

## STUDIES

	<b>Completion Status</b>
<p><b><u>MASTER PLANNING STUDY FOR DEPARTMENT OF YOUTH SERVICES</u></b>  <i>Commonwealth of Massachusetts</i>            Statewide study of 15 facilities as part of a plan to create five regional DYS regional districts. Included is the surveying of each facility's M&amp;E systems and recommendations regarding revisions to these systems to respond to the new program as well as systems recommended to serve new or renovated facilities.</p>	<p><b>S</b> <b>2009</b></p>
<p><b><u>ELECTRIC AND WATER METER ASSESSMENT FOR MASSPORT AUTHORITY</u></b>            LOGAN INTERNATIONAL AIRPORT  <i>East Boston, MA</i>            Survey and assessment of water meters and electro-mechanical and electronic electric meters at various sites including Logan International Airport, Conley Terminal, Tobin Bridge, Hanscom Air Force Base, and Black Falcon Terminal.</p>	<p><b>S</b> <b>2009</b></p>
<p><b><u>HARVARD UNIVERSITY PEABODY TERRACE GRADUATE STUDENT RESIDENCES</u></b>  <i>Cambridge, MA</i>            Study of HVAC system at six building complex that includes three 22-story towers and low-rise structures. Recommendations were made concerning upgrades and replacement to the HVAC systems as well as system revisions and additions to serve proposed space plan revision.</p>	<p><b>S</b> <b>2009</b></p>
<p><b><u>HARVARD UNIVERSITY SOLDIERS FIELD PARK STUDENT RESIDENCES</u></b>  <i>Boston, MA</i>            Study of HVAC system at four building complex to replace defective systems and upgrade other systems.</p>	<p><b>S</b> <b>2009</b></p>
<p><b><u>WHEELLOCK COLLEGE AUDITORIUM</u></b>  <i>Boston, MA</i>            Study of proposed revisions to existing Auditorium building with recommendations responding to proposed space plan and use revisions.</p>	<p><b>S</b> <b>2009</b></p>
<p><b><u>COMMONWEALTH OF MASSACHUSETTS - DEPARTMENT OF YOUTH SERVICES (DYS)</u></b>  <i>State of Massachusetts</i>            Study of state-wide DYS facilities to review impact of providing five (5) DYS facility zones versus present single state-wide DYS structure.</p>	<p><b>S</b> <b>2009</b></p>
<p><b><u>WENTWORTH INSTITUTE OF TECHNOLOGY FIRING RANGE</u></b>  <i>Boston, MA</i>            Review of ventilation rate of existing firing station range and concept design to revise the supply and exhaust air rates and include heat recovery. Project developed to a 75% Construction Document Level of completion.</p>	<p><b>S</b> <b>2009</b></p>
<p><b><u>BOSTON PUBLIC LIBRARY - McKIM AND JOHNSON BUILDINGS</u></b>  <i>Boston, MA</i>            Feasibility Study for renovations and restorations to \$65M project.</p>	<p><b>S</b> <b>2008</b></p>
<p><b><u>MASSACHUSETTS STATE POLICE STATION AT LOGAN INTERNATIONAL AIRPORT</u></b>  <i>East Boston, MA</i>            Evaluation of existing building for new State Police Offices.</p>	<p><b>S</b> <b>2005</b></p>

