

SUSSEX COUNTY COMMUNITY COLLEGE Board of Trustees

2025 Sussex County Teen Arts Festival Program

Tuesday, March 11, 2025



56th Annual Sussex County Teen Arts Festival
Sussex County Community College, One College Hill Road, Newton, NJ 07860
Logo designed by Anthony Klein, Sussex County Technical School

Wednesday, March 26, 2025 * 4:00 p.m.
Executive Office Board Room



**Board of Trustees Regular Meeting
Wednesday, March 26, 2025 – 4:00 p.m.
Executive Office Board Room**

AGENDA

1. General Institutional Functions

- 1.1 Call to Order
- 1.2 Public Statement: Adequate notice of this meeting specifying the time and location was transmitted via fax and email to the County Commissioners, County Clerk, NJ Herald, posted to the Sussex County Community College website, and on the main entry doors to the Administration Building on Wednesday, March 12, 2025 pursuant to the Open Public Meetings Act, N.J.S.A. 10:4-8.
- 1.3 Roll Call / Pledge of Allegiance
- 1.4 **Executive Session** – Be it resolved that the Board of Trustees will now go into an Executive Session to discuss personnel matters. The matters discussed will be made public if and when the circumstances requiring confidentiality no longer exist. However, it is not presently known if and when that will be.

The Executive Session is expected to last approximately 50 minutes. After the executive session, action may or may not be taken.
- 1.5 Welcome to Guests
All members of the public who provide public comment shall first identify themselves. Public comments may be submitted to the Board of Trustees Secretary via email or written letter if received at least (8) hours before the meeting. Written public comments shall be read at the meeting with the same time restrictions as all public comments at the meeting. Duplicative comments may be summarized at the discretion of the Board of Trustees Chair.
- 1.6 Courtesy of the Floor on Agenda Items Only (Public Session-5 Minutes per Speaker).

ACTION

- 1.7 Approval/Acceptance of Minutes
 - 1.7.1 Minutes from the Executive Session on February 13, 2025. (Attachment pg. 1, Resolution No. GI03262025-1)
 - 1.7.2 Minutes from the Special Meeting on February 13, 2025. (Attachment pgs. 2 & 3, Resolution No. GI03262025-2)
 - 1.7.3 Minutes from the Executive Session on February 25, 2025. (Attachment pg. 4, Resolution No. GI03262025-3)
 - 1.7.4 Minutes from the Regular Board Meeting on February 25, 2025. (Attachment pgs. 5-11, Resolution No. GI03262025-4)
 - 1.7.5 Acknowledgment of Receipt of Committee Meeting Minutes. (Attachment pgs. 12-17, Resolution No. GI03262025-5)

- Personnel and Curriculum Committee – March 18, 2025.
- Audit and Policy Committee – March 18, 2025.
- Finance and Facilities Committee – March 18, 2025.

2. **Consent Agendas – ACTION/RC**

The President recommends items 2.1 - 2.5 for Board approval, as brought forth after discussion and review by Board Committees:

- 2.1 Approval of Personnel Items
 - 2.1.1 Personnel Actions: Personnel Actions: February 11, 2025 – March 11, 2025. (Attachment pgs. 18 & 19, Resolution No. P03262025-1)
- 2.2 Approval of Curriculum Items
 - 2.2.1 Change in nomenclature for the 32-credit academic certificate, currently entitled, “Machine Tool Technology” to “Advanced Manufacturing”. (Attachment pg. 20, Resolution No. CI03262025-1)
- 2.3 Approval of Policy Items
 - 2.3.1 Re-adopt Policy No. 301.87.1 Medical Appeal Policy. Changes to procedures. (Attachment pgs. 21 & 22, Resolution No. AP03262025-1)
 - 2.3.2 Re-adopt Policy No. 401.6 Purchasing Policy. Policy name change from “Procurement/Bidding” to “Purchasing.” Changes to procedures. (Attachment pgs. 23-27, Resolution No. AP03262025-2)
 - 2.3.3 Adopt Policy No. 401.11 SCCC Credit Card Policy. This is a new policy. (Attachment pgs. 28-30, Resolution No. AP03262025-3)
 - 2.3.4 Adopt Policy No. 401.12 SCCC Meal Reimbursement Policy. This is a new policy. (Attachment pgs. 31-33, Resolution No. AP03262025-4)
 - 2.3.5 Adopt Policy No. 401.13 Fixed Asset Policy. This is a new policy. (Attachment pgs. 34-37, Resolution No. AP03262025-4)
- 2.4 Approval of Finance Items
 - 2.4.1 Change of signers on CDs that SCCC holds with First Hope Bank from Dr. Jon Connolly and Manal Meseha to Theresa Pappan and Cerene Belli. (Resolution No. BFF03262025-1)
 - 2.4.2 Microsoft OVS License Renewal from Dell for \$30,690.33. Operating Funds. (Attachment pgs. 38 & 39, Resolution No. BFF03262025-2)
 - 2.4.3 All in One Workstations – Learning Commons from Dell for \$45,357. ELF Grant. (Attachment pgs. 40-45, Resolution No. BFF03262025-3)
 - 2.4.4 Agreement with Skylands Stadium for athletic events including football, men's and women's soccer, and baseball, aligning with SCCC's fiscal year (July 1, 2025- June 30, 2026), for \$70,000/year. The total rental fee shall be paid in two equal installments: 50% (\$35,000) due before Fall sports begin (August 1, 2025), and 50% (\$35,000) due before Spring baseball begins (January 15, 2026). (Attachment pgs. 46-53, Resolution No. BFF 03262025-4)

- 2.4.5 Blanket P.O. Increase for Baldor Specialty Foods – Culinary Food Supplies. Current BPO \$15,000.00, Increase \$8,000.00, Total – \$23,000.00. Operating Funds. (Attachment pg. 54, Resolution No. BFF03262025-5)
- 2.4.6 Website Upgrades with Hanson for an Estimated \$26,000-\$30,000. Chapter 12. (Attachment pgs. 55-60, Resolution No. BFF03262025-6)
- 2.4.7 Investment Firm Selection – The Investment Firm Selection Committee recommends Biondo as the new investment firm. They have lower fees and are a local firm with strong portfolio management. (Attachment pg. 61, Resolution No. BFF03262025-7)
- 2.5 Approval of Facilities Items
 - 2.5.1 Building A Second Floor Carpet – Hannon Floors. Remove old carpet and base and install new carpet tile for \$61,246.45. Chapter 12. (Attachment pgs. 62 & 63, Resolution No. BFF03262025-8)
 - 2.5.2 Building L Second Floor Library Renovations – G. Meyer Group, for Base Bid: \$1,315,535, and Alternate: \$435,000.00 for a total of \$1,750,535. Reserves. (Emailed, Resolution No. BFF03262025-9)

3. **Finance – ACTION/RC**

- ACTION/RC** 3.1 Re-Adopt Policy No. 401.10 Cash Management. There are no changes. (Attachment pgs. 64-67, Resolution No. AP03262025-5)
- ACTION/RC** 3.2 Recommendation: Acknowledge Receipt and Review of February 2025 Financial Statements. (Attachment pgs. 68-79, Resolution No. GI03262025-6)

4. **Reports**

- 4.1 Correspondence File – (Attachment pgs. 80-83)

5. **Presentations** – Student Spotlight - Jilyssa Stevens

Jilyssa Stevens did not apply to be a writing consultant. She earned it. Jilyssa has been a genuine asset to the Writing Center.

Jilyssa brings her driven personality to every aspect of the center, from coming to work early, having the most appointments, creating new ways to engage with the students, and decorating the center to keep the spirits high.

Because of her work to support students, she will also be earning the Presidential Award for Service to the Community later this semester.

6. **Courtesy of the Floor on General Matters** (Public Session-5 Minutes per Speaker)

7. **Other Business**

Discussion / Reports / Announcements:

- 7.1 Trustee and Alumni Trustee Activity Update

7.2 President's Report

7.3 Chair's Comments

7.4 The next meeting of the Board of Trustees will take place on Tuesday, April 22, 2025, at 5:00 p.m. in the Executive Office Board Room.

8. Adjournment



**Board of Trustees Special Meeting
Thursday, February 13, 2025
Executive Office Board Room**

EXECUTIVE SESSION MINUTES

Start: 5:10 p.m.

End: 5:20 p.m.

Present: Mr. Cable, Mrs. Frank (via phone), Ms. Quinn, Mr. Santonastaso, Mr. Schick, Dr. Silverthorne, Mr. Yardley, Dr. Homer-Interim President, Mrs. Fullem-Recording Secretary, and Ms. Fina.

During the Executive Session, Dr. Homer provided the Trustees with an update regarding pending litigation.

Approved: _____



**Board of Trustees Special Meeting
Thursday, February 13, 2025
Executive Office Board Room**

MINUTES

1. General Institutional Functions

- 1.1 Katy Fina, College Counsel, called the meeting to order at 5:00 p.m. and read the Public Statement:
- 1.2 Public Statement: Adequate notice of this meeting specifying the time and location was transmitted via fax, posted to the Sussex County Community College website, and on the main entry doors to the Administration Building on February 5, 2025, pursuant to the Open Public Meetings Act, N.J.S.A. 10:4-8.
- 1.3 Roll Call / Pledge of Allegiance

The following were present: Mr. Cable, Mrs. Frank (via phone), Ms. Quinn, Mr. Santonastaso, Mr. Schick, Dr. Silverthorne, Mr. Yardley, Dr. Homer-Interim President, and Mrs. Fullem-Recording Secretary.

Also present: Mrs. Pappan-Vice President of Finance and Administration, Dr. Gallo-Associate Vice-President of Academic Affairs, Mr. Fruge-Dean of Technical Occupations, and Mr. Kula-Executive Director of the Foundation.

- 1.4 Welcome to Guests and Courtesy of the Floor for Agenda Items Only (5 minutes per speaker).

All members of the public who provide public comment shall first identify themselves. Public comments may be submitted to the Board of Trustees Secretary via email or written letter if received at least (8) hours before the meeting. Written public comments shall be read at the meeting with the same time restrictions as all public comments. Duplicative comments may be summarized at the discretion of the Board of Trustees Chair.

No one spoke.

ACTION 1.5 Election of Officers

There were two Trustees interested in the Board Chair position, Mr. Yardley and Mrs. Frank. Ms. Fina put forth Mr. Yardley for a vote first. The voice vote was as follows: Mr. Cable, Ms. Quinn, Mr. Santonastaso, Mr. Schick, Dr. Silverthorne, and Mr. Yardley voted yes. Mrs. Frank voted no. Having the majority, no further vote was conducted and Mr. Yardley was elected Chair.

There were two Trustees interested in the Board Vice Chair position, Dr. Silverthorne and Mrs. Frank. Ms. Fina put forth Dr. Silverthorne for a vote first. The voice vote was as follows: Mr. Cable, Ms. Quinn, Mr. Santonastaso,

Mr. Schick, Dr. Silverthorne, and Mr. Yardley voted yes. Mrs. Frank voted no. Having the majority, no further vote was conducted and Dr. Silverthorne was elected Vice Chair.

No nominations were received for Treasurer and Secretary. The Board will revisit these appointments at a future meeting.

The newly elected officers assumed their respective roles. Chairman Yardley expressed gratitude for the support and stated he would provide further remarks at the next meeting.

ACTION

1.6 Second person appointment to the Board of School Estimate.

One additional appointment was required. Mr. Yardley indicated he would reach out to potential candidates and present a name at a later date.

1.7 Courtesy of the Floor on General Matters (Public Session 5 Minutes per Speaker).

Mr. Santonastaso moved to open the floor for public comments. Mr. Cable seconded the motion. The motion carried unanimously.

No one spoke.

Mr. Santonastaso moved to close the public session. Dr. Silverthorne seconded the motion. The motion carried unanimously.

1.8 Executive Session – Mr. Yardley stated, “Be it resolved that the Board of Trustees will now go into an Executive Session to discuss pending or anticipated litigation falling within the attorney-client privilege. The matters discussed will be made public if and when the circumstances requiring confidentiality no longer exist. However, it is not presently known if and when that will be.

“The Executive Session is expected to last approximately 60 minutes. After the Executive Session, no action will be taken.”

At 5:10 p.m. Mr. Schick moved for the Board of Trustees to enter Executive Session. Mr. Santonastaso seconded the motion. The motion carried unanimously.

At 5:20 p.m. Mr. Schick moved for the Board of Trustees to adjourn Executive Session. Mr. Santonastaso seconded the motion. The motion carried unanimously.

1.9 The next meeting of the Board of Trustees is Tuesday, February 25, 2025, at 5:00 p.m., in the Executive Office Board Room

1.10 Adjournment

At 5:21 p.m. Mr. Schick moved for the Board of Trustees to adjourn the public meeting. Mr. Santonastaso seconded the motion. The motion carried unanimously.

Approved: _____



**Board of Trustees
Thursday, February 25, 2025
Executive Office Board Room
EXECUTIVE SESSION MINUTES**

Start: 5:10 p.m.

End: 5:20 p.m.

Present: Mr. Cable, Mr. Fiore, Mrs. Frank, Mrs. Pepe, Ms. Quinn, Mr. Santonastaso, Mr. Schick, Dr. Silverthorne, Mr. Yardley, Dr. Homer-Interim President, Mrs. Fullem-Recording Secretary, and Ms. Fina.

During Executive Session:

- A RICE Notice and its significance were explained.
- The tenure and detenure process was outlined.
- The former president's resignation, along with the terms and conditions of employment, was reviewed.
- The Board considered various options for moving.

Approved: _____



**Board of Trustees Regular Meeting
Tuesday, February 25, 2025 – 5:00 p.m.
Executive Office Board Room**

MINUTES

1. General Institutional Functions

- 1.1 Mr. Yardley called the meeting to order at 5:00 p.m.
- 1.2 Mrs. Fullem read the Public Statement: Adequate notice of this meeting specifying the time and location was transmitted via fax and email to the County Commissioners, County Clerk, NJ Herald and posted to the Sussex County Community College website and on the main entry doors to the Administration Building on Wednesday, February 19, 2025 pursuant to the Open Public Meetings Act, N.J.S.A. 10:4-8.

1.3 Roll Call / Pledge of Allegiance

The following were present: Mr. Yardley-Chair, Dr. Silverthorne-Vice Chair, Mr. Cable, Dr. Carrick, Mr. Fiore, Mrs. Frank, Mrs. Pepe, Ms. Quinn, Mr. Santonastaso, Mr. Schick, Mr. Crispino-Alumni Trustee, Dr. Homer-Interim President, and Mrs. Fullem-Recording Secretary.

Also present: Mrs. Pappan-Vice President of Finance and Administration, Dr. Gallo-Associate Vice President of Academic Affairs, Mr. Fruge-Dean of Technical Occupations, Mr. Kula-Executive Director of the Foundation, Mrs. Caputo-Director of Human Resources, and Ms. Fina-College Counsel.

Mr. Yardley indicated that the Board of Trustees still needs to vote on a Treasurer, and a Secretary. He said that Mrs. Frank expressed interest in filling the position of Treasurer, and Mrs. Pepe expressed interest in filling the position of Secretary. He asked if there were any nominations from the floor. There being none, he asked for a voice vote for Mrs. Frank-Treasurer, and Mrs. Pepe-Secretary.

Mr. Cable, Dr. Carrick, Mr. Fiore, Mrs. Frank, Mrs. Pepe, Mrs. Quinn, Mr. Santonastaso, Mr. Schick, Dr. Silverthorne, and Mr. Yardley voted yes. Mrs. Frank was elected as the Treasurer of the Board of Trustees, and Mrs. Pepe was elected the Secretary of the Board of Trustees.

1.4 Courtesy of the Floor on Agenda Items Only (Public Session-5 Minutes per Speaker).

Mr. Yardley welcomed the guests and noted all members of the public who provide public comment shall first identify themselves. Public comments may be submitted to the Board of Trustees Secretary via email or written letter if received at least (8) hours before the meeting. Written public comments shall be read at the meeting with the same time restrictions as all public comments at the meeting. Duplicative comments may be summarized at the discretion of the Board of Trustees Chair.

No one spoke and no public comments were submitted. Mr. Santonastaso

moved to close the floor. Mrs. Pepe seconded the motion. The motion carried unanimously.

ACTION

1.6 Approval/Acceptance of Minutes

Mr. Santonastaso moved to approve/accept all minutes as presented. Mrs. Frank seconded the motion. The motion carried unanimously.

- 1.6.1 Minutes from the January 17, 2025 Special Board Meeting. (Resolution No. GI02252025-1)
- 1.6.2 Minutes from the January 17, 2025 Executive Session. (Resolution No. GI02252025-2)
- 1.6.3 Minutes from the January 28, 2025, Regular Board Meeting. (Resolution No. GI02252025-3)
- 1.6.4 Acknowledgment of Receipt of Committee Meeting Minutes. (Resolution No. GI02252025-4)
 - Personnel and Curriculum Committee – February 18, 2025.
 - Audit and Policy Committee – February 18, 2025.
 - Finance and Facilities Committee – February 18, 2025.

2. Consent Agenda – ACTION/RC

The President recommends items 2.1 - 2.5 for Board approval, as brought forth after discussion and review by Board Committees:

Dr. Silverthorn moved to approve all items on the Consent Agenda. Mr. Schick seconded the motion.

Mr. Yardley thanked everyone for serving on committees.

Roll call vote: Mr. Cable, Dr. Carrick, Mr. Fiore, Mrs. Frank, Mrs. Pepe, Ms. Quinn, Mr. Santonastaso, Mr. Schick, Dr. Silverthorne, and Mr. Yardley voted yes. The motion carried unanimously.

2.1 Approval of Personnel Items

- 2.1.1 Personnel Actions: January 14, 2025 – February 11, 2025. (Resolution No. P02252025-1)

2.2 Approval of Curriculum Items – None this month.

2.3 Approval of Policy Items

- 2.3.1 Re-Adopt Policy No. 200.11 Faculty Absences with edits as noted. (Resolution No. AP02252025-1)
- 2.3.2 Re-Adopt Policy No. 200.41 Compensation for Teaching by Admin Staff with edits as noted. (Resolution No. AP02252025-2)

The following policies are presented for re-adoption. There are no changes.

- 2.3.3 Re-Adopt Policy No. 200.28 Bereavement. (Resolution No. AP02252025-3)
- 2.3.4 Re-Adopt Policy No. 200.29 FMLA. (Resolution No. AP02252025-4)

- 2.3.5 Re-Adopt Policy No. 200.46 Presidential Evaluation. (Resolution No. AP02252025-5)
- 2.3.6 Re-Adopt Policy No 200.47 Reimbursement for Expenses. (Resolution No. AP02252025-6)
- 2.4 Approval of Finance Items
 - 2.4.1 Appointment of Nisivoccia as the Auditing Firm for the Sussex County Community College Audit Engagement for FY 2025 through FY 2028, in the Amount of \$48,000. (Resolution No. BFF02252025-8)
 - 2.4.2 Dykstra Walker Design Group - Engineering, Environmental and Survey Services - Exploration of Health Science Lab Expansion for \$39,700.00. Chapter 12. (Resolution No. BFF02252025-1)
 - 2.4.3 USDA Rural Business Development Grant Application – Resolution approving and authorizing the college to submit a grant application, which if successful commits the college to undertake and implement a project consisting of upgrades and equipment, and authorizing the financing of all or a portion of the project through the Rural Business Development Grant Program made available by the USDA. Dr. Cory Homer, Interim President of Sussex County Community College, is authorized to sign any grant applications, documents, and agreements. The project paid and/or financed through all sources in an amount not to exceed \$50,000. (Resolution No. BFF02252025-2)
- 2.5 Approval of Facilities Items
 - 2.5.1 Unitemp/MDI - furnish and Install a New Rooftop Package for RTU-2, for \$56,163. Chapter 12. (Resolution No. BFF02252025-3)
 - 2.5.2 Hannon Floors - Abatement and Installation of Building C Faculty Flooring for \$83,679.88. Chapter 12. (Resolution No. BFF02252025-4)
 - 2.5.3 HQW - Architectural Service for Renovations at MTEC Building B. Reserves (Resolution No. BFF02252025-4), as follows:
 - Construction Documents - \$18,900.00
 - Bidding and Award - \$7,500.00
 - Construction Admin (Billed Hourly) Estimated - \$20,000.00
 - Reimbursable Expenses- Estimated \$500.00
 - 2.5.4 KI – Training tables and chairs at the PSTA for \$89,278.50. Chapter 12. (Resolution No. BFF02252025-5)
 - 2.5.5 Planet Networks - PSTA Fiber Connection to College Main Campus for \$1,199.95/Month, 5 Year Agreement \$71,997.00. PSTA County Funded. (Resolution No. BFF02252025-6)
 - 2.5.6 J. Kramer Landscaping and Snow Plowing – Snow services as follows: The original blanket purchase order under Garme (PB 101716) was \$200,000.00, with a balance carried over from Garme blanket purchase order for \$115,000.00. Operating. (Resolution No. BFF02252025-7)

3. Finance – ACTION/RC

ACTION/RC 3.1 Recommendation: Acknowledge Receipt and Review of Financial Statements: Financial Statements – Results as of January 31, 2025. (Resolution No. GI002252025-5). Key highlights included:

- Enrollment Growth: Up 8% over budget.
- Revenue Variances: COVID-era CARES funding no longer received.
- Expenses: Healthcare costs increased 17%.
- Software Licensing: Costs expected to rise significantly.

Mr. Cable moved to acknowledge receipt and review of the financial statements as presented. Ms. Pepe seconded the motion.

Roll call vote: Mr. Cable, Dr. Carrick, Mr. Fiore, Mrs. Frank, Mrs. Pepe, Ms. Quinn, Mr. Santonastaso, Mr. Schick, Dr. Silverthorne, and Mr. Yardley voted yes. The motion carried unanimously.

Dr. Carrick offered all the staff and faculty kudos for the enrollment efforts.

There were quick comments about enrollment:

- 2,300 headcount per semester.
- Running about a 50:50 percent full time/part time mix.
- We enroll about 400 unduplicated students a year through the college, which equals around 51,000 credit hours.

4. Reports

4.1 The Correspondence File was received, reviewed, and filed.

- Letters of appreciation for LACE Program and the Adult Transition Center.
- Acknowledgment of the STEM faculty's efforts.
- Press release on alumna Sarah Ransom completing her BFA at William Patterson.

5. Presentations – Student Spotlight - Aleah McCormick

For 3 years we have run an Automotive Jump Start program for eligible HS seniors. To date, we have served close to 24 HS seniors, and they worked toward the HS diploma and earned 12 credits in the SCCC Automotive Program. These students can complete these courses at a reduced tuition rate, and further financial assistance is supported through grants such as Perkins. The total cost to the students and family was just over \$1200 for two semesters and 12 credits in 2024. Aleah McCormick from High Point HS and Brian Drelick, Supervisor of STEM, will attend to say a few words. Aleah's experience in the electrical-focused automotive courses has steered her passion for applying to NJIT and pursuing a degree in engineering. Jessica Kuntz (Director of Guidance) from Newton HS will briefly describe this ongoing initiative. In spring 25, we will have our first cohort of students graduating from SCCC who started this program.

Mr. Yardley introduced Mr. Fiore to the Board. He apologized for not doing it sooner in the meeting.

6. Courtesy of the Floor on General Matters (Public Session-5 Minutes per Speaker)

Mr. Santonastaso moved to open the floor. Mr. Cable seconded the motion. The motion carried unanimously.

Former Dean of Arts and Humanities, Daniel Cosentino, addressed the board, raising concerns about past leadership practices at the college and proposing several actions. Cosentino urged the board to:

1. Open all interim positions to public competition within three months to ensure transparency.
2. Reevaluate faculty tenure granted outside standard review processes.
3. Restructure academic affairs to replace entrenched leadership with a more transparent, faculty-driven governance model.
4. Investigate past misconduct and abuses of power within the executive team.
5. Reinstate his position as Coordinator of Visual and Performing Arts, as he was not fired but not renewed under the prior administration.

He detailed his rigorous hiring process, contributions to the arts program, and professional achievements. Cosentino emphasized that public institutions should resolve issues transparently. He expressed a desire for a fair resolution without harming the institution and signaled his intent to continue pursuing accountability.

Dr. Dahlia Philips, an infectious disease physician, addressed the board to support her husband, Daniel Cosentino, and voiced concerns about Sussex County Community College's decline. She highlighted Daniel's success in building the Alpha Arts Institute into a thriving arts hub but noted a troubling shift—faculty departures, secrecy, and questionable decisions leading to its deterioration. Comparing it to diagnosing illness, she urged the board to act with transparency and integrity to restore the institution's mission and accountability.

Mr. Crispino, Alumni Trustee, provided an update on the Alumni Association Project:

- Website development
- Membership benefits (library, fitness center)
- Events planning

Mr. Santonastaso moved to close the floor. Mr. Cable seconded the motion. The motion carried unanimously.

7. Other Business

Discussion / Reports / Announcements:

7.1 Board Chair's Appointment of an Alternate to the Board of School Estimate.

Mrs. Frank cannot make the scheduled date of March 12, 2025. Mr. Yardley appointed Mr. Schick.

7.2 Trustee Activity Update

Ms. Quinn reported that she and Mr. Santonastaso attended the Athletic Hall of Fame unveiling for Mr. Kuntz. She commended the facilities team and everyone who worked to put it together.

Mr. Santonastaso noted that he has been speaking with the SGA. They want the Board to know that they are currently working on their bylaws. He also noted that he is working with them to create a Trustee Open Office Hour.

7.3 The President's Report is on file in the Office of the President. Highlights include:

- Academic and Community Partnerships:
 - Partnered with Pope John for theater performances and Sussex County Technical School for an Allied Health program.
 - Hosting a horticulture conference with Rutgers.
- New Programs:
 - Introduced a dispatcher course to address local shortages.
 - Launched an AI task force to guide ethical AI use.
- Student and Athletic Success:
 - One of our female wrestlers qualified for nationals
 - Baseball had a strong season start
 - The College hosted its first Female Athletic Leadership Summit to encourage student-athlete participation.
- Research and Innovation:
 - Partnering with Rochester University and Brookhaven Labs on a fission project.
 - Securing NSF grant funding.
- Alumni and Fundraising Efforts:
 - Expanding the Alumni Association
 - We have raised \$12,000 in scholarships through the college radio station underwriting.
 - Preparing for the upcoming 100 Women event.
- Dr. Homer emphasized the college's commitment to student engagement, community outreach, and institutional growth.

7.4 Chair's Comments

Mr. Yardley noted that he is still familiarizing himself with his role and the board's responsibilities, which include finance, personnel, and various programs. He commended the board members for their dedication and hard work.

He acknowledged the new president's efforts in addressing concerns, particularly improving outreach and communication with schools, the public, and the board to highlight the college's positive impact. He appreciates the new initiatives like the newsletter to spread awareness.

Regarding budget negotiations, Mr. Yardley mentioned that financial decisions are influenced by county funding and that the college is just one of many programs under review. He assured that updates would be shared as more information becomes available.

He expressed his openness to communication, encouraging people to reach out with questions and promises direct and honest answers.

7.5 The next meeting of the Board of Trustees will take place on Wednesday, March 26, 2025, at 4:00 p.m. in the Executive Office Board Room.

8. **Executive Session** – Mr. Yardley read, "Be it resolved that the Board of Trustees will now go into an Executive Session to discuss personnel matters. The matters discussed will be made public if and when the circumstances requiring confidentiality no longer exist. However, it is not presently known if and when that will be.

"The Executive Session is expected to last approximately 60 minutes. No action will be taken after the executive session."

At 6:00 p.m. Mr. Santonastaso moved for the Board to enter Executive Session. Mr. Schick seconded the motion. The motion carried unanimously.

At 7:26 p.m. Mr. Santonastaso moved for the Board to adjourn the Executive Session. Dr. Silverthorne seconded the motion. The motion carried unanimously.

9. Adjournment

At 7:26 p.m. Mr. Santonastaso moved for the Board to adjourn the public meeting. Dr. Silverthorne seconded the motion. The motion carried unanimously.

Approved:

AUDIT & POLICY COMMITTEE
SUSSEX COUNTY COMMUNITY COLLEGE BOARD OF TRUSTEES
Tuesday, March 18, 2025
Zoom Virtual Meeting

MINUTES

Start: 3:00 p.m.

End: 3:41 p.m.

Present: Mr. Santonastaso-Chair, Dr. Carrick, Mr. Yardley, Dr. Homer, Dr. Okay, Mrs. Pappan, Mrs. Fullem, Dr. Gallo, and Mrs. Dimino

POLICY – The committee reviewed and agreed to move the following policies to the Board of Trustees to approve/re-adopt:

1. Policy No. 301.87 Medical Appeal Policy. Changes to procedures.
 - No significant concerns were raised.
 - Changes primarily involved clarifying language to reflect current practice.
 - Discussion included minor wording adjustments related to explicitly defining "partial" appeals.
2. Policy No. 401.6 Purchasing Policy. Policy name change from "Procurement/Bidding" to "Purchasing." Changes to procedures.
 - The policy was renamed and revised for clarity.
 - No major changes beyond grammatical corrections and reinforcement of existing procedures.
 - Discussion highlighted that red text in the document was for emphasis rather than indicating revisions.
3. Policy No. 401.10 Cash Management. There are no changes.
 - No changes were proposed for this policy.
 - No comments or concerns were raised.
4. Policy No. 401.11 SCCC Credit Card Policy. This is a new policy.
 - The policy was introduced as part of a broader effort to provide clearer financial guidelines.
 - No specific incident triggered the creation of this policy; it was a proactive measure to ensure best practices.
5. Policy No. 401.12 SCCC Meal Reimbursement Policy. This is a new policy.
 - The policy was introduced to formalize reimbursement processes.
 - The committee raised no major concerns.
6. Policy No. 401.13 Fixed Asset Policy. This is a new policy.
 - The policy was introduced to establish clearer asset tracking and management guidelines.
 - No objections were raised.

AUDIT – None this month.

OTHER BUSINESS

1. The committee reviewed February 13, 2025 - March 13, 2025 incidents.
2. A confidential personnel matter involving a legal agreement was discussed.

**PERSONNEL & CURRICULUM COMMITTEE
SUSSEX COUNTY COMMUNITY COLLEGE BOARD OF TRUSTEES**

Tuesday, March 18, 2025

Zoom Virtual Meeting

MINUTES

Start: 4:02 p.m.

End: 4:45 p.m.

Present: Ms. Quinn-Chair, Mr. Cable, Mr. Fiore, Mr. Yardley, Dr. Homer, Dr. Okay, Mrs. Pappan, Mrs. Fullem, Dr. Gallo, and Ms. Caputo

PERSONNEL

- The committee reviewed personnel actions from February 11, 2025, to March 11, 2025, including full-time and part-time new hires, departures, and full-time and part-time open positions. *The committee agreed to bring the personnel actions to the Board of Trustees for approval.*

CURRICULUM

- The committee reviewed a change in nomenclature for Machine Tool Technology, a 32-credit academic certificate. The new name is Advanced Manufacturing. The name change brings the program in line with industry standards and competing institutions. It will help students stand out in job searches and align with local workforce needs. *The committee agreed to move this change to the Board of Trustees for approval.*

OTHER BUSINESS

- The committee reviewed February 13, 2025 - March 13, 2025 incidents.
- Ms. Quinn shared positive feedback from a high-level nurse at Newton Medical Center about the excellent quality of SCCC nursing graduates. She noted there is an interest in expanding the program to admit more students. SCCC administration confirmed expansion is under consideration within the next 3-5 years.
- A confidential personnel matter involving a legal agreement was discussed.

FINANCE & FACILITIES COMMITTEE
SUSSEX COUNTY COMMUNITY COLLEGE BOARD OF TRUSTEES
Tuesday, March 18, 2024
Zoom Virtual Meeting

MINUTES

Start: 5:00 p.m.

End: 6:42 p.m.

Present: Mrs. Frank-Chair, Dr. Silverthorne, Mrs. Pepe, Mr. Schick, Mr. Yardley, Dr. Homer, Dr. Okay, Mrs. Pappan, Mrs. Fullem, Dr. Gallo, Mrs. Unrath, Ms. Belli, Mr. Rago, and Mr. Stoppay

FINANCE – The committee reviewed the following and agreed to bring to the Board of Trustees for approval:

1. February 2025 Financial Statements, including key financial updates:
 - Enrollment continues to be strong, exceeding budget expectations.
 - Summer session enrollments lagging slightly but no major concerns.
 - Morgan Stanley portfolio liquidation reflected as a one-time revenue increase.
 - Health benefit increases (14-17%) continue to be a major cost driver.
 - CARES Act funding has ended, impacting year-over-year revenue comparisons.
 - We currently have six to eight grant applications in progress.
 - The employee retention credit (ERC) of \$1.2 million is still pending with the IRS.
2. Change of signers on CDs that SCCC holds with First Hope Bank from Dr. Jon Connolly and Manal Meseha to Theresa Pappan and Cerene Belli.
 - Interest rate on CDs is currently 4.5%.
3. Microsoft OVS License Renewal from Dell for \$30,690.33. Operating Funds. This is a routine technology renewal under the annual technology replacement plan.
4. All in One Workstations – Learning Commons from Dell for \$45,357.00. ELF Grant. There is no impact on operating funds.
5. Agreement with Skylands Stadium for athletic events, including football, men's and women's soccer, and baseball, aligning with SCCC's fiscal year (July 1, 2025-June 30, 2026), for \$70,000/year. The total rental fee shall be paid in two equal installments: 50% (\$35,000) due before Fall sports begin (August 1, 2025), and 50% (\$35,000) due before Spring baseball begins (January 15, 2026). This expands athletic event usage of Skylands Stadium (football, soccer, baseball), includes indoor facilities and recruitment partnership, and internship opportunities in executive and front office roles for business students.
6. Blanket P.O. Increase for Baldor Specialty Foods – Culinary Food Supplies. Current BPO \$15,000.00, Increase \$8,000.00, Total- \$23,000.00. Operating Funds. The increase is requested due to high demand in the Culinary program. Costs are offset by revenue generated from culinary sales.

7. Website Upgrades with Hanson for an Estimated \$26,000.00-30,000.00. Chapter 12. Upgrade of Umbraco CMS for security and efficiency. The process includes testing before full deployment.
8. Investment Firm Selection – The Investment Firm Selection Committee recommends Biondo as the new investment firm. They have lower fees and are a local firm with strong portfolio management.
9. The committee discussed the board approval threshold, which is currently \$17,500. Administration and purchasing will further research before recommending a change from \$17,500. It was noted that the \$17,500 threshold may have been set more than 10 years ago.
10. The Board of School Estimate Meeting is set for March 26th at 2:30 p.m. We are taking a \$100,000 funding cut from the county, however, \$90,000 is being redirected to support the Public Safety Training Academy (PSTA).

