



LOWELL PUBLIC SCHOOLS

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To: Jeannine Durkin, Acting Superintendent of Schools
From: John Descoteaux, Interim Assistant Business Manager of Transportation
Re: Response to Motion
Date: January 10, 2019

This report is provided in response to the following motion made by School Committee Member Gerard Nutter during the meeting June 20, 2018 School Committee Meeting:

Rezone the District to Neighborhood Schools

“Request Administration to present by the first School Committee in January 2019 a plan to rezone the district to “neighborhood” schools – presentation should include establishing transportation cost savings along with number of students and schools affected and what the new start and dismissal times will look like. The report should also include staying within the parameters of the voluntary desegregation decree.

Response to the Motion—Executive Summary

“Neighborhood” Schools:

In the course of plotting a “neighborhood” schools scenario, it became apparent that the Centralville section of the city would not be able to absorb the growing student population, with the present physical capacity limitations of the Robinson School. Meetings have taken place with City Officials prior to this decision to determine city owned space availability, feasibility of modular classrooms as well as the ability to meet an August 2019 deadline for occupancy should an RFP be initiated for needed building space. With no option to lease or buy a building in Centralville at this time, the “neighborhood” schools scenario is not a viable option at this juncture. An RFP will be initiated in collaboration with the city at this time to ensure that we have viable space options for consideration and a plan for occupancy for FY2021.

Alternative Proposal:

In light of the current neighborhood profile, an alternative zoning scenario has been explored to specifically address the portion of the motion that calls for reducing transportation costs. As was discussed at a previous School Committee Meeting, the Lowell Collegiate Charter School is changing bell times this year, which will further impact Lowell’s transportation budget and substantiates the need to review our current transportation scenario. The alternative proposal calls for dividing the city into three (3) zones:

Zone 1 - Encompasses the Pawtucketville and Centralville.

Zone 2 - Incorporates the Lower Highlands, Acre, Back Central, and Lower and Upper Belvidere.

Zone 3 - Includes the Upper Highlands and South Lowell.

Advantages of the Three (3) Zone Proposal:

- The scenario adheres to Lowell Public Schools Voluntary Desegregation Consent Decree.

- The proposal eliminates buses crossing bridges, which will reduce travel resulting in cost savings.
- Under this proposal, the longest travel time for students would be thirty (30) minutes.

Disadvantages of Proposal:

- There will be substantial changes in school bell times in our schools in order to realize cost savings.
- Preliminary data indicates that approximately 45% of the student population would require a transfer to another school in their respective zone.

Other Potential Transportation Cost Saving Measures for Consideration

University of Massachusetts Lowell (UML):

John Descoteaux met with faculty from the Civil Engineering Department at UML, and explained what the school department was looking to do in order to reduce transportation costs. The team understood the problem, and stated they would be able to assist with addressing this matter. Although we are grateful for their willingness to support this project, they needed significant time to create a proposal for the School Committee, which would extend beyond the time frame that we have to provide sufficient notice to families and school employees.

Dr. Dimitris Bertsimas, Professor Massachusetts Institute of Technology (MIT):

John Descoteaux also met with Dr. Bertsimas from MIT. He has performed similar work for the Boston Public Schools and developed an algorithm which can create optimal transportation routes for any school district. Dr. Bertsimas estimates his algorithm and software package could result in a \$1 million savings for the Lowell Public Schools. Attached is a September 23, 2018 article from the *Boston Sunday Globe Ideas* section on the savings that could have been realized by the Boston Public Schools if they had opted to implement the algorithm and software package.

Dr. Bertsimas indicated that the software package would start at the point of student registration and facilitate the choice of schools, by grade level, enrollment numbers, gender, racial status, special education status, siblings and other variables that we would like considered for equitable school assignment aligned with the Voluntary Desegregation Consent Decree.

If it is the School Committees wish to learn more about this opportunity, Dr. Bertsimas is available to present at a School Committee or Subcommittee Meeting to further elaborate on the algorithm and software package.