



**To: All Vendors Bidding on The College of New Jersey  
Packer Hall Renovations**

**From: Anup Kapur  
Finance & Business Services**

**Date: April 28, 2022**

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**ADDENDUM NO. 1**

**ISSUE DATE: April 28, 2022**

**REFERENCE:** The College of New Jersey  
Packer Hall Renovations  
Bid No. AB220036

Date of Original Bidding Documents: April 14, 2022

**INTENT:** This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents and Prior Addenda if any, as identified above. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

### **Revised page 15 of Construction Bid Proposal Form**

***PRICES FOR SINGLE BID (LUMP SUM): Base Bid, Alternate Proposals, and Unit Prices***

#### ***FORM OF PROPOSAL***

#### **TCNJ Added an add alternate #1**

**Add Alternate #1 – price to extend the epoxy flooring and painting of the walls and door frames down the halls per attached sketch.**

**Please use the attached revised Form of Proposal (page 15) in lieu of the original form that was provided in the bid proposal dated April 14, 2022. Please replace the new form with the old form in your bid package. Failure to do so may subject Bidder to disqualification.**

**AMENDMENTS TO SPECIFICATIONS:**

Section No.	Page No.	Addendum Requirements
Table of Contents	iii	ADD the following Specification Section under Division 9 – FINISHES: 096500 RESILIENT FLOOR TILE
Table of Contents	ii	ADD the following Specification Section under Division 5 – METALS: 057300 DECORATIVE METAL RAILINGS
057300	057300-1 thru 7	ADD the following Specification Section to the Contract Specifications: 057300 DECORATIVE METAL RAILINGS. See Attachment.
096500	096500-1 thru 5	ADD the following Specification Section to the Contract Specifications: 096500 RESILIENT FLOOR TILE. See Attachment.

**AMENDMENTS TO DRAWINGS:**

Dwg. No.	Addendum Requirements
A1.01 Demo Keynote #48:	REPLACE “CONTRACTOR TO MODIFY EXISTING CONDUIT AND JUCTION BOX TO ACCOMMODATE NEW WORK.” With the following: “CONTRACTOR TO PROTECT EXISTING CABLING / CEILING JACKS AND RESTORE TO ORIGINAL LOCATION.”
A1.02 Detail 1/A1.02:	ADD Keynote #48 to Lobby C21.
A1.02 General Demo Notes:	ADD General Demo Notes #20 to read as follows: “EXISTING COMMUNICATIONS CABLING SHALL BE PRESUMED TO BE IN-SERVICE AND SHALL BE MAINTAINED AND PROTECTED FROM DAMAGE. DAMAGED CABLING SHALL BE REPLACED IN ITS ENTIRETY FROM END TO END, TO CURRENT IT SPECIFICATIONS UNDER DIRECTION OF THE OWNER. COSTS FOR REPLACEMENT MATERIAL AND LABOR SHALL BE BORNE ENTIRELY BY THE CONTRACTOR.”

A1.03 RCP Demo Key

Notes:

REPLACE Keynote #9 with the following: *"ALL ADJACENT ROOF AREAS TO BE PROTECTED DURING DEMO & CONSTRUCTION. DAMAGE CREATED FROM CONSTRUCTION SHALL BE REPAIRED & REPLACED IN ACCORDANCE WITH THE EXISTING ROOF WARRANTY. ROOF WARRANTY INFORMATION: 20 YEAR, CARLISLE, GOLDEN SEAL TOTAL ROOFING SYSTEM WARRANTY, ISSUED JUNE 17<sup>TH</sup>, 2013, SERIAL #10092234, INSTALLED BY PATRIOT ROOFING, INC. OF JOBSTOWN, NJ"*

A2.02 Details 2, 4, & 6

/A2.02

CLARIFICATION on Guardrail Design: Details shown shall convey 'graphic intent' only for dimensions, post spacing, and guardrail height. REMOVE all indications of 'BARSTOCK RAILS' and 'STAINLESS STEEL CABLE BALLUSTERS'.

See Attached, ADDED specification section 057300 – DECORATIVE METAL RAILINGS for all specifications, product data, and detailing to procure and install a complete, prefabricated, stainless steel with 'cable net' mesh infill panels, decorative metal railing system in its entirety as indicated in the specification.