FACILITIES – The committee reviewed the following and agreed to bring to the Board of Trustees for approval:

1. Building A Second Floor Carpet – Hannon Floors. Remove the old carpet and base and install new carpet tile for \$61,246.45. Chapter 12. Scheduled to start after semester ends.
2. Building L Second Floor Library Renovations – G. Meyer Group, for Base Bid: \$1,315,535.00 Alternate: \$435,000.00. Reserves.
 - Renovation includes library modernization, HVAC upgrades, and tutoring/testing consolidation.
 - Mechanical systems (new boilers, rooftop HVAC, fire alarms) will be fully upgraded.
 - G. Meyer Group awarded the contract after receiving 11 bids. Estimated completion: Six months (targeting Fall 2025 opening).
 - The Board would approve the \$1,315,535. We are not asking the Board to approve the additional \$435,000 for HVAC work not included in this bid.
 - Total estimated project cost: \$1.7 million (including furniture and HVAC).
 - Additional discussion centered on the scope of work documentation.
3. Deferred Maintenance List/Key Projects Review - Facility priorities have been reassessed and sorted by year for budgeting. The new capital projects manager will oversee the construction projects. Ongoing updates are planned for future meetings.

SAFETY AND SECURITY

1. The committee reviewed February 13, 2025 - March 13, 2025 incidents.

OTHER BUSINESS—The committee received the following policies, which the Audit & Policy Committee reviewed. The Audit & Policy Committee agreed to bring all policies to the *Board of Trustees for approval/re-adoption*.

1. Policy No. 401.6 Purchasing Policy. This policy is currently called “Procurement/Bidding.” Changes to procedures.

2. Policy No. 401.10 Cash Management. There are no changes.
3. Policy No. 401.11 SCCC Credit Card Policy. This is a new policy.
4. Policy No. 401.12 SCCC Meal Reimbursement Policy. This is a new policy.
5. Policy No. 401.13 Fixed Asset Policy. This is a new policy.
6. In addition to the policies, a confidential personnel matter involving a legal agreement was discussed.

Sussex County Community College

Personnel Actions: February 11, 2025 – March 11, 2025

NEW HIRES:

Full-time

- Elizabeth Rees – Moved from PT Custodian to FT Custodian
- Marc Ponce – Director of Campus Security (DOH 03/17/25)
- Fotios Tsemberlis– Capital Project Manager (DOH 03/17/25)

Part-Time:

- Sherry Kestenbaum – PT Head Coach Volleyball
- Kiana Nieuzytek – PT Campus Store
- Timothy Stapel – PT Campus Store
- Robert Walsh – PT Head Coach Golf
- Kwadir Clarke – PT Campus Store
- Meira Kaplin-Graham – PT Campus Store
- Erin Frawley – PT Campus Store
- Olivia de Diego – PT ESOL Program Instructor & Conversation Class Instructor
- Zoe Pettway – PT Campus Life Assistant
- Angela Moten – Adjunct Biology
- Patrick Greer – Adjunct Chemistry

RESIGNATIONS/TERMINATIONS/POSITION ENDED:

- Sergio Ortiz Herrera – Voluntary Resignation

ON LEAVE:

N/A

OPEN POSITIONS:

Full-Time:

- Accountant
- Registration Generalist
- Math Instructor

Part-Time:

- PT Facilities Summer Worker
- PT Custodian
- PT Athletic Equipment Manager & Assistant Football Coach
- PT Assistant Coach Football Defensive Back
- PT Assistant Coach Football Defensive Coordinator LB
- PT Assistant Coach Football Defensive Line
- PT Assistant Coach Football Recruiting Coordinator Nickel

- PT Assistant Coach Football Running Backs
- PT Assistant Coach Football Wide Receivers
- PT ABE HSE ESOL Program Administrative Assistant
- PT CTE Student Performance Coordinator
- Adjunct – Electrical Line Worker
- Adjunct – Cosmetology
- Adjunct – Accounting
- PT Kitchen Lab Assistant
- PT Porter Dishwasher
- PT Service Staff
- Adjunct - Chemistry
- Adjunct – Math
- Adjunct – Spanish
- Adjunct – Environmental Science
- Adjunct – Business
- Adjunct – Graphic Design
- Adjunct – English Effective Speaking
- Adjunct – Business Management
- Adjunct – Biology
- PT Head Coach Football

**Academic Affairs
Board Agenda Items
March 2025**

ACTION ITEMS

1. Recommendation: Change in nomenclature for the 32-credit academic certificate, currently entitled, “Machine Tool Technology” to “**Advanced Manufacturing**”.

We are making a change in the nomenclature of the formerly-named *Machine Tool Technology* certificate to better align it with equivalent programs in the state. Many peer institutions, such as Essex, Hudson and Morris, recognize the program as “Advanced Manufacturing”. Changing the name to align the program with state-recognized terminology will benefit students as it improves transferability and workforce recognition, and reframes the program to better represent its field. A similar nomenclature change will come forward next month for the related 60-credit degree program.

Sussex County Community College

Policy No.: 301.87

Area: Academic Affairs

Adopted: September 26, 2017

(Renumbered policy 301.5)

301.87 Medical Appeal Policy

PURPOSE OF THE POLICY

The purpose of this policy is to establish criteria for a medical appeal.

GENERAL STATEMENT OF MEDICAL APPEAL

Students who must withdraw from courses because of documented medical circumstances may appeal for partial refund.

301.87.1 Procedure for Implementation of the Medical Appeal Policy

Students needing to withdraw from classes due to documented medical circumstances must officially withdraw and, thereafter, petition the HELP Committee for a medical appeal. A partial reduction in classes may also be considered if accompanied by appropriate documentation, from a licensed healthcare or mental healthcare professional, citing a specific need to reduce overall course load. The terms for granting refunds based on medical appeal are subject to the following:

1. All requests for medical appeal must be accompanied by detailed documentation from a licensed health care or mental health professional. All forms are confidential and kept in the Office of the Registrar.
2. The decision to award **50% tuition and fees credit or 50% tuition & fees debt cancellation** shall be at the sole discretion of Sussex County Community College.
3. Medical appeals may be requested during the semester of attendance, but no later than 30 days from the end of the semester.
4. A credit-on-account may be offered to the student and will be available for one calendar year from the date granted unless precluded by the illness, in which case it will be available for one year beyond the student's ability to return to school.
5. Under extreme circumstances of documented financial need, a student may petition the **Senior Vice President of Academic and Student Affairs Services**, in consultation with the ~~CFO~~ Vice President of **Finance and Administrative Services**, for a cash refund.
6. Students receiving Financial Aid or Veterans' Benefits must consult with those offices to determine the impact on their award prior to applying for a Medical Appeal.

401.6 Purchasing Policy

PURPOSE OF THE POLICY

The purpose of this policy is to ensure purchasing is in accordance with the public purchasing regulations.

GENERAL STATEMENT OF PURCHASING POLICY

To provide the procedures to be followed for ensuring transparency and accountability in the procurement of goods, works, or services using public funds and ensuring equitable treatment and free and fair competition.

\$41,600 – Threshold for bid requirement

\$8,320 – Threshold for multiple bid

\$6,240 – NJ Business Registration needed to order from Vendor

\$2,000 – Public works certificate needed to perform work on public property.

-Includes; Conduction, demolition, alteration, repair work, painting/decorating

“NJ Start” is the website to determine if a vendor is on a Contract/Co-Op/Consortium

PROCUREMENT THRESHOLDS

Note: All thresholds are cumulative through the fiscal year.

➤ **\$41,600**

○ PUBLIC BID

- Any purchase for services or materials, or any combination of orders for the same project or similar materials, that will reach this threshold during the same fiscal year will require public advertisement for bids. Bids are awarded in a "fair and open" process to the lowest responsible bidder. N.J.S.A. 18A:64A-25 et seq.
 - Exceptions: Purchases through a NJ State Contract or purchases below State Contract (quoted for exact items/services) or State approved cooperative, government agencies, public utilities, professional services (lawyers, engineers, architects), textbooks and copyrighted materials, food supplies/services, insurance, entertainment (theatrical presentations, movies, concerts), printing, proprietary hardware/software/maintenance (only available from 1 vendor), advertising, bookstore purchases, and graduation caps/gowns

○ EEO/AFFIRMATIVE ACTION

- Vendors are required to provide Affirmative Action compliance documentation. N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

➤ **\$17,500**

○ PAY-TO-PLAY

- Vendors are prohibited from making political contributions within one year, and during the term, of the contract. Political Contribution Disclosure Statements and Ownership Disclosure Statements are required. N.J.S.A. 19:44A-20.4 et seq., and P.L. 2005 c.271.
 - Exceptions: Contracts awarded through public bid, NJ State Contract, government agencies, public utilities, banking, and insurance

○ BOARD APPROVAL

- The Board of Trustees shall approve any purchase of \$17,500 or greater.

➤ **\$8,320**

○ MULTIPLE WRITTEN QUOTES

- Prior to award of any contract which is 20% or more of the current bid threshold, the College shall solicit multiple quotations.
 - Exceptions: Sole source, and professional services (lawyers, doctors, architects)

➤ **\$6,240**

○ NJ BUSINESS REGISTRATION CERTIFICATE

- A NJ Business Registration Certificate must be obtained from vendors for purchases exceeding 15% of the bid threshold before a purchase order is issued. P.L. 2004 c. 57
 - Exceptions: Government agencies, non-profit agencies, out-of-state hotels

➤ **\$2,000**

○ PUBLIC WORKS CERTIFICATE

- Contractor/Subcontractors engaging in the performance of Public Work (construction, reconstruction, demolition, alteration, and repair work, including painting and decorating, etc.) must be registered with the Dept. of Labor and Workforce Development and provide the college with certified payroll records evidencing payment of NJ prevailing wage rates. N.J.S.A. 34:11-56.48, et seq., and N.J.S.A. 34:11-56.25 et. seq.

401.6.1 Procedure for Implementation of the Purchasing Policy

PROCESS FOR PURCHASING ANYTHING THROUGH THE FACILITIES BUDGET

Step 1: Determine the Need: After looking at the project, determine what will be needed to complete the task

- What materials need to be ordered
- What services need to be done

Step 2: Discuss the need with the department lead

Step 3: Obtain a quote/s. See Procurement Thresholds

Step 4: Share quotes with the department lead about the next steps. These may include:

- Brining project to the facilities management meeting for group discussion
- Work with purchasing to prepare bids in necessary
- Place on the Board agenda if necessary

Before Ordering, A PO must be in place:

Please do not call a Vendor and have them come to service or send goods unless you know that a Quote has been obtained and the SCCC purchase has gone out!

When using blanket Pos for orders, please provide the Vendor with the blanket number when making a purchase. On invoicing and billing, you will often find SCCC, the college, and/or names. For billing purposes, please provide them with the blanket number. (Home Depot and Lowes come to mind). Ask your department lead for the PO number if you do not know it.

Purchase order: After the RP is approved in the system, purchasing will select it from the Queue, turn it into a Purchase order, and send it to the Vendor for processing.

PROCESS FOR PURCHASING ANYTHING THROUGH THE ACADEMIC AFFAIRS BUDGET

- All potential requests should begin with the question: **Does my program's budget include funding for the item or service I'm requesting?** Contact Sierra LoCicero and she can provide you with that answer.
- **Now that you know there are still funds available to cover the purchase you want to make, send your Dean an email identifying what and why you want permission to purchase an item (s).** Your Dean will answer you and, if permission is granted, direct Sierra LoCicero or Tiffany Spear to work with you to create a requisition for your approved purchase.

- **Are there any guidelines I need to follow or information I need to provide at this point?** A **QUOTE** must be provided for **any purchased item or service provided**. **An item should not be ordered, or a vendor be scheduled to do work unless they have received a PO from purchasing.** Any technology purchase must have a quote provided by George Santana. If purchased from Amazon, the links to items will need to be provided in your email. You need to provide the location for the delivery of any items.
- **What happens to my requisition after I help create it?** Sierra or Tiffany submits the **requisition** to the Purchasing Office where a **PURCHASE ORDER (PO)** is created. The College's full-time purchasing agent is Matthew Stoppay. As the person making the request, you will receive a copy of the Purchase Order issued by Matthew. You will be tagged in the email that goes to vendor
- **Okay, I have the PO in my hand, now what happens? What are my responsibilities at this point?** As the requester of the purchase, you are responsible for the order and delivery. If your requested item hasn't arrived, you should follow up with the College's Receiving Department (it is located in the basement of E Building) and is staffed full-time by Don Wagenhals at dwagenhals@sussex.edu. Please note that Don's shift begins after 2 p.m. and he is very often delivering items around campus.
- **Okay, what if I'm not dealing with an item, but a purchase order for services to be rendered? Is there anything else I need to provide? YES! You or the vendor needs an INVOICE submitted to quickpay@sussex.edu for services that have been completed.** Once an invoice with the date the services is submitted, then a check can be cut by our Business Office for the person or company that provided the service. Please note: Without an invoice, a check can't be issued. Questions about checks or invoices? Please contact Accounts Payable, Jacquelyn Jaretsky jjaretsky@sussex.edu
- For purchasing guidance, pricing, vendor assistance or if your item has never arrived or arrived damaged, please email Matthew directly at mstoppay@sussex.edu

Please note: Any purchase over \$8,320 will require multiple vendor quotes and Purchasing approval to move forward.

Please note: All requests must be made a minimum of two weeks in advance of date needed. This includes supplies, equipment, pizza, invoices, reimbursement requests. Delivery date cannot be guaranteed due to circumstances beyond our control.

All discussions of CAPEX projects and even general maintenance issues of the campus should be discussed at the bi-monthly CAPEX meeting held Wednesday mornings at 9AM in the Board Room.

Funding for the CAPEX projects should be discussed with Finance.

Tracking of the CAPEX projects will be maintained in an Excel file by Finance and Facilities to be discussed at the bi-monthly CAPEX meetings as well as the monthly meetings with the Finance and Facilities Committee meeting.

401.11 Credit Card Policy

PURPOSE OF THE POLICY

The purpose of this policy is to establish procedures for the proper use, administration, and oversight of credit cards issued by Sussex County Community College (SCCC) to faculty and staff. These procedures ensure that all transactions are **appropriate, authorized, and in compliance with state and institutional regulations** while preventing misuse or fraud.

GENERAL STATEMENT OF THE CREDIT CARD POLICY

This policy applies to all faculty, staff, and administrators who have been issued a college credit card or who are responsible for processing credit card transactions. Cardholders are issued a single card embossed with his or her name and Sussex County Community College as designated buyer. Individuals are authorized to use a Purchasing Card only after attending a training session on proper use and procedures of the card. The Purchasing department will hold a card which can be used with vendors who only take credit cards or if open billing is not an option.

401.11.1 Procedures for the SCCC Credit Card Policy

Credit cards may only be issued to **approved employees** with demonstrated purchasing needs.

Requests for a credit card must be submitted through the **Finance Office**, with approval from the department head, Finance Office and President.

College credit cards may only be used for **official business purposes**, including:

- Office supplies and materials not available through standard purchasing processes.
- Approved travel expenses such as airfare, lodging, meals (within per diem limits), and transportation.
- Conference registrations, professional memberships, and subscriptions.
- Emergency purchases when approved by the Purchasing Office.

The following transactions **are not allowed** on college credit cards:

- Personal expenses of any kind.
- Cash advances or ATM withdrawals.
- Alcohol, tobacco, or any controlled substances.
- Gift cards, unless pre-approved for official business purposes.
- Splitting transactions to circumvent purchasing limits.
- Any purchases that violate **state procurement laws** or college policies.

All cardholders will certify all billed charges and credits on their statements each month.

Cardholders are required to reconcile all purchases directly to Finance department within 10 days of receipt of information from Program Administrator (Karen Unrath).

If they fail to comply, it may result in suspension of one's Card privileges.

Cardholder reconciliation procedures:

- Cardholder will receive from the finance department, a monthly statement containing all their transactions.
- Cardholder must review all charges and provide receipts and GL Account numbers to finance department.
- All supporting receipts will be attached to the activity statement with GL numbers noted.
- Any discrepancies must be highlighted and the supplier contacted to resolve issues. This can be done by cardholder with program administrator's assistance.
- Individual purchases over \$1,000 must receive prior supervisor approval before purchasing.

- The college is tax exempt. If any sales tax appears on an invoice, the cardholder is responsible for contacting the vendor to have the sales tax credited back on their Purchasing Card.
- With a written request, a cardholder can have their line of credit raised for specific circumstances for a specific period of time. The administrator will raise the limit as requested and return the limit when the need has been fulfilled.
- Fraud Alerts: All transaction disputes must immediately be reported to the program administrator for reporting to Bank of America. Bank of America will make the determination on whether fraud has occurred. This proactive approach may require Bank of America to cancel the current account number and issue a new account. New cards will be sent to the program administrator.
- Cardholders must immediately report lost or stolen cards to the **Finance Office** and the **card issuer**.
- Cardholders must return the Purchasing card to the college's Program Administrator, Karen Unrath, immediately upon termination of employment

401.12 Meal Reimbursement Policy

PURPOSE OF THE POLICY

The purpose of this policy is to establish guidelines for the reimbursement of meal expenses incurred by staff of Sussex County Community College while conducting official college business. This policy ensures accountability, fiscal responsibility, and compliance with applicable regulations

GENERAL STATEMENT OF EXPENSE REIMBURSEMENT POLICY

This policy applies to all employees of Sussex County Community College who are authorized to travel or conduct official business requiring meal reimbursement. The policy excludes meal costs already covered by per diem rates, conference registrations, or other pre-paid arrangements.

401.12.1 Procedures for Implementation of the Meal Reimbursement Policy

Eligibility Criteria

Employees are eligible for meal reimbursement when:

1. They are traveling on official college business requiring an overnight stay.
 2. They are attending pre-approved meetings, conferences, or events that extend beyond normal work hours.
 3. They incur meal expenses during approved off-campus activities, such as professional development workshops or site visits.
-

Reimbursement Guidelines

1. Receipts and Documentation

- Original, itemized receipts must be submitted with the reimbursement request.
- Credit card slips or non-itemized receipts are not sufficient for reimbursement.
- Documentation must include the date, time, location, and purpose of the meal, along with the names of all attendees if applicable.

2. Alcoholic Beverages

- The purchase of alcoholic beverages will not be reimbursed under any circumstances.

3. Meals Provided to Students by Faculty

- Faculty may be reimbursed for meal expenses incurred while providing meals to students during classroom time or approved instructional activities.
 - Reimbursement requests must include:
 - An explanation of the educational purpose for providing the meals.
 - A list of students or the number of students served.
 - Original, itemized receipts for the meal expenses.
 - Prior approval from the department chair or dean is required for such expenses.
-

Approval Process

1. All meal reimbursements must be approved by the employee's supervisor or department head.
2. Requests should include itemized receipts, and any required supporting documentation.

Policy Violations

Failure to adhere to this policy may result in denial of reimbursement and potential disciplinary action in accordance with college policies.

Sussex County Community College
Policy No.: 401.13
Area: Finance
Adopted: March 26, 2025

401.13 Fixed Asset Policy

PURPOSE OF THE POLICY

The purpose of this policy is to establish guidelines for the acquisition, management, depreciation, and disposal of fixed assets owned by Sussex County Community College. This policy ensures accountability, compliance with applicable regulations, and accurate financial reporting.

GENERAL STATEMENT OF THE POLICY

This policy applies to all tangible fixed assets acquired, used, or disposed of by Sussex County Community College, including buildings, land, equipment, vehicles, and technology assets.

401.13.1 Procedures for Implementation of Fixed Asset Policy

Definition of Fixed Assets

Fixed assets are defined as tangible items that:

- Have a useful life of more than one year.
- Have an acquisition cost of \$5,000 or more per unit.
- Are not intended for resale.

Asset Acquisition & Capitalization

- All purchases of fixed assets must be pre-approved by the appropriate department head and finance office.
- Fixed assets must be recorded in the ledger system at acquisition cost, including taxes, shipping, and installation.
- Donated assets will be recorded at fair market value at the time of donation.

Depreciation

Depreciation is recorded annually using the straight-line method with the following useful life guidelines:

Asset Category	Estimated Useful Life (Years)
Land	Not Depreciated
Buildings	40
Building Improvements	15-25
Equipment	5-10
Vehicles	5-7
IT Equipment	3-5

Depreciation will be applied beginning the month following the asset's acquisition and will continue until the asset is fully depreciated or disposed of.

Fixed Asset Inventory & Audit Schedule

- A complete physical inventory of fixed assets will be conducted **annually** by the finance department in junction with the Facilities Department and Technology Department.
- Departments must verify their assets and report any discrepancies within **30 days** of inventory completion.
- A reconciliation of the asset management system with financial records will occur **quarterly**.
- The external audit of fixed assets will be conducted **as part of the college's annual financial audit**.

Construction in Progress Review

- All construction projects classified as **Construction in Progress (CIP)** will be reviewed **quarterly** to assess status, cost tracking, and compliance with budgetary guidelines.
- Costs associated with CIP will be capitalized once the project is complete and placed into service.
- The finance department will ensure proper classification and transition of CIP assets to depreciable fixed assets upon project completion.
- Progress reports will be shared with stakeholders, including finance and facilities management, to monitor project milestones and expenditures.

Disposal of Fixed Assets

- Fixed assets that are obsolete, damaged beyond repair, or no longer needed must be reported to the finance office.
- Disposal methods include sale, donation, trade-in, or recycling, in accordance with state and college policies.
- Assets with a remaining book value must be removed from the accounting records and reported accordingly.
- Proceeds from sales must be deposited into the college's general fund unless otherwise directed.

Responsibilities

- **Finance Office:** Maintains asset records, calculates depreciation, and oversees audits. A Fixed Asset Schedule is to be maintained that tracks all fixed assets, the date of acquisition, useful life, cost, annual depreciation, accumulated depreciation. This schedule is to be tied to the trial balance after the fiscal end close and before the start of the audit to be sure the fixed assets, accumulated depreciation and depreciation expense ties to the ledger.

A review of Construction in Progress accounts is to be done before the fiscal year end close to determine if any projects are completed and the value should be transferred to a fixed asset account and begin depreciating.

- **Department Heads:** Ensure proper use and maintenance of assets and assist with physical inventories.
- **IT Department:** Tracks technology assets and ensures proper disposal of electronic equipment.
- **Facilities Management:** Manages real estate, buildings, and major capital improvements.

Compliance & Reporting

- Fixed asset records must comply with **Governmental Accounting Standards Board (GASB) regulations** and **state requirements**.
- Any suspected loss, theft, or misappropriation of assets must be reported immediately for investigation.

- Annual financial reports will include depreciation expense and a summary of fixed asset activity.
- Assets purchased through grants such as Perkins, where the grantor, actually owns the item they fund, are not recorded on the College's fixed asset schedule.

Policy Review & Updates

This policy will be reviewed **biennially** and updated as necessary to ensure compliance with accounting standards and operational needs.

Approval & Effective Date

Approved by: _____

Title: _____

Date: _____

This policy ensures responsible stewardship of college assets while maintaining financial integrity and compliance. Let me know if any modifications are needed!



PROCUREMENT MEMO

TO: Sussex County Community College Board of Trustees,
Dr. Cory Homer

CC: Wendy Fullem, Karen Unrath,

FROM: Matthew Stoppay, Purchasing Manager

DATE: March 11, 2025

SUBJECT: License Renewal

Description: Microsoft OVS License Renewal

Vendor Name: Dell

Amount: \$30,690.33

Procurement Method: NJ State Contract – T3121/20-TELE-01510

Funding: Operating Funds

Attachments: Dell Quote



Customer: SUSSEX COUNTY COMM COLLEGE DCN 107711213

Today's Date: 3/04/2025
Dell Quote #3000186560916
Exp Date: 3/31/2025
NJ State Contract - T3121 / 20-TELE-01510
Tier 1 Software

Microsoft OVS-ES Agreement #V6618268					
Qty	Part Number	Description	Dell Cost	Customer Price	Line Total
2700	S2Y-00002	M365 APPS ENTERPRISE EDU SUB STUDENT USE BENEFIT PER USER ALL LANGUAGES	\$ -	\$ -	\$ -
6	77D-00161	VISUAL STUDIO PRO W/ MSDN LIC/SA ALL LANGUAGES	\$ 54.23	\$ 54.57	\$ 327.42
831	GU4-00001	O365 EDU OPEN FACULTY SHARED SERVER ALNG SUBS VL OLV E	\$ -	\$ -	\$ -
144	2UJ-00011	DESKTOP EDU ENT LICENSE/SOFTWARE ASSURANCE ALL LANGUAGES	\$ 54.72	\$ 55.07	\$ 7,930.08
71	HVH-00001	OFFICE 365 EDUA3 OPEN FAC SHARED SERVER SNGL SUBSVL ACADEMIC	\$ 19.88	\$ 20.01	\$ 1,420.71
68	9EA-00314	WINDOWS SERVER DATACENTER PER 2 CORE LICENSES LIC/SA	\$ 41.96	\$ 42.22	\$ 2,870.96
50	D87-06005	VISIO PRO LICENSE/SOFTWARE ASSURANCE	\$ 56.56	\$ 56.92	\$ 2,846.00
12	H30-03427	PROJECT PRO WIN32 WITH 1 CLIENT LICENSE/SOFTWARE ASSURANCE ALL LANGUAGES	\$ 65.03	\$ 65.44	\$ 785.28
12	7NQ-00050	SQL SERVER STD LIC/SA PER 2 CORE LIC	\$ 326.14	\$ 328.19	\$ 3,938.28
856	6EM-00001	MICROSOFT ENTRA ID P2 (listed as VLA AZUREACTVDRCTRYPREMP2OPEN SHRDSVR SNGL SUBSVL NL ANNUAL QLFD	\$ 12.27	\$ 12.35	\$ 10,571.60
					\$ 30,690.33

This quote adheres OPRA (Open Public Records Act) and the receiving party is permitted to use it for any purpose they see fit.
Quote prepared by: Breanna.Hopkins@Dell.com

Net Terms Due Upon Dell invoice



Microsoft Agreement #V6618268
Per NJ State Contract .63% added



PROCUREMENT MEMO

TO: Sussex County Community College Board of Trustees,
Dr. Cory Homer

CC: Wendy Fullem, Karen Unrath,

FROM: Matthew Stoppay, Purchasing Manager

DATE: March 11, 2025

SUBJECT: All in One workstations – Learning Commons

Description: Rework of B315 lab to add an additional row – Upgrade remaining faculty offices who did not get AIO workstations from last purchase

Vendor Name: Dell

Amount: \$45,357.00

Procurement Method: Dell NASPO Computer equipment PA-NJ
Contract Code C0000001128033

Funding: ELF Grant

Attachments: Dell Quote



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You can download a copy of this quote during checkout.

[Place your order](#)

Quote Name:	Qty 30 Opti AIO Plus 7420	Sales Rep	Marty Dernberger
Quote No.	3000186509776.1	Phone	1(800) 456-3355, 7288690
Total	\$45,357.00	Email	Marty_Dernberger@Dell.com
Customer #	4466333	Billing To	ACCOUNTS PAYABLE
Quoted On	Mar. 03, 2025		SUSSEX COUNTY COMM
Expires by	Apr. 02, 2025		COLLEGE
	Dell NASPO Computer		1 COLLEGE HILL RD
Contract Name	Equipment PA - New		ACCOUNTS PAYABLE
	Jersey		NEWTON, NJ 07860-1149
Contract Code	C000001128033		
Customer Agreement #	23026 / M0483/24-TELE-		
	71883		
Deal ID	26399333		

Message from your Sales Rep

Please use the Order button to securely place the order with your preferred payment method online. You may contact your Dell sales team if you have any questions. Thank you for shopping with Dell.

Regards,
Marty Dernberger

Shipping Group

Shipping To	Shipping Method
GEORGE SANTANA SUSSEX COUNTY COMM COLLEGE 1 COLLEGE HILL RD NEWTON, NJ 07860-1149 (973) 300-2249	Standard Delivery

Product	Unit Price	Quantity	Subtotal
OptiPlex All-in-One (Plus 7420)	\$1,511.90	30	\$45,357.00

Subtotal:	\$45,357.00
Shipping:	\$0.00
Non-Taxable Amount:	\$45,357.00
Taxable Amount:	\$0.00
Estimated Tax:	\$0.00

Total:	\$45,357.00
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Shipping Group Details

Shipping To	Shipping Method
GEORGE SANTANA SUSSEX COUNTY COMM COLLEGE 1 COLLEGE HILL RD NEWTON, NJ 07860-1149 (973) 300-2249	Standard Delivery

	Unit Price	Quantity	Subtotal
OptiPlex All-in-One (Plus 7420)	\$1,511.90	30	\$45,357.00
Estimated delivery if purchased today: Mar. 10, 2025 Contract # C000001128033 Customer Agreement # 23026 / M0483/24-TELE-71883			

Description	SKU	Unit Price	Quantity	Subtotal
Intel Core i7 processor 14700 vPro (33 MB cache, 20 cores, 28 threads, up to 5.4 GHz Turbo, 65W)	338-CNCK	-	30	-
Windows 11 Pro, English, Brazilian Portuguese PT-BR, French, Spanish	619-ARSB	-	30	-
Activate Your Microsoft 365 For A 30 Day Trial	658-BCSB	-	30	-
16GB DDR5 Memory,1X16GB,Non-ECC,SoDIMM	370-BBPX	-	30	-
M.2 2230 512GB PCIe NVMe Class 35 Solid State Drive	400-BQTN	-	30	-
Thermal Pad, Screw and Rubber for SSD	412-ABEK	-	30	-
Intel Integrated Graphics	490-BBFG	-	30	-
Intel(R) AX211 Wi-Fi 6E 2x2 and Bluetooth	555-BH DU	-	30	-
Screw for WLAN card	555-BIGS	-	30	-
Wireless Driver, Intel AX211 Wi-Fi 6E 2x2 (6GHz), BT 5.3	555-BKJC	-	30	-
OptiPlex All-in-One Plus 7420, 65W CPU, Touch, 5MP IR cam, GFX option, 240W Platinum, DAO/ BCC	329-BJXH	-	30	-
No Keyboard Selected	340-BZMJ	-	30	-
No Mouse Selected	570-AAAF	-	30	-
No Cover Selected	325-BCZQ	-	30	-
Height Adjustable Stand for OptiPlex All-in-One Plus	575-BCNO	-	30	-
Dell Additional Software	634-CHFP	-	30	-
ENERGY STAR Qualified	387-BBLW	-	30	-
NO RAID	817-BBBN	-	30	-
System Power Cord (Philipine/TH/US)	450-AAOJ	-	30	-
SERI Guide (ENG/FR/Multi)	340-AGIK	-	30	-
Watch Dog SRV	379-BFMR	-	30	-
Quick Start Guide, OptiPlex All-in-One Plus 7420	340-DMJL	-	30	-
Print on Demand Label	389-BDQH	-	30	-
Trusted Platform Module (Discrete TPM Enabled)	329-BBJL	-	30	-
Package for Fixed/ HAS/ no stand (DAO, CCC)	340-DDGK	-	30	-
DAO factory Information	340-DFWR	-	30	-
Shipping Label	389-BBUU	-	30	-

Regulatory Label for OptiPlex All-in-One Plus 7420, 240W Platinum, FSJ	389-FGBM	-	30	-
SW Driver, Intel Rapid Storage Technology, OptiPlex All-in-One	658-BFST	-	30	-
Intel Core i7 vPro Enterprise Processor Label	389-EDDR	-	30	-
Desktop BTS/BTP Shipment	800-BBIP	-	30	-
Fixed Hardware Configuration	998-GSGT	-	30	-
OptiPlex All-in-One Plus 7420 BTX	210-BK VX	-	30	-
OptiPlex All-in-One Touch Panel	391-BDPU	-	30	-
EPEAT 2018 Registered (Silver)	379-BD TO	-	30	-
Intel vPro Enterprise	631-BBPZ	-	30	-
Dell Limited Hardware Warranty Plus Service	997-6870	-	30	-
ProSupport Plus: Accidental Damage Service, 5 Years	997-6942	-	30	-
ProSupport Plus: Keep Your Hard Drive, 5 Years	997-6952	-	30	-
ProSupport Plus: Next Business Day Onsite 5 Years	997-6962	-	30	-
ProSupport Plus: 7x24 Technical Support, 5 Years	997-6982	-	30	-
Thank you for choosing Dell ProSupport Plus. For tech support, visit www.dell.com/contactdell or call 1-866-516-3115	997-8367	-	30	-

Subtotal:	\$45,357.00
Shipping:	\$0.00
Estimated Tax:	\$0.00

Total:	\$45,357.00
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Important Notes

Terms of Sale

This Quote will, if Customer issues a purchase order for the quoted items that is accepted by Supplier, constitute a contract between the entity issuing this Quote ("Supplier") and the entity to whom this Quote was issued ("Customer"). Unless otherwise stated herein, pricing is valid for thirty days from the date of this Quote. All product, pricing and other information is based on the latest information available and is subject to change. Supplier reserves the right to cancel this Quote and Customer purchase orders arising from pricing errors. Taxes and/or freight charges listed on this Quote are only estimates. The final amounts shall be stated on the relevant invoice. Additional freight charges will be applied if Customer requests expedited shipping. Please indicate any tax exemption status on your purchase order and send your tax exemption certificate to Tax_Department@dell.com or ARSalesTax@emc.com, as applicable.

Governing Terms: This Quote is subject to: (a) a separate written agreement between Customer or Customer's affiliate and Supplier or a Supplier's affiliate to the extent that it expressly applies to the products and/or services in this Quote or, to the extent there is no such agreement, to the applicable set of Dell's Terms of Sale (available at www.dell.com/terms or www.dell.com/oemterms), or for cloud/as-a-Service offerings, the applicable cloud terms of service (identified on the Offer Specific Terms referenced below); and (b) the terms referenced herein (collectively, the "Governing Terms"). Different Governing Terms may apply to different products and services on this Quote. The Governing Terms apply to the exclusion of all terms and conditions incorporated in or referred to in any documentation submitted by Customer to Supplier.

Supplier Software Licenses and Services Descriptions: Customer's use of any Supplier software is subject to the license terms accompanying the software, or in the absence of accompanying terms, the applicable terms posted on www.Dell.com/eula. Descriptions and terms for Supplier-branded standard services are stated at www.dell.com/servicecontracts/global or for certain infrastructure products at www.dell.com/en-us/customer-services/product-warranty-and-service-descriptions.htm.

Offer-Specific, Third Party and Program Specific Terms: Customer's use of third-party software is subject to the license terms that accompany the software. Certain Supplier-branded and third-party products and services listed on this Quote are subject to additional, specific terms stated on www.dell.com/offeringsspecificterms ("Offer Specific Terms").

In case of Resale only: Should Customer procure any products or services for resale, whether on standalone basis or as part of a solution, Customer shall include the applicable software license terms, services terms, and/or offer-specific terms in a written agreement with the end-user and provide written evidence of doing so upon receipt of request from Supplier.

