SECTION 11 61 23

MOBILE STAGE AND PERFORMANCE SYSTEM

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\*\* NOTE TO SPECIFIER \*\*

\*\* 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:   
 Wenger Corporation, JR Clancy and GearBoss, 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: [request info (info@wengercorp.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Wenger+Corporation,+JR+Clancy+and+GearBoss&coid=36487&rep=&fax=507-455-4258&message=RE:%20Spec%20Question%20(11063wen):%20%20&mf=)  
Web: <https://www.wengercorp.com> | <http://www.jrclancy.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: request info (info@wengercorp.com)   
  
[ [Click Here](https://www.arcat.com/arcatcos/cos36/arc36487.html) ] 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. With a combination of innovative designs, outstanding quality, and a century of experience, J.R. Clancy has become the leading manufacturer of theatrical stage equipment in the United States. We provide everything from the simplest hemp sets and rigging hardware to complete, highly sophisticated motorized rigging systems-for use just about anywhere.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Mobile stage and performance system.
  1. RELATED SECTIONS

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

* + 1. Division 16 - Electrical for power wiring.
  1. REFERENCES

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

* + 1. National Electrical Code (NEC).
    2. National Fire Protection Association (NFPA): NFPA 80 - Standard For Fire Doors and Other Opening Protectives.
    3. U.S. Architectural & Transportation Barriers Compliance Board: Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities.
    4. US Green Building Council (USGBC): Leadership in Energy and Environmental Design (LEED).
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Provide test results by certified independent testing laboratory indicating compliance with performance requirements.
        2. Rated capacities, construction details, material descriptions, dimensions of individual components, profiles, and finishes.
        3. Delivery, storage, handling, and installation instructions and recommendations.
        4. Maintenance instructions and recommendations.

\*\* NOTE TO SPECIFIER \*\* Retain applicable paragraphs below for LEED projects. Add additional requirements that apply. Verify credits required and availability of materials from the Manufacturer. Refer to USGC LEED Reference Guide for detailed information. Delete if not required.

* + 1. LEED Submittals:
       1. Manufacturer's certificate indicating that composite wood products and adhesives contain no added urea formaldehyde.
       2. Manufacturer's certificate indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating costs for each product having recycled content.
       3. Credit EQ 4.4: Manufacturer's Signed Confirmation indicating that composite wood products and adhesives used in acoustical shells contain no urea formaldehyde.
    2. Shop Drawings:
       1. Submit component and project specific installation drawings, cut sheets, and schedules showing all information necessary to fully explain the design features, appearance, function, fabrication, installation, and use of system components in all phases of operation. Submit for approval before beginning any fabrication, installation, or erection.
       2. A copy of the Bill of Material shall be included with the submission for approval.
       3. Include fabrication and installation details. Distinguish between factory and field work.
       4. Include plans, elevations, sections, attachments and work by other trades.
       5. Include wiring diagrams when applicable.

\*\* NOTE TO SPECIFIER \*\* Retain below if project has seismic requirements. Delete if not required.

* + - 1. Indicate seismic bracing and fastening requirements as applicable.
    1. Coordination Drawings: Project-specific Coordination Drawings, indicating the following items drawn and coordinated with each other. Include information required by Installers of each item in order to coordinate the Work. Include the following:
       1. Relationship of items shown on separate Shop Drawings.
       2. Dimensions and required clearances of adjacent or related work.
       3. Order of assembly of separate items.
       4. Information required for interface with other trades and components, including mechanical, electrical, and communication work.
    2. Product Schedule:
       1. Use designations indicated on the Drawings.
       2. Include room locations, dimensions, accessories, finishes, and project specific notes.
    3. Verification Samples:
       1. Exposed Finishes and Finish Materials: Not less than 4 by 4 inches (102 by 102 mm), for each type, color, pattern, surface and material selected.
    4. Closeout Submittals:
       1. Operation and Maintenance Data: For adjusting, repairing and replacing components and accessories.
       2. Warranty: Submit manufacturer's warranty.
    5. Field Quality Control Reports: Documenting inspections and demonstrations of installed products and equipment.
  1. QUALITY ASSURANCE
     1. Source Limitations: Obtain all products from a single manufacturer through one source providing a comprehensive material and installation package:
     2. 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.
     3. Installer Qualifications: Experienced in installation of the work of this section and acceptable to the manufacturer.

