or postpone funding of this capital project will have adverse operational, maintenance and passenger, tenant and employee quality of life consequences with regard to airport operations and maintenance. The lack of certain amenities may have future negative revenue generation impacts.

Project Cost Estimates: Construction: $200,000

Project Estimated Completion Date: 2015

Project Cost/Description FY 2014 and Follow-On Years:

2014	$200,000	Project Design and Construction

Source of Funding: For FAA and MassDOT eligible issues, reimbursable funding from FAA (90%), MassDOT Aeronautics (7.5%) and local share (2.5%); potential increase in Passenger Facility Charges (PFCs). MassDOT ASMP program grants would be 80% reimbursable. For ineligible items, full cost would be born by the Airport Enterprise Fund Reserves.

Operating Budget Impact: New fixed systems combined with reduced utility costs.

Supplemental Information: The funds in FY2014 are planned to design a new baggage carousel ($35,000) and design and construct a secure passenger arrival gate canopy ($50,000), radiant heat at

the exterior baggage canopy ($12,000), a new Flight Information Display system ($40,000), and a new lighting control system to reduce lighting costs ($25,000).

PROJECT: AIR-14 -8 **DEPARTMENT PRIORITY: 8 of 20**

Project Working Title: **INSTALL ENHANCED AIRFIELD ACCESS CONTROL AND SECURITY UPGRADES**
Project Location: 480 Barnstable Road, Hyannis

Project Description: The Barnstable Municipal Airport has a security program approved by the Transportation Security Administration (TSA) under Part 1542 of 49CFR Chapter XII; and as such is required to provide approved airport security measures over designated portions of the airport including the airport perimeter; in areas where passengers are enplaned or deplaned; where baggage is sorted, loaded and unloaded; and includes any adjacent areas that are not separated by other adequate security measures. Access to all entry control points to all of the aforementioned areas must be controlled by approved access control systems of various degrees of technology, including computer based software and hardware systems, fiber optic cables, remote transmitters, special locks and surveillance systems, and the use of trained, qualified, and certified personnel.

Project Justification: The Barnstable Municipal Airport (BMA) needs to upgrade such access control security measures throughout the airport to provide consistent standardized high quality systems; and to prevent breaches of security. In addition, all airport personnel are trained to monitor all aspects of airport security, including the use of the Barnstable Police Department on the airfield, and random inspections by TSA Inspectors. We are constantly upgrading systems to improve security and meet reporting requirements of the TSA. Violations of any aspect of the airport security plan are reported immediately to the TSA and may have impact on the National Airspace System. Particular details cannot be stated herein due to its designation as Sensitive Security Information (SSI).

Impact Of Denial/Postponement: Airport security may be breached and have a negative impact on the National Airspace System; may provide opportunities for terrorism incidents; and may lead to fines being imposed on the Airport or any entity found responsible for a breach in security.

Project Cost Estimates: Design and Construction: $90,000

Project Estimated Completion Date: 2013

Project Cost/Description FY 2014 and Follow-On Years:

2014	$90,000	Design and construct

Source of Funding: Airport enterprise funds – no grant funding available.

Operating Budget Impact: None

PROJECT: AIR-14 -9 **DEPARTMENT PRIORITY: 9 of 20**

Project Working Title: **DESIGN AND REPLACE EAST RAMP T-HANGAR ROOF**
Project Location: 480 Barnstable Road, Hyannis

Project Description: Design and replace the roof on the circa 1960's era East Ramp T-Hangar that has reached the end of its useful life. The existing metal roof continues to rapidly deteriorate with numerous leaks throughout the building that are patched as needed.

Project Justification: The East Ramp T-Hangar, despite its age, provides the only Airport-owned hangar spaces to accommodate the needs of general aviation at the Barnstable Municipal Airport. In addition, the BMA maintains a waiting list for T-hangar space that fluctuates between 25 and 27 aircraft owners waiting for space, and projections for the future of General Aviation at the BMA forecasts an additional demand for hangar space. Revenues generated by the continued rental of the bays will help offset costs of construction and maintenance.

Impact of Denial/Postponement: Impact of denial will allow hangar to continue to deteriorate with resultant loss of viable rental space. This will further decrease potential BMA revenues, and will prevent the BMA from meeting the demands of airport users.

Project Cost Estimates: Future 2015 Design: $7,500 Construction: $67,500

Project Estimated Completion Date: 2015

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$75,000	Design and Reconstruct

Source of Funding: Airport Enterprise Funds – 100%. Not eligible for MassDOT AD ASMP funding assistance.
Operating Budget Impact: Increased revenue

PROJECT: AIR-14 -10 **DEPARTMENT PRIORITY: 10 of 20**

Project Working Title: **FEDERAL AVIATION ADMINISTRATION (FAA) FEDERAL AVIATION REGULATION (FAR) PART 150 NOISE EXPOSURE MAP UPDATE**
Project Location: 480 Barnstable Road, Hyannis

Project Description: This project would update the original 1987 FAA FAR Part 150 noise compatibility study and noise exposure maps approved by the FAA in 1989; and it would update the Barnstable Municipal Airport (BMA) Noise Studies conducted in 1998/99.

Project Justification: The goal of the Barnstable Municipal Airport (BMA) noise mitigation program is to minimize the environmental impact of noise from airport operations, increasing the degree of compatibility between the airport and its neighbors through implementation of noise and land use mitigation measures that are practical for use consistent with the well being of the inhabitants of this region. The noise exposure maps will provide current “average day-night noise exposure” contours (Ldn) which can also be used for approved FAA noise mitigation measures if applicable, and as a guide for present and future land use planning. This project will help the BMA meet these goals and will provide an updated factual basis for discussions regarding noise exposures; it will focus on practical options to address issues of primary concern; and it will include public involvement. These recommended “voluntary” noise studies are the most likely to receive FAA approval for cost sharing.

