ELDORADO CLIMBING WALLS

SECTION 131200 - CLIMBING WALLS

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes the following:

1. SHOTRock Poolside Climbing Wall

B. Related Sections

1. Division 04 Unit Masonry
2. Division 05 Structural Steel Framing for steel framework requirements

1.2 REFERENCES

A. CWA – Standards for Artificial Climbing Walls

B. (IBC) International Building Code – 2003 edition

C. Manual of Steel Construction, Allowable Stress Design, 9th Edition AISC

1.3 SYSTEM DESCRIPTION

A. Work of this section is a complete climbing wall system utilizing hand sculpted shotcrete simulating natural rock profiles, colors and textures. Support structure to be designed and engineered for each project. The outcome is a seamless product that simulates real outdoor natural rock formations.

B. The steel support structure may rely on a component of the facility as its primary structure, or it may be self-supporting. The climbing wall shall be designed and installed to CWA standards. Climbing wall shall include all supporting structure necessary to create the wall profiles, the climbing surface, and specific equipment as defined below. Steel structure shall be coated for corrosion resistance.

1.4 QUALITY ASSURANCE

A. Provide climbing wall systems by a single manufacturer.

B. Substitutions of climbing wall systems and equipment shall conform to Division 01 requirements for substitutions.

C. Manufacturer shall have a minimum of five years of experience with the manufacture and installation of climbing wall systems. Installers shall have five years of experience installing climbing wall systems.

D. Welding: All welding shall conform to the AISC and the American Welding Society (AWS) Standard Code for Arc and Gas Welding in Building Construction. All welding shall be performed by AWS certified welders. The technique of welding, the workmanship, appearance and quality of welds

and the methods used in correcting nonconforming work shall be in accordance with "Section 3-Workmanship" and "Section 4-Technique" of the AWS Structural Welding Code-Steel, D1.1. Minimum size of welds shall be ⅛". Minimum return shall be 1". All welds shall be executed using E70XX electrodes unless specified otherwise in the shop drawings.

1. Surfaces Adjacent to Field Welds: Surfaces within 2" of any field weld location shall be free of materials that would prevent proper welding or produce toxic fumes during welding.

E. All structural steel and structural steel work shall conform to the specifications for design, fabrication and erection of structural steel for buildings for the American Institute of Steel Construction (AISC) Code of Standard Practice, and to the requirements of local building codes.

1. Material: Steel shall consist of A36, A500B for tube steel and Schedule 40, A53, Type S, Grade B for Standard weight structural pipe unless noted otherwise.

1.5 SUBMITTALS

A. General: Submit the following in accordance with Conditions of the Contract and Division 01 Specifications Sections.

B. Product data including manufacturer's specifications, standard details, details particular to this project, and installation drawings.

C. Shop drawings indicating layout of wall system, descriptions of materials and components, fastening and anchoring methods, and primary and secondary structural systems to be utilized.

1.6 DESIGN

A. Climbing wall shall be custom designed to suit the facility, and must be specifically crafted to meet the client's needs and requirements as follows:

1. Exert no more than 65 lbs / square foot load vertically or horizontally on wall and floor systems.

B. Side returns, top of wall and back of wall shall be included if the climbing wall is free standing in nature. If not free standing in nature, climbing wall returns (sides of the climbing wall), shall return to the facility walls seamlessly and conceal the interior structure of the climbing wall and restrict access behind climbing wall.

C. Initial drafts of the design shall be submitted to owner/architect in the form of three-dimensional CAD models.

1.7 ENGINEERING

A. Climbing wall shall be engineered to meet CWA standards for climbing wall construction.

A. Shop drawings to be delivered to General Contractor for review prior to start of on-site installation.

1.8 DELIVERY, STORAGE AND HANDLING

A. Protect products during transit, delivery, storage and handling to prevent damage and maintain integrity of components.

B. Climbing Wall Contractor to unload and handle shipped component deliveries.

C. Products shall be stored in accordance with manufacturer's recommendations in an area adjacent to the climbing wall installation.

1.9 WARRANTY

A. Manufacturer shall warrant to the original purchaser for one year from the date of substantial completion that its products are free from defects in materials and workmanship.

1.10 SITE CONDITIONS

A. Building shall be enclosed with permanent HVAC in operation and capable of maintaining a uniform temperature and humidity range. Acceptable ranges are 40 – 85 degrees F.

B. Climbing wall area shall be supplied with temporary or permanent work area lighting and multiple 110v and 220v electrical power outlets in accordance with the requirements of Division 01 "Temporary Facilities and Controls." Lighting shall be capable of 50 foot candles uniformly at work area, or additional work lights will be provided by the General Contractor. Alternatively, General Contractor shall connect (and later disconnect) a temporary power load center (provided by Climbing Wall Contractor) in the area of the installation.

PART 2 – PRODUCTS

2.0 CLIMBING WALL MANUFACTURER

A. Subject to compliance with requirements, provide similar and equal products by one of the following manufacturers.

1. Eldorado Wall Company "ShotRock" (303) 447-0512

2.1 CLIMBING WALL STRUCTURAL SYSTEM

A. All structural steel work performed by Climbing Wall Contractor in accordance with approved shop drawings.

B. The structural frame of the climbing wall is to be all-welded steel frame construction in accordance with approved shop drawings. Attachment to the facility walls, floor, and ceilings to conform to specified loading limits of the existing facility. Climbing wall manufacturer to provide all additional steel to meet the required climbing wall loads. All structural steel components shall be coated for corrosion resistance.

C. The primary structural surface shall be composed of fiber reinforced concrete. Any surface exposed to splashing shall be treated with a paint-on neoprene liner sandwiched between the scratch and surface coats. All surface areas not exposed to splashing shall be treated with waterproof cement.

D. Quality Control:

1. Quality control procedures, material and workmanship at all times may be subject to inspection by design engineers representing climbing wall manufacturer.

2.2 CLIMBING SURFACE

A. The surface shall be composed of hand sculpted and finished shotcrete with a total thickness of 2-6 inches.

    1. Surface coloration and characteristics chosen by Architect or Owner.

B. Climbing wall system shall provide integral sculpted climbing holds .

PART 3 – EXECUTION

3.1 PRE-INSTALLATION INSPECTION

A. Verify that all surfaces are ready to receive work and are within specified tolerances.

B. Verify that layout of the materials or equipment will not interfere with installed climbing wall.

3.2 INSTALLATION

A. Erection of the climbing wall system shall be made by manufacturer or approved sub-contractor with 5 years minimum experience with climbing wall installation.

B. Complete wall shall comply with specified tolerances and shop drawing requirements.

3.3 CLEAN-UP

A. Clean area of debris from installation of climbing wall.

B. Separate waste materials in accordance with the construction waste management plan and place in designated areas.

3.4 INSPECTION

A. The completed climbing wall shall undergo a full complete final inspection by a duly trained supervisor of the manufacturer and shall be certified by the manufacturer that the finished product has been built in accordance with the manufacturer's approved installation drawings and these contract documents.

B. The completed climbing wall shall undergo a full and complete final inspection by the Owner or Owner's representative at the completion of climbing wall installation.

3.5 TRAINING

A. Climbing Wall Contractor shall provide ½ day training session for the facility operations staff, following the climbing wall installation. Training shall cover the following topics:

    1. Climbing wall maintenance and periodic inspections.

3.6 PROTECTION

A. General Contractor to provide final protection in a manner acceptable to the Owner or Owner's representative that insures the climbing wall will be without damage or deterioration at time of substantial completion.

END OF SECTION 131200