\*\* NOTE TO SPECIFIER \*\* All Wenger electrical components are supplied as listed and labeled by UL and/or ETL to meet typical local electrical inspection requirements.

* + 1. Electrical Components: Listed and labeled per NFPA 70, Article 100 by a testing agency acceptable to authorities having jurisdiction.

\*\* NOTE TO SPECIFIER \*\* Indicate accessibility requirements on drawings. Delete if not required.

* + 1. 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".
  1. DELIVERY, STORAGE, AND HANDLING
     1. Deliver materials in manufacturer's original unopened containers with manufacturer's labels attached. Do not deliver material until spaces to receive them are clean, dry, and ready for their installation. Ship to jobsite only after roughing-in, painting and other finishing work has been completed, installation areas are ready to accept work.
     2. Handle and install materials to avoid damage.
  2. PROJECT CONDITIONS
     1. Environmental Limitations: Do not deliver or install materials 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.
        1. Coordinate installation and location of blocking and supports as requested.
        2. Verify openings, clearances, storage requirements and other dimensions relevant to the installation and final application.
        3. Where applicable, coordinate locations of electrical junction boxes.
     3. Field Measurements: Verify field measurements as indicated on Shop Drawings. Where measurements are not possible, provide control dimensions and templates.
        1. 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.
  3. 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. Delete if not required.

* + 1. Special Warranty for Mobile Stage Systems (Showmobile): Provide manufacturer's standard limited 5 year warranty from the date of delivery of the product.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Wenger Corporation, including all Wenger, J.R. Clancy and GearBoss product brands. 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: request info (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: request info (JRCinfo@wengercorp.com); Web: https://www.wengercorp.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 shall be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
       1. Manufacturers seeking approval shall submit the following:
          1. Product data, including third-party certified acoustical data and proposed layout for this project.
          2. Project references: Minimum of 5 installations not less than 3 years old, with owner contact information.
          3. Sample warranty.
       2. Submit substitution request not less than required days prior to bid date.
       3. Approval shall be indicated by issuance of written Addendum.
       4. Approved manufacturers shall meet separate requirements of Submittals Article.

\*\* NOTE TO SPECIFIER \*\* This all-in-one mobile performance system is suitable for usage for all outdoor performance events. The trailer design allows for transport to and use at any outdoor and even some indoor locations. In performance position, the mobile stage features a full-scale, thrust-style stage, state-of-the-art acoustical shell and cantilevered roof and canopy. The professional appearance makes this mobile stage appropriate for a complete range of events from ribbon-cutting ceremonies to full, symphony orchestra concerts. Delete if not required.

* 1. MOBILE PERFORMANCE SYSTEM
     1. Basis of Design: Showmobile as manufactured by Wenger Corporation.
     2. Dimensions (Nominal):
        1. Travel Mode Dimensions (Nominal):
           1. Body Length: 28'-0" (8.53 m).
           2. Width: 8'-5" (2.56 m).
           3. Height: 13'-2" (4.01 m).
           4. Tongue Height: 22 inches (55.8 cm).
        2. Performance Mode Dimensions (Nominal):
           1. Stage Performance Dimensions:

Main Stage Floor: 28'-0" x 6'-6" (8.53 m x 1.98 m).

Hydraulic Stage: 28'-0" x 8'-0" (7.31 m x 2.44 m).

Stage Height from Ground: 42 to 52 inches (107 - 132 cm).

Back of Wall to Leading Stage Edge: 14'-3" (4.34 m).

Performance Stage Size: 28'-0" x 14'-6" (8.53 m x 4.42 m).

* + - * 1. Acoustical Shell Interior Performance Dimensions:

Canopy Height from Stage at Highest Setting: 17'-4" (5.28 m).

Canopy Height from Ground at Highest Setting: 21'-10" (6.40 m).

Upstage Canopy Height from Floor: 9'-3" (2.82 m).

