SPORTS CENTER GYMNASIUM
BLEACHER REPLACEMENT AND FLOOR REFINISHING
Project: ECSU 2020-5

ADDENDUM NUMBER 2

Date of Addendum: March 5, 2020

Bids Due: **2:00 P.M. on March 20, 2020** in the Purchasing Department, Third Floor, Room 344 of the Gelsi-Young Hall (Administration Building along High Street)

The following clarifications are applicable to Drawings and Specifications for the project referenced above:

1. Asbestos has been found in the floor tile and mastic within the press box. The University will have the tile and mastic abated before construction. This does not create any changes to the construction documents.

**Request for Information:**

Questions from CBS INC.

1. Can Interkal LLC be listed as an acceptable manufacturer for the telescopic seating? Interkal, based in Kalamazoo, MI has been manufacturing telescopic bleachers for over 50 years and we have installed Interkal bleachers in over 150 different facilities in Connecticut in the last 10-15 years. Attached is a copy of their brochure. I have also attached some pictures of a similar installation at UMass Boston that includes both bleacher seats and folding chairs.

2. The plan view of Bank ‘B’ indicates 11 rows of folding chairs. The Elevation view and Section views of Bank ‘B’ show 10 rows of folding chairs. Do you want Nose-Mounted seats on the first row or portable seats?

Responses:

1. Hussey and Irwin are listed as basis of design manufacturers, but substitutions are allowed. Interkal or other bleachers manufacturers are allowed if they can meet the specifications. Note spec changes in ITEM 5.
2. This question brought to light a design conflict. The front row was intended to be the same folding seats, but these seats cannot be installed on the floor level and meet our other design constraints. This has resulted in a design change. See Addendum ITEM 1 and ITEM 5.

Questions from Gugliotti Associates, Inc.

1. The existing floor boards appear to be “Second and Better” to me, but the specification calls for replacement boards to be grade “First.” Should we keep the “First” grade or try to match the existing “Second and Better?”

2. The game lines are noted and shown to be overlapping. Can the overlapping game lines be broken and have small gaps where they overlap to allow for all the lines to be painted simultaneously?

Responses:

1. The specification for replacement floor boards will be changed to “Second and Better” to better match the existing floor. See Addendum ITEM #3

2. Yes, the game lines that are overlapped by other game lines may be broken with a gap to allow game lines to be painted simultaneously. See Addendum ITEM #2.

Addendum Items:

ITEM 1: Remove drawings G1.1, A1.6, A2.0, and A3.0 from drawing set. Insert the attached revised drawings G1.1, A1.6, A2.0, and A3.0 into the drawing set. The bleacher configuration has been revised to add a platform to the Student Center side and to place all wheelchair spaces on the Press Box side (opposite the team benches). The new floor in the Press Box is now to be rubber tile instead of a rubber sheet product.

ITEM 2: Insert into drawings with sheet A-1.0 the attached drawing sk001 that shows that “Overlapping” Game lines from different sports may be broken with an offset gap to allow all game lines to be painted simultaneously.

ITEM 3: Remove page 4 of spec section 096466. Insert attached revised page 4 of section 096466 into section 096466 WOOD ATHLETIC FLOORING. Floor board grade revised to “Second and Better.”

ITEM 4: Remove spec section “096516 - RESILIENT SHEET FLOORING.” Insert attached spec sections “096519 - RESILIENT TILE FLOORING” and “096513 - RESILIENT BASE AND ACCESSORIES.”

ITEM 5: Remove spec section “126613 – TELESCOPIC SEATING.” Insert attached revised spec section “126613 – TELESCOPIC SEATING.” Revisions include changes from the new design changes shown in
new drawings and a change to the center aisle handrails to allow for manually operated storage systems.

ITEM 6: Remove Page 2 of DIVISION 1 GENERAL REQUIREMENTS. Insert the attached revised Page 2 of DIVISION 1 GENERAL REQUIREMENTS. Work sequence and phasing revised to show 2 phases of work and date of substantial completion.

END OF ADDENDUM #2
NOTES:
1. ALL DIMENSIONS TO BE VERIFIED BY CONTRACTOR.
2. MINIMUM AND MAXIMUM DIMENSIONS SHOWN ON BLEACHERS INTENDED TO ALLOW FOR VARIATION BETWEEN DIFFERENT MANUFACTURERS' STANDARD SYSTEMS. MAXIMUM DEPTH OF CLOSED BLEACHERS SHOWN PROVIDES A MINIMUM CLEARANCE FOR SIDE COURTS.
3. FINAL DESIGN OF STAIRS AND LANDINGS TO PRESS BOX TO BE COORDINATED WITH ARCHITECT AND BLEACHER MANUFACTURER THROUGH SHOP DRAWINGS AND MEETINGS. DESIGN PROCESS TO BEGIN WITHIN ONE WEEK AFTER BID AWARD. DESIGN SHOWN AND OUTLINED IN PROJECT MANUAL CONFORMS TO MAXIMUM AND MINIMUM DESIGN CONSTRAINTS.
4. AFTER DESIGN PROVIDE FOR OSBI/OSFM REVIEW AND APPROVAL: (A) SHOP DRAWINGS FOR PRESS BOX HANDRAILS AND GUARD SHOWING COMPLIANT DESIGN; AND (B) BLEACHER SUBMITTAL DOCUMENTS SHOWING COMPLIANT DESIGN; (C) BLEACHER STRUCTURAL LOAD EVALUATION.
5. PRESS BOX STAIRS REQUIRE HANDRAILS WITH HANDRAIL EXTENSIONS IN DIRECTION OF TRAVEL ON BOTH SIDE OF STAIRS.
OVERLAPPING COURT LINES FROM DIFFERENT SPORTS

