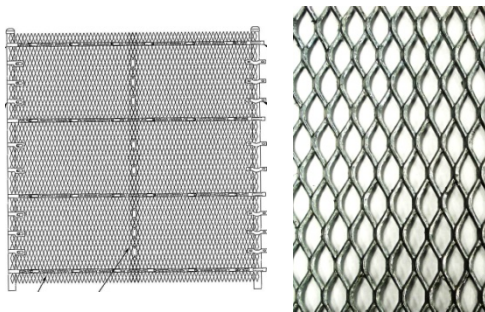


## DIAMOND FENCE SYSTEM

1/2" #13 STD EXPANDED METAL

12FT HIGH - 4 RAIL – 7'9" ON CENTER



### PART 1 GENERAL

#### 1.01 SCOPE OF WORK

Supply and install expanded metal fencing system using manufacturers' recommended method as specified.

#### 1.02 SYSTEM DESCRIPTION

System will include high security expanded metal mesh panels and fittings as manufactured by Niles Fence and Security.

#### 1.03 REFERENCES

All components shall meet or exceed the following the standards:

ASTM A123 Standard Specification for Zinc Coatings on Iron and Steel Products

ASTM F900 Specification for Industrial and Commercial Gates

ASTM F1267 Standard Specification for Metal, Expanded Steel

ASTM F2548-06 Standard Specification for Expanded Metal Fence systems for Security Purposes

ASTM F2780 Standard Specification Guide for Design and Construction of Expanded Metal Security Fences

ASTM F1083-06 Standard Specification for Pipe, Steel, Hot-Dipped Zinc Coated (Galvanized) Welded for Fence Structures.

#### 1.04 SUBMITTALS

Manufacturers' product data sheets including details and drawings. Provide plan, post spacing, sizing and finish to depict proper design considerations with contract drawings.

#### 1.05 QUALITY ASSURANCE

Contractor shall provide installers experienced with the installation of expanded metal fencing.

#### 1.06 DELIVERY, STORAGE AND HANDLING

Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURER

Niles Fence and Security, 310 N. Pleasant Ave., Niles, Ohio 44446. Telephone: 800-321-7464 Fax: 330-299-0329

Website: [www.NilesFence.com](http://www.NilesFence.com)

### 2.02 MATERIALS

A. SECURITY MESH - The expanded metal security mesh shall conform to the following:

1. Type – 1/2" #13 STD.
2. Panel Size (width) - 48" to 72"
3. Panel Size (height) – 72" to 144"
4. Strand Width – 0.096 "
5. Strand Thickness – 0.090"
6. SWD – 0.50"
7. LWD – 1.2"
8. Percent open area – 57%
9. Galvanized weight per sq. foot – 1.74 lbs.

B. SECURITY FITTINGS – The Securex expanded metal panels shall be installed using Diamond rail security fittings sized to framework specific to project.

1. Diamond Bands and Band Sets – 11ga with slotted hole
2. Diamond C-Clamps – 11ga with 2 slotted holes
3. Diamond Clamp Bars – 11ga with 2 slotted holes
4. Diamond Latch Clamps – 11ga with slotted hole
5. Diamond End Tensioners – 11ga with slotted hole

Diamond fittings use 5/16" x 2" break away nuts and bolts.

#### C. SECURITY FRAMEWORK

All terminal posts, and line posts shall be Schedule 40 or SS40 pipe conforming to ASTM F1083-06. Rails shall be Diamond style: 1-5/8 inch x 13/16 inch x 14ga with slotted holes. Line posts shall be set per contract drawings or by manufacturer recommendation. Posts shall have a pressed steel dome cap. Rails shall be secured with bands or band sets. All framework fittings shall conform to ASTM F626 and shall be a minimum of 14ga pressed steel.

#### D. FINISH

Finish shall be either: Hot Dip Galvanized meeting ASTM A123 or powder coated per manufacturers' Securex Plus finish on security panels.

### PART 3 EXECUTION

#### 3.01 INSTALLATION

All installations shall be laid out by contractor in accordance with construction plans. Install posts plumb and rails level. Post spacing shall allow for two expanded metal panels per section and shall vary based on height, topography and wind load requirements. Expanded metal mesh panels shall overlap three diamonds or three inches and be secured to Diamond rails with latch clamps. Expanded metal mesh panels shall fit flush to all terminal posts and be attached with Diamond Bands and Tensioners. Expanded metal mesh shall be attached at line posts with Diamond C-Clamps. If required, gates shall be of welded construction and designed per ASTM F900.



**NILES FENCE & SECURITY  
PRODUCTS, LLC.**