the College of Fine Arts
Boston University

Facilities Plan and Immediate Needs
a campaign for improvement, 2004

Wilson Butler Lodge Architects
architecture for arts and entertainment
Overview and Critical Issues

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The College of Fine Arts (CFA) is a center of learning and artistic self-discovery for almost 1,000 students of music, theatre, and visual arts. Its present facilities challenge our ability to support the creative endeavors of our students. The main programs of the College are currently housed in several locations in Boston, with one summer program operating on a 64-acre property in Lenox, Mass. The primary home of the College has been at 855 Commonwealth Avenue since 1956. The Huntington Avenue campus, with programs scattered in other buildings, offers two performance venues in the Boston University Theatre, as well as production facilities for the theatre arts program. While there are some beautiful architectural and functional features, the facilities at all three campuses have serious problems, cumulative effects of decades of deferred maintenance and patchwork physical improvement.

This plan describes what we must do to bring these facilities to a level that reflects and supports the College’s educational, artistic, and academic standards. The current state of these facilities constitutes a serious strategic and practical problem in a number of ways.

- First, it has a deleterious effect on student ability to learn and faculty ability to teach.
- Second, as the site for hundreds of performances and exhibits each year, the College’s campus does not effectively welcome members of the Boston University community, or arts patrons from the surrounding area.
- Finally, it has a very negative effect on the College with regard to public image and recruitment of students.

The seriousness of this situation is acutely apparent at 855 Commonwealth Avenue, which houses most of the College’s classrooms, studios, offices, and concert and practice spaces. The building, a large five-story structure adapted from what was once a car dealership, is physically tired and many of its systems are dramatically substandard.

**The life of a CFA student is extremely demanding** and requires a rigorous balance between academic and artistic curricula. Most courses of study require heavy usage of the facilities. For example, music students at CFA are required to spend six hours per week in orchestra rehearsal and many more hours with other ensembles in the ensemble rehearsal spaces. Personal practice time requires another 25-40 hours per week in the basement practice studios. None of these spaces has an up-to-date HVAC system (there is no air conditioning), proper lighting, or acceptable soundproofing. In the practice room suite, sound “bleeds” from one studio to another, resulting in a cacophony of sound throughout.

**Performance spaces within the College of Fine Arts, particularly the Concert Hall and Theatre Lab, are equally inadequate** due to poor and obsolete HVAC systems, electrical systems, and substandard acoustical systems. In addition, the heavy use has severely degraded the finishes in these spaces. CFA’s performance spaces should offer students a place in which they can present themselves confidently and professionally as emerging artists, and provide audience members with a reasonable level of comfort. Today, neither performers nor audience members are well served. Furthermore, many fine performances are hidden from the public, as what was once a beautiful showroom with a grand stairway has been walled off and underutilized, leaving the first floor façade windowless and a fire exit as the front door.

**Competition for the brightest and most talented students increases every academic year,** particularly for those students and parents choosing between the educational experience and financial investment of a conservatory and an art school within a university. Among the selection criteria students cite for this important decision is the caliber of the facility. At CFA, very few significant investments in facilities have been made in the last 50 years, while many competing institutions have substantially upgraded their facilities. Among the most notable are the newer complexes at Rice University, the University of Cincinnati’s College Conservatory, and the University of Maryland. This clearly represents a compelling economic reason for facility improvement.

Consequently, to maintain and strengthen its reputation for academic and artistic excellence, the College of Fine Arts has developed a Facilities Plan to address the major shortcomings of its current facilities. It provides a practical approach to bring the learning and teaching environment of the students and faculty of the College from the 1950s into the 21st century and a way to recognize their artistry and talents. These improvements will have a tremendous impact on our capabilities, the morale of our students and faculty, and our competitiveness. Given the size of 855 Commonwealth Avenue, its basic layout, and its location on campus, the proposed renovations will trans-
form the building into a vibrant, user-friendly part of the larger campus that will serve both the College and the University well in the coming years.

It is extremely important to emphasize that this initial phase will not address all of the facilities problems in the College. Under previous CFA deans, construction of new high-quality performance spaces was defined as the College’s primary long-range goal for facility improvement and we remain committed to this goal.

At the end of this report, in Phase Two and Beyond, we outline a long-range vision that addresses the many other inadequacies on the upper floors of 855 Commonwealth, at 808 Commonwealth, at the BU Theatre, and at our Lenox Campus.

The College is in desperate need of start-up funding from the University to achieve these immediate objectives. It is understood that for CFA to continue to improve and expand its facility, an ambitious capital campaign targeting individuals, corporations, foundations, and other funding sources must be undertaken. This capital campaign will be the most ambitious undertaken in CFA history; but a launching point for the campaign is essential as tangible evidence of Boston University’s commitment of financial and operational resources to the improvement of the CFA facility.

The following pages of this report provide:

- **Phase One**, a summary and breakdown of the steps for completion, including projected costs;
- **Phase Two and Beyond**, the outlook for further development of the facilities and where the next focus of attention will be;
- **Strategy for the Capital Campaign** for raising funds in support of **Phase One** as well as future facility initiatives;
- **Facilities Inventory and Consultant Reports**.
1. **Phase One**

**Summary**

**Phase One.** The crucial beginning and the primary purpose of this report is to address the most critical concerns of the College. This initial phase focuses on the lower three floors of the 855 Commonwealth Ave. building.

**Phase 1.0 Mandatory Infrastructure:** addresses the inadequate electrical, plumbing, and HVAC systems;

**Phase 1.1 Center for Music Teaching and Practice:** addresses the dismal conditions of the basement practice studios;

**Phase 1.2 Large Ensemble Rooms, Concert Hall, and Studio Theatre:** addresses the embarrassing and inadequate conditions of the existing rehearsal and performance spaces on the first floor;

**Phase 1.3 Jacob Sleeper Hall Modification and Atrium/Link to 855 Commonwealth Avenue:** adds a valuable performance venue with an attractive link and new entry;

**Phase 1.4 Marshall Room Relocation, Lobby & Public Access, Second Floor renovations:** creates an entirely new image for CFA’s public spaces, addresses the deficiencies in our most-used small performance space, and makes its artistic offerings more accessible to the public.

