SECTION 08 36 13

SECTIONAL DOORS

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\*\* NOTE TO SPECIFIER \*\* Haas Door Co.; Commercial and residential garage doors.  
This section is based on the products of Haas Door Co., which is located at:320 Sycamore St.Wauseon, OH 43567Tel: 419-337-9900Fax: 800-874-4227Email:  [specs@haasdoor.com](mailto:specs@haasdoor.com?subject=RE:%20Spec%20Question%20(08360haa):%20)  
Web: <https://www.haasdoor.com>   
  
 [ [Click Here](https://arcat.com/company/haas-door-co-32915) ] for additional information.  
  
Haas Door, manufacturers of commercial and residential insulated and non-insulated steel & aluminum sectional doors, is a family owned and operated company in Wauseon, Ohio. Most of our doors are available in 16 colors and 10 panels with thicknesses from 1-3/8 (35 mm) to 3 inch (76 mm). Hand crafted carriage house style or aluminum glass doors are also available. As a member of the Door and Access Systems Manufacturers Association (DASMA), Haas Door is committed to industry standards for quality and safety.  
Haas Door Company manufactures all garage doors in the U.S. and is committed to providing quality products that are safe for our customers and to the environment. Haas garage doors are made from steel that contains 80% recycled material. A plastic thermal break, made with recycled materials, separates each door section to eliminate metal-to-metal contact and the transfer of temperature. Haas also uses environmentally compliant polyurethane insulation, which results in some of the most energy-efficient doors on the market.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Sectional doors of the following types:
       1. Full view aluminum garage doors. (RA-360)
       2. Commercial aluminum garage doors. (CA-315/CA-320/CA-110)
       3. Insulated aluminum sectional doors. (CHT-5800) (CHT-5200) (CHT-5700)
       4. Insulated steel sectional doors. (CHT-800) (CHT-2000) (CHT-700) (CHT-600)
       5. Commercial ribbed steel garage doors. (C2000) (C2400) (C2500)
       6. Steel garage stamped panel pan doors. (2400/2500)
       7. Overlay carriage house garage doors. (American Tradition 9000 Series)
  1. RELATED SECTIONS

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

* + 1. Section 05 50 00 - Metal Fabrications.
    2. Section 08 71 00 - Door Hardware.
    3. Section 09 90 00 - Painting and Coating.
    4. Section 11 12 26.13 - Parking Fee Coin Collection Equipment.
    5. Section 26 05 00 - Common Work Results for Electrical.
  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 A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
    2. American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
       1. ASHRAE Standard 90.1
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings:
        1. Provide drawings indicating track details, head and jamb conditions, spring shafts, anchorage, accessories, finish colors, patterns and textures, operator mounts and other related information.
        2. Indicate door designs, configurations, window designs and glass lite materials.
        3. Regulatory Requirements and Approvals: Provide shop drawings in compliance with local Authority Having Jurisdiction (AHJ).

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Verification Samples: Color chip representing color selected.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 years experience manufacturing similar products.
     2. Installer Qualifications: Minimum 2 years experience installing similar products.
  2. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
  3. DELIVERY, STORAGE, AND HANDLING
     1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
     2. Handling: Handle materials to avoid damage.
  4. 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.
  5. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
  6. WARRANTY

\*\* NOTE TO SPECIFIER \*\* Delete warranty not required.

Residential Warranty Only: RA-360.

Commercial Warranty Only: CA-315, CA-320, CA-110, CHT-5800, CHT-800, C2000.

Residential or Commercial Warranty Dependent on Application: CHT-5200, CHT-5700, CHT-2000, CHT-700, CHT-600, 2400, 2500, 9000 - American Tradition.

* + 1. Residential Warranty: Provide manufacturer's standard limited lifetime warranty.
    2. Commercial Warranty: Provide manufacturer�s standard limited warranty.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Haas Door Co.; 320 Sycamore Street, Wauseon, OH 43567; ASD Tel: (419) 337-9900; Fax: (800) 874-4227; Email: specs@haasdoor.com; Web: http://www.haasdoor.com.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

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

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

* 1. SECTIONAL DOORS
     1. Operation and Construction:
        1. Doors are built to meet or exceed standards established by ANSI/DASMA 102-2011.

\*\* NOTE TO SPECIFIER \*\* Select one type of operation. Delete type not required.

* + - 1. Operation: Manual operation.

\*\* NOTE TO SPECIFIER \*\* Delete if chain hoist not required.

* + - * 1. Chain hoist.
      1. Operation: Motor operated.

\*\* NOTE TO SPECIFIER \*\* Select one operator type. Delete type not required.

* + - * 1. Operator Type: Trolley operator.
        2. Operator Type: Jackshaft operator.

\*\* NOTE TO SPECIFIER \*\* Select one voltage. Delete voltage types not required.

* + - * 1. Power Supply: 120 volts.
        2. Power Supply: 208/240 volts.
        3. Power Supply: 480 volts.

\*\* NOTE TO SPECIFIER \*\* Select one control. Delete types not required.

* + - * 1. Control Accessory: 24 volt 2-button station (open/close).
        2. Control Accessory: 24 volt 3-button station (open/close/stop).
        3. Control Accessory: 24 volt key switch.
      1. Track:
         1. Material: Hot-dipped galvanized steel (ASTM A-653).

\*\* NOTE TO SPECIFIER \*\* Select one track configuration. Delete types not required.

* + - * 1. Configuration Type: Standard lift.
        2. Configuration Type: Low headroom.
        3. Configuration Type: Vertical lift.
        4. Configuration Type: High lift.
        5. Configuration Type: Follow roof pitch.

\*\* NOTE TO SPECIFIER \*\* Select one track size. Some restrictions apply based on Configuration Type, Door Size and Weight. Delete type not required.

* + - * 1. Size: 2 inches (51 mm), track rollers consistent with track size, with hardened steel ball bearings.
        2. Size: 3 inches (76 mm), track rollers consistent with track size, with hardened steel ball bearings.
      1. Counterbalance System: Provided with aircraft-type, galvanized steel lifting cables with minimum safety factor of 6. Torsion Springs consisting of heavy-duty oil-tempered wire torsion springs on a continuous ball-bearing cross-header shaft.

\*\* NOTE TO SPECIFIER \*\* Select one cycle life. Delete types not required.

