**SECTION 13 34 16.53 – BLEACHERS SPECIFICATION**

**PART 1 – GENERAL**

1. **SUMMARY**
	1. Section Includes: Portable Closed Deck Bleacher Seating includes, multiple-tiered seating rows of seats, deck components, understructure that permits raising or lowering (Tip & Roll) without requiring dismantling, into a used mobile or stored configuration. Can be integrated with the Hussey MAXAM Telescopic Seating Systems or use independently.

**EDITORS NOTE: REVISE BELOW TO SUIT PROJECT**

* + 1. Typical applications include the following:
			1. Portable bleacher seating sections used independently. (A seating section)
			2. Multiple portable bleacher seating sections used concurrently. (A seating bank)

**EDITORS NOTE: REVISE BELOW TO SUIT PROJECT**

1. Special applications include the following:
	1. Qualifications and Capabilities:
		1. BIDDER QUALIFICATIONS:
		Bidders are required to be an authorized dealer or manufacturer for equipment proposed which on a day-to-day basis regularly provide the equipment offered. Bidders are further advised that only standard production models or standard options will be acceptable for award. Equipment offered shall be currently manufactured on an active assembly line. The Owner is only interested in proven equipment; provided, installed, and serviced by Authorized Dealers capable of providing references.
		2. SERVICE CAPABILITY: The Bleacher Contractor must be able to show proof of full time service capability by factory certified technicians directly employed by the Bleacher Contractor. Sub-Contractors of the Bleacher Contractor or Factory Technicians located outside of the State do not qualify under this service response requirement. Adequate and satisfactory availability of repair parts and supplies, and ability to meet warranty and service requirements are a requirement of this Invitation to Bid. The State reserves the right to satisfy itself by inquiry or otherwise as to bidder’s capabilities in this regard. A four (4) to eight (8) 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. Proof of Service Capability along with a listing of service parts regularly maintained in inventory shall be provided along with the Invitation for Bid. Failure to provide this information shall result in rejection of bid.
2. **REFERENCE**
	1. International Building Code (IBC)
	2. ICC 300 – Standard for Bleachers, Folding and Telescopic Seating and Grandstands\

* 1. Aluminum Association (AA):
		1. AA - Aluminum Structures, Construction Manual Series.
	2. American Society for Testing Materials (ASTM):
		1. ASTM - Standard Specification for Properties of Materials.
	3. National Forest Products Association (NFoPA):
		1. NFoPA - National Design Specification for Wood Construction.
	4. Southern Pine Inspection Bureau (SPIB):
		1. SPIB - Standard Grading Rules for Southern Pine.
	5. National Bureau of Standards/Products Standard (NBS/PS):
		1. PS1 - Construction and Industrial Plywood.
	6. Americans with Disability Act (ADA)
		1. ADA - Standards for Accessible Design.
1. **MANUFACTURER’S SYSTEM ENGINEERING DESCRIPTION**
	1. Structural Performance: Engineer, fabricate and install portable bleacher 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 gym seat unit.

 **EDITORS NOTE:
REVISE BELOW IF MORE STRINGENT REQUIREMENTS APPLY. ICC 300 – 2012 EDITION DESIGN LOADS FOR RAILING; VERIFY WITH JURISDICTIONAL AUTHORITY IF RAILINGS LOADS NEED TO BE INCREASED TO MEET AUTHORITY REQUIREMENTS.**