These are not temporary solutions, but rather the first steps to meet critical and fundamental teaching, rehearsal and performance needs, that we will build on to support one of the finest colleges of its kind anywhere. These vital improvements must be accomplished in the next 12-24 months.
1.0 Mandatory Infrastructure

855 Commonwealth Avenue lacks sufficient power and HVAC systems to support the Phase One initiatives. Because the basic systems are very old, out of date, or in some cases nonexistent, this work is quite significant. Before any renovation, particularly before the Center for Music Teaching and Practice (1.1) is created, this infrastructure must be put into place.

The College of Fine Arts building at 855 Commonwealth Avenue is an old, massive structure with minimal mechanical infrastructure to support the proposed upgrade program. A low-pressure steam boiler plant located at 10 Buick Street serves the building. Primary heating and ventilation is provided by 40-year-old heating and ventilating (HV) units with steam coils. Mechanical cooling of the building is limited to the first floor Art Gallery (dedicated AHU with rooftop chiller), a handful of administrative offices and teaching studios, equipped with either sub-systems or window AC units. Most of the building, including the spaces targeted for Phase One renovation, has no mechanical cooling capacity. This condition, coupled with the age of the existing HV units, has resulted in substandard temperature and humidity control even in cool weather, when effective use of outdoor air ventilation could maintain decent comfort conditions.

In addition to capital cost, the primary obstacle to the upgrade of the building HVAC systems is that the existing electrical service and its distribution are operating at or near peak capacity. A new electrical service properly designed will facilitate other improvements to the building in support of future phases of this plan.

Please reference Section 6, Addendum: Consultant Reports, for the full engineering report.

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1.1 Center for Music Teaching and Practice

Currently, the School of Music facilities in the basement of 655 Commonwealth Avenue consist of a maze of 101 dismal, antiquated practice rooms and offices. Phase 1.1 calls for the creation of state-of-the-art practice studios for individual and small ensemble rehearsals, instrument lockers and other storage, student lounge areas, and a new staircase that directly links this area to the Concert Hall and the ensemble rehearsal rooms above. The Center will be further enhanced by the presence and renovation of the Maria Clodes-Jaguaribe Piano Lab and the Electronic Music Studio. The result will be a completely modernized Center for Music Teaching and Practice to provide the environment necessary for the development of musical talent.

Conditions in the existing music practice areas in the basement are unacceptable. Students practice for hours in hot, humid, and cramped conditions. Space is inefficiently laid out. Soundproofing between studios is nonexistent, which makes concentration difficult and, at peak practice times, nearly impossible. With approximately 200 undergraduates and more than 250 graduate students in the School of Music affected by this situation on a daily basis, this constitutes by far the most pressing and critical need of the College.

The planned Center for Music Teaching and Practice will create an efficient, attractive, and secure environment with a heightened sense of community. The new plan calls for 102 new modular practice studios in five different sizes ranging from 8 feet x 10 feet for single musicians to 12 feet x 20 feet for small ensembles, all with 9 foot or higher ceilings. These rooms are fabricated from heavy-duty steel, acoustically sealed for superior sound isolation, fully ventilated, and with individual controls for lights and fans.

These modular practice studios, which can be fabricated offsite and installed quickly, will allow the College to function with little construction-related down time.

The new staircase, which will directly link the Center for Music Teaching and Practice practice rooms with the Concert Hall and the large ensemble spaces above, will give students and faculty a wide array of new pre-performance and rehearsal warm-up and staging spaces, and a small student lounge space at the foot of the stairs with windows restored. Also included in this phase will be reconfigured and expanded restrooms and a new mechanical room to provide space for building-wide improvements to the HVAC system and the electrical service.
1.1 Basement Plan: Center for Music Teaching and Practice

Phase 1.1 Project Cost

- Direct construction cost: $3.2 million
- Misc. soft costs: $1.5 million
- Total: $4.7 million

A CFA student in one of the basement practice rooms.

Center for Music Teaching and Practice

Piano Lab

Electronic Music Studio
1.1 Basement Concept: Center for Music

Teaching and Practice
1.2 **Large Ensemble Rooms, Concert and Studio Theatre**

The three large ensemble rooms and the Studio Theatre in the first floor rear of 855 Commonwealth Avenue, used by the Schools of Music and Theatre Arts, are run down and have neither proper ventilation nor air conditioning. The Concert Hall has antiquated ventilation ducts, and no air conditioning. The noise of the current air handler disturbs performances and the ceiling is low and confining. For all of these spaces the soundproofing is grossly inadequate, in terms of both sound from adjacent spaces and from the adjacent highway and railroad tracks. In addition, no space is large enough for a full orchestra. Finally, from an aesthetic perspective, renovation of the finishes and the lighting in all of these rooms is long overdue.

**Phase 1.2** will include the following improvements:

First, the ensemble rooms will be reshaped for more effective use of the space to accommodate the College’s needs; this includes reconfiguring one large ensemble room to accommodate a 100+ piece symphony orchestra. New HVAC systems will be installed in all rooms. Improved soundproofing and adjustable acoustical treatments will be added to the walls and the ceilings. The Concert Hall and the three ensemble rooms will all be given improved recording capabilities as well as acoustical enhancements. In terms of cosmetic improvements, the finishes and lighting in both the rooms and the adjacent hallways will be substantially upgraded.