Impact of Denial/Postponement: To deny or postpone funding of this capital project, noise complaints will continue, and the BMA will be seen as unresponsive to the inhabitants of the region. In addition, the BMA will have missed an opportunity to fine tune voluntary flight paths, and other noise reduction and flight safety measures.

Project Cost Estimates: Future 2015 Construction: $80,000

Project Estimated Completion Date: 2015

Project Cost/Description FY 2014 and Follow-On Years:

2014	$	
2015	$80,000	Complete Noise Exposure Mapping

Source of Funding: Funding by FAA (90%), MassDOT AD (5%), and local share (5%) from airport enterprise funds.

Operating Budget Impact: None

PROJECT: AIR-14 -11 **DEPARTMENT PRIORITY: 11 of 20**

Project Working Title: **DESIGN AND CONSTRUCT NEW T-HANGAR**
Project Location: 480 Barnstable Road, Hyannis

Project Description: Design and construct a new 6-bay nested T-hangar to provide additional hangar space to accommodate the needs of general aviation at the Barnstable Municipal Airport (BMA). The T-hangar would be constructed of metal with a concrete foundation and with bi-fold doors for aircraft access to the east ramp.

Project Justification: The recently completed Airport access road and the construction of the new fuel farm mandated the demolition of one of the two airports existing T-hangars, located adjacent to Gate Foxtrot. Since this T-hangar serviced Airport users that had to be displaced, the Airport desires to construct a new T-hangar on the East ramp to accommodate this loss of space. In addition, the BMA holds a waiting list for T-hangar space that fluctuates between 25 and 27 aircraft owners waiting for space, and projections for the future of General Aviation at the BMA forecasts an additional demand for hangar space. Revenues generated by the rental of the bays will help offset costs of construction and maintenance.

Impact of Denial/Postponement: Impact of denial will further decrease potential BMA revenues, and will prevent the BMA from meeting the demands of airport users for hangar space.

Project Cost Estimates: Future 2015 Design: $50,000 Construction: $600,000

Project Estimated Completion Date: 2015

Project Cost/Description FY 2014 and Follow-On Years:

2014	$	
2015	$650,000	Design and Construct

Source of Funding: Airport Enterprise Funds (20%) and reimbursable funding by MassDOT AD (80%)

Operating Budget Impact: None – replaces prior deteriorating facility that was demolished

PROJECT: AIR-14 -12 **DEPARTMENT PRIORITY: 12 of 20**

Project Working Title: **DESIGN AND REPLACE AIRFIELD VAULT EMERGENCY GENERATOR (100KW) AND REMOVE UNDERGROUND STORAGE TANK (UST)**
Project Location: 480 Barnstable Road, Hyannis

Project Description: Replace the existing circa 1990 100KW diesel generator and its associated 550 gallon underground storage tank (UST); and replace it with a new natural gas 100KW generator for the emergency operation of the airfield lighting vault located near Gate Papa on the East Ramp.

Project Justification: The existing 100KW diesel generator and its associated 550 gallon UST are due for replacement. The reinforced double wall steel UST is inspected as required, meets all current code requirements, and uses interstitial monitoring; however its location on the East Ramp warrants its removal in the near future, in keeping with the Airport's desire to remove all potential environmental threats in so far as is feasible on the East side of the airport to reduce the potential threat of ground water pollution.

Impact of Denial/Postponement: Denial or Postponement will place our emergency operation of airfield lighting at risk, with concurrent risk to safety of flight and potential loss of life and property damage. Denial or postponement also increases the potential risk of a diesel oil leak and threat of ground water pollution.

Project Cost Estimates: Future 2016 Design: $5,000 Construction: $55,000

Project Estimated Completion Date: 2016

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$0	
2016	$60,000	Design and Replace

Source of Funding: Airport Enterprise Funds (100%) - Not eligible for MassDOT AD ASMP Program.

Operating Budget Impact: **No**ne – replaces existing fixed facility

PROJECT: AIR-14 -13 **DEPARTMENT PRIORITY: 13 of 20**

Project Working Title: **REPLACE SNOW REMOVAL EQUIPMENT (SRE) AND AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) EQUIPMENT**
Project Location: 480 Barnstable Road, Hyannis

Project Description: Snow Removal Equipment (SRE) and Aircraft Rescue and Fire Fighting (ARFF) equipment must be maintained regularly and when certain FAA approved equipment is eligible for replacement with FAA grant assistance, SRE and ARFF vehicles and equipment must be evaluated and replaced as necessary.

Project Justification: With approximately 1.5 million square feet of pavement, that includes two active runways, several aircraft taxiways and aircraft parking ramps that must be maintained, including snow removal; and to maintain our FAA FAR Part 139 airport certification, certain equipment must be available and in good condition to perform as required.

Work Accomplished Prior Project: FY2011 Acquisition/project was cancelled due to funding constraints. Replacement airfield sweeper was acquired in FY2012.

Impact Of Denial/Postponement: The airport may not be able to meet mandated FAA FAR Part 139 certification requirements and would be decertified; the airport would not be able to maintain operations, nor remove snow in order to keep the runways open and safe for operation; the airport would be unable to provide a safe operation for the continuation of commerce as part of the national airspace plan; the airport would be unable to respond to airfield emergencies, with the potential for decreased flight safety, increased property damage, and would unnecessarily endanger lives and property.

