SECTION 32 31 16

WELDED WIRE FENCES AND GATES

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\*\* NOTE TO SPECIFIER \*\* DesignMaster by Deacero; Steel Fencing.  
This section is based on the products of DesignMaster by Deacero, which is located at:  
8411 Irvington Blvd. , Suite B  
Houston, TX 77022  
Toll Free Tel: 800-867-6245  
Email: [request info (rtenorio@deacero.com)](https://arcat.com/rfi?action=email&company=DesignMaster%252Bby%252BDeacero&message=RE%253A%2520Spec%2520Question%2520(02821dsn)%253A%2520&coid=43943&spec=02821dsn&rep=&fax=)  
Web: <https://www.designmasterfence.com>   
 [ [Click Here](https://arcat.com/company/designmaster-by-deacero-43943) ] for additional information.  
Need it strong? Strong and beautiful? Count on Designmaster!  
LEED Certified , Non-Toxic Powder Coating , 25-Year Limited Warranty , 8 colors  
Designmaster is changing the waycountry-regionAmericafences, with steel-strong commercial and residential fence and gate solutions for virtually every need, from maximum security to ornamental projects. Our incomparable quality, product diversity, maintenance-free finishes and competitive pricing give you every reason to choose Designmaster, and our customer-centric attention to detail and 25-year limited warranty ensure your satisfaction and peace of mind.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Maximum Security Steel Fence. (Forte)
    2. High Security Steel Fence. (Contempo)
    3. Medium Security, high Aesthetics Steel Fence. (Classic) (CityMilan)
    4. Standard Security, Maximum Aesthetics. (CityFlorence)
    5. Crowd Control Barriers.
  1. RELATED SECTIONS

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

* + 1. Division 01: Administrative, procedural, and temporary work requirements.
    2. Section 03 30 00 - Cast-In-Place Concrete.
    3. Section 31 23 00 - Excavation and Fill.
  1. REFERENCES

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

* + 1. ASTM International (ASTM):
       1. ASTM A185/A185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.
       2. ASTM A513 - Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing.
       3. ASTM A641/A641M - Standard Specifications for Zinc-Coated (Galvanized) Carbon Steel Wire.
       4. ASTM A787/A787M - Standard Specification for Electric-Resistance-Welded Metallic-Coated Carbon Steel Mechanical Tubing.
       5. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
       6. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
       7. ASTM D3359 - Standard Practice for Measuring Adhesion by Tape Test.
    2. PlaceNameplaceMiami-DadeCityCounty:
       1. HVHZ - High Velocity Hurricane Zone certification.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
       1. 12 inch (30.5 cm) long post samples.
       2. Cap and bracket samples.

\*\* NOTE TO SPECIFIER \*\* Delete fence panel size option not required.

* + - 1. Fence Panel Samples: 12 x 12 inch (305 x 305 mm) fence panel samples.
      2. Full sized fence panel samples.
    1. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. The intent of a mock-up is to demonstrate quality of workmanship and visual appearance.
       2. Size: Minimum two fence sections x full height.
       3. Show: Fence posts, panels, and accessories.
       4. Location: Where directed.
       5. If the mock-up is not acceptable, rebuild the mock-up until satisfactory results are achieved.
       6. Retain mock-up during construction as a standard for comparison with completed work.
       7. Do not alter or remove mock-up until work is completed or removal is authorized.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. WARRANTY
     1. Manufacturer's standard limited warranty.
        1. Coverage against corrosion of galvanized steel coatings and blistering or loosening of powder coatings.
        2. Warranty Period: 25 years.

1. PRODUCTS
   1. PERFORMANCE REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Miami Dade below applies to Classic, Florence.