Overall Overhead Roof/Canopy Depth: 13'-2" (4.01 m).

* + 1. Weight (Nominal): Gross Vehicle Weight Rating (GVWR) = 16,000 lbs (7257 kg).
    2. Chassis Construction:
       1. Structure:
          1. Constructed of two cold roll formed structural 4 inch x 12 inch x 1/4 inch (10 x 30 x 0.635 cm) carbon steel tubes.
          2. Cross Members: 14-gauge structural tubes and formed steel channels on 24 inch (61 cm) centers.
          3. All welded construction to provide unitized body structure.
          4. Perimeter shall be finished on all sides with steel skirting (rub rail) to provide finished appearance and protect internal components.
       2. Suspension and Axles:
          1. Double-axle configuration featuring two rubber-torsion type, each axle rated at 7,200 lbs (3266 kg).
          2. Torsion axles shall be used to provide the smoothest possible cargo ride, lowest center of gravity, and best road handling.
          3. Axle hubs shall have grease fittings for easy maintenance and shall be completely hot dip galvanized, inside and out, for weatherability.
          4. Leaf-spring type axle suspension is unacceptable due to inefficient oscillation time and greater maintenance requirements.
       3. Tires and Rims: LT 235/85 R16 steel-belted radial tires mounted on 8-bolt rims.
       4. Brakes:
          1. Each axle shall have two-sided adjustable 12-volt electric brakes, 12-1/4 x 2-1/2 inches (0.635 x 6.35 cm).
          2. Hitch-mounted breakaway switch system.
       5. Stabilization:
          1. Four manual leveling jacks permanently integrated into the vehicle frame for leveling and stabilization.
          2. Each jack shall have 10,000 lb (4536 kg) live load capacity.
          3. Two removable hand cranks.
          4. Due to the structural integrity of the mobile stage frame, stabilizers mounted in the center of the trailer are not required.
          5. Externally-mounted, pivoting stabilizers are unacceptable.
       6. Hitch:
          1. Trailer hitch shall feature a removable lunette ring.
          2. Connector for Towing Vehicle: Pintle hook connector.
          3. Hitch Construction: Structural carbon steel tube.
       7. Storage Compartments:
          1. Three large, weather-resistant storage compartments located on the curb side of the mobile stage.
          2. Compartment doors shall feature two stainless steel locking D-ring handles as well as stainless steel hinge construction.
          3. Compartments minimum dimensions shall be 54 inches L x 17 inches D x 15 inches H (137 cm L x 43 cm D x 38 cm H).
       8. Finish:
          1. All metal surfaces shall be primed with one coat two-component epoxy primer and one coat Sherwin-Williams Polane 8890 polyurethane enamel, a two-component, aliphatic acrylic topcoat.

Standard auto enamel paint or galvanized finish is not acceptable.

* + - 1. Electrical System:
         1. The mobile stage shall be equipped with 12-volt electrical system to power hydraulic stage, hydraulic roof and canopy and breakaway switch operations.
         2. The power source shall be a heavy-duty deep cycle 12-volt battery located in the front roadside of the mobile stage.
    1. Panel Construction:
       1. Curbside Panel: Composite acoustical panel and extruded aluminum edging:
          1. Wall panel shall be a one-piece, composite structural material, which provides a seamless, weatherproof UV protected, Tedlar exterior surface, as well as a rigid surface for reflecting sound and enhancing the acoustics of musical performances.
          2. Curbside panel frame shall be constructed of carbon steel welded to chassis to form a unitized body structure.
          3. Curbside panel shall be surrounded by extruded aluminum fastened to the steel structure and sealed with gasketing.
          4. Exterior fasteners are not acceptable.
          5. Minimum Thickness: 1-3/4 inches (4.4 cm).
          6. Curbside composite panel shall feature internal aluminum structural reinforcement.

Solid wood-core panels are not acceptable.