Project Cost Estimates: Future 2016 Construction: $730,000

Project Estimated Completion Date: 2016

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$0	
2016	$730,000	Replace 1992 Heavy Duty ARFF Vehicle Replace 1981 Loader with 36 ft Plow

Source of Funding: FAA AIP reimbursable Grant funds at 90%; MassDOT at 5%; BMA at 5%

Operating Budget Impact: None **–** replace existing heavy duty ARFF/SRE equipment

PROJECT: AIR-14 -14 **DEPARTMENT PRIORITY: 14 of 20**

Project Working Title: **RUNWAY 15-33 AND TAXIWAY ECHO MAJOR RECONSTRUCTION**
Project Location: 480 Barnstable Road, Hyannis, MA 02601

Project Description: Runway 15-33 (circa 1985) and Taxiway Echo (circa 1980) have exceeded their pavement's 20-year design life and will, therefore, be programmed by the FAA and State for a full reconstruction. This project will include the design and reconstruction of the full length (5,252 feet) of the runway, in place, including in-pavement lighting and edge lights, and will extend the design life of the pavement for another two decades, and the reconstruction of adjacent Taxiway Echo, and other miscellaneous related airfield improvements.

Project Justification: Runway pavements are given a 20-year useful life by the FAA, after which time a major reconstruction is justified. Runway 15-33 has exceeded the end of its useful life and is scheduled for a rebuild. This will avoid hazards to flight safety from failing pavement, aircraft damage, or a closed runway that would create winter crosswind conditions on the remaining runway. Crack sealing and crack repairs have extended its useful life until now but further deterioration poses serious safety risks that must be addressed.

Impact of Denial/Postponement: To deny or postpone funding of this capital project will have flight safety consequences with regard to airport operations; and will increasingly affect the ability of pilots to operate on the runway, perform aircraft engine run-ups, and with potential loss of runway access during strong crosswinds and lessened flight safety.

Project Cost Estimates: Future 2017 Design: $400,000 Construction: $4,600,000

Project Estimated Completion Date: 2017

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$0	
2016	$0	
2017	$5,000,000	Design, Permitting, and Reconstruction

Source of Funding: Reimbursable funding from FAA (90%), MassDOT Aeronautics (5%) and local share (5%)

Operating Budget Impact: None **–** replaces existing runway and taxiway

PROJECT: AIR-14 -15 **DEPARTMENT PRIORITY: 15 of 20**

Project Working Title: **DESIGN AND RECONSTRUCT TAXIWAY CHARLIE**
Project Location: 480 Barnstable Road, Hyannis

Project Description: As part of the Federal Aviation Administration's (FAA) goals to improve and correct airport layout deficiencies, enhance aircraft safety, and insure compliance with regulatory guidance, this project serves to correct major operational aircraft ground and runway safety area (RSA) deficiencies associated with taxiway Charlie and its aircraft run-up area.

Project Justification: The reconstruction project will allow taxiway Charlie and the aircraft run-up area to be designed and constructed to comply with ongoing FAA safety area standards, and correct deficiencies within the runway approach and departure environment, including other miscellaneous related airfield improvements. The current design and operation of taxiway Charlie and the aircraft run-up area must be completed in order to comply with FAA Part 77 airspace restrictions and terminal instrument procedures (TERPS) criteria. New FAA guidance has mandated the required changes.

Impact of Denial/Postponement: Denial of postponement of this project will cause the airport to be non-compliant with FAA airport design and layout criteria. In addition, failure to comply and complete this project puts the airport in jeopardy for non-receipt of additional federal Airport Improvement Program (AIP) entitlement funds for airport capital improvements.

Project Cost Estimates: Future 2017 Design: $200,000 Construction: $2,300,000

Project Estimated Completion Date: 2017

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$0	
2016	$0	
2017	$2,500,000	Permit, Design and Construct

Source of Funding: Reimbursable Funding by FAA (AIP and Discretionary 90%), MassDOT AD (5%), and local share (5%) airport enterprise funds.

Operating Budget Impact: Reduced maintenance

PROJECT: AIR-14 -16	DEPARTMENT PRIORITY: 16 of 20

Project Working Title: **PERMITTING, DESIGN, RECONSTRUCTION OF THE EAST RAMP AND TAXIWAYS BRAVO AND DELTA**

Project Location: 480 Barnstable Road, Hyannis

Project Description: The Airport's East Ramp off the old Mary Dunn Way will require future reconstruction and expansion to meet future general aviation and corporate aircraft parking needs. This project will rebuild and expand the existing East Ramp, providing adequate space for the safe maneuvering and parking of the larger-wingspan corporate jets that make up the fleet that has begun using the airport. This project is incorporated in the FAA approved ALP and is included in the Draft Airport Master Plan, EIR and Development Agreement with the Town and the Cape Cod Commission. Taxiways Bravo and Delta serve airport operations in accessing and egressing the runway and ramp system. The portions of taxiways B and D adjacent to the east ramp are more than 25 years old; typical pavement life is 20 years, and these areas are in serious need of repair. Many existing stresses on the pavement, such as a greater influx of heavier jet aircraft, and given the current level of deterioration, pose serious foreign object debris (FOD) damage to operating aircraft engines. In order to prevent FOD and provide a safe aircraft operating area, the East Ramp and Taxiways B and the D stub must be totally reconstructed, and will include miscellaneous associated airfield improvements.

Project Justification: The ramp will also require expansion to provide safe maneuvering space and adequate parking area for the larger-wingspan corporate aircraft that have become more frequent users of the airport. Given the level of deterioration and age of the pavement**,** a major rehab is needed in order to preserve safe aircraft operations. The pavement is inadequately designed for the weight-bearing capacity of larger private, military and corporate jet aircraft using the East ramp parking area. Taxiways Bravo and Delta, which access the East ramp, are the same age and show severe cracking and deterioration. All of these areas are being maintained on a regular basis, but the continual deterioration poses a serious FOD damage threat to aircraft engines, and could result in serious injury or death to personnel; and the potential for taxiway closure and loss of use due to structural taxiway damage.

Impact of Denial/Postponement: A postponement of future funding for this capital project will have flight safety consequences with regard to airport operations; and will adversely affect the ability of pilots to prevent avoidable on-airport taxiing collisions with resultant significant aircraft damage and potential injuries.

