UNITED STATES
CIVILIAN BOARD OF CONTRACT APPEALS

October 8, 2019

CBCA 6575-FEMA

In the Matter of NOBLE COUNTY, OHIO

Delmar George, County Engineer, Noble County Engineer's Office, Caldwell, OH, appearing for Applicant.

Anne Vitale, Associate Legal Counsel, Ohio Emergency Management Agency, Ohio Department of Public Safety, Columbus, OH, counsel for Grantee.

Brock Pierson and Ramoncito J. deBorja, Office of Chief Counsel, Federal Emergency Management Agency, Department of Homeland Security, Washington, DC; and Charles Schexnaildre, Office of Chief Counsel, Federal Emergency Management Agency, Department of Homeland Security, Baton Rouge, LA, counsel for Federal Emergency Management Agency.

Before the Arbitration Panel consisting of Board Judges **SHERIDAN**, **KULLBERG**, and **ZISCHKAU**.

Applicant, Noble County, Ohio (Noble County or applicant), seeks arbitration over the denial by the Federal Emergency Management Agency (FEMA) of its request for public assistance (PA) funding in the amount of $687,330 for work associated with stabilizing the integral ground and repairing a portion of county road (CR) 66/Arnold Road. FEMA determined that applicant's request was ineligible for PA funding for several reasons, including FEMA's determination that the slope and integral ground beneath the road was unstable prior to the declared event. As a result, FEMA denied applicant's request in its entirety.

The parties agreed to a hearing on the written record pursuant to Board Rule 611 (48 CFR 6106.611) (2019). For the reasons that follow, we uphold FEMA's determination and deny Noble County's claim.

## Background

During the incident period of February 14 through February 25, 2018, severe storms and flooding impacted Noble County, Ohio. The President issued a major disaster declaration for the state of Ohio on April 17, 2018, which FEMA docketed as FEMA-4360-DR-Ohio; Major Disaster and Related Determinations, 83 Fed. Reg. 20,829 (May 8, 2018). The disaster declaration for the 2018 Ohio severe storms, in which the arbitration arises, included Noble County. As such, Noble County is an eligible applicant for this declared disaster.

Following the flooding that occurred, Noble County identified damage along CR 66/Arnold Road, a twenty-three foot-wide, two-lane, asphalt road located on a slope. The damaged stretch of road, referred to as the "slip area," measured approximately 225 feet long by twenty feet wide and was identified by FEMA as project 61886. Applicant claimed soil saturation from the excessive rains and overland flooding caused erosion, settlement, and a slope failure at the site, and requested PA funding to stabilize the slope and repair the road.

FEMA initially determined that the slip area was not eligible for reimbursement under the PA program because applicant had not demonstrated that the damage was a direct result of the declared disaster. FEMA also determined that the slope and integral ground beneath the road was unstable prior to the declared event. As a result, FEMA denied Noble County's application.

Applicant appealed FEMA's decision and, in its decision on the first appeal issued on July 26, 2019, FEMA overturned part of the original ineligibility determination and concluded that Noble County had sufficiently demonstrated that damage to the road surface, base, and guardrail were a result of the declared disaster. However, FEMA upheld the part of the ineligibility determination regarding the integral ground, maintaining that the slip area was unstable prior to the disaster, and citing to its policy regarding the eligibility of slope stabilization contained in FEMA's Public Assistance Program and Policy Guide (PAPPG), FP-104-009-02, at page 128.

Noble County filed a request for arbitration with this Board, reiterating its position that FEMA should provide PA funding for the slope stabilization and road repair at issue.

a. FEMA's public assistance policy

FEMA's eligibility criteria for slope stabilization dates back to 1984. FEMA has long held that the integral ground[1] making up the slope beneath a facility and the portion of the slope essential to support the structural integrity of a facility, such as a road, is only eligible for PA if it was stable prior to the disaster. If an eligible facility is located on a slope and is damaged as a result of a landslide or slope instability triggered by the incident, FEMA looks to the stability of the slope that supports the facility before it approves PA funding to restore the facility. PAPPG, at page 128. Restoration of the integral ground that supports the facility may also be eligible. *Id*. The impact of slope stability on eligibility is as follows:

- If the site is stable, permanent restoration of the facility and its integral ground is eligible.

- If the site is unstable and there is no evidence of pre-disaster instability after the facility was constructed, permanent restoration of the facility and its integral ground is eligible, including measures to stabilize the integral ground.

- If the site is unstable and there is evidence of pre-disaster instability after the facility was constructed, restoration of the facility's integral ground is not eligible. Restoration of the facility is eligible only upon the Applicant stabilizing the site and restoring the integral ground.

*Id*. Site inspections and limited geotechnical assessments to determine site stability and to obtain a technical opinion of the cause of the slope failure are also eligible. *Id*. Permanent repair to stabilize natural ground that is not integral to an eligible facility's function is not eligible. *Id*.

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[1] Regarding the term "integral ground," the PAPPG, at page 128, provides:

> Integral ground refers to only the ground necessary to physically support a facility.
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> Integral ground may be natural or improved ground upon which an eligible facility is located and that is essential to support the structural integrity and utility of the facility.

b. Noble County has not established that the slope and integral ground at the slip area was stable at the time of the 2018 disaster

Google Earth aerial photographs taken on April 13, 1994, and October 4, 2015, show that CR 66/Arnold Road has moved down the hill approximately twenty feet in a slow landslide process. The hillside slope at CR 66/Arnold Road had been unstable for many years prior to the 2018 disaster.

Noble County has made various repairs to CR 66/Arnold Road over the years. Invoices show the same method of repairs being repeatedly performed prior to the 2018 disaster, each time resulting in similar failures. Despite this, Noble County continued to repair CR 66/Arnold Road piecemeal, sufficiently to keep it open throughout the years, but without addressing the underlying hillside slope issues above and below the road itself.

Most pertinent to this case, Noble County performed repair work on the slip area for which it now seeks PA funding, from September 19 through October 4, 2016, approximately fifteen months prior to the disaster. According to Mark J. Eicher, P.E., P.S., from Muskingum County Engineer's Office:

> In 2016 Noble County Road 66, Arnold Road had a slip that was impacting the flow of traffic and the safety of the residents along this road. At that time, no soils studies or geotechnical reports were prepared.
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> The County Road was closed, we removed the unsuitable soils in the area that was slipping and replaced it with large dump rock (rip rap). The dump rock [was] then covered with no. 2 stone to fill in the gaps between the large rocks and then covered with smaller stone . . . which we used for repairing slips at this time.
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> Prior to the beginning of the declared incident period in February 2018 Arnold Road, CR 66 was in stable condition and open to traffic in both directions.[2]

Noble County argues that by making the September/October 2016 repairs, it addressed the slope instability issues and posits that the slope at CR 66/Arnold Road was therefore stable

[2] Applicant does not explain why an engineer from Muskingum County, Ohio, was engineering a road for Noble County, or the bases for that engineer's broad conclusion that CR 66/Arnold Road "was in stable condition."

prior to the 2018 disaster. Noble County spent $55,313.12 for the September/October 2016 repairs.[3]

After the 2018 disaster, Noble County took the position that much more extensive and expensive repairs were needed to stabilize the slope and repair the slip area of CR 66/Arnold Road. Noble County sought $687,330 for work associated with stabilizing the integral ground and repairing the road. Noble County Engineer, Delmar George, P.E., P.S., wrote:

> The sliding slope mass movement led to slope failures directly affecting the integral ground of the surface road. The ability to return [the] facility back to pre-disaster condition is not feasible. The slope is very tall and steep and cannot hold the embankment material in place to prevent it from sliding downward. Therefore, it will require a different repair method to stabilize the embankment.
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> The method of repair being proposed is H-Piling with Concrete Lagging utilizing steel H-pile at regular 6' intervals, installing selected lagging material, and backfilling and compacting behind the lagging. This method has proven to be effective in stabilizing/repairing similar damages.

In denying Noble County's application for slope stabilization, FEMA asserted that the entire slope on CR 66/Arnold Road plays a role in the support and structural integrity of the road. As such, FEMA posited that the entire slope is classified as integral ground. Although invoices show that several piecemeal attempts to repair the road had been made, Noble County has performed no comprehensive analysis to assess the stability of the slope – either prior to or after the 2018 disaster.

Noble County does not have technical data or studies on the water table, soil strength, drainage, geotechnical conditions, or any other technical investigations/data necessary to properly evaluate the stability of the slope or the depth of the failure. FEMA concluded that it was not possible to determine that the rip rap used as part of the September/October 2016 repair sufficiently stabilized the slope because a comprehensive analysis of the conditions of the slope and integral ground has never been performed. Additional layers of asphalt

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[3] As support for its position, applicant refers to the October 4, 2015, aerial photograph that it asserts shows that the embankment was in stable condition prior to the disaster and that the guard rails do not appear to have moved out of position. FEMA's consulting engineers have a different take on that photograph and assert that it shows that numerous asphalt repairs have been completed on most of the downhill side of the road.

added by Noble County at the site in 2017, after the September/October 2016 repair, FEMA asserted, shows unresolved instability at the site. FEMA also posited that the asphalt thickness at the site indicates that the area has been patched many times over the years.

As the result of another weather event, this time in February 2019, the slope at CR 66/Arnold Road failed even further. FEMA retained consulting engineers to assess the conditions and a report was generated, authored by Carlos Gomez, B.S. (Civil Engineering), Benjamin Gommpers, P.E., and Hameed Shabila, Ph.D. (Structural Engineering). The observations and conclusions reported by the consulting engineers after visiting the site on August 26, 2019, included the slip area at issue in this arbitration. The consulting engineers opined that the repairs completed by Noble County in September/October 2016 addressed the road surface support but did not address the landslide process, continued stabilization issues, and collapse of the hillside slope itself. The engineers noted the misconception on the part of Noble County that additional asphalt added layer-by-layer served as a base similar to rock. The report stated, "By adding extra layers of asphalt, the implemented solution was simply adding more weight to an already collapsed hillside." The consulting engineers also observed that the road had been repaired several times over the years and showed asphalt of varying age and depth as a result of the patching.

The consulting engineers' report also addressed issues which support FEMA's conclusions as to the instability of the slope at CR 66/Arnold Road. In addition to the presence of generally unstable soils with a high runoff rate, the report spoke to the County's failure to address an important underlying cause of the continued loss of road – poor drainage. Previous work completed by Noble County at the site failed to include drainage devices, such as a culvert, to control the rainwater coming down the hillside towards the road. Without proper drainage, the consulting engineers opined, rainwater freely runs across the surface of CR 66/Arnold Road as well as beneath the road, causing continued destabilization of the slope and the road.[4] Additionally, by not adding a properly designed filter fabric/membrane to the rip rap[5] added during the September/October 2016 repairs, rainwater was free to erode and destabilize those repairs, highlighting the ineffectiveness of

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[4] The report noted that Noble County also failed to take increased groundwater into consideration, which should have been addressed as part of any effort to permanently stabilize the slope.

[5] Rip rap is listed as one of several possible "temporary" slope stabilization measures in the PAPPG under FEMA's eligibility for emergency protective measures. PAPPG, at page 82. In its first appeal, Noble County stated that piling is the only suitable repair option to properly stabilize the slip area slope and that repairing the slope with rip rap would not work.

Noble County's work performed in relation to stabilization of the slope itself. Noble County's failure to take action to address the stability issues of the slope on the uphill side of the road was also reported by the consulting engineers, who noted that both uphill and downhill slope stability issues were evident from tilted trees above and below the road, and suggested prolonged land surface slide at the site.

FEMA asserts that the shortfalls in the repairs performed by Noble County in September/October 2016, additional repairs required in 2017, the failure to take adequate measures to address the lack of drainage, as well as the unaddressed underlying slope instability both above and below the road itself, all contribute to the continued slope issues on CR 66/Arnold Road, and support its conclusion that Noble County did not adequately address the instability prior to the 2018 declared disaster.

We agree with FEMA's assessment that Noble County's continued efforts to address CR 66/Arnold Road over the years did not resolve the stability and drainage issues but were temporary fixes of the road sufficient to keep it open. The repairs were done without addressing the root problems of the road, the stability of the slope itself, and associated drainage. We find that the record supports FEMA's determination that the slope and integral ground beneath the road were unstable prior to the declared event.

## Decision

FEMA's July 26, 2019, determination that applicant was ineligible for PA funding is sustained.

*Patricia J. Sheridan*
PATRICIA J. SHERIDAN
Board Judge

*H. Chuck Kullberg*
H. CHUCK KULLBERG
Board Judge

*Jonathan D. Zischkau*
JONATHAN D. ZISCHKAU
Board Judge