In case of Financing only: If Customer intends to enter into a financing arrangement ("Financing Agreement") for the products and/or services on this Quote with Dell Financial Services LLC or other funding source pre-approved by Supplier ("FS"), Customer may issue its purchase order to Supplier or to FS. If issued to FS, Supplier will fulfill and invoice FS upon confirmation that: (a) FS intends to enter into a Financing Agreement with Customer for this order; and (b) FS agrees to procure these items from Supplier. Notwithstanding the Financing Agreement, Customer's use (and Customer's resale of and the end-user's use) of these items in the order is subject to the applicable governing agreement between Customer and Supplier, except that title shall transfer from Supplier to FS instead of to Customer. If FS notifies Supplier after shipment that Customer is no longer pursuing a Financing Agreement for these items, or if Customer fails to enter into such Financing Agreement within 120 days after shipment by Supplier, Customer shall promptly pay the Supplier invoice amounts directly to Supplier.

Customer represents that this transaction does not involve: (a) use of U.S. Government funds; (b) use by or resale to the U.S. Government; or (c) maintenance and support of the product(s) listed in this document within classified spaces. Customer further represents that this transaction does not require Supplier's compliance with any statute, regulation or information technology standard applicable to a U.S. Government procurement.

For certain products shipped to end users in California, a State Environmental Fee will be applied to Customer's invoice. Supplier encourages customers to dispose of electronic equipment properly.

Electronically linked terms and descriptions are available in hard copy upon request.



AGREEMENT

This Agreement (the "Agreement") is made and entered into as of this ____ day of _____, 2025, by and between Skylands Stadium LLC, having executive offices located at 94 Championship Place, Augusta, NJ 07822 ("Skylands"), and Sussex County Community College (SCCC), located at 1 College Hill Road, Newton, NJ 07860 ("Lessee").

WITNESSETH:

WHEREAS, Skylands oversees the operations of Skylands Stadium located at 94 Championship Place, Frankford Township, Sussex County, New Jersey; and

WHEREAS, Lessee desires to utilize Skylands Stadium for its 2025-2026 athletic events, including football, men's and women's soccer, and baseball, aligning with SCCC's fiscal year (July 1, 2025 – June 30, 2026); and

WHEREAS, both parties recognize that this Agreement represents a first-year pilot partnership, and that unforeseen issues may arise, including but not limited to pricing adjustments, additional expenses, cancellations, or conflicts due to multiple bookings; and

WHEREAS, both parties acknowledge that the pricing outlined in this Agreement is heavily discounted and is reflective of Skylands Stadium's long-term aspirations to build a strong, mutually beneficial partnership with SCCC. This pricing does not reflect the full market value of the services provided, nor does it account for the additional benefits this partnership may bring to SCCC's athletic program, recruiting, and enrollment; and

WHEREAS, pricing will be subject to evaluation and increases for subsequent years, with adjustments reflecting fair market value, facility expenses, and expanded partnership opportunities;

NOW, THEREFORE, in consideration of the mutual covenants set forth herein and other good and valuable consideration, the parties hereto agree as follows:

Section 1: Grant of Right to Use Stadium

Skylands grants Lessee the right to use Skylands Stadium for athletic events, subject to the terms and conditions set forth in this Agreement. The specific dates, times, and sports events are detailed in Addendum A.

Additionally, Skylands grants SCCC's baseball team access to the Skylands Sports Academy for training purposes, as outlined in Addendum A.

Section 2: Terms and Conditions

- **Duration:** The events will commence on July 1, 2025, and conclude on June 30, 2026, as per Addendum A.
 - **Facility Access:** Lessee shall have access to the stadium one hour before the scheduled start of an event and up to one hour after the event for breakdown and clean-up.
 - **Field Conditions:** Skylands will ensure that the field is in playing condition before each event.
-

Section 3: Financial Terms

- **Rental Fee:** Lessee agrees to pay Skylands a total of \$70,000 for the use of the stadium as detailed in Addendum A.
 - **Payment Terms:** The total rental fee shall be paid in two equal installments:
 - 50% (\$35,000) due before Fall sports begin (August 1, 2025)
 - 50% (\$35,000) due before Spring baseball begins (January 15, 2026)
 - **Refunds & Cancellations:**
 - In the event of a weather-related cancellation, Lessee may reschedule or receive a partial refund per Skylands' policies.
 - Skylands retains the right to cancel or reschedule an event if a higher-priority event is scheduled that exceeds the scope of this Agreement. In such cases:
 - Skylands shall provide at least 14 days' notice to Lessee.
 - Skylands shall make reasonable efforts to reschedule Lessee's event as soon as possible.
-

Section 4: Operational Provisions

- Use of Facilities: Lessee shall have access to Skylands' scoreboard and video board for real-time scores and announcements.
 - Concessions: Skylands retains exclusive rights to operate all concessions, including food and beverage sales.
 - Security & Staffing: Skylands will provide necessary staffing for all scheduled events.
 - Practice Availability:
 - Football practice from August 30 to November 13 on Tuesdays and Wednesdays.
 - Flexible scheduling for practices, with Tuesdays, Wednesdays, and Thursdays preferred, and weekend availability upon request.
 - Baseball Training Access: SCCC's baseball team will have access to the Skylands Sports Academy for training purposes, as outlined in Addendum A.
-

Section 5: Insurance & Liability

- Insurance: Lessee shall provide proof of general liability insurance with coverage of at least \$1,000,000 per occurrence and workers' compensation insurance.
 - Indemnification: Lessee agrees to indemnify Skylands against any claims arising from its events.
-

Section 6: Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of New Jersey.

Section 7: Termination Clause

Either party may terminate this Agreement with 30 days' written notice if there is a material breach that is not remedied within 10 days.

Section 8: Confidentiality

Both parties agree to maintain confidentiality regarding financial terms and other proprietary information.

Section 9: Pilot Partnership & Future Pricing Adjustments

- Both parties acknowledge that this Agreement represents the first year of a new partnership, and as such, unforeseen operational, scheduling, or financial issues may arise.
 - The pricing outlined in this Agreement is significantly discounted and does not reflect the full market value of Skylands Stadium's services.
 - Skylands and Lessee agree to work collaboratively and in good faith to resolve any disputes or necessary adjustments to pricing, scheduling, or event logistics.
 - Future pricing adjustments and increases will be implemented in the second year, taking into consideration facility expenses, expanded offerings, and partnership value, if applicable.
-

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

Skylands Stadium, LLC

By: _____

Date: _____

Vincent Sangemino, General Manager

Sussex County Community College

By: _____

Date: _____

Sussex County Community College

Print Name/ Title _____

ADDENDUM A:

Partnership Components & Pricing

Event Schedule: July 1, 2025 – June 30, 2026

- Fall 2025 Sports (Football, Soccer, Baseball (Fall))
- Spring 2026 Baseball Season
- Practice Dates for Football & Baseball
- Access to Skylands Sports Academy for Baseball Training

Total Cost: \$70,000

Payment Schedule:

- \$35,000 due August 1, 2025
- \$35,000 due January 15, 2026

See Attached

A.1 Game Dates & Pricing

A.2 Practice Dates & Pricing

A.3 Grand Total 2025-2026 Partnership Components & Pricing

Addendum A.1 Game Dates & Pricing

Depart / Breakdown/								
Date	Day of Week	Arrive	Gametime	Game End	Closeup	Total Hours	Pricing	
Mens Football 2025								
1	September 6, 2025	Saturday	9:00:00 AM	12:00:00 PM	3:00:00 PM	4:30:00 PM	7.5	\$4,000.00
2	September 28, 2025	Saturday	9:00:00 AM	12:00:00 PM	3:00:00 PM	4:30:00 PM	7.5	\$4,000.00
3	October 11, 2025	Saturday	9:00:00 AM	12:00:00 PM	3:00:00 PM	4:30:00 PM	7.5	\$4,000.00
4	October 25, 2025	Saturday	9:00:00 AM	12:00:00 PM	3:00:00 PM	4:30:00 PM	7.5	\$4,000.00
5	November 8, 2025	Sunday	9:00:00 AM	12:00:00 PM	3:00:00 PM	4:30:00 PM	7.5	\$4,000.00
Mens Soccer 2025								
1	September 2, 2025	Tuesday	2:00 PM	3:30 PM	5:30 PM	6:30 PM	4.5	\$1,600.00
2	September 21, 2025	Sunday	10:30 AM	12:00 PM	2:00 PM	3:00 PM	4.5	\$1,600.00
3	September 23, 2025	Tuesday	2:00 PM	3:30 PM	5:30 PM	6:30 PM	4.5	\$1,600.00
4	September 25, 2025	Thursday	2:00 PM	3:30 PM	5:30 PM	6:30 PM	4.5	\$1,600.00
5	September 30, 2025	Tuesday	2:00 PM	3:30 PM	5:30 PM	6:30 PM	4.5	\$1,600.00
Womens Soccer 2025								
1	September 6, 2025	Saturday	10:30:00 AM	12:00:00 PM	2:00:00 PM	3:00:00 PM	4.5	\$1,600.00
2	September 16, 2025	Tuesday	2:00:00 PM	3:30:00 PM	5:30:00 PM	6:30:00 PM	4.5	\$1,600.00
3	September 18, 2025	Thursday	2:00:00 PM	3:30:00 PM	5:30:00 PM	6:30:00 PM	4.5	\$1,600.00
4	September 28, 2025	Sunday	10:30:00 AM	12:00:00 PM	2:00:00 PM	3:00:00 PM	4.5	\$1,600.00
5	October 11, 2025	Sunday	10:30:00 AM	12:00:00 PM	2:00:00 PM	3:00:00 PM	4.5	\$1,600.00
Baseball Fall 2025								
1	October 3, 2025	Friday	TBD	TBD	TBD	TBD	TBD	\$500.00
2	October 5, 2025	Sunday	TBD	TBD	TBD	TBD	TBD	\$500.00
3	October 10, 2025	Friday	TBD	TBD	TBD	TBD	TBD	\$500.00
4	October 12, 2025	Sunday	TBD	TBD	TBD	TBD	TBD	\$500.00
5	October 17, 2025	Friday	TBD	TBD	TBD	TBD	TBD	\$500.00
6	October 15, 2025	Wednesday	TBD	TBD	TBD	TBD	TBD	\$500.00
7	October 19, 2025	Sunday	TBD	TBD	TBD	TBD	TBD	\$500.00
8	October 17, 2025	Friday	TBD	TBD	TBD	TBD	TBD	\$500.00
9	October 18, 2025	Saturday	TBD	TBD	TBD	TBD	TBD	\$500.00
Mens Lacrosse 2026								
1	March 2 2026	Sunday	10:30 AM	12:00 PM	2:00 PM	3:00 PM	4.5	\$1,600.00
2	March 8, 2026	Friday	2:00 PM	3:30 PM	5:30 PM	6:30 PM	4.5	\$1,600.00
3	March 10, 2026	Sunday	10:30 AM	12:00 PM	2:00 PM	3:00 PM	4.5	\$1,600.00
4	March 17, 2026	Saturday	10:30 AM	12:00 PM	2:00 PM	3:00 PM	4.5	\$1,600.00
5	March 27, 2026	Thursday	2:00 PM	3:30 PM	5:30 PM	6:30 PM	4.5	\$1,600.00
Baseball Spring 2026								
1	March 2026	Wednesday	1:30:00 PM	3:30:00 PM	5:30:00 PM	6:30:00 PM	5	\$700.00
2	March 2026	Friday	1:00:00 PM	3:00:00 PM	5:00:00 PM	6:00:00 PM	5	\$700.00
3	March 2026	Monday	1:30:00 PM	3:30:00 PM	5:30:00 PM	6:30:00 PM	5	\$700.00
4	March 2026	Saturday	10:30:00 AM	12:00:00 PM	5:30:00 PM	6:30:00 PM	8	\$875.00
5	April 2026	Friday	1:00:00 PM	3:00:00 PM	5:00:00 PM	6:00:00 PM	5	\$700.00
6	April 2026	Monday	2:00:00 PM	4:00:00 PM	6:00:00 PM	7:00:00 PM	5	\$700.00
7	April 2026	Friday	1:00:00 PM	3:00:00 PM	5:00:00 AM	6:00:00 PM	5	\$700.00
8	April 2026	Tuesday	1:30:00 PM	3:30:00 PM	5:30:00 PM	6:30:00 PM	5	\$700.00
9	April 2026	Friday	12:00:00 PM	2:00:00 PM	4:00:00 PM	5:00:00 PM	5	\$700.00
10	April 2026	Monday	1:30:00 PM	3:30:00 PM	5:30:00 PM	6:30:00 PM	5	\$700.00
11	April 2026	Saturday	10:30:00 AM	12:00:00 PM	5:30:00 PM	6:30:00 PM	8	\$875.00
12	April 2026	Tuesday	5:00:00 PM	7:00:00 PM	9:00:00 PM	10:00:00 PM	5	\$1,250.00
Double Header	Light Usage						Total	\$57,800.00

*The dates are estimated based on previous field usage and are subject to change upon the release of the 2026 Baseball Schedule.

**Agreement includes 2 Doubleheaders and 1 Night Game

Addendum A. 2 - Practice Dates & Pricing

Football	Practice Dates	Price Per Practice
1	Tuesday, September 2, 2025	\$244.00
2	Wednesday, September 3, 2025	\$244.00
3	Thursday, September 4, 2025	\$244.00
4	Tuesday, September 9, 2025	\$244.00
5	Wednesday, September 10, 2025	\$244.00
6	Thursday, September 11, 2025	\$244.00
7	Tuesday, September 16, 2025	\$244.00
8	Wednesday, September 17, 2025	\$244.00
9	Thursday, September 18, 2025	\$244.00
10	Tuesday, September 23, 2025	\$244.00
11	Wednesday, September 24, 2025	\$244.00
12	Thursday, September 25, 2025	\$244.00
13	Tuesday, September 30, 2025	\$244.00
14	Wednesday, October 1, 2025	\$244.00
15	Thursday, October 2, 2025	\$244.00
16	Tuesday, October 7, 2025	\$244.00
17	Wednesday, October 8, 2025	\$244.00
18	1 Floating Practice Date TBD	\$244.00
Football Total		\$4,392.00

Baseball Total	\$7,808
Football Total	\$4,392
Practice Total	\$12,200

Baseball Spring	Practice Dates	Price Per Practice
19	January 10, 2026	\$244
20	January 12, 2026	\$244
21	January 13, 2026	\$244
22	January 14, 2026	\$244
23	January 16, 2026	\$244
24	January 20, 2026	\$244
25	January 21, 2026	\$244
26	January 23, 2026	\$244
27	January 24, 2026	\$244
28	January 27, 2026	\$244
29	January 28, 2026	\$244
30	January 30, 2026	\$244
31	January 31, 2026	\$244
32	February 3, 2026	\$244
33	February 4, 2026	\$244
34	February 6, 2026	\$244
35	February 7, 2026	\$244
36	February 10, 2026	\$244
37	February 11, 2026	\$244
38	February 13, 2026	\$244
39	February 14, 2026	\$244
40	February 17, 2026	\$244
41	February 18, 2026	\$244
42	February 20, 2026	\$244
43	February 21, 2026	\$244
44	February 24, 2026	\$244
45	February 27, 2026	\$244
46	February 28, 2026	\$244
47	March 4, 2026	\$244
48	March 5, 2026	\$244
49	March 7, 2026	\$244
50	March 18, 2026	\$244
Baseball Total		\$7,808

Addendum A.3- Grand Total 2025-2026 Partnership Components & Pricing

Game Total	\$57,800.00
Baseball Practice Total	\$7,808
Football Practice Total	\$4,392
Grand Total	\$70,000.00



PROCUREMENT MEMO

TO: Sussex County Community College Board of Trustees,
Dr. Cory Homer

CC: Wendy Fullem, Karen Unrath,

FROM: Matthew Stoppay, Purchasing Manager

DATE: March 11, 2025

SUBJECT: Food Supplies - Culinary

Description: Blanket Increase

Vendor Name: Baldor Specialty Foods

Amount: Current BPO \$15,000.00
Increase \$8,000.00
Total- \$23,000.00

Procurement Method: Bid Exception Food Supplies

Funding: Operating Funds

Attachments: N/A



PROCUREMENT MEMO

TO: Sussex County Community College Board of Trustees,
Dr. Cory Homer

CC: Wendy Fullem, Karen Unrath,

FROM: Matthew Stoppay, Purchasing Manager

DATE: March 11, 2025

SUBJECT: Sussex County Community College Website Upgrade

Description: Website Upgrades

Vendor Name: Hanson

Amount: Estimated \$26,000.00 - \$30,000.00

Procurement Method: Proprietary Software

Funding: Chapter 12 (Technology Upgrades)

Attachments: Hanson Quote

hanson

Umbraco CMS Upgrade to Version 13.5.2 LTS

Statement of Work Prepared for Sussex County Community College

January 2025

Overview

Sussex County Community College (SCCC) is committed to providing a modern, accessible and user-friendly web presence to effectively serve its students, alumni, staff, and community. As part of this commitment, SCCC must invest in upgrading and maintaining the site to ensure enhanced security, performance, usability, and alignment with long-term technological sustainability.

SCCC's website is built with the Umbraco Content Management System, a robust tool used to create dynamic websites that are easy to maintain. The current version of Umbraco – 10.8.6 – is functional but has reached a stage where an upgrade is necessary to:

- Ensure continued support and updates from the Umbraco development community.
- Strengthen security against vulnerabilities inherent in older software versions.
- Maintain compatibility with evolving web technologies and third-party integrations.

Umbraco has posted their release cadence online and has aligned the release of their long-term supported (LTS) versions with Microsoft's .NET framework on which Umbraco is built.

It is our recommendation that the site is upgraded to Umbraco 13.5.2, which is the current LTS release, prior to this version reaching end of life on June 16, 2025. From there, SCCC should plan to upgrade to Umbraco 17 in 2026 with subsequent upgrades every two years to the newest LTS.

Scope

The scope of the Umbraco CMS upgrade project includes:

Migration Planning and Assessment of Existing Setup

- Audit the current Umbraco 10.8.6 implementation, including content types, page templates, and customizations
- Identify deprecated features and dependencies incompatible with Umbraco 13.5.2
- Develop a detailed migration plan covering database, content and media assets and how to handle deprecated features and dependencies
- Establish a timeline that minimizes downtime and disruption

Local and Staging Environment Preparation

- Set up a staging environment and ensure compatibility with existing hosting infrastructure or recommend necessary updates
- Upgrade the local project environment to .NET 8 and ensure the latest compatible Visual Studio version is installed for the migration
- Update the project Target Framework to .NET 8 and install necessary Microsoft and Umbraco NuGet packages, resolving dependency conflicts as needed
- Research and upgrade Umbraco Forms

Content and Functionality Migration

- Migrate all existing content, media, and custom features while resolving deprecated editor aliases and obsolete configurations
- Adjust database configurations for compatibility with Umbraco 13.5.2

Code and Configuration Updates

- Refactor project configurations, including transitioning from Startup.cs to Program.cs
- Resolve all build errors and update obsolete code to align with the latest Umbraco APIs and conventions

Testing and Validation

- Conduct testing of the upgraded staging site to ensure functionality, performance and security
- Validate third-party integrations and custom features

Deployment and Post-Deployment Support

- Develop a Go-Live Checklist to ensure a smooth transition and minimal downtime
- Review Go-Live Checklist with Sussex and schedule launch
- Deploy the upgraded site to the live environment
- Offer a 30-day support period to address any emerging issues and provide guidance on new workflows.

Deliverables

The following deliverables will be provided:

- Upgrade plan outlining the migration strategy, timeline, and testing approach
- Staging environment running Umbraco 13.5.2 for testing and validation
- Go-Live Checklist
- Sussex.edu website upgraded to Umbraco 13.5.2 LTS, fully tested and deployed

Assumptions

To ensure clarity, the following assumptions are made for the project:

- Sussex will provide access to all required environments, including the existing CMS, hosting servers, and databases, before the project begins.
- All content, media, and custom functionality currently on the website are considered stable and operational as of the project start date.
- Sussex will designate a point of contact to provide timely responses to queries and approvals during the project timeline.

- Third-party plugins and integrations currently in use are assumed to have compatible versions or alternatives available for Umbraco 13.5.2.
- Any new functionality, features, or redesign requests are outside the scope of this upgrade and will be handled as separate projects.
- Testing and validation will occur within a mutually agreed-upon timeframe, with any delays in feedback potentially impacting the overall schedule.
- The provided 30-day support period covers issues arising from the upgrade itself but excludes new feature development or unrelated changes.

Project Pricing and Invoicing Schedule

Every website built on Umbraco is custom to the client. Until we begin the process, we cannot know needs related to deprecated elements. For this reason, we are providing a price range instead of a fixed price. As we begin the upgrade process and understand SCCC's unique needs, we will provide an update.

Project costs for the Umbraco upgrade are \$26,000 – \$30,000.

Hanson will invoice for 50% of the higher end of the cost range at the start of work and the remaining balance at launch.

Approval

This project will be considered approved upon receipt of returned copy of this statement of work with signature as designated below:

Sussex County Community College

Date

Terms

- This proposal/estimate is valid for 30 days. After 30 days a review of the requirements and/or estimate may be required.
- This project will be invoiced per the invoicing schedule included in this statement of work.
- All invoices are due within 30 days.
- Any travel and related expenses (hotels, meals, car rentals, airline tickets, etc.) associated with this project are not included in this Statement of Work and will be billed at cost on a monthly basis throughout the term of this project. Any associated travel will not be undertaken without the client's prior knowledge and consent.
- The prices in this SOW are based on agreement to the general project durations set forth in the Pricing and Duration table. If there are significant changes to the phase durations, Hanson reserves the right to set new prices for the services and establish a new schedule for such services. Such new pricing and schedule shall be set forth in a written notice sent for approval.

- Should the project, or a portion of the project, be delayed or put on hold by the client for more than 60 days or canceled before the project is completed, an invoice will be sent for all time and materials invested by Hanson in this project up to and including the date the project is put on hold or canceled.
- Any third-party software or hardware license costs will be the responsibility of the client.
- It is understood that the use of third-party software for this project is the decision of the client and that Hanson makes no claims as to its fitness for use. Furthermore, Hanson makes no warranties in association with third-party software. Any costs incurred by Hanson associated with bugs or issues of functionality or performance directly related to the third-party software product will be considered out of scope for this project and will be billed to the client at cost on a time and materials basis. Hanson will not perform any out-of-scope work without notification to and approval from the client.
- Hanson warrants that for thirty (30) days following delivery of the Deliverables, the Deliverables will be free from material reproducible programming errors and will substantially conform to those specifications set forth in the Statement of Work when maintained and operated in accordance with Hanson's instructions. If any such material reproducible programming errors or nonconformities are discovered during the warranty period, Hanson shall promptly remedy them at no additional expense to the client.

Results of review of 3 firms that bid for the Sussex County Community College Investment Firm Search

An investment search firm committee was formed to review the investment firm bids and interviewed each firm.

The committee was comprised of:

Lena Frank – SCCC Board Trustee and Chair of the Audit Search Committee
 Dr. Cory Homer – Interim President SCCC
 Stan Kula – Executive Director of SCCC Foundation
 Elizabeth Silverthorne – SCCC Board Co-Chair
 Sal Paolucci – SCCC Faculty
 Karen Unrath – Budget Officer
 Theresa Pappan – VP Finance and Administration

The results of the rubric review of each of the 3 firms before the interviews was as follows:

	Beacon	Biondo	Infinity
Total	380	343	310
Average	63.3	57.2	51.7
Median	63	57.5	49

Results of the review of each of the 3 firms after the interviews was as follows:

<u>Firm</u>	<u>Rank</u>	<u>Fees</u>	<u>Pros</u>	<u>Cons</u>
Biondo	1	0.50%	Price Local firm FDC registered Cohesive approach	Investment strategy prix fixe
Infinity	2	0.65%	Known entity More flexible invest strategy Endorsement Foundation Board	SCCC & Found inv w/1 firm
Beacon	3	0.77%	Sub of Provident	Fees Investment strategy prix fixe



PROCUREMENT MEMO

TO: Sussex County Community College Board of Trustees,
Dr. Jon Connolly

CC: Wendy Fullem, Karen Unrath,

FROM: Matthew Stoppay, Purchasing Manager

DATE: March 11, 2025

SUBJECT: Building A 2ND FLOOR

Description: Remove old carpet and base and install new carpet tile

Vendor Name: Hannon Floors

Amount: \$61,246.45

Procurement Method: NJ State Approved #34HUNCCP Commercial floor covering and related services #215

Funding: Chapter 12

Attachments: Hannon Quote



March 5, 2025

Sussex County Community College

1 College Hill Rd
Newton, NJ 07860
Attention: Rose Figueroa

We are pleased to submit our estimate as follows for Building A. Remove the existing carpet and base throughout the second floor of the A Building including staircase. Feather out pillars, and prep floor as needed. Install carpet tile throughout the main area, including a pattern. Install rubber stair treads and riser, rubber flooring to be used at the landing and elevator as well. Price includes 4-inch base and transitions where needed.

RE Flooring Quote: NJ STATE Approved Pricing System #34HUNCCP Commercial Floor Covering and Related Services #215

Removal & Disposal of Carpet & Base-

Carpet Removal- \$6.13 x 697 yards	\$4,272.61
Carpet Disposal- \$2.80 x 697 yards	\$1,951.60
Removal & disposal of existing wood base 1.31 x 550	\$720.00
Total removal & disposal- \$6,944.21	

Prep & Installation

Skim- \$1.76 x 5,700 square feet	\$10,032.00
Carpet Tile- \$13.80 x 400 square yards	\$5,244.00
Tread & Risers \$24.00 x 200 linear feet	\$4,800.00
Elevator & Landing- Hammered rubber- 96 square feet x \$5.86	\$562.56
Base 4" 2.70 x 550	\$1,485.00
Carpet design & feathering out pillars 6 x \$175.00	\$1,050.00
Total Prep & Installation- \$23,173.66	

Material-

Throughout- Mannington Carpet- 400 yards x \$57.58	\$23,032.00
Circle Color Anchor- 45 square yards x \$41.16	\$1,852.20
Hammered Rubber elevator- \$16.03 x 96 square feet	\$1,538.88
Stair treads & Risers – 200 linear feet x \$19.10	\$3,820.00
4" base- 550 x 1.61	\$885.50
Material Total- \$31,128.58	

Project Total- \$61,246.45

- Work @ regular hours
- Price does not include any unforeseen issues
- Furniture removed by other.
- Manufactory maintenance and Warranty will be provided for products used.
- Proper furniture and chair protection should be followed.

Should you have any questions please feel free to call.

Thank you,
Kristin Banks
973-784-2941

Sussex County Community College
Policy No.: 401.10
Area: Administrative Services
Adopted: September 28, 2021

401.10 Cash Management Policy

PURPOSE OF THE POLICY

The purpose of the Cash Management policy is for the Office of CFO to invest College's Cash in areas approved by the Board of Trustees. The Finance Committee of the Board of Trustees shall monitor the goals and objectives relating to the College's Portfolio.

GENERAL STATEMENT OF CASH MANAGEMENT

The College shall invest excess cash balances in the form of U.S. Treasury bills or notes, certificates of deposit, repurchase agreements, or other investments such as U. S. Government agency instruments, corporate stocks and bonds, and commercial paper. All insured money market investments shall be made at official depositories approved by the Board of Trustees.

On an average monthly basis, the College's portfolio's fixed income component should be not less than 50 percent.

401.10.1 Procedures for Implementation of Cash Management Policy

PROCEDURES RELATED TO CASH MANAGEMENT

Current Procedure:

The College's CFO & Executive Vice President of Administrative Services invests in CDs and interest-bearing checking accounts.

New Procedure:

1. Upon determination that monies shall be available for investment purposes, the following shall occur:
 - (a) The amount of money and the period for the investment shall be determined.
 - (b) The form of investment shall be decided based on prevailing interest rates and current liquidity needs.
2. Investment in U.S. Treasury Bills and Notes shall be accomplished as follows:
 - (a) Contact the bank to determine the current interest rates. The bank used to secure the investment shall be where the funds being invested are on deposit.
 - (b) The order will be placed by phone, requesting that our account be charged for the purchase price.
 - (c) Confirm, in writing, the placement of the order stating the conditions of purchase.
 - (d) Notify the bank, of the maturity date, to either credit our account or reinvest the proceeds in new U.S. Treasury Bills or Notes.
3. Investment in Certificates of Deposit and Repurchase agreements shall be accomplished as follows:
 - (a) Contact all available institutions, previously approved as depositories for college funds, in order to determine the current interest rates. Select the institution which offers the highest yield. Available institutions are banks and savings & loan associations that have not already issued the maximum of \$300,000 in certificates of deposit or repurchase agreements to the College. If all approved depositories are at the maximum of \$300,000 each, then \$400,000 shall temporarily become the new limit.

- (b) The maximum length of the investment period shall be twelve months.
 - (c) Place the order by phone.
 - (d) Prepare a check for the purchase price of the certificate or have funds electronically transferred. If a matured certificate is being reinvested in the same institution, no transfer of funds is necessary.
 - (e) Notify the bank on or before the maturity date whether the certificate shall be cashed or reinvested. This shall be so indicated on the reverse side of the certificate and signed by authorized personnel.
4. Investment in Money Market Investment Accounts at Board approved depositories shall be accomplished as follows:
- (a) Daily cash receipts shall be deposited directly into a Money Market Investment Account. Transfers will then be made to checking accounts as needed to cover disbursed funds. Transfers may be made by telephone, check, or electronic fund transfer.
 - (b) A compensating balance must be maintained in the general checking account. In addition, an earnings credit rate will be calculated by the bank of record and will be used to offset the costs involved in maintaining the checking accounts and other bank services.
5. Investment in any other approved instruments shall be accomplished as follows:
- (a) Contact the Board of Trustees approved investment advisor and inform same of cash availability and any time restrictions which may have a bearing on an investment decision.
 - (b) Before purchase, the investment advisor must confer with the CFO and Executive Vice President of Administrative Affairs or his designated representative, specifying what instruments are to be purchased, the cost involved, and the date funds are to be transmitted.
 - (c) After purchase, funds will be transmitted by check or electronic funds transfer to the investment advisor on the date agreed upon. The investment advisor will retain the instruments in a custodial account, thereby simplifying the registration and resale aspects.
 - (d) The investment advisor will forward written confirmation of each transaction to the College's CFO & Executive Vice President of

Administrative Services, detailing all costs, names, dates, etc.

- (e) Every month, the investment advisor will provide a detailed listing of all instruments in the custodial account. The list will include names, quantities, yields, current market values, original costs, etc. Electronic access to the account will also be available to the office of the CFO & Executive Vice President of Administrative Services.
- (f) Investment instruments to be considered are:
 - (1) U.S. Government Agencies
 - (2) Corporate Bonds
 - (3) Corporate Stocks - Common and Preferred
 - (4) Commercial Paper

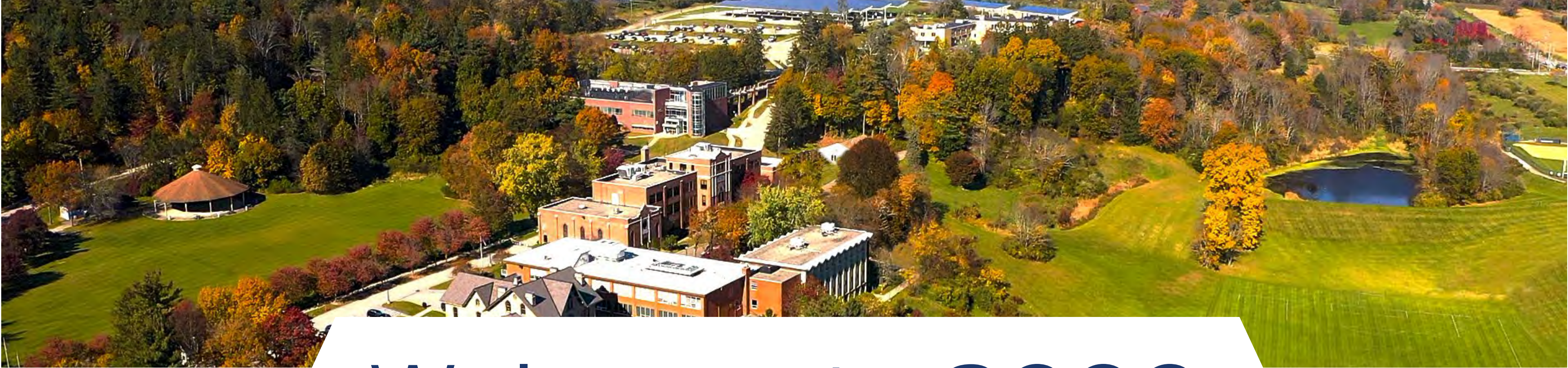


About Sussex County Community College

Start here, go anywhere!

sussex.edu | 973.300.2100





Welcome to SCCC

- Two-year Comprehensive Community College
- 167-Acre Campus located in Newton, NJ
- Over 3,000 students each year from 10 states and 14 countries.

2022-2026 Strategic Plan

High-Quality Academic and Occupational Programs

To strengthen and support high-quality academic and occupational programs through a comprehensive teaching and learning experience which fosters student success.

Accessible and Supportive Environment

To provide an accessible, inclusive, and supportive environment that fosters a holistic approach to academic and student support resources for the success of all students.

Dynamic College Experience

To offer a unique, robust college experience including engaging campus life, athletics, and clubs to strengthen the student experience.

Lifelong Learning

To foster a community-wide culture that promotes scholarly inquiry, professional development, and academic research.

Inclusive College Community

To embrace and strengthen an inclusive culture that values all members of the community.

ABOUT SCCC

VISION

Sussex County Community College will be a leader in NJ Higher Education as a premier provider of 21st century learning opportunities, professional training, and skills development to meet the needs of the people of our community in a globally competitive environment.

MISSION

Sussex County Community College provides a dynamic college experience to a diverse community of students that supports the economic prosperity of the region through lifelong learning, and high-quality academic and occupational programs, in an accessible and supportive environment to ensure student success.





