

Whitetopping: The Overlay Choice



GOMACO®

The Worldwide Leader in Concrete Paving Technology



A GOMACO GHP-2800 is slipforming the new concrete overlay on top of existing asphalt.

HW-051210 D13

Whitetopping Project:

Interstate 90 near Hamburg,
New York, USA

Paver:

GOMACO GHP-2800 with IDBI attachment, two paver-mounted GOMACO Smoothness Indicator (GSI) units, and Leica Geosystems 3D

Paving Width:

25 feet (7.6 m)

Whitetopping Depth:

Nine inches (229 mm)

Paving Production:

2600 feet (792 m) per day, six to eight feet (1.8 to 2.4 m) per minute

Smoothness Results:

IRI readings averaged around 70, with readings as low as 30

Note of Interest:

The contractor slipforming the project stated, "I've had some industry feedback stating straight out that this is the smoothest concrete pavement that anybody has ever ridden on in New York."



The paver is equipped with Leica Geosystems 3D, two paver-mounted GSI units, and an IDBI for placing the dowel bars for the transverse joints.

HW-051210 D4



A GOMACO T/C-600 texture/cure machine followed the paver and applied a longitudinal tine and white spray cure.

HW-051211 D12

Whitetopping Project: Highway 200 in North Dakota, USA

Paver:

GOMACO GP-2600 with a paver-mounted GOMACO Smoothness Indicator (GSI®) unit

Paving Width:

28 feet (8.5 m)

Whitetopping Depth:

Five inches and six inches (127 mm and 152 mm)

Smoothness Results:

IRI reading of 38.6 before corrective action. The contractor was easily able to meet the “localized roughness” standard of under 80 inches per mile (1263 mm/km) in a 25 foot (7.6 m) continuous segment

Note of Interest:

This highway was chosen for a concrete overlay due to the very high level of truck traffic generated by two large industrial facilities on the route.



Elevated shoulder tie bars at the edge of the pavement were used to tie on a new concrete shoulder over the existing asphalt surface.



A GOMACO T/C-600 texture/cure machine worked behind the GOMACO paver.



The GOMACO GSI on the back of the GP-2600 gave real-time smoothness results allowing instant fine-tuning of paver operations for smooth ride.

Whitetopping Project:

U.S. Highway 71 by Spencer, Iowa, USA

Paver:

GOMACO GHP-2800 with G+®, G+ Connect™, 5400 series mold, two paver-mounted GOMACO Smoothness Indicator (GSI®) units, and Leica Geosystem 3D

Paving Width:

34 feet (10.4 m)

Whitetopping Depth:

Six inches (152 mm)

Paving Production:

5700 feet (1737 m) per day

Smoothness Results:

Averaged 17 or under on the zero-blanking band

Note of Interest:

The mainline on the project was 24 feet (7.3 m) wide with six foot (1.8 m) and four foot (1.2 m) flying shoulders. The GHP-2800 was equipped with three power transition adjustors (PTAs), one for the center crown and one each for the shoulders. The 5400 series mold features self-supported TAs that are hydraulically driven with the transitions controlled by G+.



HW-101217 D16

Paver-mounted GOMACO GSI units provide instant feedback to achieve rideability and help pinpoint optimum travel speed, vibration, mix design, and other variations with slipform paving.



HW-101218 D9

HW-101221 D15

On the ground— personnel have the ability to monitor paving information and make adjustments for PTAs, 3D systems, GSI units, and more.



HW-101222 D20

The GHP-2800 now features GOMACO's exclusive and proprietary G+ control system that is simple to understand and operate.



HW-101106 D17

HW-101120 D12

Paver-mounted GSI units provide instant rideability results. The GSI is GOMACO's proprietary non-contact profiler capable of providing instant smoothness results.



The existing asphalt surface was milled, swept, and cleaned to prepare for the unbonded concrete whitetopping. Trucks dumped the concrete directly onto the grade in front of the paver.



HW-101102 D10

The project was slipformed half-width and one lane of traffic was kept open at all times using flaggers and pilot cars to direct the vehicles.



HW-101109 D11

#5 steel rebar, six feet (1.8 m) long, were placed on 30 inch (762 mm) centers on the existing roadway to tie on the new eight inch (203 mm) thick shoulder.

Whitetopping Project: U.S. Highway 18 by West Union, Iowa, USA

Paver:
GOMACO GHP-2800, two paver-mounted GOMACO Smoothness Indicator (GSI) units, and Leica Geosystem 3D

Paving Width:
16 feet (4.9 m) with a 12 foot (3.7 m) driving lane and four foot (1.2 m) shoulder

Whitetopping Depth:
4.5 inch (114 mm) roadway, eight inch (203 mm) shoulder

Paving Production:
8000 feet (2438 m) per day

Smoothness Results:
Averaged 18 to 19 inches per mile (284 to 300 mm/km) on the zero-blanking band, with some days as low as 13 inches per mile (205 mm/km)

Note of Interest:
This project was half-width concrete whitetopping in the state of Iowa. The contractor on the project stated, "I think it went really well and this will be a viable option for other projects. This was the first half-width overlay we've done with stringless technology. It went well and we were able to achieve very, very good smoothness on the entire project."