0.94" TYP.
2.2 SYSTEM DESCRIPTION

A. Floor Finish System: System of compatible components recommended in writing by flooring manufacturer and MFMA approved.

1. Type: MFMA Group 3, Gymnasium Type Surface Finishes; urethane-oil type
2. Floor-Sealer Formulation: SportSeal 275 or equal, 2 coats
4. Game-Line and Marker Paint: Industrial enamel compatible with finish coats and recommended in writing by manufacturers of finish coats, and paint for this use. Bona Sport Courtlines Sport Flooring Paint.
5. Wood Floor Stain – Bona DriFast Stain – Semi transparent, solids 35-47%, Density Wood tones: 7.2-7.5LBS/GALLON, us Regulatory VOC – 550 g/l
6. Chemical Components: Provide products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   a. Floor Sealers and Finish Coats: VOC content of not more than 275 g/L.
   b. Game-Line and Marker Paint: VOC content of not more than 150 g/L.

B. Options in "Overall System Height" Paragraph below are examples only. Systems are available in various heights; coordinate system heights with slab depressions.

2.3 PERFORMANCE REQUIREMENTS

A. Certified Wood: Verify wood products are made from certified wood tracked through a chain-of-custody process. Provide certified wood documentation from sources certified through a forest certification system with principles, criteria, and standards developed using ISO/IEC Guide 59 or the World Trade Organization's "WTO Agreement on Technical Barriers to Trade."

B. Composite Wood Products: Verify products are made without added urea formaldehyde.

2.4 FLOORING MATERIALS

A. Maple Flooring: Comply with MFMA grading rules for species, grade, and cut.

1. Certification: Provide flooring that carries MFMA mark on each bundle or piece.

B. Random-Length Strip Flooring: Northern hard maple (Acer saccharum), kiln dried, random length, tongue and groove, and end matched.

1. Grade: MFMA-RL First, SECOND AND BETTER
   a. Exception: For areas under stacked portion of telescoping bleachers that are normally concealed from view, provide Third and Better Grade.

2. Cut: Match existing.
SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

   1. Rubber base.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Sustainable Design Submittals:

   1. Product Data: For adhesives, indicating VOC content.
   2. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.
   3. Product Data: For sealants, indicating VOC content.
   4. Laboratory Test Reports: For sealants, indicating compliance with requirements for low-emitting materials.
   5. Laboratory Test Reports: For resilient base and stair products and accessories, indicating compliance with requirements for low-emitting materials.
   6. Environmental Product Declaration: For each product.

C. Samples: For each exposed product and for each color and texture specified, not less than 12 inches (300 mm) long.

D. Samples for Initial Selection: For each type of product indicated.

E. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches (300 mm) long.

F. Product Schedule: For resilient base and accessory products. Use same designations indicated on Drawings.

1.3 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. Furnish not less than 10 linear feet (3 linear m) for every 500 linear feet (150 linear m) or fraction thereof, of each type, color, pattern, and size of resilient product installed.
1.4 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
   1. Coordinate mockups in this Section with mockups specified in other Sections.
   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.

1.5 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).

1.6 FIELD CONDITIONS

A. Maintain ambient 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 resilient products during the following 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 (13 deg C) or more than 95 deg F (35 deg C).

C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Products shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Formaldehyde emissions shall not exceed 16.5 mcg/cu. m or 13.5 ppb, whichever is less.
2.2 RUBBER BASE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Nora.
   2. American Bilrite
   3. Flexco.

B. Product Standard: ASTM F1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).
   1. Style and Location:
      a. Cove: Provide in areas with resilient floor coverings.

C. Thickness: 0.125 inch (3.2 mm).

D. Height: 4 inches (102 mm) As indicated on Drawings.

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Job formed or preformed.

G. Inside Corners: Job formed or preformed.

H. Colors: Flexco Midnight Blue 099, Pantone 289 (Navy), or other similar color approved by architect.

2.3 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 resilient-product manufacturer for resilient products and substrate conditions indicated.
   1. Adhesives shall have a VOC content of 50 g/L or less

C. Stair-Tread Nose Filler: Two-part epoxy compound recommended by resilient stair-tread manufacturer to fill nosing substrates that do not conform to tread contours.

D. Metal Edge Strips: Extruded aluminum with mill finish, nominal 2 inches (50.8 mm) wide, of height required to protect exposed edges of flooring, and in maximum available lengths to minimize running joints.

E. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient stair-tread manufacturer.
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 resilient products.

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

1. Installation of resilient products indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates for Resilient Stair Accessories: Prepare horizontal surfaces according to ASTM F710.

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 manufacturer. Do not use solvents.

3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.

4. Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft. (304.8 sq. m), and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.

   a. Anhydrous Calcium Chloride Test: ASTM F1869. 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. Relative Humidity Test: Using in-situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install resilient products until materials are the same temperature as space where they are to be installed.
1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.

E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

### 3.3 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. Preformed Corners: Install preformed corners before installing straight pieces.

H. Job-Formed Corners:
   1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches (76 mm) in length.
      a. Form without producing discoloration (whitening) at bends.
   2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches (76 mm) in length.
      a. Miter or cope corners to minimize open joints.

### 3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Perform the following operations immediately after completing resilient-product installation:
   1. Remove adhesive and other blemishes from surfaces.
   2. Sweep and vacuum horizontal surfaces thoroughly.
   3. Damp-mop horizontal surfaces to remove marks and soil.
C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 096513
SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Rubber floor tile.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Sustainable Design Submittals:

1. Product Data: For adhesives, indicating VOC content.
2. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.
3. Product Data: For chemical-bonding compounds, indicating VOC content.
4. Laboratory Test Reports: For chemical-bonding compounds, indicating compliance with requirements for low-emitting materials.
5. Product Data: For sealants, indicating VOC content.
6. Laboratory Test Reports: For sealants, indicating compliance with requirements for low-emitting materials.
7. Laboratory Test Reports: For flooring products, indicating compliance with requirements for low-emitting materials.
8. Environmental Product Declaration: For each product.
9. Health Product Declaration: For each product.
10. Sourcing of Raw Materials: Corporate sustainability report for each manufacturer.

C. Samples: For each exposed product and for each color and pattern specified.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for floor tile installation.
PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient floor tile, as determined by testing identical products according to ASTM E648 or NFPA 253 by a qualified testing agency.
   
   1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

B. Verify flooring products comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.2 RUBBER FLOOR TILE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   
   1. Nora Systems, Inc. Grano tile. (this product is the basis of design)
   3. Flexco. IMO rubber tile.


C. Hardness: Grade 2 or harder, minimum hardness of 70, measured using Shore, Type A durometer according to ASTM D2240.

D. Wearing Surface: Textured.

E. Thickness: 0.118 inches (3 mm) to 0.14 inches (3.5mm).

F. Size: Square, 35.5 inches by 35.5 inches to 39.53 inches by 39.53 inches.

G. Colors and Patterns: As selected by the architect from the manufacturer's standard options.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.

   1. Verify adhesives have a VOC content of 50 g/L or less.
   2. Verify adhesive complies with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
PART 3 - EXECUTION

3.1 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 F710.
   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: Perform tests so that each test area does not exceed 1000 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
      a. Relative Humidity Test: Using in-situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 60 percent relative humidity level measurement.

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 materials are the same temperature as 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.

3.2 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.
   1. Lay tiles square with room axis.
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.

1. Lay tiles with grain running in one direction (grain to run parallel to long axis of floor).

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 installation 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.

H. Adhere floor tiles to 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.

END OF SECTION 096519
PART 1  GENERAL

1.1  SUMMARY
A. Section Includes: Telescopic Gym Seating includes electrically operated multiple-tiered seating rows comprising of seat, deck components, understructure that permits closing without requiring dismantling, into a nested configuration for storing or for moving purposes.

Wall-attached telescoping stands

1.2  REFERENCES
A. Aluminum Association (AA):
ADM 1- Aluminum Design Manual
B. American Institute of Steel Construction (AISC):
AISC 360- Steel Construction Manual.
C. American Iron & Steel Institute (AISI):
AISI S100 – Design of Cold Formed Steel Structural Members.
D. American Society for Testing Materials (ASTM):
E. American Wood Council (AWC):
F. American Welding Society (AWS):
AWS D1.1 Structural Welding Code – Steel
AWS D1.3 Structural Welding Code - Sheet Steel
G. Canadian Welding Bureau: CWB Division 3 W47.1
H. U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines.
I. National Institute of Standards and Technology (NIST)
PS 1: Structural Plywood.
J. Southern Pine Inspection Bureau (SPIB):

1.3  PERFORMANCE REQUIREMENTS
A. Structural Performance: Engineer, fabricate and install telescopic gym seating systems to the following structural loads without exceeding allowable design working stresses of materials involved, including anchors and connections. Apply each load to produce maximum stress in each respective component of each telescoping stand unit according to ICC 300
B. Manufacturer's System Design Criteria:
Gymnasium seat assembly; Design to support and resist, in addition to its own weight, the following forces:

a.) Live load of 120 lbs. per linear foot (1.75 kN/m) on seats and decking
b.) Uniformly distributed live load of not less than 100 psf (4.79 kN/m²) of gross horizontal projection.
c.) Parallel sway load of 24 lbs. per linear foot (0.35 kN/m) of row combined with (b.) above
d.) Perpendicular sway load of 10 lbs. per linear foot (0.15 kN/m) of row combined with uniformly distributed live load above.
e.) Parallel and Perpendicular sway loads are not applied concurrently.