Student
Centered
Campus



Financial Status Discussion

As of February 28, 2025 Actual vs. Budget and vs. Prior Year

Revenue:

- Fall, Winter and Spring semesters have exceeded budget.
- Summer sessions are lagging behind budget but, it is still early in the enrollment process
- Overall tuition revenue is exceeding the budget as of February 2025 by 18% and is up over February 2024 by 2.6%
- Revenue increase to Budget due to sale of Morgan Stanley portfolio and transferred to Provident bank accounts February 11, 2025 (switching to a new investment firm).
- YOY revenue reduction due to CARES funds received in 2024

Expenses:

- Health benefits continues to be a pressure
- Variances in grants and financial aid is timing compared to budget and more need than prior year

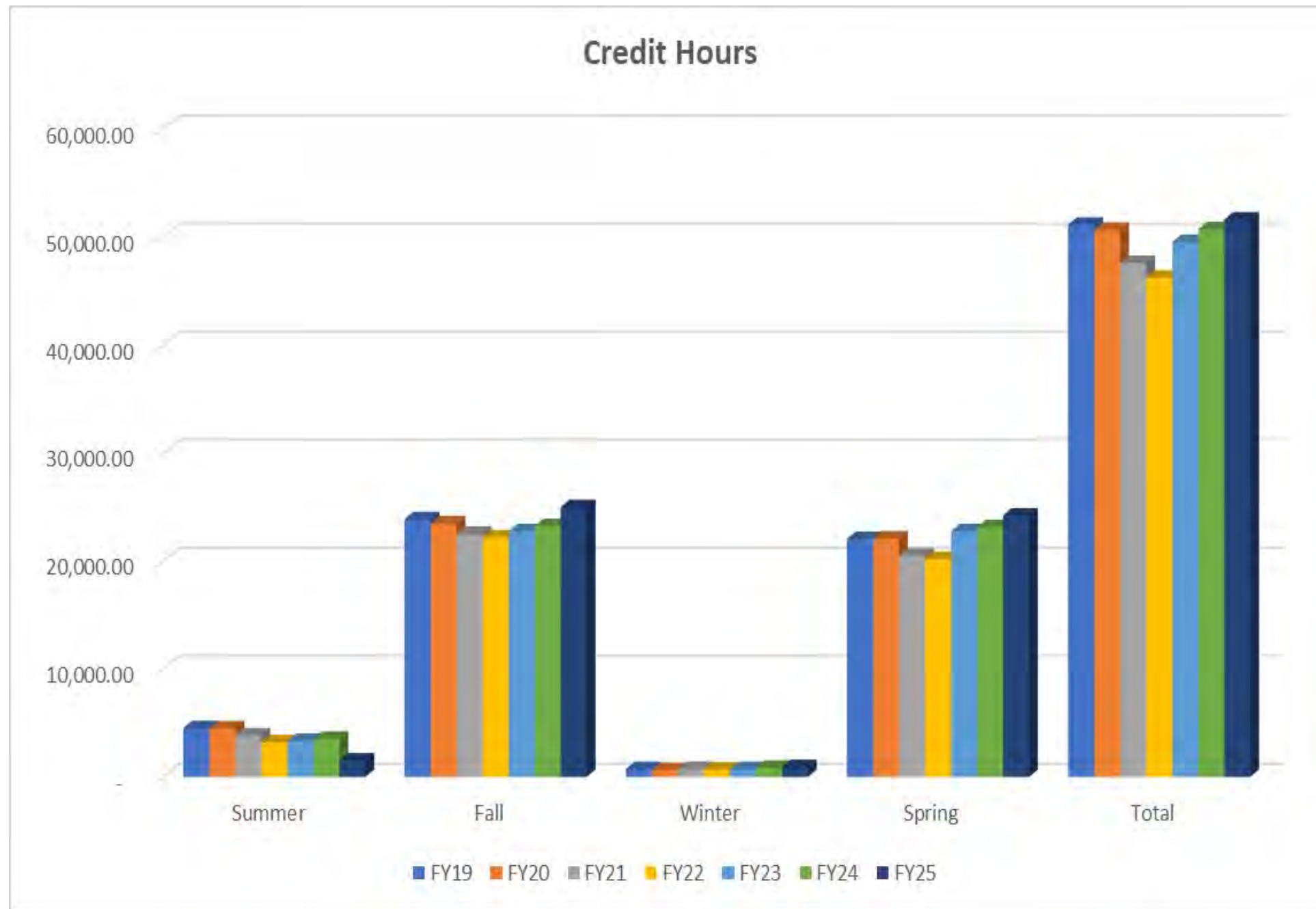




February 2025 - Credit Hours Dashboard

Credit Hours	FY25	FY25 Budget	FY25A vs FY25B	FY24 Actuals	FY25A vs FY24A
Summer II	239	436	-45%	752	-68.2%
Summer III	333	1,137	-71%	1,433	-76.8%
Fall	24,974	23,980	4%	25,592	-2.4%
<u>1st half of year</u>	25,546	25,553	0%	27,777	-8.0%
Winterim	900	665	35%	717	25.5%
Spring	24,209	19,617	23%	22,826	6.1%
<u>2nd half of year</u>	25,109	20,282	24%	23,543	6.7%
Summer I	874	1,707	-49%	1,816	-51.9%
Summer IV	66			19	247.4%
<u>2nd half of year</u>	26,049	21,989	18%	25,378	2.6%

FY History of Credit Hours



February 2025 YTD Actual vs Budget & Prior Year

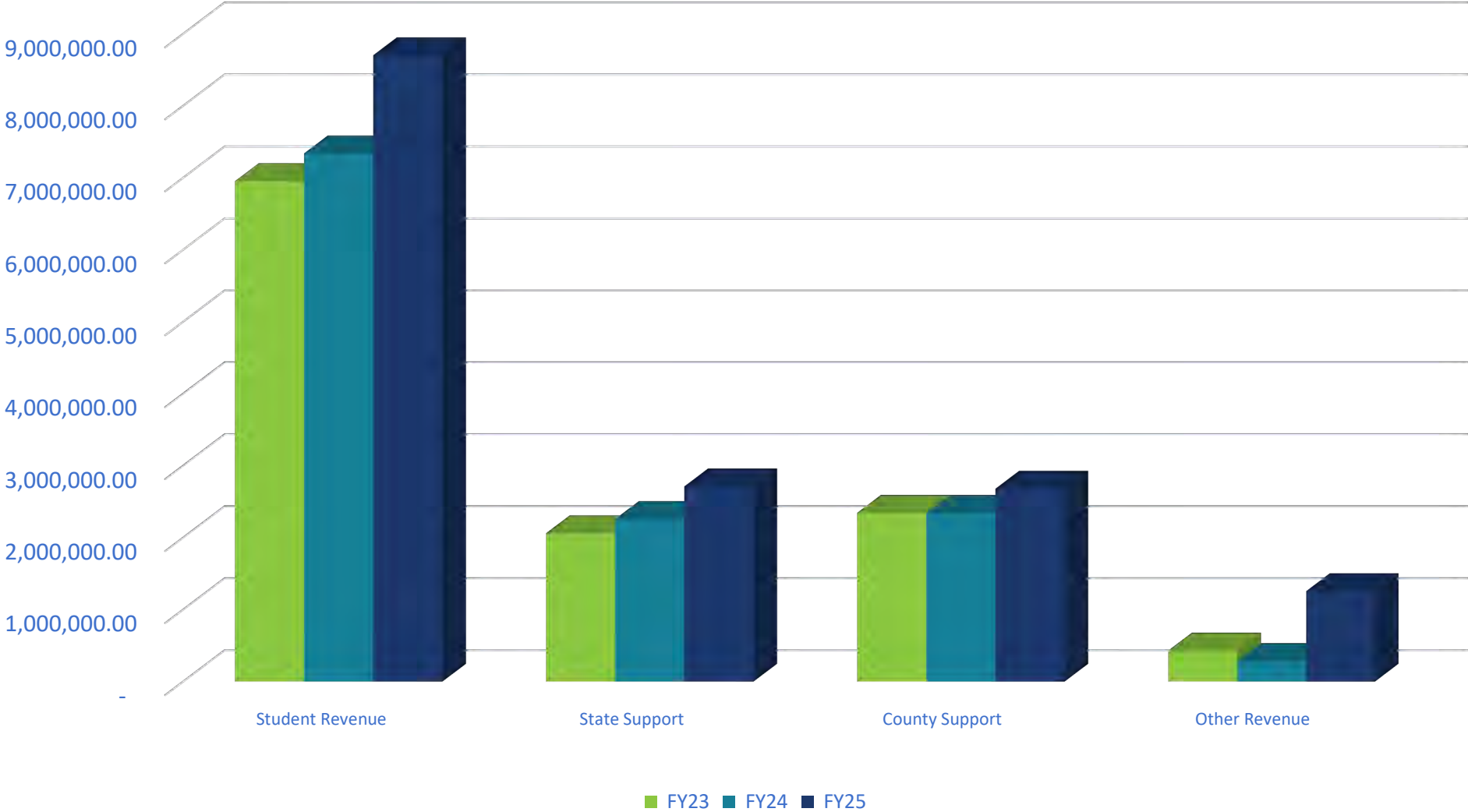


(\$thsd)	8 Mos. YTD 25	8 Mos.25 YTD Budget	Budget Var \$	8 Mos. 24 YTD	Prior Year Var \$	FY 2025 BOSE Budget
Total Student Revenues	8,703	8,258	445	8,544	159	12,154
Change in Student Revenue			5.4%		1.9%	
Non-Student Revenues						
State Support	2,712	2,601	111	2,585	127	3,902
County Support	2,680	2,680	0	2,680	0	4,020
CARES Support	0	0	0	579	(579)	0
Other Revenues	1,257	365	892	957	300	548
Subtotal Non-Student Revenues	6,649	5,647	1,002	6,801	(152)	8,470
Subtotal all Revenues	15,352	13,905	1,447	15,345	8	20,624
Grant Revenue (Pass thru)	1,648	533	1,115	843	806	800
PSTA Revenue	286	227	60	275	11	340
Federal, State Financial Aid	6,092	2,607	3,484	5,006	1,086	3,911
Federal ,State Loans	1,842	1,967	(126)	1,858	(17)	2,951
Subtotal Grant Revenues(Pass thru)	9,868	5,335	4,533	7,982	1,886	8,002
Total Operating Revenues	25,220	19,240	5,980	23,326	1,894	28,626
Expenses						
Salaries/Benefits	9,305	9,050	255	8,498	807	13,575
Other Expenses	5,236	4,698	538	4,999	237	7,047
Subtotal Expenses	14,541	13,748	793	13,497	1,044	20,622
Grant Expense (Pass thru)	1,648	533	1,115	843	806	800
PSTA Expense	286	227	60	275	11	340
Federal, State Financial Aid	6,092	2,649	3,442	5,006	1,086	3,974
Federal ,State Loans	1,842	1,925	(84)	1,858	(17)	2,888
Subtotal Grant Expenses(Pass thru)	9,868	5,335	4,533	7,982	1,886	8,002
Total Operating Expenses	24,409	19,083	5,326	21,479	2,930	28,624
Contribution to Unrestricted Fund Balance	811	157	654	1,848	(1,037)	2



Revenue Student/Support

Revenue (Student/Support)



	FY23	FY24	FY25
Student Revenue	6,954,000.00	7,339,346.00	8,702,954.00
State Support	2,062,000.00	2,259,708.00	2,712,033.00
County Support	2,345,000.00	2,345,000.00	2,680,000.00
Other Revenue	432,000.00	286,537.00	1,256,897.00



February 2025 YTD Actual vs Budget & Prior



(\$thsd)	8 Mos. YTD 25	8 Mos.25 YTD Budget	Budget Var \$	8 Mos. 24 YTD	Prior Year Var \$	FY 2025 BOSE Budget
Total Student Revenues	8,703	8,258	445	8,544	159	12,154
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Total Operating Expenses	24,409	19,083	5,326	21,479	2,930	28,624
Contribution to Unrestricted Fund Balance	811	157	654	1,848	(1,037)	2





Thank You



973.300.2100



tpappan@sussex.edu



sussex.edu



One College Hill Road
Newton, NJ



Correspondence File – March 2025

1. Email about the 56th Annual Sussex County Teen Arts Festival.
2. Chemistry Professor Christina Winters's participation in professional development via conferences that will focus on innovative approaches to teaching chemistry at the two-year college level.

From: [Sierra LoCicero](#)
To: [All College](#)
Subject: 2025 Teen Arts the 56th Festival
Date: Thursday, March 13, 2025 9:42:23 AM

Dear Colleagues and Friends,
SCCC hosted the 56th Annual Sussex County Teen Arts Festival on Tuesday, March 11, from 8am to 2pm and feedback has been excellent.

There were 22 schools/arts studios participating. We received registration counts of 1,500 local students and teachers attending, 500 pieces of artwork on display, 144 student performances adjudicated, and 40 hands-on workshops/demonstrations that took place on campus. Every art form category was represented including poetry, prose, film, fine art, musical theater, instrumental music, and vocal music.

The festival was a success thanks to SCCC's outstanding facilities, security, and technical staff who bring creative vision and problem-solving skills to transform our campus into a vibrant festival.

Additional thanks go to Academic Affairs and faculty, the Finance Department, Rose Figuero and her team, Jim Coiro and his team, Vicky Hoskin and her team, and Tim O'Connor and his team. Christine Gaydos and the SCCC Ambassadors assisted students, artists, and adjudicators throughout the day. Student volunteers included fine art, graphic design, theater and performing arts majors. I appreciate everyone's expertise and support to help showcase the college and its resources.

The Teen Arts festival makes a difference in the lives of Sussex County's teens and inspires them to consider careers in the arts. I received many emails of thanks from the area schools. There were four schools/public school arts programs that attended the festival for the first time. The teachers marveled at how beautiful the campus was and students said, "Best field trip ever."

The festival continued with a visual arts reception in the A, B, and C galleries on Wednesday, March 12 from 6:00 to 8:00pm. Students with artwork hanging in the galleries brought their parents, grandparents and siblings to view the exhibits. In speaking with the families, they were very impressed with the campus gallery space and they expressed gratitude that their sons and daughters were able to be part of the festival. The artwork will be on display through Monday, March 24, then selected artwork and performance presentations will represent Sussex County at the NJ State Teen Arts festival at Middlesex College in June.

Many thanks for helping to engage students in the arts at SCCC,
Anita

Anita Collins
SCCC Adjunct Professor
Faculty Advisor, Idiom & Image Arts & Literary Magazine
Sussex County Teen Arts Coordinator
201-400-0897
acollins@sussex.edu

From: O'Connor, Christine <oconnorc@sunyacc.edu>

Sent: Monday, February 17, 2025 1:30 PM

To: Christina Winters <cwinters@sussex.edu>

Subject: Congratulations on Your Nomination

Dear Professor Winters,

I hope this message finds you well. I am delighted to inform you that you have been nominated by Dean Gallo for an exciting NSF-funded professional development project focused on improving chemistry teaching at community colleges.

As part of this project, you will have the opportunity to participate in two conferences that will focus on innovative approaches to teaching chemistry at the two-year college level. Topics will be decided after surveying participants and students about their needs. The first conference will take place June 16-18th, 2025, followed by a second in June 2026. These events will bring together regional educators like yourself who are passionate about enhancing student learning experiences in chemistry.

In addition to the conferences, you will have the chance to join a community of practice for ongoing support throughout the year. This community will help you implement any instructional changes or strategies you find valuable. The project also includes a research component, which involves surveys of faculty and their students, as well as optional student interviews. We ask that participants complete surveys and help distribute them to their students.

We are confident that your involvement will not only assist you in your own professional development endeavors, but will also be instrumental in contributing to the advancement of chemistry education at community colleges. We hope that you will be available for the two three-day conferences and are excited to support your professional journey through this initiative.

Please let us know if you are able to participate. If you are able to join us, please read, sign, and return the attached consent form. Please reach out with any questions that you may have.

Warm regards,

Christine

Christine O'Connor
Professor of Chemistry
Principal Investigator
SUNY Adirondack

SPECIFICATION

BUILDING 'L' RENOVATIONS:

SUSSEX COUNTY COMMUNITY COLLEGE

NEWTON, NEW JERSEY



HQW ARCHITECTS, LLC

14 N. Village Blvd. Suite C
Sparta, New Jersey 07871

DATE: JANUARY, 2025

HQW #15-5062

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SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Work by Owner.
 - 4. Work under separate contracts.
 - 5. Owner-furnished products.
 - 6. Access to site.
 - 7. Coordination with occupants.
 - 8. Work restrictions.
 - 9. Specification and drawing conventions.
 - 10. Miscellaneous provisions.
- B. Related Requirements:
 - 1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification: Renovations to the existing Building 'L' 2nd floor library space.
 - 1. Project Location: One College Hill Road, Newton, NJ 07860 (Building 'L')
- B. Owner: Sussex County Community College, Newton, NJ.
 - 1. Owner's Representative: Mr. Matthew Stoppay.
- C. Architect: HQT Architects, LLC, 14 N. Village Blvd. Ste. C, Sparta, NJ 07871.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:

1. This Project consists of the renovations of the 2nd floor library to include: small group study spaces, math center, writing center, computer lab, testing room, support offices, and an open library/ study area.
- B. Type of Contract:
 1. Project will be constructed under a single prime contract.

1.5 WORK BY OWNER

- A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

1.6 WORK UNDER SEPARATE CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

1.7 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish products indicated. Unless otherwise noted, the Work includes receiving, unloading, handling, storing, protecting, and installing Owner-furnished products and making building services connections.

1.8 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 1. Driveways, Walkways and Entrances: Keep driveways, loading areas, exits and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.9 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and existing and adjacent buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.
- B. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction and/or renovation. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- C. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
 - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
 - 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
 - 3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
 - 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.10 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work to normal business working hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, unless otherwise indicated.

1. Weekend Hours: Permitted with written permission of the Owner. Provide 72 hours advance notice to the Owner.
 2. Early Morning Hours: As allowed by the Authorities Having Jurisdiction and with the written permission of the Owner. Provide 72 hours advance notice to the Owner.
 3. Hours for Utility Shutdowns: Utility shutdowns shall be coordinated with the Owner 72 hours in advance of any shutdown. Obtain Owners' written permission prior to initiating any shutdown.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
1. Notify Owner not less than three days in advance of proposed utility interruptions.
 2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
1. Notify Owner not less than two days in advance of proposed disruptive operations.
 2. Obtain Owner's written permission before proceeding with disruptive operations.
- E. Nonsmoking Building: Smoking is not permitted anywhere on the grounds of Sussex County Community College.
- F. Controlled Substances: Use of tobacco products and other controlled substances on the grounds of Sussex County Community College is not permitted.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

1.12 MISCELLANEOUS PROVISIONS

A. Prohibition of fraternization:

1. All workers and employees of the Contractor are prohibited from fraternizing with any and all students, staff, workers and/or employees of Sussex County Community College or any of their guests, including relatives, not directly related to the Work of the Contract. Any such fraternization or contact will result in immediate and final termination.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Contingency allowances.
- C. Related Requirements:
 - 1. Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Contingency Allowance: Include a contingency allowance of \$30,000.00 for use according to Owner's written instructions.

END OF SECTION 012100

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Divisions 02 through 33 Sections for specific requirements and limitations for substitutions.
- C. All product substitutions shall be proposed by the Contractor in writing, including all pertinent information about the product to clearly illustrate compliance with performance criteria specified for the particular product. Contractor shall not furnish or install substitute materials without prior written approval from the Architect.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.
 - a. Requests for Substitutions for Convenience shall be made in writing and shall demonstrate advantage to the Owner. Requests for such Substitutions for Convenience may be denied by the Owner at no penalty to the Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit one copy in .pdf format of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use Contractors' letterhead in form acceptable to the Architect.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

- a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later. Architect will consider up to two proposed requests for a single item without charge if submitted in .pdf format. Additional requests in .pdf format will not be considered unless accompanied by a check in the amount of \$500 payable to the Architect.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
 - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Requested substitution provides sustainable design characteristics that specified product provided.
 - c. Substitution request is fully documented and properly submitted.
 - d. Requested substitution will not adversely affect Contractor's construction schedule.
 - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - f. Requested substitution is compatible with other portions of the Work.
 - g. Requested substitution has been coordinated with other portions of the Work.
 - h. Requested substitution provides specified warranty.
 - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - j. Requested substitution provides a credit to the Owner in the form of a reduction in the Contract Sum.
- B. Substitutions for Convenience: Not allowed unless authorized by the Owner in writing.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Division 01 Section "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and

finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
- 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor directly attributable to the change. Supervision and office expense shall be included in overhead and profit and not as a line item in the Proposal.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - 7. Proposal Request Form: Use form acceptable to Architect.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Division 01 Section "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Division 01 Section "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.
- B. The cost of insurance, field supervision and office management shall be considered overhead for any Change Order Request.
- C. The following percentages for combined overhead and profit that may be added to changes and costs approved by the Owner are as follows:
 - 1. Where work is performed by subcontractor, the subcontractor agrees that the following stipulation shall be made a part of such subcontract: "Subcontractor may add to his on-site cost for extra work an amount not to exceed 15%".

2. The Contractor may add on his on-site cost of extra work when such work is performed directly at the site with his own personnel, equipment and materials an amount not to exceed 15%.
3. For administration and supervision of extra work performed by a subcontractor the Contractor may add to subcontractor's costs an amount not to exceed 10%.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Sub-schedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values coordinated with each phase of payment.
 - 4. Sub-schedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide sub-schedules showing values coordinated with each element.
 - 5. Sub-schedules for Separate Design Contracts: Where the Owner has retained design professionals under separate contracts who will each provide certification of payment requests, provide sub-schedules showing values coordinated with the scope of each design services contract as described in Division 01 Section "Summary."
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
 - a. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling at least five percent of the Contract Sum and subcontract amount.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed. Payments will not be made for submittals required by the Specifications for which products have not been installed or suitably stored and documented..
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
7. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Provide separate line items for mobilization and, where applicable, bonds.
9. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

10. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.
11. Each item in the schedule of values and Applications for Payment shall be complete. The Owner and the Architect shall be entitled to rely on the accuracy of each line item. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
12. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
 2. **NOTE (if applicable): INITIAL APPLICATION FOR PAYMENT SHALL NOT BE CERTIFIED UNTIL EACH CONTRACTOR AND/OR SUBCONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC FORCE-RESISTING SYSTEM HAS SUBMITTED AN APPROVED WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER. (SEE SECTION 014000)**
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Architect by the last of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.
 2. Line items for General Conditions shall reflect the percentage complete of the work and shall not be based on the Contract Time.
- D. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.

2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- F. **Stored Materials:** Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- G. **Transmittal:** Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. **Waivers of Mechanic's Lien:** With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 5. **Waiver Forms:** Submit executed waivers of lien on forms, acceptable to Owner.
- I. **Initial Application for Payment:** Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).

4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
 5. Products list (preliminary if not final).
 6. Schedule of unit prices.
 7. Submittal schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal consultants.
 10. Copies of building permits.
 11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 12. Initial progress report.
 13. Report of preconstruction conference.
 14. Certificates of insurance and insurance policies.
 15. Performance and payment bonds.
 16. Data needed to acquire Owner's insurance.
- J. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Coordination drawings.
 - 3. Requests for Information (RFIs).
 - 4. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
 - 1. Post copies of list in project meeting room, in temporary field office and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Preinstallation conferences.
 - 7. Project closeout activities.
 - 8. Startup and adjustment of systems.

1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
 - 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.

- b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
- c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
- d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
- e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
- f. Indicate required installation sequences.
- g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

- 1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
- 2. Plenum Space: Indicate sub-framing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
- 3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
- 4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
- 5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
- 6. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
- 7. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inches (32 mm) in diameter and larger.
 - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
 - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.

- d. Location of pull boxes and junction boxes, dimensioned from column center lines.
 - 8. Fire-Protection System: Show the following:
 - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
 - b. Locations of through-penetration protection systems and the system to be utilized. Provide details from UL or other independent testing agencies of systems to be utilized.
 - 9. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.
 - 10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Division 01 Section "Submittal Procedures."
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
- 1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
 - 2. File Preparation Format: DWG operating in Microsoft Windows operating system.
 - 3. File Submittal Format: Submit or post coordination drawing files using Portable Data File (PDF) format.
 - 4. Architect will not furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files. Digital data files will be made available upon the Contractors' execution of the CAD File Release Form included as an attachment to Section 013300 and payment for same. It shall be the Contractors' obligation to obtain release of CAD files from the Architects' and Owners' consultants under separate agreement with those consultants.
 - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
 - b. Digital Data Software Program: Drawings are available in AutoCad.
 - c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

1.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
- 1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: Form acceptable to Architect.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log on a regular basis. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.8 PROJECT MEETINGS

- A. General: Architect will schedule and conduct meetings and conferences at Project site unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Architect will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within five days of the meeting.
- B. Preconstruction Conference: Contractor will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
1. Conduct the conference to review responsibilities and personnel assignments.
 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.

- f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - l. Preparation of record documents.
 - m. Use of the premises and existing building.
 - n. Work restrictions.
 - o. Working hours.
 - p. Owner's occupancy requirements.
 - q. Responsibility for temporary facilities and controls.
 - r. Procedures for disruptions and shutdowns.
 - s. Construction waste management.
 - t. Parking availability.
 - u. Office, work, and storage areas.
 - v. Equipment deliveries and priorities.
 - w. First aid.
 - x. Security.
 - y. Progress cleaning.
4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility requirements.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.

- r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Architect will conduct progress meetings at regular intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.

- 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
4. Minutes: Architect will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- E. Coordination Meetings: Conduct Project coordination meetings at biweekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
 - c. Review present and future needs of each contractor present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Resolution of BIM component conflicts.
 - 4) Status of submittals.
 - 5) Deliveries.
 - 6) Off-site fabrication.
 - 7) Access.
 - 8) Site utilization.
 - 9) Temporary facilities and controls.
 - 10) Work hours.

- 11) Hazards and risks.
- 12) Progress cleaning.
- 13) Quality and work standards.
- 14) Change Orders.

- 3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Startup construction schedule.
 - 2. Contractor's construction schedule.
 - 3. Construction schedule updating reports.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Site condition reports.
 - 7. Special reports.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum unless otherwise approved by Architect.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
1. PDF electronic file.
 2. Four paper copies.
- B. Startup construction schedule.
1. Approval of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
1. Submit a working electronic copy of schedule, using Microsoft Project, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
- D. Construction Schedule Updating Reports: Submit with Applications for Payment.
- E. Daily Construction Reports: Submit at bi-weekly intervals.
- F. Material Location Reports: Submit at bi-weekly intervals.
- G. Site Condition Reports: Submit at time of discovery of differing conditions.
- H. Special Reports: Submit at time of unusual event.
- I. Qualification Data: For scheduling consultant.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed or Contract Date, whichever is earlier, to date of final completion.
 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect and Construction Manager.
 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 6. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 1. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 2. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.

3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Building flush-out.
 - m. Startup and placement into final use and operation.
 4. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Permitting.
 - b. Sitework.
 - c. Structural completion.
 - d. Temporary enclosure and space conditioning.
 - e. Permanent space enclosure.
 - f. Completion of mechanical installation.
 - g. Completion of electrical installation.
 - h. Substantial Completion.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
1. Unresolved issues.
 2. Unanswered Requests for Information.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
 5. Pending modifications affecting the Work and Contract Time.
- F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
- G. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
1. Use Microsoft Project, for Windows XP operating system.

2.2 STARTUP CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit startup, horizontal, bar-chart-type construction schedule within seven days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 15 days of date established for the Notice to Proceed. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in **10** percent increments within time bar.

2.4 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (see special reports).
 - 10. Stoppages, delays, shortages, and losses.
 - 11. Meter readings and similar recordings.
 - 12. Emergency procedures.
 - 13. Orders and requests of authorities having jurisdiction.
 - 14. Change Orders received and implemented.
 - 15. Construction Change Directives received and implemented.
 - 16. Services connected and disconnected.
 - 17. Equipment or system tests and startups.
 - 18. Partial completions and occupancies.
 - 19. Substantial Completions authorized.

- B. **Material Location Reports:** At bi-weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
 - 1. Material stored prior to previous report and remaining in storage.
 - 2. Material stored prior to previous report and since removed from storage and installed.
 - 3. Material stored following previous report and remaining in storage.
- C. **Site Condition Reports:** Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.5 SPECIAL REPORTS

- A. **General:** Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. **Reporting Unusual Events:** When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. **Contractor's Construction Schedule Updating:** At bi-weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate final completion percentage for each activity.
- B. **Distribution:** Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.

2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals

- required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings may be provided by Architect for Contractor's use in preparing submittals. Agreement and conditions for release of electronic digital data files is included at the end of this Specification Section. Digital files of the Architects' or Owners consultants may or may not be available. The Contractor shall contact the individual parties to determine availability, and conditions pertaining thereto, for release of digital data files.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
 5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned through Architect to Contractor.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification. PAPER SUBMITTALS WILL, FOR OTHER THAN DELEGATED DESIGN SUBMITTALS AND CERTIFICATES REQUIRING ORIGINAL SIGNATURES, SAMPLES AND/OR COLOR SELECTIONS, ONLY BE ACCEPTABLE IF ACCOMPANIED BY A CHECK IN THE AMOUNT OF \$500, PAYABLE TO THE ARCHITECT.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of subcontractor.
 - g. Name of supplier.
 - h. Name of manufacturer.
 - i. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Other necessary identification.
 4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

- a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.
 - a. Transmittal Form for Paper Submittals: Provide locations on form for the following information:
 - 1) Project name.
 - 2) Date.
 - 3) Destination (To:).
 - 4) Source (From:).
 - 5) Name and address of Architect.
 - 6) Name of Construction Manager.
 - 7) Name of Contractor.
 - 8) Name of firm or entity that prepared submittal.
 - 9) Names of subcontractor, manufacturer, and supplier.
 - 10) Category and type of submittal.
 - 11) Submittal purpose and description.
 - 12) Specification Section number and title.
 - 13) Specification paragraph number or drawing designation and generic name for each of multiple items.
 - 14) Drawing number and detail references, as appropriate.
 - 15) Indication of full or partial submittal.
 - 16) Transmittal number.
 - 17) Submittal and transmittal distribution record.
 - 18) Remarks.
 - 19) Signature of transmitter.

E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., 15-5033-061000.001.01). Resubmittals shall be differentiated by including the next number in sequence after the last decimal place (e.g., 15-5033- 061000.001.02).
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.

- c. Name and address of Architect.
- d. Name of Construction Manager.
- e. Name of Contractor.
- f. Name of firm or entity that prepared submittal.
- g. Names of subcontractor, manufacturer, and supplier.
- h. Category and type of submittal.
- i. Submittal purpose and description.
- j. Specification Section number and title.
- k. Specification paragraph number or drawing designation and generic name for each of multiple items.
- l. Drawing number and detail references, as appropriate.
- m. Location(s) where product is to be installed, as appropriate.
- n. Related physical samples submitted directly.
- o. Indication of full or partial submittal.
- p. Transmittal number.
- q. Submittal and transmittal distribution record.
- r. Other necessary identification.
- s. Remarks.

F. Options: Identify options requiring selection by Architect.

G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

- 1. Note date and content of previous submittal.
- 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
- 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- 4. **Resubmittal Fee: The Contractor shall be charged the sum of One Hundred Dollars and no cents (\$100.00) for each sheet of the resubmittal for each resubmittal, whether for action or record, beyond the second review by the Architect. This Resubmittal fee shall be in the form of a check made payable to the Architect and shall accompany the resubmittal.**

I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Submit electronic submittals as PDF electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 2. Action Submittals: Submit one PDF file of each submittal unless otherwise indicated. Architect will return one copy. Submit 6 paper copies of each submittal unless otherwise indicated. Architect will return one PDF file or two paper copies. (Fee will apply to paper copies.)
 3. Informational Submittals: Submit one PDF file of each submittal unless otherwise indicated. Architect will not return copies. Submit three paper copies of each submittal unless otherwise indicated. Architect will not return copies. (Fee will apply to paper copies)
 4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:

- a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 - 5. Submit Product Data before or concurrent with Samples.
 - 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted.
- 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 - 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).
 - 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
- 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 - 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 - 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.

4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
 5. Submit product schedule in the following format:
 - a. PDF electronic file.
 - b. Four paper copies of product schedule or list unless otherwise indicated. Architect will return one copy.
- F. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed

before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

- W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 ELECTRONIC SUBMITTALS

- A. Summary:
 - 1. Shop drawing and product data submittals shall be transmitted to Architect in electronic (PDF) format using Submittal Exchange, a website service designed specifically for transmitting submittals between construction team members.
 - 2. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
 - 3. The electronic submittal process is not intended for color samples, color charts, delegated design submittals required to be signed and sealed or physical material samples.
- B. Procedures:
 - 1. Submittal Preparation - Contractor may use any or all of the following options:
 - a. Subcontractors and Suppliers provide paper submittals to General Contractor who electronically scans and converts to PDF format.
 - b. Subcontractors and Suppliers provide paper submittals to Scanning Service which electronically scans and converts to PDF format.
 - 2. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer / product, dimensions and coordination of information with other parts of the work.
 - 3. Architect/Engineer review comments will be made available on the Submittal Exchange.
 - 4. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.
 - 5. Submit bound paper copies of reviewed submittals at project closeout for record purposes in accordance with Section 017839 – Project Record Documents.

2.3 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit four paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Division 01 Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents. **Stamp must indicate both review and approval.**

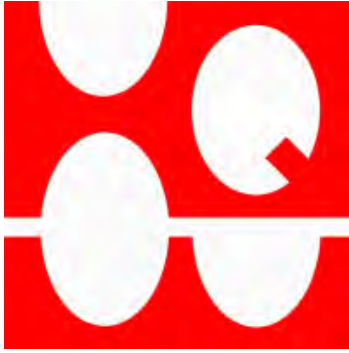
3.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:
 - 1. No Exceptions Taken
 - 2. Make Corrections Noted
 - 3. Amend and Resubmit
 - 4. Rejected. See remarks
- B. When "Make Corrections Noted" and "Amend and Resubmit" are marked, the item may be released but an amended copy(ies) shall be submitted. Copy(ies) shall be for a record only where item is in conformance with the Contract Documents except for minor variations to be corrected. Copy(ies) shall be submitted for re-review, and shall be considered a re-submittal, where notations indicate non-conforming items.
- C. Review is for conformance with design conception of the project and information given in the Contract Documents. The absence of correction on a separate item shall not indicate acceptance of an assembly in which the item functions unless so noted. Absence of correction shall not relieve the contractor of responsibility for any deviation from the requirements of the contract documents or for responsibility for errors or omissions in this drawing by submitting this

drawing the contractor represents that he is determined and verified all dimensions and field measurements, field construction criteria, materials, catalog numbers and similar data and that he has checked and coordinated this drawing with the requirements of the Contract Documents. All dimensions are this contractor's responsibility.

- D. Informational Submittals: Architect will review each submittal and will not return it or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- E. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- F. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- G. Submittals not required by the Contract Documents may be returned by the Architect without action.
- H. Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.**

END OF SECTION 013300



HQW ARCHITECTS L.L.C.