Second, the renovation of the Concert Hall, one of the most heavily used spaces in the building, will include a new HVAC system with separate zones for the stage and the orchestra with above-the-roof ductwork, improved soundproofing of both the ceiling and the walls, and a renovation of the finishes and the lighting. In addition, the space will include improvements to the recording capabilities, as well as consideration of acoustical electronic enhancement and other ways to improve the sound. Finally, cosmetic upgrades to the ceiling will improve the patron’s perception of the space.

Third, the renovation of the 100-seat Studio Theatre, one of the School of Theatre Arts’ primary work and performance spaces, will include a new HVAC system, significant improvements to the interior finishes, and new architectural lighting to bring the theatre up to current standards.

Finally, this phase will include renovations to the finishes and the lighting in the main corridor that serves these venues.

**Acoustical Enhancement Pending Funding**

The acoustics of the Concert Hall and the Large Ensemble Studios would be significantly enhanced if the volume of these rooms could be increased by raising the roof. The initial estimate to raise this portion of the roof was nearly $2 million and therefore is not included in the current budget for Phase I. However, this additional improvement will be considered if funds can be raised for it.
1.2 Street Level Plan: Large Ensemble Rooms, Concert and Studio Theatre

Proposed acoustical "ceiling clouds", as installed at the University of Maryland’s Fine Arts campus.

### Phase 1.2 Project Cost

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*Raised Roof* Option $1.9 million
1.3 New Concert Hall, College of General Studies, Atrium/Link to 855 Commonwealth Ave.

Jacob Sleeper Hall, an important classroom within the College of General Studies, includes 414 seats at the orchestra level and 221 seats in the mezzanine – a total of 635 seats. Its “stage” has been designed primarily for lectures, as have its acoustics. Sleeper Hall does not meet the standard for handicapped accessibility.

**Phase 1.3** proposes modifications that will allow this venue to be used for musical performances as well. The stage will be extended into the auditorium by 3.5 feet, the rear wall will move back 7.5 feet, and the existing structural columns will be relocated. This will provide approximately 350 additional square feet to the stage. In addition, the stage will be raised by 18 inches and the front of the orchestra rake will be leveled to improve sight lines and to help meet ADA accessibility requirements – this will provide a three foot stage height. The expanded stage will require the removal of the first row of seating, reducing the capacity by about 18 seats.

A number of renovations will be necessary to bring this new Concert Hall into compliance with the ADA. The 16 fixed seats in the last row of the orchestra will be removed to provide eight handicapped and companion seating spaces. A lift at the stage and a ramp from the west hall to stage level will be added to provide handicapped access to seating in the front row of the orchestra and to the stage. Handicapped access will also be provided in the rear of the mezzanine.

The new ramp to the stage, which would run along the outside of the west wall of Concert Hall, will also allow a piano to be used on stage. This, along with renovations behind the stage, will require breaking and replacing the slab in these locations. Acoustical improvements will include the addition of sound/light vestibules at all direct entry points to the Hall on both levels. The current ceiling configuration will be studied and measures will be implemented to improve acoustics.

The new arcade will also serve as the new main public entry for the College and enclose the alley between the two buildings with a glazed entry vestibule with steps and a ramp for handicapped access. Entry to this space from the College of Fine Arts will be through three new connections: two hallways will link the renovated Sleeper Hall to the Center for Music Education at the basement level and a new arcade will link the two buildings at the street level. A new stairway will enable patrons to reach the orchestra seating area from the first floor lobby and will enhance the lobbies and entrances.

Pending available funding, the center aisle seating configuration would be replaced with a two side aisle configuration. This will create a “best” center seating section and decrease the length of runs of continuous seats, making it more patron-friendly.
1.3 Basement Plan: New Concert Hall, College of General Studies
Atrium/Link to 855 Commonwealth Ave.
1.3 Theatre Plan & Section: New Concert Hall, College of General Studies
Atrium/Link to 855 Commonwealth Ave.

A plan of Sleeper Hall’s enlarged stage for up to 33 musicians

Sleeper Hall’s expanded stage area and ramped access.
1.3 Street Level Plan: New Concert Hall, College of General Studies
Atrium/Link to 855 Commonwealth Ave.

Design concept for new entrance to Sleeper Hall

Alley between 871 and 855 Commonwealth Avenue, proposed site for new atrium entrance to Sleeper Hall

**Phase 1.3 Project Cost**

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1.4 Public Lobby Improvements: Restoring Grand Stair, Relocation of Small Recital Room, 2nd Floor Alterations

The building spaces at the front of 855 Commonwealth Avenue are badly laid out. Because of this, the circulation into and through the building is difficult, space is under used, the College has no public face, and some of the best spaces at the street level have been marginalized.

**Phase 1.4** will address these shortcomings in a number of ways. First, the spaces along the south façade of the building will be reopened to the street, restoring the showroom windows. In addition, an entrance will be located at the eastern end of the building into a new student lounge and lobby area. The existing entrance will be retained as an exit from the existing stair tower. A new handicapped accessible ramp will also be installed along the building's east façade.

The new student lounge, lobby, and entrance will restore the original showroom floor space at the building's east end. It will include sliding/folding partitions to create flexible, multi-use space. The building's original grand stair will be restored as the principal access to the second floor. The space will also include upgrades to the HVAC systems, new interior finishes, and new architectural lighting.

The existing Art Gallery will be modestly improved to include a new handicapped access ramp entry and new display cases facing the street and the entry arcade. Eventually its office spaces will be relocated, allowing for larger exhibitions.

The current Marshall Room will be replaced with a new Small Recital Room located on the street level adjacent to the entry arcade.

The main longitudinal circulation core will be reconfigured to provide more direct access to both the spaces at street level and the vertical circulation cores. This area will also provide a venue for a new student lobby gallery (presently known as the “Commonwealth Gallery”). New bathrooms will be located off this spine and will be large enough to serve students and accommodate patrons attending the exhibition and performances venues.