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**STUDIES (Continued)**

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<p><b><u>PLYMOUTH NORTH AND SOUTH HIGH SCHOOLS and SOUTH MIDDLE SCHOOL</u></b>  <i>Plymouth, MA</i>            Feasibility Study of possible additions and renovations to the existing schools versus the inclusion of new schools.</p>	<p><b>S</b> <b>2005</b></p>
<p><b><u>COORDINATION STUDY LOGAN INTERNATIONAL AIRPORT</u></b>            LOGAN INTERNATIONAL AIRPORT  <i>East Boston, MA</i>            Perform short circuit and coordination study of existing 15kV and 5kV electrical distribution system at Logan. Document existing distribution system based on actual system operation scheme in both normal and fault conditions. Prepare one line diagrams and document existing relay and protective equipment settings. Recommend changes for proper application and protection, and develop an implementation program to keep the study up to date.</p>	<p><b>S</b> <b>2005</b></p>
<p><b><u>LOGAN FIRE ALARM UPGRADE STUDY</u></b>            LOGAN INTERNATIONAL AIRPORT  <i>East Boston, MA</i>            Prepare a study which will include an evaluation of the existing Simplex fire alarm system at Logan International Airport; Terminal specific issues such as: emergency evacuation paging, speaker coverage, remote paging stations and fire command centers for firefighter personnel; the central reporting system and where alarms should be sent; the adequacy of current testing procedures; alternate manufacturers to Simplex; evaluating if MPA should have a Proprietary Station and a separate fire alarm maintenance division; ensuring all Tenant alarms are transmitted over fiber optic cable.</p>	<p><b>S</b> <b>2005</b></p>
<p><b><u>PRUDENTIAL OFFICE TOWER STACK AFFECT STUDY</u></b>  <i>Boston, MA</i>            Review of stack affect in existing 52-story commercial office tower and recommendations for corrective action.</p>	<p><b>S</b> <b>2005</b></p>
<p><b><u>PROVIDENCE COUNTRY DAY SCHOOL STUDY</u></b>  <i>East Providence, RI</i>            Existing conditions report and Master Plan work for a five building campus style school.</p>	<p><b>S</b> <b>2004</b></p>
<p><b><u>WAYLAND HIGH SCHOOL STUDY</u></b>  <i>Wayland, MA</i>            Existing conditions report and Master Plan work of a six building, 160,000 SF campus style high school, and conceptual design for 130,000 SF of new construction.</p>	<p><b>S</b> <b>2004</b></p>
<p><b><u>PINE HILL ELEMENTARY SCHOOL STUDY</u></b>  <i>Sherborn, MA</i>            Existing conditions report and Master Plan work of a 54,000 SF elementary school including system options and phasing implications.</p>	<p><b>S</b> <b>2004</b></p>
<p><b><u>MANULIFE MECHANICAL / ELECTRICAL SYSTEM STUDY</u></b>  <i>Boston, MA</i>            Evaluation of systems in four (4) high-rise buildings to determine present system arrangement, to determine required equipment service needs, and to compare present systems to Manulife System Standards.</p>	<p><b>S</b> <b>2004</b></p>
<p><b><u>MANULIFE LIFE SAFETY SYSTEMS STUDY</u></b>  <i>Boston, MA</i>            Evaluation of systems in four (4) high-rise buildings to determine present system arrangement and system suitability to meet code and performance requirements.</p>	<p><b>S</b> <b>2004</b></p>

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**101 HUNTINGTON AVENUE OFFICE TOWER**

*Boston, MA*

Feasibility Study regarding the addition of stairwell pressurization system to late 1960's high-rise commercial office tower at the Prudential Center.

S  
2004

**WALTHAM BUSINESS CENTER**

*Waltham, MA*

Feasibility Study of system options to serve new 100,000 SF hotel and 300,000 SF of commercial office space being created within existing mill building.

S  
2004

**DANA HALL - BARDWELL**

*Wellesley, MA*

Feasibility Study of an Auditorium Building for a life safety system upgrade, fire alarm and fire protection, and design/build documentation.

S  
2004

**DANA HALL - MAPLE MANOR**

*Wellesley, MA*

Feasibility Study of a residential building being used for offices, to renovate for a Faculty Residence Building, and design/build documentation.

S  
2004

**REVISIONS TO PRUDENTIAL RETAIL MALL ENTRY HEATING SYSTEM**

*Boston, MA*

Feasibility Study of system options to address additional heating capacity of entry.