An Agreement between HQW Architects, LLC (HQW) and Purchaser for Transfer of Computer Aided Drafting (CAD) Files on Electronic Media and/or Prints (circle one) Prepared by HQW Architects, LLC

HQW: _____ Purchaser: _____

Address: _____

Phone: _____

Project No.: _____ Date: _____

Project Name: _____

Location: _____

HQW will provide the following CAD files dated _____ for the convenience of the Purchaser for general information purposes only:

1. _____

2. _____

3. _____

4. _____

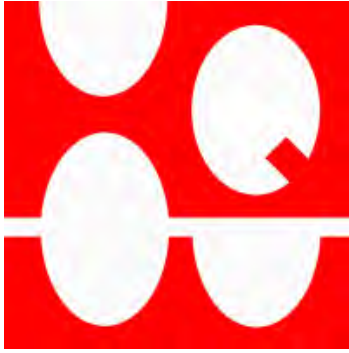
5. _____

Drawings were prepared on the following:

Software:

Version:

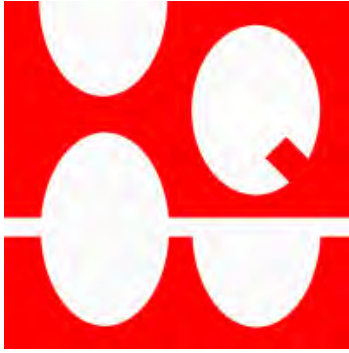
Purchaser shall pay HQW a service fee of: **Fifty dollars and no cents (\$50.00) per drawing.**



HQW ARCHITECTS L.L.C.

TERMS AND CONDITIONS:

1. HQW makes no representation as to the compatibility of the CAD files with any hardware or software.
2. Since the information set forth on the CAD files can be modified unintentionally or otherwise, HQW reserves the right to remove all indication of its ownership and/or involvement from each electronic display.
3. All information added to the drawings by the Purchaser shall be clearly distinguished from the original files.
4. Any information added by the Purchaser, which represents a proposed change to the original design, shall be clearly identified by flagging or other distinctive presentation.
5. All information on the CAD files and/or prints shall be considered instruments of service of HQW and shall not be used for other projects, for additions to this project, or for completion of this project by others. CAD files shall remain the property of HQW, and in no case shall the transfer of these files be considered a sale.
6. HQW makes no representation regarding the accuracy, completeness, or permanence of CAD files nor for their merchantability or fitness for a particular purpose. Addenda information or revisions made after the date indicated on the CAD files may not have been incorporated. In the event of a conflict between HQW's sealed contract drawings and CAD files, the sealed contract drawings shall govern. It is the Purchaser's responsibility to determine if any conflicts exist. The CAD files shall not be considered to be Contract Documents as defined by the General Conditions of the Contract for Construction.
7. The use of CAD files prepared by HQW shall not in any way negate the Purchaser's responsibility for coordination with other trades or for the proper checking and coordination of dimensions, details, member sizes and gage, and quantities of materials as required to facilitate complete and accurate fabrication and erection.
8. The Purchaser agrees to make no claim and hereby waive, to the fullest extent permitted by law, any claim or cause of action of any nature against HQW, its officers, directors, employees, agents or sub consultants arising out of or in connection with the use of the CAD files by the Purchaser.
9. The Purchaser shall, to the fullest extent permitted by law, indemnify, defend and hold harmless HQW and its sub consultants from any and all claims, damages, losses, expenses, penalties and liabilities of any kind, including attorney's fees and defense costs, arising out of or resulting from the use of the CAD files by the Purchaser, or by third party recipients of the CAD files from the Purchaser.
10. HQW believes that no licensing or copyright fees are due to others on account of the transfer of the CAD files, but to the extent any are, the Purchaser will pay the appropriate fees and hold HQW harmless from such claims as may arise.



HQW ARCHITECTS L.L.C.

11. Any purchase order number provided by the Purchaser is for Purchaser's accounting purposes only. Purchaser's purchase order terms and conditions are void and are not a part of this agreement.
12. Payment of the service fee is due upon request of the CAD files.
13. This agreement shall be governed by the laws of the principal place of business of HQW.

AUTHORIZED ACCEPTANCE

Purchaser

Print Name & Title

Date

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
 - 1. Divisions 02 through 33 Sections for specific test and inspection requirements.
- D. Special Tests and Inspections required by the Building Subcode can be found at the end of this Section.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to

show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Laboratory Mockups: Full-size physical assemblies constructed at testing facility to verify performance characteristics.
 2. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.
 3. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.
- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the

minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 ACTION SUBMITTALS

- A. Shop Drawings: For integrated exterior mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
 - 1. Indicate manufacturer and model number of individual components.
 - 2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.
- C. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- D. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.

1.7 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice of Award or Notice to Proceed, whichever is the earlier and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.
 - 1. Quality Control Plan shall address requirements for all special inspections.
- B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.

1. Project quality-control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 2. Special inspections required by authorities having jurisdiction and indicated on the "Statement of Special Inspections."
 3. Owner-performed tests and inspections indicated in the Contract Documents.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.8 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. **Factory-Authorized Service Representative's Reports:** Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- D. **Permits, Licenses, and Certificates:** For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.9 QUALITY ASSURANCE

- A. **General:** Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, and mockups, and laboratory mockups; do not reuse products on Project.
 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at Project.
 4. Demonstrate the proposed range of aesthetic effects and workmanship.
 5. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 7. Demolish and remove mockups when directed unless otherwise indicated.
- L. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Specification Sections in Divisions 02 through 33.

1.10 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. **Manufacturer's Technical Services:** Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. **Testing Agency Responsibilities:** Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform any duties of Contractor.
- G. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Delivery of samples to testing agencies.
 - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
 1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.11 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency and/or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in Statement of Special Inspections attached to this Section, and as follows:
 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

3.3 SPECIAL INSPECTIONS

- A. This Project will require special inspections as mandated by the Uniform Construction Code, State of New Jersey and the relevant subcodes. The Owner shall employ one or more special inspectors to provide inspections during the construction on the types of work listed in the Schedule of Special Inspections. The special inspector(s) shall be a qualified person who shall demonstrate competence to the satisfaction of the Authorities Having Jurisdiction, (AHJ) for the particular type of construction or operation requiring special inspection.
- B. The special inspectors shall keep records of all inspections and shall furnish inspection reports to the Construction Official and the Architect at maximum intervals of every two weeks. All discrepancies shall be brought to the **immediate** attention of the General Contractor and the Architect for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the Construction Official, the Architect and the design professional of record. A report of inspection documenting all of the project specific special inspections as well as any corrections required shall be submitted periodically to the Construction Official and the Architect at a frequency agreed upon by the permit applicant and the Construction Official. A final report documenting all special inspections, deficiencies and corrections shall be submitted to the Construction Official and the Architect at the completion of the Project. Final and periodic reports shall become a part of the Project Record Documents.
- C. Each Contractor and/or Subcontractor responsible for the construction of a seismic-force-resisting system, designated seismic system or seismic-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the building official and the Owner prior to the commencement of work on the system or component. The Contractors' statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.
- D. Job safety is solely the responsibility of the Contractor. Materials and activities to be inspected are not to include the Contractors' equipment and methods used to construct, erect or install the materials listed

3.4 SPECIAL TESTS AND INSPECTIONS

- A. General: Periodic inspections shall occur as the systems are installed and before being covered or concealed. The special inspector shall verify that the seismic attachment of components to building meets the approved shop drawings and IBC requirements.
- B. Where required, each Contractor and/or Subcontractor responsible for the construction of a seismic-force-resisting system, designated seismic system or seismic-resisting component listed

in the statement of special inspections shall submit a written statement of responsibility to the building official and the Owner prior to the commencement of work on the system or component. The Contractors' statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities.
- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities.
- D. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities.
- E. European Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities as referred to in that country or countries.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.
- B. Water Service: Owner will pay water-service use charges for water used by all entities for construction operations.
- C. Electric Power Service: Owner will pay electric-power-service use charges for electricity used by all entities for construction operations.
- D. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- E. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- C. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed by a qualified testing agency acceptable to authorities having jurisdiction and marked for intended location and application.

3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of **8** at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 017700 "Closeout Procedures".

PART 3 - EXECUTION

A. INSTALLATION, GENERAL

1. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
2. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.

C. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

1. Toilets: Use of Owner's existing toilet facilities will NOT be permitted.

E. Heating: Provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

F. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.

- G. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Connect temporary service to Owner's existing power source, as directed by Owner.
- H. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- I. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line for each field office.
 - 1. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Contractor's emergency after-hours telephone number.
 - e. Architect's office.
 - f. Engineers' offices.
 - g. Owner's office.
 - h. Principal subcontractors' field and home offices.
 - 2. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.
- J. Electronic Communication Service: Provide a desktop computer in the primary field office adequate for use by Architect and Owner to access Project electronic documents and maintain electronic communications.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 - 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 - 1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
- C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- D. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
 3. Identification Signs: Provide Project identification signs as indicated on Drawings.
 4. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
 5. Maintain and touchup signs so they are legible at all times.
- F. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- G. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings, requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.

4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Site Enclosure Fence: Before construction operations begin furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- F. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- G. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- H. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- I. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- J. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration to completed areas of the Work.
 1. Construct dustproof partitions with two layers of 6-mil (0.14-mm) polyethylene sheet on each side. Cover floor with two layers of 6-mil (0.14-mm) polyethylene sheet, extending sheets 18 inches (460 mm) up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
 2. Protect air-handling equipment.
 3. Provide walk-off mats at each entrance through temporary partition.
- K. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
 1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 MOISTURE AND MOLD CONTROL

- A. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- B. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace, or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- C. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use permanent HVAC system to control humidity.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 - 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
1. Store products to allow for inspection and measurement of quantity or counting of units.
 2. Store materials in a manner that will not endanger Project structure.

3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.
7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 3. See Divisions 02 through 33 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.
 6. Credit to be provided to the Owner.
- B. The Owner and the Architect have no obligation to accept comparable products and may summarily reject the Contractors' request.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
 - 9. Correction of the Work.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor or professional engineer.
- B. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
 - 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.

3. Products: List products to be used for patching and firms or entities that will perform patching work.
 4. Dates: Indicate when cutting and patching will be performed.
 5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
 - a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.
- D. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.5 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include, but are not limited to, the following:
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.
 - h. Fire-detection and -alarm systems.
 - i. Conveying systems.
 - j. Electrical wiring systems.
 - k. Operating systems of special construction.
 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or

decreased operational life or safety. Other construction elements include but are not limited to the following:

- a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Sprayed fire-resistive material.
 - e. Equipment supports.
 - f. Piping, ductwork, vessels, and equipment.
 - g. Noise- and vibration-control elements and systems.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- C. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding. Contractor shall ensure that cutting and patching in Noise Critical construction does not compromise acoustical performance of those constructions.
- D. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with requirements in Division 01 sustainable design requirements Section.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work.
 - 2. List of detrimental conditions, including substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before

fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Division 01 Section "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish limits on use of Project site.
 - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 4. Inform installers of lines and levels to which they must comply.
 - 5. Check the location, level and plumb, of every major element as the Work progresses.
 - 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 - 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.

- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect and Construction Manager before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Division 01 Section "Summary."

- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.

5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction and process equipment installation personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction and process equipment installation personnel.
 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 2. Preinstallation Conferences: Include Owner's construction and process equipment installation personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction and process equipment installation personnel if portions of the Work depend on Owner's construction.
 - a. Final building service connections shall be by the Contractor as part of the work of this Contract.

3.8 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 1. Remove liquid spills promptly.

2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Division 01 Section "General Commissioning Requirements."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."

3.10 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

- B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Disposing of nonhazardous construction waste.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 INFORMATIONAL SUBMITTALS

- A. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Division 01 Section "Execution" for progress cleaning of Project site.
 - 2. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Division 01 Section "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 4. Division 01 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
 - 5. Divisions 02 through 33 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete. **Do not prepare and submit Contractor's punch list prior to when items remaining to be completed can reasonably be expected to preclude the issuance of a Certificate of Substantial Completion.**
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Divisions 02 through 33 Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner's signature for receipt of submittals.
 - 5. Submit test/adjust/balance records.
 - 6. Submit sustainable design submittals required in Division 01 sustainable design requirements Section and in individual Division 02 through 33 Sections.
 - 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.

3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Division 01 Section "Demonstration and Training."
 6. Advise Owner of changeover in heat and other utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - a. The number of re-inspections shall be limited to one. **Additional inspections, if required, will be charged to the Contractor at the Architect's and his consultant's normal hourly rates. Costs for the same shall be deducted from the Contract Sum by Change Order. By entering into Contract, the Contractor agrees that such a Change Order will be promptly executed by him.**
 2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection

or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. **Additional inspections, if required, will be charged to the Contractor at the Architect's and his consultant's normal hourly rates. Costs for the same shall be deducted from the Contract Sum by Change Order. By entering into Contract, the Contractor agrees that such a Change Order will be promptly executed by him.**

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 1. Organize list of spaces in sequential order.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in one of the following formats:
 - a. MS Excel electronic file. Architect will return annotated file.
 - b. PDF electronic file. Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.

2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.

- d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - 1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
 - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - q. Leave Project clean and ready for occupancy.
- C. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.

2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Product maintenance manuals.
 - 5. Systems and equipment maintenance manuals.
- B. Related Requirements:
 - 1. Divisions 02 through 33 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following formats:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.

- a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.
- 2. Four paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two copies.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
 - 1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 - 1. List of documents.
 - 2. List of systems.
 - 3. List of equipment.
 - 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name and contact information for Contractor.
 - 6. Name and contact information for Architect.
 - 7. Name and contact information for Commissioning Authority.
 - 8. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 - 9. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
 - 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
 - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 - 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

- F. **Manuals, Paper Copy:** In addition to the electronic files, submit manuals in the form of hard copy, bound and labeled volumes.
1. **Binders:** Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders, if necessary, to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name and subject matter of contents. Indicate volume number for multiple-volume sets.
 2. **Dividers:** Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. **Protective Plastic Sleeves:** Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
 4. **Supplementary Text:** Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.
 5. **Drawings:** Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

- A. **Content:** Organize manual into a separate section for each of the following:
1. Type of emergency.
 2. Emergency instructions.
 3. Emergency procedures.
- B. **Type of Emergency:** Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
 2. Gas leak.
 3. Water leak.
 4. Power failure.
 5. Water outage.
 6. System, subsystem, or equipment failure.
 7. Chemical release or spill.

- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits.
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 - 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 - 2. Performance and design criteria if Contractor has delegated design responsibility.
 - 3. Operating standards.
 - 4. Operating procedures.
 - 5. Operating logs.
 - 6. Wiring diagrams.
 - 7. Control diagrams.
 - 8. Piped system diagrams.
 - 9. Precautions against improper use.
 - 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
 - 1. Product name and model number. Use designations for products indicated on Contract Documents.
 - 2. Manufacturer's name.
 - 3. Equipment identification with serial number of each component.
 - 4. Equipment function.
 - 5. Operating characteristics.
 - 6. Limiting conditions.
 - 7. Performance curves.
 - 8. Engineering data and tests.
 - 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
 - 1. Startup procedures.
 - 2. Equipment or system break-in procedures.
 - 3. Routine and normal operating instructions.
 - 4. Regulation and control procedures.
 - 5. Instructions on stopping.
 - 6. Normal shutdown instructions.

7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures,

maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

- B. **Source Information:** List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. **Manufacturers' Maintenance Documentation:** Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 - 1. Standard maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.
- D. **Maintenance Procedures:** Include the following information and items that detail essential maintenance procedures:
 - 1. Test and inspection instructions.
 - 2. Troubleshooting guide.
 - 3. Precautions against improper maintenance.
 - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - 5. Aligning, adjusting, and checking instructions.
 - 6. Demonstration and training video recording, if available.
- E. **Maintenance and Service Schedules:** Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 - 1. **Scheduled Maintenance and Service:** Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 - 2. **Maintenance and Service Record:** Include manufacturers' forms for recording maintenance.
- F. **Spare Parts List and Source Information:** Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. **Maintenance Service Contracts:** Include copies of maintenance agreements with name and telephone number of service agent.
- H. **Warranties and Bonds:** Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original project record documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared record Drawings in Division 01 Section "Project Record Documents."
- G. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Miscellaneous record submittals.
- B. Related Requirements:
 - 1. Division 01 Section "Closeout Procedures" for general closeout procedures.
 - 2. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Divisions 02 through 33 Sections for specific requirements for project record documents of the Work in those Sections.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit two sets of marked-up record prints.
 - a. Initial Submittal:
 - 1) Submit two paper-copy sets of marked-up record prints.
 - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit PDF electronic files of scanned record prints and three sets of prints.
 - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit three paper copies of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit three paper copies of each submittal.

1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
 2. Where record Product Data was submitted in electronic format, include sheets in manual so noting and provide three record CD's, one with each manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one paper copy and one annotated PDF electronic files and directories of each submittal.
- E. Reports: Submit written reports as requested by the Owner indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding archive photographic documentation.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or Construction Change Directive.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.

- n. Record information on the Work that is shown only schematically.
 - 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 - 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
- 1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
 - 2. Consult Architect, and Owner for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared record Drawings into record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- C. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
- 1. Format: Annotated PDF electronic file.
 - 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 - 3. Refer instances of uncertainty to Architect for resolution.
- D. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
- 1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Format: Annotated PDF electronic file with comment function enabled.
 - 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 - 4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 - 5. Note related Change Orders, record Product Data, and record Drawings where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file, paper copy or scanned PDF electronic file(s) of marked-up paper copy of Specifications. Verify Owner preference prior to preparation.

2.3 RECORD PRODUCT DATA AND SHOP DRAWINGS

- A. Preparation: Mark Product Data and Shop Drawings to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data and Shop Drawings as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data. Verify Owner preference prior to preparation. Provide one set of bound paper copies.
 - 1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
 - 1. Special attention is called to the periodic and final special inspection reports which shall be included in the Project Record Documents.
- B. Format: Submit miscellaneous record submittals as PDF electronic file, paper copy or scanned PDF electronic files of marked-up miscellaneous record submittals. Verify Owner preference prior to preparing submittal.

1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's and Owner's reference during normal working hours.

END OF SECTION 017839

SECTION 017900 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training video recordings.
- B. Related Requirements:
 - 1. Divisions 02 through 33 Sections and process equipment sections for specific requirements for demonstration and training for products in those Sections.

1.3 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Attendance Record: For each training module, submit list of participants and length of instruction time.
- C. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.4 QUALITY ASSURANCE

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 01 Section "Quality Requirements," experienced in operation and maintenance procedures and training.

- B. Pre-instruction Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
 - 1. Inspect and discuss locations and other facilities required for instruction.
 - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 - 3. Review required content of instruction.
 - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
 - 2. Documentation: Review the following items in detail:

- a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
- a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
- a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
- a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
- a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
- a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.

- f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
- 8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Division 01 Section "Operations and Maintenance Data."
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Owner will furnish Contractor with names and positions of participants.
- B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner with at least seven days' advance notice.
- C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- D. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

END OF SECTION 017900

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Demolition and removal of selected site elements.
 - 3. Salvage of existing items to be reused or recycled.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
 - 2. Section 017300 "Execution" for cutting and patching procedures.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.5 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property for dust control and for noise control. Indicate proposed locations and construction of barriers.
- C. Schedule of Selective Demolition Activities: Indicate the following:
 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 3. Coordination for shutoff, capping, and continuation of utility services.
 4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- D. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.
- E. Statement of Refrigerant Recovery (if applicable): Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- F. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.8 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.9 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1.10 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties. Notify warrantor before proceeding. Existing warranties include the following:
 - 1. There are no existing warranted systems.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
 - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Section 011000 "Summary."
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 4. Disconnect, demolish, and remove plumbing, and HVAC systems, equipment, and components indicated to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.

- C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Section 015000 "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden

- space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 5. Maintain adequate ventilation when using cutting torches.
 - 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 9. Dispose of demolished items and materials promptly.
- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in sections. Cut concrete at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
- C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.
- D. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Wood blocking, cants, and nailers.
 - 2. Plywood backing panels.

1.3 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.
 - 3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
 - 1. Preservative-treated wood.
 - 2. Fire-retardant-treated wood.
 - 3. Sheathing

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent testing agency, acceptable to authorities having jurisdiction, with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- B. Source Limitations for Fire-Retardant-Treated Wood: Obtain each type of fire-retardant-treated wood product through one source from a single producer.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
 - 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
- B. Wood Structural Panels:
 - 1. Plywood: PS 1 Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
 - 2. Oriented Strand Board: DOC PS 2.
 - 3. Thickness: As needed to comply with requirements specified but not less than thickness indicated.
 - 4. Comply with "Code Plus" provisions in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial."
 - 5. Factory mark panels according to indicated standard.
 - 6. Wood structural panels shall be fire retardant treated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment: All wood indicated as treated shall be treated with ACQ (Ammoniacal Copper Quaternary). CCA (Chromated Copper Arsenate) is not acceptable.
- B. Kiln-dry material after treatment to maximum moisture content of 19 percent for lumber and 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

3. Wood framing members less than 18 inches above grade.
4. Wood floor plates that are installed over concrete slabs directly in contact with earth.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, provide materials that comply with performance requirements in AWPAC20 (lumber) and AWPAC27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
 1. Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516, for plywood.
 2. Use treatment that does not promote corrosion of metal fasteners.
 3. Use Exterior type for exterior locations and where indicated.
 4. Use Interior Type A High Temperature (HT), unless otherwise indicated.

2.4 DIMENSION LUMBER

- A. General: Provide dimension lumber of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.

2.5 PLYWOOD BACKING PANELS

- A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2 inch thick.

2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM/A 153M.
 2. For wood preservative treated materials provide fasteners that are hot dip galvanized or stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: CABO NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1.
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

2.7 MISCELLANEOUS MATERIALS

- A. Isolation Membrane: The isolation membrane is used separate wood preservative treated material from incompatible materials such as aluminum or steel that has not been minimum hot dip galvanized.
1. EPDM Flashing: Manufacturer's standard flashing product formed from a terpolymer of ethylene-propylene diene, complying with ASTM D 4637, 0.040 inch thick.
- B. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by the flashing manufacturer for bonding flashing sheets to each other and to substrates.

PART 3 -EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. CABO NER-272 for power-driven fasteners.
 2. Published requirements of metal framing anchor manufacturer.
 3. Table 2304.10.1, "Fastening Schedule," in the IBC/2015 NJ Edition.
- E. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required. Fasteners for preservative treated lumber shall be hot dip galvanized or stainless steel.

3.2 WOOD GROUND, BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build anchor bolts into masonry during installation of masonry work. Where possible, secure anchor bolts to formwork before concrete placement.
- C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.
- D. Install isolation membrane where wood preservative treated materials would otherwise be in contact with incompatible materials.

END OF SECTION 061000

SECTION 062023 - INTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Interior trim, including interior door and sidelight frames.
- B. Related Requirements:

1.3 DEFINITIONS

- A. MDF: Medium-density fiberboard.
- B. MDO: Plywood with a medium-density overlay on the face.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained. Include chemical-treatment manufacturer's written instructions for finishing treated material.
 - 2. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.
 - 3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced before shipment to Project site to levels specified.
 - 4. Include copies of warranties from chemical-treatment manufacturers for each type of treatment.
- B. Samples for Initial Selection: For each type of product involving selection of colors, profiles, or textures.
- C. Samples for Verification:

1. For each species and cut of lumber and panel products with non-factory-applied finish, with 1/2 of exposed surface finished, 50 sq. in. (300 sq. cm) for lumber.
2. For each finish system and color of lumber and panel products with factory-applied finish, 50 sq. in. (300 sq. cm) for lumber.

1.5 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For fire-retardant-treated wood, from ICC-ES.
- B. Sample Warranty: For manufacturer's warranty.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation. Protect materials from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.
- B. Deliver interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and the following grading rules:
 1. NHLA: National Hardwood Lumber Association, "Rules for the Measurement and Inspection of Hardwood & Cypress."
- B. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.

1. For exposed lumber, mark grade stamp on end or back of each piece.
- C. Softwood Plywood: DOC PS 1.

2.2 INTERIOR TRIM

- A. Hardwood Lumber Trim for Transparent Finish (Stain or Clear Finish):
1. Species and Grade: Red oak; Clear; NHLA.
 2. Maximum Moisture Content: 10 percent.
 3. Finger Jointing: Not allowed.
 4. Gluing for Width: Use for lumber trim wider than 6 inches (150 mm).
 5. Veneered Material: Not allowed.
 6. Face Surface: Surfaced (smooth).
 7. Matching: Selected for compatible grain and color.

2.3 MISCELLANEOUS MATERIALS

- A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.
- B. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer for general carpentry use.
1. Wood glue shall have a VOC content of 30 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. Multipurpose Construction Adhesive: Formulation complying with ASTM D 3498 that is recommended for indicated use by adhesive manufacturer.
1. Adhesive shall have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.4 FABRICATION

- A. Back out or kerf backs of the following members except those with ends exposed in finished work:
1. Interior standing and running trim except shoe and crown molds.
- B. Ease edges of lumber less than 1 inch (25 mm) in nominal thickness to 1/16-inch (1.5-mm) radius and edges of lumber 1 inch (25 mm) or more in nominal thickness to 1/8-inch (3-mm) radius.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours.

3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, too small to fabricate with proper jointing arrangements, or with defective surfaces, sizes, or patterns.
- B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
 - 2. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
 - 3. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining interior finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.5-mm) maximum offset for reveal installation.
 - 4. Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

3.4 STANDING AND RUNNING TRIM INSTALLATION

- A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches (610 mm) long, except where necessary. Stagger joints in adjacent and related standing and running trim. Miter at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane backs of casings to provide uniform thickness across joints where necessary for alignment.

1. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
2. Install trim after gypsum-board joint finishing operations are completed.
3. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed carpentry work and fill holes.

3.5 ADJUSTING

- A. Replace interior finish carpentry that is damaged or does not comply with requirements. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.6 CLEANING

- A. Clean interior finish carpentry on exposed and semiexposed surfaces. Restore damaged or soiled areas and touch up factory-applied finishes, if any.

3.7 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 062023

SECTION 064113 - WOOD-VENEER-FACED ARCHITECTURAL CABINETS

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Architectural Wood Cabinets.
 - 2. Metal Trim.
 - 3. Shop finishing of architectural wood cabinets.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show details full size.
 - 2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 - 3. Show locations and sizes of cutouts and holes for electrical switches and outlets and other items installed in architectural wood cabinets.
 - 4. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.
 - 5. Apply AWI Quality Certification Program label to Shop Drawings.
- C. Samples for Initial Selection:
 - 1. Shop-applied transparent finishes.
 - 2. Metal Trim.
 - 3. Thermoset decorative panels.
- D. Samples for Verification:
 - 1. Lumber for transparent finish, not less than 5 inches (125 mm) wide by 12 inches (300 mm) long, for each species and cut, finished on one side and one edge.

2. Veneer leaves representative of and selected from flitches to be used for transparent-finished cabinets.
3. Corner pieces as follows:
 - a. Cabinet-front frame joints between stiles and rails, as well as exposed end pieces, 18 inches (450 mm) high by 18 inches (450 mm) wide by 6 inches (150 mm) deep.
 - b. Miter joints for standing trim.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and fabricator.
- B. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance. Shop is a certified participant in AWI's Quality Certification Program.
- B. Installer Qualifications: Certified participant in AWI's Quality Certification Program.
- C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 1. Build mockups of typical architectural wood cabinets as shown on Drawings.
 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver cabinets until painting and similar operations that could damage woodwork have been completed in installation areas. If cabinets must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.8 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install cabinets until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Environmental Limitations: Do not deliver or install cabinets until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 43 and 70 percent during the remainder of the construction period.

- C. Field Measurements: Where cabinets are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support cabinets by field measurements before being enclosed, and indicate measurements on Shop Drawings.
- D. Established Dimensions: Where cabinets are indicated to fit to other construction, establish dimensions for areas where cabinets are to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.9 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that wood-veneer-faced architectural cabinets can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 ARCHITECTURAL WOOD CABINETS, GENERAL

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of architectural wood cabinets indicated for construction, finishes, installation, and other requirements.
 - 1. Provide labels and certificates from AWI certification program indicating that woodwork, including installation, complies with requirements of grades specified.
 - 2. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.

2.2 WOOD CABINETS FOR TRANSPARENT FINISH

- A. Grade: Premium.
- B. Type of Construction: Frameless.
- C. Wood for Exposed Surfaces:
 - 1. Species: Red Oak
 - 2. Cut: Quarter – Sliced
 - 3. Grain Direction: Vert.
 - 4. Matching of Veneer Leaves: Slip match.
 - 5. Veneer Matching within Panel Face: Running match.
- D. Semiexposed and Concealed Surfaces: Thermoset Decorative Panels

2.3 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Wood Moisture Content: 8 to 13 percent.
- B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Medium-Density Fiberboard: ANSI A208.2, Grade 130.
 - 2. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde, Grade M-2-Exterior Glue.
 - 3. Softwood Plywood: DOC PS 1, medium-density overlay.
 - 4. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no urea formaldehyde.

2.4 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.
- B. Sliding Glass Door Track: Knappe & Vogt or equal aluminum double channel ball bearing tracks for 1/4" tempered glass.
- C. Glass: 1/4" fully tempered glass.
- D. Ratchet Glass Showcase Lock: Knappe & Vogt or equal showcase lock, one for each section.
- E. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; recessed metal standards with shelf rests.
- F. Metal Trim: Stainless Steel with #4 Satin finish.

2.5 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- C. Adhesives: Do not use adhesives that contain urea formaldehyde.

2.6 FABRICATION

- A. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

1. Corners of Cabinets: 1/16 inch (1.5 mm) unless otherwise indicated.
- B. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
 2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements before disassembling for shipment.
- C. Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
- D. Install glass to comply with applicable requirements in Section 088000 "Glazing" and in GANA's "Glazing Manual."

2.7 SHOP FINISHING

- A. General: Finish architectural wood cabinets at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.
- B. Transparent Finish:
 1. Grade: Premium.
 2. Finish: System - 4, water-based acrylic lacquer.
 3. Wash Coat for Closed-Grain Woods: Apply wash-coat sealer to cabinets made from closed-grain wood before staining and finishing.
 4. Staining: Match approved sample for color.
 5. Sheen: Satin, 31-45 gloss units measured on 60-degree gloss meter per ASTM D 523.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition cabinets to average prevailing humidity conditions in installation areas.
- B. Before installing cabinets, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install cabinets to comply with same grade as item to be installed.
- B. Assemble cabinets and complete fabrication at Project site to the extent that it was not completed in the shop.
- C. Install cabinets level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- D. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Where required, anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.
 - 1. For shop finished items use filler matching finish of items being installed.
- F. Cabinets: Install without distortion so sliding glass fits opening properly and is accurately aligned. Complete installation of hardware and accessory items as indicated.
- G. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.
 - 1. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats are applied in shop.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective cabinets, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean cabinets on exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064113

SECTION 081213 - HOLLOW METAL FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Standard and sound-rated hollow metal frames.

1.3 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings.
- B. Standard Hollow Metal Work: Hollow metal work fabricated according to ANSI/SDI A250.8.
- C. Custom Hollow Metal Work: Hollow metal work fabricated according to ANSI/NAAMM-HMMA 861.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, sound ratings, fire-resistance rating and finishes.
- B. Shop Drawings: Include the following:
 - 1. Elevations of each door design.
 - 2. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 - 3. Locations of reinforcement and preparations for hardware.
 - 4. Details of each different wall opening condition.
 - 5. Details of anchorages, joints, field splices, and connections.
 - 6. Details of accessories.
 - 7. Details of conduit and preparations for power, signal, and control systems.
- C. Other Action Submittals:
 - 1. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule.

1.5 INFORMATIONAL SUBMITTALS

- A. Oversize Construction Certification: For assemblies required to be fire rated and exceeding limitations of labeled assemblies.
- B. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of hollow metal door and frame assembly.

1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain hollow metal work from single source from single manufacturer.
- B. Sound-Rated Door Frame Assemblies: Provide assemblies complying with the STC rating of the partition in which they are located.
- C. Preinstallation Conference: Conduct conference at Project site.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
 - 1. Provide additional protection to prevent damage to finish of factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch- (102-mm-) high wood blocking. Do not store in a manner that traps excess humidity.
 - 1. Provide minimum 1/4-inch (6-mm) space between each stacked door to permit air circulation.

1.8 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.9 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Amweld Building Products, LLC.
 - 2. Ceco Door Products; an Assa Abloy Group company.
 - 3. Curries Company; an Assa Abloy Group company.
 - 4. Pioneer Industries, Inc.
 - 5. Steelcraft; an Ingersoll-Rand company.
 - 6. Or Approved Equal.

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.
- D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z (12G) coating designation; mill phosphatized.
 - 1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.
- G. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.
- H. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. (96- to 192-kg/cu. m) density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- I. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.3 STANDARD HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
- B. Interior Frames: Fabricated from metallic-coated sheet.
 - 1. Fabricate frames with mitered or coped corners.
 - 2. Fabricate frames as face welded unless otherwise indicated. Frames for precast/tilt-up concrete construction shall be punched and dimpled for anchorage.
 - 3. Frames for Level 4 Steel Doors: 0.067-inch- (1.7-mm-) thick steel sheet.
- C. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

2.4 FRAME ANCHORS

- A. Jamb Anchors:
 - 1. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch (1.0 mm) thick.
- B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch (1.0 mm) thick, and as follows:
 - 1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

2.5 STOPS AND MOLDINGS

- A. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated.

2.6 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.
- C. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 1. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
 - 2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 - 3. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.

4. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
5. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Stud-Wall Type: Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches (1524 mm) high.
 - 2) Four anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
 - 3) Five anchors per jamb from 90 to 96 inches (2286 to 2438 mm) high.
 - 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches (610 mm) or fraction thereof above 96 inches (2438 mm) high.
 - 5) Two anchors per head for frames above 42 inches (1066 mm) wide and mounted in metal-stud partitions.
6. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
 - b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
- D. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.
- E. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."
 1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
 2. Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.
 3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
 4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.7 STEEL FINISHES

- A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.
 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
 2. Field Painting: All hollow metal frames shall be field painted, color selected by Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness to the following tolerances:
 - 1. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - 2. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
 - 3. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - 4. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a perpendicular line from head to floor.
- C. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11.
 - 1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. At sound-rated openings, install frames in accordance with manufacturers' instructions.

- b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
 - c. Install frames with removable glazing stops located on secure side of opening.
 - d. Install door silencers in frames before grouting.
 - e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - f. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 - g. Field apply bituminous coating to backs of frames that are filled with grout containing antifreezing agents.
- 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
- 3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation behind frames.
- 4. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION 081213

SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Solid-core doors with wood-veneer faces.
 - 2. Factory finishing flush wood doors.

