

# MA Department of Public Health Laboratory – Jamaica Plain

## State Public Health Laboratory Feasibility Study

Bureau of Laboratory Sciences  
Bureau of Infectious Disease  
Bureau of Environmental Health / Food Protection Program



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- *Legislation*
- *Overview of Existing Facility*
- *Strategic Development Options*
- *Objectives*
- *Deficiencies*
- *Infrastructure Investments*
- *What Makes It Feasible*
- *Approach*
- *What's Achieved*
- *Budget & Schedule*

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### **Legislation:**

**This Study responds to legislation requiring a report on the “feasibility of a new state public health laboratory”.**

From Chapter 46 of the Acts of 2015:

*4516-1000.....that the department of public health and the division of capital asset management and maintenance shall complete the planning study pursuant to item 4516-1000 of section 2 of chapter 165 of the acts of 2014 on the feasibility of a new state public health laboratory and shall file a copy of a report on the planning study not later than December 1, 2015 with the house and senate committees on ways and means and the house and senate committees on bonding, capital expenditures and state assets.....*



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## **Overview of Existing Facility**

### *Functionality*

*Current configuration of labs and support spaces is operationally inefficient, and inhibits collaboration and use flexibility; open plan layouts will result in increased utilization of available square footage  
Equipment is antiquated and needs to be replaced*

### *Building Condition*

*Built in 1973, the original building systems are in substandard condition and at the end of their useful lives. Investment in infrastructure upgrades is ongoing and requires continuing attention.*

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## ***Strategic Development Options***

### ***New Construction***

*Feasibility of a replacement facility on three alternative nearby sites was analyzed in 2014  
Estimated budget for capital project: \$200 - \$250 Million*

### ***Modernization of Existing Facility***

*2015 analysis proposes phased implementation of interior and infrastructure upgrades to high-rise structure.  
Estimated budget for capital project: \$82.6 Million.*



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### Objectives:

1. Provide flexibility to accommodate seasonal and epidemiological threats
2. Maintain 24/7/365 operation
3. Accommodate appropriate program growth with minimum building addition
4. Provide space that will encourage collaboration & sharing of creative ideas
5. Provide spaces that can support modern laboratory practices & equipment
6. Consolidate BID (from Stables Building & Washington St.)
7. Minimize moves
8. Plan for likely decrease in lab equipment size (do not over build labs)
9. Provide Enhanced IT
10. Accomplish scope for a reasonable cost within a reasonable time frame



*possible future*

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### ***Deficiencies:***

- Existing single use labs cannot be shared or modified easily to accommodate seasonal or epidemiological threats readily*
- Inefficient use of space with single use laboratories & lack of use of shared support services. Wasted space does not provide efficient accommodation of program*
- Building code and accessibility deficiencies*
- Lack of collaborative space*



***Existing inefficient single use lab***

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### Infrastructure Investments:

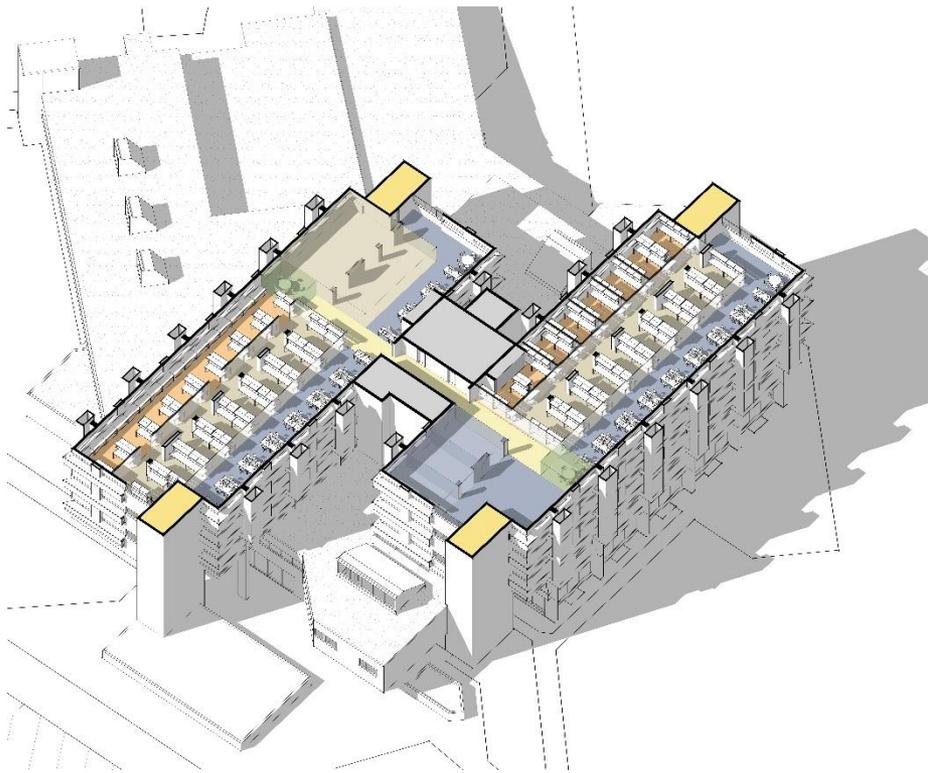
Substantial investments in building infrastructure have been completed or are presently on-going, minimizing the funding needed for this Capital Renewal Proposal

Completed Work			Cost
<b>New Main Electrical Room Tower Building</b>			
DPH0702 EM1	installation of new switchgear and generators		\$ 4,000,000
DPH0702 EM2	pre-purchase of new switchgear and generators		\$ 2,800,000
<b>Electrical Separation of the Biologics and Stable Building from the Tower Building</b>			
DPH0703 EM1	installation of new switchgear and generators		\$ 3,000,000
DPH0703 EM2	pre-purchase of new switchgear and generators		\$ 1,700,000
<b>New HVAC Improvements to Tower Building</b>			\$ 10,500,000
DPH0702 EM3	HVAC repairs in Tower Building		\$ 2,000,000
<b>TOTAL</b>			<b>\$ 24,000,000</b>
<b>On-going Work</b>			
<b>Elevator Replacements in Tower (includes accessibility Improvements)</b>			
DPH1204 HC1	New Elevators		\$ 3,000,000
<b>Additional HVAC Work On-going</b>			\$ 1,300,000
<b>TOTAL</b>			<b>\$ 4,300,000</b>

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### What makes it feasible:

- 11' Module conducive to lab planning
- Single interior column line allows for flexible open plan strategy
- Exterior duct chases are easily accessible for retrofit
- Shallow depth allows maximum interior light penetrate with open plan strategy
- Substantial completed and planned infrastructural upgrades
- Opportunities to create day-lighted collaborative space with glass at end of corridors and sky-lighted area

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### **Approach:**

- *The capital renewal project approach is a four phased renovation of eight floors (plus basement) over **5 years** as funding becomes available. Total project cost is estimated at **\$82.6** Million, approximately **\$16** Million per phase.*
- *This approach takes advantage of available swing space in the existing building (3<sup>rd</sup> floor and 6<sup>th</sup> floor) and a small, new addition (4,500 sq. ft.). We will renovate 2 floors at a time, minimizing the number of moves for users.*
- *These moves will accommodate department functionality.*

