

**MATANUSKA-SUSITNA BOROUGH INFORMATION MEMORANDUM** IM No. 20-174  
**SUBJECT:** AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY  
 CONDEMNING THE HOUSTON MIDDLE SCHOOL BUILDING AND ORDERING IT  
 REMOVED OR DEMOLISHED.

**AGENDA OF:** September 15, 2020

**ASSEMBLY ACTION:**

*Adopted with Assemblymember  
 McKee opposed 9-15-20*  
*(Signature)*

**MANAGER RECOMMENDATION:** Introduce and set for public hearing.

**APPROVED BY GEORGE HAYS, ACTING BOROUGH MANAGER:**

*(Signature of George Hays)*

Route To:	Department/Individual	Initials	Remarks
	Originator	<i>Law</i>	
	Capital Projects Director	<i>(Signature)</i>	
	Planning and Land Use Director	<i>(Signature)</i>	
	Community Development Director	<i>EP</i>	
	Emergency Services Director	<i>KB</i>	
	Finance Director	<i>OK</i>	
	Borough Attorney	<i>NS</i>	
	Borough Clerk	<i>(Signature) 8/31/20</i>	<i>(Signature)</i>

**ATTACHMENT(S):** Fiscal Note: YES ☐ NO ☒  
 Ordinance Serial No. 20-089(2 pp)  
 PDC Recommendation (3 pp)  
 Notice of Condemnation Recommendation (1 p)

**SUMMARY STATEMENT:** The November 30, 2018 earthquake significantly damaged Houston Middle School making it too hazardous for occupancy. The windows have been boarded to prevent unauthorized entry and shoring has been installed to prevent a roof collapse. Shortly after the earthquake, the Matanuska-Susitna Borough (MSB) contracted with Burkhardt Croft Architects (BCA) and PDC Engineers to conduct the initial structural evaluation of Houston Middle School. This evaluation was done at the same time and with the

MSB's primary insurance carrier in support of insurance settlement negotiations. This initial structural evaluation did not include a complete structural analysis or destructive inspection and was limited to what could be seen/evaluated without tearing into the walls and roof because of fear of a building collapse due to the constant aftershocks.

BCA/PDC recommended the academic wing be demolished and reconstructed and to repair the administrative and gymnasium wings. At the time, and based on the limited structural investigations, it appeared that repairing two of the three wings was the more cost effective option and the MSB's insurance carrier agreed with this analysis and that damage likely exceeded the \$15M policy and wrote the MSB a check. Negotiations with the MSB's secondary insurance provider have recently concluded and resulted in no additional insurance coverage for the damages.

Due to the extent of damages and the significant possibility of uncovering additional damages once actual repairs commenced, condemnation was discussed, however at the point the prior decisions needed to be made, the full extent of the damage in the remaining two wings was unknown and everyone remained hopeful for a quick repair so students could get back into the school without much delay.

Upon FEMA approval, a Request for Proposals was advertised. The scope of work included a structural analysis and three possible scenarios: 1) Repair the building to a similar state prior to the earthquake. 2) Demolish and reconstruct the academic wing and repair the remaining wings. 3) Demolish and reconstruct the entire school. The above options were developed in close concert between the MSB School District and the MSB's Capital Projects Department and were presented to the MSB School Board for consideration on August 21, 2019. The MSB School Board selected Option Two through Resolution 20-001. Proposals were evaluated and a firm was selected in September 2019. On Jan 21, 2020, through AM No 20-009, the Matanuska-Susitna Borough Assembly (Assembly) approved a contract award to Bezek, Durst, Seiser, Inc, for Design of the Houston Middle School Repair and Reconstruction, Project 55026, in the amount of \$2,449,313. The Assembly-approved scope of work authorized a demolition and rebuild of the academic wing and repair of the administrative and gymnasium wings.