1.3 SUBMITTALS

- A. Product Data: For each type of door indicated. Include details of core and edge construction and trim for openings. Include factory-finishing specifications.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.
 - 1. Indicate dimensions and locations of mortises and holes for hardware.
 - 2. Indicate dimensions and locations of cutouts.
 - 3. Indicate requirements for veneer matching.
 - 4. Indicate doors to be factory finished and finish requirements.
 - 5. Indicate fire-protection ratings for fire-rated doors.
- C. Samples for Initial Selection: For factory-finished doors. Provide samples of both quarter sliced and plain sliced for approval.
- D. Samples for Verification:
 - 1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches (200 by 250 mm), for each material and finish.
 - 2. Frames for light openings, 6 inches (150 mm) long, for each material, type, and finish required
- E. Warranty: Sample of special warranty.
- F. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain flush wood doors from single manufacturer.
- B. Quality Standard: In addition to requirements specified, comply with AWI's "Architectural Woodwork Quality Standards Illustrated."
 - 1. Provide AWI Quality Certification Labels or an AWI letter of licensing for Project indicating that doors comply with requirements of grades specified.
- C. Preinstallation Conference: Conduct conference at Project site.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.
- B. Package doors individually in cardboard cartons and wrap bundles of doors in plastic sheeting.
- C. Mark each door on bottom rail with opening number used on Shop Drawings.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Warping (bow, cup, or twist) more than 1/4 inch (6.4 mm) in a 42-by-84-inch (1067-by-2134-mm) section.
 - b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch (0.25 mm in a 76.2-mm) span.
 - 2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
 - 3. Warranty Period for Solid-Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Algoma Hardwoods, Inc.
 - 2. Eggers Industries.
 - 3. Mohawk Flush Doors, Inc.; a Masonite company.
 - 4. VT Industries Inc.
 - 5. Or Approved Equal.

2.2 DOOR CONSTRUCTION, GENERAL

- A. WDMA I.S.1-A Performance Grade: Heavy Duty.
- B. Structural-Composite-Lumber-Core Doors:
 - 1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal, Face: 700 lbf (3100 N).
 - b. Screw Withdrawal, Edge: 400 lbf (1780 N).
- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
 - 1. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.
 - 2. Temperature-Rise Limit: At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
 - 3. Cores: Provide core specified or mineral core as needed to provide fire-protection rating indicated.
 - 4. Edge Construction: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed edges.
 - 5. Pairs: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Provide stiles with concealed intumescent seals. Comply with specified requirements for exposed edges.
 - 6. Pairs: Provide formed-steel edges and astragals with intumescent seals.
 - a. Finish steel edges and astragals with baked enamel same color as doors.
- D. Finish steel edges and astragals to match door hardware (locksets or exit devices).

2.3 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Solid-Core Doors:

1. Grade: Premium, with Grade AA faces.
2. Species: Red oak or White Oak.
3. Cut: Quarter sliced or Plain sliced as selected by Architect.
4. Match between Veneer Leaves: Slip match.
5. Assembly of Veneer Leaves on Door Faces: Running match.
6. Pair and Set Match: Provide for doors hung in the same opening.
7. Exposed Vertical and Top Edges: Same species as faces.
8. Core: Structural composite lumber.
9. Construction: Five or seven plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering. Faces are bonded to core using a hot press.
10. WDMA I.S.1-A Performance Grade: Heavy Duty.

2.4 LIGHT FRAMES

A. Wood Beads for Light Openings in Wood Doors: Provide manufacturer's standard wood beads as follows unless otherwise indicated.

1. Wood Species: Same species as door faces.
2. Profile: Manufacturer's standard shape or as approved by Architect.

B. Wood-Veneered Beads for Light Openings in Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire-protection rating indicated. Include concealed metal glazing clips where required for opening size and fire-protection rating indicated.

2.5 FABRICATION

A. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.

1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.

B. Openings: Cut and trim openings through doors in factory.

1. Light Openings: Trim openings with moldings of material and profile indicated.
2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Division 08 Section "Glazing."

2.6 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
 - 1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.
- B. Finish doors at factory.
- C. Finish doors at factory that are indicated to receive transparent finish.
- D. Transparent Finish:
 - 1. Grade: Premium.
 - 2. Finish: AWI conversion varnish system.
 - 3. Staining: As selected by Architect from manufacturer's full range.
 - 4. Effect: Filled finish.
 - 5. Sheen: Satin.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed door frames before hanging doors.
 - 1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 - 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Division 08 Section "Door Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.
- C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
 - 1. Clearances: Provide 1/8 inch (3.2 mm) at heads, jambs, and between pairs of doors. Provide 1/8 inch (3.2 mm) from bottom of door to top of decorative floor finish or

covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch (6.4 mm) from bottom of door to top of threshold unless otherwise indicated.

- a. Comply with NFPA 80 for fire rated doors.
 - 2. Bevel non-fire-rated doors 1/8 inch in 2 inches (3-1/2 degrees) at lock and hinge edges.
 - 3. Bevel fire-rated doors 1/8 inch in 2 inches (3-1/2 degrees) at lock edge; trim stiles and rails only to extent permitted by labeling agency.
- D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416

SECTION 087100 - DOOR HARDWARE & INDEX

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes door hardware for aluminum and glass doors, hollow metal frames, and solid core wood doors.

1.02 SUBMITTALS

A. Submit product data for each type of hardware, including manufacturer's specifications and installation instructions.

B. Provide hardware schedule organized by door number, coordinated with the door index.

C. Provide finish samples upon request.

1.03 QUALITY ASSURANCE

A. Hardware shall comply with applicable accessibility codes (ADA Standards).

B. Provide hardware from a single manufacturer where possible for consistency.

C. Coordinate finish with frame and door manufacturer.

PART 2 - PRODUCTS

2.01 DOOR INDEX

Door No.	Door Type	Function	Notes
202	Aluminum & Glass	Classroom Entry	Electric strike and card reader
203, 204, 205	Aluminum & Glass	Classroom Entry	Electric strike and card reader
203A-D, 204A-D, 208, 211	Aluminum & Glass	Passage	No access control
206, 207, 209, 210	Aluminum & Glass	Office Entry	Electric strike and card reader
202A	Hollow Metal & Solid Core	IT Room (Storage)	Secure lock, no access control
202B	Hollow Metal & Solid Core	Archive Room (Storage)	Secure lock, no access control

2.02 DOOR HARDWARE

A. General Requirements:

1. All hardware and frames shall have a black finish.
2. Hardware shall be high-quality commercial-grade products.

Hardware Group 1: Classroom Entry (Doors 202, 203, 204, 205)

Component	Description
Hinges	4.5" x 4.5" standard weight, ball bearing butt hinges, black finish (Hager BB1279 or similar).
Lockset	Schlage ND Series Lever Lockset with electrified function and large format interchangeable core, black finish.
Electric Strike	HES 5000, black finish.
Card Reader	HID multiCLASS SE, black finish.
Door Closer	LCN 4040XP, black finish.
Sound Seal	Pemko S88, black finish.
Threshold	Pemko 272A, black finish.
Miscellaneous	Wall bumper or door stop (Rockwood 406 or similar), black finish.

Hardware Group 2: Passage Function (Doors 203A-D, 204A-D, 208, 211)

Component	Description
Hinges	4.5" x 4.5" standard weight, ball bearing butt hinges, black finish (Hager BB1279 or similar).
Passage Set	Schlage ND Series Lever Passage Set (non-locking), black finish.
Door Closer	LCN 4040XP, black finish.
Sound Seal	Pemko S88, black finish.
Threshold	Pemko 272A, black finish.
Miscellaneous	Wall bumper or door stop (Rockwood 406 or similar), black finish.

similar), black finish.

Hardware Group 3: Office Function (Doors 206, 207, 209, 210)

Component	Description
Hinges	4.5" x 4.5" standard weight, ball bearing butt hinges, black finish (Hager BB1279 or similar).
Lockset	Schlage ND Series Lever Lockset with office function and large format interchangeable core, black finish.
Electric Strike	HES 5000, black finish.
Card Reader	HID multiCLASS SE, black finish.
Door Closer	LCN 4040XP, black finish.
Sound Seal	Pemko S88, black finish.
Threshold	Pemko 272A, black finish.
Miscellaneous	Wall bumper or door stop (Rockwood 406 or similar), black finish.

Hardware Group 4: Storage Function (Doors 202A, 202B)

Component	Description
Hinges	4.5" x 4.5" heavy-duty ball bearing butt hinges, black finish (Hager BB1279 or similar).
Lockset	Schlage ND Series Lever Lockset with storage function (key required for entry, non-locking from inside), black finish.
Door Closer	LCN 4040XP, black finish.
Kick Plate	Stainless steel kick plate, 8" high, black finish (Rockwood K1050 or similar).
Sound Seal	Pemko S88, black finish.
Threshold	Pemko 272A, black finish.
Miscellaneous	Wall bumper or door stop (Rockwood 406 or

similar), black finish.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install hardware per manufacturer's recommendations.
- B. Ensure proper alignment of hardware with frames and doors for smooth operation.
- C. Verify compatibility of electric strikes and card readers with access control system.

3.02 ADJUSTMENTS

- A. Adjust hardware for proper function after installation.
- B. Test and confirm operation of all electrified hardware and card readers.

3.03 CLEANING AND PROTECTION

- A. Clean all hardware surfaces to remove fingerprints, debris, and marks.
- B. Protect installed hardware from damage during construction.

END OF SECTION 087100

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Non-load-bearing steel framing systems for interior gypsum board assemblies.
 - 2. Suspension systems for interior gypsum ceilings, soffits, and grid systems.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Data shall indicate limiting heights for each specific construction, spacing, depth and base metal thickness. Provide required bracing.

1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For dimpled steel studs and runners and firestop tracks, from ICC-ES.
- B. System Reports, including manufacturers' recommendations for limiting heights, bracing and layers and thickness of materials indicating compliance with construction shown.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 FRAMING SYSTEMS

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
 - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
 - 2. Protective Coating: ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized unless otherwise indicated.
- B. Studs and Runners: ASTM C 645.
 - 1. Steel Studs and Runners:
 - a. Minimum Base-Metal Thickness: 0.042 inch (18 gauge) minimum.
 - b. Depth: As indicated on Drawings.
- C. Slip-Type Head Joints: Where indicated, provide one of the following:
 - 1. Single Long-Leg Runner System: ASTM C 645 top runner with 2-inch- (51-mm-) deep flanges in thickness not less than indicated for studs, installed with studs friction fit into top runner and with continuous bridging located within 12 inches (305 mm) of the top of studs to provide lateral bracing.
 - 2. Double-Runner System: ASTM C 645 top runners, inside runner with 2-inch- (51-mm-) deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.
 - 3. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.
 - a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Dietrich Metal Framing; SLP-TRK Slotted Deflection Track.
 - 2) MBA Building Supplies; Slotted Deflecto Track.
 - 3) Steel Network Inc. (The); VertiClip SLD Series.
 - 4) Superior Metal Trim; Superior Flex Track System (SFT).
 - 5) Telling Industries; Vertical Slip Track.
- D. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Fire Trak Corp.; Fire Trak System.
 - b. Grace Construction Products; FlameSafe FlowTrak System.
 - c. Metal-Lite, Inc.; The System.
 - d. Steel Network Inc. (The); VertiClip SLD Series.

- E. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
 - 1. Minimum Base-Metal Thickness: 0.018 inch (0.45 mm).
 - 2. Minimum Base-Metal Thickness for backing plates supporting plumbing fixtures, cabinetry, grab bars and similarly wall hung construction shall be 0.053 inch (1.34-mm).
- F. Cold-Rolled Channel Bridging: Steel, 0.053-inch (1.34-mm) minimum base-metal thickness, with minimum 1/2-inch- (13-mm-) wide flanges.
 - 1. Depth: 1-1/2 inches (38 mm).
 - 2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches (38 by 38 mm), 0.068-inch- (1.72-mm-) thick, galvanized steel.
- G. Hat-Shaped, Rigid Furring Channels: ASTM C 645.
 - 1. Minimum Base-Metal Thickness: 0.033 inch (0.84 mm).
 - 2. Depth: As indicated on Drawings.
- H. Resilient Furring Channels: 1/2-inch- (13-mm-) deep, steel sheet members designed to reduce sound transmission.
 - 1. USG RC-1 or equal by Uni-Mast.
 - 2. Configuration: Asymmetrical.
- I. Cold-Rolled Furring Channels: 0.053-inch (1.34-mm) uncoated-steel thickness, with minimum 1/2-inch- (13-mm-) wide flanges.
 - 1. Depth: As indicated on Drawings.
 - 2. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum uncoated-steel thickness of 0.033 inch (0.8 mm).
 - 3. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- (1.59-mm-) diameter wire, or double strand of 0.048-inch- (1.21-mm-) diameter wire.
- J. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches (32 mm), wall attachment flange of 7/8 inch (22 mm), minimum uncoated-metal thickness of 0.018 inch (0.45 mm), and depth required to fit insulation thickness indicated. Depth as indicated on the Drawings

2.3 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards.
 - 1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.
- B. Isolation Strip at Exterior Walls: Provide the following:
 - 1. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch (3.2 mm) thick, in width to suit steel stud size.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordination with Sprayed Fire-Resistive Materials:
 - 1. Before sprayed fire-resistive materials are applied, attach offset anchor plates or ceiling runners (tracks) to surfaces indicated to receive sprayed fire-resistive materials. Where offset anchor plates are required, provide continuous plates fastened to building structure not more than 24 inches (610 mm) o.c.
 - 2. After sprayed fire-resistive materials are applied, remove them only to extent necessary for installation of non-load-bearing steel framing. Do not reduce thickness of fire-resistive materials below that required for fire-resistance ratings indicated. Protect adjacent fire-resistive materials from damage.

3.3 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754.
 - 1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 INSTALLING FRAMED ASSEMBLIES

- A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
 - 1. Single-Layer Application: 16 inches (406 mm) o.c. unless otherwise indicated.
 - 2. Multilayer Application: 16 inches (406 mm) o.c. unless otherwise indicated.
 - 3. Tile Backing Panels: 16 inches (406 mm) o.c. unless otherwise indicated.

- B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
- C. Install studs so flanges within framing system point in same direction.
- D. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
 - 1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 - 2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - a. Install two studs at each jamb unless otherwise indicated.
 - b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch (13-mm) clearance from jamb stud to allow for installation of control joint in finished assembly.
 - c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
 - 3. Other Framed Openings: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
 - 4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
 - a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
 - 5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.
 - 6. Curved Partitions:
 - a. Bend track to uniform curve and locate straight lengths so they are tangent to arcs.
 - b. Begin and end each arc with a stud, and space intermediate studs equally along arcs. On straight lengths of no fewer than two studs at ends of arcs, place studs 6 inches (150 mm) o.c.
- E. Direct Furring:
 - 1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches (610 mm) o.c.
- F. Z-Furring Members:
 - 1. Erect insulation, specified in Section 072100 "Thermal Insulation," vertically and hold in place with Z-furring members spaced 24 inches (610 mm) o.c.

2. Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches (610 mm) o.c.
 3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw-attach short flange of furring channel to web of attached channel. At interior corners, space second member no more than 12 inches (305 mm) from corner and cut insulation to fit.
- G. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Interior gypsum board.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For the following products:
 - 1. Trim Accessories: Full-size Sample in 12-inch- (300-mm-) long length for each trim accessory indicated.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.5 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 INTERIOR GYPSUM BOARD

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. American Gypsum.
 - 2. Georgia-Pacific Gypsum LLC.
 - 3. Lafarge North America Inc.
 - 4. National Gypsum Company.
 - 5. USG Corporation.
 - 6. Or Approved Equal.
- B. Gypsum Wallboard: ASTM C 1396/C 1396M.
 - 1. Thickness: As noted, or 5/8 inch minimum if not noted.
 - 2. Long Edges: Tapered.
- C. Gypsum Board, Type X: ASTM C 1396/C 1396M.
 - 1. Thickness: 1/2 inch (12.7 mm) and 5/8 inch (15.9 mm) as noted.
 - 2. Long Edges: Tapered.
- D. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.
 - 1. Core: Regular type or Type X as indicated.
 - 2. Long Edges: Tapered.
 - 3. Mold Resistance: ASTM D 3273, score of 10.
- E. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

1. Thickness: 1/2 inch (12.7 mm) non-sag type or as noted on the drawings.
2. Long Edges: Tapered.

2.4 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
 1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc or plastic.
 2. Shapes:
 - a. Cornerbead.
 - b. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - c. L-Bead: L-shaped; exposed long flange receives joint compound.
 - d. Expansion (control) joint.

2.5 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 1. Interior Gypsum Board: Paper.
- C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
 3. Fill Coat: For second coat, use drying-type, all-purpose compound.
 4. Finish Coat: For third coat, use drying-type, all-purpose compound.
 5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.

2.6 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

- C. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
 - 1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
- D. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Accumetric LLC; BOSS 824 Acoustical Sound Sealant.
 - b. Grabber Construction Products; Acoustical Sealant GSC.
 - c. Pecora Corporation; AC-20 FTR.
 - d. Specified Technologies, Inc.; Smoke N Sound Acoustical Sealant.
 - e. USG Corporation; SHEETROCK Acoustical Sealant.
- E. Thermal Insulation: As specified in Division 07 Section "Thermal Insulation."
- F. Vapor Retarder: As specified in Division 07 Section "Thermal Insulation."
- G. Resilient Channels: USG RC-1 or equal by Uni-Mast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

- C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
- D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.
- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc., except in chases braced internally).
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- I. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.
- J. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

3.3 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Wallboard Type: Vertical surfaces unless otherwise indicated.
 - 2. Type X: As indicated on Drawings and where required for fire-resistance-rated assembly.
 - 3. Moisture- and Mold-Resistant Type: As indicated on Drawings and in toilet and locker rooms.
- B. Single-Layer Application:

1. On partitions/walls, apply gypsum panels vertically (parallel to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
 - b. At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.
2. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.
- C. Interior Trim: Install in the following locations:
 1. Cornerbead: Use at outside corners.
 2. LC-Bead: Use at exposed panel edges.
 3. L-Bead: Use where indicated.

3.5 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
 1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
 2. Level 5: At panel surfaces that will be exposed to view unless otherwise indicated.
 - a. Primer and its application to surfaces are specified in other Division 09 Sections.
 3. Level 5: At curved surfaces and where indicated.
 - a. Primer and its application to surfaces are specified in Section 099100 "Painting."

3.6 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.2 SUMMARY

A. Section Includes

1. Acoustical ceiling panels
2. Exposed grid suspension system
3. Wire hangers, fasteners, main runners, cross tees, and wall angle moldings
4. Perimeter Trim

B. Related Sections

1. Section 09 50 00 - Ceilings
2. Section 09 51 14 – Acoustical Fabric Faced Panel Ceilings
3. Section 09 51 23 – Acoustical Tile Ceilings
4. Section 09 53 00 - Acoustical Ceiling Suspension Assemblies
5. Section 09 20 00 - Plaster and Gypsum Board
6. Section 01 81 13 - Sustainable Design Requirements
7. Section 01 81 19 - Indoor Air Quality Requirements
8. Section 02 42 00 - Removal and Salvage of Construction Materials
9. Division 23 - HVAC Air Distribution
10. Division 26 - Electrical

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM A 1008 Standard Specification for Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability
2. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
3. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process
4. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
5. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings
6. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels
7. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
8. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials
9. ASTM E 580 Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint
10. ASTM E 1111 Standard Test Method for Measuring the Interzone Attenuation of Ceilings Systems
11. ASTM E 1414 Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum
12. ASTM E 1264 Classification for Acoustical Ceiling Products

B. International Building Code

C. ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality

D. NFPA 70 National Electrical Code

E. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures

F. International Code Council-Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components

G. International Code Council-Evaluation Services Report - Seismic Engineer Report

- 1. ESR 1308 - Armstrong Suspension Systems
- H. International Association of Plumbing and Mechanical Officials - Seismic Engineer Report
 - 1. 0244 - Armstrong Single Span Suspension System
- I. California Department of Public Health CDPH/EHLB/Standard Method v1.2 2017
- J. LEED - Leadership in Energy and Environmental Design is a set of rating systems for the design, construction, operation, and maintenance of green buildings
- K. International Well Building Standard
- L. Mindful Materials
- M. Living Building Challenge
- N. U.S. Department of Agriculture BioPreferred program (USDA BioPreferred).
- O. Clean Rooms up to ISO Class 5 (Class 100)

1.4 SYSTEM DESCRIPTION

- A. Continuous/Wall-to-wall

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of acoustical ceiling unit and suspension system required.
- B. Samples: Minimum 6-inch x 6-inch samples of specified acoustical panel; 8-inch-long samples of exposed wall molding and suspension system, including main runner and 4-foot cross tees.
- C. Shop Drawings: Layout and details of acoustical ceilings show locations of items that are to be coordinated with or supported by the ceilings.
- D. Acoustical Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry an approved independent laboratory classification, such as Underwriter's Laboratory (UL), of NRC, CAC, and AC.
 - 1. If the material supplied by the acoustical subcontractor does not have an independent laboratory classification of acoustical performance on every carton, subcontractor shall be required to send material from every production run appearing on the job to an independent or NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must

be removed, disposed of, and replaced with complying product at the expense of the Contractor performing the work.

1.6 SUSTAINABLE MATERIALS

- A. Transparency: Manufacturers will be given preference when they provide documentation to support sustainable requirements for the following: Material ingredient transparency, Removal of Red List Ingredients per LBCV3, Life Cycle impact information, Low-Emitting Materials, and Clean Air performance.
 - 1. Health Product Declaration (HPD). The end use product has a published, complete Health Product Declaration with disclosure at a minimum of 1000ppm of known hazards in compliance with the Health Product Declaration Open Standard.
 - 2. Declare Label. The end use product has a published Declare label by the International Living Future Institute with disclosure of 100 ppm with a designation of Red List Free or Compliant (less than 1% proprietary ingredients).
 - 3. Low Emitting products with VOC emissions data. Preference will be given to manufacturers that can provide emissions data showing their products meet any of the following: CDPH/EHLB/Standard Method v1.2-2017; Indoor Air Quality Certified to SCS-105 v4.2-2023
 - 4. Life cycle analysis. Products that have communicated lifecycle data through Environmental Product Declarations (EPDs) will be preferred.
 - 5. Biobased products derived from plants and other renewable materials will be given preference. Provide USDA Certified Biobased Product certification.
 - 6. End of Life Programs/Recycling: Where applicable, manufacturers that provide the option for recycling of their products into new products at end-of-life through take-back programs will be preferred.

1.7 QUALITY ASSURANCE

- A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer to ensure fit and function.
- B. Installer Qualifications: Company specializing in performing specified work type, a minimum of three years of documented experience, and approved by the manufacturer.
- C. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.

- D. Surface Burning Characteristics: Tested per ASTM E 84 and complying with ASTM E 1264 Classification.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical ceiling units carefully to avoid chipping edges or damaging units in any way.

1.9 WARRANTY

- A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:
 - 1. Acoustical Panels with HumiGuard® Max and HumiGuard® Plus performance: sagging and warping
 - 2. Acoustical panels with BioBlock® performance: growth of mold and mildew
 - 3. Grid System: rusting and manufacturer's defects
- B. Warranty Period:
 - 1. Ceiling System: Thirty (30) years from date of substantial completion
- C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.10 MAINTENANCE

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
 - 1. Acoustical Ceiling Units: Furnish quality of full-size units equal to 5.0 percent of amount installed.
 - 2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 2.0 percent of amount installed.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Ceiling Panels:

1. Armstrong World Industries, Inc.
2. Certainteed Saint-Gobain
3. Or approved equal.

B. Suspension Systems:

1. Armstrong World Industries, Inc.
2. Certainteed Saint-Gobain
3. Or approved equal.

2.2 ACOUSTICAL CEILING UNITS

A. Acoustical Panel Ceilings

1. Surface Texture: Smooth Texture
2. Composition: Mineral Fiber
3. Color: White & Custom Blue As Shown
4. Size: 24 in x 24 in
5. Edge Profile: 15/16” Square Tegular
6. Noise Reduction Coefficient (NRC) ASTM C 423 Classified w/ UL label on product carton: 0.80
7. Ceiling Attenuation Class (CAC): ASTM E1414/E1414M; Classified with UL label on product carton: 38
8. Articulation Class (AC): ASTM E 1111; Classified with UL label on product carton: 170
9. Flame Spread: ASTM E 1264; Class A
10. Light Reflectance (LR) White Panel: ASTM E 1477; 0.85
11. Dimensional Stability: HumiGuard Plus
12. Recycle Content: Up to 85% total recycled content. (Total recycled content: pre-consumer, post-consumer and post-industrial)
13. Material Ingredient Transparency: Health Product Declaration (HPD); Declare Label
14. Life Cycle Assessment: Third Party Certified Environmental Product Declaration (EPD)
15. Indoor Air Quality Certified to SCS-105 v4.2-2023

16. USDA Certified Biobased Product
17. Basis of Design: **Calla Health Zone, item number 2230**, as manufactured by Armstrong World Industries, Inc.

2.3 METAL SUSPENSION SYSTEMS

- A. Components: Main beams and cross tees, base metal and end detail, fabricated from commercial quality hot dipped galvanized steel complying with ASTM A 653. Main beams and cross tees are double-web steel construction exposed flange design. Exposed surfaces chemically cleansed, capping prefinished galvanized steel in baked polyester paint. Main beams and cross tees shall have rotary stitching.
 1. Structural Classification: ASTM C 635 Intermediate or Heavy Duty.
 2. Color: White or match the actual color of the selected ceiling tile, unless noted otherwise.
 3. Sustainability: Environmental Product Declaration (EPD), Health Product Declaration (HPD)
 4. Basis of Design
 - i. Prelude XL 15/16" Exposed Tee as manufactured by Armstrong World Industries, Inc.
- B. Attachment Devices: Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.
- C. Wire for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft annealed, with a yield stress load of at least three times design load, but not less than 12 gauge.
- D. Edge Moldings as manufactured by Armstrong World Industries, Inc.
- E. AXIOM Trim & Transitions as manufactured by Armstrong World Industries, Inc.
www.armstrongceilings.com/axiom
- F. Accessories as manufactured by Armstrong World Industries, Inc.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations. (Exception: HumiGuard Max Ceilings)

3.2 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.
- B. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.
 - 1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

3.3 INSTALLATION

- A. Follow manufacturer installation instructions.
- B. Install suspension system and panels in accordance with the manufacturer's instructions, and in compliance with ASTM C 636 and with the authorities having jurisdiction.
- C. Suspend main beam from overhead construction with hanger wires spaced 4 feet on center along the length of the main runner. Install hanger wires plumb and straight.
- D. Install wall moldings at intersection of suspended ceiling and vertical surfaces. Miter corners where wall moldings intersect or install corner caps.
- E. For reveal edge panels: Cut and reveal or rabbet edges of ceiling panels at border areas and vertical surfaces.
- F. Install acoustical panels in coordination with suspended system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings.

3.4 ADJUSTING AND CLEANING

- A. Replace damaged and broken panels.
- B. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove any ceiling products that cannot be successfully cleaned and or repaired. Replace with attic stock or new product to eliminate evidence of damage.

END OF SECTION 095113

SECTION 095400 – FABRIC CELING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. LEED Data: www.ecomedes.com
- 2. Perforated (Tavola Panels) and non-perforated felt ceiling panels
- 3. Suspension systems
- 4. Accessories: provide other necessary items including devices for attachment overhead construction, secondary members, splines, splices, connecting clips, wall connectors, wall angles, and other devices required for a complete installation.
- 5. Supplemental support framing: Provide fully engineered secondary framing as required to meet code, conforming to layout shown in drawings, to support direct hung felt ceilings suspension system.

- B. Related Sections / Work:

- 1. Sections 05 40 00 – Cold-Formed Metal Framing
- 2. Sections 09 20 00 – Plaster and Gypsum Board
- 3. Sections 09 50 00 – Acoustical Ceilings
- 4. Sections 09 90 00 – Paintings and Coatings
- 5. Division 23 – Heating, Ventilating and Air Conditioning
- 6. Division 26 – Electrical

- C. This Section covers the general requirements only for Acoustical Felt Ceilings as shown on the drawings. The supplying and installation of additional accessory features and other items not specifically mentioned herein, but which are necessary to make a complete installation, shall also be included or clarified accordingly.

- D. Qualification Data:

- 1. Test Reports: Certified reports from independent agency substantiating structural compliance to governing code requirements.

2. Certificates:
 - a. Data substantiating manufacturer and installer qualifications.
 - b. Certified data attesting fire rated materials comply with specifications.
3. Manufacturer's Instructions: Detailed installation instructions and maintenance data.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. E 84 – "Standard Test Method for Surface Burning Characteristics of Building Materials"
2. E 488 – "Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements"
3. B 209 – "Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate"
4. C 423 – "Sound Absorption and Sound Absorption Coefficients by Reverberation Room Method"
5. E 580 – "Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Moderate Seismic Restraint"
6. C 635 – "Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings"
7. C 636 – "Recommended Practice for Installation of Metal Ceiling Suspensions Systems for Acoustical and Lay-in Panels"
8. A 641 – "Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire"
9. A 653 – "Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip process"
10. E 1264 – "Classification for Acoustical Ceiling Products"
11. E 1477 – "Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by use of Integrating-Sphere Reflectometers"
12. D 1044 – "Practice for Abrasion Resistance"
13. D 1002 – "Practice for Adhesion Resistance"

B. Cradle-to-Cradle Bronze Certified

C. LEED-CI 2009: Applicable LEED Environmental Categories and Credits and performance requirements as indicated in LEED for Commercial Interiors 2009:

1. Material and Resources (MR)
 - a. MRc4 – Building Product Disclosure and Optimization – Material Ingredients
2. Indoor Environmental Quality (IEQ)

- a. IEQc4.6 – Low-Emitting Materials – Ceiling and Wall Systems
- b. IEQpc24 – Acoustics
- D. LEED v4 ID+C: Applicable LEED v.4 Environmental Categories and Credits and performance requirements as indicated in LEED v4 for Interior Design + Coordination:
 - 1. MR Credit: Building Product Disclosure & Optimization – Material Ingredients
 - 2. EQ Credit: Low-Emitting Materials
 - 3. EQ Credit: Indoor Air Quality Assessment
 - 4. EQ Credit: Acoustic Performance

1.4 SUBMITTALS

- A. Product Data: Manufacturer's published literature, including specifications.
- B. LEED Submittal Data: Manufacturer's product data for each product specified in this section per ecoscorecard.com.
- C. Product Certification: Manufacturer's certifications that products comply with specified requirements and governing codes including product data, laboratory test reports and research reports showing compliance with specified standards.
- D. Shop Drawings: Submit shop drawings for reflected ceiling plans (RCP's), drawn to scale, and indicating penetrations and ceiling mounted items. Show the following details:
 - 1. Reflected Ceiling Plan(s): Indicating felt ceiling layout, ceiling mounted items and penetrations.
 - 2. Suspension System, Carrier, and Component Layout.
 - 3. Details of system assembly and connections to building components.
- E. Samples for Verification: Full-size units (or as specified below) of each type of ceiling assembly indicated; in sets for each color, texture, and pattern specified, showing the full range of variations expected in these characteristics. Submit samples for each type specified.
 - 1. 11" long felt panel units.
 - 2. 11" long samples of each suspension component.

1.5 QUALITY ASSURANCE

- A. Manufacturer/Installer Qualifications:
 - 1. Provide felt ceiling system and suspension system components produced by a single manufacturer to provide consistent quality in appearance and physical properties, without delaying the work.

2. Perform installations using a firm with installers having no less than 3 years of successful experience on projects of similar size and requirements.

B. Regulatory Requirements:

1. Fire Rating Performance Characteristics: Install system to provide a flame spread of 0 - 25, complying with certified testing to ASTM E 84.
2. Structural Criteria: Install and certify system to comply with structural and wind load requirements of governing codes.
3. Installation Standard for Suspension System: Comply with ASTM C 636.

- C. Pre-installation Conference: Conduct a conference, prior to start of installation, to review system requirements, shop drawings, and all coordination needs.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver system components in manufacturer's original unopened packages, clearly labeled.
- B. Store components in fully enclosed dry space. Carefully place on skids, to prevent damage from moisture and other construction activities.
- C. Handle components to prevent damage to surfaces and edges, and to prevent distortion and other physical damage.

1.7 PROJECT CONDITIONS

- A. Begin system installations only after spaces are enclosed and weather-tight, and after all wet work and overhead work have been completed.
- B. Prior to starting installations, allow materials to reach ambient room temperature and humidity intended to be maintained for occupancy.

1.8 WARRANTY

- A. Provide specified manufacturer's warranty against defects in workmanship, discoloration, or other defects considered undesirable by the Architect or Employer.
- B. This warranty shall remain in effect for a minimum period of one (1) year from date of initial acceptance.

1.9 MAINTENANCE & EXTRA MATERIALS

- A. Maintenance Instructions: Provide manufacturer's standard maintenance and cleaning instructions for finishes provided. Given the unique and special nature of our HeartFelt™ ceiling product, steps should be taken (before and during installation, as well as over the lifetime of the ceiling) to avoid or minimize static and the accumulation of dust, lint, dirt or airborne particles on or around the felt. Hunter Douglas does not warrant against or take responsibility for any such static or accumulation.

- B. Extra Materials: Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels describing contents. Only typical system components are included with attic stock.
 - 1. Acoustical Felt Ceiling Pan Units: Full-size units equal to two percent (2%) of amount installed.
 - 2. Ceiling Suspension System Components: Quantity of each grid and exposed component equal to two percent (2%) of amount installed.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Provide Combi-Line which includes Tavola Panels and HeartFelt™ linear felt panel ceiling system. Tavola Panels are manufactured by CertainTeed Architectural and HeartFelt panels are manufactured by Hunter Douglas exclusively supplied from CertainTeed Architectural; 5015 Oakbrook Parkway, Suite 100, Norcross, GA 30093. Tel: (800) 366-4327;
www.certainteed.com/architectural

Heartfelt™ is a trademark of Hunter Douglas Inc. used with permission

- B. Substitutions not permitted

2.2 SYSTEM MATERIALS

- A. Linear felt & metal panel ceiling system for interior installations:
- B. HeartFelt - Square Edge Felt Panel Profile Type: .090" thick PES (polyester) felt with square edges.
 - 1. Panel Profile: (1-9/16" (40mm) wide x 4-1/8" (105mm) deep profile)
 - 2. Panel length: *Varies max. = 96" see Reflected Ceiling Plan*
- C. Perforations: perforated only
- D. Panel Finish:
 - 1. HeartFelt Earth Tones (square edge 1-9/16" (40mm) wide x 2-3/16" (55mm) deep profile)
 - a. Crème 7575F
 - b. Umber 7579F
- E. Tavola Panels - Material thickness per manufacturer's recommendations.
 - 1. Panel Dimensions (standard shown):
 - a. 1-9/16" wide by high 4-3/16"
 - 2. Contact manufacturer for other dimensions.