Project Cost Estimates: Future FY2016 Design: $600,000
Future FY2018 Construction: $4,000,000

Project Estimated Completion Date: 2018

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$0	
2016	$600,000	Permitting and Design
2017	$0	
2018	$4,000,000	Construction

Source of Funding: Reimbursable funding from FAA (90%), MassDOT Aeronautics (5%) and local share (5%)

Operating Budget Impact: Reduced routine maintenance

PROJECT: AIR-14 -17 **DEPARTMENT PRIORITY: 17 of 20**

Project Working Title: **RUNWAY 6-24 MAJOR RECONSTRUCTION**
Project Location: 480 Barnstable Road, Hyannis

Project Description: Runway 6-24 has exceeded its pavement's 20-year (circa 1991) design life and will, therefore, be programmed by the FAA and State for a full reconstruction. This project will include the design and reconstruction of the full length (5,425 feet) of the runway, in place, including in-pavement lighting and edge lights, and will extend the design life of the pavement for another two decades, and will also include other miscellaneous related airfield improvements.

Project Justification: Runway pavements are given a 20-year useful life by the FAA, after which time a major reconstruction is justified. Runway 6-24 will have exceeded its useful life by 2017, at which time it is scheduled for a rebuild. This will avoid hazards to flight safety from failing pavement, and potential aircraft damage.

Impact of Denial/Postponement: To deny or postpone funding of this capital project will have flight safety consequences with regard to airport operations; and will increasingly affect the ability of pilots to operate on the runway, due to the potential for aircraft damage and lessened flight safety.

Project Cost Estimates: Future FY2017 Design: $400,000 Construction: $4,600,000

Project Estimated Completion Date: 2017

Project Cost/Description FY 2014 and Follow-On Years

2014	$0	
2015	$0	
2016	$0	
2017	$5,000,000	Design, Permitting, Construction

Source of Funding: Reimbursable funding from FAA (90%), MassDOT Aeronautics (5%) and local share (5%)

Operating Budget Impact: Reduced routine maintenance

PROJECT: AIR-14 -18 **DEPARTMENT PRIORITY: 18 of 20**

Project Working Title: **LAND ACQUISITION FOR RW33 RUNWAY SAFETY AREA/PROTECTION ZONE (RSA/RPZ)**
Project Location: 480 Barnstable Road, Hyannis

Project Description: The Airport and Town relocated Mary Dunn Way several years ago to enlarge the Runway Safety Area (RSA) at the end of Runway 33, per FAA's safety standards. Several parcels remain within the Safety Area, and the adjacent Runway Protection Zone (RPZ), which conflict with FAA's safety standards. The Airport proposes to acquire these parcels which are incompatible land uses that pose a risk to aviation safety and a hazard to the flying public.

Project Justification: Several gas station and fuel storage parcels create incompatible land uses and hazards to aviation safety, as well as the safety of the public, due to their location within the RSA and RPZ at the end of Runway 33. The Airport proposes to acquire these parcels for open space protection within the RSA and RPZ, thereby enhancing public safety and complying with FAA's standards for compatible land use and RSA protection.

Impact of Denial/Postponement: To postpone funding of this capital project will continue the risk to public safety as a consequence of any aircraft overrun or undershoot that may impact one of the adjacent, incompatible land uses. An aircraft collision with any of the fuel storage facilities within the RSA or RPZ would have the potential for loss of life and significant injuries.

Project Cost Estimates: Future FY2017 Construction: $2,500,000

Project Estimated Completion Date: 2017

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$0	
2016	$0	
2017	$2,500,000	Land Acquisition

Source of Funding: Reimbursable funding from FAA (90%), MassDOT Aeronautics (5%) and local share (5%)

Operating Budget Impact: None

PROJECT: AIR-14 -19 **DEPARTMENT PRIORITY: 19 of 20**

Project Working Title: **DESIGN AND CONSTRUCT NEW EXTENDED AND RELOCATED TAXIWAYS BRAVO AND BRAVO ONE**

Project Location: 480 Barnstable Road, Hyannis

Project Description: The extended and relocated Taxiways Bravo and Bravo One serve airport operations in accessing and egressing the runway and ramp system. To maintain safety for both aircraft and passengers, the taxiways must be extended and maintained to be in compliance with airport design criteria. Taxiways B and B1 will connect the new expanded and relocated East Ramp to the end of Runway 6.

Project Justification: This construction project for the new and relocated Taxiways B and B1 is the final step in a multi-year process to modify the East Ramp and its associated taxiways to bring it into compliance with FAA airport design criteria; and to meet the requirements of the Airport Layout Plan, the 2010 Draft Airport Master Plan, Development of Regional Impact, EIR and Development Agreement for the future development of the East Ramp.

Impact of Denial/Postponement: Denial or postponement of funding for this project will negatively affect aircraft and airport operations for the future development of the East Ramp, and the airport will not be in compliance with FAA airport design criteria.

Project Cost Estimates: Future FY2018 Design: $280,000 Construction: $$3,220,000

Project Estimated Completion Date: 2018

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0
2015	$0
2016	$0
2017	$0

2018 $3,500,000 Permitting, Design and Construction

Source of Funding: FAA share: 90%, MassDOT AD share: 5% and Airport share: 5%.

Operating Budget Impact: None – new taxiways will be maintained with existing resources

PROJECT: AIR-14 -20 **DEPARTMENT PRIORITY: 20 of 20**

Project Working Title: **AIRPORT FAA MASTER PLAN UPDATE AND UTILITIES GIS SURVEY**
Project Location: 480 Barnstable Road, Hyannis

Project Description: The Airport's required FAA Master Plan (per FAA Advisory Circular AC150/5070-6B) is a comprehensive long-term plan for the airport development that should be revisited and updated periodically, and upon completion of the Town and Cape Cod Commission mandated Master Plan and Development Agreement process. In addition, this planning process will be done in concert with the Airport's utilities infrastructure systems plan that will incorporate all utilities that were originally built in the 1940's and have been upgraded multiple times over the subsequent decades. There is a need to collate all historic construction and engineering data into a comprehensive data base, with controlled GIS surveys of above and below-ground systems. This project will include the survey and data collection of all runway, taxiway, apron and airfield utilities, including landside utilities for all buildings, parking facilities, and access roads onto a comprehensive GIS database, compatible with FAA and Town needs.

