SECTION 12 61 00

FIXED AUDIENCE SEATING

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\*\* NOTE TO SPECIFIER \*\* Wenger Corporation, including all Wenger, J.R. Clancy and GearBoss product brands; Broadcast, theater and stage equipment, sound-control door assemblies, acoustic room components, lockers, storage assemblies, specialty casework, special purpose rooms, integrated lighting, integrated controls and audio video systems.   
This section is based on the products of Wenger Corporation, which is located at:  
 555 Park Dr.  
Owatonna, MN 55060  
Toll Free Tel: 800-4WENGER (493-6437)  
Tel: (507) 455-4100  
Fax: (507) 455-4258  
Email: info@wengercorp.com  
Wenger Corporation - Syracuse, which is located at:  
7041 Interstate Island Road  
Syracuse, NY 13209  
Toll Free Tel: 800-836-1885  
Tel: (315) 451-3440  
Email: stacy.hanson@wengercorp.com  
Web: https://www.wengercorp.com , http://www.jrclancy.com.  
[Click Here] for additional information  
Wenger Corporation and J.R. Clancy are Your Performance Partners. In 2011, Wenger and J.R. Clancy brought together almost 200 years of experience to provide complete solutions for Performing Arts Centers and Theatres. We design, manufacture and install leading theatrical equipment worldwide from Complete Rigging Solutions and Controls to Acoustical Shell Enclosures and Orchestra Pit Fillers as well as a full-line of quality furnishings.  
Wenger Corporation provides innovative, high-quality products and solutions for performing arts and music and theatre education. For more than 65 years Wenger has been listening to what our customers need and then designing and manufacturing innovative, durable and functional products to meet those needs.  
Wenger pioneered sound isolation in practice rooms and now offers modular rooms with virtual acoustic technology (VAE) and built-in digital recording/playback. Products for music and theatre spaces include: pre-engineered acoustical doors, sound-isolating music practice rooms, acoustical shells, acoustical wall and ceiling treatment, instrument and equipment storage cabinets, portable audience seating, portable stage platforms and staging systems, music posture and portable audience chairs, orchestra pit fillers, makeup stations, tiered risers and music furniture.  
Since 1885, J.R. Clancy has been a leading designer and supplier of theatrical rigging systems, accessories and services to the theatre and entertainment industries around the world. Our team of experienced mechanical and electrical engineers, project managers, and installers provides expert technical assistance and information to architects, general contractors, theatre consultants, end users, and dealers.

1. GENERAL
   1. SECTION INCLUDES
      1. Fixed, upholstered theater seating and seating accessories. (Cavea)
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete sections below not relevant to this project; add others as required.