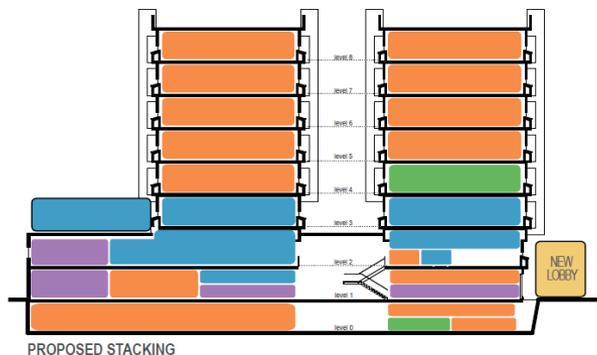
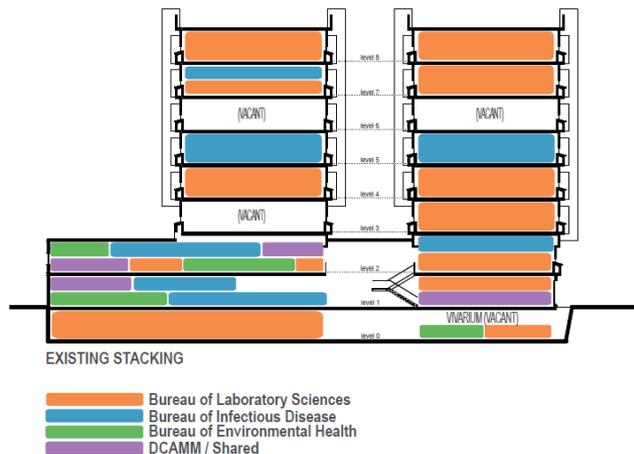
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## What's Achieved:

1. Open labs provide flexibility to accommodate seasonal and epidemiological threats
2. 24/7/365 operation maintainable
3. Requested growth & adjacencies achieved with one small building addition only
4. Collaborative spaces accommodated
5. Spaces planned to support modern laboratory practices & equipment
6. BID consolidated
7. Only one temporary move
8. Likely decrease in equipment size accounted for
9. Enhanced IT will be provided
10. Phased capital renewal approach allows for completing the scope for a reasonable cost & within a reasonable time frame

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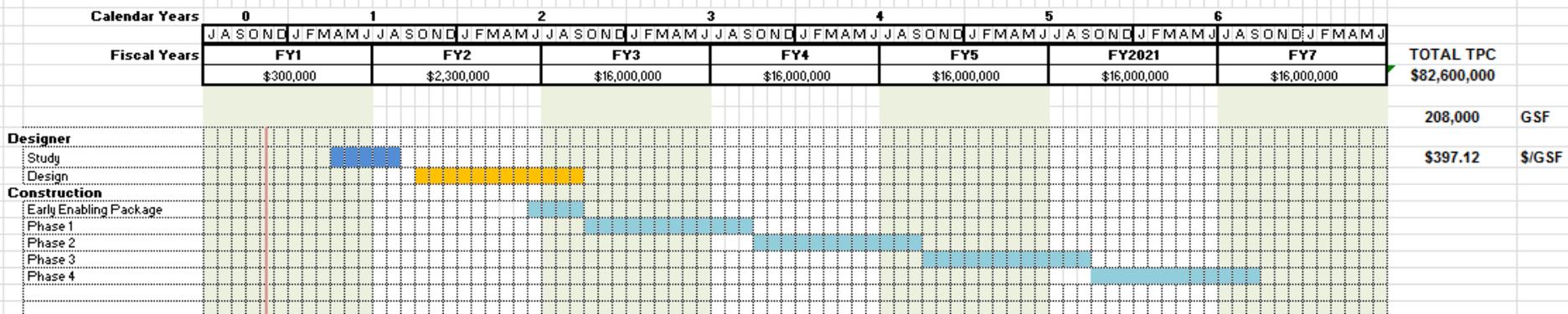
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### Budget & Schedule

The Total Project Cost is estimated at **\$82.6M** approximately **\$16 Million** per phase over **5 years** as funding becomes available. This Capital Renewal approach is much more cost effective than a new facility estimated at \$200 to \$250 TPC.

Proposed 5 Year Capital Spend Out



Note: Potential authorization: Chapter 237 of the Acts of 2014, Account 4000-2022