Whitetopping Project:

Interstate 59 in Etowah County,
Alabama, USA

Paver:

GOMACO GP-2600 with two paver-mounted
GOMACO Smoothness Indicator (GSI®) units

Paving Width:

26 feet (7.9 m)

Whitetopping Depth:

11 inches (279 mm)

Paving Production:

2000 feet (610 m) per day

Smoothness Results:

Averaged under five on the zero-blanking band

Note of Interest:

This was the first concrete project to be let in the state of Alabama in almost 30 years and the state's first concrete overlay. It came with some difficult specifications on the slipformed concrete's smoothness, edge and thickness. The on-board GSI units helped the contractor fine-tune their paving operation to achieve ultimate rideability.



The GOMACO GSI display can be mounted at eye level on the side of the paver, and offers a variety of viewing options of the information collected by the on-board GSI units.



The project had no extra room for haul roads, so concrete was dumped directly on grade in front of the GOMACO PS-2600 placer/spreader. Baskets were placed by hand onto the existing asphalt grade.



Draft of the paving mold, concrete slump, size of the concrete head in front of the paver, and other factors were studied to see what influence they potentially had on pavement smoothness.



The paver-mounted GOMACO GSIs were powerful diagnostic tools as the contractor in Alabama worked to fine-tune their paving process for the challenging rideability specification.

HW-051111 D8

HW-051104 D20

HW-051112 D12

HW-051113 D5



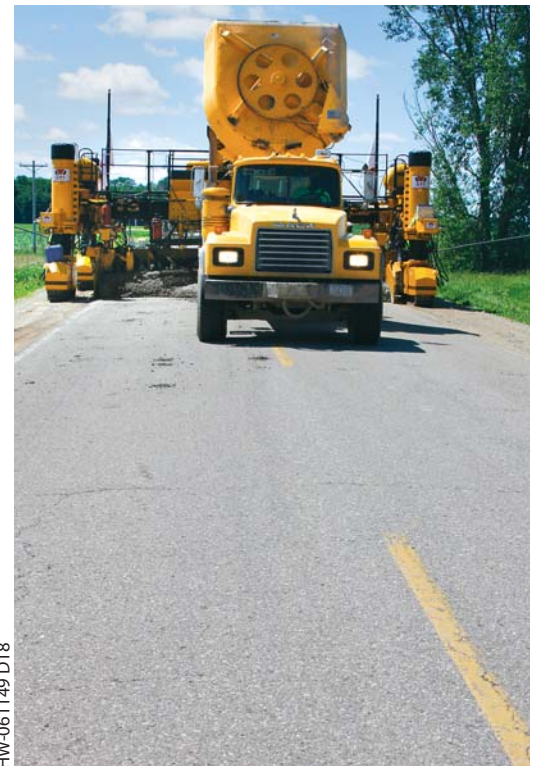
Concrete is placed directly on the existing asphalt. The surface only has to be swept clean before the concrete is dumped on top of it.



Four Leica Geosystems total stations are at work on the stringless project.



Transverse joints in the new four inch (102 mm) thick, 22 feet (6.7 m) wide overlay are every six feet (1.8 m), and longitudinal joints are every 5.5 feet (1.7 m).



The overlay is four inches (102 mm) thick. For a visual reference, that's the exact height of this picture.

Whitetopping Project: 80 kilometers in Mitchell and Worth Counties, Iowa, USA

Paver:

GOMACO GP-2600 and the GOMACO GHP-2800 with Leica Geosystem 3D

Paving Width:

22 feet (6.7 m)

Whitetopping Depth:

Four inches (102 mm)

Paving Production:

8400 feet (2560 m) per day

Note of Interest:

The contractor started the project using their GP-2600 paving with stringline. During the second portion of the project, they upgraded to a GHP-2800 with 3D. The contractor noted the benefit of increased paving production with fewer men needed for stringline maintenance and setup. Five laborers who worked the stringline are now used elsewhere in the paving process. The lack of stringline also allows them to focus more on quality and production rather than stringline maintenance.

HW-061153 D16

HW-061148 D15

HW-061147 D20

HW-061149 D18



Whitotopping depths of five, six and seven inches (127, 152, and 178 mm) were slipformed with a GOMACO GP-2600 on a project near Jamestown, North Dakota, USA.



This 16 feet (4.9 m) wide, four inch (102 mm) thick whitotopping was slipformed with a Commander III over existing asphalt in Kalamazoo, Michigan, USA.



A Commander III slipforms a polymer concrete overlay on Interstate 5 in Sacramento, California, USA.



U.S. Highway 10 in Clare, Michigan, USA, received a six inch (152 mm) whitotopping using a GOMACO GHP-2800 paver with IDBI and Trimble 3D stringless controls.



A two-pass concrete whitotopping was placed on State Highway 24A near Cozad, Nebraska, USA. The GOMACO GP-2400's single-lane paving passes were 12.5 feet (3.8 m) wide and five inches (127 mm) thick.

You can always find us at: <http://www.gomaco.com>

Cover Photo: HW-061147 D20 and HW-101109 D11

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W272UP1

CG-060414 D32

CG-120807 D15

HW-081314 D12

HW-101303 D8

HW-101345 D6