Attachment 1 – Resolution 383, June 19, 2014

Revisions to Plan 2040 Sections

Chapter 2 Section 5: Resiliency and Climate Adaptation Strategies

Page 2-30 Second Paragraph the highlighted text is added:
The most significant environmental effects of climate change that will impact New York State are summertime droughts and coastal inundation. The latter is a particular concern for New York as it has the second-highest coastal population of any state in the country, 70 much of which is concentrated in the NYMTC planning area. Climate adaptation plans for New York City, whose 520-mile-long coastline includes vital transportation infrastructure, must be implemented to sustain this economic hub. Recent storms that have impacted the NYMTC planning area have revealed how vulnerable our transportation system really is. In the fall of 2012, Hurricane Sandy made landfall in the northeastern United States, killing well over 100 people and causing tens of billions of dollars in damage to infrastructure, businesses, and residences in several states, particularly New York and New Jersey. According to the U.S. Geological Survey (USGS) the largest storm surge in the region was in Long Beach, Nassau County, where it exceeded seventeen feet. Other areas of the region saw the storm surge reach fourteen feet, where it submerged coastal roadways, undermined roadbeds and sea walls and flooded subway and auto tunnels. Most subway lines in New York City were closed for several days and some stations did not re-open for months. The damage to MTA property caused the agency to make plans to sell $4.8 billion in bonds in order to cover the costs of repairs. The impacts of Hurricane Sandy, as well as Tropical Storm Irene in 2011, suggest that transportation infrastructure must be better equipped to handle the effects of extreme weather events in future plans.

Page 2-30 Fifth Paragraph – the highlighted text is added
At the local level, New York City created PlaNYC in 2007 in part to address challenges brought on by climate change. The report includes recommendations to increase transportation options; measures to combat congestion such as modifications to freight movement; and maintaining and improving the physical conditions of roads and the transit system so they can accommodate more users safely. After Sandy, New York City formed the Special Initiative for Rebuilding and Resiliency and charged it with producing a plan to provide additional protection for New York’s infrastructure, buildings, and communities from the impacts of climate change. The result of this effort is A Stronger, More Resilient New York which is a roadmap for creating a sustainable 21st century New York. New York City is pursuing a range of strategies to promote resilience in conjunction with transportation investments:
  - Reduce potential for street flooding (caused by either coastal or overland flooding) and disruption of transportation where feasible through raising of streets, drainage improvements, etc.
  - Reinforcement of key access routes or improvements to transportation connectivity in coastal areas, improving emergency response, evacuation, and post-storm access to resources and services.
• Protection of key transit and other transportation assets (e.g., railyards, tunnels)
• Reinforcement of existing peripheral roadways and street ends vulnerable to flooding and erosion to preserve continuity of transportation access and prevent damage or disruption inland
• Coordination with other area capital projects to incorporate resilience or provide co-benefits where possible (e.g., use transportation structures to provide a degree of coastal protection, or public amenities)
• Identify opportunities for additional ferry service to complement other modes and improve post-storm transportation capacity.
• Install, and establish clear procedures for the installation of footings or anchors for deployable flood control devices in public rights-of-way
• Where appropriate and feasible, accommodate elevate walkways within the public right of way to provide access to buildings that have been elevated for flood protection

Page 2-31 Second Paragraph – the highlighted text is added:
Westchester County is undertaking various initiatives to adapt services and infrastructure to address the increasing severity and frequency of storms such as Sandy, including identifying detours for bus routes and developing flood mitigation plans to minimize roadway closures. The county will continue to make full use of its Emergency Operations Center to facilitate up-to-date communication among transportation agencies, first responders and utility companies, and work with them to direct resources to the areas of greatest need. In addition, the County plans to enhance communications protocols for informing the public.

Page 2-31 – New text to be inserted after paragraph three
Nassau County’s post-Sandy efforts have focused on being better prepared for future severe storms and on making the infrastructure stronger and more resilient. A key initiative is the major program to upgrade and “weather-proof” the County’s most vulnerable sewage treatment plants, and the County has received roughly $830 million in Federal funds for this effort. Nassau is also working with the City of Long Beach to develop a more regional approach for better managing their sewage treatment plant through major weather events. On the highway side the county has completed upgrades to many roads severely damaged by Sandy, most notably West Shore Road. The County also replaced 130 traffic signals that were damaged by Sandy, and embarked on a program to have generators available to keep 300 key traffic signals operating during power outages. Nassau County is also working closely and aggressively with New York State on finding grant funds for projects to improve drainage, storm water quality and targeted roadway improvements. On the transit side, the Nassau Inter County Express (NICE) had to replace damaged facility items as a direct result of severe and sustained winds from Sandy. Work was performed at all operating facilities - Mitchel Field, Rockville Centre, Stewart Avenue, and the Hempstead Transit Center. The scope of work included debris removal, fence repairs, light pole repair, door repair, and roof repairs, with all projects completed by December 2013.