* + - * 1. Spring Cycle Life: 10,000 cycles.
        2. Spring Cycle Life: 25,000 cycles.
        3. Spring Cycle Life: 50,000 cycles.
        4. Spring Cycle Life: 75,000 cycles.
        5. Spring Cycle Life: 100,000 cycles.
      1. Hardware:
         1. Hinges and Brackets: Hot-dipped galvanized steel, 14 gauge minimum. Double end hinges are supplied on doors 18 feet (5486 mm) and wider.

\*\* NOTE TO SPECIFIER \*\* Select one lock device. Door may be provided with exterior or interior locking device. Delete type not required.

* + - * 1. Lock Device: Exterior key lock with five-pin tumbler cylinder, night latch and steel bar engaging track.
        2. Lock Device: Interior slide bar lock to be spring loaded, mounted on end stile and shall engage slot in track.
      1. Weatherstripping:

\*\* NOTE TO SPECIFIER \*\* Delete seal not required.

* + - * 1. Perimeter Seal: Flexible perimeter seal for jambs and header.
        2. Bottom Seal: Full length vinyl astragal retainer. Weather strip to be "U" shaped flexible extruded vinyl.

\*\* NOTE TO SPECIFIER \*\* Available in a wide range of design pressures for wind loading requirements. Refer to manufacturer. Insert wind pressure requirements

* + - 1. Wind Loading: +\_\_\_\_ /-\_\_\_\_ psf Design Pressure.
         1. Wind Load Test Pressure: 1.5 times the Design Pressure.

\*\* NOTE TO SPECIFIER \*\* Take your home to a new level of sophistication with a Residential Aluminum 360 Series garage door from Haas Door. Each door is handcrafted and will add a smooth, contemporary look to any home. The rails are manufactured with rust and corrosion free commercial grade aluminum. Each 360 Series door is built with tongue and groove joint with a bulb seal to ensure beauty, performance. Delete if not required.

* + 1. Full View Aluminum Garage Door - RA-360 Series as manufactured by Haas Door Co.
       1. Garage Door - General:
          1. Application: Residential.
          2. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts. Horizontal meeting rails shall have tongue and groove joints. Bottom rails, top rails and end stiles are 6 inches (152 mm).Center stiles are 2 inches (51 mm). Meeting rails are 4 inches (102 mm).

Doors are built to meet or exceed standards established by ANSI/DASMA 102.

* + - * 1. Panels:

Section height as indicated.

Glazing and solid panels as selected shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

* + - * 1. End Stile: 6 inch (152 mm).
        2. Bottom Rail: 6 inch (152 mm).
        3. Top Rail: 6 inch (152 mm).

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in rails and stiles is not required.

* + - * 1. Insulation in Rails and Stiles: Polystyrene.

\*\* NOTE TO SPECIFIER \*\* Select one color. Delete colors not required.

* + - 1. Color: Clear Anodized.
      2. Color: Dark Bronze Anodized.
      3. Color: Black Anodized.
      4. Color: Polar White.
      5. Color: Almond.
      6. Color: Painted Black.
      7. Color: Painted Bronze.
      8. Color: Brown.
      9. Color: Charcoal.
      10. Color: Gray.
      11. Color: Sandstone.
      12. Powder Coated Woodgrain: National Oak.
      13. Powder Coated Woodgrain: European Cherry.
      14. Powder Coated Woodgrain: Coffee.
      15. Powder Coated Woodgrain: National Cherry.
      16. Powder Coated Woodgrain: Black Walnut.
      17. Powder Coated Woodgrain: Cherry with Flame.
      18. Powder Coated Woodgrain: Antique Cherry.
      19. Powder Coated Woodgrain: Oregon Douglas.
      20. Powder Coated Woodgrain: Knotty Pine.
      21. Powder Coated Woodgrain: Colony Maple.
      22. Powder Coated Woodgrain: Heritage Maple.
      23. Powder Coated Woodgrain: Spiced Walnut.
      24. Powder Coated Woodgrain: American Douglas.

\*\* NOTE TO SPECIFIER \*\* Glass panels are an option. Delete if not required.

* + - 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one type of glass. Delete types not required.

* + - * 1. Glass: 1/8 Inch (3 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

* + - * 1. Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

* + - * 1. Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

\*\* NOTE TO SPECIFIER \*\* Solid panels are an option. Delete if not required.

* + - 1. Solid Panels:
         1. Panel: 0.050 Inch (1.25 mm) smooth aluminum panel.

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in panel is not required.

* + - * 1. Insulation in Panel: Laminated polystyrene.

\*\* NOTE TO SPECIFIER \*\* Haas Door Commercial aluminum features a clean, sophisticated straight line look that is not only architecturally pleasing but will further enhance the elegance of your project. The CA-320 heavy-duty model has a larger center stile and provides the most flexibility with the largest door sizes available, the most color/wood grain finishes, and the most accessory options. Delete if not required.

* + 1. Commercial Aluminum Garage Doors - CA-320 Heavy Duty Frame as manufactured by Haas Door Co.
       1. Garage Door - General:
          1. Application: Commercial.
          2. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts. Horizontal meeting rails shall have tongue and groove joints. Center stiles are 2 inches (51 mm). Meeting rails are 4 inches (102 mm).

Doors are built to meet or exceed standards established by ANSI/DASMA 102.

* + - * 1. Panels:

Section height as indicated.

Glazing and solid panels as selected shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Select one size of end stile. Delete types not required.

* + - * 1. End Stile:

4 inch (102 mm).

6 inch (152 mm).

\*\* NOTE TO SPECIFIER \*\* Select one size of bottom rail. Delete types not required.

* + - * 1. Bottom Rail:

4 inch (102 mm).

6 inch (152 mm).

\*\* NOTE TO SPECIFIER \*\* Select one size of top rail. Delete types not required.

* + - * 1. Top Rail:

4 inch (102 mm).

6 inch (152 mm).

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in rails and stiles is not required.

* + - * 1. Insulation in Rails and Stiles: Polystyrene.

\*\* NOTE TO SPECIFIER \*\* Select one color. Delete colors not required.