Over the last several months as part of the design effort, a full structural analysis was conducted along with complete destructive investigations and repair cost estimates. Through these investigations and analyses, it was revealed that the administrative wing suffered significantly more damage than previously noted. Deficiencies discovered included rebar in the foundation and footers that must be upgraded, beam connections and

bond beams requiring grout, rebar in walls and improper steel connections and welds that must be improved. These conditions are widespread throughout the entire administrative wing and most likely throughout the gymnasium area as well. Since there are numerous areas of the administrative wing which cannot be observed until actual construction occurs, there will most certainly be additional damage found which would result in a high-risk change order environment that will impact budget and time. This makes the current plan to repair the academic and gymnasium wings very cost ineffective.

Currently, Houston Middle School is a fire and health hazard and public nuisance and should be removed or demolished. Design efforts to date are not in vein and will be used for the new structure, adhering to the public and school board approved design. Repairing the currently identified conditions will only bring the administrative wing to 62% of current structural building code requirements. A rebuild would make the entire facility 100% compliant with current structural building code requirements and will be significantly safer in another seismic event.

Condemnation and removal of the existing building will not result in additional insurance money because those determinations have been made. In addition, it is likely that condemning the building will result in a lower total cost of construction. The building has been a health hazard, fire hazard, and public nuisance for almost 2 years and should be removed. In light of the significant advantages to durability, usability, and being able to fully meet code, the prudent course of action is condemnation of the building.

**RECOMMENDATION OF ADMINISTRATION:** Recommend approval of condemnation of Houston Middle School to allow demolition of the entire structure and reconstruction of a new school.



August 28, 2020

Jeff Walden  
Mat-Su Borough  
Project Management Division Manager

**SUBJECT:** Recommendation to Condemn Houston Middle School

On November 30, 2018 an earthquake with the magnitude of 7.1 on the Richter scale hit southcentral Alaska. Houston Middle School was deemed unsafe to occupy. BDS Architects was selected from a competitive Request for Proposal process and engaged in January of 2020 to lead a design team of Architects and Engineers to Renovate the School and make it suitable for occupancy. PDC Engineers was selected to be the structural designer with Amy K. Mestas, PE, SE, assigned as the structural engineer of record.

The scope of work for the A/E team is to provide an in-depth field investigation, design, and cost estimate for the repair and replacement of Houston Middle School. It was anticipated that the most cost-effective solution to meet the minimum requirements of the Alaska State Building Code would be to demolish and rebuild the academic wing and to renovate the gym and administration wings.

The damage created by the earthquake brought to light many construction deficiencies that were not able to be observed prior to the seismic event. Examples of this include failed roof connections which did not have adequate capacity to transfer load to the walls, grout missing where studs are supposed to be embedded in grout, and materials in many cases did not match what was shown on the design documents.

During the site investigation and design, it was discovered the damage from the earthquake and quality of construction was in worse condition than the initial observations indicated. Findings include:

- Due to the earthquake damage and redistribution of load paths, many of the concrete foundations need to be replaced. There is insufficient and/or no reinforcement present where needed for the retrofit design loads. It is

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125 W Evergreen Ave. Ste 102, Palmer, Alaska 99645  
907.707.1215  
[www.PDCENG.com](http://www.PDCENG.com)



unusual for footings and continuous stem wall foundation elements to be unreinforced. When the foundation is replaced, the walls they are supporting must be replaced along with them.

