

SECTION 116843**NEVCO, INC. MODEL 3680 EXTERIOR INTELLIGENT CAPTION MULTISPORT SCOREBOARD****PART 1 - GENERAL****1.1 SUMMARY**

A. Section includes: Exterior, electronic scoreboard including control center and other accessories for complete functional installation.

1. Section 03 30 00 Cast-in-Place Concrete: Concrete footings for posts supporting scoreboards.
2. Section 05 12 00 Structural Steel: Steel posts and other structural framing to support scoreboards.
3. Section 26 05 26 Grounding and Bonding: Grounding of scoreboard and support structure.
4. Section 26 20 00 Low Voltage Electrical Distribution
5. Section 27 41 16 Integrated Audio-Video Systems
6. Section 10 14 63 Electronic Message Signage

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM) Publications:
 1. ASTM B221 - Aluminum-Alloy Extruded Bar, Rod, Wire, Shape, and Tube.
 B. National Electrical Code.
 C. Federal Communications Commission, Part 15 Rules & Regulations.
 D. UL and C-UL Standard for Electric Signs

1.3 SUBMITTALS

A. Provide in accordance with Section 01 33 00 - Submittal Procedures:
 1. To minimize the environmental impact of multiple paper copies, product installation prints, instructions and diagrams of manufacturer will be submitted in a paperless fashion. The end user shall receive all pertinent hard-copy documentation at delivery.
 2. Product data for scoreboards, controls, and accessories shall include descriptions of control functions etc.
 3. Installation drawings, face layout, dimensions, construction, electrical wiring diagrams, and method of anchorage. (Paperless when applicable).
 4. Copy of guarantee required by Paragraph 1.5 for review by Architect. (Paperless when applicable).
 5. Manufacturer's installation instructions. (Paperless when applicable).
 6. Finish Samples.

1.4 QUALITY ASSURANCE

A. Source limitation: All components including scoreboard, control center, control cable, and other accessories and installation hardware shall be products of a single manufacturer.
 B. Manufacturer qualifications: Company specializing in manufacturing electronic scoreboards with 10 years minimum successful world-wide experience.
 C. Scoreboards shall be designed for exterior installation with weatherproof housing and optical isolation interface to reduce potential damage from electrical storms.
 D. Should service be necessary, specialized personnel shall not be required. Modular "plug and play" components will be housed in an internal protective enclosure.
 E. Scoreboards and other electrical components shall be certified for use in United States and Canada by Underwriter Laboratories, (UL) Inc. and shall bear either UL or C-UL label only.
 F. Scoreboards and other electrical components shall be electrically grounded in accordance with National Electrical Code (NEC), Article 600.

1.5 GUARANTEE

A. Provide under provisions of Section 01 78 00 - Closeout Submittals: Guarantee to cover defects in materials and workmanship.
 1. Scoreboards, scoring tables, marquees, message centers, video boards* and Stadium Pro loudspeaker enclosures are guaranteed for a period of five (5) years from the date of invoice against defects in workmanship or materials.
 2. Wireless components, portable scoreboards and solar power kit carry a two (2) year guarantee from date of invoice. Hand-held controls and switches carry a one (1) year guarantee from date of invoice. The Stadium Pro loudspeaker front printed scrim is guaranteed for one (1) year from the date of invoice. For products supplied by third-party suppliers (i.e. cameras, computers, computer monitors, radar guns, loudspeakers, amplifiers and associated electronics), Purchaser agrees to accept the manufacturer's warranty, if any, in lieu of any warranty by Nevco.
 3. Lifetime telephone support.

PART 2 - PRODUCTS**2.1 ACCEPTABLE MANUFACTURERS**

A. Nevco, Inc., 301 East Harris Avenue, Greenville, Illinois 62246; 800-851-4040; www.nevco.com.
 B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01 25 00 - Product Substitution Procedures.