* + - 1. Color: Clear Anodized.
      2. Color: Dark Bronze Anodized.
      3. Color: Black Anodized.
      4. Color: Polar White.
      5. Color: Almond.
      6. Color: Painted Black.
      7. Color: Painted Bronze.
      8. Color: Brown.
      9. Color: Charcoal.
      10. Color: Gray.
      11. Color: Sandstone.
      12. Powder Coated Woodgrain: National Oak.
      13. Powder Coated Woodgrain: European Cherry.
      14. Powder Coated Woodgrain: Coffee.
      15. Powder Coated Woodgrain: National Cherry.
      16. Powder Coated Woodgrain: Black Walnut.
      17. Powder Coated Woodgrain: Cherry with Flame.
      18. Powder Coated Woodgrain: Antique Cherry.
      19. Powder Coated Woodgrain: Oregon Douglas.
      20. Powder Coated Woodgrain: Knotty Pine.
      21. Powder Coated Woodgrain: Colony Maple.
      22. Powder Coated Woodgrain: Heritage Maple.
      23. Powder Coated Woodgrain: Spiced Walnut.
      24. Powder Coated Woodgrain: American Douglas.

\*\* NOTE TO SPECIFIER \*\* Glass panels are an option. Delete if not required.

* + - 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. Delete types not required.

* + - * 1. Glass: 1/8 Inch (3 mm):

Clear DBS/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

* + - * 1. Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

* + - * 1. Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

\*\* NOTE TO SPECIFIER \*\* Solid panels are an option. Delete if not required.

* + - 1. Solid Panels:

\*\* NOTE TO SPECIFIER \*\* Select one type of panel. Delete type not required.

* + - * 1. Panel: 0.040 Inch (1 mm) stucco embossed aluminum panel.
        2. Panel: 0.050 Inch (1.25 mm) smooth aluminum panel.

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in panel is not required.

* + - * 1. Insulation in Panel: Laminated polystyrene.

\*\* NOTE TO SPECIFIER \*\* Add a modern contemporary look. The CA-315 model has a heavy-duty frame, but with a smaller center stile to give the look of more glass, but with expanded color choices and larger sizes. Standard tongue and groove section joints with bulb seal adds performance. Delete if not required.

* + 1. Commercial Aluminum Garage Doors - CA-315 Heavy Duty Frame as manufactured by Haas Door Co.
       1. Garage Door - General:
          1. Application: Commercial.
          2. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts. Horizontal meeting rails shall have tongue and groove joints. Center stiles are 1 inches (25 mm). Meeting rails are 4 inches (102 mm).

Doors are built to meet or exceed standards established by ANSI/DASMA 102.

* + - * 1. Panels:

Section height as indicated.

Glazing and solid panels as selected shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Select one size of end stile. Delete types not required.

* + - * 1. End Stile:

4 inch (102 mm).

6 inch (152 mm).

\*\* NOTE TO SPECIFIER \*\* Select one size of bottom rail. Delete types not required.

* + - * 1. Bottom Rail:

4 inch (102 mm).

6 inch (152 mm).

\*\* NOTE TO SPECIFIER \*\* Select one size of top rail. Delete types not required.

* + - * 1. Top Rail:

4 inch (102 mm).

6 inch (152 mm).

\*\* NOTE TO SPECIFIER \*\* Select one color. Delete colors not required.

* + - 1. Color: Clear Anodized.
      2. Color: Dark Bronze Anodized.
      3. Color: Black Anodized.
      4. Color: Polar White.
      5. Color: Almond.
      6. Color: Painted Black.
      7. Color: Painted Bronze.
      8. Color: Brown.
      9. Color: Charcoal.
      10. Color: Gray.
      11. Color: Sandstone.

\*\* NOTE TO SPECIFIER \*\* Glass panels are an option. Delete if not required.

* + - 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. Delete types not required.

* + - * 1. Glass: 1/8 Inch (3 mm):

Clear DBS/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

* + - * 1. Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

* + - * 1. Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

\*\* NOTE TO SPECIFIER \*\* Solid panels are an option. Delete if not required.

* + - 1. Solid Panels:

\*\* NOTE TO SPECIFIER \*\* Select one type of panel. Delete type not required.

* + - * 1. Panel: 0.040 Inch (1 mm) stucco embossed aluminum panel.
        2. Panel: 0.050 Inch (1.25 mm) smooth aluminum panel.

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in panel is not required.

* + - * 1. Insulation in Panel: Laminated polystyrene.

\*\* NOTE TO SPECIFIER \*\* Haas Door Commercial Aluminum series offers a modern, contemporary, clean line look to any project. The CA-110 is a narrow line, lighter weight door due to the smaller rail profile that gives the clean look of mostly glass with four rail color options. Delete if not required.

* + 1. Commercial Aluminum Garage Doors - CA-110 Narrow Line Frame as manufactured by Haas Door Co.
       1. Garage Door - General:
          1. Application: Commercial.
          2. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts. Horizontal meeting rails shall have rabbeted overlap joints. Center stiles are 1 inches (25 mm). Meeting rails are 2 inches (51 mm).

Doors are built to meet or exceed standards established by ANSI/DASMA 102.

* + - * 1. Panels:

Section height as indicated.

Glazing and solid panels as selected shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Select one size of end stile. Delete types not required.

* + - * 1. End Stile:

3 inch (76 mm)

4 inch (102 mm)

6 inch (152 mm)

\*\* NOTE TO SPECIFIER \*\* Select one size of bottom rail. Delete types not required.

* + - * 1. Bottom Rail:

3 inch (76 mm)

4 inch (102 mm)

6 inch (152 mm)

\*\* NOTE TO SPECIFIER \*\* Select one size of top rail. Delete types not required.

* + - * 1. Top Rail:

3 inch (76 mm)

4 inch (102 mm)

6 inch (152 mm)

\*\* NOTE TO SPECIFIER \*\* Select one color. Delete colors not required.

* + - 1. Color: Clear Anodized.
      2. Color: Dark Bronze Anodized.
      3. Color: Black Anodized.
      4. Color: Polar White.

\*\* NOTE TO SPECIFIER \*\* Glass panels are an option. Delete if not required.

* + - 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. Delete types not required.

* + - * 1. Glass: 1/8 Inch (3 mm):

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

* + - * 1. Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

* + - * 1. Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

\*\* NOTE TO SPECIFIER \*\* Solid panels are an option. Delete if not required.

* + - 1. Solid Panels:

\*\* NOTE TO SPECIFIER \*\* Select one type of panel. Delete type not required.