* + 1. Section 01 35 00 - Special Procedures.
    2. Division 16 - Electrical for connections to seating junction boxes for aisle lighting power.
    3. Coordination with Electrical Work: Coordinate installation of wiring to ensure that floor-mounted junction boxes are completely beneath seats and free of aisle spaces.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Iron and Steel Institute (AISI) and Society of Automotive Engineers (SAE):
       1. AISI/SAE1008/1010/1015 - Steel and Alloys.
    2. American National Standards Institute (ANSI)/Business and Institutional Furniture Manufacturers Association (BIFMA):
       1. ANSI/BIFMA X5.4-2012 - Office Furnishings - Lounge Seating.
    3. ASTM International (ASTM):
       1. ASTM A36 - Standard Specification for Carbon Structural Steel.
       2. ASTM A48 - Standard Specification for Gray Iron Castings.
       3. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
       4. ASTM A789 - Standard Specification for Seamless and Welded Ferritic/Austenitic Stainless Steel Tubing for General Service.
       5. ASTM B26 - Standard Specification for Aluminum-Alloy Sand Castings.
       6. ASTM B108 - Standard Specification for Aluminum-Alloy Permanent Mold Castings.
       7. ASTM B179 - Standard Specification for Aluminum Alloys in Ingot and Molten Forms for Castings from All Casting Processes.
       8. ASTM D3597 - Standard Performance Specification for Woven Upholstery Fabrics - Plan, Tufted, or Flocked.
       9. ASTM F 851: Test Method for Self-Rising Seat Mechanisms.
    4. State of California, Department of Consumers Affairs, Bureau of Home Furnishings and Thermal Insulation:
       1. California Technical Bulletin 117 - Requirements, Test Procedures and Apparatus for Testing Flame Retardance of Resilient Filling Materials Used in Upholstered Furniture.
    5. Code of Federal Regulations:
       1. 16 CFR 1610.61 - Clarification of Flammability Standard for Clothing Textiles (CS 191-53).
    6. National Electrical Manufacturers Association (NEMA):
       1. NEMA LD 3 - High Pressure Decorative Laminates.
    7. National Fire Protection Association:
       1. NFPA 70 - National Electrical Code (NEC).
    8. Underwriters' Laboratories, Inc. (UL) and Underwriters' Laboratories of Canada (ULC):
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Provide for all products furnished under this Section. Include dimensions and profiles, electrical connections, wood and metal finishes, and details of construction.
     3. Shop Drawings: Include plans, elevations, sections, and details. Show overall plan of fixed seating including aisle spacing and seating layout. Include row to row spacing, row lettering, and chair numbering sequence. Show floor plan and details of ADA/ABA compliance in plan and section. Show method of attachment including anchors and other devices.
        1. Develop sightline plan and sections through seating areas using sightlines program and sightline rules. Refer to Drawings.
        2. Show fabric selection.
        3. Additional options placement (ie. Tablet Arms).

\*\* NOTE TO SPECIFIER \*\* Delete if not required for Project.

* + - 1. Include electrical schematic for aisle lighting.

\*\* NOTE TO SPECIFIER \*\* Delete if not required for Project.

* + - 1. Drawings to indicate placement of seating with table arms as required.
    1. Samples for Initial Selection:

\*\* NOTE TO SPECIFIER \*\* Delete samples not required for Project.

* + - 1. Fabric choices.
      2. Wood finish selections.
      3. Plastic finish sample.
    1. Samples For Verification: Provide manufacturer's samples of the following:

\*\* NOTE TO SPECIFIER \*\* Delete samples not required for Project.

* + - 1. Exposed metal component finishes.
      2. Plywood panel finish.
      3. Row lettering and seat numbering plaques: Provide full size plaques showing base material and lettering font.
    1. Closeout Submittals:
       1. Operation and Maintenance Data: For adjusting, repairing, and replacing components and accessories.
       2. Warranty: Submit manufacturer's sample warranty.
    2. Product Certificates: Provide manufacturer's certification of flame-retardant treatment (if required).
    3. Cleaning and Maintenance Information: Provide instructions for cleaning, adjusting, repairing, and replacing fixed audience seating.
    4. Warranty: Copy of manufacturer's warranty.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 years' experience in manufacture of similar products in use in similar environments, including project size, and complexity, and with the production capacity to meet the construction and installation schedule.
     2. Installer Qualifications: Manufacturer's authorized representative, trained and approved for installation of units required for this Project.
     3. Source Limitations: Obtain components and accessories through one source from a single approved manufacturer.
     4. Fire-Test-Response Compliance:
        1. Fabric: Class 1 according to DOC CS 191 and 16 CFR 1610.61, tested according to California Technical Bulletin 117-2013.
        2. Cushioning: California Technical Bulletin 117-2013 compliant.
     5. Electrical Components: Listed and labeled per NFPA 70, Article 100 by a testing agency acceptable to authorities having jurisdiction.
     6. Testing of Seats: All qualifying seats must meet the minimum criteria of the following test procedures:
        1. Seat:
           1. Self-Lifting Oscillating Test: Withstand 300,000 lifting cycles when tested in accordance with ASTM F851.
           2. Vertical Static Load Test: Withstand vertical static load of 600 lb. 272 kg) without failure or permanent set greater than 5/8 inch (16 mm) .
           3. Vertical Drop Impact Test: Withstand vertical drop impact of 40 lb. (18 kg) from 12 inches (305 mm), 25,000 times each at a rate of 18 cycles per minute for a total of 100,000 impacts without failure or permanent set greater than 3/4 inch (19 mm).
        2. Back:
           1. Horizontal Static Load Back Test: Withstand front or rear static load of 450 lb. (205 kg).
           2. Swinging Impact Back Test: Withstand swing impacts to each side of chair back with 40 lb. (18 kg) from 12 inches (305 mm), 25,000 times each distance at a rate of 20 cycles per minute for a total of 100,000 impacts without damage or failure.
           3. Transverse Static Load Back Test: Withstand transverse static load of 200 lb. (91 kg) applied to the top of the back at a 45-degree angle to the row of seats.
        3. Armrests:
           1. Horizontal Load to Arm Test: Withstand vertical and perpendicular static load of 200 lb. (91 kg) without failure or permanent set greater than 3/4 inch (19 mm).
        4. Tablet arm:
           1. Tablet Arm Load Ease Test - Cyclic: Withstand 100,000 cycles of 55 lb. (25 kg) loading without loss of serviceability of unit when tested in accordance with Test Number 22 of BIFMA X5.4.
           2. Tablet Arm Load Test - Static: Withstand vertical static load of 150 lb. (68 kg) without a sudden change in function or structural integrity in unit when tested in accordance with Test Number 23 of BIFMA X5.4 and still allowing egress from the unit after the test.
        5. Fire Performance of Upholstery and Padding: Comply with California Technical Bulletin-117.
     7. Regulatory Requirements: Where components are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities".