On the second floor at the top of the renovated grand stair, the spaces will be reconfigured to maximize the effect of the stairway and to create better circulation to the College's classrooms, administrative offices, and Music Resource Library. In addition a number of office and classroom spaces will be reconfigured to create a more efficient plan.
1.4 Ground Floor Plan: Relocation of Small Recital Room
Lobby, Art Gallery, 2nd Floor Alterations

Existing gallery on the first floor of 855 Commonwealth
1.4 Second Floor Plan: Relocation of Small Recital Room
Lobby, Art Gallery, 2nd Floor Alterations

PHASE 1.4 PROJECT COST

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Existing library on the second floor of 855 Commonwealth
## Summary of Phase One

### Scope of Work

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### Optional Scope of Work

#### Phase 1.2 The “Raised Roof” Option:
Cost to raise roof above Concert Hall and Large Ensemble Rooms 1,900,000

### Total Project Costs with Phase 1.2 Option included

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Phase One has addressed the most immediate and urgent needs of the College while establishing an attractive foundation for CFA’s long-term objectives. However, it initiates only realizing our dream of creating one of the most functional and vibrant environments for arts learning to be found anywhere. Phase Two and Beyond fulfills this dream by renovating the remaining floors of 855 Commonwealth Avenue and reshaping other properties at 808 Commonwealth Avenue, the BU Theatre and Production Center, and the Lenox Campus to support CFA and related arts programs at Boston University. Eventual construction of a state-of-the-art performance venue with seating for at least 1,200 remains an important goal.

Once funding is in place to accomplish the attainment of the much-dreamed-about performance venue with capacity of 1200 to 1500 seats. The visual performance venue will satisfy the long-time dreams of the University Theatre and the Tsai Performance Center, will become the centerpiece of Boston University facilities, have a home in state-of-the-art facilities at 808 and 855. These facilities, along with the Boston University Theatre on Huntington Avenue and the Tsai Performance Center, will give CFA a range of high-quality performance venues to present the artistry of its faculty and students until the dream of a Boston University Center for the Arts may be realized. A major new performance venue on the adjacent property will satisfy the long-time dreams of the University and the College of Fine Arts. The Boston University Theatre and the Tsai Performance Center will thus remain important venues, while the Lenox Campus continues as the home of the Boston University Tanglewood Institute, but in an improved and more functional state.

Phase Two & Beyond: 808 Commonwealth Ave & A New Performance Venue, The Huntington Avenue Theatre Complex, The Tanglewood Campus

A summary of the Facilities Master Plan is as follows:

Development of 808 Commonwealth Avenue:

- Consolidate the School of Visual Arts administrative and teaching spaces in a single building, occupying all or part of the basement and floors 3 to 5.
- Consolidate the University’s arts libraries, including the Mugar art and music collection; the CFA music, visual arts, and script libraries; and the CAS Art History Library, along with state-of-the-art classrooms in art and music education, musicology, and graphic design, proposed for the second floor of 808.
- Develop a permanent gallery on the first floor of 808, relocating the BU Art Gallery offices, and possibly relocate allied programs in CAS (e.g., Music, Art History) as space permits.
- Relocation of teaching faculty and classrooms in the School of Theatre Arts design and production programs from the nearly condemned spaces at 256 Huntington Avenue as space permits.

Construction of Major Performance Venue:

On the site adjacent to 808 Commonwealth, at the crossroads linking the east and west of Boston University Charles River Campus, build the much-dreamed-about performance venue with capacity of 1200 to 1500 seats. The visual and performing arts will then become the centerpiece of Boston University.

Boston University Theatre Complex and Lenox Campus:

Renovation must address the many maintenance and infrastructure problems existing at the Boston University Theatre and Production Center as well as within the numerous buildings on our Lenox campus, home of the Boston University Tanglewood Institute. These include antiquated electrical, heating/cooling, and plumbing systems, with parts of the building shells crumbling.

In addition: once the academic programs and faculty currently located within the Boston University Theatre and Production Center move to Commonwealth Avenue, space will allow for much-needed expansion of the production areas, including the scene, prop, paint, and costume shops.

The Lenox Campus offers a beautiful setting and a long, storied history, but it is old and in serious disrepair. This valuable property needs a separate assessment and master plan that evaluates the options, projects the investment required, and establishes the basis of for fundraising.

The Finale

The overarching goal of the Facilities Master Plan is that all fine arts-related programs, including the professional companies in residence, have a home in state-of-the-art facilities at 808 and 855. These facilities, along with the Boston University Theatre on Huntington Avenue and the Tsai Performance Center, will give CFA a range of high-quality performance venues to present the artistry of its faculty and students until the dream of a Boston University Center for the Arts may be realized. A major new performance venue on the adjacent property will satisfy the long-time dreams of the University and the College of Fine Arts. The Boston University Theatre and the Tsai Performance Center will thus remain important venues, while the Lenox Campus continues as the home of the Boston University Tanglewood Institute, but in an improved and more functional state.
3. **Phase Two & Beyond: 808 Commonwealth Ave & A New Performance Venue,**
The Huntington Avenue Theatre Complex, The Tanglewood Campus

Design concept of a new performing arts center adjacent to 808 Commonwealth Avenue.
The College of Fine Arts is about to embark on the first significant facilities renovation in its history, one that must be accompanied by an equally aggressive capital campaign. By targeting individuals, corporations, foundations, and other resources, the campaign will involve high-profile alumni and friends of the College in leadership roles, making the case for bringing the College of Fine Arts up to a physical standard in keeping with its educational and artistic successes.

As stated earlier, an essential launching point for this campaign will be evidence of Boston University’s commitment of financial and operational resources to the improvement of CFA facilities. The electrical and HVAC system upgrades would be an ideal place for the University to invest, since upgrades are critical to setting the facilities plan in motion, and since it would be difficult to interest outside donors in so invisible and mundane an investment. Further investment by the University that directly improves the quality of the teaching and learning will sustain the College during the early stages of the campaign and enable advancement of the programs while improving student and faculty morale.