Project Justification: The present Master Plan does not appear to be complete and should be completed to bring the Airport into full FAA compliance. The Airport Layout Plan and other required portions of the Plan are kept up-to-date, however, a comprehensive plan does not appear to have been brought up to date for many years. The utility systems are not adequately researched or surveyed, which leads to accidental utility damage despite efforts to adequately identify and locate them prior to any construction. This project will reduce hazards and risks during reconstruction of airport projects, and reduce engineering and potential repair costs in the future.

Impact of Denial/Postponement: To deny or postpone funding of this capital project will not allow the Airport to be in full compliance with FAA directives that may have long term financial consequences; and the lack of a utilities plan will have safety consequences with regard to airport operations.

Project Cost Estimates: Future 2018: Update & Survey $800,000

Project Estimated Completion Date: 2018

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$0	
2016	$0	
2017	$0	
2018	$800,000	Project Completion

Source of Funding: Reimbursable funding from FAA (90%), MassDOT Aeronautics (5%) and local share (5%)

Operating Budget Impact: none determined at this time

Supplemental Information: (1) A.O. #2011-078 for the completion of a property line and leasehold survey is ongoing and will form an integral part of the FAA Master Plan; the updated Airport Layout Plans have incorporated ongoing property acquisitions, and the results of the Cape Cod Commission Development of Regional Impact; and the recently completed EIR and the new Master Plan and Development Agreement will also form a part of the new FAA Master Plan. (2) During the recent airport improvement projects, undetected and unknown utility lines and FAA telecommunications and airport aids to navigation lines were discovered after the commencement of construction that caused costly delays and emergency repairs in the interests of safety. This is a continuing problem with almost every construction project at the airport. This project will identify these utilities and telecommunication lines in advance as a preventative measure.

2. HYANNIS YOUTH AND COMMUNITY CENTER

PROJECT: CS-14 -01 (HYCC) **DEPARTMENT PRIORITY: 1 of 1**

Project Working Title: **HYCC MECHANICAL UPGRADES**
Project Location: Hyannis

Project Description: The proposed project includes the study of the existing HVAC system for the core areas of the building, engineering design, contract administration, and project management services for improvements to the existing HVAC system.

Project Justification: The central core of building is fed off of one system without reheat units and temperature controls for a diverse number of spaces of varying occupancies. This diversity on one system allows for one temperature throughout, thus some areas are hot while others are cold. This is complicated by having cold ice rinks on two sides. The electrical system is maxed out so a gas fired system would be less expensive to employ.
Project Cost Estimates: Future FY 15 Evaluate and Design: $36,200

Project Estimated Completion Date: July, 2015

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$ 36,200	Evaluate and Design
2016	$184,400	Construct

Source of Funding: Enterprise Reserves

Operating Budget Impact: None at this time

3. SOLID WASTE ENTERPRISE FUND

PROJECT: DPW-14 -01 (SOLID WASTE) **DEPARTMENT PRIORITY: 1 of 2**

Project Working Title: **REAR LOADER TRASH TRUCK**
Project Location: 45 Flint St. Marstons Mills.

Project Description: Purchase one rear loading packer truck, which services municipal buildings, beaches, docks, parking lots, etc.

Project Justification: The existing packer truck was purchased in 2003 and is entering into its tenth year of operation. The vehicle has had a history of repetitive mechanical problems. It is recommended that the vehicle be replaced rather than continue to repair the vehicle.

Impact of Denial/Postponement: Continued expenditure of operating funds for excessive maintenance on a vehicle at the end of its useful life. When the vehicle is out of service the division is required to rent a packer truck at a cost of $600 per day. To date FY 2013, Solid Waste Division has incurred $12,000 in rental cost for said services.

Project Cost Estimates: Purchase $225,000

Project Estimated Completion Date: 2013

Project Cost/Description FY 2014 and Follow-On Years:

2014	$ 225,000	Purchase new packer truck

Source of Funding: Solid Waste Enterprise Account

Operating Budget Impact: Reduced maintenance

Current Town Packer Truck

PROJECT: DPW-14 -02 (SOLID WASTE) DEPARTMENT PRIORITY: 2 of 2

Project Working Title: **CONTAINER ROLL-OFF TRUCK**
Project Location: 45 Flint St. Marstons Mills

Project Description: Purchase one roll off truck to replace one that is used to transport containers on and off site.

Project Justification: The existing roll-off truck was purchased in 1992 and can no longer perform its basic function in a safe or efficient manner.

Impact of Denial/Postponement: The vehicle is rapidly approaching mechanical failure resulting in interruption of service to our customers and additional operating costs for a leased vehicle.

Project Cost Estimates: Purchase $190,000

Project Estimated Completion Date: 2014

Project Cost/Description FY 2014 and Follow-On Years:

2014	$190,000	Purchase a new roll-off truck

Source of Funding: Solid Waste Enterprise Account

Operating Budget Impact: Reliability and lower maintenance costs.

Current Town Roll-off truck

4. WATER SUPPLY ENTERPRISE FUND

PROJECT: DPW-14 -01 (WATER SUPPLY)	DEPARTMENT PRIORITY: 1 of 5

Project Working Title: **PIPE REPLACEMENT AND UPGRADE PROGRAM**
Project Location: The drinking water distribution system for Hyannis, Hyannis Port and West Hyannis Port.