* + - * 1. Panel: 0.040 Inch (1 mm) stucco embossed aluminum panel.
        2. Panel: 0.050 Inch (1.25 mm) smooth aluminum panel.

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in panel is not required.

* + - * 1. Insulation in Panel: Laminated polystyrene.

\*\* NOTE TO SPECIFIER \*\* Haas Door Commercial Insulated Aluminum 5800 Series uses the natural advantages of aluminum and takes it to the next level. Insulated garage doors with 24 gauge, corrosion-resistant aluminum that stands up in harsh weather conditions. Available with wind load and impact options for severe weather prone areas such as high-velocity hurricane zones. Delete if not required.

* + 1. Insulated Aluminum Sectional Door: CHT-5800 Series as manufactured by Haas Door Co.
       1. Application: Commercial.
       2. Construction:
          1. Sections: 3 inches (76 mm) thick roll formed inside and outside, tempered aluminum alloy, insulated with high density polyurethane foam.
          2. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
          3. Material: Tempered aluminum alloy (ASTM B-209).

Gauge: 24 gauge stucco texture exterior and 24 gauge stucco texture interior.

\*\* NOTE TO SPECIFIER \*\* Select one exterior panel design. Delete types not required.

* + - * 1. Exterior Panel Design: Flush.
        2. Exterior Panel Design: V-groove on 3 inch centers.
        3. Exterior Panel Design: Standard Raised Panel with shadow lines.
        4. Exterior Panel Design: Ranch Raised Panel with shadow lines.
        5. Interior Design: V-groove on 3 inch centers.
      1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 25.8, U value = .039.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Performance: Doors to meet the ASHRAE Standard 90.1 specification for wind infiltration, specifically for sectional garage doors described in Addendum O.
      2. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      3. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      4. Intermediate Reinforcing: nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      5. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.
      6. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

\*\* NOTE TO SPECIFIER \*\* Delete safety device if not required

* + - 1. Safety Device: Cam type safety device.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* Delete window design option not required.

* + - * 1. Window Design: 25 x 12 inches (635 x 305 mm) TL windows.
        2. Window Design: 24 x 6 inches TL (610 x 152 mm) windows.
        3. Glazing Type:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. Delete type not required.

Glass: Insulated tempered.

Clear Tempered.

Frosted over Clear Tempered.

\*\* NOTE TO SPECIFIER \*\* Haas Door Commercial Insulated Aluminum 5200 Series uses the natural advantages of aluminum and takes it to the next level. Insulated garage doors with 24 gauge, corrosion-resistant aluminum that stands up in harsh weather conditions. Available with wind load and impact options for severe weather prone areas such as high-velocity hurricane zones. Delete if not required.

* + 1. Insulated Aluminum Sectional Door: CHT-5200 Series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: shall be 2 inches (50.8 mm) thick roll formed inside and outside, tempered aluminum alloy, insulated with high density polyurethane foam.
         2. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
         3. Material: Tempered aluminum alloy (ASTM B-209).

Gauge: 24 gauge stucco texture exterior and 24 gauge stucco texture interior.

\*\* NOTE TO SPECIFIER \*\* Select one exterior panel design. Delete types not required.

* + - * 1. Exterior Panel Design: Flush.
        2. Exterior Panel Design: V-groove on 3 inch (76 mm) centers.
        3. Exterior Panel Design: Standard Raised Panel with shadow lines.
        4. Exterior Panel Design: Ranch Raised Panel with shadow lines.
        5. Interior Design: V-groove on 3 inch (76 mm) centers.
      1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 17.66, U value = .057.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Performance: Doors shall meet the ASHRAE Standard 90.1 specification for wind infiltration, specifically for sectional garage doors described in Addendum O.
      2. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      3. End Stiles:

\*\* NOTE TO SPECIFIER \*\* Select one end stile type. Delete type not required.

* + - * 1. Vinyl End Stiles: Shall be integral rigid vinyl to ensure consistent thermal break and provide protection to the foam along with sealing it from excessive air exposure.
        2. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      1. Intermediate Reinforcing: Nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.
      3. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

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

* + - 1. Safety Device: Cam type safety device.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* Delete window design options not required. Window and glazing options shown are not available for each and every door design in the 5200 series. For more detailed information concerning each model in the 5200 series, see manufacturer website for additional information.

* + - * 1. Window Design: Ranch Series Windows.
        2. Window Design: Standard Series Windows.
        3. Window Design: 25 x 12 inches (635 x 305 mm) TL windows.
        4. Window Design: 24 x 6 inches TL (610 x 152 mm) windows.

\*\* NOTE TO SPECIFIER \*\* Delete glazing type option not required and subsequent options not required.

* + - * 1. Glazing Type: 1/2 Inch (16 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Frosted Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Obscure Pattern 62 over Clear Tempered.

* + - * 1. Glazing Type: 1/4 Inch (6 mm):

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

\*\* NOTE TO SPECIFIER \*\* Delete full vision sections if not required.

* + - 1. Full Vision Sections:
         1. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts.

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in rails and stiles is not required.

* + - * 1. Insulation in Rails and Stiles: Polystyrene.
        2. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Delete glass type options not required and subsequent options not required.

Glass: 1/8 Inch (3 mm):

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

* + - * 1. Glazing: Set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Haas Door Commercial Insulated Aluminum 5700 Series uses the natural advantages of aluminum and takes it to the next level. Insulated garage doors with 24 gauge, corrosion-resistant aluminum that stands up in harsh weather conditions. Available with wind load and impact options for severe weather prone areas such as high-velocity hurricane zones. Delete if not required.

* + 1. Insulated Aluminum Sectional Door: CHT-5700 Series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: Shall be 1-3/4 inches (44.5 mm) thick roll formed inside and outside, tempered aluminum alloy, insulated with high density polyurethane foam.
         2. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
         3. Material: Tempered aluminum alloy (ASTM B-209).

Gauge: 24 gauge stucco texture exterior and 24 gauge stucco texture interior.

\*\* NOTE TO SPECIFIER \*\* Select one exterior panel design. Delete types not required.

* + - * 1. Exterior Panel Design: Flush.
        2. Exterior Panel Design: V-groove on 3 inch (76 mm) centers.
        3. Exterior Panel Design: Standard Raised Panel with shadow lines.
        4. Exterior Panel Design: Ranch Raised Panel with shadow lines.
        5. Interior Design: V-groove on 3 inch centers.
      1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 16.18, U value = .062.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      2. End Stiles:

\*\* NOTE TO SPECIFIER \*\* Select one end stile type. Delete type not required.