S  
2004

**PRUDENTIAL FOOD COURT SURVEY**

*Boston, MA*

Survey of existing Food Court Tenants to determine exhaust air needs versus present system capabilities.

S  
2003

**CAMBRIDGE RINGE & LATIN SCHOOL BOILER PLANT STUDY**

*Cambridge, MA*

Feasibility Study to analyze options relative to replacing aging Boiler Plant.

S  
2003

**HARVARD UNIVERSITY, 46 BLACKSTONE STREET**

*Cambridge, MA*

Study of renovation to office space.

S  
2003

**MANCHESTER COLLEGE MUSIC SCHOOL**

*Manchester, NH*

Feasibility Study of concern of high school to music facility.

S  
2003

**OUR LADY OF GOOD VOYAGE STUDY**

*Boston, MA*

Study of revisions and additions to Chapel located in South Boston Waterfront.

S  
2002

**PLYMOUTH NORTH AND SOUTH HIGH SCHOOLS**

*Plymouth, MA*

Feasibility Study of possible additions and renovations to the existing school versus the inclusion of a new high school is ongoing.

S  
2002

**PEABODY HIGH SCHOOL**

*Peabody, MA*

Feasibility Study to analyze various HVAC systems for complete replacement of all electric HVAC system. Also a life safety study to bring fire alarm and fire protection up to code.

S  
2002

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**READING HIGH SCHOOL**

*Reading, MA*  
Study for new \$40 million facility.

**S  
2002**

**ROWLEY HIGH SCHOOL**

*Rowley, MA*  
Feasibility Study and existing systems report completed of existing school.

**DH  
2001**

**NAHANT ELEMENTARY SCHOOL**

*Nahant, MA*  
Feasibility Study and existing conditions report completed of existing school.

**S  
2001**

**MANCHESTER ESSEX JUNIOR/SENIOR HIGH SCHOOL**

*Manchester By The Sea, MA*  
New and renovated school with feasibility study and existing system report completed.

**S  
2001**

**WALTHAM ELEMENTARY SCHOOL STUDY**

*Waltham, MA*  
Feasibility Study for six new schools has been completed as has the design of three schools with these three schools under construction. The design of the remaining two schools is ongoing

**S  
1999**

**BERKLEE COLLEGE OF MUSIC**

*Boston, MA*  
Study relative to proposed dormitory renovation projects at five buildings totaling 120,000 SF.

**S  
1996**

**STOP & SHOP CORPORATE OFFICES**

*Quincy, MA*  
Survey of existing mechanical systems for 200,000 SF building on ten floors to provide recommendations of system upgrades and to address specific tenant issues.

**S  
1993**

**BOSTON CITY HOSPITAL UTILITIES RELOCATION STUDY**

*Boston, MA*  
Study of relocation of central steam condensate return, domestic water, fire protection service and medical gases as required by building enhancement project at the hospital.

**S  
1992**

**HARVARD UNIVERSITY HEALTH SERVICE**

*Cambridge, MA*  
Study to recommend major revisions to HVAC system in seven level - 78,000 SF space including out patient, clinical and in patient space.

**S  
1992**

**NORTHEASTERN UNIVERSITY ELL STUDENT CENTER**

*Boston, MA*  
Study to recommend extensive revisions to mechanical systems and to respond to proposed space plan revisions in existing 140,000 SF five story building.

**S  
1992**

**HARVARD COMMUNITY HEALTH PLAN**

*Boston, MA*  
Study to recommend revisions to HVAC system in 10 story, 150,000 SF clinical building to resolve deficiencies.