Hand Railings, Posts and Supports: Engineered to withstand the following forces applied separately:

f.) Concentrated load of 200 lbs. (0.89 kN) applied at any point and in any direction.
g.) Uniform load of 50 lbs. per foot (0.73 kN/m) applied in any direction.

Guard Railings, Post and Supports: Engineered to withstand the following forces applied separately:

h.) Concentrated load of 200 lbs. (0.89 kN) applied at any point and in any direction along top rail.
i.) Uniform load of 50 lbs. per foot (0.73 kN/m) applied in any direction at top rail.
j.) Uniform load of 50 lbs. (0.22 kN) applied on an area equal to 1 ft² (0.09 m²) applied on all guardrail infill panels.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Environmental Data Package: Provide project specific environmental data work sheet with project header and LEED calculations completed based on actual project weight and project price. Environmental Data Package required to be submitted with formal submittal package prior to project award.

Regional Manufacturing:

a.) Provide manufacturing location and distance to project site by product material type as required. Use straight-line travel as defined by USGBC.

Recycled Content:

b.) Provide Packaging Material Listing & Recycled Content by Material Type; total percentage of recycled content, total percentage of pre consumer and post consumer materials.

c.) Provide Product Material Listing & Recycled Content by Material Type; total percentage of recycled content, total percentage of pre consumer and post consumer materials.

Indoor Environmental Quality:

d.) Provide documentation that the specified product passes ANSI/BIFMA X7.1-2007 Standard for Formaldehyde and TVOC Emissions of Low-emitting Office Furniture Systems and Seating
e.) Provide documentation that the specified product solid core ply-form or engineered fiber panels are manufactured with resins that are free of added urea-formaldehyde.

**Product Life Cycle Deconstruction & Reclaiming Opportunity:**

f.) Provide listing of product materials that can be recycled at the end of the product life cycle and re-enter the recycled or reuse material stream.

C. Shop Drawings: For telescoping stands in both stacked and extended positions. Show seat heights, row spacing and rise, aisle widths and locations, assembly dimensions, anchorage to supporting structure, material types and finishes. Show all equipment to be furnished with details of accessories to be supplied including necessary electrical service to be provided by others. All electrical submittals must include U.L. listing number.

**Electrical:** Indicate power supply requirements.

**Graphics Layout Drawings:** Indicate pattern of contrasting or matching seat colors.

D. Samples: For units with factory-applied finishes.

### 1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified manufacturer and installer.

B. Welding certificates.

C. Product Test Reports: Load test to all loads, observed by a qualified independent testing laboratory, and certified by a registered professional structural engineer verifying the integrity of the manufacturer's design.

D. Warranty: Manufacturers standard warranty documents.

### 1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For telescopic bleacher to include video operations manual.

B. Full text of manufacturer’s Warranty.

### 1.7 QUALITY ASSURANCE

A. Manufacturer's Qualifications: A minimum of 25 years of experience manufacturing telescoping stands and can demonstrate continual design enhancement and 25-year minimum product life-cycle support of telescopic seating.

B. Installer Qualifications: Factory certification by the manufacturer.

**Project list: Ten projects of similar size, complexity and in service for at least five years.**

C. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
E. Seating Layout: Provide telescoping stands to comply with ICC 300 2017 Standard for Bleachers, Folding and Telescopic Seating, and Grandstands, except where additional requirements are indicated or imposed by authorities having jurisdiction.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver telescoping stands in manufacturers packaging clearly labeled with manufacturer name and content.
B. Handle bleacher equipment in a manner to prevent damage.
C. Deliver the telescoping stands at a scheduled time for installation that will not interfere with other trades operating in the building when at all possible.

1.9 PROJECT CONDITIONS

A. Field Measurements: Coordinate actual dimensions of construction affecting telescoping stands installation by accurate field measurements before fabrication. Show recorded measurements on final shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid delay of Work.

1.10 WARRANTY

A. Manufacturer's Warranty: Includes the repair or replacement of the defective product; or defective component thereof, with a comparable product; or component thereof, or a refund of the purchase price prorated over the warranty period.

Includes: Labor, materials, and freight for replacement or repairs.

Structural Component parts of Understructure Warranty Period: 10 years from Date of Acceptance
Decking systems, seating collections, electrical, portable and integral dolly systems, end closure curtains, surface material finishes Warranty Period 5 years from Date of Acceptance.

PART 2 PRODUCTS

A. Wood:

Lumber: NIST PS 20, southern pine complying with SPIB's "Standard Grading Rules for Southern Pine Lumber" for B&B Finish (B and better) grade-of-finish requirements.
Plywood: NIST PS 1, APA-grade trademarked, A-C grade.