Beginning with significant capital gifts, we are mapping out a comprehensive list of naming opportunities. The plan is to structure capital gifts for naming opportunities by investing 80% of gift principal in the capital improvement itself, while holding 20% of principal in endowment for ongoing maintenance of the named facility. In this way, we will protect the donor’s investment and the College’s image by ensuring that dedicated funds will keep all named facilities structurally and cosmetically sound in perpetuity.

Included in the larger campaign strategy will be solicitations to name the College of Fine Arts and each of the three schools, School of Music, School of Visual Arts, and School of Theatre Arts. These naming opportunities will require upwards of $15 million, with the naming of the College creating an endowment that will assure financial stability and security. The potential total of all naming opportunities for the College could exceed $100 million.

A list of campaign prospects is being developed and the next step is to create targeted strategies for reaching and engaging each individual on the list. Prospects will be managed by the Dean, the Executive Director for External Relations, and the Director of Development and Alumni Relations at the College of Fine Arts, with the help of Christopher Reaske, Vice President for Development and Alumni Relations, and his staff. The overall campaign strategy for prospect management will be completed within the next 30-60 days, and weekly prospect meetings will assure consistent prospective management of prospects with respect to communication, cultivation, and solicitation of significant gifts.
5. The CFA Properties: A Facilities Inventory

To provide a contextual reference for consideration of CFA’s Facilities Master Plan presented on the preceding pages, the following is a brief analysis of the current state of properties housing the College of Fine Arts schools and programs. These evaluations produce a picture of the CFA existing facilities with an eye towards consolidating and upgrading them in the most pragmatic and effective manner. The focus in identifying deficiencies is on 855 Commonwealth Avenue and 808 Commonwealth Avenue, because these buildings house most of the College and are the most promising sites for immediate building initiatives.

855 Commonwealth Avenue is a reinforced concrete building that houses the majority of the programs at CFA. Built as a Buick car dealership in 1919 and renovated in the mid 1950s for the College, it contains approximately 214,550 square feet on six floors (including a partially at-grade basement and mezzanine). It is located on the north side of Commonwealth Avenue and abuts a 20,000 square-foot parking lot to the east, and the College of General Studies to the west. To the north, the building is bordered by the Massachusetts Turnpike and rail lines used for commuter and freight trains. The building deficiencies include:

- Much of the building remains unchanged from its 1950s renovation.
- Electrical, plumbing, and mechanical systems are inadequate for today’s functions. The building’s electrical service is at capacity. Most of the building has no air conditioning, and antiquated controls for heating. Plumbing service is adequate, but restrooms do not meet the current access codes. Sprinkler and fire alarm systems are relatively new.
- Music practice rooms occupy a maze-like suite. They lack adequate ventilation and are harshly lit. They also lack proper acoustic treatment, so sound “bleeds” from one studio to another, resulting in a cacophony throughout the suite.
- Large ensemble rehearsals spaces are undersized, poorly ventilated, oppressive to work in, and transmit sound into the adjacent concert hall.
- Performance spaces, particularly the Concert Hall, Theatre Lab, and Marshall Room, also lack adequate heating and air conditioning.
- Public access to the building is unattractive, with the primary entry a fire exit. Inside, the route to major performance and exhibit venues is indirect and confusing. A once-beautiful showroom with a grand staircase has been hidden and is underused.
- Lobbies to the School of Visual Arts and the School of Theatre Arts are shabby and ugly.
- Skylights and ceilings on the top floor need repair to keep out rain.
5. The CFA Properties: A Facilities Inventory

808 Commonwealth Avenue is a reinforced concrete building on the south side of Commonwealth, bounded by Essex Street to the east and a 120,000 square-foot parking lot to the west. The building, built in 1927 as a Cadillac dealership, is on the National Register of Historic Places. It contains approximately 264,450 square feet on five floors and a basement (this includes a small mezzanine). It also contains a circular vehicle ramp in the southwest corridor and a central light well that extends down to the second floor. The property was acquired by the University in 1979 and has been considered the future home of the School of Visual Arts and selected other programs in the College of Fine Arts.

The building currently houses the School of Hospitality Administration and portions of Metropolitan College. Faculty and graduate students in CFA’s Opera Institute and the School of Visual Arts occupy space on the second and third floors. However, most of the building is used for storage and parking. The building deficiencies include:
- The building’s electrical, heating/cooling, plumbing and fire-protection systems cannot support needed or desired renovation or expansion.
- The shell of the building (façade, windows, central light core, and roof) needs repair and restoration.
- Restrooms are inadequate.
- Elevators are inadequate.

Boston University Theatre and Production Center includes a 900-seat proscenium theatre with a 32 foot x 76 foot stage house, a 2500 square-foot studio theatre, and 19,100 square feet of backstage, administrative, teaching, and support space, including a scene shop, a costume shop, dressing rooms, classrooms, and offices. The theatre itself is a beautiful and extremely functional facility designed and constructed as America’s first civic playhouse. The production center portion of the property occupies the two adjacent buildings east of the theatre. Opened in 1925 as the Repertory Theatre of Boston, it is now perhaps the College’s most charming and historic physical asset.

The building deficiencies include:
- Electrical, heating/cooling, and plumbing systems are antiquated.
- Parts of the building shell are crumbling.
- Space is inadequate, tired, and deteriorated.
5. The CFA Properties: A Facilities Inventory

The University leases the property to the Berkshire Country Day School (BCDS) for its upper school during the academic year. With the exception of the primary buildings, which BCDS helps maintain, much of the property has deteriorated to the point where significant investment is required to maintain our programs. In spite of terrible facility conditions, BUTI has been able to sustain high artistic and pedagogical standards, and continues to attract an outstanding faculty and student body. One major goal of the next fiscal year will be to conduct a property assessment to evaluate the needs, propose options, and determine the resources for protecting this valuable asset.