* + - * 1. Vinyl End Stiles: Shall be integral rigid vinyl to ensure consistent thermal break and provide protection to the foam along with sealing it from excessive air exposure.
        2. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      1. Intermediate Reinforcing: Nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.
      3. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

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

* + - 1. Safety Device: Cam type safety device.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* Delete window design options not required. Window and glazing options shown are not available for each and every door design in the 5700 series. For more detailed information concerning each model in the 5700 series, see manufacturer website for additional information.

* + - * 1. Window Design: Ranch Series Windows.
        2. Window Design: Standard Series Windows.
        3. Window Design: 25 x 12 inches (635 x 305 mm) TL windows.
        4. Window Design: 24 x 6 inches TL (610 x 152 mm) windows.

\*\* NOTE TO SPECIFIER \*\* Delete glazing types not required and subsequent options not required.

* + - * 1. Glazing Types: 1/8 inch (3 mm):

\*\* NOTE TO SPECIFIER \*\* Clear DSB/Annealed is standard for 1/8 inch (3 mm) in the 5700 model series except for the Carriage House and Ranch models where clear tempered is standard.

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

* + - * 1. Glazing Types: 1/4 Inch (6 mm):

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

* + - * 1. Glazing Types: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

* + - 1. Full Vision Sections:
         1. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts.

\*\* NOTE TO SPECIFIER \*\* Delete if insulation in rails and stiles is not required.

* + - * 1. Insulation in Rails and Stiles: Polystyrene.
        2. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one type. Delete glass types not required.

Glass: 1/8 Inch (3 mm):

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

Glazing: Shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* The Architects' Choice For the Most Demanding Specifications. The outstanding features and benefits of the Haas 800 Series have made it the door of choice among commercial and industrial architects. The 800 series commercial insulated steel doors feature a full 3 inch (76 mm) pressure-injected core of high-density environmentally compliant polyurethane foam insulation, with a calculated R-Value of 25.8 - the highest in the commercial door industry. The 800 series is exceptionally strong and reinforced with roll-formed galvanized steel struts and double-end hinges as required to meet or exceed local wind load specifications. It is the ideal door for locations that require both maximum energy efficiency and durable strength. Delete if not required.

* + 1. Insulated Steel Sectional Door - CHT-800 Series as manufactured by Haas Door Co.
       1. Application: Commercial.
       2. Construction:
          1. Sections: shall be 3 inches (76.2 mm) thick roll formed inside and outside, hot-dipped galvanized steel, insulated with high density polyurethane foam.
          2. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
          3. Material: Hot-dipped galvanized steel (ASTM A-653).

\*\* NOTE TO SPECIFIER \*\* Select one gauge. When panel design is selected, note that 20 gauge steel is available in Flush and V-groove only. Delete types not required.

Gauge: 26 gauge woodgrain texture exterior and 26 gauge woodgrain texture interior.

Gauge: 20 gauge smooth exterior and 26 gauge woodgrain interior.

Gauge: 20 gauge smooth exterior and 20 gauge smooth interior.

* + - * 1. Exterior Panel Design:

\*\* NOTE TO SPECIFIER \*\* Select one exterior panel design. 20 gauge steel available in Flush and V-groove only. Delete types not required.

Exterior Panel Design: Flush.

Exterior Panel Design: V-groove on 3 inch centers.

Exterior Panel Design: Standard Raised Panel with shadow lines.

Exterior Panel Design: Ranch Raised Panel with shadow lines.

* + - * 1. Interior Design: V-groove on 3 inch centers
      1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 25.8, U value = .039.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Performance: Doors shall meet the ASHRAE Standard 90.1 specification for wind infiltration, specifically for sectional garage doors described in Addendum O.
      2. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      3. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      4. Intermediate Reinforcing: nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      5. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\* Select one color. All colors are not available on all steel types. Refer to Manufacturer. Delete colors not required.

* + - * 1. Color: Polar White.
        2. Color: Almond.
        3. Color: Bronze.
        4. Color: Brown.
        5. Color: Charcoal.
        6. Color: Gray.
        7. Color: Sandstone.
        8. Premium Color: Ash.
        9. Premium Color: Mahogany.
        10. Premium Color: American Walnut.
        11. Premium Color: English Oak.
        12. Premium Bi-Directional Color: Ash.
        13. Premium Bi-Directional Color: Mahogany.
        14. Premium Bi-Directional Color: American Walnut.
        15. Premium Bi-Directional Color: English Oak.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Color: Carbon black.
      1. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

\*\* NOTE TO SPECIFIER \*\* Delete safety device if not required

* + - 1. Safety Device: Cam type safety device.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* Select one window design. Delete type if not required.

* + - * 1. Window Design: 25 x 12 inches (635 x 305 mm) TL windows.
        2. Window Design: 24 x 6 inches TL (610 x 152 mm) windows.
        3. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. Delete type not required.

Glass: Insulated tempered.

Clear Tempered.

Frosted over Clear Tempered.

\*\* NOTE TO SPECIFIER \*\* The Strength To Keep Out Noise And Weather. Haas 2000 Series commercial insulated doors stand up to the elements while enhancing the overall aesthetics of your building at the same time. Choosing one of our insulated doors will help increase energy savings, as our environmentally compliant polyurethane provides one of the highest R values available in sectional doors. They are reinforced with roll-formed galvanized steel struts and double-end hinges, as required to meet wind load specifications and to comply with ANSI/DASM 102-2011. The protective coating system is found on both the interior and exterior steel. Delete if not required.

* + 1. Insulated Steel Sectional Door - CHT-2000 Series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: shall be 2 inches (50.8 mm) thick roll formed inside and outside, hot-dipped galvanized steel, insulated with high density polyurethane foam.
         2. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
         3. Material: Hot-dipped galvanized steel (ASTM A-653).

\*\* NOTE TO SPECIFIER \*\* Select one gauge. When panel design is selected, note that 20 gauge steel is available in Flush and V-groove only. Delete types not required.

Gauge: 26 gauge woodgrain texture exterior and 26 gauge woodgrain texture interior.

Gauge: 20 gauge smooth exterior and 26 gauge woodgrain interior.

Gauge: 20 gauge smooth exterior and 20 gauge smooth interior.

