CITY OF CONCORD

REPORT TO THE MAYOR AND CITY COUNCIL

FROM: Edward L. Roberge, PE, City Engineer

DATE: August 25, 2015

SUBJECT: Report recommending that the City Manager be authorized to apply for Federal Highway Administration Accelerated Innovation Deployment (AID) Demonstration Program grant funds.

Recommendation

Accept this report recommending that the City Manager be authorized to apply for Federal Highway Administration (FHWA) Accelerated Innovation Deployment (AID) Demonstration Program grant funds associated with Geosynthetic Reinforced Soil – Integrated Bridge System (GRS-IBS) projects including the Portsmouth Street Storm Water Improvement Project (CIP83), the Hooksett Turnpike Bridge Replacement Project (CIP361), and the Birchdale Road Bridge Replacement Project (CIP498).

Background

On February 19, 2014, a Notice of Funding Availability (NOFA) was published by FHWA requesting grant applications for Accelerated Innovation Deployment (AID) Demonstration projects, part of the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 call for a Technology and Innovation Deployment Program (TIDP) that includes three major initiatives; accelerated innovation deployment, future strategic highway research program (SHRP 2), and accelerated implementation and deployment of pavement technologies. The TIDP relates to all aspects of highway transportation projects with innovative methods, practices, and technologies.

Discussion

Based upon initial review of the NOFA, the AID program is designed to support transportation projects that significantly accelerate the adoption of innovative state-of-the-art technologies that improve quality and safety and user satisfaction, with particular focus on improving highway operation and maintenance efficiency, mobility, reliability, service life, environmental protection, and sustainability. Additionally, the innovations must align with TIDP goals and must not be routinely used by the recipient.

The majority of bridges across this nation are small, single-span bridges or large culverts commonly on rural and local roads. As infrastructure ages, weight limitations and/or

bridge closures are becoming more frequent. With limited resources, FHWA recognizes that transportation agencies, particularly at the local level, must find innovative, cost-effective solutions for bridge construction. The Geosynthetic Reinforced Soil – Integrated Bridge System (GRS-IBS) may be an excellent alternative to help reduce bridge construction cost and time.

GRS-IBS is an innovative alternative to conventional small bridge and large culvert construction. Construction costs are typically 25 to 60 percent less than conventional construction methods and are easier to build with common equipment and readily available materials, so projects can be completed more quickly. It's flexible design can be easily modified in the field if unforeseen site conditions are encountered.

GRS-IBS is a major FHWA Every Day Counts (EDC) innovation initiative; we believe this grant program aligns well with several projects within our current Capital Improvement Program (CIP). Funds up to $1.0M are available for local government agencies. FHWA will use an open, rolling application process where project readiness will be treated as primary selection criteria in their evaluation process. To address project readiness, staff will demonstrate that the project will be ready to initiate within the 6 months required for the AID grant program funding.

We are confident that use of the GRS-IBS to replace small bridges and large culverts is well aligned with the program goals and recommend that the City Manager be authorized to apply for Federal Highway Administration (FHWA) Accelerated Innovation Deployment (AID) Demonstration Program grant funds associated with GRS-IBS.

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cc: Jamie Sikora, FHWA
Bill Watson, NHDOT