MACCAFERRI

CASE HISTORY

Ref: USA045, Issue Date: 10.1.2008

BASE COURSE (ROAD) REINFORCEMENT

BRAZOS COUNTY, TEXAS, USA

Product: MacGrid® EB2, MacGrid® EB3

Problem

Highway 6 north out of Houston was designated as one of the evacuation routes out of the city in the event of natural disasters. The width of the highway was being expanded to accommodate hurricane evacuation for Houston area residents. Due to the potential large number of vehicles and large size of vehicles (i.e. buses and other large transportation vehicles) the roadway needed to be both large in lane numbers and strong. The sub-base and base course design has a major impact on the strength and functionality of the road. TXDoT needed a cost effective and practical way to solve this problem.

Solution

The geogrid was designed and installed to reduce or eliminate surface cracking of the asphalt road being built. Sulfates in the sub-base would cause greater swelling and shrinking creating cracks in the road. It was more cost effective to use geogrid than to test the entire sub-base area and chemically treat it.

Best Features of the Structure

The geogrid has replaced the need for chemical stabilization of the sub-grade. Also, by reducing or eliminating the surface cracking the road has a longer lifespan. Ultimately, taxpayers spend less money on the road on the construction side and by not having to rehab the roadway as much versus other road design solutions.

Other Geogrid Applications

Strengthens base course underneath roads, allows for a reduction in base course material, and increases lifespan of roads.

Client:

TXDOT

Main contractor:

TJ LAMBRECHT

Designer:

TXDOT

Products used:

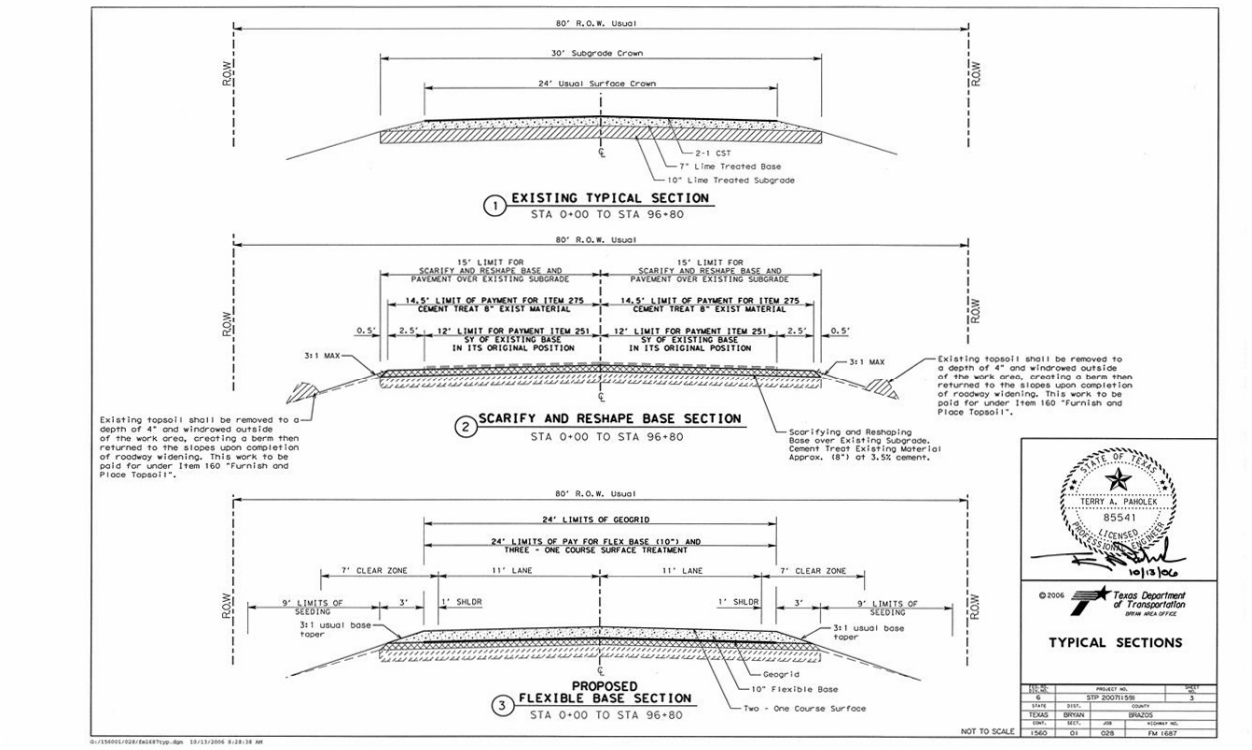
MACGRID® EB2, MACGRID® EB3

Date of construction:

START: 03/02/2006; END: 08/2009

Initial Site

During Construction



Cross Section of SH6

Construction

927,960 square yards of MacGrid® EB2 and 29,868 square yards of MacGrid® EB3 were used. Production rate was 2,500 square yards per day with 3-4 men per crew. This production rate is lower than normal because this was the first project this county's engineers had ever done with geogrid and therefore they had very stringent regulations on installation procedures.

Recent View of the Structure

Working with Maccaferri

For over 125 years, Maccaferri has provided engineering expertise to clients around the world. We believe that the combination of our professionalism, design software, technical and site assistance services and our aim of providing the best products in the market, sets us apart from our competitors. We are certain you will agree.

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