**BU Lenox Campus** (sometimes referred to as the Tanglewood Campus) is home of the Boston University Tanglewood Institute (BUTI), located in Lenox, Massachusetts, in the Berkshires. BUTI is one of the most prestigious music programs of its kind in the world, enrolling more than 300 students for eight weeks each summer. This 64-acre property is adjacent to the Boston Symphony Orchestra’s famed Tanglewood summer home, and originally belonged to the Winthrop Estate. The setting is beautiful and has a long, storied history. In addition to the main house, Groton Place, there are a separate 375-seat theatre, two classroom buildings, two large carriage houses, two dormitories, a small private residence, and a collection of other small buildings, bunkhouses, and practice sheds.

**Tsai Performance Center** is a 525-seat theatre and concert hall located at 685 Commonwealth Avenue within the College of Arts and Sciences (CAS). It was built in 1989 as a multi-purpose auditorium serving the entire University, and is the site of dozens of CFA concerts each year. The location is somewhat inconvenient for CFA and, for some types of musical events, the size and acoustical characteristics do not work well. Otherwise, the well-maintained venue has been a great benefit to the College of Fine Arts, enabling us to acceptably sustain the quality of our activities over these last 14 years.

**Mugar Memorial Library** houses roughly 20,000 square feet of art and music collections and several important classrooms that CFA depends on in support of musicology. It is presumed that the Mugar Library has its own master plan for development and improvement that identifies deficiencies and proposes solutions. The long-term plan for CFA proposes that the University consolidate all arts libraries, including the Mugar art/music collections and classrooms; the CFA music, visual arts, and script libraries; and the CAS Art History Library, along with creating state-of-the-art classrooms supporting art and music education, art history, musicology, and graphic design to 808 — a move that would free up space elsewhere in the University and potentially benefit and solve problems for Mugar, CAS, and CFA.
6. **Addendum: Consultant Reports**
6. Addendum: Consultant Reports

Engineered Solutions Inc.: Mechanical Renovation/Feasibility Analysis

Engineered Solutions Inc. was retained by Wilson Butler Lodge Inc. to review proposed renovations plans for the basement and first floor of the College of Fine Arts to assess impact on existing systems and to develop a schematic description of mechanical systems upgrades required to support the latest Master Plan. This information has been prepared by the architect’s cost-estimation consultant to establish cost impact and feasibility of the proposal.

Existing Conditions: General

The College of Fine Arts building at 855 Commonwealth is a massive old structure with minimal mechanical infrastructure to support the proposed upgrade program. The building is served by a low-pressure steam boiler plant located at 10 Buick Street. Primary heating and ventilation is provided by 40-year-old heating and ventilating (HV) units with steam coils. Mechanical cooling of the building spaces is limited to the first floor Art Gallery (dedicated AHU with rooftop chiller), the Dean’s Office Suite, and a handful of administrative offices, equipped with window AC units. Most of the building, including the spaces targeted for Phase I renovation, are not provided with mechanical cooling capacity.

This condition, coupled with the age of the existing HVAC units serving these spaces, has resulted in substandard space temperature and humidity control, even in the cooling offseason when effective use of outdoor air ventilation could maintain decent comfort conditions.

In addition to capital cost, the primary obstacle to upgrade of the building HVAC systems is the existing electrical service and distribution, which is currently operating at or near peak capacity. Please refer to S.B. Sager Associates Electrical Impact Analysis for further discussion regarding electrical service upgrade requirements.

Sleeper Auditorium in the building adjacent to 855 Commonwealth is also being considered for inclusion in the College of Fine Arts Master Plan for renovations. The existing auditorium appears to be served by its own HVAC system with a central water-cooled chiller plant in the basement. More field investigation is required before we can make recommendations regarding upgrade of these HVAC systems as part of this Master Plan; however, given the age of the equipment, replacement/upgrade is a likely requirement.

Infrastructure Upgrade and Construction Phasing

Preliminary construction phasing proposed under the current WBLI study is based on the premise that the underlying mechanical and electrical infrastructure will be in place to accommodate the related space renovation. Incremental development of the necessary infrastructure, given the current limitation of the existing electrical service, is the least desirable approach for implementation of the Master Plan. Given the overall scope of the proposed program and the underlying assumption that the renovated spaces will have an anticipated life of at least 15 years, the most cost-effective and reasonable approach would be to include mechanical and electrical infrastructure upgrade in the initial phase of the project (basement practice rooms and adjacent mechanical/electrical room development).

Referring to S. B. Sager Associates feasibility study write-up of 3/20/02, it appears that the best long-term option for the building would be to provide a new 3000 amp 480/277 Volt, 3 phase switchboard in a new basement electric room, fed from the existing 13.8 KV campus electrical distribution (refer to SBBS study Option 2 for further description). Implementation of this infrastructure upgrade in the initial phase of the College of Fine Arts Master Plan will enable upgrade of the building’s mechanical and electrical systems to support the overall program.

During the initial phase of construction, we propose installation of an electric central chiller plant, including full-sized piping risers/distribution to support the overall program or, better yet, the future renovation of the remainder of the building for full HVAC service from a new efficient chilled-water plant. The plant design would best be arranged with multiple chillers and pumps for some measure of redundancy and to permit phasing of equipment installation; however, the main piping infrastructure should be included in the first phase of construction. Given the projected size of the chiller plant (up to 400 tons for the full CFA Master Plan and up to 600 tons for the eventual full building renovation), a water-cooled system with rooftop cooling towers is probably the best approach, although less efficient air-cooled equipment may lend itself better to construction phasing if the initial infrastructure investment proves to be cost prohibitive.

New chilled-water air handling systems, air distribution, and controls can easily be phased along with the space renovation program once the basic mechanical infrastructure is in place.