A2.03 Interior Finish

General Notes:

ADD Note #16 as follows: *"ALL NEW AND EXISTING SURFACE MOUNTED CONDUIT AND BOXES SHALL BE PAINTED, COLOR COORDINATE WITH FINISH PLAN."*

A2.03 Detail 4/A2.03

2<sup>nd</sup> Floor Rotunda Lobby C21: REPLACE Finish Tag 'CPT-1' with 'LVT-1'.  
Corridor C21A: ADD Finish Tag 'LVT-1'.

A2.03 Finish Schedule

C21: REPLACE 'CPT-1' with 'LVT-1'.  
C21A: REPLACE 'CPT-1' with 'LVT-1'.

ADD the following Abbreviation and Finish description:

LVT-1 = 9"x36" LUXURY VINYL TILE – WOOD PLANX BY PATCRAFT – SEE SPECIFICATIONS.

A2.03 Interior Finish

Finish Schedule:

REPLACE 'GM-1 = Gym Mat – Ecore Performance Rally – Color' with 'GM-1 = GYM MAT – ECORE – ULTRATILE – BLUE JAYS'.

A2.03 Interior Finish

Finish Schedule:

REPLACE 'GM-2 = Gym Mat – Ecore Performance Beast Plus – Color' with 'GM-2 = GYM MAT – ECORE – ULTRATILE – STEEL APPEAL 2'.

A2.03 Detail 5/A2.03

ADD Detail 5/A2.03 to the Contract Drawings as shown on the attached Alternate Bid Sketch indicating additional scope of work to include flooring replacement and wall & door frame paint to the corridors. See sketch attachments for additional information.

- A5.01 Reflected Ceiling Plan  
Lighting Schedule: Light Fixture "F" – REPLACE '*LINEAR PENDANT*' with: '*LINEAR WALL MOUNTED*'
- A5.01 Reflected Ceiling Plan  
Lighting Schedule: Light Fixture "F2" – REPLACE '*LINEAR PENDANT*' with: '*LINEAR WALL MOUNTED*'  
REPLACE '*B.O. FIXTURE 25'-6" A.F.F.*' with: '*B.O. FIXTURE 19'-1" A.F.F.*'
- A5.01 Detail 3/A5.01: REMOVE duplicate note that reads "*INDICATES NEW CABLE TRAY – SEE ELECTRICAL DRAWINGS*"
- E1.01 General Demo  
Notes: REPLACE Note 11 with the following: "*ALL NEW AND EXISTING SURFACE MOUNTED CONDUIT AND BOXES SHALL BE PAINTED, COLOR COORDINATE WITH FINISH PLAN.*"
- E1.01 General Note for Wireless Access Portals (WAP)  
Note 1: REPLACE "*Contractor shall modify junction box as required to accommodate new ceilings.*" With the following: "*WAPs at all suspended acoustic ceiling tile system areas to be removed and replaced. Contractor to protect existing cabling/ceiling jacks and restore to original location.*"
- E1.01 Detail 1/E1.01 Rotunda (Lobby) L11: ADD Demo Electrical Keynote #9 to the 'data jack labeled (EX)' on the north wall.
- E1.02 Detail 1/E1.02 REMOVE Keynote #12 at Lobby C21.
- E1.02 General Note for Wireless Access Portals (WAP)  
Note 1: REPLACE "*Contractor shall modify junction box as required to accommodate new ceilings.*" With the following: "*WAPs at all suspended acoustic ceiling tile system areas to be removed and replaced. Contractor to protect existing cabling/ceiling jacks and restore to original location.*"
- E2.01 General Notes REPLACE Note 6 in its entirety with the following: '*CONTRACTOR TO PROVIDE BACKBOXES FOR DATA OUTLETS, SURFACE-MOUNT OR CONCEALED CONDUIT, AND PULL WIRE FOR OWNER TO INSTALL DATA WIRING*'
- E2.01 Electrical Key Notes REPLACE Key Note 4 in its entirety with the following: '*DISPLAY LOCATION. POWER AND DATA CONDUITS SHALL RUN IN WALL AND BOXES TO TERMINATE BEHIND. COORDINATE FINAL LOCATION WITH OWNER. IT PATHWAY FOR THE ROTUNDA SHOWCASE COMPUTER: RANDL BOX BEHIND DISPLAY. 1-1/4" EMT EXTENDED INTO THE CEILING OF THE SECOND FLOOR. TURN OUT AND STUB.*'