* + - 1. Roof and Canopy Construction: Steel frame, composite acoustical panel and extruded aluminum edging:
         1. Panels shall be composite, one-piece, lightweight, structural material, to provide a seamless, weatherproof exterior surface as well as a rigid surface for reflecting sound and enhancing the acoustics of musical performances.
         2. Frame structure shall be one-piece welded carbon steel construction integrally connected to the roof/canopy linkage system.
         3. Aluminum extrusion shall seal steel frame and composite panel together to create complete, one-piece roof and canopy assemblies.
         4. Extruded aluminum roof and canopy edges shall meet to form a continuous rain gutter.
         5. Canvas or membranes used to seal joints between assemblies are not acceptable.
         6. Minimum Thickness: 1 inch (2.5 cm).
         7. Roof and canopy composite panels shall feature internal aluminum structural reinforcements.

Solid wood-core panels are not acceptable.

* + - * 1. Exterior fasteners are not acceptable.
      1. End Panels: Steel frame, composite acoustical panel and extruded aluminum edging:
         1. Panels shall be a one-piece, lightweight, composite structural material, to provide a seamless, weatherproof exterior surface as well as a rigid surface for reflecting sound and enhancing the acoustics of musical performances.
         2. Frame structure shall be one-piece, welded carbon steel hinged to the upright curbside structure.
         3. End panel shall be recessed inside roof and canopy when in travel position. Extruded aluminum end panel frame shall provide a continuous rain gutter surrounded by gasketing.
         4. Operating Handle: Recessed, constructed of stainless steel with integral covered, keyed-locking mechanism.
         5. Latching Mechanism: Holds the end panel closed with three points of contact.
         6. Hinge: Continuous, end-panel hinge shall be constructed of stainless steel.
         7. End panel shall be adjustable between its closed position and 270 degrees out of audience view.
         8. Locking mechanisms shall be provided to secure end panels in various performance and stowed positions.
         9. Acoustical end panels shall have 3 adjustments, closed to 270 degrees.
    1. Hydraulic Stage Construction:
       1. Deck Material: 3/4 inch (1.9 cm) 7-ply Douglas Fir plywood core.
          1. Traffic Surface: Black, non-skid, 0.015 inches (0.038 cm) thermally fused Quadripple composite overlay embossed with raised textured pattern.
          2. Backer Material: 0.008 inch (0.0203 cm) thermally fused MDO overlay, functions as moisture barrier.
          3. Stage deck shall be constructed of economical replaceable components in the event that damage should require decking replacement.
       2. Structure: Formed steel fabricated into one-piece, unitized system.
          1. Cross Members: At 24 inches (61 cm) on center, maximum.
       3. Hardware and Legs:
          1. Stage hinge and fasteners shall be of stainless steel. Hinge shall be continuous to prevent gaps between main stage and hydraulic stage.
          2. Five adjustable support legs shall be attached to the leading edge of the hydraulic stage to provide uniform stability and load capacity.

Fold into position when the hydraulic stage is opened and secure for transport to magnetic catches when closed.

Leg Tubes: Telspar, adjustable in 1/8 inch (0.3175 cm) increments.

Feet: 4 x 4 inch (10 x 10 cm).

* + - 1. Stage Edging: Perimeter of the stage deck shall have an extruded aluminum channel, to accommodate supplementary stage extension platforms as well as stairways, drapery skirting, rail sections, or other optional accessories.
      2. Tie Downs:
         1. Eight tie-downs and four tie-down straps shall be provided on the main stage for the secure transport of supplemental stage equipment.
         2. Tie-downs shall be flush-mounted with D-ring attachment.
    1. Electrical and Hydraulic Systems:
       1. Power Center: 110V electrical system capable of operating from regular 110V "household current," enabling operation of the LED lighting, use of the back wall outlets and charging of the 12V-battery:
          1. The 110V-electrical power shall be distributed through one load center.
          2. Circuit Breakers: One 30-amp main breaker and three 20-amp breakers.

The first 20-amp breaker protects the three rows of LED lighting located in the roof and canopy.

The second 20-amp GFI breaker protects the two duplex outlets located on the inside lower back wall.

The third 20-amp GFI breaker protects the one duplex outlet located near the 12-volt battery.