* + - * 1. Exterior Panel Design:

\*\* NOTE TO SPECIFIER \*\* Select one exterior panel design. 20 gauge steel available in Flush and V-groove only. Delete types not required.

Exterior Panel Design: Flush.

Exterior Panel Design: V-groove on 3 inch (76 mm) centers.

Exterior Panel Design: Standard Raised Panel with shadow lines.

Exterior Panel Design: Ranch Raised Panel with shadow lines.

Exterior Panel Design: Short Ribbed Panel.

Exterior Panel Design: Short Recessed Panel.

Exterior Panel Design: Long Ribbed Panel.

Exterior Panel Design: Long Recessed Panel.

* + - * 1. Interior Design: V-groove on 3 inch (76 mm) centers.
      1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 17.66, U value = .057.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Performance: Doors shall meet the ASHRAE Standard 90.1 specification for wind infiltration, specifically for sectional garage doors described in Addendum O.
      2. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      3. End Stiles:

\*\* NOTE TO SPECIFIER \*\* Select one end stile type. Delete type not required.

* + - * 1. Vinyl End Stiles: shall be integral rigid vinyl to ensure consistent thermal break and provide protection to the foam along with sealing it from excessive air exposure.
        2. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      1. Intermediate Reinforcing: nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\*Select one color. All colors are not available on all steel types. Refer to Manufacturer. Delete colors not required.

* + - * 1. Color: Polar White.
        2. Color: Almond.
        3. Color: Bronze.
        4. Color: Brown.
        5. Color: Charcoal.
        6. Color: Gray.
        7. Color: Sandstone.
        8. Premium Color: Ash.
        9. Premium Color: Mahogany.
        10. Premium Color: American Walnut.
        11. Premium Color: English Oak.
        12. Premium Color: Graywood.
        13. Premium Bi-Directional Color: Ash.
        14. Premium Bi-Directional Color: Mahogany.
        15. Premium Bi-Directional Color: American Walnut.
        16. Premium Bi-Directional Color: English Oak.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Color: Carbon Black.
      1. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

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

* + - 1. Provide the following assembly components:
         1. Cam safety device.
         2. Pass door.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* All window options are not available on door series. See manufacturer website for additional information.

* + - * 1. Window Design:

\*\* NOTE TO SPECIFIER \*\* Select one window design. Delete types not required.

Window Design: Carriage House Series Windows.

Window Design: Ranch Series Windows.

Window Design: Standard Series Windows.

Window Design: 25 x 12 inches (635 x 305 mm) TL windows.

Window Design: 24 x 6 inches TL (610 x 152 mm) windows.

* + - * 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. All glazing types are not available with all Window Designs. See manufacturer website for additional information. Delete glass types not required.

Glass: 3/4 Inch (16 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Obscure Pattern 62 over Clear Tempered.

Glass: 1/4 Inch (6 mm):

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

* + - 1. Full Vision Sections:
         1. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts.
         2. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one type. Delete glass types not required.

Glass: 1/8 Inch (3 mm):

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

* + - * 1. Glazing: shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Built to Last. Haas 700 Series commercial insulated steel doors stand up to the elements, while dramatically decreasing exterior noise and enhancing the overall aesthetics of your building at the same time. The 1-3/4 inch (44.5 mm) thick 700 Series insulated steel doors help increase energy savings with polyurethane foam cores and are built to last. Delete if not required.

* + 1. Insulated Steel Sectional Door - CHT-700 Series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: shall be 1-3/4 inches (44.5 mm) thick roll formed inside and outside, hot-dipped galvanized steel, insulated with high density polyurethane foam.
         2. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
         3. Material: Hot-dipped galvanized steel (ASTM A-653).

\*\* NOTE TO SPECIFIER \*\* Select one gauge. When panel design is selected, note that 20 gauge steel is available in Flush and V-groove only. Delete types not required.

Gauge: 26 gauge woodgrain texture exterior and 26 gauge woodgrain texture interior.

Gauge: 20 gauge smooth exterior and 26 gauge woodgrain interior.

Gauge: 20 gauge smooth exterior and 20 gauge smooth interior.

* + - * 1. Exterior Panel Design:

\*\* NOTE TO SPECIFIER \*\* Select one exterior panel design. 20 gauge steel available in Flush and V-groove only. Delete types not required.

Exterior Panel Design: Flush.

Exterior Panel Design: V-groove on 3 inch (76 mm) centers.

Exterior Panel Design: Standard Raised Panel with shadow lines.

Exterior Panel Design: Ranch Raised Panel with shadow lines.

Exterior Panel Design: Short Ribbed Panel.

Exterior Panel Design: Short Recessed Panel.

Exterior Panel Design: Long Ribbed Panel.

Exterior Panel Design: Long Recessed Panel.

* + - * 1. Interior Design: V-groove on 3 inch centers.
      1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 16.18, U value = .062.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      2. End Stiles:

\*\* NOTE TO SPECIFIER \*\* Select one end stile type. Delete type not required.

* + - * 1. Vinyl End Stiles: shall be integral rigid vinyl to ensure consistent thermal break and provide protection to the foam along with sealing it from excessive air exposure.
        2. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      1. Intermediate Reinforcing: nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\* Select one color. All colors are not available on all steel types. Refer to Manufacturer. Delete colors not required.

* + - * 1. Color: Polar White.
        2. Color: Almond.
        3. Color: Bronze.
        4. Color: Brown.
        5. Color: Charcoal.
        6. Color: Gray.
        7. Color: Sandstone.
        8. Premium Color: Ash.
        9. Premium Color: Mahogany.
        10. Premium Color: American Walnut.
        11. Premium Color: English Oak.
        12. Premium Color: Graywood.
        13. Premium Bi-Directional Color: Ash.
        14. Premium Bi-Directional Color: Mahogany.
        15. Premium Bi-Directional Color: American Walnut.
        16. Premium Bi-Directional Color: English Oak.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Color: Carbon Black.
      1. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

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

* + - 1. Provide the following assembly components:
         1. Cam safety device.
         2. Pass door.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* All window options are not available on door series. See manufacturer website for additional information.

* + - * 1. Window Design:

\*\* NOTE TO SPECIFIER \*\* Select one window design. Delete types not required.

Window Design: Carriage House Series Windows.

Window Design: Ranch Series Windows.

