FACILITIES ASSESSMENT SUMMARIES

Introduction

Following the data gathering phase of the master plan, the team began the process of surveying and documenting the existing on-campus facilities. This effort entailed assembling any available building documentation, which consisted mainly of original construction documents, reviewing the general design for individual disciplines and then undertaking field surveys of facilities. The results of these surveys were recorded, actions recommended and, where applicable, general cost impacts estimated and compiled. The surveys were not intended to be detailed audits of each building component and piece of equipment, but instead focused on identifying major issues, trends, general assessments and recurring conditions. The technical consultant surveys were conducted for structural components, mechanical, electrical, plumbing and fire protection systems, with particular attention was paid to the following areas:

- Items potentially affecting life safety
- Conditions that are non-conforming based on current code standards
- Deferred maintenance items that may be affecting building performance, energy efficiency and applicability of building use

In addition to the technical building systems surveys, the master plan also included architectural assessments and recommendations of interior finishes lighting, furnishings and exterior architectural conditions. The purpose of the architectural assessments, as with the technical surveys, is to provide the University and the Facilities Department with a framework for evaluating and prioritizing deferred maintenance issues. With respect to the architectural components identified in the surveys, the master plan recommendations are intended to serve as a “kit of parts” for approaching repairs, finish upgrades and tackling deferred maintenance.

As with the campus planning findings of this master plan, the architectural and interior recommendations attempt to be respectful of the original designs of the facilities, but are not intended to be seen as an exercise in restoring the buildings to the original design intentions of Paul Rudolph. On the contrary, the suggestions often attempt to introduce contemporary interventions that will improve upon the original designs, temper the affects of time on building conditions and respond to changes in taste and occupant needs. In doing so, however, many recommendations do recognize some unsuccessful renovations and interventions that should be brought back to a condition similar to the original condition.
Summaries of Individual Areas of Assessment

Structural Analysis and Assessment

The structural engineering firm of LeMessurier consultants reviewed original structural documentation and conducted walk-throughs of all main campus and residential buildings performing visual inspections of interior and exterior structural and architectural components. Descriptions of each building and the corresponding structural and architectural conditions observed are summarized and documented with photographs keyed into the summary text. Within this summary, areas in need of repair or further evaluation are also identified. The full structural report can be found in the Master Plan Technical Appendix accompanying this document.

A brief summary of some the major structural issues and recurring conditions found in the report include:

- Identifying Areas of spalling and or chipping concrete
- Reinforcing steel corrosion and other areas of rust-staining from non-structural metals on structural concrete
- Structural concrete cracks
- Observations of structural systems design relative to current structural code design requirements, particular with respect to seismic issues
- Expansion joint conditions, performance and sealant
- Observations of standing water or evidence of water damage on structural and architectural elements
- Signs of overstressing of structural elements and suggested areas of design analysis
- Masonry veneer cracks
- Control joint conditions or lack of control joint observations
- Efflorescence or staining of masonry caused by salts leeching from block mortar
- Flashing conditions and areas in need of roofing repair

The structural assessment also analyzed the designs of the major structural repairs that were conducted in the Group II atriums and confirms the adequacy of the interventions. Assumptions are made regarding other areas that are observed to be in overstressed conditions and, if necessary, the report suggests further evaluation of some conditions.
The report also included detailed drawings for recommended structural repairs of conditions that were found to be recurring. These details include repair methods for concrete spalling in a variety of typical locations, reinforcing steel replacement, slab delamination and concrete topping replacement.

**Mechanical, Electrical, Plumbing and Fire Protection Systems Assessments**

The engineering firm of SAR Engineers reviewed original design drawings, conducted walk-throughs, and recorded observations of all main campus and residential building heating, cooling, ventilation, electrical, plumbing and fire protection systems. General conditions and performance of systems were observed and are described by building and by discipline in the *Master Plan Technical Appendix* accompanying this document. Included in this report are summary sheets of the issues identified and relative cost estimates associated with replacement or repair.