- E2.01 Electrical Key Notes REPLACE Key Note 5 in its entirety with the following: *'ELECTRICAL CONTRACTOR SHALL VERIFY IN FIELD THE MOUNTING HEIGHT OF NEW QUAD RECEPTACLE FOR THE MONITOR. PROVIDE NEW 20A CIRCUIT BREAKER IN EXISTING PANEL 'B' LOCATED IN THE MAIN ELECTRICAL ROOM AND RUN 2#12, 1#12G IN 3/4"C. CIRCUIT NUMBER AS SHOWN.'*
- E2.01 Electrical Key Notes REPLACE Key Note 6 in its entirety with the following: *'DISPLAY LOCATION: FURNISH AND INSTALL (1) SINGLE-GANG BOX BEHIND THE DISPLAY LOCATION, AND (1) SINGLE GANG BOX AT SWITCH HEIGHT. EXTEND 1" EMT FROM EACH BOX TO ACCESSIBLE CEILING SPACE. FURNISH AND INSTALL NEW RANDL BOX ON WALL, AT ACCESSIBLE CEILING SPACE ABOVE. INSTALL 1-1/4 " BUSHING INTO RANDL BOX.'*
- E2.01 Electrical Key Notes REPLACE Key Note 7 in its entirety with the following: *'SPEAKER LOCATION. REFER TO FITNESS CENTER IT/MEDIA REQUIREMENTS ON SHEET E2.02 FOR PATHWAY REQUIREMENTS. ALL FINAL LOCATIONS SHALL BE CONFIRMED WITH OWNER. THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR AND OWNER SHALL HOLD A PRE-INSTALLATION CONFERENCE PRIOR TO INSTALL, SCHEDULED BY GENERAL CONTRACTOR.'*
- E2.01 Electrical Key Notes REPLACE Key Note 10 in its entirety with the following: *'DISPLAY LOCATION: REFER TO FITNESS CENTER IT/MEDIA REQUIREMENTS ON SHEET E2.02 FOR POWER AND CONDUIT REQUIREMENTS. PROVIDE NEW 20A, 1-POLE CIRCUIT BREAKER TO EXISTING PANEL 'B' LOCATED IN ELECTRICAL ROOM AND RUN 2#12 AWG, 1#12G IN 3/4"C. CIRCUIT NUMBERS AS SHOWN.'*
- E2.01 Electrical Key Notes REPLACE Key Note 11 in its entirety with the following: *'STAFF WORKSTATION: REFER TO FITNESS CENTER IT/MEDIA REQUIREMENTS ON SHEET E2.02 FOR POWER AND CONDUIT REQUIREMENTS. PROVIDE NEW 20A, 1-POLE CIRCUIT BREAKER TO EXISTING PANEL 'B' LOCATED IN ELECTRICAL ROOM AND RUN 2#12 AWG, 1# 12G IN 3/4"C. CIRCUIT NUMBERS AS SHOWN.'*
- E2.01 Electrical Key Notes REPLACE Key Note 12 in its entirety with the following: *'MEDIA EQUIPMENT CABINET: REFER TO FITNESS CENTER IT/MEDIA REQUIREMENTS ON SHEET E2.02 AND DETAIL 4/E2.01 FOR POWER, CONDUIT AND ENCLOSURES REQUIREMENTS. PROVIDE NEW 20A, 1-POLE CIRCUIT BREAKER TO EXISTING PANEL 'B' IN ELECTRICAL ROOM AND RUN 2#12 AWG, 1#12G IN 3/4"C. CIRCUIT NUMBERS AS SHOWN.'*
- E2.01 Electrical Key Notes REPLACE Key Note 16 in its entirety with the following: *'SUBWOOFER LOCATION - OWNER FURNISHED, OWNER INSTALLED.'*
- E2.01 Electrical Key Notes REPLACE Key Note 17 in its entirety with the following: *'USER INPUT LOCATION. PROVIDE RANDL BOX AND 1-1/4" EMT SURFACE MOUNT.'*
- E2.01 Detail 4/E2.01 REPLACE *'RANDL BOX FOR UTP (TYPICAL 2 LOCATIONS)'* with the following: *'RANDL BOX FOR UTP (TYPICAL 2 LOCATIONS 166-08, 166-09)'*