Below is a brief updated description of the proposed HVAC renovations to suit the current Master Plan.

Phase 1.1 Basement Practice Rooms HVAC

1. The basement practice rooms proposed for renovation or replacement with modular room units will be served by one or two chilled-water AHUs located in the new basement mechanical room. New unit pricing should be based on Trane modular units with double wall construction (for sound attenuation without exposed duct liner), air blower module, steam preheat coil, 6-8 row chilled water coil, and low pressure fan. Units should be sized for low coil face velocity (<450 fpm) to minimize fan static and noise generation.

2. Based on review of 1958 plans, the existing system apparently consists of a plenum supply and return ducts above the acoustical ceiling grid, with individual supply and return runouts to each practice room from the overhead plenum. Given the age and likely degradation of the original duct system, we recommend complete replacement of supply and return duct mains (a full “gut job”).

3. The architects’ latest program description calls for modular units with built-in HVAC silencer and fan. Based on this approach, supply and return air registers should be uniformly mounted on the new duct mains to conditioned the space surrounding the new modular units, individual duct runouts to each module are not required.
6. Addendum: Consultant Reports
Engineered Solutions Inc.: Mechanical Renovation/Feasibility Analysis

4. Peak cooling load requirement for the basement practice rooms is estimated at 59 tons, with an additional 15 tons estimated for the adjacent lounge and support areas, for a total of 74 tons maximum.

Phase 1.2 First Floor Ensemble Rooms, Concert Hall, Theatre HVAC

1. The large Concert Hall AHU (12000 CFM), currently mounted above the ceiling of the front entrance, is in a very difficult location for service/maintenance. The unit’s fan bearings appear in need of repair, as evidenced by fan noise. Retrofit of this unit with a cooling coil is not feasible due to location and age. One-for-one replacement with a new unit with cooling coil will likely prove problematic due to tight space constraints and higher static and fan RPM requirements which will likely result in unacceptable high noise levels in the Concert Hall.

2. We recommend that the large Concert Hall H&V unit be replaced with a new outdoor unit equal to a Trane T series units with coils, filtration, and fans similar to indoor units. This unit would be mounted on the low roof above the Concert Hall. Steam piping directly below serving the existing unit would be extended to the roof and new glycol chilled-water piping would be run from the new air-cooled chiller system risers to the rooftop unit cooling coil. Extensive demo and replacement of the lobby ceiling area below the existing unit will be required for unit demolition and ductwork changes above the Lobby ceiling. New ductwork from the rooftop unit to the Concert Hall supply and return grilles can be run outdoors for acoustical reasons and to permit removal of existing ceiling ductwork, which currently limits its ceiling height in the Concert Hall.

3. The AHU serving the Concert Hall stage (6000 CFM) can be retrofit with a cooling coil and upsized motor, as this unit is relatively new and in good shape.

4. Due to acoustical considerations and service-access issues, we recommend that serious consideration be given to remote location of new air handling unit(s) on the low roof above for the ensemble and theatre rehearsal rooms as they are currently served by an old, inaccessible H&V unit above the existing hung ceiling. A single rooftop unit with the same design specifications as the Concert Hall rooftop can serve these rooms. For budget purposes, we assume VAV terminal boxes with reheat coils for each of the four rooms, with VFD supply fan control.

5. We recommend replacing the existing AHU (7200 CFM) in the loading dock area with a new unit similar to basement unit specifications, installing new fresh air louver and duct, and reusing the theatre existing supply and return duct.

6. Incremental peak cooling-load requirement for the Concert Hall, Studio Theatre, ensemble and theater practice rooms (and piano repair) is estimated at 123 tons. This is above and beyond the 74 tons required for the basement practice rooms.

Phase 1.3 Sleeper Hall and Arcade HVAC

1. The existing chiller unit in the basement of this building looks to be at least 25 years old and ready for replacement. We did not survey the auditorium’s air handling system(s) but replacement as part of the overall upgrade is likely to be the most logical approach given equipment age.

Phase 1.4 First Floor Marshall Room, Lobby, Gallery, Student Commons HVAC

1. The first-pass estimate is total load of 62 tons, requiring new AHU(s) and ductwork. The existing Art Gallery AHU and chiller can be retained.

Phase 1.4 Second Floor Offices/Conference/Classrooms HVAC

1. The preliminary estimate is an additional 35 tons of cooling capacity to accommodate the spaces proposed for renovation. An existing systems survey has yet to be conducted for these spaces.
## Addendum: Consultant Reports

**Engineered Solutions Inc.:** Mechanical Renovation/Feasibility Analysis

### SCHOOL FINE ARTS PHASE I RENOVATIONS FEASIBILITY STUDY

**PRELIMINARY LOAD ANALYSIS AND AHU SIZING FOR REVIEW AND COMMENT**

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<th>MAX # OF PEOPLE</th>
<th>DESIGN CPM</th>
<th>MIN OA CPM</th>
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<th>COOLING LOAD TONS</th>
<th>SF/TON</th>
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<td>24,527</td>
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6. **Addendum: Consultant Reports**

**S. B Sager Associates: Electrical Service Upgrade/Feasibility Analysis**

**I. Objective**

The purpose of this report is to present options for the electrical service upgrade to accommodate the proposed building improvements as outlined in the phasing drawings developed by Wilson Butler Lodge, Inc., and the associated HVAC upgrades proposed by Engineered Solutions.

**II. Existing Conditions**

The existing electrical service serving 855 Commonwealth Avenue is derived from a utility company (NSTAR) transformer vault (Vault #467) on the Basement Level. Based on telephone conversations with NSTAR, it is our understanding that there is a 300 kVA, 13.8 kV primary, pad-mount style transformer in the vault that serves the building. The transformer is fed from the NSTAR Distribution System via a manhole on Commonwealth Avenue.