Window Design: Standard Series Windows.

Window Design: 25 x 12 inches (635 x 305 mm) TL windows.

Window Design: 24 x 6 inches TL (610 x 152 mm) windows.

* + - * 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. All glazing types are not available with all Window Designs. See manufacturer website for additional information. Delete glass types not required.

Glass: 1/8 inch (3 mm):

Clear DSB/Annealed. (Standard Series)

Clear Tempered. (Carriage House and Ranch Series)

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Glass: 1/4 Inch (6 mm):

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Low E - Solar Ban 60 Tempered.

* + - 1. Full Vision Sections:
         1. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts.
         2. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one type. Delete glass types not required.

Glass: 1/8 Inch (3 mm):

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

* + - * 1. Glazing: shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Strong, Efficient and Attractive. When your major considerations include energy efficiency, noise buffering and beauty, a Haas 600 Series commercial insulated steel door will far exceed your expectations. These environmentally compliant polyurethane-foam-injected steel doors offer exceptional benefits for commercial applications, including durable strength, unique paint system and hard working hardware to withstand the harshest of elements. Delete if not required.

* + 1. Insulated Steel Sectional Door - CHT-600 Series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: shall be 1-3/8 inches (34.9 mm) thick roll formed inside and outside, hot-dipped galvanized steel, insulated with high density polyurethane foam.
         2. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
         3. Material: Hot-dipped galvanized steel (ASTM A-653).

\*\* NOTE TO SPECIFIER \*\* Select one gauge. When panel design is selected, note that 20 gauge steel is available in Flush and V-groove only. Delete types not required.

Gauge: 26 gauge woodgrain texture exterior and 26 gauge woodgrain texture interior.

Gauge: 20 gauge smooth exterior and 26 gauge woodgrain interior.

Gauge: 20 gauge smooth exterior and 20 gauge smooth interior.

* + - * 1. Exterior Panel Design:

\*\* NOTE TO SPECIFIER \*\* Select one exterior panel design. 20 gauge steel available in Flush and V-groove only. Delete types not required.

Exterior Panel Design: Flush.

Exterior Panel Design: V-groove on 3 inch centers.

Exterior Panel Design: Standard Raised Panel with shadow lines.

Exterior Panel Design: Ranch Raised Panel with shadow lines.

Exterior Panel Design: Short Ribbed Panel.

Exterior Panel Design: Short Recessed Panel.

Exterior Panel Design: Long Ribbed Panel.

Exterior Panel Design: Long Recessed Panel.

* + - * 1. Interior Design: V-groove on 3 inch centers.
      1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 13.45, U value = .074

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      2. End Stiles:

\*\* NOTE TO SPECIFIER \*\* Select one type of end stile. Delete types not required.

* + - * 1. Vinyl End Stiles: shall be integral rigid vinyl to ensure consistent thermal break and provide protection to the foam along with sealing it from excessive air exposure.
        2. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      1. Intermediate Reinforcing: nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\* Select one color. All colors are not available on all steel types. Refer to Manufacturer. Delete colors not required.

* + - * 1. Color: Polar White.
        2. Color: Almond.
        3. Color: Bronze.
        4. Color: Brown.
        5. Color: Charcoal.
        6. Color: Gray.
        7. Color: Sandstone.
        8. Premium Color: Ash.
        9. Premium Color: Mahogany.
        10. Premium Color: American Walnut.
        11. Premium Color: English Oak.
        12. Premium Color: Graywood.
        13. Premium Bi-Directional Color: Ash.
        14. Premium Bi-Directional Color: Mahogany.
        15. Premium Bi-Directional Color: American Walnut.
        16. Premium Bi-Directional Color: English Oak.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Color: Carbon Black.
      1. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

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

* + - 1. Provide the following assembly components:
         1. Cam Safety Device.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* All window options are not available on door series. See manufacturer website for additional information.

* + - * 1. Window Design:

\*\* NOTE TO SPECIFIER \*\* Select one window design. Delete types not required.

Window Design: Carriage House Series Windows.

Window Design: Ranch Series Windows.

Window Design: Standard Series Windows.

Window Design: 25 x 12 inches (635 x 305 mm) TL windows.

Window Design: 24 x 6 inches TL (610 x 152 mm) windows.

* + - * 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. All glazing types are not available with all Window Designs. See manufacturer website for additional information. Delete glass types not required.

Glass: 1/8 inch (3 mm):

Clear DSB/Annealed. (Standard Series)

Clear Tempered. (Carriage House and Ranch Series)

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Glass: 1/4 Inch (6 mm):

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

\*\* NOTE TO SPECIFIER \*\* Strength and Value. The Haas Commercial Ribbed Steel Series doors are a value-based product that offers the strength of steel in three color choices. Energy efficient insulation panels are an upgradable option available on all models. Ribbed steel doors are the ideal choice when economy is the prime consideration but a high quality, beautifully crafted product is still a necessity. Delete if not required.

* + 1. Commercial Ribbed Steel Garage Door - C2000 series as manufactured by Haas Door Co.
       1. Application: Commercial.
       2. Construction:
          1. Sections: shall be 2 inches (50.8 mm) thick roll formed hot-dipped galvanized steel.
          2. Material: Hot-dipped galvanized steel (ASTM A-653).

\*\* NOTE TO SPECIFIER \*\* Select one gauge. Delete types not required.

Gauge: 20 gauge smooth ribbed exterior.

Gauge: 24 gauge smooth ribbed exterior.

Gauge: 24 gauge nominal smooth ribbed exterior.

\*\* NOTE TO SPECIFIER \*\* Optional, not standard. Delete if not required.

* + - * 1. Provide interior thermal insulation panels to provide a calculated R value of 7.45.

\*\* NOTE TO SPECIFIER \*\* Select one type of back. Delete type finish not required.

Laminated matt back

26 gauge smooth steel back

* + - * 1. Stiles: ' C'-shaped galvanized steel pre-punched for hinge and reinforcing strut attachment.

\*\* NOTE TO SPECIFIER \*\* Select one gauge. Delete type not required.

18 gauge.

16 gauge.

* + - 1. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\* Select one color. All colors are not available on all steel types. Refer to Manufacturer. Delete colors not required.