Project Description: This 30-year phased improvement program is a continuous pipe replacement and upgrade program for the Hyannis Water System as recommended by Weston & Sampson Engineering, Inc. in their April 2007 Master Plan. It is appropriate to implement a structured program to replace and upgrade the water pipes in the distribution system, some of which are over 100 years old. This program is in addition to the routine maintenance and repair program to be performed by the contracted water system operator. The proposed capital budget for this pipe replacement and upgrade program is $1,050,000 per year; and includes a capitally funded water works project manager, to oversee and implement this program in coordination with the Town roads program and other public utilities.

Project Justification: This project would ensure the long term ability and viability of the Hyannis Water System to provide sufficient drinking water and fire readiness protection for all of our customers.

Impact of Denial/Postponement: Water distribution capacity will continue to be less reliable over time, limiting water supply availability for existing customers, new growth, and during emergencies.

Project Cost Estimates: Design $ 150,000 Construction $ 900,000

Project Estimated Completion Date: Continuing annual project

Project Cost/Description FY 2014 and Follow-On Years:

2014	$1,050,000	Design/Construction
2015	$1,050,000	Design/Construction
2016	$1,050,000	Design/Construction
2017	$1,050,000	Design/Construction
2018	$1,050,000	Design/Construction

Source of Funding: Water Supply Enterprise Account, User Fees, Borrow.

Operating Budget Impact: Elimination of water frequent waterline breaks.

Installing new water pipes

PROJECT: DPW-14 -02 (WATER SUPPLY) DEPARTMENT PRIORITY: 2 of 5

Project Working Title: **WATER SUPPLY WELLS, PUMP STATION AND TREATMENT PLANT REPAIR AND UPGRADE PROGRAM**

Project Location: Existing wells, pumping stations, treatment plants and all other appurtenances

Project Description: This capital improvement program is a continuation of the repairs and upgrades commenced in FY2007. With the exception of the Straightway well #2, all of the wells were constructed in the early to mid- 1970's. The prior year's monies were used to install emergency generators, lighting, fencing and pavement improvements. Starting in FY14, the Hyannis Water Board approved the recommendation to implement a structured rehabilitation program dealing with major facility components needing upgrades or replacements. These facility components are; buildings, process control equipment, safety & security, and electrical equipment. Project management and oversight will be provided by a Junior Engineer, partially funded out of this program.

Project Justification: It is appropriate to implement a structured program to repair and upgrade the wells, many of which are approximately 40 years old. This program is in addition to, and may supplement, the routine maintenance program to be performed by the contracted water system operator.

Impact of Denial/Postponement: Water pumping capacity will continue to be less reliable over time, limiting water supply availability for existing customers, economic growth, and during emergencies.

Project Cost Estimates: Design $ 20,000 Construction $ 180,000

Project Estimated Completion Date: Continuing annual program

Project Cost/Description FY 2014 and Follow-On Years:

2014	$200,000	Design/Construction
2015	$200,000	Design/Construction
2016	$200,000	Design/Construction
2017	$200,000	Design/Construction
2018	$200,000	Design/Construction

Source of Funding: Water Supply Enterprise Account, User fees.

Operating Budget Impact: Reduction in routine repair costs.

PROJECT: DPW-14 -03 (WATER SUPPLY) DEPARTMENT PRIORITY: 3 of 5

Project Working Title: **NEW WELL EXPLORATION PROGRAM**
Project Location: All land currently under ownership and control of the Water Supply Division for the Hyannis Water System**.**

Project Description: To evaluate the possibility of permitting, designing and constructing two or more new wells for the Hyannis Water System. The new well exploration program is set-up in four phases. The first phase will consist of exploratory test wells, environmental notifications, evaluations and recommendations. The second phase will deal with DEP new source approvals.

Project Justification: The need for this program became more urgent since the preliminary water quality study results became known. Three (3) of our eleven (11) wells do have water quality issues with iron and manganese that can't be addressed with our current sequestering treatment. The Mary Dunn 4 well is under the influence of surface water and can't be used. This means that 4 out of 11 wells should be replaced or treated.

Impact of Denial/Postponement: The ability to provide the rate payers of the Hyannis Water System with the highest possible water quality will continue to deteriorate and the redundancy of water pumping capacity will diminish.

Project Cost Estimates: Design $489,500

Project Estimated Completion Date: FY 2020

Project Cost/Description FY 2014 and Follow-On Years:

2014	$ 489,500	Exploratory test wells, recommendations, environmental notifications
2015	$ 583,000	DEP New source approval process, 8" test wells, pumping tests
2016	$ 555,500	Design & permitting for construction, MEPA process, reviews
2017	$2,000,000	Well A. Construction, testing, commissioning
2018	$ 32,745	Well A. Project management funding
2019	$2,000,000	Well B. Construction, testing, commissioning
2020	$ 34,067	Well B. Project management funding

Source of Funding: Water Supply Enterprise Account, User fees, borrow.

PROJECT: DPW-14 -04 (WATER SUPPLY) **DEPARTMENT PRIORITY: 4 of 5**

Project Working Title: **MAHER TREATMENT PLANT, AIR-STRIPPER UPGRADES**
Project Location: Maher Treatment Plant, 47 Old Yarmouth Road, Hyannis

Project Description: To finalize the needed upgrades for the air-stripper at the Maher drinking water treatment plant. The air-stripper removes low levels of volatile organic compounds out of the well water. It was installed in 1990. In 2009, the Haley & Ward Engineering firm did an inspection and recommended a series of repairs and improvements with a time table. In FY2010, a portion of the improvements were accomplished and during FY2011, emergency repairs dealt with the media replacement. This capital request will accomplish the remaining outstanding items, like the distributor tray and demister, tower sump, air blower and carbon filter system.

Project Justification: The proper maintenance and repair of this equipment is critical to insure the safety and reliability of the water treatment plant. The Maher Water Treatment Plant currently produces between 40% and 70% of the Hyannis Water System's drinking water. Without the air-stripper we can not run the plant.