Many of the issues are described with respect to impact on life safety, performance, energy efficiency and system integrity. Non-conforming code conditions are identified and prioritized as such, particularly related to electrical and fire safety issues. A brief summary of some the major building systems issues and recurring conditions found in the report include:

**Heating, Ventilation and Air Conditioning**

- Addressing and replacing the cooling systems in Textiles and Violette which are currently utilizing the systems for Group II, which are not adequate for all 3 buildings
- Introducing cooling in Group I
- Replacement of Dion air handling units and roof mounted exhaust fans
- A phased replacement of HVAC controls with a campus-wide digital control system, including the residence halls
- Abatement of any existing piping equipment insulation that is found to contain hazardous materials
- Heat exchanger and pump replacement in the 4 original residence halls
- Science laboratory ventilation, fume hood and make up air systems are not code compliant and are in need of replacement

**Plumbing and Fire Protection**

- Replacement of steam domestic water boilers
- Improvement to science laboratory and art studio chemical waste systems
- Replacement or installation of science lab safety showers and eye washes
- Replacement of drinking fountains and selected plumbing fixtures for accessibility requirements (to eventually be described further in the access section of this chapter)
- Replace corroded storm water systems in several buildings
- Replace corroded waste line vent piping

**Electrical**

- Replacement of life safety systems including addressable fire alarm, emergency lighting and exit signage throughout the campus
- Electrical distribution systems upgrades in several buildings, particularly Group VI including a separate life safety branch as required by current electrical code
- Additional power distribution panels for data outlets and receptacle rewiring to separate linear and non-linear loads necessitated by increases in power requirements for computer usage
- Update lighting throughout campus building, in particular classrooms and public atriums and corridors. Replace existing fixtures with higher efficiency fixtures with increased light levels utilizing fewer fixtures. Incorporate new building lighting control systems.
The technical appendix to the Master Plan contains descriptions and cost estimates for the building systems assessment summarized above.

**Architectural Assessment**

**General Building Exterior Recommendations**

In addition to the assessments and recommendations found in the structural report on exterior wall conditions, additional general comments regarding building exteriors are summarized as follows:

- All existing exterior soffits that are finished with “Tektum” panels should be replaced with a vented cementitious soffit board and high efficiency exterior grade downlights
- A gradual replacement of all main exterior entrance doors and vestibule doors with automatic, motion-activated sliding doors should be undertaken. This will reduce building heat loss, respond to entrance accessibility issues and reduce maintenance issues associated with door closers and other hardware devices.
- The master plan recommends establishing common, campus-wide building entrance signage that relates graphically to the interior way-finding signage being put into place. This system should be applied to all building entrances that provide public access. Additional signage with the same format should be utilized at service entrances as well.
- In association with exterior building entry signage, a common exterior building light fixture should be included to mark each entrance location and improve safety, security and visibility of building entrances at night. The style of this fixture could relate in language to the site lighting recommendations found in the landscape section of this document.
The existing glazing systems within the main campus buildings are original to the buildings’ initial construction. Some of the older buildings such as Group I employ a single-glazed metal window system, while some later buildings such as Group VI contain double-glazed windows. In many of the double-glazed systems found on campus, the seals between the glazing have been broken and moisture stains have appeared in several locations. Some of the glazing found on campus contains tinted films that have been applied to the windows, which is peeling or bubbling in several locations. Because of the large expanses of glass and limited framing profiles typically found in the campus buildings, replacement with glazing of a similar aesthetic will be an expensive endeavor. While near-term master planning recommendations do not include campus window replacement, the following suggestions should be considered relative to potential longer term window replacement:

- Beginning with Group I, the University should conduct a thorough investigation of window replacement issues including a cost-benefit analysis that weighs potential energy savings against the cost of installing new thermal glazing systems. This analysis should also consider the potential options for re-glazing including thermally broken aluminum frames and metal windows. In either case, the exercise should carefully evaluate the cost and aesthetic implications of different window frame profiles, some of which will differ from original window profiles because of new thermal and structural standards as well as cost implications.

- The results of the analysis and cost/benefit findings should inform a longer-term strategy for window replacement, identify the projected life span of the existing windows and evaluate any potential payback that might result from energy savings.