* + 1. Standards Compliance: Miami Dade HVHZ, Notice Of Acceptance file number 15-0903.07, EXP 03/30/2022.
  1. MANUFACTURERS
     1. Acceptable Manufacturer: DesignMaster by Deacero, which is located at:  
        8411 Irvington Blvd. , Suite B  
        Houston, TX 77022  
        Toll Free Tel: 800-867-6245  
        Email: [request info (rtenorio@deacero.com)](https://arcat.com/rfi?action=email&company=DesignMaster%252Bby%252BDeacero&message=RE%253A%2520Spec%2520Question%2520(02821dsn)%253A%2520&coid=43943&spec=02821dsn&rep=&fax=);Web: <https://www.designmasterfence.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 01 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.

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

* 1. MAXIMUM SECURITY STEEL FENCE (FORTE)
     1. Basis of Design: Forte, as manufactured by Designmaster.
     2. Fence Panels:
        1. Resistance welded steel wire mesh, ASTM A185/A185M, 8 gauge Class 1 galvanized steel wire per ASTM A641/A641M, 1/2 x 3 inch (13 x 76 mm) mesh.

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

* + - 1. Height:
         1. Flat Panels: 79 inches (2007 mm).
         2. Flat Panels: 99 inches (2515 mm).
         3. Flat Panels: 118 inches (2997 mm).
         4. Flat Panels: 142 inches (3607 mm).
         5. V Brace Panels: 76 inches (1930 mm).
         6. V Brace Panels: 96 inches (2438 mm).
      2. Wire Breaking Load: Minimum 70,000 psi (482.6 MPa).
      3. Weld Shear Strength: Minimum 1,050 pounds (476.3 kg).
      4. Wind Load Rating: Minimum 110 mph (177 kph).
    1. Posts:
       1. Galvanized steel tube, ASTM A513 or ASTM A787, G60 coating class, 3 x 3 inches (76 x 76 mm), 11 gauge.
       2. Length: To suit panel height and post mounting method.
       3. Post Caps: Ultraviolet-protected plastic, sized to post dimensions, friction fit.
       4. Post Bases: Not applicable.
       5. Extension Arms: Same material and size as posts, welded to post tops at 45 degree angle, for attachment of:

\*\* NOTE TO SPECIFIER \*\* Delete attachment option not required.

* + - * 1. Barbed wire using clips and machine bolts.
        2. Fence panels using post brackets.
    1. Post Brackets:
       1. Galvanized steel and powder coated, with self-tapping stainless steel screw or other appropriate self-tapping screw as required.
    2. Cross Bars:
       1. Provide universal brackets and self-tapping screws recommended by manufacturer.

\*\* NOTE TO SPECIFIER \*\* Delete cross bar option not required. Three cross bars are recommended for highest security, to prevent panels from bowing or flexing.

* + - 1. Three cross bars per panel.
      2. Two cross bars per panel.
    1. Gates: Custom-designed and built according to construction documents. Includes hardware.
       1. Basis of Design: Forte Gates, as manufactured by Designmaster.

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

* 1. HIGH SECURITY STEEL FENCE (CONTEMPO)
     1. Basis of Design: Contempo, as manufactured by Designmaster.
     2. Fence Panels:
        1. Resistance welded steel wire mesh, ASTM A185/A185M, double 1 gauge horizontal wires with 4 gauge vertical wires between, all are Class 1 galvanized steel wire per ASTM A641/A641M, 2 x 8 inch (51 x 203 mm) mesh, stiffened.

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

* + - 1. Height: 4 feet (1.2 m).
      2. Height: 6 feet (1.8 m).
      3. Height: 8 feet (2.4 m).
      4. Wire Breaking Load: Minimum 75,000 PSI (517.1 MPa).
      5. Weld Shear Strength: Minimum 1,050 pounds (476.3 kg).
    1. Posts:
       1. Galvanized steel tube, ASTM A513 or ASTM A787, G60 coating class, 3 x 3 inches (76 x 76 mm), 11 gauge.
       2. Length: To suit panel height and post mounting method.
       3. Post caps: Ultraviolet-protected plastic, sized to post dimensions, friction fit.
       4. Post bases: Not applicable.
       5. Extension Arms: Same material and size as posts, welded to post tops at 45 degree angle, for attachment of:

\*\* NOTE TO SPECIFIER \*\* Delete attachment option not required.

