

ALL NOISE CONTROL SPECIALTY PRODUCTS

STEEL ACOUSTICAL WINDOWS TECHNICAL SPECIFICATIONS

NOTE **All Noise Control Specialty Products also manufactures bullet-resistant, blast-resistant, radio frequency shielding, thermal shielding and stainless steel doors, frames and windows.

PART 1 GENERAL

NOTE **Delete items in paragraphs below, that are not required for project.

1.1 SECTION INCLUDES

Noise Control view windows

1.2 RELATED SECTIONS

- A. Section 08800 - Glazing.
- B. Section 09900 - Paints and Coatings.

1.3 REFERENCES

- B. ASTM A 366 - Standard Specification for Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.
- B. ASTM A 569 - Standard Specification for Steel, Carbon, (0.15 Maximum Percent), Hot-Rolled Sheet and Strip, Commercial Quality.
- C. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- D. ASTM B 117 - Standard Method of Salt Spray (Fog) Testing.
- E. ASTM D 1735 - Standard Practice for Testing Water Resistance of Coating Using Water Fog Apparatus.
- F. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne-Sound Transmission Loss of Building Partitions.
- G. ASTM E 336 - Standard Test Method for Measurement of Airborne Sound Insulation in Buildings.

H. ASTM E 413 - Classification for Determination of Sound Transmission Class.

1.4 SYSTEM DESCRIPTION

- A. Design requirements: Acoustical window assemblies to include frames, glass and the gasketing system required to achieve specified performance requirements.
- B. Performance requirements: Sound Transmission Coefficient rating of STC _____ for installed assembly, when tested as operable door assembly in accordance with ASTM E 90 and ASTM E 413.

1.5 SUBMITTALS

- A. Submittal under provisions of Section 01300.
- B. Product data: Indicate window materials and construction.
- C. Shop drawings: Indicate window opening criteria, elevations, sizes, type; identify and detail cutouts.
- D. Quality assurance submittals:
 - 1. Test Reports:

Certified laboratory reports, performed in accordance with ASTM E 90 and ASTM E 413, from independent testing laboratory qualified under the National Voluntary Laboratory Accreditation Program (NVLAP) supporting compliance of assemblies to specified requirements.
 - 2. Certificates:
 - a) Contractor's certification that:
 - (1) Products of this section, as provided, meet or exceed specified requirements.
 - (1) Manufacturer of products of this section meets specified qualifications.
 - 3. Manufacturer's instructions: Printed installation instructions for each component.
- E. Closeout submittals:
 - 1. Warranty documents, executed by manufacturer in Owner's name.
 - 2. Operation and maintenance data for assembly components.

3. Certified statement of manufacturer's authorized representative, as specified in FIELD QUALITY CONTROL Article of PART 3 of this section.
4. Certified test reports of independent testing agency, as specified in FIELD QUALITY CONTROL Article of PART 3 of this section.

1.6 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: Minimum five (5) years documented experience producing systems specified in this section.
2. Installer: Minimum five (5) years documented experience producing systems specified in this section, and approved by manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store frames in accordance with requirements of HMM A 840.
- B. Remove wraps or covers from frames upon delivery at the building site; clean and touch-up scratches or disfigurement caused by shipping or handling promptly with rust inhibitive primer.
- C. Store windows on planks or dunnage in a dry location; store in a vertical position spaced by blocking.
- D. Store units covered to protect them from damage, but permitting air circulation.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. All Noise Control Steel Products, 4880 Gregg Road, Pico Rivera CA 90660; Telephone 562-695-0645, FAX 562-692-0146.
- B. Unless otherwise specified for an individual product or material, supply all products specified in this section from the same manufacturer.

2.2 MATERIALS

- A. Steel sheet: One of the following:
 1. Cold-rolled steel sheet conforming to ASTM A 366, commercial quality.
 2. Hot-rolled steel sheet conforming to ASTM A 569, pickled and oiled, commercial quality.