* + 1. Design Loads: Comply with ICC 300 – 2012 Edition
	1. Manufacturer's System Design Criteria:
		1. Gymnasium seat assembly; Design to support and resist, in addition to it’s own weight, the following forces:
			1. Live load of 120 lbs per linear foot [162.69 N/m] on seats and decking
			2. Uniformly distributed live load of not less than 100 lbs per sq. ft. [135.58N/m] of gross horizontal projection.
			3. Parallel sway load of 24 lbs. [32.53 N/m] per linear foot of row combined with (b.) above
			4. Perpendicular sway load of 10 lbs. [13.56 N-m] per linear foot of row combined with (b.) above
		2. Member Sizes and Connections: Design criteria (current edition) of the following shall be the basis for calculation of member sizes and connections:
			1. AA: Specification for Aluminum Structures
			2. NFOPA: National Design Guide For Wood Construction.
1. **SUBMITTIALS**
	1. Section Cross-Reference: Required submittals in accordance with "Conditions of the Contract" and Division 1 General Requirements sections of this "Project Manual."
	2. Project Data: Manufacturer's product data for each system. Include the following:
		1. Project list: Ten(10) seating projects of similar size, complexity and in service for at least five (5) years.
		2. Deviations: List of deviations from these project specifications, if any.
	3. Shop Drawings: Indicate Portable Bleacher Seat assembly layout. Show seat heights, row spacing and rise, and locations, assembly dimensions, material types and finishes..
		1. Graphics Layout Drawings: Indicate pattern of contrasting or matching seat colors
	4. Samples: Seat materials and color finish as selected by Architect from manufacturers standard offered color finishes.
	5. Manufacturer Qualifications: Certification of insurance coverage and manufacturing experience of manufacturer,
	6. Installer Qualifications: Installer qualifications indicating capability, experience, and official Certification Card issued by manufacturer of bleacher seating.
	7. Engineer Qualifications: Certification by a professional engineer registered in the state of manufacturer that the equipment to be supplied meets or exceeds the design criteria of this specification.
	8. Operating/Maintenance Manuals: Provide to Owner maintenance manuals. Demonstrate operating procedures, recommended maintenance and inspection program.
	9. Warranty: Manufacturers standard warranty documents.
2. **QUALITY ASSURANCE**

**EDITORS NOTE:
BELOW STANDARD MAY BE MORE STRINGENT THAN APPLICABLE BUILDING CODE REQUIREMENTS. COORDINATE WITH LOCAL BUILDING CODE REQUIREMENTS FOR TELESCOPIC SEATS.**

* 1. Seating Layout: Comply with ICCC 300 -2012 Standard for Bleachers, Folding Telescopic Seating and Grandstands, except where additional requirements are indicated or imposed by authorities having jurisdiction.
	2. Insurance Qualifications: Mandatory that each bidder submit with his bid an insurance certificate from the manufacturer evidencing the following insurance coverage:

		1. Workers Compensation - including Employers Liability with the following limits:
			1. $500,000.00 (US) Each Accident
			2. $500,000.00 (US) Disease - Policy Limit
			3. $500,000.00 (US) Disease - Each Employee
		2. Commercial General Liability - including premises/ operations, independent contractors and products completed operations liability. Limits of liability shall not be less than $5,000,000.00 (US).
	3. Manufacturer Qualifications: Manufacturer who has a minimum of 40 years of experience manufacturing telescoping gym seats and Portable bleachers can demonstrate continual design enhancement and 25-year minimum product life-cycle support of seating.
	4. Installer Qualifications: Engage experienced Installer who has specialized in installation of telescoping gym seat types similar to types required for this project and who carries an official Certification Card issued by telescoping gym seat manufacturer.
	5. Engineer Qualifications: Engage licensed professional engineer experienced in providing engineering services of the kind indicated that have resulted in the successful installation of telescoping bleachers similar in material, design, fabrication, and extent to those types indicated for this project.
1. **DELIVERY, STORAGE AND HANDLING**
	1. Deliver product fully assembled or Select Field Assembly;
	2. Deliver portable bleacher seats in manufacturers packaging clearly labeled with manufacturer name and content.
	3. Handle seating equipment in a manner to prevent damage.
	4. Deliver the seating at a scheduled time for installation that will not interfere with other trades operating in the building.
2. **PROJECT CONDITIONS**
	1. Field Measurements: Coordinate actual dimensions of construction affecting portable bleachers 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.
3. **WARRANTY**
	1. Manufacturer's Product Warranty: Submit manufacturer's standard warranty form for telescoping bleachers. This warranty is in addition to, and not a limitation of other rights Owner may have under Contract Documents.

		1. Warranty Period: Five years from Date of Acceptance.
		2. Beneficiary: Issue warranty in legal name of project Owner.
		3. Warranty Acceptance: Owner is sole authority who will determine acceptance of warranty documents.
4. **MAINTENANCE AND OPERATION**
	1. Instructions: Both operation and maintenance shall be transmitted to the Owner by the manufacturer of the seating or his representative.
	2. Service: Maintenance and operation of the seating system shall be the responsibility of the Owner or his duly authorized representative, and shall include the following:

		1. Operation of the Seating System shall be supervised by responsible personnel who will assure that the operation is in accordance with the manufacturer's instructions.
		2. Only attachments specifically approved by the manufacturer for the specific installation shall be attached to the seating.
		3. An annual inspection and required maintenance of each seating system shall be performed to assure safe conditions. At least biannually the inspection shall be performed by a professional engineer or factory qualified service personnel.