* + - * 1. Power Cord: 50 foot (15 m), 10/3 power cord, with a 30-amp twist-lock plug.
        2. The load center shall be in a compartment located near the hitch end, curbside of the mobile stage.
        3. A lockable weatherproof door with stainless steel hardware shall enclose the power center and seal the compartment.
        4. The compartment shall also be able to store the power cord.
      1. General Lighting: Four rows of LED lighting, one row in overhead canopy and three rows in roof:
         1. Fixtures: IP65 rated LED strip lighting with over 400 lumen output per foot housed in aluminum channel with clear cover.
         2. All led strip lighting shall be on one circuit and be 4000K color-temperature.
         3. All trailer indicator lighting is LED (side markers, brakes, license plate).
      2. Double Articulated Roof/Canopy and Stage Hydraulic Deployment System:
         1. Hydraulic deployment system shall open and close double articulated roof/canopy as well as raise and lower the hydraulic stage.
         2. Double articulated roof-canopy must be continuously adjustable from fully open to fully closed to allow for flexibility in presentation.
         3. Support: Structural steel columns on curbside wall with a dual hydraulic linkage actuation system.
         4. Roof/Canopy Controls: Two, two-way hydraulic cylinders with solenoid control powered by an on-board 12-volt, DC hydraulic power unit.
         5. Hydraulic deployment system shall be safety protected by counterbalance and velocity check components.
         6. Hydraulic Stage Controls: Two, two-way hydraulic cylinders with solenoid control powered by 12-volt, DC hydraulic power unit.
         7. Dimensions for appropriate acoustical, visual, lighting, and functional benefits:

Distance from stage to rear of roof in open position: Minimum 9'-2" (2.79 m).

Distance from stage to roof/canopy pivot point in open position: Minimum 14'-11" (4.55 m).

Distance from stage to front edge of canopy in open position: Minimum 17'-3" (5.25 m).

Distance from stage to front edge of light bar in open position: Minimum 17'-9" (5.41 m).

* + - * 1. Roof/Canopy shall open to required dimensions to provide the following:

Maximum performance space volume, which optimizes performance and audience acoustics.

Allows the use of choral risers and other performance platforms on-stage, while still maintaining headroom for performers.

17 x 28 foot (5.2 m x 8.5 m) visual frame with open ends for optimum audience viewing.

Allows the use of standard size theatrical lighting fixtures along the rear of the roofline without occupying critical headroom for performers.

* + - 1. Remote-Control Module:
         1. Removable weatherproof remote-control module with 12 foot (3.6 m) cord shall be provided to operate the roof/canopy and the hydraulic stage.
         2. Remote-control module shall contain toggle-type switches for opening and closing the roof/canopy, and raising and lowering the hydraulic stage.
         3. Remote cable shall plug into the front of the mobile stage with a positive lock-type connector.
         4. Remote-control module shall be keyed for operational security.

\*\* NOTE TO SPECIFIER \*\* Delete if hydraulic leveling is not required for project.