- B. Galvanized steel sheet: ASTM A 653/A 653M, commercial quality, minimum G 60 zinc coating.
- C. Acoustical material: Manufacturer's standard for required STC rating.
- D. Primer: Meeting ASTM B 117 salt spray for 150 hours, and ASTM D 1735 water fog test for organic coatings for 200 hours.
- E. Glazing: to match glazing as specified in Section 08800.

2.3 COMPONENTS

- A. Frames: Fabricate in accordance with Architect-approved shop drawings, and as follows:
 - 1. Frames for interior use: Fabricate from steel sheet, minimum 14 gage thickness.
 - 2. Frames for exterior use: Fabricate from galvanized steel sheet, minimum 14 gage thickness.
 - 3. Form frame members straight, and of uniform profile through lengths, as welded units with integral trim, of sizes and profiles indicated.
 - a) Weld contact edges of joints closed tight.
 - b) Interpenetrate trim faces and weld continuously.
 - 4. Stops:
 - a) Where integral stops are indicated, form minimum 5/8 inch in depth.
 - b) Butt stop joints.
 - 5. When shipping limitations so dictate, fabricate frames for large openings in sections designed for assembly in the field; install alignment plates or angles, of same material and gage as frame, at each joint.
 - 6. Jamb anchors:
 - a) Fabricate of same material as frame material; weld anchors inside each jamb for wall anchorage.
 - b) Provide anchor types for indicated adjacent wall construction:
 - (1) Frames for installation in masonry walls: Adjustable jamb anchors, 16 gage, T-shape type.
 - (2) Frames for installation in stud partitions: Horizontal 16 gage steel "zee" sections to attach metal studs, welded inside each jamb.
 - 7. Plaster guards: Fabricate from minimum 22 gage steel; weld in place at hardware mortises on frames to be set in plaster, masonry, or concrete openings.

B. Glass and Glazing

- 1. Clear Laminated Acoustical glass shall be furnished in the thickness required to meet the STC ratings. The manufacturer will supply the materials.

2. For fire rated assemblies, clear fire glass shall be furnished in the thickness required to meet the fire ratings. The manufacturer will supply the materials.
3. The area between the two pieces of glass shall be finished with a minimum of 1" thick acoustical desiccant, applied to the frame by a perforated metal case. This will be furnished to fit.

2.4 FINISHES

A. Shop priming for window frames:

1. After fabrication, fill and sand tool marks and surface blemishes on both faces and both vertical edges smooth and free from irregularities.
2. Treat for paint adhesion, then apply primer to all accessible surfaces; allow curing prior to shipment.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verification of conditions:

1. Prior to installation, check and correct frames for size, squareness, alignment, twist and plumb.
2. Verify openings are in accordance with approved shop drawings.

B. Installer's examination:

1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
2. Transmit two copies of installer's report to Architect within 24 hours of receipt.
3. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.
4. Beginning construction activities of this section indicates installer's acceptance of conditions.

3.2 INSTALLATION

A. Install units in accordance with approved shop drawings and manufacturer's printed installation instructions; in addition, install steel components in accordance with HMM A 840.

B. Oversize assemblies:

1. Weld field joints in accordance with AWS D1.1 and approved shop drawings.

- 2. Finish exposed field welds smooth; touch-up with rust inhibitive primer.
- C. Fill voids between concealed side of frame and adjacent wall construction with dense fiberglass or lightweight gypsum plaster in accordance with approved shop drawings or manufacturer's printed installation instructions.
- D. Finish surfaces having abrasion damage smooth; touch-up with rust inhibitive primer.
- E. Install glass & gasketing systems in accordance with manufacturer's printed instructions.
- F. Field painting is specified in Section 09900.

3.3 FIELD QUALITY CONTROL

- A. Engage and pay for the services of independent testing agency to:
 - 1. Test door and frame assemblies selected by Owner or Architect in accordance with ASTM E 336.
 - 2. Issue certified report documenting compliance of installed door and frame assemblies to specified acoustical performance requirements.
- B. Notify Architect a minimum of four (4) calendar days prior to scheduled testing dates.

END OF SECTION