INVITATION FOR BIDS

AUDITORIUM SEATING EQUIPMENT AND SUPPLIES
BID #21-373

Seating Specification Irwin Seating Company

Model: 6.6.58.8 Century PAC

Part 1: General Specifications

1.01 Scope:
Deliver and install fixed upholstered chairs with upholstered seat and back, and aisle and center standards, all as specified, floor mounted, with self-lifting seat which raises automatically to a uniform 3/4 fold position.

1.02 ADA:
Comply with ADA (Americans with Disabilities Act) Rules and Regulations.

1.03 Sizes:
Varying lateral sizes of backs shall be used in accordance with approved seating plans, with standards in each row spaced laterally so that the end standards shall be in alignment from first to last row whether aisles are of constant of converging width.

1.04 Shop Drawings:
Submit a complete seating plan developed from the contract drawings, showing all chairs, sizes, and aisle widths. Assume complete responsibility for the accuracy of all chair measurements shown on the seating plan.

1.05 Examination & Acceptance of Work in Place:
Examine work in place on which seating work is dependent. Defects which may influence satisfactory completion and performance of seating work shall be corrected in accordance with the requirements of the applicable section of work prior to commencement of seating work.

1.06 Field Measurements:
Take field measurements to verify or supplement dimensions indicated. Be responsible for accurate fit of work.

1.07 Materials and Workmanship:

a. Provide new materials of types specified.

b. Turn over all work to the owner in undamaged condition.

c. Provide workmanship of the best quality by craftsmen skilled in their respective trades.

1.08 Fire Performance Characteristics of Upholstered Seating:
Chairs provided shall have be certified as meeting the flammability requirements of California Technical Bulletin No. 133, Flammability Test Procedure for Seating Furniture for Use in Public Occupancies, developed by the California Bureau of Home Furnishings and Thermal Insulation.

1.09 Quality Assurance:
To assure high and satisfactory quality, design, color and operation of products, reference has been made to brand names; however, it is not intended to limit competition and items of brands that are equal will be given full consideration.

Base Specification:

Specified	Fixed Chair
Irwin Seating Company	6.6.58.8 Century PAC

1.10 Responsibility of Bidder:
The bidder must provide the following with his bid:

Bidder shall submit a list of five (5) seating projects of similar size which have been in service for 5 years or longer. Projects submitted shall incorporate chairs with seats, backs and standards consistent with those offered on this project.

1.11 Delivery:
Deliver the seating at a proper time for installation that will not interfere with other trades operating in the building. Bid seating for installation and completion as directed by owner after that date.

1.12 Warranty:
a. Provide a manufacturer's warranty covering the material and workmanship for a period of one year from date of final acceptance.

b. Repair or replace any part which becomes defective during the warranty period, except where the product has been subject to accident, alterations, abuse, misuse or neglect.

Part 2: Material Specifications

2.01 Steel:
Steel shall be the primary structural material for chair support systems, including aisle and center standards, and back component attachment. Steel structural components shall be die-formed according to modern manufacturing methods, and assembled by means of state-of-the-art MIG welding processes. All steel shall have smooth surfaces and be of sufficient gauge thickness and designed to withstand strains of normal use.

2.02 Wood:
Plywood, exposed or concealed, shall be hardwood. All plywood shall be hot press laminated using high frequency process. Interior plies shall be Class 3 or better. Exposed exterior plies shall be Class 1, continuous, and selected as to color. Solid hardwood shall be clear and selected by color. All exposed hardwood shall be solid northern-grown maple, and veneer shall be rotary cut, Grade A, #1 white, maple. Medium Density Fiberboard shall be resin bonded of wood particles, 5/8” minimum thickness, 45 lb./cu. ft. density.

2.03 Plastic Components:
a. Not Applicable

2.04 Padding Material:
Seat and back padding material shall be of new (prime manufacture) polyurethane foam. Padding material shall comply with the flammability requirements outlined in the California Technical Information Bulletin #117, Resilient Cellular Materials,

Section A & D, dated February 1975, when tested in accordance with Federal Test Method Standard 191, Method 5903.2.

2.05 Fabric:

A specification for upholstered chairs is expected to contain a description of upholstery fabric required; otherwise the seating contractor must base a bid on their own choice. A wide variety of upholstery materials are available from a multitude of sources. Designer has great discretion in the fabric to be used. It is recommended that auditorium chair upholstery fabrics offer resistance to abrasion, stretch, seam failure when sewn, crocking, and allow finished chairs to have a reasonable cost. Further, it is required that fabric shall meet Class 1 flammability requirements of the U.S. Department of Commerce Commercial Standard 191-53 per Bulletin #117 (California Code).

