PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Automatic, electrically operated, roll-up projection screens, controls, and accessories.

1.2 RELATED SECTIONS

A. Section 05 50 00 - Metal Fabrications.
B. Section 26 00 00 – Electrical Work.
C. Section 09 22 16 - Non-structural metal framing
D. Section 09 51 23 – Acoustical Tile Ceilings

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
C. Preparation instructions and recommendations.
D. Storage and handling requirements and recommendations.
E. Manufacturer's installation, operation, maintenance, and cleaning instructions.
F. Shop Drawings: Indicate dimensions, fabrication and installation details, and electric wiring diagrams.
G. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Firm with 10 years minimum successful experience manufacturing electric projection screens.
B. Installer Qualifications: Authorized and trained by the manufacturer to install systems required.
C. Definition of Terms for Specifications:

1. Gain: Indication of screen's luminance or brightness measured perpendicular of screen center and measured relative to a block of magnesium carbonate which serves as the standard for 1.0 gain. Higher numbers indicate greater brightness. Gain shall be determined in accordance with SMPTE RP 94-2000.
2. Keystone: Distortion of projected image when screen is not perpendicular with center line of projected image.
3. Viewing angle: Angle from perpendicular center of screen at which the gain or brightness is decreased by 50 percent.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.
B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:

1. Da-Lite Screen Company, Inc.
2. Draper
3. Stuart Film Screen

2.2 PROJECTION SCREENS

A. Basis of Design

1. Items specified are to establish a standard of quality for design, function, materials, and appearance.

B. Type A - Electric Projection Screen, wall mounted - basis of design Cosmopolitan Electrol:

1. Viewing Surface: Matte White.
2. Viewing format: See attached screen schedule.
3. UL Label: Recessed installed in return air ceiling plenums shall be certified by Underwriters Laboratory (UL), Inc. and shall bear UL label.
4. Size: See attached screen schedule.
5. Masking: Black masking borders.
6. Extra Drop Masking: See attached screen schedule
7. Finish: White finished in lightly textured powder coat.
8. Low voltage control: Single Motor Low Voltage Control (LCV) capable of third party control.
9. Wall switch: Low voltage, wall mounted, three position switch.
10. Limit switches: Pre-set, adjustable switches to automatically stop viewing surface, and case closure door where scheduled, in up or down positions.
11. Silent motor with LVC: Silent Motor with Integrated LVC.

2.3 VIEWING SURFACES CONSTRUCTION AND PERFORMANCE

A. Viewing Surfaces:

1. Matt White as manufactured by Draper, Inc.: Flame retardant, mildew resistant, smooth, white, unsupported vinyl screen that can be rolled, folded, cleaned with mild soap and water solution.
   a. Gain: 1.0.
   b. Viewing angle: 60 degrees.
2. Acoustically transparent mico-perforated material- coordinate with University representative to confirm final projector resolution

3. Masking: Black.
4. Drop: Refer to drawings for floor to ceiling height.
   c. Drop Color: Black.
5. Seams: To the extent possible screen surfaces shall be seamless. Where required by size, provide a minimum number of flat, horizontal seams. Vertical seams are not acceptable.

PART 2 - EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Coordinate provision of screens with locations of other wall and ceiling mounted components such as visual display boards, casework, structural framing, light fixtures, air diffusers, ducts, and fire sprinklers to eliminate potential conflicts.
B. Coordinate requirements for blocking, construction of recesses, and auxiliary structural supports to ensure adequate means for installation of screens.

C. Coordinate requirements for power supply, conduit, and wiring required for electric screen and controls.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.
B. Installation hardware: Provide attachment hardware, fasteners, and other components of type, size, and spacing recommended by manufacturer for complete, functional, secure installation of screens.

3.4 PROTECTION

A. Protect installed products until completion of project.
B. Touch-up, repair or replace damaged products before Substantial Completion.

Table 1. AV Screen Schedule

SCREEN SCHEDULE							
Room Num.	Room Name	Screen Type	Viewable Image Size	Distance from Bottom of Image to Finished Floor (Inches)		Total Black-drop (Inches)	QTY per room
12	Mech. Materials Mech. Thermal	A	92”x52”	TBD		24”	1
103	Incubator Space	A	116”x65”	TBD		24”	1
106	Creative Design Garage	A	92”x52”	TBD		24”	3

END OF SECTION