E2.01	Detail 4/E2.01	REPLACE <i>'RECEPTACLE IN THE CABINET, HINGE SIDE, UPPER RIGHT CORNER. COORDINATE FINAL POSITION WITH OWNER'</i> with the following: <i>'RECEPTACLE IN THE CABINET, HINGE SIDE, UPPER RIGHT CORNER. COORDINATE FINAL POSITION WITH OWNER (Location B#27).'</i>
E2.01	Detail 4/E2.01	ADD the following note with leader directed towards the 2'-2" x 2'-11 ½" box to read as follows: <i>'MEDIA EQUIPMENT CABINET, PRE-INSTALLED BY OTHERS.'</i>
E2.01	Detail 4/E2.01	REPLACE the Detail's Title in its entirety with the following: <i>'MEDIA EQUIPMENT CABINET PATHWAY.'</i>
E2.01	Detail 5/E2.01	REPLACE <i>'IT PATHWAY FOR CABLING TO FITNESS CENTER: 4" EMT SLEEVED PATHWAY THROUGH WALL'</i> with the following: <i>'IT PATHWAY FOR CABLING TO FITNESS CENTER: 4" EMT SLEEVED PATHWAY THROUGH WALL, EQUIPPED WITH WIREMOLD FLAMESTOPPERS.'</i>
E2.01	Detail 2/E2.01	Lounge 165, Duplex receptacle indicated on 'west' wall with Key Note '5': REPLACE this duplex receptacle with a Quad (double duplex) receptacle.
E2.01	Detail 3/E2.01	REPLACE note <i>'(1) 2" EMT FROM BOX TO TRAY'</i> with the following: <i>'(2) 2" EMT FROM BOX TO TRAY'.</i>
E2.02	Packer Hall of Champions – Fitness Center IT / Media Requirements	ADD the following to 1_a_vi: <i>'3. Cable tag part number is PST-FOBLNK - Self-Laminating Cable Marker Tag 3.5" x 2" (88.9 mm x 50.8 mm). Color Black/Yellow. 5 tags per package.'</i>
E2.02	Packer Hall of Champions – Fitness Center IT / Media Requirements	DELETE item 1_b_i_1 text in its entirety. Clarification: The tray color will be field painted to match the ceiling. Color to be selected by Architect during submittal phase.
E2.02	Packer Hall of Champions – Fitness Center IT / Media Requirements	REPLACE item 2_i_iv text in its entirety with the following: <i>'See additional information below for media equipment enclosures requirements. Refer also to 4/E2.01 for additional media equipment pathway requirements.'</i>
E2.02	IT Pathway Requirements	REMOVE item 2 text in its entirety as this information is addressed elsewhere in the documents.'



**ATTACHMENTS:**

Sketch for Alternate #1

Pre-bid sign in sheet.

Construction Bid Proposal Form.