2.06 Finish:

a. Metal Parts:
   All exposed metal parts shall be powder coated with a hybrid thermosetting powder coat finish. The powder coat finish shall be applied by electrostatic means to a thickness of 2 - 5 mils, and shall provide a durable coating having a 2H Pencil hardness. Prior to powder coating, metal parts shall be treated with a three-stage bonderization process for superior finish adhesion, and after coating shall be oven baked to cause proper flow of the epoxy powder to result in a smooth, durable finish. Manufacturer's standard color range shall be used.

b. Wood Parts:
   All exposed wood parts shall be stained to color selected and provided with a high quality finish, produced with two top coats of high density clear lacquer following stroke-sanding of raw wooden parts, sealing, and light preparatory sanding prior to both lacquer top coats.

c. Plastic Parts:
   Color of plastic shall be selected from manufacturer's standard color range.

d. Hardware:
   All assembly hardware shall be rust resistant, black plated.

Part 3: Construction

3.01 Upholstered Chair Backs:

Chair back components shall be upholstered and padded on the face with a rear "designer" panel surfaced with hardwood veneer. The upholstered face of the backs shall have a sewn cover exhibiting a crisp, plush, neatly tailored appearance. The backs shall be rectangular shaped and fabricated with a lateral radius for comfort to an approximate width of 24”. The upholstery and rear panels shall be enclosed with a continuous 7/32 inch diameter welt of matching fabric with no exposed fasteners or hardware on the rear surface.

a. The structure of the upholstery panels shall be 5-ply, 7/16" hardwood plywood and shall be padded with a 2" thick dual-density polyurethane foam pad. Back padding shall feature a denser top collar (1.65 lb./cu. ft. and 25% I.F.D. rating of 40 pounds) for maintaining the crisp upholstery top shape, and a softer supportive main body padding (1.45 lb./cu. ft. and 25% I.F.D. rating of 23 pounds) for comfortable support of the seated individual. Sides of the foam pad shall be cut on a taper to facilitate the crisp appearance. The fabric cover shall be two-piece, box construction, with a seam around the entire perimeter of the back for a clean,

crisp, tailored appearance. The wings, for secure attachment of complete backs to the standards, shall be not less than 14 gauge steel, securely bolted to the upholstery panel with concealed threaded washers, and shall provide for 16 degree and 20 degree back pitch.

b. The exposed rear "designer" panel shall be fabricated of 9-plies of 1/16" thick hardwood veneer, providing sufficient mass of the decorative panel and providing an attractive, measured, even appearance of the exposed edges. Special care shall be exercised regarding consistent color of exposed edges of interior plies. Decorative rear panels shall be formed on the same radius as the upholstered panel, and shall be securely mounted to the upholstery panel using concealed fasteners. There shall be no exposed screws, mounting brackets or hardware on the rear of the back. The rear surface of the back shall be vertical grain hardwood veneer of the species selected, and shall be finished per finishing specifications. The rear panel shall be of sufficient length to protect the chair seat from the rear, and the forward face of the minimally exposed lower portion of the rear panel shall be allowed to be interior grade veneer, stained the appropriate color and coated with a single coat of lacquer.

3.02 Upholstered Self-Lifting Seat:

Seats shall be upholstered on their face with serpentine spring cushions supported by a formed steel foundation pan, and shall be quietly and automatically self-lifting to a 3/4 fold position when unoccupied. The seats shall be certified to withstand a 600 lbs. static load, laterally distributed three inches from the leading edge of the seat. The seat shall also be certified to pass seat cycle oscillation testing, ASTM Designation F851-87 Test Method for Self-Rising Seat Mechanism, and sandbag testing.

a. The seat cushion shall have a base structure of five serpentine springs spanning an extra heavy 14 gauge steel frame, formed to a channel, welded for precision fit into the steel foundation pan. Serpentine arch springs spanning the frame shall be secured to the cushion frame by insulated squeak-proof clips, and shall be isolated from the polyurethane cushion by a tough, durable, non-woven, non-vegetable chafing barrier. The seat cushion shall have an extended front, high resilient polyurethane foam pad, molded to the contour of the springs on the bottom and providing a flat surface on the top of the cushion with a crisp, waterfall leading edge.

   Height of the cushion at the front edge shall be consistent at approximately 3" above the steel foundation. Polyurethane foam, to insure a high and satisfactory cushion quality, shall possess the following values:

   Density: 3.3 - 3.8 lbs. Sag Factor: 2.5 Min.
   I.F.D.(25%): 26 lbs., Flex-Fatigue (50 lbs. + or - 3 lbs. load): 10% Maximum

   The specified fabric, carefully tailored, shall be of panel-side construction, secured around the perimeter of the cushion frame by case hardened spring clips which permit ease of re-upholstery. The seat cushion assembly shall be securely locked into the seat pan by positive, high strength spring clips which prevent unauthorized removal of cushions, yet can be quickly removed from the seat foundation without removal of screws or bolts.

b. Seat foundation pan shall be 20 gauge, deep-drawn die-formed steel, completely enclosing the self-lifting hinge mechanism. The seat pan shall be strengthened by a full 360 degree roll around the perimeter for rigidity, and shall have decorative embossing for basic strength, and to provide additional leg room for a standing

patron. Further, the foundation pan shall have internal reinforcing consisting of steel doubler plates and formed angular steel lateral braces. The foundation pan shall be free of screws and bolts on the bottom, front, sides and rear.