B. Steel:

Structural-Steel Shapes, Plates, and Bars: ASTM A36.
Galvanized-Steel Sheet: ASTM A653, coating designation G60.
Uncoated Steel Strip; Non-Structural Components: ASTM A1011, Commercial Quality, Type B, Hot-Rolled Strip.
Uncoated Steel Strip; Structural Components: ASTM A1011 Grade 33 (228 MPa), Grade 36 (249 MPa), Grade 40 (276 MPa), Grade 45 (311 MPa), or Grade 50 (345 MPa), Structural Quality, Hot-Rolled.
Galvanized Steel Strip: ASTM A653 Grade 40 (276 MPa), structural quality, coating designation G60.
Tubing: ASTM A500, cold formed; Grade B.

C. Polyethylene Plastic: High-density polyethylene; injection molded, color-pigmented, textured, impact-resistant, and dimensionally stable.

2.2 MANUFACTURERS

A. Manufacturer: Hussey Seating Company, U.S.A.
   Address: North Berwick, Maine, 03906.
   Telephone: (207) 676-2271; Fax: (207) 676-9690.

B. Manufacturer: Irwin Seating Company – Telescopic Division
   Address: Altamont, IL 62411
   Telephone: (618) 483-6157
   Product: VersaTract Telescopic Seating System.

C. Substitutions: The above manufacturers are the basis of design. Substitutions are PERMITTED and must be bid AS SPECIFIED.

2.3 TELESCOPING STANDS

A. Wall-Attached Telescoping Stands: Forward-folding system with the rear of the understructure permanently attached to the floor and to the rear wall. Rear wall provides structural support and must support loads imposed by the bleacher.

2.4 DIMENSIONAL AND OPERATIONAL CRITERIA

A. Dimensions: BANK “A”
   Bank Length: 114’-0” (Including End Rails)
   Aisle Width: 36” to 54” as shown on plan
   Number of Tiers: 20
   Row Spacing: 26 inches
   Row Rise: 9-5/8 inches
   Open Dimension: 44’-0” maximum
   Closed Dimension: 4’-9” maximum
   Overall Unit Height: 16’-7” (22’-1” including stairs to press box and associated guard rails)
   Net Capacity: 1212
   Maximum Net Capacity; with ADA “Flex” Row Fully Recovered: 1,084.

B. Dimensions: BANK “B”
   Bank Length: 96’-0” (Including End Rails)
   Aisle Width: 54”
   Number of Tiers: 15
   Row Spacing: 33” Rows 1-11 / 26” Rows 12-15
   Row Rise: 9-5/8 inches to 10 inches
   Open Dimension: 42’-0” approximate
Closed Dimension: 4’-9” maximum  
Overall Unit Height: 13'-5” or more  
Net Capacity: 495 Folding Chairs / 194 10” Bench Seat Modules  
Maximum Net Capacity: 680  
Include 4’x16’ video platform on this bank

C. Operation: **Integral Power**

All integral powered options operate the entire bank.

**Integral Power: Wireless control unit**

a.) Limit Switches: Automatically stop integral power system when telescoping stands reach fully opened or closed positions.

b.) Motion Monitor: Flashing light with self-contained warning horn, rated at 85 dB, activates when stands are in motion.

**Portable power-assist:** User operates system by opening/closing each section using a portable power-assist tractor: 115 volt, 20amps.

**Manual:** User operates system by manually pulling/pushing each section with operating handles

2.5 **SEATING**

A. Fold Down Chairs: Rows 1-11 on Bank B

1. Fold-Down Chairs: Rotating from upright, locked position to folded-down position that allows supporting platform to telescope for storage. With chairs in the upright position, seat bottoms are self-returning to allow passage of persons within row.

**Operation: Folding Mechanism**

Chair width with armrests: 21 inches  
Armrest height: 25 ¼ inches  
Module Load: Tested to 600 lbs. (2.67 kN).  
Seats: Polyethylene plastic

a.) Color: **As selected by Architect from manufacturers standard colors**

b.) Seat up envelope: 14 13/16 inches (376mm) with arm rest and 18 9/16 inches (471mm) with cupholder

c.) Seat down envelope: 22 1/16 inches (561mm) Polymer

Backs: Polyethylene plastic

d.) Color: **As selected by Architect from manufacturers standard colors**

Armrests: Polyethylene plastic

e.) Color: **As selected by Architect from manufacturers standard colors**

2. **Auto-Fold:** Chairs shall be ganged in group(s) of one to fourteen, manually raised as one unit with gas strut assist to offset weight. Auto-Fold operation will allow seating rows 2 and above to be unlocked and lowered via mechanism below the deck surface. This mechanism is activated during the closure of the bleacher.

3. **Chair System:** Beam-mounted design, consisting of chairs independently mounted and armrests independently mounted to transverse beam. Top of support arms shall be
designed to capture and secure the beam in place. Support arms articulate from manual assist or semi-automatic operating mechanism.