* + - * 1. Barbed wire using clips and machine bolts.
        2. Fence panels using post brackets.
    1. Post Brackets:
       1. Galvanized steel and powder coated, sized to post dimensions, with a 1-1/4 inch galvanized nut and bolt.
    2. Gates: Custom-designed and built according to construction documents. Includes hardware.
       1. Basis of Design: Contempo Gates, as manufactured by Designmaster.

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

* 1. MEDIUM SECURITY STEEL FENCE (CLASSIC)
     1. Basis of Design: Classic, as manufactured by Designmaster.
     2. Fence Panels:
        1. Resistance welded steel wire mesh, ASTM A185/A185M, 6 gauge Class 1 galvanized steel wire per ASTM A641/A641M, 2 x 6 inch (51 x 152 mm) mesh, stiffened with horizontal V-shaped braces.

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

* + - 1. Height: 2 feet (0.6 m).
      2. Height: 4 feet (1.2 m).
      3. Height: 5 feet (1.5 m).
      4. Height: 6 feet (1.8 m).
      5. Height: 8 feet (2.4 m).
      6. Wire Breaking Load: Minimum 80,000 PSI (551.6 MPa).
      7. Weld Shear Strength: Minimum 1,050 pounds (476.3 kg).
    1. Posts:
       1. Galvanized steel tube, ASTM A513 or ASTM A787, G60 coating class.

\*\* NOTE TO SPECIFIER \*\* Delete Dimensions option not required.

* + - 1. Dimensions: 2-1/4 x 2-1/4 inches (57 x 57 mm) inches, 16 gauge (except 12 gauge for posts supporting extension arms).
      2. Dimensions: 3 x 3 (76 x 76 mm) inches, 11 gauge.
      3. Length: To suit panel height and post mounting method.
      4. Post caps: Ultraviolet-protected plastic, sized to post dimensions, friction fit.
      5. Post bases: Steel plate bolted to bottom of posts, with four plated steel anchor bolts per base.
      6. Extension Arms: Same material and size as posts, welded to post tops at 45 degree angle, for attachment of:

\*\* NOTE TO SPECIFIER \*\* Delete attachment option not required.

* + - * 1. Barbed wire using clips and machine bolts.
        2. Fence panels using post brackets.
    1. Post Brackets:
       1. Galvanized steel and powder coated, sized to post dimensions, with a 1-1/4 inch (32 mm) galvanized nut and bolt.
    2. Gates: Custom-designed and built according to construction documents. Includes hardware.
       1. Basis of Design: Classic Gates, as manufactured by Designmaster.

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

* 1. MEDIUM SECURITY STEEL FENCE (MILAN)
     1. Basis of Design: Milan, as manufactured by Designmaster.
     2. Fence Panels:
        1. Resistance welded steel wire mesh, ASTM A185/A185M, double 1 gauge horizontal with 4 gauge filler, Class 1 galvanized steel wire per ASTM A641/A641M, continuous ornamental wire.

\*\* NOTE TO SPECIFIER \*\* Delete height option not required.

* + - 1. Height: 63 inches (1600 mm).
      2. Height: 83 inches (2108 mm).
      3. Wire Breaking Load: Minimum 55,000 psi (379.2 MPa).
      4. Weld Shear Strength: Minimum 1,050 lbs (476.3 kg).
    1. Posts:
       1. Extruded Aluminum Tube, ASTM A513 or ASTM A787, custom-designed for the panel.
       2. Length: To suit panel height and post mounting method.
       3. Post caps: Ultraviolet-protected plastic, sized to post dimensions, friction fit.
       4. Post bases: Not applicable.
       5. Extension arms: Not applicable for this design.
    2. Post Brackets:
       1. Galvanized steel and powder coated, sized to post dimensions.
    3. Gates: Custom-designed and built according to construction documents. Includes hardware.
       1. Basis of Design: Milan Gates, as manufactured by Designmaster.