2.2 MATERIALS

A. Aluminum faces and perimeter frame: Fabricated from .050 minimum thickness, ASTM B221 aluminum sheet with reinforcement and slotted mounting brackets top and bottom.
 B. Finish: Acrylic polyurethane paint. Color as selected by Architect from manufacturer's standard range as provided by Nevco, Inc.
 1. Provide striping to separate scoreboard features.
 C. Brackets: Integrated universal bracket system.
 D. Fasteners, anchors, and other exposed hardware: Corrosion resistant.
 E. Electronics: Low voltage, solid state, 2-wire cable, multiplex system, quartz crystal controlled.
 F. Provide gold plated electrical contacts in interconnecting wiring to reduce corrosion and improve reliability.
 G. Provide optical communication interface to reduce threat of damage from electrical storms and ESD.
 H. LED (light emitting diode) units: Seven-bar, segmented digits with protective aluminum cover, rated typical life 100,000 hours and be designed to provide excellent visibility from all angles and sides.
 I. Junction boxes where required: Sheet metal box and cover, 4-1/2 x 2-1/8 x 2-1/8 inches min. complying with NEMA standards.
 J. Control cable: UL listed, 2-wire, RG-58/U, coaxial cable, 1/4 inch diameter.

2.3 SCOREBOARD

A. Type: Exterior, large-numbered, electronic Intelligent Caption – Multi-sport scoreboard with integral horn and LED displays for time, scores and four digit pairs for per team features listed below. Model 3680 as manufactured by Nevco, Inc.
 1. Size: 18 feet long x 8 feet high x 8 inches deep
 2. Approximate weight: 555 pounds
 3. All electronic Caption Plates: two ea. 8x48, four ea. 8x32, and two ea. 8x16 – 16mm matrix red or amber LED displays.
 a. Displaying per sport: "HOME", "GUESTS", "BALL ON", "DOWN", "SHOT", "OUT", "SAVES", "SHOTS", "CK", "H/G", "PEN", "AT BAT", "BALL", "STRIKE", "OUT"
 4. High intensity red, amber, or translucent white LED displays.
 a. 24 inches high digits: All digits except "tol"
 b. 18 inches high digits: "tol"
 5. Power requirements:
 a. POWER (Red/Amber): 120 VAC, 6.3 Amps, 50/60 Hz. / 240 VAC, 3.2 Amps, 50/60 Hz. Requires earth ground.
 b. POWER (Translucent White): 120 VAC, 8.3 Amps, 50/60 Hz. / 240 VAC, 4.2 Amps, 50/60 Hz. Requires earth ground.

2.4 ACCESSORIES

A. Provide each scoreboard or accessory with control cable of length required. Electrical junction boxes, conduits, mounting hardware, and other accessories as required for installation are to be provided by others.
 B. 18'x4' Decorative Truss Above Scoreboard to include logo specified by the Architect

2.5 CONTROL CENTER

A. **Type:** Wired or Wireless, microprocessor based operator's control center designed to operate different models of scoreboard by interchange of keyboard overlay; Model MPC as manufactured by Nevco Inc. Console will operate earlier scoreboards from Nevco Inc.
 1. Console: High impact, break-resistant black plastic with improved UV resistance. 11 x 9-1/2 x 4-1/8 inches
 2. Features:
 a. Provide with LED displays, lithium cell battery backup to maintain scoreboard memory and time of day, self test mode, power on/off switch, alternate time control, and multiple scoreboard operation.
 b. Split and raised 40 key soft touch keyboard.
 c. Keyboard shall be spill resistant.
 d. Internal beeper acknowledging each entry.
 e. System Profiles feature set all parameters of operation including choice of controlled accessories and scoreboards.
 f. Colorful graphic rich keyboard overlays for scoreboard or accessory.
 g. Remote hand-held main time switch with programmable integral horn button.
 h. 25 foot control cable with connectors.
 i. Timer features: Time of day display, multiple time out timers with warning, interval horn, up-count auto stop with horn, 1/10th second display during last minute, changeable horn tone on scoreboards with the feature.
 j. Segment timing for practice and workout.
 k. Dimmer control for scoreboard.
 l. MPC features shall be accessed through yes/no abbreviated questions in a drop down menu format.
 m. Multiple receiver management shall be accomplished through direct keyboard input.
 n. Electronic Team Names and automatic Electronic Caption Plates shall be controlled from MPC control without need to change overlays.
 3. Power requirements: 120 volts, 12 watts, 50/60 Hz.
 4. Provide option of battery supply for control operation if utility power not available.
 5. Provide carrying case for control center, cable, and hand-held switch; Model CC-3 as manufactured by Nevco Inc.
 a. Size: 18-1/2 x 14-1/2 x 6 inches
 b. Construction: Double wall, high density black polyethylene with padded interior, mechanical latches, and hinges.
 6. Wireless Receiver
 a. Sturdy impact resistant construction, 6 x 4 x 1.5 inches
 b. Integrated antenna, mounted flush in scoreboard face. Protruding antennas shall not be used.
 7. Maximum range: 1,000 feet from control center to receiver.
 8. Receiver shall require no additional source of power or separate control cable.