4. Seat Support:
   a.) Each of the independent seat hinges shall be fitted with up and down stops as well as double acting; self-centering, preloaded coiled seat return springs with silencers.
   b.) Chairs must be designed with two independent return springs which position seat pan in 3/4 fold position with 100 percent (100%) fold position available for added aisle passage. Seat action shall be dampened for a constant velocity return and no final oscillations to the rest position.
   c.) Hinges, seat support, return springs, and stops shall be enveloped and concealed by the seat and back shells. Seat shall have the ability to achieve a full fold position when rearward pressure is applied. Superior comfort shall be derived through careful ergonomic engineering.

5. Polymer Seats / Backs: (seats and backs)
   a.) Shall each be textured one-piece gas-assist injection molded pigmented polypropylene shells.
   b.) Shall be internal structured with peripheral gas channels. The gas channels shall support, resist, and transmit design loads to the aluminum in the plastic chair beam.
   c.) Back must extend below seat to afford chair occupant protection from rear and eliminate any pinching hazard.
   d.) Backs should be rigidly attached to the chair beam and show no evidence of articulation.

6. Armrests and armrests with cupholders: Shall be of injection-molded, leather textured polypropylene secured to polypropylene armrest base with concealed fasteners. Armrest standard to be of powder-coated cast aluminum grade AA 380 and independently secured to mounting beam.

7. Chair Beam: Shall be constructed of extruded aluminum with polymer end caps and serve as the focal attachment and shall in turn transmit all forces to the beam support.

8. Beam support: Shall be cast steel support arms. Closed seam steel tube standards are unacceptable. Top of support arms shall be designed to capture and secure the beam in place. Support arms articulate from manual assist or semi-automatic operating mechanism.

B. Polymer Bench Seat System: Bank A and Rows 12-15 on Bank B

Material: Gas assist injection-molded, 100 percent recyclable HDPE, high density polyethylene.
Module Size: 18 inches long by 10 inches deep.
Module Load: Tested to 600 lbs. (2.67 kN).
Seat height range from deck to top of seat: 16-1/8 inches (410 mm) to 18-1/4 inches (464 mm).
Integrally molded end caps at aisle end locations.
Integrally molded recess pockets to accept seat number and row letters.
Integrally molded rear closure panel at back of seat to allow for "continuous clean sweep" of debris at deck level and minimized visibility of structural ribbing.
Color: As selected by Architect from manufacturers standard colors.

C. ADA Accessible Seating:

Locate first tier modular units to provide wheelchair-accessible seating at locations indicated on Drawings.

A. “Flex” Row: First row of benches to be retractable to provide ADA and Companion Seating.

2.6 VIDEO PLATFORM

A. Supply one 4’x16’ video platform permanently or semi-permanently attached to the telescopic stand. The video platform shall be constructed of 4’x4’ sections, each with a system allowing adjacent sections to be securely connected, including all necessary support braces. Deck material to be a minimum of 5/8” plywood core to provide maximum support in a concentrated area and to minimize vibration. Decking surface to match the rest of the bleacher system deck.

B. Guardrails along the front side of each video platform section shall not be less than 47” wide and 36” high. Guardrails at the ends of the video platform shall not be less than 23” wide and 36” high. All railings to be constructed from 1 1/2” aluminum tubing with clear anodized finish, including a 4” toe extruded toe board eliminating the possibility of any items being kicked off the platform and endangering spectators seated below. The design of each guardrail must comply with IBC/ICC codes.

2.7 RAILS, PANELS AND STEPS

A. End Rails:

Self-storing
a.) Provide steel self-storing starting no higher than tier 2 42 inches (1066mm) high above seat, end rail with tubular supports and intermediate members designed with 4 inch (102mm) sphere passage requirements.

Material and Finish: Semi-gloss powder coated steel.
Color: TBD

B. Center Aisle Rails:

a.) Provide single pedestal mount handrails 34 inches (864mm) high with mid rail. Permanently attached handrail may be manually operated or rotated in place for rail storage. Self storing railings or railings that automatically rotate to store are also allowed. Hand rails that require removal for storage will not be accepted. Handrails that project past the closed dimension indicated on the floor plan will not be accepted.

Material and Finish: Semi-gloss powder coated steel.
Color: TBD
C. Skirt Panel: On 1st Row, provide galvanized steel front skirt panel to prevent players/objects from sliding underneath the first row.

D. Steps

Flip-up Front Aisle Step: Permanently hinged to the front row to ensure availability and ease of operation. Two 3” diameter x ¾” wide non-marking front wheels are provided so that the system can be operated with the Step in the stored or deployed position. All edges coined, hemmed or radiused with front edge protective rubber bumpers. Abrasive-backed non-slip tread identifier on leading edge of nosing. For aisle widths greater than 6’-0”, two side by side hinged steps are provided. Steps requiring manual removal for storage WILL NOT be considered equal.

2.8 COMPONENTS

A. Decking

Plywood

a.) 5/8 inch (16 mm) thick AC grade tongue and groove with clear urethane, high gloss finish. Decking system with lower grade plywood and any type of Polyethylene coating WILL NOT be considered equal.

B. Understructure:

Finish: Rust-inhibiting black finish.

Hardware finish: Zinc-plated, Rust inhibiting black finish.

Locks and other surfaces: Powder coated black, Rust inhibiting black finish.