Impact of Denial/Postponement: The Maher Water Treatment Plant currently produces between 40% and 70% of the Hyannis Water System's drinking water. Without the air-stripper the plant can not run.

Project Cost Estimates: Design $25,000 Construction $275,000

Project Estimated Completion Date: May 2014

Project Cost/Description FY 2014 and Follow-On Years:

2014	$300,000	Design/Construction

Source of Funding: Water Supply Enterprise Fund, User fees, Borrow

Operating Budget Impact:

Expenses:

2014	$0
2015	$18,750
2016	$18,750
2017	$18,750
2018	$18,750

Maher Treatment Plant

PROJECT: DPW-14 -05 (WATER SUPPLY) DEPARTMENT PRIORITY: 5 of 5

Project Working Title: **CONSTRUCTION OF THE WATER MAIN LOOPING BETWEEN HIGHLAND STREET AND COOK CIRCLE IN HYANNIS.**
Project Location: Highland Street and Cook Circle.

Project Description: This water works project will provide for looping the water main from Highland Street to Cook Circle with approximately 2000 feet of new cement lined, ductile iron water main, gates and fire hydrants.

Project Justification: This project was recommended by Weston & Sampson Engineering, Inc. in their April 2007 Master Plan, Table 9-2, phase A-8.

Impact Of Denial/Postponement: Water quality and fire flow capacity will continue to deteriorate over time, impacting and limiting water supply availability for existing customers and during emergencies.

Project Cost Estimates: FY 2014 Design $ Construction $540,000

Project Cost/Description FY 2014 and Follow-On Years:
2014 $540,000 Construction

Source of Funding: Water Supply Enterprise Fund, User Fees, Borrow

Operating Budget Impact: None identified at this time

5. WASTE WATER ENTERPRISE FUND

PROJECT: DPW-14 -01 (WASTE WATER) DEPARTMENT PRIORITY: 1 of 2

Project Working Title: **STAFF LOCKER ROOM**
Project Location: 617 Bearse's Way, Hyannis, MA

Project Description: Replace the existing Staff Locker Room.

Project Justification: The locker room serves as a changing, showering, lunch and division meeting center. Given the nature of wastewater operations, the staff needs a facility in order to clean up after work. The present locker room is a trailer put into service in the early 1980's and moved in 1997. The trailer is a conglomeration of parts and is of dubious construction. At 25 years old, it is the end of its serviceable life. During the summer of 2010, the entire front exterior wall was replaced, including its siding, plywood, studs, insulation and interior wallboard, all of which had rotted away. See photo below. The main steel I beams supporting the structure were damaged and twisted in the 1997 move and cannot be repaired. Rebuilding on the present frame cannot be done.

Impact of Denial/Postponement: The building will continue to demand expenditures to keep it up. The front wall cost $5,000 to replace this past summer. The other four walls are in equally bad shape and will cost an estimated $15-20,000 for repairs. The HVAC system is near failure and would cost $15,000 for upgrades. The floor joists and sills are rotting. It is speculated that in a good wind storm the building could collapse

Project Cost Estimates: Design $30,000 Construction $160,000

Project Estimated Completion Date: 2014

Project Cost/Description FY 2014 and Follow-On Years:
2014 $190,000 Construct Staff Locker Room

Source of Funding: Wastewater Enterprise Reserve

Operating Budget Impact: Reduction in maintenance and energy costs.

Rot in corner of existing building

PROJECT: DPW-14 -02 (WASTE WATER) DEPARTMENT PRIORITY: 2 of 6

Project Working Title: **BEARSE'S WAY VACUUM STATION, BACK UP PUMP**
Project Location: Bearse's Way vacuum pump station

Project Description: Third pump for Bearse's Way Vacuum Station.

Project Justification: The present pump station is now eight years old and is in good operating order. However there is no back up pump. During peak flows the two pumps, now in operation, are both forced to run together at times to maintain the necessary vacuum. If one vacuum pump should fail a spare pump that is stored on site, would need to be installed. This procedure is problematic to maintain reliable service to the customer base. The Cape Codder, Holiday Inn, Cape Crossroads Condominiums, Christmas Tree complex and Marriott Hotel are all on this system and therefore demand a reliable disposal system.

Impact of Denial/Postponement: Eventually one of the existing vacuum pumps will fail and possibly result in back-up and overflow of raw sewage to homes, businesses, and roadways resulting in a health hazard.

Project Cost Estimates: Construction $80,000

Project Estimated Completion Date: 2014

Project Cost/Description FY 2014 and Follow-On Years:

2014	$80,000	Construct third vacuum pump.

Source of Funding: Wastewater Enterprise Reserve

Operating Budget Impact: Insurance in event of failure of existing pump.

PROJECT: DPW-14 -03 (WASTE WATER) DEPARTMENT PRIORITY: 3 of 6

Project Working Title: **WALLS AND TANKS, RESURFACE AND PAINTING**
Project Location: 617 Bearse's Way, Hyannis

Project Description: Evaluate Pretreatment building concrete walls and channels. Evaluate the clarifier steel work. Resurface and paint as necessary.

Project Justification: During the plant upgrade, the Pretreatment building walls were briefly evaluated and found to be in fair condition. Previous resurfacing is still in place but will need upgrading. The clarifier steel work and several of the clarifier have moderate to severe rusting. 4 of the 5 clarifiers have been repainted, several twice. However, the rust is prevalent and persistent. Repainting the clarifiers has proved to be a questionable exercise, like car rust, it perseveres. This evaluation would look at alternatives to save the substantial investments in the clarifier steel work.

Work Accomplished Prior Project: During the Facility Upgrade project, the Pretreatment building walls were found to be in fair condition. The building was constructed in 1975. In the 1990's, the walls were sealed with a coating that is still adhering but of unknown sealing and protective condition. The clarifiers, 1980 vintage, have all been repainted and have moderate to severe rusting.

