

December 30, 2014

Michael McGovern, Town Manager
Town of Cape Elizabeth
320 Ocean House Road
Cape Elizabeth, ME 04107



Re: Town of Cape Elizabeth Transfer Station Safety Assessment Addendum

Dear Mr. McGovern:

At the request of the Town of Cape Elizabeth, Woodard & Curran conducted and prepared a facility safety review for the Town's transfer station. As part of the *Town of Cape Elizabeth Transfer Station Safety Assessment*, dated December 22, 2014, Woodard & Curran recommended the installation of proper fall protection along the top of the overhead roll-off container retaining wall. This letter serves as an addendum to the original safety assessment and provides an alternative interim solution for safety improvements along the retaining wall. Woodard & Curran understands the Town has formed a Solid Waste & Recycling Long Range Planning Committee to evaluate the future of the Town's solid waste and recycling program. It is our understanding that this committee will provide recommendations to the Town Council for future solid waste options and any long-term safety improvements.

Woodard & Curran met with Public Works Director, Bob Malley, and Code Enforcement Officer, Ben McDougal, on December 29, 2014 and discussed the fall protection recommendation at the overhead roll-off container retaining wall for both the open-top bulky waste containers and the silver bullet overhead containers. The intent of the meeting was to identify a safe, functional and code compliant interim solution to protect users of the transfer station from the fall hazard at the edge of the retaining wall.

The safety improvement solution discussed and agreed upon during the meeting for the open-top bulky waste containers consists of placing physical barriers, such as concrete jersey barriers, a specified distance from the edge of the retaining wall to eliminate the fall hazard. Per the International Building Code, fall protection guards are required;

"along open-sided walking surfaces, including mezzanines, equipment platforms, stairs, ramps and landings that are located more than 30-inches measured vertically to the floor or grade below at any point within 36-inches horizontally to the edge of the open side."

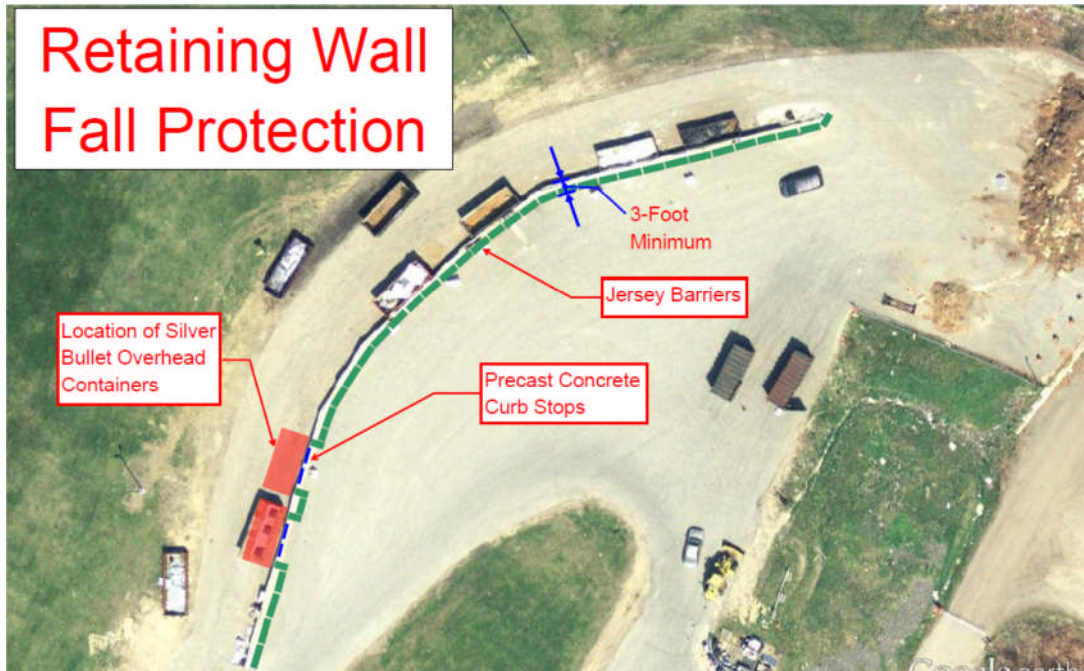
To become fully code compliant, barriers should be placed along the retaining wall in front of the open-top bulky waste containers so as to provide a 36-inch restricted zone along the edge of the retaining wall. This will effectively eliminate the fall hazard and the need for the installation of permanent fall protection guards. Jersey barriers have a relatively low profile, approximately 32-inches in height, and are not anticipated to significantly reduce the ability of the majority of users to throw most bulky waste items into the overhead roll-off containers. Users may have difficulty with the disposal of large bulky waste items such as washers and dryers. However, these items are disposed of infrequently and Bob Malley suggested users could place these items alongside the barriers. Transfer station attendants could use the facility's heavy equipment to place these items in the containers at a later time.

The Town and Woodard & Curran also discussed the potential for a fall hazard at the silver bullet overhead containers. The silver bullet overhead containers have solid covers with small openings for recyclables, restricting users from falling into the containers. Based on our discussion with code enforcement, if these containers are located close to the retaining wall, within approximately 4-inches,



the fall hazard would be virtually eliminated at the location of the silver bullet overhead containers. Therefore, no barriers would need to be placed directly in front of the containers, maintaining their functionality. However, as an additional precaution, it is recommended precast concrete curb stops be provided on top of the retaining wall in front of the silver bullet overhead containers to prevent users from stepping or sliding their feet over the edge of the retaining wall into the small gap.

Below is a conceptual layout for the recommended safety improvements at the retaining wall:



It should be noted that when a silver bullet overhead container is hauled to ecomaine, there will be a fall hazard at the location of the missing container. Temporary barriers should be placed in front of any opening spaces until a replacement container can be installed. During our meeting, the Town indicated it may be possible to schedule hauling of the silver bullet overhead container to take place outside the hours of operations for the transfer station, which is another option for reducing the users' exposure to the fall hazard.

The proposed safety improvements provide an increase in safety as compared to the existing conditions and meet the intent of the International Building Code. These improvements are also temporary and do not required the installation of any permanent fixtures.

Sincerely,

WOODARD & CURRAN

Randy Tome, PE
Senior Vice President

Megan McDevitt, PE
Project Engineer 2

MDLM/RET

cc: Robert Malley, Director of Public Works
Benjamin McDougal, Code Enforcement Officer