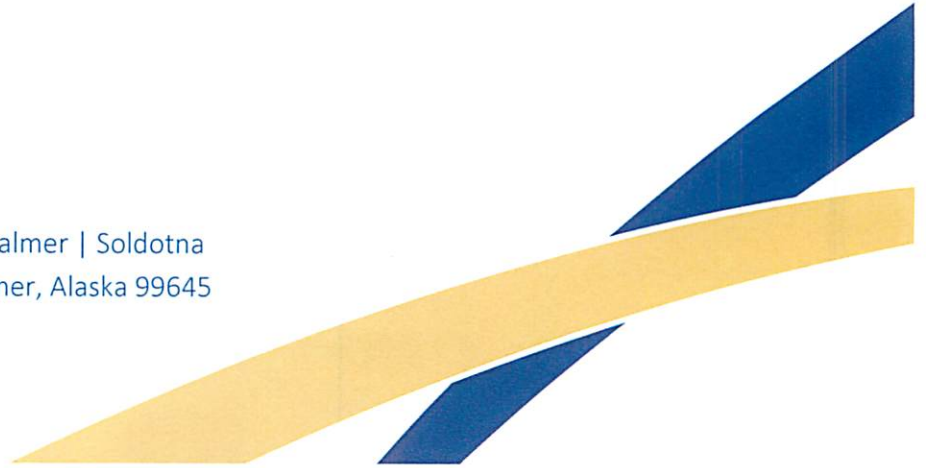
- To demolish the foundation, access is needed to both sides of the foundation for several feet. Existing parts of the interior impede the demolition including partition walls, floors, ceilings, equipment and finishes.
- The grout used in the masonry walls has been observed to be of poor/mediocre quality with voids throughout the facility. This caused many CMU walls to be damaged in the seismic event. Rebar indicated in the drawings is not always preset or located correctly adding to the damage. Beam connections to the bearing walls are designed to be secured in grout that is not there. Welds are not long enough with improper connection techniques. Poor-quality construction of the building in 1984 was observed to be widespread. There appears to have been little oversight or inspections during construction.
- Structural repair and retrofit work is only code required to be designed at 62% of the current building code requirements. Ultimately, a new facility will provide a higher degree of safety and lower damage levels in future seismic events.
- Renovation of the academic and administration wings is anticipated to be more expensive than replacement. Renovation of the gymnasium would be well above 50% of the cost of replacement.
- A new structure will be more resistant to earthquakes and will use a braced frame instead of reusing walls that have known problems for lateral resistance. The current building code will be utilized which includes more recent earthquake data including acknowledging the Castle Mountain fault line running just miles away from the school.
- Change orders will be reduced due to eliminating the existing unknown conditions that can't be observed until construction commences with demolition.
- If proceeding with renovation, the project cost estimate and schedule will need to include a significant contingency (on the order of 15-20% for encountering unforeseen conditions). Additional design time and cost for total replacement vs partial repair is anticipated to be lower than these necessary contingencies.
- The new construction will increase the lifespan of the building.

PDC Engineers, recommends the Matanuska-Susitna Borough Condemn Houston Middle School. Replacement of the school is in the best interest of the community for health, safety, and financial considerations.

Sincerely,

A handwritten signature in blue ink that reads "Amy K. Mestas". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Amy K. Mestas, PE, SE  
Senior Structural Engineer  
PDC Engineers






## MATANUSKA-SUSITNA BOROUGH

Office of the Acting Borough Manager  
350 East Dahlia Avenue • Palmer, AK 99645  
Phone (907) 861-8405 Fax (907) 861-8669  
[george.hays@matsugov.us](mailto:george.hays@matsugov.us)

### MEMORANDUM

**DATE:** August 20, 2020  
**TO:** Eric Phillips, Community Development Director  
**FROM:** George W. Hays, Acting Borough Manager   
**SUBJECT:** Intent to Recommend Condemnation of Houston Middle School

It is the intent of the Matanuska-Susitna Borough Administration to recommend to the Borough Assembly that Houston Middle School be condemned in accordance with MSB code 8.45.030.

During the past several months, the architecture firm who was awarded the design contract in February of 2020, conducted an in-depth structural, mechanical, and electrical evaluation of the entire facility. Their analysis discovered significantly more damage to the school from the November 2018 earthquake than previously identified. As a result of this evaluation, the school is unsafe for occupation, a fire hazard, and a public health hazard.

In accordance with MSB code 8.45.030, you as the owners/occupants of this building have 30 days to remove the building before the Borough may proceed to remove the building.

Please direct all comments to Jude Bilafer, the MSB's Capital Projects Department Director. Jude can be reached by phone at (907) 861-7701 or by email at [jude.bilafer@matsugov.us](mailto:jude.bilafer@matsugov.us)

cc: Dr. Randy Trani, Superintendent, Matanuska-Susitna Borough School District