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size or quality warrant taking such a precaution. When deciding on the extent, consider all the major different types of work on the project. Show mock-up locations and required components on the architectural drawings. Delete if not required.

* + 1. Mockups:
       1. Build mockups to set standards for fabrication. Show fabric selection, wood and metal finishes selections and aesthetic effect.
       2. Configuration: A typical two-seat unit with aisle and row seat.
       3. Approved mockups will be returned to the manufacturer upon request and may become part of Project if in as-manufactured condition at time of Substantial Completion.
    2. Field Dimensioning: After approval of submittals but prior to fabrication, confirm dimensions of fixed audience seating space, including features that will affect installation. Confirm location of electrical rough-in.
  1. PRE-INSTALLATION MEETINGS
     1. Convene at the Project site or conduct a virtual meeting a minimum two weeks prior to starting the Work of this Section.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver materials in manufacturer's original unopened containers with manufacturer's labels attached.
     2. Handle fixed audience seating during installation to prevent damage. Replace any seating damaged during installation.
     3. Handle and install units to avoid damage.
  3. PROJECT CONDITIONS
     1. Environmental Limitations: Do not deliver or install lockers until spaces are enclosed and weather tight, wet work in spaces is complete and dry, HVAC system is operating and maintaining ambient temperature at occupancy levels during the remainder of the construction period.
     2. Field Measurements: Verify field measurements as indicated on Shop Drawings. Where measurements are not possible, provide control dimensions and templates.
     3. Coordinate locations of electrical junction boxes.
     4. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
     5. Where fixed audience seating is anchored to new concrete, allow for curing of concrete before seating is delivered.
  4. WARRANTY

\*\* NOTE TO SPECIFIER \*\* The "special warranty" is a warranty provided by the manufacturer to the building owner. The warranty terms below are available from Wenger Corp. Verify that other manufacturers listed or seeking approval furnish warranty meeting requirements. Durability is a key aspect of Wenger's product value for Owners. The available warranty reflects Wenger's high confidence in the performance of their products.