PART 3 - EXECUTION**3.1 PREPARATION**

A. Verify exact scoreboard and control center quantities and junction box locations with Architect.
 B. Coordinate requirements for electrical power, concrete, steel erection, auxiliary framing and supports, suspension cables, and other components to be provided under other Specification Sections to ensure adequate provisions are made for complete, functional installation of scoreboards.
 C. Coordinate scoreboard electrical requirements to ensure proper power source, conduit, wiring, and boxes are provided. Prior to installation, verify type and location of power supply.

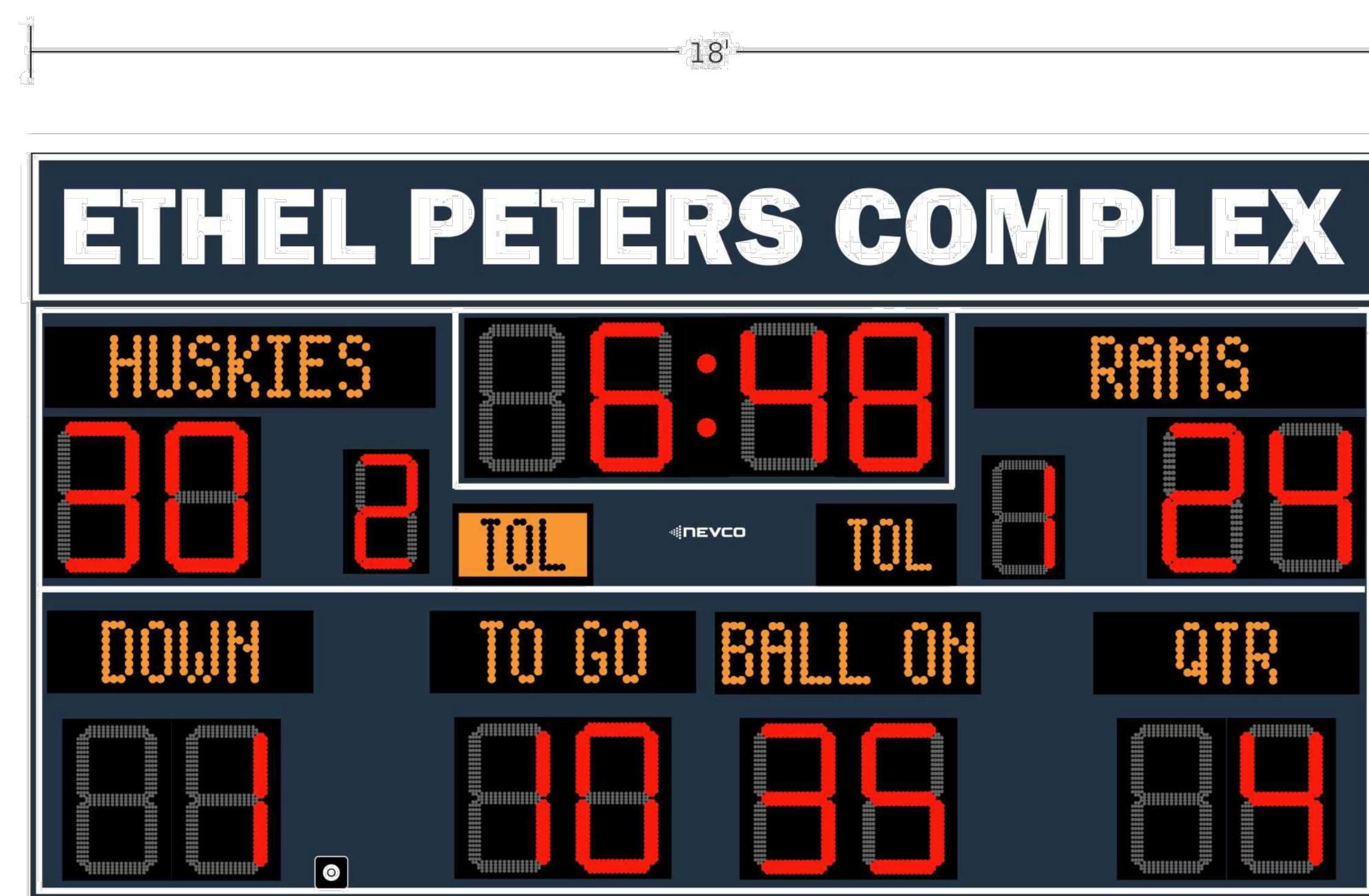
3.2 INSTALLATION

A. Install scoreboards and accessories in accordance with manufacturer's instructions and approved installation drawings.
 B. Before installation, field test scoreboards and accessories for operating functions. Ensure that scoreboards accurately perform all operations. Correct deficiencies.
 C. Rigidly mount scoreboards and accessories level and plumb with brackets and fasteners.
 D. Clean exposed surfaces.
 E. Protect scoreboards and finishes from other construction operations.

3.3 DEMONSTRATING AND TRAINING

A. In accordance with Section 01 75 00 - Starting, Adjusting, and Demonstrating, provide demonstration and training session for Owner's representative covering operation and maintenance of electronic scoreboard.

END OF SECTION



Model 3680-IC LED Scoreboard