- The recommendation is to also focus the potential window replacement evaluation on glazing that is south facing, particularly the rear façade of the Foster Administration building. Because of their orientation and the lack of shading devices on this façade, these windows are good candidates for potential replacement and increases in cooling efficiency. Aesthetically, the condition of these windows is poor due to the damaging effects of direct solar exposure.

General Interior Facilities Assessment

The master planning team conducted a general survey of the majority of interior spaces on the campus identifying finishes, lighting, doors, furnishings and equipment and commenting on the general condition of each item. The documentation of that survey can be found in the technical appendix to the master plan. The purpose of the interior survey was not to create a comprehensive audit of every interior condition on campus,
but rather to identify recurring conditions, issues and problems and to make general recommendations on improving and modifying some of the more problematic interior conditions. The recommendations focus mainly on public areas (corridors and atrium spaces) as well as classrooms.

The recommendations summarized below are intended to serve as a framework for addressing interior conditions within main campus buildings. Because of the uniformity of the architectural language, most of the recommendations are not intended for specific locations but can be applied to the majority of campus interiors. Some interior interventions introduced over the years vary from building to building and the surveys identified where variable finishes occur. Some interior finishes are more successful than others and the recommendations identify these conditions below.

A critical factor to consider relative to campus interior finishes is the pervasive condition of exterior structural surfaces of cast-in-place concrete and ribbed masonry block are the same finishes that occur on the majority of interior surfaces. This fact limits the opportunities to introduce other surfaces, textures and colors limited to floors, dropped ceiling locations, furnishings and any miscellaneous elements that might be applied to wall surfaces such as display boards and acoustical panels. Because of the ubiquitous nature of the exposed concrete and block surfaces, the selection of these other interior elements are critical with respect to the potential to introduce color or patterns that will help soften the sometimes brutal, unfriendly affects of the concrete surfaces. Other finishes also provide the only opportunities to overcome the bland neutrality of the block and concrete. The ambient dimension of interior lighting is also an important component of interior considerations. Since much of the lighting is original to the buildings, there are many opportunities to upgrade lighting levels and energy consumption while improving to the overall look and feel of many of the interior spaces.
Part of the interior recommendation exercise analyzed some of the finish treatments from the original Paul Rudolph designs. This was not done as part of an effort to restore the buildings to their original condition, but rather to discover how some of the original intentions might offer lessons for treating finishes today. The most important lesson from this exercise is an understanding the important role that color played in the original interiors, particularly the atrium spaces. Lighting too, in its original design, was intended to highlight the structure and model the textured surfaces of the concrete. The importance of these elements to temper the color and tone of the concrete is something that the following master plan recommendations attempt to recapture.

Atrium Spaces

The interior atrium spaces of the Dartmouth buildings were originally, and remain today, the most important interior spaces on campus. Their expression of the ambitious structural forms, their 3-dimensional volume and open, multi-level circulation are in notable contrast to the typical utilitarian nature of most of the other campus interiors. With the absence of campus center spaces that offer space for social interaction, studying and flexible program opportunities, the atriums provide an important supplement to the lack of symbolic social centers within the campus center. While the make-up of the University has changed significantly since the campus was built and, to some extent, the nature of social interaction on college campuses, the spaces still serve an important role in the identity of the institution despite their need for improvements.

With 2 atriums in Group I, 1 in Group VI, 3 in Group II and 1 in Dion, each space serves a particular user population and departmental grouping. The physical location of the atriums, always occurring at a shift in plan and level and connecting major corridors, provides each space with added significance as important centers of building circulation. Whether used for
congregating or as pass-through spaces, the atriums play an important part in the University’s culture. With some interior improvements to these spaces, and some programming recommendations, their importance can be exploited and, in many cases re-invented.

The following are summaries of the master plan recommendations for atrium interior improvements:

**Flooring:**
- All the atrium spaces should be carpeted with preferably a bright, warm palette similar to the original atrium carpet color. In the interest of maintenance, carpets may also have a slight pattern, possible directional. Carpet tiles might also be utilized.
- Steps and corridors surrounding the atrium spaces should be resilient flooring or vinyl composition tile (VCT) and may be distinguished in color from the main corridor spaces, perhaps darker in color given the amount of natural light that exists in the atrium spaces.