* + - * 1. Remote-control module acts as backup to the wireless remote controller for hydraulic leveling.
    1. Weatherproofing and Finishing:
       1. Construction: Mating edges of all major assemblies (roof, canopy, curbside panel, end panels) shall have extruded aluminum edges with gasketing.
          1. Aluminum edges shall provide integral channels which direct water away from the roof of the mobile stage.
       2. Wall Panels: Composite panels shall provide a seamless exterior surface that is UV protected and impervious to the elements.
          1. High gloss fiberglass reinforced plastic surface.
       3. Deck Material:
          1. Stage decking shall have a treated core.
          2. Textured surface shall provide a non-skid performance area.
       4. Fasteners and Hardware: To minimize the effects of corrosive elements and weather, as well as improving overall appearance, exposed fasteners shall be unacceptable on all exterior roof, canopy, and curbside panels.
          1. All exterior hardware materials shall be stainless steel, plastic or aluminum.
       5. Coatings: All metal surfaces shall be primed with one coat two-component epoxy primer and one coat Sherwin-Williams Polane 8890 polyurethane enamel, a two-component, aliphatic acrylic topcoat.
          1. The epoxy primer and polyurethane topcoat create a barrier coat, which prevents moisture reaching any steel parts.
          2. Paint shall provide high gloss retention for excellent exterior physical and chemical performance properties, excellent hardness and impact resistance and excellent mar and abrasion resistance.
          3. Finish shall not create a chalky white nor dulled appearance over time (oxidation).
       6. Colors:
          1. Exterior Top: Bright white.
          2. Exterior Bottom: Blackthorn.
          3. Interior wall and roof/canopy: Bright white.
          4. Stage Deck: Black.
    2. Stairway: Adjustable all-terrain stair with handrails.
       1. Stairway shall incorporate a parallelogram design, which allows for the rise of the steps to increase or decrease compensate for irregularities in ground level.
       2. Stairway may be positioned anywhere around the hydraulic stage and stage extension perimeters.
       3. Treads: Extruded aluminum.
       4. Adjustable height from 37 to 50 inches (94 - 127 cm).
       5. Meets all applicable safety codes and conditions.
    3. Support and Background:
       1. Design shall meet Society of Automotive Engineers (SAE) Standards as well as the Code of Federal Regulations, which includes Department of Transportation (DOT), Federal Motor Vehicle Safety Standards (FMVSS) and Federal Motor Carrier Safety Regulations (FMCSR).
       2. Product Training: Upon delivery, complete training on operation and maintenance shall be conducted by manufacturers authorized representative.
    4. Included Options:

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

* + - 1. Hydraulic Leveling System with Wireless Remote and Auto Level Feature:
         1. Jacks: Four automatic, hydraulic leveling jacks permanently integrated into the vehicle frame for leveling and stabilization.

Each jack shall have 10,000 lb (4536 kg) live load capacity and a 10 inch (25cm) diameter swiveling stabilization pad

Jacks shall be powered by the standard 12-volt electrical system, independently controllable, and will position the stage of the mobile stage 40 to 45 inches (102-114 cm) above level ground.

Each jack shall feature an integrated counterbalance valve safety device.

* + - * 1. Hand-Held Wireless, Remote-Control Unit:

Operated on a protected FM radio frequency that can only be received by the on-board receiver.

Powered by a nine-volt battery.

Receiver Unit: Powered by the 12-volt battery in the mobile stage.

Auto shut-off feature shall be provided to prevent battery drain.

Provides independent up/down control of the four stabilizing jacks, the open/close function of the roof/canopy, the raise/lower function of the hydraulic stage, and the auto-leveling system.

* + - * 1. Auto-Leveling Feature: Controlled by wireless remote.

One-button feature allows the mobile stage to electronically sense its out-of-level position, and will automatically adjust the hydraulic stabilizers until a level chassis position is attained.

* + - * 1. Safety Features:

Roof/Canopy raise shall not function until a level chassis position is attained.

Hydraulic stage shall not lower or raise until adequate roof/canopy clearance is available.

* + - * 1. Standard wired controller to be supplied along with wireless remote controller that is supplied with hydraulic leveling option.
      1. Disability Lift (12V-powered): Low-profile platform style wheelchair lift built into the curbside wall of the mobile stage, with interior cover and lockable exterior access door:
         1. Provide manual back-up pump.
         2. Minimum lift capacity shall be 800 lbs.
      2. Graphics: Complete exterior graphics package custom designed:
         1. Graphics, logo and text shall be executed with 3M acrylic vinyl in a choice of 60 colors.
    1. Accessories:

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

* + - 1. Stage Extensions: Component 4 foot x 8 foot (122 x 244 cm) variable height stage platforms:
         1. Each platform shall be constructed of lightweight aluminum framing with black Quadripple stage decking material.
         2. Platforms securely attach to each other or anywhere around the perimeter of the stage.
         3. Legs: Variable height, 30 to 54 inches (76 - 137 cm) with appropriate connection hardware.
         4. Weight: 120 lb (55 kg) maximum.
         5. May also be used independently for other uses.

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

* + - * 1. Stage Extension Package A: Extends the stage on both ends of the mobile stage, for a nominal stage size of 16 feet x 40 feet (4.88 m x 12 m). Units can alternately be used to extend the front of the mobile stage. Includes:

(4) 4 foot x 8 foot (122 x 244 cm) Stage Platforms.

