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# ANDOVER ELEMENTARY / MIDDLE SCHOOL

## FACILITIES STUDY

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Prepared by

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## EXECUTIVE SUMMARY

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1. **This Facilities Study of Andover Elementary / Middle School (AEMS) represents a consensus on how to meet current and future needs of the facility at this site.**
  - *The existing facility has been reviewed, both physically and through documentation, by architects and by mechanical and electrical engineers. Recommendations from earlier reports by structural and fire safety engineers have also been studied.*
  - *The proposals reflect extensive discussions on existing conditions and educational needs with school administration and staff, input from local officials, and guidance from the Andover School Board.*
2. **Site access and security at AEMS is generally good, but improvements in security at the perimeter and inside the building can be implemented.**
  - *Vehicular drop-off and parking generally work well. Minor improvements have been proposed.*
  - *Relocating the administrative offices to the main entrance of the school will provide better access control and a fully wheelchair accessible entrance.*
  - *Two sets of interior security doors can be added to close off large parts of the building during night-time activities.*
  - *Fire separation at the central stair and lift and at the stage will substantially reduce the potential spread of smoke and fire.*
  - *Upgrading of exit and emergency lighting is recommended for greater safety and improved energy efficiency.*
3. **AEMS can fulfill the School District's educational goals by providing a sufficient number of general purpose classrooms, enlarging undersized specialty classrooms and upgrading core facilities.**
  - *Based on the available information, total student enrollment at AEMS is expected to be flat for the next several years.*
  - *AEMS is essentially a school with two class sections per grade level and 9 grades at the school (K – 8). Therefore, for the school to function well in the long term, 18 general purpose classrooms are needed and are proposed.*
  - *A new, enlarged cafeteria, separate from the stage, is proposed. This will reduce the length of lunch, eliminate interference with stage and gym activities, make available a multi-purpose space at the school, and improve fire safety.*
  - *An enlarged Art Room, relocated Music Room, enlarged Kindergarten Rooms and a new Middle School Special Ed Room are proposed.*
  - *Several improvements and additions to core facilities are proposed: a renovated kitchen, a walk-in freezer, additional gym and general storage, and an upgraded stage separated from the adjacent corridor.*
4. **Building enclosure and environmental systems can be substantially upgraded for better function and greater energy efficiency.**
  - *Insulation levels and weather-sealing of the building enclosure can be greatly improved at both the 1934 and 1960 wings.*
  - *Ventilation levels can be improved and at the same time, heat can be recovered from the exhaust air.*
  - *Heat transport in the building can be made much more efficient by insulating heating pipes and domestic hot water pipes.*
  - *Upgrading of main electrical service and electrical subpanels is recommended. This will also allow additional outlets in classrooms.*
  - *Two alternate replacement heating systems are proposed. A detailed technical and financial analysis of each option must be done before a choice between the two can be made.*
    - *The first is a wood pellet boiler with pellet storage in the old coal bin. This new boiler will serve most of the heating needs of the school and will save about 30% of space heating costs. It will be integrated with the oil fired boiler, which will be used as a backup and to supplement the pellet boiler during coldest weather.*
    - *The second system uses a series of multi-zone, high efficiency heat pumps. This system will save about 40% of current heating costs. In this case also, the existing boiler and hydronic heating would serve as a backup, and supplement the heat pumps during coldest weather.*
5. **A Facilities Task Force will be constituted to review proposals in this report, hold public meetings and present their recommendations to the School Board.**
  - *The project scope, budget, phasing and other construction logistics will be finalized during this process.*

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