**Lighting:**
- A comprehensive redesign of all the lighting in the atrium
spaces should be undertaken, preferably with the recommendations of a lighting designer. General light levels in the space should be improved with the introduction of high efficiency downlights to replace the compact fluorescent replacement lamps in many of the original fixtures. The soffit strip lights should be upgraded along with the display downlights for highlighting information as well as spotlights intended to wash the texture block walls. In an effort to enable the use of the atrium spaces for exhibits, presentations, lectures and informal discussions, flexible controls should be provided that provide multiple lighting levels and options including spot lighting and display lighting.

**Furnishings:**
- Built-in benches should be maintained and reupholstered. In some locations, the bench seats and backs need to be replaced and, as in the case of the Dion atrium, the plastic seats should be replaced with cushioned benches. Upholstery should be brighter, warm colors to complement the carpets. Patterned fabrics will wear better than solid colors. In addition to fabrics, durable synthetic upholstery materials might be considered as well for maintenance purposes and to reintroduce the original look of the atrium benches. Synthetic materials may also offer a broader color range and brighter palette options.

- In atriums where moveable furniture is desirable, such as the Group II platforms and informal study and work tables, moveable furniture should be replaced with uniform style that is more durable, uniform and appropriate to the prominence of the spaces. The current furniture within these spaces is mismatched and generally not suitable to
such a prominent public area. Other recommendations include selecting a uniform interior common area waste receptacle and removing vending machines from the central atrium spaces.

Displays:
- The atrium spaces serve an important role as information centers in all University buildings. This is a role that should continue and be encouraged however the master plan recommends a more controlled placement of display elements and a uniform selection of these elements. Bulletin boards should be limited to the corridor areas adjacent to the atriums, not mounted in the central spaces or balcony levels. These bulletin boards should be uniform in size, style and mounting height to alleviate visual clutter. Some glass display cases should be present in each location for displaying more general University and/or
departmental information and larger events in addition to public bulletin boards for student postings. Track lighting should be incorporated in these locations.

- Displays within the atrium spaces themselves should be more along the line of permanent and/or rotating art exhibitions or academic displays or information, not bulletin board postings. Track or spot lighting should also be incorporated into these locations.

**Technology / Programming:**

- The C.I.T.S. department recently installed wireless Internet hubs in all of the campus atriums. This represents the recognition of the importance of these spaces as central gathering places, but also suggests opportunities to improve their potential as improvement to their potential for centers of information. The use of technology to convey information within the atriums could be extended further to potentially include display screens for electronic signage, public lecture telecasts from other locations within the university (or from other universities), or projection screens for presentations within the spaces themselves. Programmatically, it is not difficult to imagine any or all of the campus atriums serving functions such as those currently found in the library browsing area. As the residential population of the campus grows and the need for evening and nighttime activities continues to increases accordingly, the atriums might fulfill the need for such activities after regular class hours. The presence of technology that will support some of these activities will greatly improve the opportunities to utilize these important campus centers for multiple educational and extra curricular activities. Related to this recommendation is the fact that the main, lower levels of all the atrium spaces should be made fully accessible to people with disabilities.
The accessibility assessment portion of the recommendations will describe this recommendation in greater detail.

- The introduction of programming elements such as food carts has been largely successful and should be extended to all atrium spaces. The general location of these elements, within the adjacent corridor spaces is desirable. Over time, efforts should be made to improve the aesthetics and uniformity of the carts, perhaps establishing a more permanent built-in condition with finishes that are more compatible with the interiors of the buildings. A related recommendation that would take the idea of the food carts a step further is to explore the possibility of introducing a more permanent use such as a café or small dining facility. The ideal location for such a function would be in the adjacent 2nd floor spaces that were originally open to the atrium but have been partitioned off. An example of such an area is the space currently occupied by the UMD Reading Center off of the Group I north atrium. If an alternative location for this use could be relocated in some future expansion project, a significant opportunity would exist to open this space back up to the atrium and introduce
a small café space that could activate the atrium significantly. Group II atriums offer the same potential in locations that have been converted to office suites.