The seat shall rotate on two self-compensating, fully independent, 5/8" diameter, high strength, solid steel hinge rods. Seat-lift shall be accomplished by dual 13 gauge extension springs, providing quiet gentle seat uplift. Seat uplift shall be dampened at the 3/4 fold position, and rendered virtually noiseless, by durable, soft rubber cushioned upstops. Smooth, effortless operation of the hinges shall be assured by lifetime lubricated nylon shoulder bushings. When unoccupied, the seat shall quietly and automatically rise to a 3/4 fold position, and upon a slight rearward pressure, shall achieve full-fold, allowing the patron additional passing room. Downstops shall be rubber cushioned for quiet operation.

3.03 Standards:

a. Aisle Standards:
Aisle standards shall be of modern pedestal design with the rectangular decorator panels approximately 11-1/2" x 17-1/2" with the mounting foot recessed 7" from the outside edge of the aisle panel. Aisle panels shall be constructed of medium density fiberboard (MDF) with rear and front-end caps to create an overall thickness of 1-5/8". Panels shall be surfaced with wood veneer, stained as required and attached to a formed, 14 gauge (0.0747") steel panel that is welded to the column. Structure of the aisle standards shall be provided by 1" x 3" rectangular columns of 14 gauge (.0747) steel. The top of the column shall be provided with two formed steel dovetail lugs for secure attachment of the armrests. Brackets for seat attachment shall be 7 gauge (.1875") buttressed steel welded on the inside of the standard.

b. Center standards shall be of welded steel, modern pedestal design, fabricated of 14 gauge (.0747") steel to a 1" x 3" rectangular column. Brackets for seat support shall be 7 gauge (.1875") steel for superior strength, formed with an integral support buttress, and wing plates for mounting backs shall be 14 ga. (.0747") steel; both MIG-welded to the pedestal column to form a coherent unit. The top of the column shall be provided with two formed steel dovetails for secure attachment of the armrests.

c. Floor mounted standards shall be provided with a formed 14 gauge (.0747) steel foot welded to the bottom of the rectangular column. This weldment shall be at all critical stress areas 360 degrees around the column, and concealed on the inside so as not to detract from clean appearance of the column. The foot dimension shall be 8" x 2-3/4" to provide maximum bearing surface to the floor. The standard shall be fabricated to be compatible with the floor incline, and to maintain proper seat and back height and angle.

3.04 Armrests:

Armrests shall be solid hardwood with all edges well rounded. Armrests shall be furnished with two (2) keyhole slots in the bottom and shall lock securely to dovetail lugs provided on aisle and center standards. Further, one (1) security screw shall be utilized.

3.05 Number and Letter Plates:

A numbering system shall be provided for identification of all chairs. Number and letter plates shall be furnished as shown on the approved seating layout, and shall be 5/8" x 1-5/8" with a bronze finish and black sans serif letters and numerals. The seat pans shall be recessed at the center of the front edge for the number plates, and the plates shall be attached by two (2) pop rivets. Letter plates shall be attached in a

recess in the aisle standard armrest by two (2) escutcheon pins. Attaching hardware shall have a bronze finish compatible to plates.

3.06 Aisle Lights:
Aisle lights shall be furnished for aisle standards located as designated on the approved seating plan to provide illumination of the aisle panel and adjacent floor and/or steps. The aisle light standards shall be pre-wired and furnished complete with utility box, light socket, 10-watt bulb (1,500 hr. life & 38 lumen min. rating) 120 volt AC, 60 hz., and detachable, 5” round hooded aisle light cover. The aisle light shall be pre-wired with No. 14 AWG wire with THHN type insulation, and wiring shall extend 18 inches beyond the connector. A 3/8 inch flex-steel conduit connector shall be pre-attached to the standard. Connection of aisle light wiring to the building’s electrical system, and flexible conduit to make the connection, are to be provided by the contract electrician.

3.07 Handicapped Access Aisle Standards:
Aisle standards designated on the contract drawings shall be designed to allow an individual to transfer from a wheelchair to the theatre chair. The aisle standard support column shall be inclined toward the rear by approximately 16 degrees, and shall be equipped with an armrest capable of lifting to a position parallel with the chair back, opening sideways access to the seat. Aisle standards so equipped shall be provided with a label, displaying an easily recognizable "handicapped" symbol. Decorative requirements of aisle standards are waived for the handicapped access standards.

Part 4: Execution

4.01 Scope of Work:
The installation shall be performed by the successful bidder, under the direction of a capable installation superintendent, in a manner satisfactory to the architect, and the job turned over to the owner with all chairs complete and ready to use.

4.02 Method of Installation:
The seating plan shall be reproduced on the floor, all dimensions checked against the plan and necessary adjustments made in the layout for all discrepancies.

Chairs shall be attached by means of an approved style of wedge-type, zinc plated expansion anchors installed strictly according to the manufacturers’ instructions. Floor mount chairs shall be attached with 1/4" expansion anchors by not less than 2-1/4" long. There shall be two (2) bolts per standard.

4.03 Cleaning:
Remove all debris caused by this work from the premises.