* + 1. Special Warranty: Manufacturer's written warranty indicating manufacturer's intent to repair or replace components of audience seating that fail in materials or workmanship.
    2. Failures include, but are not limited to, the following:
       1. Fracturing or breaking of unit components which results from normal wear and tear and normal use other than vandalism.
       2. Delamination or other failures of glue bond of components.
       3. Warping of components not resulting from leaks, flooding, or other uncontrolled moisture or humidity.
    3. Damage from deliberate destruction and vandalism is excluded.
    4. Accessories that are of a consumable nature such as bulbs, aisle lights and transformers are excluded.
    5. Warranty Period:
       1. Structure (including back bracket, standard, metal base): 10 years.
       2. Operating mechanisms (including seat/back cushion, wood works (wood panels/armrest/ADA end arms), polypropylene parts (polypropylene shells, polypropylene armrest), tip-up seat mechanism, writing tablet (including writing tablet mechanism): 10 years.
       3. Accessories (such numbering, moveable base, and similar items): 10 years.
  1. EXTRA MATERIALS/ATTIC STOCK

\*\* NOTE TO SPECIFIER \*\* Adjust percentage of extra materials per project requirements. Delete if not required.

* + 1. Furnish the following extra materials from the same manufacturing run as the original products that match products installed. Package with protective coating and identified with product labels.
       1. Full-size units of the following seating components equal to 2 percent of amount installed for each type and finish installed, but no fewer than two units:
       2. Arm standards (both center and end standards).
       3. Wooden/polypropylene seat back and cushion covers.
       4. Seat bottom.
       5. Lighting Components devices.
       6. Fabric seat/back covers.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Wenger Corporation, JR Clancy and GearBoss, which is located at:555 Park Dr.Owatonna, MN 55060Toll Free Tel: 800-4WENGER (493-6437)Tel: 507-455-4100Fax: 507-455-4258Email: [request info (info@wengercorp.com)](https://arcat.com/rfi?action=email&company=Wenger%252BCorporation%252C%252BJR%252BClancy%252Band%252BGearBoss&message=RE%253A%2520Spec%2520Question%2520(12610wen)%253A%2520&coid=36487&spec=12610wen&rep=&fax=507-455-4258);Web: <https://www.wengercorp.com> | <https://www.jrclancy.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. FIXED SEATING - CAVEA FIXED AUDIENCE SEATING
     1. Basis of Design - Upholstered Fixed Seating System: Wenger Cavea Fixed Audience Seating: www.wengercorp.com.
     2. Description: Fixed seating system designed to permit radial installation using common middle support standards in each row and aisle standards aligned as indicated on drawings. Width of seats not less than 19 inches (483 mm).
     3. Seating system consists of a wing installed upholstered back and a drop-in self-lifting upholstered seat which automatically returns to a position with the underside of the seat in alignment with the front of the aisle panel.
     4. Back:
        1. Adjustable wing system type;two-panel construction with fabric covering over cold-molded closed cell surround foam and protective back panel, with installed height 33 inches (889 mm) above finished floor.
        2. MIG-welded tubular steel frame with contoured steel back slats.
        3. Sculptured cold mold closed cell foam fully surrounds and encapsulates the steel frame with a protective skin preventing dust and humidity from getting into the foam.
        4. Adjustable back wing attachment system allows chairs to be installed on concave, convex radii, and/or straight rows, where chair widths can be adjusted for seat sizes 19, 20, 21, and 22 inches.
        5. Adjustable back wing attachment system allows back angle pitches of 19, 16, and 13 degrees.
        6. Outer Back Cover:

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs.

* + - * 1. Type: Injection molded polypropylene outer back cover.
        2. Type: Injection molded polypropylene outer back cover with veneer inlay. Veneer inlay color selection from manufacturer's standard options.
      1. Padding: Cold-molded closed cell sculptured high resiliency polyurethane foam, 2.8 lb. /cu ft. (44.9 kg/cu m) density, 2 inches (64 mm) thick which is bonded to and fully covering structural support.
      2. Covering: Fabric installed using slipcover style to facilitate easy replacement.
    1. Seat:
       1. Hinged drop-in type, two-panel construction with fabric covering over cold-molded surround foam and protective seat bottom cover.
       2. MIG-Welded tubular steel seat structure will support 600 lbs. of weight on the front edge of seat.
       3. Webbing attached to the steel seat structure supports the user ergonomically allowing proper blood flow.
       4. Sculptured cold molded closed cell foam fully surrounds and encapsulates the steel frame with a protective skin preventing dust and humidity from getting into the foam.
       5. Assembly of the foam will not use any adhesives or glue harming the environment.
       6. Seat Bottom Cover:

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs.