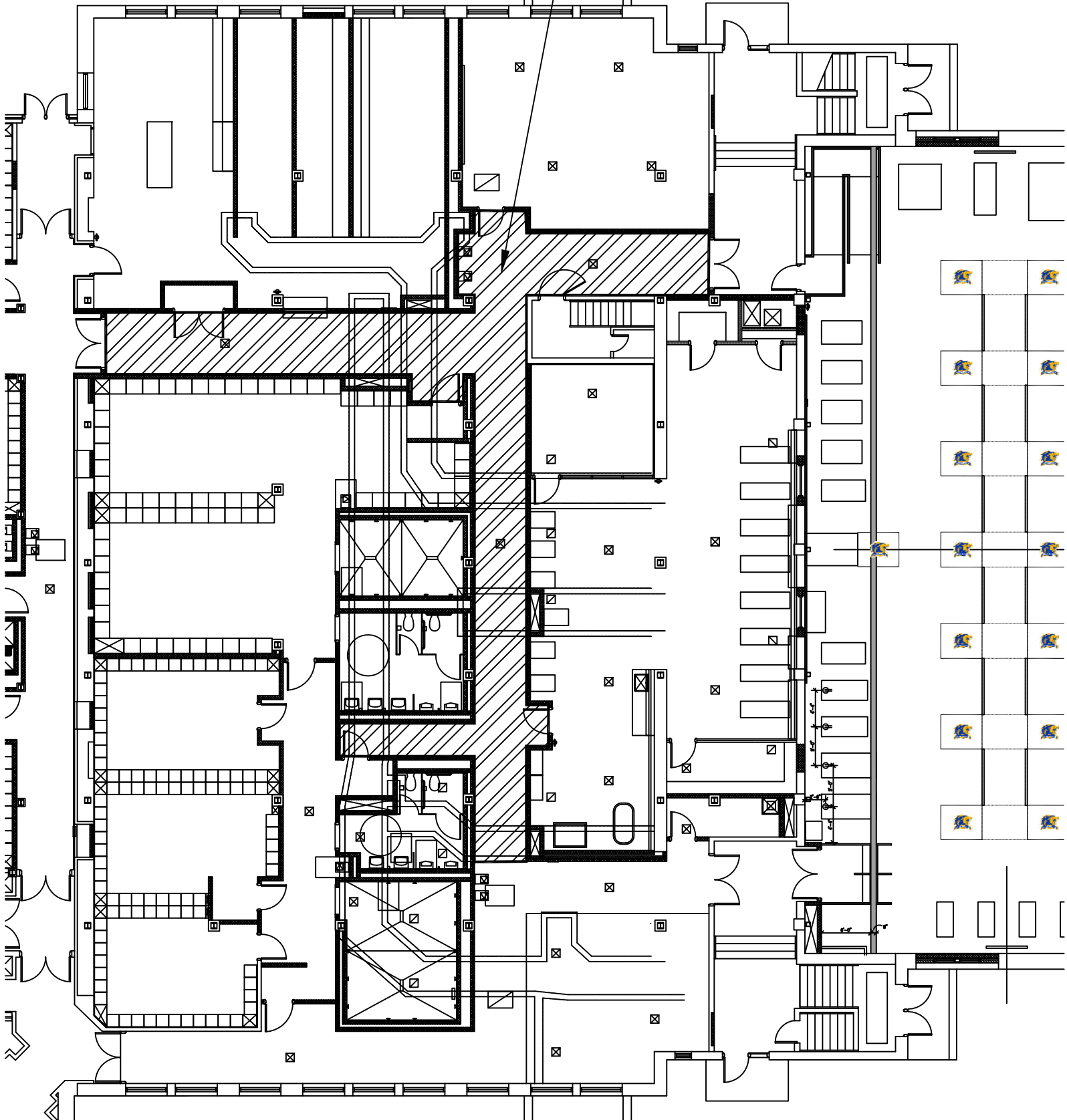
Specification Section 057300.

Specification Section 096500.

**END OF ADDENDUM NO. 1**

SK-1  
ADD ALTERNATE #1:

ADD ALTERNATE #1:  
"1,200 SF OF NEW EPOXY FLOORING AND RUBBER BASE:  
EXISTING EPOXY FLOORING SYSTEM TO BE REMOVED IN  
ITS ENTIRETY. PREP FLOOR TO ACCOMMODATE NEW  
EPOXY FLOOR SYSTEM & RUBBER WALL BASE. ALL WALLS  
& DOOR FRAMES AT THIS AREA SHALL BE PREPPED AND  
PAINTED. SCOPE OF WORK AT THIS AREA TO BE SIMILAR  
TO ADJACENT LOUNGE 165 & CORRIDOR C13. CEILINGS  
AND LIGHTING AT THIS AREA SHALL REMAIN."







**PRICES FOR SINGLE BID (LUMP SUM): Base Bid, Alternate Proposals, and Unit Prices  
FORM OF PROPOSAL**

To: **The College of New Jersey**

for: **Packer Hall Renovation**

Date \_\_\_\_\_

**A. 1. Base:**

Part-A (Packer Hall Renovation): \$ \_\_\_\_\_

Part-B (Allowance): \$20,000.00

We, \_\_\_\_\_, the Undersigned, in accordance with the published advertisement inviting proposals, will furnish all labor, material, equipment and services necessary for the complete construction, as defined in the advertisement, specimen contract, specifications, addendums/clarifications/bulletins, drawings, and proposal, for the Contract amount indicated below for the **above noted project** in strict accordance with the Contract Documents and Addenda thereto for the total sum of:

**Total of Part A and B (including allowance)**

\_\_\_\_\_ Dollars \$ \_\_\_\_\_  
(words)

**General Construction (Single overall Prime Contract)**

**Allowance:**

Contractors will include in their bids an allowance of \$20,000 to be used for unforeseen conditions or design enhancements. Any unused allowance shall be deducted from the contract via a deduct change order.

**2. Add /Deduct Alternate**

1. **Add** price to extend the epoxy flooring and painting of the walls and door frames down the halls as shown on the sketch included in addendum #1.