**PART 2 – PRODUCTS**

**EDITORS NOTE:**
MANUFACTURER DOES NOT RECOMMEND THE USE OF PHRASES “OR EQUAL” / “OR APPROVED EQUAL” BECAUSE OF DIFFERING INTERPRETATIONS BETWEEN CONTRACTING PARTIES. CONSIDER UTILIZING “ALTERNATE” METHOD OF SPECIFYING PRODUCTS FOR LISTING ALTERNATE MANUFACTURERS AND PRODUCTS. (SEE ARTICLE 2.02 HERE IN).

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

**EDITORS NOTE:**
ADD BELOW SELECTIONS FROM MANUFACTURER’S LITERATURE AND COORDINATE SELECTIONS WITH DRAWINGS.

* + 1. Product: MAXAM1 Portable Bleacher Seating System by Hussey Seating Company

**EDITORS NOTE:** SELECT BELOW MODEL TYPE.

* + - 1. Model: MAXAM1 Portable Bleacher Seating System (Tip & Roll), 3 tier, 5 ½” [140mm] rise, fixed 25” [559mm] row spacing and a total section width of 7’-6” [2286mm].

			Dimensional Data:
			In-Use:
			7’-6” [2286mm] wide x 5’-1 ¾” [1569mm] deep x 2’-5 5/8” [753mm] high

Moving & Storage:

5’-1 ¾” [1569mm] Tall x x 2’-5 5/8” [753mm] wide x 7’-6” [2286mm] long

Total Weight 245 lbs. [111kg]

* + - 1. MAXAM1 Portable Bleacher Seating System, **SELECT** 15 Person Seating Capacity or 12 Person Seating Capacity with Integrated Seat Spaces for More Personnel Space.
			2. Seat Type: **SELECT**: 10” Courtside Collection or 10” Courtside Collection with Integrated Seat Spacer with or without integrated cupholder.
				1. Seat color finish: **SELECT**: manufacturers 15 standard for Courtside Collection
				2. Courtside graphic logos and custom Signature logos: **(See Personalization and Creativity under Accessories section)**
		1. Product Description/Criteria
			1. Bank Length:
			2. Number of Tiers:
			3. Row Spacing(s):
			4. Used Dimension:
			5. Stored Dimension:
			6. Overall Unit Height:
			7. Net Capacity; per seat (18” [457]):

* + 1. Miscellaneous Product Accessories: SELECT: seat number’s, row letters, CourtSide Graphic Logos
	1. Other Acceptable Manufacturers: Will be considered if in compliance with these specifications. Deviations must be submitted with bid in order that a fair and proper evaluation be made. Those bidders not submitting a list of deviations will be presumed to have bid as specified.

**EDITORS NOTE:**
COORDINATE BELOW ARTICLE WITH RELATED DIVISION 1 SECTION FOR ALTERNATES, AND BID DOCUMENTS AND BID FORMS FOR BID TYPE PROJECTS

1. **ALTERNATES**
	1. Base Bid:
		1. Base Bid Product:
		2. Base Bid Product Accessories:
	2. Alternate No. : In lieu of providing base bid product, provide the following:
		1. Alternate Product:
		2. Alternate Product Accessories:
	3. Alternate No. : In lieu of providing base bid product, provide the following:
		1. Alternate Product:
		2. Alternate Product Accessories:

 **EDITORS NOTE:**
BELOW ARTICLE FOR GENERIC / REFERENCE SPECIFICATION.

1. **MATERIALS**
	1. Lumber: ANSI/Voluntary Product 20, B & B Southern Pine
	2. Plywood: ANSI/Voluntary Product PS1, APA A-C Exterior Grade.
	3. Uncoated Aluminum Strip: Seat Risers: Aluminum Alloy 5052, ASTM B209
	4. Structural Tubing: Aluminum 6061 T6, ASTM B221-13

* 1. Polyethylene Polymer: ASTM D 1248, Type III, Class B; molded, color-pigmented, textured, impact-resistant, structural formulation; in color indicated or, if not otherwise indicated, as selected by Architect from manufacturer's standard colors.
	2. Fasteners: Vibration-proof, of size and material standard with manufacturer.
1. **UNDERSTRUCTURE FABRICATION**
	1. Frame System:

		1. Two Aluminum Vertical Frames per section with integrated Traction Arm and Gas Struts for assisted lifting and lowering of the seating system by one person.
		2. Lower Track: Structural Aluminum, tubular shape with non-marring Rubber Floor Pads
		3. Vertical Columns: Structural Aluminum, tubular shape.
		4. Deck & Seat Support: Structural High Hat Shape 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. While providing mounting location for seat seating system
	2. Deck System:

		1. Section Lengths: Each bank shall contain sections not to exceed 7’-6” [2286mm] in length with a minimum of two supporting frames per row, each section.
		2. Combination Nose beam and Rear Riser beam: Beam shall be continuously formed aluminum seating support
		3. Attachment: Through-Bolted fore/aft to frame cantilevers.
		4. Decking: 5/8" [16], AC grade clear-top-coated tongue and groove Southern Yellow Pine; or BC grade polyethylene-top-coated tongue and groove Douglas Fir plywood; both of interior type with exterior glue, 5-ply, all plies with plugged cross-bands, produced in accordance with National Bureau of Standards PS-1-97. Plywood shall be cut and installed with top, center and bottom ply grain-oriented from front of deck to rear of deck (nose beam to riser beam). Adjacent pieces shall be locked together with tongue and groove joint from front to rear of deck. Longest unsupported span:
		MAXAM 26, 21 ½” [546mm].

**EDITORS NOTE:** SELECT BELOW SEAT MODEL TYPE.

1. **SEAT FABRICATION**

	1. Polymer Seat System – Courtside Collection XC10 (10”):

	Hussey Courtside Collection Series embodies the latest leading edge innovations in linear telescopic seating modules. Courtside seats utilize a harmonious blend of advanced ergonomic principals, architecturally appealing design, safety, value and performance.

	Seat Modules: 18" [457mm] long assembled, gas assisted injection-molded, high density, 100% recyclable HDPE (high density polyethylene) modules in monochromatic colors providing, dual textured scuff resistant 10" [254mm] deep seat surface with ½” [13] minimum interlock on seat and face. Unit structural tested to 600 lbs occupant load.
		1. CourtSide XC10 Seat Module

			1. XC10 – 10” [254] Comfort Profile
				1. 10” [254] depth continuous comfort curve style bench seat module
				2. Ergonomically contoured forward “waterfall” edge for enhanced spectator comfort and minimization of sensitive pressure point areas, regardless of leg positioning.
				3. Fore & Aft contoured seat surface for uniform support and minimize high pressure points under the buttocks.
				4. Seat height ranges from deck to t/o seat range from 16-1/8” [410] to 18-1/8” [460]
				5. 21-1/8” [537] clear foot space area, regardless of leg positioning.
			2. Integrally molded end caps at aisle end locations for clean finished appearance.
			3. Custom color graphic logo design application for end cap insert.**(See Personalization and Creativity under Accessories section)**
			4. Integrally molded recess pockets to accept seat number and row letters.
			5. 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.
			6. Seat Attachment: Each polymer seat module shall be securely anchored by a 12 ga steel clamp bracket that provides steel-to-steel, through bolted attachment to the front nose beam of the bleacher. Attachment eliminates fore / aft movement of the seat module on the nose beam.
			7. Seat Attachment: Each polymer seat module shall be securely anchored by a 12 ga steel clamp bracket that provides steel-to-steel, through bolted attachment to the front nose beam of the bleacher. Attachment eliminates fore / aft movement of the seat module on the aluminum nose / riser beam.
2. **SHOP FINISHES**
	1. Understructure: For rust resistance, steel understructure shall be finished on all surfaces with black "Dura-Coat” enamel. Understructure finish shall contain a silicone additive to improve scratch resistance of finish.
	2. Wear Surfaces: Surface subject to normal wear by spectators shall have a finish that does not wear to show different color underneath:
		1. Decking shall have use-surfaces to receive both a sealer coat and wear-resistant high gloss clear urethane finish. Optional decking to have 0.030” laminated polyethylene wear surface.

**EDITORS NOTE:** SELECT BELOW FINISHES FOR EACH SEAT MODEL TYPE.

* + 1. Injection Molded Courtside seats shall be per manufacturer standard 15 colors.
	1. High Humidity finish: Above shop finishes shall include following modifications:
		1. Understructure: All frames and other structural components shall be Aluminum
		2. All hardware to be stainless steel
		3. Decking to be polyethylene-laminated plywood
1. **FASTENINGS**

	1. Structural Connections: Secured by structural bolts with prevailing torque lock nuts, free-spinning nuts in combination with lock washers, or Riv-nuts in combination with lock washers.

1. **TRANSPORT SYSTEMS**

**EDITORS NOTE:** SELECT BELOW SYSTEMS, ONE PER APPLICATION

* 1. Integral Dollies: Provide four non-directional swivel casters with non-marring surface for transportation of seating systems and storage. 360 degree swiveling “kingpinless” casters to insure ease of telescopic section movement. Wheel treads shall be molded polyurethane bonded to cast iron with roller bearing hubs.
1. **ACCESSORIES | STANDARD TELESCOPIC GYMSEAT ACCESSORIES**

**EDITORS NOTE:** Select Accessories

* 1. Seat Numbers: Provide each polymer seat module with a 1 3/4" x 1 1/4" [45 x 32] oval etched Lexan plate. Easy to read black numerals will be on the plate fitted in a vandal resistant recess.
	2. Row Letters: Provide at each row end of polymer seat a 1 3/4" x 1 1/4" [45 x 32] oval etched Lexan plate with black numerals. Plates to be fitted flush in vandal resistant end cap recess.
	3. Poly Deck: Decking panel to be a 0.030” [1] thick high-density polyethylene overlay panel fabricated with a skid-resistant textured top surface permanently bonded to a Western Fir plywood substrate meeting the requirements of NBS PS-1-97. Panel thickness shall be 5/8” [16] with tongue and grooved edge joints and top polyethylene surface of textured gray color.
1. **ACCESSORIES | PERSONALIZATION and CREATIVITY ACCESSORIES and SOLUTIONS**
	1. CourtSide Graphic Logo
		1. Decorative graphic logo that is applied to the integrally molded end cap recess area of the CourtSide 10 XC.
		2. Logo is approximately 4.7” [119] (h) x 3.5” [89] (w) w/full color CMYK vector art output on FujiFlex crystal archive printing material. (FujiFlex Specs. Available)
		3. Color logo is laminated with a 5-mil Hard Guard Matte laminate (Specs. Available)
		4. Laminated logo is bonded to a Flex-Con L – 606 laminating adhesive layer (Specs. Available)
		5. Logo is trimmed to a precise custom cut shape with two mounting holes.

[**Click here for CourtSide Graphic Logo Image**:](http://www.husseyseating.com/display/ShowImage?imageUrl=/storage/seat_options/maxam/Courtside_logo.jpg?__SQUARESPACE_CACHEVERSION=1306869982897)

* 1. CourtSide XT (Seat Spacer)
		1. Courtside XT Spacers are mounted between CourtSide XC10 or XCS12 seat modules.
		2. Courtside XT Spacers provide additional 4-1/2” of clear space space between Courtside seats.
		3. CourtSide XT Spacers can be selected with an integral tray or 3” cupholder for enhanced spectator features.
		4. CourtSide XT Spacer Attachment: Each polymer spacer shall be securely anchored by a 12 ga steel clamp bracket that provides a steel-to-steel, through bolted attachment to the front nose beam of the bleacher. Attachment eliminates fore / aft movement of spacer on the nose beam.
		5. Unit structural tested to 600 lbs static load in the center of the XT top surface.

**PART 3 – EXECUTION**

1. **EXAMINATION**
	1. Verification of Conditions: Verify area to receive Portable Closed Deck Bleacher Seating are free of impediments interfering with installation and condition of installation substrates are acceptable to receive Portable Closed Deck Bleacher Seating in accordance with Portable Closed Deck Bleacher Seating manufacturer's recommendations. Do not commence installation until conditions are satisfactory.
2. **INSTALLATION**
	1. Manufacturer's Recommendations: Comply with Portable Closed Deck Bleacher Seating manufacturer's recommendations for product installation requirements.
	2. General: Manufacturer’s Certified Installers to install telescoping gym seats in accordance with manufacturer's installation instructions and final shop drawings. Provide accessories, anchors, fasteners, inserts and other items for installation of telescoping gym seats and for permanent attachment to adjoining construction.
3. **ADJUSTMENT AND CLEANING**
	1. Adjustment: After installation completion, test and adjust each Portable Closed Deck Bleacher Seating assembly to operate in compliance with manufacturer's operations manual.
	2. Cleaning: Clean installed Portable Closed Deck Bleacher Seating on both exposed and semi-exposed surfaces. Touch-up finishes restoring damage or soiled surfaces.
4. **PROTECTION**
	1. General: Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer to ensure telescoping gym seats are without damage or deterioration at time of substantial completion.

**END OF SECTION**