* + - * 1. Type: Injection molded polypropylene seat bottom cover.
        2. Type: Injection molded polypropylene seat bottom cover with veneer inlay. Veneer inlay color selection from manufacturer' standard options.
      1. Seat Drop-in System: Seat attachment system allows chairs to be installed on concave, convex radii, and/or straight rows, where chair widths can be adjusted for seat sizes 19, 20, 21, and 22 inches.
      2. No maintenance fastening system allows seat mechanism to be attached without the use of any screws or nuts.
      3. Automatic gravity lift system without spring assistance for maintenance free use.
      4. Maintenance free aluminum drop in seat mechanism functions without any screws needing regular tightening.
      5. Fully enclosed aluminum seat mechanism with injection molded polypropylene cover for safety.
      6. Sound performance noise level to remain below 30 decibels
      7. Seat mechanism allows for customization of seat pitch while in use or resting position.
      8. Padding: Cold molded closed cell sculptured high resiliency polyurethane foam, 3.2 lb. /cu ft (51.3 kg/cu m) density, 3 inches (76 mm) thick, bonded to and covering structural support and mesh.
      9. Seat Closed Depth (Envelope): 16.7 inches (424 mm), maximum.
      10. Hinges:
          1. Pivot point axles that drop into lock hinge mechanisms on the support standards, equipped with enclosed counterweight non-pinching gravity lift system, without springs, allowing unoccupied seat to rise automatically to vertical position.
          2. Provide push-back hinge mechanism that allows additional aisle space while seat is in an open position.
    1. Standards:
       1. Vertical steel tubular pipe standard measuring 1.6 inches (40mm) x 1.6 inches (40mm) made from 14-gauge steel.
       2. Mounting plate for sloped floors flat floors or riser mounting to be .25 inches (6mm) thick steel plate measuring 5 inches (127mm) x 1.8 inches (46mm).
       3. Horizontal support arm made from solid steel bar measuring .75 inches (19mm) x .75 inches (19mm) welded into vertical standard pipe.
       4. Tubular steel pipe standard to be welded to the steel mounting plate using a 360-degree continuous MIG-welding system.
    2. Arm Rests:
       1. Locate at aisles and between chairs; attached to standard horizontal support arm with concealed fasteners; exposed surfaces polyurethane or solid hardwood lumber with smoothed edges.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs.

* + - 1. Type: Polyurethane arm cap to have metal insert which will be attached to the horizontal support arm using a keyhole system.
      2. Type: Wood arm cap which will be attached to the horizontal support arm using a keyhole system without any wood screws used at all.
    1. End Panels:

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs.

* + - 1. Type: Open end panel to have .25 inches (6mm) thick horizontal support plate measuring 6.4 inches (163mm) x 4 inches (100mm) welded to vertical support standard.
      2. Type: Plywood end panel 7-ply, 9/16 inch (14 mm) thick covered with wood veneer exterior to be attached to the end standard with threaded T-Nuts and no wood screws.

\*\* NOTE TO SPECIFIER \*\* Delete product accessories not required.

