Planning Submittal Narrative for Fore St. Garage Solar Canopy

View:

Please see the renderings attached to e-mail dated 3/13/16. The panels will not be visible from Fore st. There is model taken from Dana St. which shows that a small portion of the canopy may be visible. Please note that the model is a worst case scenario since the modeled view from Dana does not take into account the steep grade heading away from Fore St. In real world the array may well not be visible. It in our view that the potentially small amount of canopy which may be viewed is not out of place with the scale of the garage and surrounding buildings as viewed from the street.

Snow:

The tilt of the panels is 5 degrees, almost flat. They are designed and engineered to hold snow rather than shed and will decrease the snow removal needs on the upper garage deck. The space between the individual arrays is only 18", limiting the amount of space where snow could slide. Due to this low pitch, the relatively small height from deck (13'), and the minimum inter-row space, the solar canopy is not expected to create any sliding snow hazard.

Glare:

We have assessed the potential for glare from the solar array on surrounding buildings. We have found that glare from the array is negligible. What glare does exist is confined to a 1-hr period in fall and spring months. All incidences of glare occur before 8:30AM. With regards to intensity, the glare from the proposed solar array is 1/5000 of the glare experienced when staring directly at the sun for a brief time. In conclusion, the solar array will add nothing to the amount of glare currently experienced by buildings in this vicinity, from exposure to the sun and light reflected off Casco Bay. Upon request, we will provide the full analysis of glare at the Fore Street Parking Garage. This glare study was conducted using Sandia National Laboratories' Solar Glare Hazard Analysis Tool. Sandia is a nationally recognized laboratory, and this tool is the standard used by the FAA to assess solar installations on airport facilities.

Lighting:

Lighting details to be determined based on the addition of L.E.D lighting to the site plan technical standards. The garage currently has LED lighting on the upper deck of the garage, these lights are on poles approximately 30' tall. The proposed LED site lighting will be mounted directly to the underside of the array and thus will be significantly closer to the garage deck - 12' proposed vs 30' existing. The proximity to the deck will help limit the light spread. We expect that a higher number of lower output fixtures will be installed to maintain the same coverage as the fewer 30' tall high output fixtures. All lighting will be cut off type and will also be shielded by the solar array above the lights. There should be no impact on surrounding buildings greater than the existing lighting, if anything it should be less.

The proposed solar canopy is contained within the footprint of the upper garage deck, and is setback 27' from the edge of the deck at its closest point. See attached site map for more detail. No parking spaces will be impeded or changed due to the installation of the solar canopy and the pedestrian access will not be affected.