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

* 1. STANDARD SECURITY STEEL FENCE (FLORENCE)
     1. Basis of Design: Florence, as manufactured by Designmaster.
     2. Fence Panels:
        1. Resistance welded steel wire mesh, ASTM A185/A185M, double 1 gauge horizontal with 4 gauge filler, Class 1 galvanized steel wire per ASTM A641/A641M, continuous ornamental wire.

\*\* NOTE TO SPECIFIER \*\* Delete height option not required.

* + - 1. Height: 31.5 inches (800 mm).
      2. Height: 48 inches (1219 mm).
      3. Wire Breaking Load: Minimum 55,000 psi (379.2 MPa).
      4. Weld Shear Strength: Minimum 1,050 lbs (476.3 kg).
    1. Posts:
       1. Extruded Aluminum Tube, ASTM A513 or ASTM A787, custom-designed for the panel.
       2. Length: To suit panel height and post mounting method.
       3. Post caps: Ultraviolet-protected plastic, sized to post dimensions, friction fit.
       4. Post bases: Aluminum plate bolted to bottom of posts, with four plated steel anchor bolts per base.
       5. Extension arms: Not applicable for this design.
    2. Post Brackets:
       1. Galvanized steel and powder coated, sized to post dimensions.
    3. Gates: Custom-designed and built according to construction documents. Includes hardware.
       1. Basis of Design: Florence Gates, as manufactured by Designmaster.

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

* 1. CROWD CONTROL BARRIERS
     1. Basis of Design: Crowd Control Barriers, as manufactured by Designmaster.
        1. Height: 48 inches (1219 mm).
        2. Length: 79 inches (2007 mm).
        3. Openings: 2 x 8 inches (51 x 203 mm).
        4. Gauge: 6 cal. (4.89 mm).
        5. Horizontal Lines: 6 per panel.
        6. Vertical Lines: 37 per panel.
        7. Pipe Diameter: 1.5 inch (3.8 cm).
  2. ACCESSORIES
     1. Concrete: Comply with ASTM C94, local building codes, and Division 03 Concrete section as applicable.
  3. FINISHES
     1. Fence Panels, Posts, and Gates:
        1. Polyester powder coated to approximately 4 mils thickness, free of both Triglycidyl Isocyanurate (TGIC) and Volatile Organic Compounds.

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

* + - 1. Color: Black, RAL 9004.
      2. Color: White, RAL 9010.
      3. Color: Green, RAL 6005.
      4. Color: Brown, RAL 7006.
      5. Color: Gray, RAL 7037.
      6. Color: Blue, RAL 5003.
      7. Color: Red, RAL 3002.
      8. Color: Yellow, RAL 1028.
      9. Salt Spray Resistance: No rusting or blistering tested to ASTM B117 for 1000 hours.
      10. Adhesion: Tested to ASTM D3359, Method B.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until field conditions have been properly constructed.
      2. Notify Architect in writing of unsatisfactory conditions before proceeding.
   2. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.

\*\* NOTE TO SPECIFIER \*\* Retain installation types below as needed.

* + 1. In-Ground Installation:
       1. Drill post holes into undisturbed or compacted soil in accordance with local building codes.
       2. Set posts with bottom hole in accordance with local building codes.
       3. Place concrete around posts in accordance with local building codes.
       4. Pour top of footings in accordance with local building codes.
    2. Anchored Installation:
       1. Install fencing in accordance with manufacturer's instructions and approved Shop Drawings.
       2. Locate and drill holes for post bases.
       3. Secure each post with four anchor bolts.
    3. Installation Tolerances:

\*\* NOTE TO SPECIFIER \*\* Revise tolerances below if needed.

* + - 1. Maximum Variation from Plumb: 1/4 inch in 10 feet (2 mm in 1 m).
      2. Maximum Offset from True Position: 1 inch (25 mm).
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturers recommendations.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION