



UNITED STATES  
CIVILIAN BOARD OF CONTRACT APPEALS

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July 29, 2021

CBCA 7017-FEMA

In the Matter of CITY OF HATTIESBURG, MISSISSIPPI

Michael G. Gaffney and Christopher M. Gaffney of Gaffney & Gaffney, Metairie, LA; and Charles V. Cusimano, III of Cusimano Law Firm, PLC, Metairie, LA, counsel for Applicant.

Clayton C. French, Jr., Chief Recovery Officer, John M. Siler, Director, Office of Public Assistance, and Wendy Huff Ellard, Mississippi Emergency Management Agency, Pearl, MS, appearing for Grantee.

Ramoncito DeBorja and Christiana Cooley, Office of General Counsel, Federal Emergency Management Agency, Department of Homeland Security, Washington, DC; and Frank Bruscato, Office of General 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 **BEARDSLEY** (Chair), **KULLBERG**, and **RUSSELL**.

The applicant, the City of Hattiesburg, Mississippi, sought arbitration under 42 U.S.C. § 5189a(d) (2018) of a dispute with the Federal Emergency Management Agency (FEMA). The panel held a two-day hearing under Board Rule 611 (48 CFR 6106.611 (2020)). The issue before us is whether, in accordance with what is known as the “fifty-percent rule,” the city is entitled to the costs of replacing Fire Station No. 2 or, instead, is limited in its recovery to the costs of repairing the existing building.

### Background

From January 20 to 21, 2017, severe storms, tornadoes, straight-line winds, rain, and flooding struck the city of Hattiesburg and damaged Fire Station No. 2. The fire station was a one-story, 3207-square-foot building constructed in 1972 of stack-bond concrete masonry, flat roof bar joist, and tectum panel decking. The storm damaged the roof, interior walls, exterior walls, engine bays, engine bay doors, fascia and soffit, brick, electrical and communications services, windows, heaters, HVAC, trench drain, wall supports, gutter and downspouts, parapets, flashings and counter flashings, gas service, ceilings, insulation, electrical systems, plumbing systems, floors, interior partitions, corridor ceilings, and woodwork.

On January 23, 2017, the city's insurer, Western World Insurance Group, inspected the fire station and prepared a report estimating repair costs totaling \$177,512.82 and a replacement value of \$227,884.16. Because the estimate exceeded the city's \$225,000 insurance policy limit, the insurer declared the facility "damaged beyond repair" and capped the payout at the policy limit.

The city provided several estimates of repair and replacement costs by engineering firms and Mr. Mark Williams, an architect and design professional. FEMA originally prepared project worksheet (PW) 11 for an estimated repair cost of \$263,295, calculated using FEMA's cost estimating format (CEF). FEMA calculated a fifty-percent rule analysis to compare the eligible repair costs (\$263,295) to the eligible replacement costs (\$640,000) calculated by Mr. Williams. Since the repair costs did not meet the fifty-percent threshold, FEMA determined that only the repair costs for the fire station were eligible for public assistance (PA) funding. After first deducting \$225,000 in insurance proceeds, FEMA obligated PW 11 for \$44,712.07 in eligible costs to repair the fire station.

On August 27, 2018, the city asked FEMA to recalculate the fifty-percent rule analysis using a new repair estimate developed by Mr. Williams in the amount of \$538,650.37. The new repair cost estimate was based on an itemized scope of work that included seven line items that FEMA had not included in its initial CEF. Using RSMeans cost data, FEMA prepared a new CEF that included costs related to the newly identified line items and recalculated the fifty-percent rule analysis based on an estimated repair cost of \$174,597.53 and a total replacement cost of \$337,055. Based on this new analysis, FEMA concluded that the revised cost estimates satisfied the fifty-percent rule replacement threshold, and on January 8, 2019, FEMA revised PW 11 to fund the replacement of the city's fire station.

On March 6, 2019, the city submitted a first appeal of PW 11, version 1, alleging that the \$337,055 estimated replacement cost did not properly account for square footage

upgrades to the fire station's design required by current, applicable fire prevention codes and standards. The city requested an additional \$1,791,551.52 in PA funding to build a 7568-square-foot fire station for estimated costs totaling \$2,234,941.

On July 12, 2019, the city submitted a proposed floor plan to FEMA for the new fire station and requested funding for an "in kind, at cost" replacement facility. The proposed replacement building was 5928.72 square feet. The city justified the increased size of the building as necessary to meet general and use-specific codes and standards.

FEMA reviewed the first appeal and concluded that a portion of the applicable fire prevention codes and standards were not accounted for in the approved CEF. On October 29, 2019, the first appeal decision approved the additional square footage, and FEMA indicated that it would prepare a new CEF to include the fire prevention codes and standards upgrades and then recalculate the fifty-percent rule analysis based on a 5900-square-foot replacement facility. The recalculated cost to repair was \$203,604.18, the replacement cost was \$572,762.31, and the new fifty-percent analysis totaled 35.5%, making the fire station ineligible for replacement funding. On January 7, 2020, FEMA reversed its decision from November 2018, indicating that the fire station was no longer eligible for replacement funding. Thereafter, the city appealed this decision to FEMA. FEMA denied the appeal and funding in the amount of \$1,928,376 for the replacement of the fire station, and the city submitted its request for arbitration to us.

After a two-day hearing, the parties submitted some new numbers to the panel to consider in calculating the fifty-percent rule. Specifically, the city estimated the historical cost to repair the 3200-square-foot fire station to be \$1,054,800 and the RSMeans cost to be \$634,784. The city's replacement cost equaled \$616,009.91 for a 3200-square-foot facility based on RSMeans. The city's replacement cost for a 5900-square-foot facility equaled \$1,580,042 using historical data, or \$983,185 using RSMeans. Each of the city's repair costs equaled more than fifty percent of the city's corresponding replacement costs.

FEMA, on the other hand, found the repair costs of a 3200-square-foot fire station to equal \$215,938 and the replacement costs of that same size facility to be \$362,820.01. The repair costs, therefore, equaled over fifty-nine percent of the replacement costs. However, FEMA's replacement costs for a 5900-square-foot facility equaled \$595,702.80, resulting in repair costs that are thirty-six percent of the replacement costs.

The applicant asks us to find that it is entitled to funding of the full replacement costs of a 5900-square-foot fire station, rather than the costs of repairing disaster-related damage in the 3200-square-foot fire station.

### Discussion

“We review the fifty-percent calculation de novo, rather than through a deferential standard of review.” *Roman Catholic Church of the Archdiocese of New Orleans*, CBCA 6469-FEMA, 20-1 BCA ¶ 37,582 (citing *Bay St. Louis-Waveland School District*, CBCA 1739-FEMA, 10-1 BCA ¶ 34,335 (2009)). Accordingly, we are not bound by FEMA’s prior determinations. *City of New Orleans*, CBCA 5684-FEMA, 18-1 BCA ¶ 37,005.

“Under FEMA’s regulations implementing the [Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. §§ 5121–5296 (2018)], an applicant is eligible for reimbursement of the costs of replacing, rather than merely repairing, a damaged facility if the cost of repairing the disaster-damaged elements of that facility to their ‘predisaster condition’ exceed fifty percent of the cost of facility replacement.” *Roman Catholic Church of the Archdiocese of New Orleans*, CBCA 5549-FEMA, 18-1 BCA ¶ 37,089 (citing 44 CFR 206.226(f) (2017)). In calculating a facility’s repair cost, FEMA includes only costs related to the repair of disaster-damaged components, including upgrades to those components required by applicable codes and standards. For large projects, which this is, FEMA uses the estimated costs formulated in part A of the CEF to calculate the estimated repair and replacement costs using the following guidance:

The cost of repair is that which is necessary to repair disaster-damaged components using current methods and materials. The repair costs include non-emergency mold remediation associated with the damaged components and the codes and standards upgrades that apply to the repair of the damaged components. This cost does not include upgrades of other components triggered by codes and standards, design associated with upgrades, demolition of the entire facility, site work, or applicable project management costs, even though such costs may be eligible for PA. The cost of contents and hazard mitigation measures is not included in the repair cost.

The replacement cost includes the costs for all work necessary to provide a new facility of the same size or design capacity and function as the damaged facility in accordance with all current applicable codes and standards. The cost does not include demolition, site work, applicable project management costs, cost of contents, and hazard mitigation measures.

FEMA’s CEF for Large Projects Instructional Guide V2.1 (Sept. 2009) (2009 CEF Guide) at 2-3. FEMA guidance recommends that estimated costs calculated using the CEF be based on “average weighted unit prices (local costs derived from actual contract history) provided by an applicant or relevant state or regional agency.” *Id.* at 4-8. However, if appropriate

local data cannot be developed, FEMA guidance recommends the use of industry standard construction cost estimating resources, such as RSMeans. *Id.*

. . . FEMA requires documentation to support that the work is eligible in accordance with laws, regulations, Executive Orders (EOs), and policies. This chapter provides checklists of documentation that may support eligibility. These checklists are not all-inclusive lists. Documentation should provide the “who, what, when, where, why, and how much” for each item claimed. If the specific documentation discussed below is not available, FEMA and the Recipient work with the Applicant to obtain alternative documentation to support eligibility. However, it is the Applicant’s responsibility to substantiate its claim as eligible. If the Applicant does not provide sufficient documentation to support its claim as eligible, FEMA cannot provide PA funding for the work.

FEMA’s Public Assistance Program and Policy Guide (PAPPG) (Jan. 2016) at 127.

FEMA primarily questions the city’s fifty-percent rule analysis and estimated costs due to the city’s failure to provide unit costs, certain detailed analyses, and specific identification of the application of codes and standards. At the hearing, the city provided testimony to address these issues and to support a finding by the panel that the fire station repair costs equal more than fifty percent of the replacement costs.

### Substantial Damage

The city argues that FEMA improperly calculated the repair cost estimate because it failed to account for increased roof and engine bay repair costs related to upgrades required to comply with FEMA Recovery Policy (FP) 104-009-4, *FEMA’s Public Assistance Required Minimum Standards* (Sept. 2016). When triggered, the PA-required minimum standards require “the integration and use of the hazard-resistant provisions of the International Code Councils’ (ICC) International Building Code (IBC), the International Existing Build Code (IEBC), and/or the International Residential Code (IRC).” FP 104-009-4.

FEMA Policy FP 104-009-4 reads:

This policy applies when a building: is Substantially Damaged, suffers Substantial Structural Damage, and/or [is] eligible for Replacement in accordance with the 44 CFR part 206.226(f).

1. Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.
2. Substantial Structural Damage: Significant damage to the vertical elements of the lateral force-resisting system and/or the vertical gravity load-carrying components in accordance with the IBC or IEBC.
3. Replacement: Disaster-related damage exceeds 50% of the cost to replace a facility to its pre-disaster condition.

*Id.* at 2 ¶ A.1.a.ii. FEMA asserts that the city has failed to demonstrate that any of these three triggers apply to the fire station and that FEMA, therefore, was not required to include costs related to the PA-required minimum standards in its fifty-percent rule repair and replacement cost estimates. The panel, however, agrees with the city that these PA-required minimum standards apply.

FEMA argues that the fire station did not sustain substantial damage as defined in FP 104-009-4 because substantial damage can only occur in a flood hazard area and that the fire station was not in a flood hazard area. FEMA, however, relies on a 2017 FEMA Job Aid, *Understanding Substantial Damage in the International Building Code, International Existing Building Code, or International Residential Code*, that applies “substantial damage” to damaged facilities in flood hazard areas only and references FP 104-009-2 instead of FP 104-009-4.<sup>1</sup> FP 104-009-4 does not limit substantial damages to facilities in flood hazard areas, but mentions “tornado, wind, seismic, and flood-prone areas, the location of which is identified in the IBC, IEBC, or IRC, regardless of the type of incident that caused the damage.” Even though the IEBC defines “substantial damage” as relating to flood provisions, we find that the fire station, which suffered damage due, in part, to tornadoes and severe winds, did not have to be in a flood hazard area to sustain substantial damage as defined by FP 104-009-4.

FEMA (citing FEMA’s Substantial Structural Damage Job Aid, *Understanding Substantial Structural Damage in the International Existing Building Code* (Apr. 2017) (FEMA SSD Job Aid), and IEBC §§ 202, 404.2.1, 606.2.2 (2015)) contends that a finding of substantial structural damage requires “a structural load-bearing evaluation of the entire lateral system (including undamaged system components) to determine whether it can

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<sup>1</sup> FP 104-009-4 was published in September 2016, and it was not superceded until April 2017, when the next version of the PAPPG was published. The damage to the fire station occurred in January 2017.

withstand certain wind and seismic loads.” According to FEMA, a registered design professional must “establish whether the damaged building, if repaired to its predamage state, would comply with the provisions of the *International Building Code* for wind and earthquake loads.” IEBC §§ 202. If the evaluation determines that substantial structural damage exists, the entire system must be retrofitted to withstand the required loads. FEMA SSD Job Aid at 2; IEBC §§ 202, 404.2.1, 606.2.2. Similarly, for substantial structural damage to the gravity system, the PA minimum standards require “retrofit of both damaged and undamaged gravity system components to carry the dead and live load required for new construction.” FEMA SSD Job Aid at 4; IEBC §§ 404.3, 606.2.3.

FEMA contends that the city did not provide a structural load-bearing evaluation by a registered design professional. Again, FEMA relies on the job aid published after the storm that requires the load-bearing evaluation. However,

[t]he determination of whether a standard is triggered may be made by the appropriate building official or inspector, where applicable, or by the recipient’s or subrecipient’s registered design professional or other appropriate and qualified individual. FEMA will generally accept this determination, but may review the determination to ensure it was made consistent with the standard.

FP 104-009-4. The panel finds that the city provided a sufficient assessment by its design professional and other appropriate and qualified individuals to find that substantial structural damage occurred.

The city-retained engineers documented “cracked brick veneer along high stress points [such as] the heads of openings, direction changes in the exterior walls, parapet walls, and height changes.” Mr. Williams identified “minor thru wall cracking evident throughout the station exterior walls.” He also documented the approximately one-half-inch displacement of the roof structure from its supporting walls. Mr. Williams further testified that there was substantial structural damage to the facility. Mr. Mitchell, the city’s code and building official, testified that the fire station suffered substantial structural damage based on his observations having toured the damaged building and his review of Mr. Williams’s structural evaluation. He testified that “all four of those walls” in the equipment bay “are damaged” as well as “the roof is gone.” Even FEMA in its 2019 appeal decision states that upon reinspection of the facility, FEMA found “noticeable structural damage to the equipment bay.” The city also points to the insurance adjuster’s conclusion that the fire station was “damaged beyond repair.”

Based on the reports and testimony of building officials and design professionals, the panel finds that there was substantial damage and substantial structural damage, and the PA-required minimum standards, therefore, apply to the fire station.

### Applicable Codes and Standards

“When evaluating whether a building is eligible for replacement under 44 CFR 206.226(f), upgrades to meet the IBC, IEBC, or IRC codes will be treated in the same manner as locally adopted codes and standards for the purposes of calculating repair and replacement costs.” FP 104-009-4. FEMA contends that the city provided no specific and delineated analysis of which codes apply or had been adopted by the locality. The testimony of the city’s code official, however, established that the city had adopted at the time of the storm the 2012 International Building Code (IBC), the 2012 International Existing Building Code (IEBC), the National Fire Protection Association (NFPA) Life Safety Code, and the 2012 International Energy Conservation Code (IECC). Mr. Mitchell further established that because the fire station is classified as a Risk Category IV per the 2018 IBC, the new or repaired building will have to be built to withstand 145-mile-per-hour winds. The wind code will affect the repair of the roof, walls, windows, and every other damaged element. To withstand such winds requires impact resistant glass in all eighteen windows and helical piles. The IECC requires the roof and walls to be upgraded to the international energy codes. The electrical system must be upgraded and a new electrical panel installed. Since the communication system was destroyed, the International Fire Code requires responder radio coverage be installed in the facility. The IBC requires upgrades to the living facilities, with a second opening and a sprinkler system.

FEMA failed to include in the estimate of the repair cost the IBC and local codes and standards which are applicable to the disaster damaged elements, such as (1) the costs to comply with the new wind load requirements, and (2) the costs to comply with the American with Disabilities Act (ADA) for access.<sup>2</sup> The city demonstrated effectively at the hearing that the cost of the windows included in FEMA’s estimate was significantly low both because it did not include the wind resistant windows and only included seven, instead of eighteen, windows. The city further demonstrated that the 19.8% allowance for ADA upgrades was also low.

### Insurance Adjuster’s Estimate

The city asserts that FEMA improperly relied on the insurance adjuster’s estimate to calculate estimated repair costs because he allegedly stopped assessing the damage once the

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<sup>2</sup> Despite the city’s argument to the contrary, FEMA properly accounted for asbestos removal in its repair cost estimate.



damage exceeded the amount of insurance coverage. However, each party has conflicting information from the insurance adjuster as to whether that is so. Although FEMA asserts that it performed its own review prior to incorporating certain estimated repair costs into the CEF and FEMA's fifty-percent rule analysis, FEMA included all 235 separate repair line items (totaling \$174,597.53 in costs) in the CEF. Since the report was completed in January 2017, FEMA also added a building cost index (BCI) to reflect current market data in October 2019, the time in which FEMA formulated the CEF. The city witnesses testified that there was no code-required scope of work, including replacement of asbestos floor tile or inclusion of windows to withstand 145 mph winds, included in the insurance adjuster's estimate. The city also argues that FEMA's use of the insurance adjuster's estimate instead of or in addition to RSMMeans and the addition of a BCI confused the issue and made it difficult to compare FEMA's repair costs estimate to the city's repair costs estimate. The city, however, has offered only summary evidence that the insurance adjuster's report costs were unreliable or otherwise flawed. The insurance adjuster's report meets FEMA's criteria for relying on an insurance adjuster's report. PAPPG at 132. The panel, therefore, finds that FEMA's use of the insurance adjuster's estimate was acceptable.

#### Fifty-Percent Rule Analysis

FEMA asserts that the city's fifty-percent rule analysis is flawed because it relies on cost estimates that are based on lump sums rather than on unit costs, making it difficult to determine if the costs are related to the repair of a facility's damaged components, including upgrades to those components required by applicable codes and standards. PAPPG at 132. The testimony of Mr. Williams and other city witnesses, however, satisfied the panel that the city's repair cost numerator includes only costs related to the repair of damaged elements and excludes disallowed costs. Likewise, under FEMA policy, the replacement denominator includes only work necessary to replace the facility in compliance with applicable codes and standards and cannot include costs related to demolition, site work, soft costs, facility contents, hazard mitigation measures, or emergency work. PAPPG at 97; 2009 CEF Guide at 2-8. The city's witnesses similarly satisfied the panel that the city's replacement cost estimate excludes disallowed costs.

The city's witness, Mr. Dorris, argued that FEMA miscalculated its replacement denominator when it used 5900 square feet because the increase in size was related to triggered codes that should not be factored into the replacement denominator. He gave the following example:

If a window is damaged but it did not have a wind rating, the window should be replaced with the new wind load and the cost included in the repair numerator and replacement denominator. If the building requires the separation of male versus female bathrooms to comply with the ADA, because

it was not repair or replacement of a storm-damaged element, it does not go into the numerator or denominator for the fifty percent rule calculation.

Mr. Dorris testified that for the purposes of the fifty-percent calculation, the denominator costs should have been for a 3200-square-foot facility. Mr. Dorris relies on the statement on page 97 of the PAPPG that excludes costs from the repair numerator associated with “upgrades of non-damaged elements even if required by standards” and defines the replacement cost (denominator) as “the cost of replacing the facility on the basis of its pre-disaster design (size and capacity) and function in accordance with applicable standards.”

In PW 11, version 1, FEMA determined that, at 3200 square feet, the facility was eligible for replacement. In the first appeal, FEMA agreed to consider that the replacement facility should be 5900 square feet. Either way, we believe that the cost of repairing the fire station is at least fifty percent of the building’s replacement cost and direct FEMA to provide funding to the city for replacement, rather than repair, of the fire station.

#### Decision

We find that FEMA has incorrectly excluded certain repair and replacement costs in its fifty-percent analysis. We accept the city’s fifty-percent analysis and therefore determine that the City of Hattiesburg is eligible for the costs of replacing, rather than repairing, the fire station with a 5900-square-foot facility.

*Erica S. Beardsley*

ERICA S. BEARDSLEY  
Board Judge

*Beverly M. Russell*

BEVERLY M. RUSSELL  
Board Judge

*H. Chuck Kullberg*

H. CHUCK KULLBERG  
Board Judge