* + 1. Product Accessories:
       1. Hercules Folding Tablet Arms: Mounted on standards to right side of each seat with non-lubricated hinge and swivel mechanism securely fastened to underside of writing surface and designed to provide solid support in the open position and semi-automatic return to stowed position outside of the right arm rest and parallel to right standard; non-handed design for use by left and right-handed occupants.
          1. Finish: Reinforced Polymer, in black, with smooth rounded edges.
          2. Size: Writing surface not less than 178 sq inches (0.1148 sq m).
          3. Tablet arm in open position does not protrude into aisle or adjacent seat space.
          4. Tablet arm in open position rests on top of armrest for added strength.
          5. Tablet arm in closed position does not interfere with armrest usage.
       2. Aisle Lights: Standard UL-approved surface mounted and concealed LED lamp assemblies, with louvers to conceal lamp and direct light toward floor, mounted on vertical end panel surface or beneath aisle arm rest; wiring route concealed to floor connection.
       3. Seat Numbers: Recessed black plate with white seat numbers securely fastened to front edge of folding seats.
       4. Row Letters: Recessed or Surface Mounted black plate with white letters securely fastened to vertical surface of aisle panels.
       5. Donor and ADA, Plates: Standard plates securely fastened to end aisle panels; black finish, with letters and numbers countersunk and filled with white paint.
       6. End Panels: Open End, Wood Veneer, and ADA Swing Out.
       7. Arm Caps: Polyurethane or solid hardwood
       8. Outer Back and Seat Cover Inserts: Wood veneer, laminate, other types of pliable material.
       9. Power System: UL-approved plug and play electrical system encased in aluminum raceways mounted under to the vertical standards allowing for duplex and USB power connections at each chair.
       10. Cupholder: Rear mounted or front floor mounted.
       11. Removable Seat Tandem: 1, 2, or 3 seat configurations.
       12. Requirements for listing and labeling of products.
  1. MATERIALS
     1. Cast Iron: ASTM A48/A48M, Class 25A minimum, free of air holes and casting imperfections, all edges ground smooth.
     2. Cast Aluminum: ASTM B26/B26M, ASTM B108/B108M, or ASTM B179.
     3. Sheet Steel: ASTM A879/A879M, Commercial Steel (CS) or Drawing Steel (DS) electrogalvanized sheet, 04Z (12G) coating class on both surfaces; chemically treated for baked enamel finish.
     4. Steel Plates and Bars: ASTM A36/A36M; minimum 1/4 inch (6.4 mm) thick.
     5. Steel Tubes: AISI/SAE1008/1010/1015, ASTM A500/A500M, Grade B cold-formed structural tubing; minimum wall thickness of 0.083 inch (2.10 mm).
     6. Exposed Hardwood: Solid lumber selected for absence of visible defects; as selected from manufacturer's standards.
     7. Donor, ADA, and Other Plates: Manufacturer's standard seat plates securely fastened to end aisle panels; anodized aluminum finish, with letters and numbers countersunk and filled with black paint.
     8. Plastic Laminate: NEMA LD 3, Type 1, Grade GP 50, nominal thickness 0.050 inch (1.27 mm); colors and patterns as selected from manufacturer's standards.
     9. Fiberglass: Molded polypropylene material with not less than 30 percent glass fiber reinforcement and integral color pigments.
     10. Polypropylene Sheet: Molded high-density polypropylene with minimum tensile strength of 3300 psi (23 MPa), integral color pigments, and textured, scuff-resistant surface finish.
     11. Polyurethane Foam: Density not less than 1.8 lb./cu ft (28.8 kg/cu m), fire retardant, non-hardening, and non-oxidizing, with high resistance to alkalis, oils, moisture, and mildew.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Upholstery Fabric:

\*\* NOTE TO SPECIFIER \*\* Delete two of the following three paragraphs.

* + - 1. Selected from manufacturer's standard options.
      2. Custom selected option.
      3. Supplied by customer.

1. EXECUTION
   1. EXAMINATION
      1. Examine substrates for conditions detrimental to installation of fixed audience seating.
      2. Proceed with installation only after unsatisfactory conditions have been corrected.
   2. INSTALLATION
      1. Comply with manufacturer's installation instructions and approved shop drawings.
      2. Anchor support standards securely to substrate with at least two anchoring devices recommended by manufacturer.
      3. Place standards in each row laterally so the standards at the aisle will be in alignment.
      4. Vary width of seats and backs as required to optimize sightlines and comply with the ADA Standards for row and aisle widths.
      5. In curved rows, install standards to form smooth radius, without breaks or angled chords
      6. Attach components to standards with sufficient flexibility to compensate for convergence of seats toward the center.
   3. ADJUSTING
      1. Adjust seat mechanisms to ensure that seats in each row are aligned when unoccupied.
      2. Repair minor abrasions and imperfections in painted finishes with a coating that matches factory-applied finish; replace units that cannot be repaired to unblemished appearance.
      3. Replace upholstery fabric damaged or soiled during installation.

END OF SECTION