3. Panel Length *Varies max. = 96" see Reflected Ceiling Plan*
- G. Perforations available on painted finish options only (Tavola panels):
 4. Non-Perforated
- H. Panel Finish:
 1. 40TL55 – 0280 Cotton White
 2. 40TL55 – 8458 Farm Maple
- I. Carrier Module: *2-3/8"; 60mm, Reveal width 13/16", Pattern width 2' 4 3/8"*
 1. Color= black

2.3 ACCESSORY MATERIALS

- H. Panel: End Plugs
- I. Hanger Brackets: Splice/hanger bracket connectors
- J. Acoustic Material (*1" thick glass fiber, 1-1/2 pcf density, polywrapped*)
 1. Apparent NRC Rating: ***Upon Request***
 2. Carrier: Roll-formed aluminum section with hook-shaped tabs spaced to receive ceiling panels. Finish: (*black – factory-applied enamel*). Carrier types: Standard.
 - a. Standard Carrier: designed for HeartFelt panels with the same elevation. Roll-formed aluminum section with hook-shaped tabs spaced to receive ceiling panels. All tabs at the same height for Ceiling panel to remain on same plain. Finish: (*black – factory-applied enamel*).
 3. Hangers:
 - a. Hanger Wire: 12 gage galvanized carbon steel hanger wire.
 - b. Threaded Rod
 - c. Aircraft Cable
 4. Seismic Compression Struts: 1-1/2" (38 mm) deep, 16 Ga., cold-rolled steel "C" channels.

2.4 ACCESSORY MATERIALS

- H. Panel Splice: Formed aluminum insert designed to slide into and bite into ends of two ceiling panels.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine substrates and structural framing to which acoustical felt panels attach or abut, with installer present, for compliance with requirements specified in this and other Sections that affect installation and anchorage, and other conditions affecting performance of felt panel ceilings.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordination: Furnish layouts for cast-in-place anchors, clips, and other ceiling anchors whose installation is specified in other Sections.
- B. Measure each ceiling area and establish layout of acoustical felt pan units to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width units at borders and comply with layout shown on reflected ceiling plans.
- C. Survey substrate for wall attachment to assure squareness and proper elevation for wall panel installation.

3.3 INSTALLATION

- A. General: Install acoustical felt pan ceilings, per manufacturers shop drawings provided, per manufacturer's written instructions and to comply with publications referenced below.
 - 1. Cisca "Ceiling Systems Handbook"
 - 2. Standard for Ceiling Suspension System Installations - ASTM C 636
 - 3. Standard for Ceiling Suspension Systems Requiring Seismic Restraint - ASTM E 580
 - 4. IBC (International Building Code) Standard for Seismic Zone for local area
- B. Suspend ceiling hangers from building's approved structural substrates and as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
 - 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, counter-splaying, or other equally effective means.
 - 3. Where width of ducts and other construction within ceiling plenum produce hanger spacings that interfere with location of hangers at spacing required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Utilize supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.
 - 4. Where used secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure; that are appropriate for substrate; and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.

5. Space hangers not more than 48" on-center, along each member supported directly from hangers, unless otherwise indicated; and provide hangers not more than 12" from ends of each member. Supply supporting calculations from licensed Structural Engineer verifying hanger spacing meets all requirements, when spacing exceeds those recommended.
 6. Level grid to 1/8" in 10' from specified elevation(s), square and true.
 7. Adjust suspension system runners so they are square (within .5 degree from 90 degrees) and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
- C. Secure bracing wires to ceiling suspension members and to supports acceptable to Architect/Engineer and/or inspector. Suspend bracing from building's structural members and/or structural deck, as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs (unless directed otherwise).
 - D. Scribe and cut acoustical felt panel units for accurate fit at penetrations by other work through ceilings. Stiffen edges of cut units as required to eliminate evidence of buckling or variations in flatness exceeding referenced standards for stretcher-leveled felt sheet.
 - E. Install acoustical felt panel units in coordination with suspension system. Fit adjoining units to form flush, tight joints. Scribe and cut units for accurate fit at borders and around construction penetrating ceiling.

3.4 ADJUST AND CLEAN

- A. Adjust components to provide uniform tolerances.
- B. Replace all ceiling panels that are creased, faded, or otherwise damaged.
- C. Clean exposed surfaces with vacuum or dusting. If necessary, panels can be wet cleaned with water, or non-solvent, non-abrasive commercial type cleaner.

END OF SECTION - 095400

SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Luxury Vinyl Floor Tile.
 - 2. Floor preparation where the moisture vapor emission rate and relative humidity exceeds manufacturers' recommendations levels.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include certification of critical radiant flux and smoke developed indicating compliance with the requirements of the building code in effect.
- B. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
 - 1. Show details of special patterns.
- C. Samples: Full-size units of each color and pattern of floor tile required.
- D. Samples for Initial Selection: For each type of floor tile indicated.
- E. Samples for Verification: Full-size units of each color and pattern of floor tile required.
- F. Product Schedule: For floor tile. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Floor Tile: Furnish one box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.
- B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Build mockups for floor tile including resilient base and accessories.
 - a. Size: Minimum 100 sq. ft. (9.3 sq. m) for each type, color, and pattern in locations directed by Architect.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 65 deg F or more than 85 deg F. Store floor tiles on flat surfaces.
 - 1. Deliver in Mohawk Groups' original packaging.

1.9 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 85 deg F, in spaces to receive floor tile during the following time periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 90 deg F.
- C. Close spaces to traffic during floor tile installation.

- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
- B. FloorScore Compliance: Resilient tile flooring shall comply with requirements of FloorScore certification.

2.2 LUXURY VINYL FLOOR TILE – Drawing Designation – (LVT)

- A. Provide luxury vinyl tile as manufactured by Armstrong Flooring.
- B. Tile Standard: ASTM F 1700.
 - 1. Class: Class III, Type B – Embossed Surface
- C. Size: 6” x 48”
- D. Wear Layer: 20 mil
- E. Model: Parallel USA 12
- F. Colors and Patterns: Glendale Oak Scotch Mist J5115.
- G. Manufacturer: As written above (or equal).

2.3 RESILIENT WALL BASE – Drawing Designation – (B)

- A. Provide “Tarkett Perceptions Recess Rubber Millwork Base” as manufactured by Johnsonite.
- B. General: Applicable to all resilient flooring including resinous flooring and carpet.
- C. Wall Base: ASTM F 1861.
- D. Type (Material Requirement): vinyl.
- E. Group (Manufacturing Method): solid, homogeneous.
- F. Style: Cove (with top-set toe) for tile and resinous flooring. Straight (toeless) for carpet.

- G. Minimum Thickness: 3/8 inch.
- H. Height: 4-1/4 inches
- I. Lengths: Cut lengths 96 inches long or coils in manufacturer's standard length.
- J. Outside Corners: Job formed or pre-molded.
- K. Inside Corners: Job formed or pre-molded.
- L. Surface: Smooth.
- M. Color: 63-Burnt Umber

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F 710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing.
 - 4. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations, but not less stringent than the following:
 - a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of less than that required by the flooring manufacturer.

- b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum relative humidity level of less than that required by the flooring manufacturer.
 - c. Where moisture-vapor emission rates and/or relative humidity exceed the recommended levels, install the moisture control system in accordance with the system manufacturers' written recommendations.
- C. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.
- D. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- E. Do not install floor tiles until they are the same temperature as the space where they are to be installed.
 - 1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.
- F. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.3 FLOOR TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.
- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.

3.4 RESILIENT WALL BASE INSTALLATION

- A. Apply wall base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- B. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.
- C. Tightly adhere wall base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- D. Do not stretch wall base during installation.
- E. On masonry surfaces or other similar irregular substrates, fill voids along top edge of wall base with manufacturer's recommended adhesive filler material.
- F. Pre-molded Corners: Install pre-molded corners before installing straight pieces.
- G. Job-Formed Corners:
 - 1. Outside Corners: Use straight pieces of maximum lengths possible. Form without producing discoloration (whitening) at bends. Shave back of base at points where bends occur and remove strips perpendicular to length of base that are only deep enough to produce a snug fit without removing more than half the wall base thickness.
 - 2. Inside Corners: Use straight pieces of maximum lengths possible. Form by cutting an inverted V-shaped notch in toe of wall base at the point where corner is formed. Shave back of base where necessary to produce a snug fit to substrate.

3.5 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover floor tile until Substantial Completion in accordance with manufacturers' written instructions.

3.6 WARRANTY

- A. Provide flooring manufacturers' 10 year warranty for flooring adhesion, accepting the installation of the Moisture Control System, where applicable.

END OF SECTION 096519

SECTION 096813 - TILE CARPETING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes modular, tufted carpet tile.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review methods and procedures related to carpet tile installation including, but not limited to, the following:
 - a. Review delivery, storage, and handling procedures.
 - b. Review ambient conditions and ventilation procedures.
 - c. Review subfloor preparation procedures.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include manufacturer's written data on physical characteristics, durability, and fade resistance.
 - 2. Include installation recommendations for each type of substrate.
- B. Shop Drawings: Show the following:
 - 1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.
 - 2. Carpet tile type, color, and dye lot.
 - 3. Type of subfloor.
 - 4. Type of installation.
 - 5. Pattern of installation.
 - 6. Pattern type, location, and direction.
 - 7. Pile direction.
 - 8. Type, color, and location of insets and borders.
 - 9. Type, color, and location of edge, transition, and other accessory strips.
 - 10. Transition details to other flooring materials.

- C. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
 - 1. Carpet Tile: Full-size Sample.
 - 2. Exposed Edge, Transition, and Other Accessory Stripping: 12-inch- (300-mm-) long Samples.
- D. Product Schedule: For carpet tile. Use same designations indicated on Drawings.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For carpet tile, for tests performed by a qualified testing agency.
- C. Sample Warranty: For special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For carpet tiles to include in maintenance manuals. Include the following:
 - 1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
 - 2. Precautions for cleaning materials and methods that could be detrimental to carpet tile.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd. (8.3 sq. m).

1.8 QUALITY ASSURANCE

- A. Fire-Test-Response Ratings: Where indicated, provide carpet tile identical to those of assemblies tested for fire response according to NFPA 253 by a qualified testing agency.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Comply with CRI 104.

1.10 FIELD CONDITIONS

- A. Comply with CRI 104 for temperature, humidity, and ventilation limitations.

- B. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at occupancy levels during the remainder of the construction period.
- C. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.

1.11 WARRANTY

- A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
 - 2. Failures include, but are not limited to, more than 10 percent edge raveling, snags, runs, dimensional stability, loss of tuft bind strength, loss of face fiber, colorfastness to light, colorfastness to atmospheric contaminants and delamination.
 - 3. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CARPET TILE

- A. Subject to compliance with requirements, provide carpet tile by Shaw Contract, Carpet Tile Depot or approved equal.
- B. Color: Coordinate 04535
- C. Style: Advance Tile,5T202
- D. Fiber Type: Ecosolution Q100™ Nylon
- E. Pile Characteristic: Textured pattern loop.
- F. Pile Thickness: 0.085 inches for finished carpet tile.
- G. Stitches: 9.0 per inch.
- H. Gage: 1/12.
- I. Surface Pile Weight: 20 oz./sq. yd.
- J. Backing: Manufacturer's standard composite materials.
- K. Secondary Backing: Manufacturer's standard material.

- L. Size: 12 by 48 inches (300 by 1220 mm).
- M. Applied Soil-Resistance Treatment: Manufacturer's standard material.
- N. Antimicrobial Treatment: Manufacturer's standard material.
- O. Performance Characteristics: As follows:
 - 1. Appearance Retention Rating: Severe traffic, 3.5 minimum according to ASTM D 7330.
 - 2. Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm.

2.2 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation.
 - 1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. Metal Edge/Transition Strips: Extruded aluminum finish of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance. Examine carpet tile for type, color, pattern, and potential defects.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
 - 1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet tile manufacturer.
 - 2. Subfloor finishes comply with requirements specified in Section 033000 "Cast-in-Place Concrete" for slabs receiving carpet tile.
 - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile installation.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch (3 mm) wide or wider and protrusions more than 1/32 inch (0.8 mm) unless more stringent requirements are required by manufacturer's written instructions.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet tile manufacturer.
- D. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

3.3 INSTALLATION

- A. General: Comply with CRI 104, Section 14, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: As recommended in writing by carpet tile manufacturer.
- C. Maintain dye lot integrity. Do not mix dye lots in same area.
- D. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.
- E. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, non-staining marking device.
- G. Install pattern parallel to walls and borders.
- H. Stagger joints of carpet tiles so carpet tile grid is offset from access flooring panel grid. Do not fill seams of access flooring panels with carpet adhesive; keep seams free of adhesive.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet tile:
 - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet tile manufacturer.
 - 2. Remove yarns that protrude from carpet tile surface.
 - 3. Vacuum carpet tile using commercial machine with face-beater element.

- B. Protect installed carpet tile to comply with CRI 104, Section 16, "Protecting Indoor Installations."
- C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION 096813

SECTION 098433 – SOUND-ABSORBING WALL UNITS

PART 1. GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - 2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 3. ASTM E795 Standard Practices for Mounting Test Specimens During Sound Absorption Tests.

1.3 SYSTEM DESCRIPTION

- A. Performance Requirements:
 - 1. Surface Burning Characteristics (ASTM E84):
 - Flame spread: 25 maximum.
 - Smoke Developed: 450 maximum.
 -

1.4 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, and components, including anchorage, and colors.
- D. Samples: Submit selection and verification samples of finishes and colors.
- E. Test Reports: Certified test reports showing compliance with specified performance requirements.
 - Standard Systems: Submit copies of previous test reports substantiating performance of system in lieu of retesting.

1.5 QUALITY ASSURANCE

- A. Manufacturer/Installer Qualifications:
 - 1. Provide felt system and suspension system components produced by a single manufacturer to provide consistent quality in appearance and physical properties, without delaying the work.
 - 2. Perform installations using a firm with installers having no less than 3 years of successful experience on projects of similar size and requirements.
- B. Regulatory Requirements:
 - 1 Fire Rating Performance Characteristics: Install system to provide a flame spread of 0 - 25, complying with certified testing to ASTM E 84.
 - 2 Structural Criteria: Install and certify system to comply with structural and wind load requirements of governing codes.
 - 3 Installation Standard for Suspension System: Comply with ASTM C 636.

- C. Pre-installation Conference: Conduct a conference, prior to start of installation, to review system requirements, shop drawings, and all coordination needs.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver system components in manufacturer's original unopened packages, clearly labeled.
- B. Store components in fully enclosed dry space. Carefully place on skids, to prevent damage from moisture and other construction activities.
- C. Handle components to prevent damage to surfaces and edges, and to prevent distortion and other physical damage

1.7 PROJECT CONDITIONS

- A. Environmental Requirements: Do not install until wet work, such as concrete and plastering, is complete; the building is enclosed; and the temperature and relative humidity are stabilized at 60 - 80 degrees F (16 - 27 degrees C) and 35% MINIMUM RH and 55% MAXIMUM RH, respectively.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Provide SheetFelt 9 mm manufactured exclusively for CertainTeed Architectural; 5015 Oakbrook Parkway, Suite 100 Norcross, GA 30093. Phone: 800.366.4327 Fax: 770.806.0214 www.CertainTeed.com/Architectural
- B. Substitutions not permitted

2.2 SYSTEM MATERIALS

Select size per project requirements.

1. Size:

- 48'' x 96'' x 0.35''
(1219.2 mm x 2438.4 mm x 9 mm)

Colors and finishes:

a. Colors

- Cloud 18

2. Sound Absorption (ASTM C423): NRC as follows:

- a. 0.65-0.85

Select mounting accessories per project requirements.

3. Mounting Accessories: Drywall Screw and Carpet Glue

PART 3 EXECUTION

3.1 EXAMINATION

- A. Compliance: Comply with manufacturer's product data, including product data sheet and product installation instructions.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordination: Furnish layouts for cast-in-place anchors, clips, and other ceiling anchors whose installation is specified in other Sections.
- B. Measure each ceiling area and establish layout of acoustical felt pieces to balance border widths at opposite edges of each area.

3.3 CLEANING

- A. Follow manufacturer's instructions for cleaning dirt during installation. Replace pieces that cannot be cleaned to as new condition.
- B. Keep site free from accumulation of waste and debris.

END OF SECTION 098433

SECTION 099100 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on exterior and interior substrates including the following:
 - 1. Steel.
 - 2. Galvanized metal.
 - 3. Aluminum (not anodized or otherwise coated).
 - 4. Gypsum board.
 - 5. Exposed Ductwork.
- B. Related Requirements:
 - 1. Section 099300 "Staining and Transparent Finishing" for surface preparation and the application of wood stains and transparent finishes on exterior and interior wood substrates.

1.3 DEFINITIONS

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- G. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples for Initial Selection: For each type of topcoat product.
- C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- D. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 - 2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.
 - 3. VOC content.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint: 5 percent, but not less than 2 gal. (7.6 L) of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Behr Process Corporation.
 2. Benjamin Moore & Co.
 3. Cloverdale Paint.
 4. Columbia Paint & Coatings.
 5. Dunn-Edwards Corporation.
 6. ICI Paints.
 7. PPG Architectural Finishes, Inc.
 8. Sherwin-Williams Company (The).
 9. Or approved equal.

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
1. Flat Paints and Coatings: 50 g/L.
 2. Nonflat Paints and Coatings: 150 g/L.
 3. Dry-Fog Coatings: 400 g/L.
 4. Primers, Sealers, and Undercoaters: 200 g/L.
 5. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
 6. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
 7. Pretreatment Wash Primers: 420 g/L.
 8. Floor Coatings: 100 g/L.
 9. Shellacs, Clear: 730 g/L.
 10. Shellacs, Pigmented: 550 g/L.
- D. Colors: As selected by Architect from manufacturer's full range.

2.3 PRIMERS/SEALERS

- A. Primer Sealer, Latex, Interior: MPI #50.
- B. Wood-Knot Sealer: Sealer recommended in writing by topcoat manufacturer for use in paint systems indicated.

2.4 METAL PRIMERS

- A. Primer, Alkyd, Quick Dry, for Metal: MPI #76.
- B. Primer, Alkyd, Non-Cementitious, Interior: MPI #135.
- C. Primer, Galvanized, Water Based: MPI #134.
- D. Primer, Quick Dry, for Aluminum: MPI #95.

2.5 WATER-BASED PAINTS

- A. Light Industrial Coating, Exterior, Water Based, Semi-Gloss (Gloss Level 5): MPI #163.
- B. Latex, Interior, (Gloss Level 3): MPI #52.
- C. Latex, Interior, Semi-Gloss, (Gloss Level 5): MPI #54.
- D. Latex, Interior, Flat, (Gloss Level 1): MPI #53
- E. Light Industrial Coating, Interior, Water Based (Gloss Level 3): MPI #151.

2.6 SOLVENT-BASED PAINTS

- A. Alkyd, Interior, Semi-Gloss (Gloss Level 5): MPI #47.

2.7 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
 - 1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
 - 2. Testing agency will perform tests for compliance with product requirements.
 - 3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials

from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Gypsum Board: 12 percent.
- C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Spray-Textured Ceiling Substrates: Verify that surfaces are dry.
- E. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- F. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

- E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceed that permitted in manufacturer's written instructions.
- F. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer.
- G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- I. Aluminum Substrates: Remove loose surface oxidation.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 - 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
 - 1. Paint the following work where exposed in equipment rooms:
 - a. Equipment, including panelboards and switch gear.

- b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Tanks that do not have factory-applied final finishes.
 - h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - i. Exposed metal ductwork.
2. Paint the following work where exposed in occupied spaces:
- a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - h. Exposed metal ductwork.
 - i. Metal deck (above ceilings where deck is visible).
3. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
- 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

- A. Galvanized-Metal Substrates, including interior of exterior HM doors and door frames:
 - 1. Water-Based Light Industrial Coating System: MPI EXT 5.3J-G5
 - a. Prime Coat: Primer, galvanized, water based, MPI #134.
 - b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
 - c. Topcoat: Light industrial coating, exterior, water based, semi-gloss (Gloss Level 5), MPI #163.

3.7 INTERIOR PAINTING SCHEDULE

- A. Steel Substrates:
 - 1. Latex over quick dry Alkyd Primer System: MPI INT 5.1Q – G5.
 - a. Prime Coat: Primer, alkyd, quick dry, for metal, MPI #76.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Latex, interior, semi-gloss, (Gloss Level 5), MPI #54.
- B. Galvanized-Metal Substrates:
 - 1. Latex over Waterborne Primer System: MPI INT 5.3L – G5.
 - a. Prime Coat: Primer, galvanized, metal, MPI #135.
 - b. Intermediate Coat: Alkyd quick dry, interior, matching topcoat.
 - c. Topcoat: Alkyd, interior, semi-gloss, (Gloss Level 5), MPI #47.
- C. Galvanized-Metal Substrates – Ductwork:
 - 1. Latex over Waterborne Primer System: MPI INT 5.3J – G1.
 - a. Prime Coat: Primer, galvanized, metal, MPI #134.
 - b. Intermediate Coat: Alkyd quick dry, interior, matching topcoat.
 - c. Topcoat: Alkyd, interior, flat, (Gloss Level 1), MPI #53.
- D. Aluminum (Not Anodized or Otherwise Coated) Substrates:
 - 1. Water-Based Light Industrial Coating System: MPI INT 5.4E – G3.
 - a. Prime Coat: Primer, quick dry, for aluminum, MPI #95.
 - b. Intermediate Coat: Light industrial coating, interior, water based, matching topcoat.
 - c. Topcoat: Light industrial coating, interior, water based (Gloss Level 3), MPI #151.
- E. Gypsum Board Substrates:

1. Latex System:
 - a. Prime Coat: Primer sealer, latex, interior, MPI #50.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Latex, interior, (Gloss Level 3), MPI #52.

END OF SECTION 099123

SECTION 101423 - PANEL SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Room-identification signs.

1.3 DEFINITIONS

- A. Accessible: In accordance with the accessibility standard.
- B. Illuminated: Illuminated by lighting source integrally constructed as part of the sign unit.

1.4 COORDINATION

- A. Furnish templates for placement of sign-anchorage devices embedded in permanent construction by other installers.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For panel signs.
 - 1. Include fabrication and installation details and attachments to other work.
 - 2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 - 3. Show message list, typestyles, graphic elements, including raised characters and Braille, and layout for each sign at least half size.
- C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.
 - 1. Include representative Samples of available typestyles and graphic symbols.
- D. Samples for Verification: For each type of sign assembly showing all components and with the required finishes, in manufacturer's standard size unless otherwise indicated and as follows:
 - 1. Room-Identification Signs: Full-size Sample.

- E. Sign Schedule: The schedule at the end of this Section is to indicate the general scope and requirements of the project for bidding purposes. Verify designations with Owner.
 - 1. After meeting with the Owner's representative, submit a schedule for approval.

1.6 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For special warranty.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For signs to include in maintenance manuals.

1.8 FIELD CONDITIONS

- A. Field Measurements: Verify locations of anchorage devices embedded in permanent construction by other installers by field measurements before fabrication, and indicate measurements on Shop Drawings.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image.
 - c. Separation or delamination of sheet materials and components.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for signs.
 - 1. Comply with the New Jersey Barrier-Free Subcode and Chapter 11 of the IBC 2015, New Jersey Edition.

2.2 SIGNS

- A. Room-Identification Signs : Signs with smooth, uniform surfaces; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; and as follows:

1. Match existing signage in color, finish, construction and mounting. Modify from existing only as required to conform with the Accessibility Standard and the Barrier-Free Subcode.

2.3 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signage, noncorrosive and compatible with each material joined, and complying with the following:
 1. Use concealed fasteners and anchors unless indicated to be exposed.
- B. Adhesives: As recommended by sign manufacturer and with a VOC content of 70 g/L or less for adhesives used inside the weatherproofing system and applied on-site when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. Two-Face Tape: Manufacturer's standard high-bond, foam-core tape, 0.045 inch (1.14 mm) thick, with adhesive on both sides.

2.4 FABRICATION

- A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.
- B. Brackets: Fabricate brackets, fittings, and hardware for bracket-mounted signs to suit sign construction and mounting conditions indicated. Modify manufacturer's standard brackets as required.

2.5 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Directional Finishes: Run grain with long dimension of each piece and perpendicular to long dimension of finished trim or border surface unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of signage work.

- B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
 - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Install signs so they do not protrude or obstruct according to the accessibility standard.
 - 3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
- B. Room-Identification Signs and Other Accessible Signage: Install in locations on walls as indicated and according to accessibility standard.

3.3 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

3.4 SIGN SCHEDULE

- A. The following list indicates signs for bidding purposes only. All signs shall include braille.
 - 1. Signs with permanent lettering and symbols (bathrooms):
 - a. Quantity: 2
 - 2. Signs with permanent lettering (all other rooms):
 - a. Quantity: 23

END OF SECTION 101423

SECTION 102219 – DEMOUNTABLE GLASS PARTITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Specifications throughout all Divisions of the Project Manual are directly applicable to this Section, and this Section is directly applicable to them.

1.2 DESCRIPTION OF WORK

- A. This Section includes the following:
 - 1. The extent of the demountable partition or butt-glazed entrances/storefronts work as shown on the drawings, and as specified herein.
 - 2. Provide all materials, labor, and equipment to install demountable partitions or butt-glazed entrances/storefronts. The system shall offer maximum flexibility and reusability to accommodate frequent and quick relocation work without loss of materials, damage or modification to panels or to adjoining structures such as ceilings, fixed walls and floors. The factory assembled system must be unitized or pre-assembled (not stick built), non-progressive and modular, allowing the removal of individual panels from any location without disturbing adjoining units and providing interchangeability of panels and door units on the same module.
 - 3. The head detail shall be flush to the ceiling without a reveal. All ceiling leveling adjustment is hidden within the head detail.
 - 4. The panel thickness at the base shall be 2" thick providing the user more usable space when space planning.
 - 5. The base assembly with an integrated leveling system shall be permanently attached to the panel. Detached and loosely shipped floor tracks and leveling components shall not be permitted.
 - 6. The factory assembled movable walls should very flexible to accommodate the building conditions. The wall shall have flexible vertical adjustability. An adjustable, ceiling head assembly shall provide a $\pm 1/2"$ adjustment at the ceiling. At the floor, a self-contained leveling glide system and a 2 1/2", 3 1/4" and 4" high base cover shall allow for floor adjustment of + 1/4" for a 2 1/2" base, + 1" for a 3 1/4" base, and 1 3/4" for a 4" base. Where the wall system meets the building core walls, columns or window mullions, u-channel extrusions shall allow for horizontal adjustment.
- B. Related Sections include the following:
 - 1. Door Hardware – Section 08 71 00
 - 2. Glass and Glazing – Section 08 81 00
 - 3. Acoustical Ceilings – 09 51 23
 - 4. Electrical and Lighting– Division 26

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has successfully completed demountable partition or butt-glazed entrance/storefront installations similar in material, design, and extent to that indicated for this Project and are mutually accepted by the manufacturer and the customer.
- B. Performance Bond: The successful demountable partition or butt-glazed entrances/storefronts manufacturer should have the ability to provide a performance bond to insure Project completion.
- C. Sound Control: Glass panel's sound transmission will be dependent upon glass type used.

- D. Indoor Air Quality: Demountable partition or butt-glazed entrances/storefronts wall manufacturer's non-wood products must meet the SCS Indoor Advantage™ Gold Certification or equivalent. This approval guarantees conformance to indoor air concentrations meeting ANSI/BIFMA M7.1-2011, California Specification 01350, and ANSI/BIFMA e3-2012 testing, conducted in an independent third-party air quality testing laboratory.
- E. Glass Association of North America (GANA) Guidelines: Recommends the use of ½" thick glass when used in butt-glazed demountable partition or entrances/storefronts mounted or restrained at the top and bottom only for ceilings from 96" to 120".
- F. 2012 IBC, Section 2403.4: When two adjacent interior demountable partition or butt-glazed entrances/storefronts walls mounted or restrained at the top and bottom only are installed adjacent to a walking surface, the differential deflection shall not be greater than the thickness of the panels (glass thickness) when a force of 50 pounds per linear foot is applied horizontally to one panel at any point up to 42 inches above the walking surface.
- G. 2010 ADA:
 - Doors Clear Width (ADA 404.2.3) *Suggested Specification*. Doorways shall have a minimum clear opening of 32" (815mm) with the door open 90°, measured between the face of the door and the opposite stop, and shall have 80" (2030mm) minimum clear headroom
 - Doors Opening Force (ADA 404.2.9) *Suggested Specification*. Interior hinged, sliding or folding doors shall require no more than five pounds of force to open.
 - Doors Door Hardware (ADA 404.2.7) *Suggested Specification*. Door handles shall be levers that can be operated with a closed fist. Hardware shall be mounted no higher than 48" (1220mm) above finished floor and a minimum of 34" above finished floor.
 - Office Layout Wheelchair Turning Space (ADA 304.3) *Suggested Specification*. Allow 60" (1525mm) diameter clear space within office to allow a wheelchair to make a 180° turn.
- H. 2012 IBC Section 1607.14: Interior demountable partition or butt-glazed entrances/storefronts wall manufacturer that exceed 6 feet (1829 mm) in height, including their finish materials, shall have adequate strength to resist the loads which they are subjected but not less than a horizontal load of 5 psf (0.240 kN/m2).
- I. Certification: Include supporting certified laboratory testing data indicating that material meets specified test requirements.
- J. Mock up for Verification Purposes: In a location designated by the Architect, install a full scale installation incorporating at least one of each type of panel, and accessory required, illustrating each installation condition. Retain mock up installation until completion of total installation or dismantle earlier at the direction of the Architect. Materials used for the mock up installation will not be considered part of either the base contract materials or the attic stock materials. If life cycle costs of the product are important decision criteria, the mock up installation and reconfiguration should be timed, and the reuse of components should be evaluated.

1.4 SUBMITTALS

- A. Product Data: Product data on physical characteristics, durability, resistance to fading, and flame spread characteristics for each type of partition and accessory.
- B. Shop Drawings: Shop drawings showing location and extent of partitions. Include plans, elevations, sections, details, and attachments to other work.

- C. Samples:
1. Samples for Initial Selection: Samples for initial selection purposes in form of manufacturer's standard color charts showing full range of colors, textures, and patterns available for each type of material exposed to view.
 2. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
 - a. Panel Finish Face: Manufacturer's standard-size unit, but not less than 3 inches (75 mm) square.
 - b. Base Trim: 12-inch- (300-mm-) long Samples.
 - c. Door Finish Face: Manufacturer's standard-size unit, but not less than 3 inches (75 mm) square.
 - d. Glazing: Manufacturer's standard-size unit, but not less than 3 inches (75 mm) square.
- D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each type of demountable partition or butt-glazed entrance/storefront.
- E. Contract Closeout Information:
1. Warranty.
 2. Maintenance Data: For demountable partitions or butt-glazed entrances/storefronts to include in maintenance manuals.
 - a. Recommended cleaning materials and warnings about cleaning methods that could be detrimental to finishes and performance.
 - b. Installation manual detailing methods to move reuse and adjust demountable partition or butt-glazed entrance/storefront product.

1.5 PROJECT CONDITIONS

- A. Delivery, Storage, and Handling: Deliver materials to Project Site in original factory wrappings and containers/skids, clearly labeled with identification of manufacturer, brand name, model number and order number. Store materials in original undamaged packages and containers, inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, humidity; store product according to installation manual and away from other trades.
- B. Environmental Limitations: Do not deliver or install demountable partitions or butt-glazed entrance/storefront components until building is enclosed and finishing operations, including ceiling and floor-covering installation and painting, are complete.
- C. Field Measurements: Indicate measurements on Shop Drawings.
- D. Coordination of Work: Coordinate layout and installation of demountable partitions or butt-glazed entrance/storefront components with other units of Work. Installation of ceilings, floor coverings, lighting fixtures, HVAC equipment, and fire-suppression systems should be completed before demountable partitions are installed.
- E. Special Requirements: Comply with instructions and recommendations of manufacture for special delivery, storage, and handling requirements.

1.6 EXTRA MATERIALS

Deliver to the Owner, not less than three percent of the Project total for each component, panel and accessory of each type, color, and finish of demountable partition or butt-glazed entrance/storefront system exclusive of material required to properly complete installation. Furnish accessory components and installation tools as indicated on schedule. Furnish extra materials from same production run as materials installed. Package extra materials with protective covering, identified with appropriate labels.

1.7 WARRANTY

Demountable or butt-glazed entrance/storefront system glazed units, door frames, and related components to be without defects in material or workmanship for a period of ten (10) years from the date of delivery. Wood doors shall be warranted for ten (10) years from the date of delivery, subject to the manufacturer's terms and conditions. Third party supplied product such as door hardware and film applied to glass will be warranted based on their own warranty terms.

This warranty does not cover defects or damage resulting from accidents, misuse, improper relocation methods or transfer to storage. Plastic laminates, and wood veneer finishes are not warranted against fading or wearing, or if improperly cleaned or treated by the Owner or by others.

1.8 NON-OBSOLENCE

Demountable or butt-glazed entrance/storefront system components and parts, with exception of third party supplied product (such as door hardware, glass, film applied to glass) are guaranteed to be compatible and available for purchase for ten years from the date of the original order.

PART 2 - PRODUCTS

2.1 DEMOUNTABLE PARTITIONS OR BUTT-GLAZED ENTRANCE/STOREFRONT

- A. Manufacturers: Subject to compliance with requirements, provide product by the following
 1. KI "Lightline" demountable partition or butt-glazed entrance/storefront.
 2. Smart Space LLC.
 - a. 16 East 49th Street 6th Flr
New York, NY 10016
212-542-5749
 3. Or approved equal.
- B. Butted Glass Panel-to-Panel Glazing Seal:
 1. In-line Joint Seal Type: Factory-installed VHB tape dry glass seal and ¼" rigid seal
 2. Frameless Corner Glass Overlap (not-mitered) Glazing Seal Type: Factory-installed VHB tape dry glass seal and 1/8" rigid seal
- C. Glass and Glazing:
 1. Single Glazed Thickness: ½"
 2. Glass Type: Laminate
 3. Exposed Glass Edge Type: Polished and Aris (chamfered)
 4. Glass Panel Configuration: Single Center mounted
- D. Aluminum Trim: Base trim is continuous to 10', factory-finished, snap-on type or recessed; adjustable for variations in floor. Ceiling trim is continuous to 10' and ceiling irregularities are hidden.
 1. Base Trim Height: 4"
 2. Ceiling Trim Profile: 3" Flush
 3. Exposed-Metal Trim Finish: Factory-applied powdercoat paint; Black
 4. Trim Color: As selected by Architect from manufacturer's full range; Black
 5. Typical Corner Ceiling Trim: Outside corner is factory mitered and are 2 ½" x 2 ½". Inside corner is a butt-joint.
 6. Typical Corner Base Trim: Outside corner is factory mitered and are 2 ½" x 2 ½". Inside corner is a butt-joint.
- E. Post Connections:

1. Universal Post Configuration Demising Wall. Please denote typical wall connection: 2 1/8" Lightline
 2. Permanent Drywall Connection (Connection sealed with gasket): 2 1/8" Post
- F. 1/2" Thick Framed Glass Leaves: Manufacturer's standard 1/2" tempered with polished edge.
1. Single Glazed Thickness: 1/2"
 2. Glass Type: Tempered
 3. Exposed Glass Edge Type: Polished and Aris (chamfered)
 4. Drop Seal to adjust for floor variances (Default Solution) included
- G. Type of Door Frame: Sliding door frame track is surface-mounted and finished with a valence. Optional double acting soft stop mechanism is available. Pivot hinge is reversible. Door frame units are pre-assembled or unitized.
1. Frame Height: Refer to drawings.
 2. Frame Type: Single Reversible Pivot
 3. Frame Finishes: Factory-applied powdercoat paint; Black
 4. Frame Color: As selected by Architect from manufacturer's full range; Black
 5. Vertical Post Size: 2 1/8"
 6. Optional Door Seal on vertical posts and along horizontal top: Yes
- H. Door Hardware: As specified in Hardware Section 08 71 00
- I. Seals: Manufacturer's standard.