The same general recommendations should be applied to other important public circulation and gathering spaces on the campus including the library public areas, the campus center lower level main entrance, and the Foster atrium. The recent improvements made to the auditorium lobby and gallery level spaces can also serve as an example of the types of finish, furnishing and programmatic interventions that can drastically improve the quality and utilization of other campus public interior spaces.

Public Corridors

Flooring
- The issue of floor finishes in the public corridors is also related to the issue of lighting. In general, where existing light levels are maintained, the recommendation is to introduce brighter toned finishes such as the light gray VCT found in the corridors in Group I. In Group II, the original exposed aggregate concrete floors are found in the corridors. Although the lighting fixture type and location are identical for both buildings, the dark color and lack of reflection from the concrete floors make the Group II corridors appear much darker than those of Group I. In addition the difficulty in removing chewing gum from exposed concrete aggregate floors presents a maintenance problem. While VCT is a viable flooring option for corridors, resilient rubber flooring presents another solution to public corridor floors. Darker colored floor finishes may be utilized, and present fewer maintenance issues, but should only be introduced in conjunction with lighting upgrades throughout the corridors. Increase lighting levels will also enable the use of colored flooring, which will enliven the look of corridor spaces.
**Lighting**
- Like within the atrium spaces, the original corridor lighting is inefficient and inadequate. General light levels in the typical corridor space should be improved with the introduction of high efficiency downlights to replace the compact fluorescent replacement lamps in many of the original fixtures. The soffit strip lights should be upgraded along with the display downlights for highlighting information as well as spotlights intended to wash the texture block walls.

**Wall Treatments**
- In order to relieve the visual impact of long stretches of ribbed block corridor walls, as a general consideration for any interior location, the master plan recommends introducing raised panels mounted to block walls to serve as potential display surfaces. These panels may also act as reflective surfaces and improving the overall lighting levels of a space, to interrupt the extensive blank block surfaces found throughout the campus, and to provide additional materials and color to offset the neutral palette of the concrete and block surfaces. Some potential material for such wall panels include light colored wood veneer laminated plywood, preferably with solid wood edges for endurance, perforated metal panels and tackable surfaces with colored or patterned fabric surfaces such as acoustical panels. These paneled elements might also contain graphic images such as those found in the coffee shop located in the lower level of the campus center. Although in some locations on campus one can find examples of painted block wall surfaces, the master plan does not recommend continuing this precedent. Painting the ribbed block creates additional maintenance issues associated with cleaning and repainting, presents difficulty in properly painting the ribbed block surface including the need to apply block filler base coats, and actually decreases the acoustical properties of the material by infilling the porous surfaces.
Existing Group VI corridor with talkable display surfaces and ‘Tektum’ ceiling

Group VI study exploring the use of wood laminate panels, colored doors and perforated panel ceiling grid

Existing Group I corridor with bulletin boards and lockers

Group I study introducing wood laminate panels and displays in lieu of lockers, and introducing wood panels in soffit ceilings
Another recommendation for public corridors is to eliminate the presence of metal lockers, which are not under utilized, and are a source of visual clutter within the academic corridors. These locations offer the potential to introduce display cases and graphic or display panels.

**Ceilings**

- The dropped ceilings located in the typical corridor soffits and elsewhere on campus, were originally finished with 2x4 “Tektum” ceiling panels with a fiber texture. These panels are typically butt jointed without a concealed grid or spline. In much of Group II, and part of Groups I and VI, these panels have been replaced with conventional 2x4 acoustic ceiling tiles with an exposed grid. While this offers a straightforward and easily maintainable solution to the typical corridor and classroom suspended soffits, there are other options and opportunities that should be explored for this condition. Among these are the potential to introduce a perforated metal panel system mounted directly to the concrete beams, and perhaps suspended slightly below the currently panel height. A similar approach might be employed using laminated wood panels mounted to the beams, a solution that would introduce warmth to the color palette and soften the visual impact of the concrete. In all cases, the master plan recommends using such ceiling panel systems only in existing soffit locations, not to conceal the underside of exposed concrete ceiling surfaces. The only exception to this would be in computer rooms that require additional cooling solutions and duct distribution to be concealed beneath a dropped ceiling. Several existing computer rooms have this condition, particularly in Group I where there is not central air conditioning system. The master plan recommends that only in the case of a particular mechanical or classroom technology requirement should concrete ceilings be concealed beneath acoustic ceiling tiles.