(4) 2 foot x 8 foot (61 x 244 cm) Stage Platforms.

Legs and connectors.

* + - * 1. Stage Extension Package B: Extends both ends, as in Package A, plus adds 4 feet to the front of the mobile stage, for a nominal stage size of 20 feet x 40 feet (6 m x 12 m). Units can alternately be used to extend the front of the mobile stage. Includes:

(9) 4 foot x 8 foot (122 x 244 cm) Stage Platforms.

(4) 2 foot x 8 foot (61 x 244 cm) Stage Platforms.

Legs and connectors.

* + - * 1. Stage Extension Package C: Extends both ends, as in Package A, plus adds 8 feet to the front of the mobile stage, for a nominal stage size of 24 feet x 40 feet (8 m x 12 m). Units can alternately be used to extend the front of the mobile stage. Includes:

(14) 4 foot x 8 foot (122 x 244 cm) Stage Platforms.

(4) 2 foot x 8 foot (61 x 244 cm) Stage Platforms.

Legs and connectors.

* + - 1. Stage Drapery Skirting: Pleated outdoor drapery skirting with Velcro attachment and weighted bottom shall be provided for the front and sides of the stage.
         1. Color: \_\_\_\_\_.
      2. Additional Stairways: Of same design as included stairway.
         1. Number: \_\_\_\_\_.
      3. Lighting Packages: Canopy lights mounted to the canopy light frame assembly bars.
         1. All fixtures are IP rated (65 or greater) for increased weather resistance and longevity.
         2. Bars and lights shall be designed to swing out for performance use or returned to storage position for travel without being dismantled from the canopy.
         3. Wall mounted reprogrammable 5 preset DMX controller (pre-programmed for basic function from the factory).
         4. 5 pin DMX override port for optional external control.
         5. Circuit Breakers: three additional 20-amp breakers for lighting added to existing 110V electrical system

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

* + - * 1. Lighting Package - Show:

(5) Upstage RGB batten downlights.

(8) Canopy-mounted RGBWA-UV front wash fixtures.

Total additional intensity: 38,000 lumens.

* + - * 1. Lighting Package - Performance:

(5) Upstage RGB batten downlights.

(4) High-output canopy mounted LED profile fixtures.

CRI (Color Rending Index): 97.2.

Color Temperature: 3200K.

50-degree lens.

Total additional intensity: 57,000 lumens.

* + - 1. Portable Generator:
         1. Industrial 6,600 continuous watts rated - 11.7 HP, four-stroke, single cylinder, air cooled with 6.5 gallon fuel tank.
         2. Does not supply power to the optional canopy and roof lighting packages.
         3. Shall not be attached to the mobile stage.
      2. Spare Tire and Wheel: LT 235/85 R16 steel belted radial tires mounted on an eight-bolt rim.
      3. Secondary Control Unit: Connects directly into control compartment:
         1. Operates all functions of the mobile stage with hydraulic leveling option.
         2. Serves as backup or replacement for wireless remote.

1. EXECUTION
   1. EXAMINATION
      1. Examine installation areas and mounting surfaces with Installer present, for compliance with manufacturer's installation tolerances including required clearances, floor level, location of blocking and anchoring reinforcements, and other existing conditions that may affect installation or performance.
      2. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
      3. Proceed with installation only after correction of unsatisfactory conditions.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install manufactured units in accordance with manufacturer's recommendations, approved submittals, and in proper relationship with adjacent construction.
      2. Test for proper operation and adjust until satisfactory results are obtained.
   4. DEMONSTRATION
      1. Train Owner's personnel to adjust, operate, and maintain equipment. Turn over keys, tools, and operation and maintenance instructions to Owner.
   5. CLEANING AND PROTECTION
      1. Repair or replace defective work as directed by Architect upon inspection.
      2. Clean surfaces. Touch up marred finishes, or replace damaged components that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by manufacturer.
      3. Protect installed products from damage, abuse, dust, dirt, stain, or paint until completion of project. Do not permit use during construction.

END OF SECTION