1. joint seal – SILCONE [707] (Revised 10-08-20)

Description. This work is furnishing and installing a silicone joint system at the specified locations.

Materials.

Nosing material. Furnish a polymer-based material compatible with the silicone sealant. Where nosing is monolithic with reinforcement embedded in the bridge deck, a Portland based cement will be accepted.

Silicone Sealant. Furnish a rapid-curing, high movement, ultra-low modulus, self-leveling, two-component silicone sealant in conjunction with a closed cell expanded polyethylene backer rod. Do not use asphalt-based or one-part silicone sealants. Use a joint sealant that accommodates movements of +100/-50% of joint opening size (100% tension, 50% compression).

Furnish a joint system that functions properly between -40°F and 113°F (4°C and 45°C).

Construction Requirements.

Sandblast the joint opening and prime the prepared surfaces. Keep all joint surfaces clean and dry prior to and during joint installation. Use primer materials that are recommended for usage with the silicone joint sealant. Size and install the backer rod and install the joint sealant and wear resistant nosing according to the manufacturer’s recommendations.

Install the joint system when the air temperature is between 40°F and 75°F (7°C and 24°C). Install at a higher temperature only with approval from the Project Manager.

Submittals. Do not install the joint system until approval from the Project Manager.

Submit material certification for the joint system being used to the Project Manager at least 14 calendar days prior to starting the work. Include the following information in the submittal:

Product specifications.

Material safety data sheet.

Manufacturer’s recommended application procedure.

Contractor’s work plan for installing the joint system.

Work Plan. When the contract requires casting of new concrete at the joint location, submit a work plan describing the procedures that will be used to form the joint opening. Include the following in the work plan:

Joint Width. Provide methods that will ensure the joint is constructed to the plan joint opening width. Consider that the joint opening width will change with temperature before, during and after concrete placement. Use methods and/or sequencing that prevent shoving of the concrete during thermal expansion of the span(s). Request approval for additional construction joints not shown in the plans if needed.

Straightness. Provide methods that will ensure the joint does not deviate from a straight line by more than ½-inch (12.5 mm).

Method of Measurement and Basis of Payment. Silicone joint systems are measured and paid for by the linear foot of joint installed.

Payment at the contract unit price is full compensation for all resources necessary to complete the item of work in accordance with the contract.