**Classrooms**

**Large Classrooms and Lecture Halls**

Many of the general finish recommendations summarized above may be applied to typical classroom conditions found throughout the campus. A general master plan recommendation suggests complete renovations to the larger auditorium classrooms and lecture halls across the campus. In general these spaces are found to be challenging spaces for teaching and learning. This inappropriateness of many of these spaces contributes to an overall perception that there is a shortage of classroom space on campus. The space utilization section of the master plan discusses this issue in greater detail suggesting that the lack of classroom amenities and the generally poor conditions of many of these spaces is more of an issue than actual shortage of space. The following general recommendations are suggested as part of overall large classroom renovation projects throughout the campus.

- Introduce carpet wherever possible, particularly in aisles and circulation spaces with VCT or resilient flooring in seating areas
- Improve lighting levels and lighting controls flexibility, particularly general lighting within the student seating areas
- Introduce or upgrade acoustic panels in larger spaces with either fabric panels or laminated wood veneer panels mounted to both walls and ceilings (Acoustic evaluations should be performed by a consultant with specific acoustical treatment recommendations stemming from the evaluation)
- Improve window treatments where applicable, preferably with uniform white vertical blinds or woven mesh roll-up fabric shades.
- Repair all operable windows and ensure the ability to open windows that are beyond reach
- Replace broken and missing fixed seating.

Note: General heating and cooling issues were identified as a major issue within large classrooms throughout campus, particularly the Group II lecture halls. Refer to the HVAC assessments found within the technical appendix for specific recommendations.

Note: General technology upgrades and improvements recently made to the 10 largest classrooms are summarized in a 2003 report prepared by C.I.T.S. This report also identifies the need to undertake environmental and architectural improvements to fully utilize the benefits of the technology investments since the general condition of the larger classrooms are still poor in spite of these upgrades.

Small and Mid-Sized General Use Classrooms

The finish recommendations identified above can generally be applied to smaller classrooms as well. Acoustical issues are not as prevalent or difficult to resolve, although the presence of small panels in the rear of classrooms can improve acoustic conditions. In smaller classrooms, the presence of natural light often makes artificial lighting less of an issue, although the ability to control natural light with proper shading devices is important in the smaller classrooms. As with the Group I and Group II corridor floor finish comparison, the presence of VCT or light colored resilient rubber flooring greatly increases light levels over rooms with exposed aggregate concrete floors.
Vinyl or rubber flooring also offers acoustical improvements as compared to concrete floors.

A general recommendation related to the typical mid-size classrooms found in the first floor of Group I involves leveling the stepped floors and eliminating the sunken level of the lecture podium and the angled orientation of the space. Creating a single level teaching space will eliminate the existing fixed seating in lieu of moveable tables and chairs. With changes in current instructional pedagogy, the type of flexibility provided by moveable stations will provide opportunities for small group discussions and break-out activities, seminar type classes as well as a more flexible arrangements for traditional lecture instruction. Examples of this approach have been implemented in some existing Group I classrooms that were leveled from their original stepped condition. In general, this approach will allow for the type of flexibility, class sizes and square foot per station recommendations found in the space utilization section of this document.

**Accessibility**

A summary of the recommended facility upgrades regarding accessibility can be found in Chapter 4 of this report.
### Final Master Plan Recommendations: EXISTING FACILITIES ASSESSMENTS