2.2 FABRICATION

- A. Demountable or butt-glazed entrance/storefront panels: Factory-assembled, butt-glazed pre-assembled glass units (not stick-built or site built). Fabricate panels for installation with concealed fastening devices and pressure-fit components that will not damage ceiling or floor coverings. Fabricate panels with continuous light-and-sound seals at floor, ceiling, and other locations where panels abut fixed construction.
- B. Components: Fabricate components for installation with concealed fastening devices and pressure-fit members that will not damage ceiling or floor coverings. Fabricate for installation with continuous seals at floor, ceiling, and other locations where partition assemblies abut fixed construction and for installation of sound attenuation insulation in partition cavities.

2.3 FINISHES, GENERAL

- A. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Prior to installation of demountable or butt-glazed entrance/storefront system, clean floor to remove dust, debris, and loose particles.
- B. Illuminate areas of installation to provide an ambient light level of at least 100 foot candles measured in the area where partitions are to be installed.

- C. Maintain temperature in the area of installation at a constant minimum of 65 degrees F with relatively humidity less than 70 percent for a period of 48 hours prior to installation and during installation process.
- D. General Contractor will deliver all GWB construction interfacing with the demountable or movable partition system in true and plumb condition.
- E. For manufacturer to accept responsibility of dimensional compatibility between demountable or movable partition wall system and GWB construction, manufacturer shall have access to the completed GWB for accurate field measuring eight weeks prior to requiring product on site to commence installation. If time line does not permit the eight weeks lead time, demountable manufacturer shall provide "hold-to" dimensions for the General Contractor. General Contractor then assumes responsibility that GWB construction delivers on "hold-to" dimensions.
- F. Demountable or butt-glazed entrance/storefront manufacturer determines that conditions are acceptable to receive the work of this section. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to installer. Starting of work shall be construed as acceptance of conditions.

3.2 INSTALLATION

- A. Install Demountable or butt-glazed entrance/storefront systems rigid, level, plumb, and aligned. Install seals to prevent light and sound transmission at connections to floors, ceilings, fixed walls, and abutting surfaces.
 - 1. Installation Tolerance: Install each demountable partition so surfaces vary not more than 1/8 inch (3 mm) from the plane formed by the faces of adjacent partitions.
- B. Do not alter ceiling suspension system.
- C. Install door-and-frame, and glazing-and-glazing-frame assemblies securely anchored to partitions and with doors aligned and fitted. Install and adjust door hardware for proper operation.

3.3 DEMONSTRATION

- A. Engage a factory-authorized service representative to demonstrate and train Owner's maintenance personnel to adjust, operate, and maintain Demountable or butt-glazed entrance/storefront system. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 102219

SECTION 102239 – FOLDING PANEL PARTITIONS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Manually operated, paired panel operable partitions.
- B. Related Sections include the following:
 - 1. Division 03 Sections for concrete tolerances required.
 - 2. Division 05 Sections for primary structural support, including pre-punching of support members by structural steel supplier per operable partition supplier's template.
 - 3. Division 06 Sections for wood framing & supports, and all blocking at head and jambs as required.
 - 4. Division 09 Sections for wall and ceiling framing at head and jambs.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified in writing by the operable partition manufacturer, as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.
- B. Acoustical Performance: Test operable partitions in an independent acoustical laboratory in accordance with ASTM E90 test procedure and classified in accordance with ASTM E413 to attain no less than the STC rating specified. Provide a complete and unedited written test report by the testing laboratory upon request.
- C. Preparation of the opening shall conform to the criteria set forth per ASTM E557 *Standard Practice for Architectural Application and Installation of Operable Partitions*.
- D. The operable wall must be manufactured by a certified ISO-9001-2015 company or an equivalent quality control system.
- E. Indoor Air Quality: Operable partition, movable wall manufacturer's non-wood products must meet the SCS Indoor Advantage™ Gold Certification or equivalent. This approval guarantees conformance to indoor air concentrations meeting Indoor Advantage Gold Indoor Air Quality Certified to SCS-105 v4.2-2023 Conforms to ANSI/BIFMA M7.1 and X7.1 and the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 conducted in an independent third-party air quality testing laboratory.

1.4 REFERENCE STANDARDS

- A. ASTM International
 - 1. ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
 - 2. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - 3. ASTM C1036 - Standard Specification for Flat Glass.
 - 4. ASTM C1048 - Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.
 - 5. ASTM E84 - Surface Burning Characteristics of Building Materials.
 - 6. ASTM E413 - Classification for Rating Sound Insulation
- B. Health Product Declaration Collaborative
 - 1. Health Product Declaration Open Standard v2.1
- C. International Standards Organization
 - 1. ISO 14021 - Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labeling).
 - 2. ISO 14025:2011-10, Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures.
 - 3. ISO 14040:2009-11, Environmental Management - Life Cycle Assessment - Principles and Framework.

4. ISO 14044:2006-10, Environmental Management - Life Cycle Assessment - Requirements and Guidelines.
 5. ISO 21930 – Sustainability in Buildings and Civil Engineering Works — Core Rules for Environmental Product Declarations of Construction Products and Services.
- D. Other Standards
1. ADA – Americans with Disabilities Act.
 2. ANSI Z97.1 - Safety Glazing Materials Used in Buildings.
 3. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
 4. NEMA LD3 - High Pressure Decorative Laminates.

1.5 SUBMITTALS

- A. Product Data: Material descriptions, construction details, finishes, installation details, and operating instructions for each type of operable partition, component, and accessory specified.
- B. Shop Drawings: Show location and extent of operable partitions. Include plans, elevations, sections, details, attachments to other construction, and accessories. Indicate dimensions, weights, conditions at openings, and at storage areas, and required installation, storage, and operating clearances. Indicate location and installation requirements for hardware and track, including floor tolerances required and direction of travel. Indicate blocking to be provided by others.
- C. Setting Drawings: Show imbedded items and cutouts required in other work, including support beam punching template.
- D. Samples: Color samples demonstrating full range of finishes available by architect. Verification samples will be available in same thickness and material indicated for the work.
- E. Reports: Provide a complete and unedited written sound test report indicating test specimen matches product as submitted.
- F. Create spaces that are healthy for occupants.
 1. Furnish products and materials with Health Product Declaration (HPD), Manufacturer Inventory, or other material health disclosure documentation. Products without an HPD or other disclosure documentation are not acceptable.
- G. Furnish materials that generate the least amount of pollution.
 1. Furnish products and materials that have third party verified environmental product declarations (EPD's). Consider products and materials that have optimized environmental performance (reduced life cycle impacts). Products without an EPD or other disclosure documentation are not acceptable.
- H. Buy American: Folding door to be manufactured in the United States in compliance with applicable U.S. Federal Trade Commission (FTC) and U.S. Customs Service and Border Protections regulations and be labeled "Made in America".

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Clearly mark packages and panels with numbering systems used on Shop Drawings. Do not use permanent markings on panels.
- B. Protect panels during delivery, storage, and handling to comply with manufacturer's direction and as required to prevent damage.

1.7 WARRANTY

- A. Provide written warranty by manufacturer of operable partitions agreeing to repair or replace any components with manufacturing defects.
- B. Warranty period: Two (2) years.
- C. Suspension System Warranty:
 1. OP-01: Five (5) years.

PART 2 – PRODUCTS

2.1 MANUFACTURERS, PRODUCTS, AND OPERATION

- A. Manufacturers: Subject to compliance with requirements, provide product by the following:
 1. Modernfold, Inc.

2. Hufcor, Inc.
3. Or approved equal.

B. Doors to be manufactured in the U.S.A.

C. Products: Subject to compliance with the requirements, provide the following product:

1. OP-01: Acousti-Seal Premier - Paired Panel: Manually operated paired panel operable partition.

2.2 OPERATION

A. OP-01: Acousti-Seal Premier - Paired Panel: Series of paired flat panels hinged together in pairs, manually operated, top supported with operable floor seals.

B. Final Closure:

1. OP-01: Horizontally expanding panel edge with removable crank

2.3 PANEL CONSTRUCTION

A. OP-01: Nominal 3-inch (76mm) thick panels in manufacturer's standard 48-inch (1220mm) widths. All panel horizontal and vertical framing members fabricated from minimum 18-gage formed steel with overlapped and welded corners for rigidity. Top channel is reinforced to support suspension system components. Frame is designed so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.

B. Panel skin shall be:

1. OP-01: 0.50-inch (13mm) NAUF medium density fiberboard, single material or composite layers continuously bonded to panel frame. Acoustical ratings of panels with this construction minimum:
 - a. 50 STC

C. Hinges for Panels, Closure Panels, Pass Doors, and Pocket Doors shall be:

1. OP-01: Full leaf butt hinges, attached directly to the panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame. Lifetime warranty on hinges. Hinges mounted into panel edge or vertical astragal are not acceptable.

D. Panel Trim: No vertical trim required or allowed on edges of panels; minimal groove appearance at panel joints.

E. Panel Weights:

1. OP-01: 50 STC - 8 lbs./square foot

2.4 PANEL FINISH

A. Panel finish shall be:

1. OP-01: Reinforced vinyl with woven backing weighing not less than 20 ounces (567 grams) per lineal yard.

B. Panel Trim: Exposed panel trim of one consistent color:

1. OP-01: Black

2.5 SOUND SEALS

A. Vertical Interlocking Sound Seals between panels: Roll-formed steel astragals, with reversible tongue and groove configuration in each panel edge for universal panel operation. Rigid plastic or aluminum astragals or astragals in only one panel edge are not acceptable.

B. Horizontal Top Seals: Continuous contact extruded vinyl bulb shape with pairs of non-contacting vinyl fingers to prevent distortion without the need for mechanically operated parts.

C. Horizontal bottom floor seals shall be:

1. OP-01: Modernfold IA2 Bottom seal. Automatic operable seals providing nominal 2-inch (51mm) operating clearance with an operating range of +0.50-inch (13mm) to -1.50-inch (38mm) which automatically drop as panels are positioned, without the need for tools or cranks.

2.6 SUSPENSION SYSTEM

A. OP-01: #17 Suspension System

1. Suspension Tracks: Minimum 11-gauge, 0.12-inch (3.04mm) roll-formed steel track, suitable for either direct mounting to a wood header or supported by adjustable steel hanger brackets, supporting

the load-bearing surface of the track, connected to structural support by pairs of 0.38-inch (10mm) diameter threaded rods. Aluminum track is not acceptable.

- a. Exposed track soffit: Steel, integral to track, and pre-painted off-white.
2. Carriers: One all-steel trolley with steel tired ball bearing wheels per panel (except hinged panels). Non-steel tires are not acceptable.

2.7 OPTIONS

- A. Work Surfaces shall be as indicated on drawings:
 1. OP-01: Markerboard: White porcelain enamel on steel, bonded to the face of the panel with horizontal and vertical trim without exposed fasteners.
- B. Available accessories/options:
 1. OP-01: Pocket Doors: Acousti-Seal Pocket Doors by Modernfold, Inc. (see supplement specification)
 - a. Premier pocket door

PART 3 – EXECUTION

3.1 INSTALLATION

- A. General: Comply with ASTM E557, operable partition manufacturer's written installation instructions, Drawings and approved Shop Drawings.
- B. Install operable partitions and accessories after other finishing operations, including painting have been completed.
- C. Match operable partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.
- D. Broken, cracked, chipped, deformed or unmatched panels are not acceptable.

3.2 CLEANING AND PROTECTION

- A. Clean partition surfaces upon completing installation of operable partitions to remove dust, dirt, adhesives, and other foreign materials according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions in a manner acceptable to the manufacturer and Installer that ensure operable partitions are without damage or deterioration at time of Substantial Completion.

3.3 ADJUSTING

- A. Adjust operable partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and other moving parts.

3.4 EXAMINATION

- A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable partitions. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 DEMONSTRATION

- A. Demonstrate proper operation and maintenance procedures to Owner's representative.
- B. Provide Operation and Maintenance Manual to Owner's representative.

END OF SECTION 102239

SECTION 104400 - FIRE-PROTECTION SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Portable fire extinguishers.
 - 2. Fire Extinguisher cabinets (semi-recessed).

1.3 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire-protection cabinets.
 - 1. Fire Extinguishers: Include rating and classification.
 - 2. Fire-Protection Cabinets: Include roughing-in dimensions, details showing mounting methods, relationships of box and trim to surrounding construction, door hardware, cabinet type, trim style, and panel style.
- B. Samples for Initial Selection: For fire-protection cabinets with factory-applied color finishes.
- C. Samples for Verification: For each type of exposed factory-applied color finish required for fire-protection cabinets, prepared on Samples of size indicated below.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain fire extinguishers and fire-protection cabinets through one source from a single manufacturer.
- B. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."
- C. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.
 - 1. Provide fire extinguishers approved, listed, and labeled by FMG.
- D. Fire-Rated Fire-Protection Cabinets: Listed and labeled to comply with requirements of ASTM E 814 for fire-resistance rating of walls where they are installed.

1.5 COORDINATION

- A. Coordinate size of fire-protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.
- B.

- C. Verify locations with the Fire Marshal.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 PORTABLE FIRE EXTINGUISHERS

- A. Manufacturers:
 - 1. Badger Fire Protection.
 - 2. JL Industries, Inc.
 - 3. Larsen's Manufacturing Company.
 - 4. Potter Roemer; Div. of Smith Industries, Inc.
 - 5. Or Approved Equivalent.
- B. General: Provide fire extinguishers of type, size, and capacity for each fire-protection cabinet and mounting bracket indicated. Colors and finishes selected from manufacturer's standard.

2.2 FIRE EXTINGUISHERS

- A. Multipurpose Dry-Chemical Type in Steel Container: UL-rated 4-A:80-B:C, 10-lb nominal capacity, with monoammonium phosphate-based dry chemical in enameled-steel container.
 - 1. Basis of Design: Larsen's MP10.

2.3 FIRE-PROTECTION CABINET

- A. Cabinet Type: Suitable for fire extinguisher.
- B. Recessed Cabinet: Cabinet box fully recessed in walls of shallow depth with one-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend). Cabinets shall be ADA compliant.
 - 1. Basis of Design: Larsen's 2409-R7, Architectural Series, semi-recessed "Vertical Duo" style with clear acrylic glazing. Provide fire rated cabinets where located in fire rated partitions.
- C. Cabinet Trim Material: Painted Steel - White.
- D. Door Material: Painted Steel – White w/ clear acrylic glazing pane.
- E. Accessories:
 - 1. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire-protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.

2.4 MOUNTING BRACKETS

- A. Mounting Brackets: Manufacturer's standard steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
 - 1. Color: Red.

2.5 FABRICATION

- A. Fire-Protection Cabinets: Provide manufacturer's standard box (tub), with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.
 - 1. Weld joints and grind smooth.
 - 2. Construct fire-rated cabinets with double walls fabricated from 0.0428-inch- thick, cold-rolled steel sheet lined with minimum 5/8-inch- thick, fire-barrier material.
 - a. Provide factory-drilled mounting holes.
- B. Cabinet Doors: Fabricate doors according to manufacturer's standards, from materials indicated and coordinated with cabinet types and trim styles selected.
 - 1. Fabricate doorframes with tubular stiles and rails and hollow-metal design, minimum 1/2 inch thick.
 - 2. Miter and weld perimeter doorframes.
- C. Cabinet Trim: Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Finish fire-protection cabinets after assembly.
- D. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls and partitions for suitable framing depth and blocking where cabinets will be installed.
- B. Examine fire extinguishers for proper charging and tagging.
 - 1. Remove and replace damaged, defective, or undercharged units.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare recesses for fire-protection cabinets as required by type and size of cabinet and trim style.

3.3 INSTALLATION

- A. Fire-Protection Cabinets: Fasten fire-protection cabinets to structure, square and plumb.
- B. Mounting Brackets: Fasten mounting brackets to surfaces, square and plumb, at locations indicated.

3.4 ADJUSTING AND CLEANING

- A. Remove temporary protective coverings and strippable films, if any, as fire-protection specialties are installed, unless otherwise indicated in manufacturer's written installation instructions.
- B. Adjust fire-protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.
- C. On completion of fire-protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Touch up marred finishes, or replace fire-protection cabinets that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by fire-protection cabinet manufacturer.
- E. Replace fire-protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

3.5 LOCATION

- A. Refer to drawings for locations of fire extinguishers.

3.6 Fire Marshall shall verify location of all fire extinguishers.

3.7 QUANTITY

- 1. Fire Extinguishers and cabinets: Refer to drawings for quantities.

END OF SECTION 104400

SECTION 123661 – SIMULATED STONE COUNTERTOPS

GENERAL

1.01 SUMMARY

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING HORIZONTAL AND TRIM QUARTZ SURFACING PRODUCT TYPES:

- 1. Countertops
- 2. Other interior counter or surfacing applications as shown on drawings.

1.03 RELATED REQUIREMENTS

- A. Section 06 10 00 – Rough Carpentry
- B. Section 06 61 13 – Simulated Stone Fabrications
- C. Section 07 92 00 – Joint Sealants

1.04 REFERENCES

- A. CSA B45/IAPMO ANSI Z124 (previously ANSI Z124.6 – Plastic Sinks).
 - 1. CSA B45/IAPMO ANSI Z124 Section 5.7.1.3 – Point Impact tests.
- B. ASTM C170 – Standard Test Method for Compressive Strength of Dimension Stone.
- C. ASTM C370 – Standard Test Method for Moisture Expansion of Fired Whiteware Products.
- D. ASTM C373 – Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products, Ceramic Tiles, and Glass Tiles.
- E. ASTM C501 – Standard Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
- F. ASTM C1026 – Standard Test Method for Measuring the Resistance of Ceramic Tile to Freeze-Thaw Cycling.
- G. ASTM C1028 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
- H. ASTM D570 – Standard Test Method for Water Absorption of Plastics.
- I. ASTM D696 – Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous Silica Dilatometer.
- J. ASTM D790 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- K. ASTM D792 – Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
- L. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- M. ASTM G21 – Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
- N. ASTM G22 – Standard Practice for Determining Resistance of Plastics to Bacteria.
- O. CSA B45.5-11/IAPMO Z124-2011 – Plastic Plumbing Fixtures.
- P. NEMA LD 3 – High Pressure Decorative Laminates.
 - 1. NEMA LD 3-3.3 – Light Resistance.
 - 2. NEMA LD 3-3.5 – Boiling Water Resistance.
 - 3. NEMA LD 3-3.6 – High Temperature Resistance.
 - 4. NEMA LD 3-3.8 – Ball Impact Resistance.
- Q. NFPA (National Fire Protection Association) - NFPA 101®, Life Safety Code®.

- R. NFPA 255 – Standard Method of Test of Surface Burning Characteristics of Building Materials.
- S. ISO (International Organization for Standardization) - ISO 14001 – Environmental Management Systems.
- T. UL (Underwriters Laboratories) - UL 723 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- U. ULC (Underwriters Laboratories of Canada) – ULC/CAN-S102 – Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
- V. NSF (NSF International) NSF/ANSI Standard 51 – Food Equipment Materials.
- W. New York City Construction Codes, Office of Technical Certification and Research, MEA (Materials and Equipment Acceptance), <http://www1.nyc.gov/>.
- X. UL Environment/GREENGUARD - UL 2818 – Standard for Chemical Emissions for Building Materials, Finishes and Furnishings, Section 7.1.
- Y. UL Environment/GREENGUARD - UL 2818 – Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings, Section 7.1 and 7.2.
- Z. UL 2824 – GREENGUARD Certification Program, Method For Measuring Microbial Resistance From Various Sources Using Static Environmental Chambers.
- AA. SCAQMD (South Coast Air Quality Management District) VOC (Volatile Organic Content) Rule 1168 for Adhesive and Sealant Applications
- BB. Star-K Kosher Certification (www.star-k.org).

1.05 SUBMITTALS

- A. Submit product data for each type of product indicated.
 - 1. Submit manufacturer's product data on material characteristics, performance properties, fabrication instructions, installation instructions and maintenance instructions.
- B. Shop drawings:
 - 1. Show location of each item; provide complete detailed and dimensioned plans and elevations, large-scale details, attachment devices and other components.
 - a. Show the following:
 - 1) Full-size details, edge details, attachments, etc.
 - 2) Locations and sizes of furring, blocking, including concealed blocking and reinforcement specified in other Sections.
 - 3) Fabrication details for brackets.
 - 4) Locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, waste receptacle and other items installed in quartz surface.
 - 5) Locations and sizes of cutouts for sink installation and lavatory installation.
 - 6) Type of sealant.
 - 7) Type of adhesive.
 - 8) Seam locations.
- C. Samples:
 - 1. For each type of product indicated:
 - a. Submit minimum 2-inch-by-2-inch sample in specified color. For viewing pattern or veining, submit minimum 4-inch-by-4-inch samples.
 - b. Cut sample and seam together for representation of seaming techniques.
 - c. Indicate full range of color and pattern variation.
 - d. Approved samples will be retained as a standard for work.
- D. Product data:
 - 1. Indicate product description, fabrication information and compliance with specified performance requirements.
- E. Sustainable Design Reporting:
 - 1. Provide documentation from manufacturer of the amounts of pre-consumer and/or post-consumer recycled content for products.

2. Provide documentation from manufacturer showing manufacturing locations for products manufactured and sourced within 500 miles of project site.
 3. Provide documentation from manufacturer that products meet or exceed emissions guidelines for volatile organic compounds (VOCs).
 4. Provide documentation from manufacturer indicating that adhesives and sealants applied on project site meet or exceed emissions guidelines for volatile organic compounds (VOCs) and comply with SCAQMD Rule #1168.
- F. LEED Submittals:
1. LEED® 2009, Credits MR Credit 4 – Recycled Content.
 - a. Provide documentation for cost of products having recycled content indicating percentages by weight of post-consumer plus 1/2 of pre-consumer content.
 2. LEED® 2009, Credits MR Credit 5 – Regional Materials.
 - a. Provide documentation showing manufacturing locations and origins of materials for products manufactured and sourced within 500 miles of project location. The point of manufacture is place of final assembly of components. Provide documentation for cost of materials or products that have been extracted, harvested or recovered and regionally manufactured within 500 miles of the project site.
 3. LEED® 2009, Credits MR Credit 4.1– Low-Emitting Materials – Adhesives and Sealants,
 - a. Provide documentation from manufacturers indicating that adhesives and sealants applied on project site meet or exceed emissions guidelines for volatile organic compounds (VOCs) and comply with SCAQMD Rule #1168.
 4. LEED® NC v4, EQ: Indoor Environmental Quality, EQ Credit: Low-Emitting Materials.
 - a. Provide documentation from manufacturers that products meet or exceed emissions guidelines for volatile organic compounds (VOCs).
 - b. Provide documentation from manufacturers that adhesives and sealants meet or exceed emissions guidelines for volatile organic compounds (VOCs) and comply with SCAQMD Rule #1168.
 5. LEED® NC v4, MR Credit: Building Product Disclosure and Optimization - Material Ingredients.
 - a. Option 1. Material Ingredient Reporting.
 - 1) Provide manufacturer's HPD (Health Product Declaration).
 6. LEED® NC v4, MR Credit: Building Product Disclosure and Optimization - Sourcing of Raw Materials.
 - a. Option 1. Raw Material Source and Extraction Reporting.
 - 1) Provide manufacturer's CSR (Corporate Sustainability Report)
 - b. Option 2. Leadership Extraction Practices.
 - 1) Provide documentation from manufacturer of the amounts of pre-consumer and post-consumer recycled content for products specified.
 7. LEED® NC v4, MR Credit: Building Product Disclosure and Optimization.
 - a. Option 1. Environmental Product Declaration (EPD)
 - 1) Provide manufacturer's EPD (Environmental Product Declaration)
- G. Fabricator/installer qualifications:
1. Provide copy of certification number.
- H. Certificates: Certify that products meet or exceed requirements.
1. UL Environment– GREENGUARD and GREENGUARD Gold, current low emitting VOC certification of quartz surface and solid surface products.
 2. UL Environment– GREENGUARD and GREENGUARD Gold, current low emitting VOC certification for manufacturer's recommended adhesive and/or sealant.
 3. UL Environment – Mold Resistance Certification in accordance with UL 2824.
- I. Fire test response characteristics:
1. United States – Provide Class A surface burning characteristics as determined by testing products per UL 723 (ASTM E 84, NFPA 255) or another testing and inspecting agency acceptable to authorities having jurisdiction.

- a. Flame Spread Index: 25 or less.
 - b. Smoke Developed Index: 450 or less.
- 2. Canada – Provide with surface burning characteristics as determined by testing products by UL Canada per ULC S102 or another testing and inspecting agency acceptable to authorities having jurisdiction.
- J. Maintenance data:
 - 1. Submit manufacturer's care and maintenance data.
 - 2. Include in project closeout documents.

1.06 QUALITY ASSURANCE

- A. Qualifications:
 - a. Shop employs skilled workers who custom fabricate products similar to those required for this project and whose products have a record of successful in-service performance.
- B. Fabricator/installer qualifications:
 - 1. Work of this section shall be by a certified fabricator/installer, certified in writing by the manufacturer or designated representative.
- C. Allowable tolerances:
 - 1. Variation in component size: $\pm 1/8$ inch (3 mm) over a 10 foot length.
 - 2. Location of openings: $\pm 1/8$ inch (3 mm) from indicated location.
 - 3. Minimum of $1/16$ inch and a maximum of $1/8$ inch (3 mm) clearance between quartz surfaces and each wall.
- D. Coordination drawings:
 - 1. Shall be prepared indicating:
 - a. Plumbing work.
 - b. Electrical work.
 - c. Miscellaneous steel for the general work.
 - d. Indicate location of all walls (rated and non-rated), blocking locations and recessed wall items, etc.
 - 2. Content:
 - a. Project-specific information, drawn accurately to scale.
 - b. Do not base coordination drawings on reproductions of the contract documents or standard printed data.
 - c. Indicate dimensions shown on the contract drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements.
 - d. Provide alternate sketches to designer for resolution of such conflicts.
 - 1) Minor dimension changes and difficult installations will not be considered changes to the contract.
 - 3. Drawings shall:
 - a. Be produced in $1/2$ inch scale for all fabricated items.
 - 4. Drawings must be complete and submitted to the architect within 60 days after award of contract for record only.
 - a. No review or approval will be forthcoming.
 - b. Coordination drawings are required for the benefit of contractor's fabricators/installers as an aid to coordination of their work to eliminate or reduce conflicts that may arise during the installation of their work.
- E. Job mock-up:
 - 1. Prior to fabrication of architectural millwork, erect sample unit to further verify selections made under sample submittals and to demonstrate the quality of materials and execution.
 - 2. Build the mock-up to comply with the contract documents and install in a location as directed by the architect.
 - 3. Notify the architect two weeks in advance of the date of when the mock-up will be delivered.

4. Should mock-up not be approved, re-fabricate and reinstall until approval is secured.
 5. Remove rejected units from project site.
 6. Mock-up, once approved, may become a part of the project and serve as a standard for judging quality of all completed units of work.
- F. Pre-installation conference:
1. Conduct conference at project site to comply with requirements in Division 1.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver no components to project site until areas are ready for installation.
- B. Store components indoors in clean and dry area prior to installation.
- C. Handle materials to prevent damage to finished surfaces.
- D. Follow manufacturer's safe handling and storage recommendations.
- E. Provide protective coverings to prevent physical damage or staining following installation for duration of project.

1.08 WARRANTY

- A. Provide manufacturer's 10-year warranty.
- B. Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted.

1.09 MAINTENANCE

- A. Provide maintenance requirements as specified by the manufacturer.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Contract Documents are based on products manufactured by DuPont (E. I. du Pont de Nemours and Company). Provide Corian® Quartz, formerly known as Zodiaq® (basis of design) subject to compliance with the requirements.
 - a. Address: Corian® Design, Corian® Quartz, Chestnut Run Plaza 735, 974 Centre Road, P.O. Box 2915, Wilmington, DE 19805.
 - b. Phone: (800) 426-7426.
 - c. Website: www-surfaces.dupont.com; www.corianquartz.com.
 - d. Subject to compliance with the requirements, provide the following product: quartz surface from Corian® Design (basis of design).
- B. Or approved equal.

2.02 MATERIALS

- A. Material:
 1. Corian® Quartz material composed of ~93 % natural quartz with pigments and resin.
 2. Corian® Quartz Terra Collection product composed of pre-consumer and/or post-consumer glass, natural quartz, pigments and resin.
 3. Material shall have minimum physical and performance properties as specified.
- B. Thickness:
 1. 2 cm (3/4 inch).
- C. Edge treatment:
 1. Profile: Eased edge
- D. Seam width:
 1. 1/16 inch nominal unless otherwise specified.
 2. Flexural Strength > 5,300 psi ASTM D790
 3. Flexural Modulus 5.3–5.7 X 106 psi ASTM D790

4.	Compression Strength (Dry)	27,300 psi	ASTM C170
5.	Compression Strength (Wet)	24,400 psi	ASTM C170
6.	Hardness	7	Mohs Hardness Scale
7.	Thermal Expansion	1.45 x 10 ⁻⁵ meter/meter deg C	ASTM D696
8.	Thermal Expansion	2.61 x 10 ⁻⁵ inch/inch deg F	ASTM D696
9.	Colorfastness	Passes	NEMA LD 3-3.3
10.	Gloss (60° Gardner)	45–50	ANSI Z124
11.	Wear and Cleanability	Passes	CSA B45.5-11/IAPMO Z124-2011
12.	Stain Resistance	Passes	CSA B45.5-11/IAPMO Z124-2011
13.	Fungal Resistance	No observed growth on product	ASTM G 21
14.	Bacterial Resistance	No observed growth on product	ASTM G 22
15.	High Temperature Resistance	None to slight effect	NEMA LD 3-3.6
	a. Temperature, 356 deg F		
16.	Boiling Water Resistance	None to slight effect	NEMA LD 3-3.5
17.	Freeze-Thaw Cycling	Unaffected	ASTM C1026
18.	Point Impact	Passes	ANSI Z124.6.4.2
19.	Ball Impact Resistance	No failure at 164 inches	NEMA LD 3-3.8
	a. Slabs, No fracture, 1/2 lb. ball – 2cm and 3 cm		
20.	Static Coefficient of Friction	0.89 (Dry), 0.61 (Wet)	ASTM C1028
21.	Abrasion Resistance	139	ASTM C501
22.	Density	2.4 g/cm ³	ASTM D792
23.	Water Absorption, Long-term	0.12%	ASTM C373
24.	Water Absorption, Short	< 0.04%	ASTM C373
25.	Moisture Expansion	< 0.01% average	ASTM C370
26.	Flammability	Class A, all colors	NFPA 101® Life Safety Code
27.	Flame Spread Index	FSI 0 for 3 cm	UL 723
28.	Flame Spread Index	FSI ≤ 5 for 2 cm	UL 723
29.	Smoke Developed Index	SDI ≤ 40 for 3 cm	UL 723
30.	Smoke Developed Index	SDI ≤ 75 for 2 cm	UL 723
31.	Flame Spread Value	0 for 3 cm	CAN/ULC-S102
32.	Flame Spread Value	5 for 2 cm	CAN/ULC-S102
33.	Smoke Developed Value	10 for 3 cm	CAN/ULC-S102
34.	Smoke Developed Value	50 for 2 cm	CAN/ULC S102
35.	Nominal Thickness	2 cm and 3 cm	
36.	Nominal Weight per square foot for 2cm thickness is 10 pounds		
37.	Nominal Weight per square foot for 3cm thickness is 15 pounds		
E.	CORIAN® QUARTZ (ZODIAQ®) CERTIFICATIONS and APPROVALS:		
	1.	New York City Material Equipment Acceptance Number for DuPont™ Zodiaq® is 431-00-M.	
	2.	NSF/ANSI Standard 51, Listed by NSF.	
	3.	UL Environment/GREENGUARD Certified.	
	4.	UL Environment/GREENGUARD Gold Certified.	
	5.	UL 2824 - Mold Resistant.	
	6.	Kosher, Listed by Star-K.	

2.03 ACCESSORY PRODUCTS

- A. Mounting Adhesives:
 1. 100 percent Silicone Sealant.
- B. Seam Adhesive:
 1. Corian® Joint Adhesive to create color-coordinated seam.
- C. Sink/bowl mounting hardware:
 1. Manufacturer's approved sink setters, bowl clips and fasteners for attachment of undermount sinks/bowls.

2.04 FABRICATION

- A. Fabricate components to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's printed instructions and technical bulletins.
- B. Form joints between components using manufacturer's standard joint adhesive.
 - a. Reinforce as required.
 - 2. Provide factory cutouts for plumbing fittings and bath accessories as indicated on the drawings.
 - 3. Rout and finish component edges with clean, sharp returns.
 - 4. Rout cutouts, radii and contours to template.
- C. Smooth edges.

2.05 FINISHES

- A. As selected by architect from manufacturer's full line of colors.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General
 - 1. Install countertop materials in accordance with manufacturer's instructions.
 - 2. Additional weight from attached sink or lavatory will affect maneuverability of tops during transportation and installation.
 - 3. Carefully plan work to avoid damaging finished tops during transportation and installation.
- B. Install components plumb and level, in accordance with approved shop drawings and product installation details.
 - 1. Tops:
 - a. Flat and true to within 1/8 inch (3 mm) of a flat surface over a 10-foot length.
 - b. Allow a minimum of 1/16 inch to a maximum of 1/8 inch (3 mm) clearance between surface and each wall.
 - c. Form field joints using manufacturer's recommended adhesive (Corian® Joint Adhesive), with joint widths no greater than 1/8 inch (3 mm) in finished work.
 - d. Keep components and hands clean when making joints.

3.02 CONNECTIONS:

- A. Make plumbing connections in accordance with Division 22.
- B. Make electrical connections in accordance with Division 26.

3.03 CLEANING AND PROTECTION

- A. Keep components and hands clean during installation.
- B. Remove adhesives, sealants and other stains in accordance with manufacturer's instructions.
 - 1. Clean exposed surfaces in accordance with manufacturer's instructions.
 - 2. Components shall be clean on date of substantial completion.
 - a. Protect surfaces from damage until date of substantial completion.
 - 3. Replace or repair damaged work in a satisfactory manner.

END OF SECTION 123661