\$ \_\_\_\_\_

**3. CHECK LIST FOR BIDDERS:**

A check list has been provided in these specifications for the use in completing this proposal. Bidders are encouraged to reference said list to minimize the opportunity for errors by the bidder.

**B. UNIT PRICES: None.**

**C. AGREEMENT:** We, the Undersigned, agree, if awarded the Contract, to execute an agreement for the above stated work and compensation on the Standard Form of Agreement Between Owner and Contractor.

**D. SURETY:** We, the Undersigned, agree, if awarded the Contract, to execute and deliver to the Owner, prior to the signing of the Contract, the Performance and Payment Bonds as required.

- Contractor shall provide a Maintenance Bond at job completion for a period of one year for 100% of the

## SECTION 057300 – DECORATIVE METAL RAILINGS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Stainless steel decorative metal railings with infill panels.
  - 2. Wood railings.
  - 3. Fasteners.
  - 4. Miscellaneous materials.
- B. Related Requirements:
  - 1. Rough Carpentry Specification Section.

#### 1.2 DEFINITIONS

- A. Railings: Guards, handrails, and similar devices used for protection of occupants at open-sided floor areas and for pedestrian guidance and support, visual separation, or wall protection.

#### 1.3 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. 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 items to Project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not meet structural performance requirements.

#### 1.4 PREINSTALLATION MEETINGS

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

#### 1.5 ACTION SUBMITTALS

- A. Product Data:
  - 1. Manufacturer's product lines of stainless steel decorative metal railings assembled from standard components.
  - 2. Cable net infill panels.
  - 3. Wood railings.
  - 4. Fasteners.

5. Post-installed anchors.
6. Handrail brackets.
7. Nonshrink, nonmetallic grout.
8. Anchoring cement.
9. Metal finishes.

B. Shop Drawings: Include plans, elevations, sections, and attachment details.

C. Samples for Initial Selection: For products involving selection of color, texture, or design.

1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters
2. Fittings, end caps, and brackets.
3. Assembled Sample of railing system, made from full-size components, including top rail, post, handrail, and guard infill. Sample need not be full height.
  - a. Show method of connecting and finishing members at intersections.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: The manufacturer of railing system or a qualified installation firm that is approved, authorized, or licensed by railing system manufacturer to install manufacturer's products.
- B. Welding Qualifications: Qualify procedures and personnel in accordance with the following:
1. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel."
  1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."

## 1.7 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.

## PART 2 - PRODUCTS

### 2.1 SOURCE LIMITATIONS

- A. Obtain decorative metal railing systems from single source from single manufacturer. Systems must be designed, engineered, and fabricated by manufacturer of railing system.

### 2.2 MANUFACTURERS

- A. Stainless Steel Decorative Metal Railings:
1. Basis-of-Design Product: Subject to compliance with requirements, provide VIVA Railings, LLC; BLADE Railing System or comparable product by one of the following:

- a. Or Approved Equal.
- B. Product Options: Drawings indicate size, profiles, and dimensional requirements of railings and are based on the specific system indicated.
  - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

## 2.3 PERFORMANCE REQUIREMENTS

- A. General: For engineering decorative metal railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
  - 1. Stainless Steel: 45 percent of minimum yield strength.
  - 2. Steel: 72 percent of minimum yield strength.
- B. Structural Performance: Decorative metal railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
  - 1. Handrails and Top Rails of Guards:
    - a. Uniform load of 50 lbf/ft. (0.73 kN/m) applied in any direction.
    - b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
    - c. Uniform and concentrated loads need not be assumed to act concurrently.
  - 2. Infill of Guards:
    - a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
    - b. Infill load and other loads need not be assumed to act concurrently.

## 2.4 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Same metal and finish as supported rails unless otherwise indicated.
  - 1. Provide stainless steel wall brackets with flange tapped for concealed anchorage with vertical and horizontal adjustment capability.

## 2.5 STAINLESS STEEL DECORATIVE METAL RAILINGS

- A. Stainless Steel Tubing: ASTM A554, Grade MT 304.
- B. Stainless Steel Pipe: ASTM A312/A312M, Grade TP 304.
- C. Stainless Steel Castings: ASTM A743/A743M, Grade CF 8 or CF 20.