Nose beam and Rear Riser beam: Nose beam shall be continuously roll-formed closed tubular shape of ASTM A653 grade 40 (276 MPa). Riser beam shall be continuously roll-formed of ASTM A653 grade 40 (276 MPa). Nose and Riser beam shall be designed with no steel edges exposed to spectator after product assembly. Nose beam and riser beams are through-bolted fore/aft to deck stabilizers and frame cantilevers to create the deck structure.

Frame: The frames are welded assemblies (one left hand, one right hand per tier) comprised of the following components:

a.) Lower Track subassembly: ASTM A1011 Grade 50: Continuous Positive Interglide System (casterhorn) interlocks each adjacent frame casterhorn using an integral, continuous, anti-drift feature and captive interlock with adjustable row spacing at front to prevent separation and misalignment.

b.) Lower Track Wheels: 3 per frame Not less than 5 inches (127 mm) diameter by 1-1/4 inches (32 mm) with non-marring soft rubber face to protect wood and synthetic floor surfaces, with molded-in sintered iron oil-impregnated bushings to fit 3/8 inch (10 mm) diameter axles secured with E-type snap rings. Systems with wheels smaller than 5 inches WILL NOT be considered equal.

1.) Option: up to 6 wheels per frame for load distribution

c.) Slant Columns: A500 Grade B, tubular shape.

d.) Cantilever Subassembly: Consists of ASTM A1011 Grade 50 nose connection plate, cantilever, and riser attachment plate welded together into a subassembly.
Lock system: Casterhorns at the end sections of powered banks (minimally), and manual sections, contain a Low Profile Lock to lock each row in open position and allow unlocking automatically. Provide adjustable stops to allow field adjustment of row spacings.

Sway Bracing: ASTM A653 grade 40 (276 MPa), tension members bolted to columns.

Deck Stabilizer: A1011 Grade 45, member through-bolted to nose and riser at three locations per section. Securely captures front and rear edge of decking at rear edge of nose beam and lower edge of riser beam for entire length of section. Interlocks with adjacent stabilizer on upper tier using low-friction nylon roller to prevent separation and misalignment.

Fasteners: Vibration proof, in manufacturer's standard size and material.

C. Electrical operation systems

A. Integral power

Default operation shall be with a removable pendant control unit which plugs into seating bank for tethered operator management of stop, start, forward, and reverse control of the power operation. Other modes of operation are optional.

B. Furnish and install an integral automatic electro mechanical powered frame propulsion system, to open and close telescopic seating.

Electrical - Seating Manufacturer shall provide all wiring within seating bank, including pendant control. Motors, housing, and wiring shall be installed and grounded in complete accord with the National Electrical Code. The electrical contractor shall perform all connections at and upstream of the equipment specified herein and ensure that supplied voltage drops no more than 4% below nominal where power connects thereto.

Each unit for powered frame is driven by a motor integrated into the first moving row of understructure to achieve smooth and efficient operation with the following specifications:

a.) 208V 3 Phase:

1.) This 1.25 Service Factor motor runs on 208V at 60 Hz and draws a full load current of 1.8 amperes. The required power supply shall be 3 asynchronous phases of 120 Volts each, plus neutral plus ground, each with 20 Amp capacity.

2.) This system shall be UL Listed in its entirety (motors, circuit protection, motor controls, user interface, enclosures, conductors and connectors all evaluated and approved for correct sizing and compatibility under maximum rated load on the motors) under UL Product Category FHJU, titled Electrical Drive and Controls for Folding and Telescopic Seating.

b.) Each pair of Powered Frames shall consist of output shaft gear reducer with 6 inch (152mm) minimum diameter wheels covered with non-marring 1/2 inch (13mm) thick composite rubber, and operate the bleacher.

Mechanical

c.) Each pair of Powered Frames shall be driven through a gearmotor with dual output shaft, 6 inches (152mm) minimum diameter wheels covered with non-marring 1/2 inch (13mm) thick composite rubber, and pull the
bleacher with approximately 160 lbs [712N] at [25 feet / min (16.8 meters / min)].

**Limit Switches**

d.) Limit switches will automatically stop integral power operation when seating has reached the fully extended or closed position. Manufacturer shall furnish and install both open and closed limit switches for the integral power system. Power operation shall utilize a combination of contactors and limit switches to insure the wiring is not energized except during operation.

### 2.10 FABRICATION

A. Fabricate understructure from structural-steel members in size, spacing, and form required to support design loads specified in referenced safety standard.

B. Weld understructure to comply with applicable AWS standards.

C. Round corners and edges of components and exposed fasteners to reduce snagging and pinching hazards.

D. Form exposed sheet metal with flat, flush surfaces, level and true in line, and without cracking and grain separation.

### 2.11 ACCESSORIES

A. End curtain closures. End curtains with custom graphics shall be provided to limit unauthorized access to the underside of the telescopic system. Curtain to be one piece design shaped to follow the angle of the telescopic unit in the open position, and constructed of a sturdy material with sewn-in grommets for attachment. Each curtain shall include full custom graphics with print-ready artwork as supplied by the architect/owner.