Impact of Denial/Postponement: Loss of present concrete walls and steel work necessitating complete replacement.

Project Cost Estimates: Design: $50,000

Project Estimated Completion Date: 2014

Project Cost/Description FY 2014 and Follow-On Years:

2014	$50,000	Design coating protection for walls and tanks
2015	$200,000	Apply coating protection to walls and tanks

Source of Funding: Wastewater Enterprise Reserve

Operating Budget Impact: Added costs as follows:

		Salary Costs	Benefits	Expenses	Total
2014	¼ person	$20,000	$7,000	$10,000	$37,000

PROJECT: DPW-14 -04 (WASTE WATER) DEPARTMENT PRIORITY: 4 of 6

Project Working Title: **HYANNIS WPCF HYDRAULIC LOAD TESTING**
Project Location: Hyannis Water Pollution Control Facility (WPCF).

Project Description: This effort is needed to determine the infiltration capacity of the sand infiltration beds at the Hyannis WPCF

Project Justification: This is a requirement of the Massachusetts Executive office of Energy and Environmental affairs (EOEEA) on the Town's Nutrient Management Planning (NMP) Project as part of that project's regulatory review. This is needed information as the Town decides the needed wastewater facilities at that site.

Work Accomplished Prior Project:
Town-wide Wastewater Facility Planning and Improvements (1990 to 2007):

- Completed Groundwater Conditions Report dated 1993
- Upgraded and expanded Hyannis WPCF
- Expanded and improved wastewater collection system with sewer improvements and extensions, and pump station improvements and new installations
- Ongoing groundwater monitoring as part of Hyannis WPCF operations and discharge permit compliance

Town-wide Nutrient Management Planning (2005 to present):

- Completed two initial reports: Needs Assessment and Alternatives Screening Analysis Reports of the Comprehensive Wastewater Management Plan in 2010

Impact of Denial/Postponement: The impact will be lack of information on how to site new wastewater facilities in Town to address water quality problems identified as part of the Comprehensive Wastewater Management Planning Project. Larger areas will need to be reserved for the sand infiltration beds, and these larger areas will require more flow be sent off site at a greater expense for new facilities.

Project Cost Estimates: $50,000

Project Estimated Completion Date: September 2013

Project Cost/Description FY 2014:

2014	$ 50,000	Hydraulic Load Test & Wells

Source of Funding: General Fund

Operating Budget Impact: This project could save millions of dollars to site new wastewater facilities in Town because it will get better performance out of its existing facilities.

PROJECT: DPW-14 -05 (WASTE WATER) DEPARTMENT PRIORITY: 5 of 6

Project Working Title: **SEPTAGE BUILDING CAPACITY EVALUATION**
Project Location: 617 Bearse's Way, Hyannis

Project Description: Evaluate future capacity and operation of the Septage building.

Project Justification: The Septage building was built in 1990 and at the end of its design life. The building processes 11,000,000 gallons of Septage and over 12,000,000 gallons in sludge and greases a year. The mechanical equipment, piping, and structure all need to be assessed for future operations and expected increased flows. The evaluation will also assess the present sludge disposal operation of trucking off site to incineration and other options such as composting. The Town may also wish to include an assessment of regional sludge disposal and garbage co-mingling. This is an evaluation that would lead to a design.

The evaluation would also examine an upgrade to the Septage building rag, rock, grease and grit removal systems. The present system is dangerous and odorous.

Impact of Denial/Postponement: The expansion of the sewer system requires that the Septage building be capable of processing all the Septage and sludge generated in the future so that the building does not become a bottleneck in the future.

Project Cost Estimates: FY 2015 Evaluation: $100,000

Project Estimated Completion Date: 2018

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$ 100,000	Evaluation Septage building operation
2016	$ 350,000	Design (speculative)
2017	$3,500,000	Construct building upgrade (speculative)

Source of Funding: Wastewater Enterprise Reserve

Operating Budget Impact: Revenue and expenses as follows:

Revenue: $700,000 Septage revenue yearly in the future

Expenses: $400,000 building operation

FY	No. Positions	Salary Costs	Benefits	Expenses	Total
2014	2	$150,000	$50,000	$200,000	$400,000
2015	2	$150,000	$50,000	$200,000	$400,000
2016	2	$150,000	$50,000	$200,000	$400,000

PROJECT: DPW-14 -06 (WASTE WATER) DEPARTMENT PRIORITY: 6 of 6

Project Working Title: **TOTAL ORGANIC CARBON (TOC) AND TOTAL NITROGEN (TN) EFFLUENT EVALUATION**

Project Location: 617 Bearse's Way

Project Description: The TOC Effluent Limit is 3 mg/l for groundwater discharge to a Drinking Water Zone II within a 2 year travel to the well(s). TOC is used as an indicator of water quality for pharmaceuticals, personal care products, endocrine disruptors and other emerging contaminants. This project will evaluate and design the upgrading of the Hyannis Water Pollution Control Facility to meet the 3 mg/l TOC limit and TN estuary limit for groundwater discharge.

Project Justification: TOC Effluent Limit of 3 mg/l is a State regulation, at this time not enforced. Presently conservation groups are initiating lawsuits that increase the probability of State enforcement. The Town must be prepared to comply with this State regulation or face costly fines.

Impact of Denial/Postponement: Violation of State regulation and costly fines.

Project Cost Estimates: Design: $800,000

Project Estimated Completion Date: 2018

Project Cost/Description FY 2014 and Follow-On Years:

2014	$0	
2015	$800,000	Design compliance to 3 mg/l TOC
2016	$0	
2017	$10,000,000	Construct TOC removal process at the WPCF

Source of Funding: Wastewater Enterprise Reserve.

Operating Budget Impact: Avoidance of State enforcement action with fines.