- D. Stainless Steel Sheet, Strip, Plate, and Flat Bar: ASTM A666, Type 304.
- E. Stainless Steel Bars and Shapes: ASTM A276, Type 304.
- F. Steel Bars: Hot-rolled, carbon steel complying with ASTM A29/A29M, Grade 1010.
- G. Posts: Parallel double plate, made from stainless steel.
- H. Top Rail/Hand Rail: Wood with round cross-section shape.
- I. Cable Net Infill Panels: 1/16 inch (1.5 mm) stainless steel cable mesh with 1 inch (102 mm) wide frame.

## 2.6 WOOD RAILINGS

- A. Description: Clear, straight-grained hardwood rails secured to **recessed** metal substrate.
  - 1. Species: Red oak.
  - 2. Finish: Manufacturer's standard unfinished.
  - 3. Staining: In accordance with Section 099123 "Interior Painting."
  - 4. Top Rail Profile: Round, 2-inch (50-mm) diameter.
- B. Description: Hardwood rails complying with Section 064023 "Interior Architectural Woodwork."

## 2.7 FASTENERS

- A. Fastener Materials: Unless otherwise indicated, provide the following:
  - 1. For Stainless Steel Railing Components: Type 304 stainless steel fasteners.
  - 2. For Dissimilar Metal Railing Components: Type 304 stainless steel fasteners.
  - 3. Finish exposed fasteners to match appearance, including color and texture, of railings.
- B. Fasteners for Anchoring to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction and capable of withstanding design loads.
- C. Provide concealed fasteners for interconnecting railing components and for attaching railings to other work unless exposed fasteners are unavoidable.
  - 1. Provide hex, hex socket, or hex-button head machine screws for exposed fasteners unless otherwise indicated.
- D. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to the design load, in accordance with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193.
  - 1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5, unless otherwise indicated.

## 2.8 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for metal alloy welded.
  - 1. Provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

## 2.9 FABRICATION

- A. General: Fabricate decorative metal railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Shop assemble railings and guards to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations.
  - 1. Clearly mark units for reassembly and coordinated installation.
  - 2. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately.
  - 1. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated.
  - 2. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water.
  - 1. Provide weep holes where water may accumulate.
  - 2. Locate weep holes in inconspicuous locations.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded or mechanical connections unless otherwise indicated.

## 2.10 METAL FINISH REQUIREMENTS, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipment.
- C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. 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.

- D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

## 2.11 STAINLESS STEEL FINISHES

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Stainless Steel Finishes:
  - 1. Color Electro-Plated Metal: Vertical and stand-off components.
    - a. Basis-of-Design Product: Subject to compliance with requirements, provide VIVA Railings, LLC; ECM Finish System or comparable product.
- C. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Installation Tolerances: Structural steel and concrete slabs to be within 1/8 inch (3 mm) in 10 ft. (3.048 m) horizontally and 1/8 inch (3 mm) vertically. Correct out-of-tolerance conditions to meet railing manufacturer's requirements.

### 3.2 INSTALLATION, GENERAL

- A. Perform cutting, drilling, and fitting required for installing railings.
  - 1. Fit exposed connections together to form tight, hairline joints.
  - 2. Install railings level, plumb, square, true to line; without distortion, warp, or rack.
  - 3. Set railings accurately in location, alignment, and elevation; measured from established lines and levels.
  - 4. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
  - 5. Set posts plumb within a tolerance of 1/16 inch in 3 ft. (2 mm in 1 m).
  - 6. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 ft. (6 mm in 3 m).
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
- C. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.



### 3.3 METAL RAILING CONNECTIONS

- A. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings. Seal recessed holes of exposed locking screws, using plastic cement filler colored to match finish of railings.
- B. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article, whether welding is performed in the shop or in the field.

### 3.4 ANCHORING METAL POSTS

- A. Anchor posts to metal surfaces with flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:
  - 1. For stainless steel railings, weld flanges to posts and bolt to metal-supporting surfaces.

### 3.5 ATTACHING RAILINGS

- A. Anchor railing ends to concrete and masonry with brackets on underside of rails connected to railing ends and anchored to wall construction with anchors and bolts.
- B. Secure wall brackets and railing end flanges to building construction as follows:
  - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
  - 2. For hollow masonry anchorage, use toggle bolts.
  - 3. For wood stud partitions, use hanger or lag bolts set into studs or wood backing between studs. Coordinate with carpentry work to locate backing members.
  - 4. For steel-framed partitions, fasten brackets directly to steel framing or concealed steel reinforcements using self-tapping screws of size and type required to support structural loads.