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>PROJECT DESCRIPTION</th>
<th>SQUARE FOOTAGE/UNIT TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residence Hall Improvements - Interior and Exterior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvements to Phase I, II and III Residence Halls exterior building envelope</td>
<td>Re-caulking of expansion joints, re-pointing of cracked and spalling block veneer joints, cleaning of efflorescence on block veneer, repair of balconies and exterior egress stair guardrails</td>
<td></td>
</tr>
<tr>
<td>Reglazing of Phase I, II and II Residence Halls</td>
<td>Complete reglazing of existing openings with new aluminum frame, thermally broken insulated glazing units</td>
<td></td>
</tr>
<tr>
<td>Improve building and site lighting</td>
<td>Introduce additional pedestrian light fixtures and upgrade lighting on building exterior</td>
<td></td>
</tr>
<tr>
<td>Improve lighting in existing common areas</td>
<td>Install energy efficient down lights and strip lights on common lobbies, corridors and common residential areas</td>
<td></td>
</tr>
<tr>
<td>General Improvements to interior finishes</td>
<td>Complete carpet and window treatment replacement in rooms</td>
<td></td>
</tr>
<tr>
<td><strong>Existing Facility Improvements - Interior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renovation of Campus Center Auditorium</td>
<td>Complete renovation of existing auditorium including permanent separation between performance space and balcony lecture halls, reconstruction of stage and proscenium, and introduction of publicly accessible entrance and direct elevator access to all levels</td>
<td>46,500</td>
</tr>
<tr>
<td>Classroom Reconfigurations (Group I)</td>
<td>Removal of fixed seating, filling in of stepped classrooms, new VCT floor finishes, replacement of soffit ceiling tiles, new vertical window blinds, introduction of acoustic wall panels (10 classrooms total)</td>
<td>5,000</td>
</tr>
<tr>
<td>Classroom Renovations (Group I)</td>
<td>Replacement of acoustic ceiling tiles, new vertical window blinds, new VCT flooring, introduction of acoustic wall panels</td>
<td>10,000</td>
</tr>
<tr>
<td>Faculty / department office reconfiguration and renovations (Group I)</td>
<td>Renovation and reconfiguration of 3rd floor faculty and departmental offices following completion of the Charlton building and the relocation of the college of business offices, including the conversion of some existing office space back to as original plan seminar</td>
<td>20,000</td>
</tr>
<tr>
<td>Renovations</td>
<td>Details</td>
<td>Cost</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>Large Classroom / Lecture Hall Renovations</td>
<td>Replace lighting in selected areas, introduce acoustical wall and ceiling panels, replace soffit acoustic ceiling tiles, replace vertical window blinds (where applicable)</td>
<td>2,550</td>
</tr>
<tr>
<td>Group VI Room 203</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group I Room 117</td>
<td></td>
<td>2,200</td>
</tr>
<tr>
<td>Group II Lecture Halls</td>
<td></td>
<td>6,800</td>
</tr>
<tr>
<td>Dion 115 &amp; 116</td>
<td></td>
<td>3,600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interior Accessibility Upgrades</th>
<th>Details</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restroom accessibility improvements</td>
<td>Reconfigure 2 public restrooms per floor in central atrium for each academic building, campus center and admin. Building (500 sf/ room)</td>
<td>16,000</td>
</tr>
<tr>
<td>Atrium Accessibility improvements</td>
<td>Provide accessible ramp down from main corridor level to lower level of atrium spaces (typical at 5 atrium spaces Group I, II and VI)</td>
<td>5</td>
</tr>
<tr>
<td>General Upgrades to Drinking Fountains</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>General improvements to signage and wayfinding for accessible paths of travel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group I general interior finish improvements</th>
<th>Details</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public corridor finishes / Lighting</td>
<td>Replace acoustic ceiling tiles in corridor soffits, replace linear soffit lights and downlights in corridors with high efficiency fixtures, replace laminated corridor doors, standardize room signage, remove lockers</td>
<td></td>
</tr>
<tr>
<td>Atrium Finishes / Lighting</td>
<td>Re-carpet atrium floors, re-upholster all benches, replace down lights and spot lights with high efficiency fixtures, standardize all bulletin boards, displays and signage.</td>
<td>2 total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group II general finish improvements</th>
<th>Details</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public corridor finishes / Lighting</td>
<td>Install VCT floors in all corridors, replace acoustic ceiling tiles in corridor soffits, replace linear soffit lights and downlights in corridors with high efficiency fixtures, replace laminated corridor doors, standardize room signage, remove lockers</td>
<td></td>
</tr>
<tr>
<td>Atrium Finishes / Lighting</td>
<td>Re-carpet atrium floors, re-upholster all benches, replace down lights and spot lights with high efficiency fixtures, standardize all bulletin boards, displays and signage.</td>
<td>3 total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Existing Laboratory Upgrades</th>
<th>Details</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Replacement and building and life safety code upgrades of existing equipment, (vent hoods, waste disposal, fire protection)</td>
<td></td>
</tr>
</tbody>
</table>