The transformer serves a 2000-Amp, 120/208-Volt, 3-Phase, 4-Wire switchboard located in the Main Electric Room adjacent to the transformer vault on the Basement Level. The switchboard consists of a 2000-Amp main bolted-pressure switch and three (3) 1000-Amp rated distribution sections.

**III. Observations**

Based on the load profile of the building obtained from Bill Wyman, the peak demand was 290.2 kW, which occurred between April 18 and May 21, 2001. Assuming an 80% power factor, this translates to approximately 362.75 kVA. Based on this information, the transformer serving the building is at its maximum capacity.

The existing 2000-Amp main switchboard serving the building is full of circuit breakers, none of which appear to be spare. (All of the feeder circuit breakers are in the “on” position.) In addition, there is no available space in the Main Electric Room for expansion.

**IV. Recommendations**

Based on the latest program information provided by Wilson Butler Lodge and on input from Engineered Solutions regarding mechanical infrastructure upgrade requirements our preliminary recommendation for electrical infrastructure upgrade is as follows:

1. Construct a new Main Electric Room adjacent to the existing Main Electric Room on Basement Level.
2. Install, as a minimum, a new 3000-Amp, 480/277-Volt, 3-Phase, 4-Wire switchboard in the new Main Electric Room.
3. Install new 500 kVA, 480-Volt Delta primary, 120/208-Volt Wye secondary, dry-type transformer to serve the existing 2000-Amp, 120/208-Volt, 3-Phase, 4-Wire switchboard.
4. Re-feed the existing 2000-Amp, 120/208-Volt, 3-Phase, 4-Wire switchboard from the new 480/277-Volt switchboard via the new 500 kVA transformer.
5. Feed the new HVAC equipment from the new 3000-Amp, 480/277-Volt, 3-Phase, 4-Wire switchboard.

**NOTE:**

This will require a new Primary Electric Service to the building from either the local utility company (NSTAR) or from the existing 13.8 kV Campus Distribution located at 10 Buck Street. If the new 13.8 kV service is derived from NSTAR, then a new transformer vault will be required. If the new 13.8 kV service is derived from the Campus Distribution, then we recommend that the new switchboard be a unit substation with integral transformer.
**6. Addendum: Consultant Reports**

**Akustiks: Acoustical Assessment**

**Sleeper Auditorium**

The desired programming for this room includes lectures, film, soloists, and small musical ensembles in rehearsal and performance. If appropriate within a reasonable budget, the capability to perform semi-staged chamber operas and small musicals is also contemplated.

The room truly has the potential to become a little jewel box recital hall. Because of its small volume of approximately 100,000 cubic feet, we recommend limiting maximum ensemble size to that of a small classical orchestra (up to 33 players) and audience size to less than 350 people for classical music events.

To successfully accomplish the transformation, the room will require ceiling reshaping to achieve additional volume and better distribution of reflected energy (simply opening up the room to the existing structural boundary gets you 90% there), some minor upper sidewall modifications for diffusion and to enhance reverberant quality, an expanded and raised stage area (possibly including a lift or removable platforms covering a shallow pit area as an alternate), additional silencing for existing mechanical and electrical systems (this might be incorporated in the aforementioned side wall modifications), new performance lighting and sound systems, and additional HVAC capacity for the stage area. Some provisions for easily adjustable acoustic absorption elements are also required to accommodate the diverse acoustic requirements of lectures, jazz, and classical music ensembles.

**Concert Hall**

The ceiling of the Concert Hall is impossibly low to achieve anything approaching good symphonic acoustics. The proposed removal of the existing ductwork will provide significant aesthetic improvement, even though measured room acoustic improvements will be subtle unless there are other strong interventions. To fully correct the problem with natural acoustics would certainly be expensive, as the ceiling height of the concert hall would need to be doubled. A less expensive alternative would be to render the existing ceiling acoustically invisible using thick acoustic absorption treatments, and then replicate the performance of a larger room through electronic enhancement. Preliminary cost estimates for acoustic absorption and electronic systems are on the order of $250,000 to $350,000. Current state-of-the-art enhancement systems are a generation beyond that in the Tsai. Reliability is better, and the quality of sound is certainly more natural. Coupled with removal of the cramped ceiling ductwork, this would significantly improve perceived acoustic quality.

A new silent HVAC system producing noise less than PNC-20 is also required for this space.

**Practice Spaces**

Current plans include prefabricated modular practice room units, preferably with tall ceilings, which may be the only practical way to accomplish the proposed renovations in the limited time allotted. Custom “stick-built” rooms can often be less expensive to implement (particularly in some construction markets), but they also require more time to construct.

**Rehearsal Spaces**

These spaces also could benefit from additional ceiling height, but more important is adequate sound isolation from exterior traffic noise and simultaneous use of adjoining rehearsal spaces. Some preservation of natural light is desirable, but the large areas of glass might be reduced. A new silent HVAC system is required.

**Recommendations for noise control include an additional interior wall, perhaps with multiple layers of clerestory glass. Addition of permanent and adjustable areas of absorption will be required. The room intended for large orchestra rehearsal appears too small to accommodate its footprint plus desirable clearances. A minor adjustment of some walls currently shown may mitigate this concern.**

Background noise target of PNC-25 is appropriate for these spaces.
The following Boston University staff and Wilson Butler Lodge Design Team professionals have been instrumental in the development of this facilities plan.

The College of Fine Arts, Boston University

- Walt Meissner, Dean ad interim
- Paul Rinaldi, Director, Office of Space Management

The Master Plan Design Team

- Wilson Butler Lodge Inc., Architects, Boston, MA
- Akustiks, Acoustical Consultants, S. Norwalk, Ct
- Engineered Solutions, M/P Engineers, Natick, MA
- S. B Sager Associates, Electrical Engineers, Natick, MA
- Piatt Associates, Architectural Renderings, Boston, MA
- T. R White, General Contractors, Boston, MA