### 3.6 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period, so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

END OF SECTION 057300

## SECTION 096500 - RESILIENT FLOOR TILE

### PART 1 - GENERAL

#### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. 096513 RESILIENT BASE AND ACCESSORIES

#### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Include all labor, materials, tools, equipment, and services required to furnish, deliver and install all work under this section as required by the drawings and as specified.
  - 2. Provide new LVT (Luxury Vinyl Tile) flooring as specified.
  - 3. Examine all drawings. Coordinate the work of this section with all related and adjoining work.

#### 1.03 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of product indicated.
- C. Maintenance Data: For resilient products to include in maintenance manuals.

#### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C). Store tiles on flat surfaces.

#### 1.05 PROJECT CONDITIONS

- A. Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C), in spaces to receive floor tile during the following time periods:
  - 1. 72 hours before installation.

2. During installation.
  3. 48 hours after installation.
- B. After post installation period, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C).
- C. Close spaces to traffic during floor covering installation.
- D. Close spaces to traffic for 48 hours after floor covering installation.
- E. Install resilient products after other finishing operations, including painting, have been completed.

#### 1.06 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Floor Tile: Furnish 1 box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

#### 1.08 REFERENCES

- A. Federal Specifications: SS-T-312B, Interim Amendment-1 (YD).
- B. American Society for Testing and Materials (ASTM):
1. ASTM F 1066, Standard Specifications for Vinyl Composition Floor Tile;
  2. ASTM E 648 (NFPA 253), Test Method for Critical Radiant Flux of Floor Covering Systems;
  2. ASTM E 84 (NFPA 255), Standard Test Method for Surface Burning Characteristics of Building Materials.

### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products listed in other Part 2 articles.

## 2.02 LUXURY VINYL TILE

- A. Luxury Vinyl Tile (LVT): ASTM F 1700.
  - 1. Patcraft.
  - 2. Flexco.
  - 3. Armstrong.
  - 4. Or approved equal.
- B. Basis of Design: Wood Planx Luxury Vinyl Tile by Patcraft with the following physical characteristics:
  - 1. Slip Resistance: Meets and exceeds passing requirements for ADA compliance and OSHA guidelines.
  - 2. Wear layer: 40 mil.
  - 3. Finish: UV Urethane.
  - 4. Warranty: 15 year commercial manufacturer's warranty
  - 5. Tile Size and Colors:
    - a. 9" x 36"; Colors as selected by Architect from Manufacturer's full range of standard colors; Stagger installation

## 2.03 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic cement based formulation provided or approved by resilient product manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.
- C. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of tiles, and in maximum available lengths to minimize running joints.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances, moisture content, and other conditions affecting performance.
  - 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 resilient products.

2. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Prepare substrates according to manufacturer's written recommendations 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. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
  3. Moisture Testing:
    - a. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m) in 24 hours.
    - b. Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
- C. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- D. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates.
- E. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
  1. Do not install resilient products until they are same temperature as space where they are to be installed.
- F. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, and dust. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.03 TILE INSTALLATION

- A. Lay out 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.
  1. Lay tiles in pattern indicated.
- B. Match 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.

1. Lay tiles in pattern of colors and sizes indicated.
- C. Scribe, cut, and fit tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings.
- D. Extend tiles into toe spaces, door reveals, closets, and similar openings.
- E. 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, non-staining marking device.
- F. Install tiles on covers for telephone and electrical ducts and similar items in finished floor areas. Maintain overall continuity of color and pattern with pieces of tile installed on covers. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
- G. Adhere tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

### 3.04 CLEANING AND PROTECTION

- A. Perform the following operations immediately after completing resilient product 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.
    - a. Do not wash surfaces until after time period recommended by manufacturer.
- B. Protect resilient products from marks, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods recommended in writing by manufacturer.
  1. Apply protective floor polish to horizontal surfaces that are free from soil, visible adhesive, and surface blemishes if recommended in writing by manufacturer.
    - a. Use commercially available product acceptable to manufacturer.
    - b. Coordinate selection of floor polish with Owner's maintenance service.
  2. Cover products installed on horizontal surfaces with undyed, untreated building paper until Substantial Completion.
  3. Do not move heavy and sharp objects directly over surfaces. Place hardboard or plywood panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

END OF SECTION 096500