### 2.12 STAIRS AND LANDINGS TO PRESS BOX

A. Engineer and furnish stairs and landings to press box with handrails and guards complying with ICC 300. Use similar materials and components from “2.8 COMPONENTS” and “2.7 RAILS, PANELS AND STEPS” for design criteria. For handrail mounted to CMU wall see Section 055213 “Pipe and Tube Railings.” There shall be steel hand rails on either side of the stairs compliant with IBC 1014. Press box stairs require handrails with handrail extensions in direction of travel on both side of stairs. Stair nosings shall match nosings of bleacher aisle stairs. Treads shall match bleacher decking. Under structure shall be made from similar understructure materials and capable of supporting the same loads and transmitting them through the bleacher system.

B. Provide for OSBI/OSFM review and approval: (a) Shop drawings for press box handrails and guards showing compliant design; and (b) Bleacher submittal documents showing compliant design; (c) Bleacher structural load evaluation. Approval from architect and OSBI/OSFM is required before fabrication can begin.

### PART 3 EXECUTION

#### 3.1 EXAMINATION
A. Examine areas where telescoping stands are to be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

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

3.2 INSTALLATION

A. Tolerances:

Flooring and rear wall: Level and plumb within 1/8 inch (3 mm) in 8 feet (2438 mm).

Maximum bleacher force on the floor of a 27 foot (8230 mm) section: Static point load of less than 300 psi (2068 kN/m²).

B. Install telescoping stands to comply with referenced safety standard and manufacturer's written instructions.

ADJUSTING AND CLEANING

C. On completion of installation, lubricate, test, and adjust each telescoping stand unit so that it operates according to manufacturer's written operating instructions.

D. Clean installed telescoping stands on exposed surfaces. Touch up shop-applied finishes or replace components as required to restore damaged or soiled areas.

3.3 MAINTENANCE SERVICE

A. Service Capability: Show proof of full time service capability by factory certified technicians directly employed by the FACTORY.

A four to eight-hour maximum on-site repair response is required during normal working hours, 8 a.m. to 5 p.m. weekdays (excluding holidays).

All Full Time Service Personnel shall be Factory Authorized and Trained.

Provide proof of Service Capability and a list of service parts regularly maintained in inventory.

3.4 DEMONSTRATION

Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain telescoping stands.

END OF SECTION 126613

Updated March 2020.
b. The Construction Administrator will process all requests for information, interpretations and decisions regarding the meaning and intent of the Contract Documents, consulting with appropriate parties prior to rendering the interpretations or decisions to the Contractor. All such requests and replies shall be in writing.

01010 SUMMARY OF WORK

A. Summary of Work includes but is not limited to the following:

   1. Refinishing gymnasium floor, including patching, repair, sanding, removal of existing finish, lines and logos, and refinishing with new stains, game lines, logos, 2 coats of sealer, and 2 coats of floor finish.

   2. Remove existing bleachers and replace with new telescopic bleachers as shown in drawings fully automated with motor driven system for opening and closing bleachers. New bleachers to include stairs and landings to existing press box.

   3. Renovate the existing press box, including new doors, door hardware, finish floor, countertop, built-in cabinets, and electrical work.

B. The Contractor will include in his bid, all items required in order to carry out the intent of the work as described, shown and implied in the Contract Documents.

C. It shall be the Contractor's responsibility upon discovery to immediately notify the Construction Administrator, in writing, of errors, omissions, discrepancies, and instances of noncompliance with applicable codes and regulations within the documents, and of any work which will not fit or properly function if installed as indicated on the Contract Documents. Any additional costs arising from the Contractor's failure to provide such notification shall be borne by the Contractor.

D. The Work will be constructed under a single lump.

E. Work Sequence - Phase(s):

   1. The entire Project shall be constructed in 2 Phases. Work of these Phase(s) shall be substantially complete, ready for occupancy within 90 Calendar Days of commencement of the Work.

01011 EXAMINATION OF SITE

A. It is not the intent of the Documents to show all existing conditions. All contractors are advised to visit and examine the site with the Construction Administrator prior to submitting bids.

B. Contractors should investigate and satisfy themselves as to the conditions affecting the work, including but no restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, uncertainties of weather, roads or similar physical conditions of the ground, the character of equipment, and facilities needed preliminary to and during the prosecution of the Work. The Contractor should further satisfy himself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the Contract Documents. Any failure by the Contractor to acquaint himself with the available information shall not relieve him from the responsibility for estimating properly the difficulty and cost of successfully performing the Work.

D. Mandatory Pre-Bid Conference:

   1. A Mandatory Pre-Bid Conference and tour of the site will be conducted as scheduled in the Notice to Bidders. This scheduled conference is the only official opportunity for the bidders to tour the site with the Owner, Architect, Engineer, Construction Administrator, and Agency.

01012 PROJECT DOCUMENTS

A. The Specifications and Drawings are intended to describe and illustrate the materials and labor necessary for the work of this Project.

B. Throughout the Technical Specifications, the Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction Form 816, current addition including any