2,550
2,200
6,800
3,600
16,000
5
50

40
Group VI general finish improvements

Public corridor finishes / Lighting
Install VCT floors in all corridors, replace acoustic ceiling tiles in corridor soffits, replace linear soffit lights and downlights in corridors with high efficiency fixtures, replace laminated corridor doors, standardize room signage, remove lockers

Atrium Finishes / Lighting
Re-carpet atrium floors, re-upholster all benches, replace down lights and spot lights with high efficiency fixtures, standardize all bulletin boards, displays and signage 1 total

Basement Level
General renovation of existing campus mail room and storage space to accommodate studio space (following construction of facilities building) 5,000
General renovation of existing campus mail room and storage space to accommodate studio and/or rehearsal space (following construction of facilities building) 5,000

Dion general finish improvements

Public corridor finishes
Replace soffit lights and down lights with high efficiency fixtures

Atrium Finishes / Lighting
Replace benches w/ upholstered seating, improve lighting, install carpeting

Lecture Halls general finish improvements

Public corridor finishes / Lighting
Install VCT floors in all corridors, replace acoustic ceiling tiles in corridor soffits, replace linear metal soffits, soffit lights and downlights in corridors with high efficiency fixtures

Campus Center general finish improvements

Public corridor finishes / Lighting
Replace lighting with high efficiency fixtures, reupholster benches, replace corrugated w/ wood panels 20,000

Tripp Athletic Center
Replace upper level perimeter heating cabinets w/ insulted, finished cabinets, insulate perimeter unit duct work
Install resilient flooring in locker room and lower level public areas 10,000

Foster Admin. General finish improvements
Replace lighting with high efficiency fixtures, replace acoustic ceiling tiles in soffits
General renovation of basement level offices following relocation of facilities department 5,000

Library general finish improvements
Replace carpet on upper levels 30,000
### Existing Facility Improvements - Exterior

#### Exterior / Site Accessibility Upgrades

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade accessible ramp at Library Entrance</td>
<td>Reconstruct exterior accessible ramp at main library entrance down to rear (west) side of building (non-confirming slope)</td>
</tr>
<tr>
<td>Improve accessible paths at parking lots</td>
<td>Regrading and paving of selected paths between parking lots and main campus to introduce accessible slope, introduce site signage identifying accessible path</td>
</tr>
<tr>
<td>Building entry signage</td>
<td>Provide new standardized building name signage and exterior entry lighting at each public building entrance</td>
</tr>
<tr>
<td>Automatic Building Entry Doors</td>
<td>Provide motion activated sliding entry doors at all main campus building entrances</td>
</tr>
<tr>
<td>Exterior Soffits and Soffit Lighting</td>
<td>Replace existing “Tektum” soffits with exterior grade cement board, provide insulation and new exterior down lights</td>
</tr>
<tr>
<td>Tripp Athletic Center Envelope Improvements</td>
<td>General re-pointing of exterior masonry joints at horizontal and vertical cracks, recaulking of control joints, patching and parging of cracked concrete at exposed sloped roofs at lower level, re-flashing of roof parapet</td>
</tr>
<tr>
<td>General campus building masonry repairs</td>
<td>General repointing and caulking of control joints, replacement of cracked or spalling veneer, cleaning of efflorescence</td>
</tr>
<tr>
<td>General campus building exterior concrete repairs</td>
<td>General patching of cracked exterior concrete, cold galvanizing of exposed reinforcing steel</td>
</tr>
<tr>
<td>Masonry Waterproofing</td>
<td>Allowance</td>
</tr>
<tr>
<td>Structural Concrete Repairs</td>
<td>Allowance</td>
</tr>
</tbody>
</table>