**S  
1991**

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<p><b><u>BRIGHAM AND WOMEN'S HOSPITAL</u></b>  <i>Boston, MA</i>            Review of issues and recommendation regarding upgrade of existing Intensive Care Units and renovation of Patient Rooms into Intensive Care Units.</p>	<p><b>S</b> <b>1991</b></p>
<p><b><u>ADDISON GILBERT HOSPITAL</u></b>  <i>Gloucester, MA</i>            Review of existing condition including all HVAC systems for 115 bed hospital. Recommendations regarding code updates and system deficiency corrective measures. Master Plan issues reviewed.</p>	<p><b>S</b> <b>1991</b></p>
<p><b><u>BLUE CROSS / BLUE SHIELD NEW HAMPSHIRE</u></b>  <i>Concord, New Hampshire</i>            Study of options available for complete retrofit of 140,000 SF building with radiant panel system.</p>	<p><b>S</b> <b>1990</b></p>
<p><b><u>MASCO OFFICE BUILDING AND GARAGE</u></b>  <i>Boston, MA</i>            Evaluation of including thermal ice storage system in office building HVAC system.</p>	<p><b>S</b> <b>1989</b></p>
<p><b><u>WING MIDDLE SCHOOL MAINTENANCE RECOMMENDATIONS</u></b>  <i>Sandwich, MA</i>            Report for 100,000 SF school.</p>	<p><b>S</b> <b>1989</b></p>
<p><b><u>BOSTON CITY HALL STUDY</u></b>  <i>Boston, MA</i>            Recommendations on renovation of air handling equipment and temperature controls for \$2 million project.</p>	<p><b>S</b> <b>1989</b></p>
<p><b><u>HARVARD MEDICAL SCHOOL BUILDING SURVEY</u></b>  <i>Boston, MA</i>            Four buildings totaling over 600,000 SF to provide recommendations on maintenance required and recommended systems revisions.</p>	<p><b>S</b> <b>1989</b></p>
<p><b><u>WASHINGTON DC OFFICE BUILDING</u></b>  <i>Washington, DC</i>            Study of Shortfall of cooling capacity with recommendations for corrective action.</p>	<p><b>S</b> <b>1989</b></p>
<p><b><u>LONGWOOD MEDICAL RESEARCH CENTER SYSTEMS RECOMMENDATION STUDY</u></b>  <i>Boston, MA</i>            120,000 SF new research lab and 30,000 SF of renovated area.</p>	<p><b>S</b> <b>1988</b></p>
<p><b><u>SALEM SCHOOLS EVALUATION</u></b>  <i>Salem, MA</i>            Existing systems and recommendations for renovations and new construction of \$20 million in five schools.</p>	<p><b>S</b> <b>1988</b></p>
<p><b><u>CAPITOL SQUARE</u></b>  <i>Concord, MA</i>            150,000 SF new office building and below grade parking. System evaluations and recommendations.</p>	<p><b>S</b> <b>1988</b></p>
<p><b><u>NEWTON PUBLIC LIBRARY EVALUATION</u></b>  <i>Newton, MA</i>            Including ice storage system as part of HVAC design.</p>	<p><b>S</b> <b>1988</b></p>

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**WORCESTER CITY HALL STUDY**

*Worcester, MA*  
To Evaluate Reuse Of Existing Mechanical Systems.

**S  
1988**

**BOSTON SYMPHONY HALL**

*Boston, MA*  
Master Plan Study

**S  
1986**

**RIVERWALK OFFICE PARK DEVELOPMENT**

*Lawrence, MA*  
System comparison to evaluate centralized versus decentralized heating and cooling plants at 1,000,000 SF five building complex.

**S  
1985**

**WANG'S LAWRENCE FACILITY**

*Lawrence, MA*  
Feasibility study for incorporation of trash burning boilers.

**S  
1984**

**HYNES AUDITORIUM**

*Boston, MA*  
Analysis of existing systems at the original Hynes Auditorium.

**S  
1984**

**WANG CENTER FOR PERFORMING ARTS**

*Boston, MA*  
Analysis of HVAC systems.

**S  
1984**

**MASSACHUSETTS GENERAL HOSPITAL**

*Boston, MA*  
Condensate Heat Recovery System Feasibility Study.

**S  
1984**