 18'W x 8'H x 8'D
 Scoreboard Color: 185 Navy/Blue
 Digit Color: Red
 Electronic Team Name Color: Amber

Non-illuminated Sign
 18'W x 2'H

NOTES:

1. EXISTING STRUCTURAL SUPPORT TO BE REUSED FOR NEW SCOREBOARD.
2. EXISTING SCOREBOARD TO BE REUSED BY OWNER IN A DIFFERENT LOCATION.
3. REMOVE EXISTING SCOREBOARD, ENSURING NO DAMAGE OR HARM. STORE WITH ALL PARTS/PIECES AS DIRECTED BY CONSULTANT OR OWNER.
4. CLEAN, SCRAPE, AND REPAIR EXISTING SUPPORT POSTS AND BEAMS AS NEEDED. PAINT WITH BLACK RUST-PREVENTIVE PAINT PRIOR TO NEW SCOREBOARD INSTALLATION.
5. INSPECT GROUND AREA AROUND, AND EXISTING FOUNDATION OF EXISTING SUPPORT POSTS. TAKE STEPS TO INCREASE STABILITY OF EXISTING POSTS AS REQUIRED.
6. REVIEW ELECTRICAL SERVICE TO SCOREBOARD. REPLACE OR REPAIR AS NEEDED FOR NEW SCOREBOARD INSTALLATION.
7. FURNISH AND INSTALL NEW SCOREBOARD.
8. PROVIDE ONE FULL TRAINING SESSION FOR NEW SCOREBOARD FUNCTION WITH THE OWNER, TO BE HELD AT A MUTUALLY AGREED UPON DATE AND TIME.

ISSUE: _____ DATE: _____

REPLACEMENT of BLEACHERS and SCOREBOARD at ETHEL PETERS RECREATION COMPLEX

OWNER: _____

DESIGN CONSULTANT: _____

WBA
 The WBA Group, Inc.

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 Branford, Connecticut 06405
 Phone: (203) 488 - 8234
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SHEET NAME: _____

SCOREBOARD SPECIFICATIONS

SCALE: AS NOTED
 DATE: 12/04/23
 DRAWN BY: ECP
 APPR. BY: WBA
 FILE NO. 23-07

L-04