* + - * 1. Color: Polar White.
        2. Color: Brown.
        3. Color: Sandstone.
      1. Interior Finish Coat: Two-coat finish painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

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

* + - 1. Provide the following assembly components:
         1. Cam Safety Device.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* All window options are not available on door series. See manufacturer website for additional information.

* + - * 1. Window Design:

\*\* NOTE TO SPECIFIER \*\* Select one window design. Delete types not required.

Window Design: 24 x 12 inches (610 x 305 mm) windows.

Window Design: 24 x 6 inches (610 x 152 mm) windows.

* + - * 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* All glazing types are not available with all Window Designs. See manufacturer's website for additional information. Delete type not required.

Glass: 1/8 inch (3 mm) clear tempered glass. (non-insulated sections)

Glass: 1/2 Inch (13 mm) clear insulated tempered. (insulated sections)

* + - 1. Full Vision Sections:
         1. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts.
         2. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one type of glass. Delete types not required.

Glass: 1/8 Inch (3 mm):

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

* + - * 1. Glazing: Shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Strength and Value. The Haas Steel Series pan doors are a value-based product that offers the strength of steel in five color choices. Energy efficient insulation panels are an upgradable option available on all models. Pan steel doors are the ideal choice when economy is the prime consideration but a high quality, beautifully crafted product is still a necessity. Delete if not required.

* + 1. Steel Stamped Panel Pan Garage Door - 2400 and 2500 series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: Shall be 2 inches (50.8 mm) thick roll formed hot-dipped galvanized steel.
         2. Material: Hot-dipped galvanized steel (ASTM A-653).

\*\* NOTE TO SPECIFIER \*\* 24 gauge applies to the 2400 series. 24 gauge nominal applies to the 2500 Series. Delete gauge option not required.

Gauge for 2400 Series: 24 gauge woodgrain texture exterior.

Gauge for 2500 Series: 24 gauge nominal woodgrain texture exterior.

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

* + - * 1. Insulated Panels: Provide interior laminated matt back thermal insulation panels to provide a calculated R value of 7.45.
        2. Stiles: ' C'-shaped galvanized steel pre-punched for hinge and reinforcing strut attachment.

\*\* NOTE TO SPECIFIER \*\* Select one gauge. Delete gauge not required.

20 gauge.

18 gauge.

16 gauge.

* + - 1. Exterior Panel Design:

\*\* NOTE TO SPECIFIER \*\* Select one panel design feature. Delete types not required.

* + - * 1. Exterior Panel Design: Flush.
        2. Exterior Panel Design: Standard Raised panel with shadow lines.
        3. Exterior Panel Design: Ranch Raised Panel with shadow lines.
        4. Exterior Panel Design: Short Ribbed Panel.
        5. Exterior Panel Design: Short Recessed Panel.
      1. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\* Select one color. All colors are not available on all steel types. Refer to Manufacturer. Delete colors not required.

* + - * 1. Color: Polar White.
        2. Color: Almond.
        3. Color: Brown.
        4. Color: Charcoal.
        5. Color: Sandstone.

\*\* NOTE TO SPECIFIER \*\* Available on 24 gauge woodgrain texture exterior only.

* + - * 1. Premium Color: English Oak.
      1. Interior Finish Coat: Two-coat finish painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.

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

* + - 1. Provide the following assembly components:
         1. Cam Safety Device.

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

* + - 1. Windows:

\*\* NOTE TO SPECIFIER \*\* All window options are not available on door series. See manufacturer website for additional information.

* + - * 1. Window Design:

\*\* NOTE TO SPECIFIER \*\* Select one window design. Delete types not required.

Window Design: Carriage House Series Windows.

Window Design: Ranch Series Windows.

Window Design: Standard Series Windows.

* + - * 1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* All glazing types are not available with all Window Designs. See manufacturer's website for additional information. Delete type not required.

Glass: 1/8 inch (3 mm):

Clear DSB/Annealed. (Standard Series)

Clear Tempered. (Carriage House and Ranch Series)

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Polycarbonate (Lexan).

* + - 1. Full Vision Sections:
         1. Framing: Sections shall be 1.75 inches (44.5 mm) thick full tubular aluminum framework with 0.125 inch (3.18 mm) wall thickness wherever hardware attaches. Vertical stiles and horizontal rails shall be assembled using internal steel thru-bolts.
         2. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one type of glass. Delete types not required.

Glass: 1/8 Inch (3 mm):

Clear DSB/Annealed.

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Glass: 1/4 Inch (6 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Clear Laminated.

Frosted Laminated.

Reflective Bronze.

Clear Acrylic (Plexiglass).

Frosted Acrylic (Plexiglass).

Clear Polycarbonate (Lexan).

Frosted Polycarbonate (Lexan).

Wire.

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

Solar Ban 70 w/ Argon Gas Tempered.

Obscure Pattern 62 over Clear Tempered.

* + - * 1. Glazing: shall be set in a continuous glazing sealant and held in place by inside vinyl snap-in glazing bead.

\*\* NOTE TO SPECIFIER \*\* Our classic American Tradition Series� garage doors have gotten even better. We�ve expanded this series to include new 9200 models, which bring a thicker 2 inch (51 mm) base door for more robust thermal performance. The bulb seal between every section meets IECC requirements for air infiltration. Our handcrafted process uses modern technology and 21st-century materials. Backed by a Lifetime Limited Warranty, American Tradition Series� doors are the ideal choice to add the style and appeal of a genuine carriage house door that provides a stronger barrier to the elements than wood with the thermal performance you need.

* + 1. Overlay Carriage House Garage Door - American Tradition 9200 Series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: shall be 2-5/8 inches (51 mm) thick roll formed inside and outside, hot-dipped galvanized steel, insulated with high density polyurethane foam.
         2. Overlay: 5/8 inch (15.9 mm) textured high density polyurethane boards glued and pinned to the section.
         3. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
         4. Material: Hot-dipped galvanized steel (ASTM A-653).

Gauge: 26 gauge woodgrain texture exterior and 26 gauge woodgrain texture interior.

* + - 1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 17.66, U value = .057.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Performance: Doors shall meet the ASHRAE Standard 90.1 specification for wind infiltration, specifically for sectional garage doors described in Addendum O.
      2. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      3. End Stiles:

\*\* NOTE TO SPECIFIER \*\* Select one end stile. Delete type not required.

* + - * 1. Vinyl End Stiles: shall be integral rigid vinyl to ensure consistent thermal break and provide protection to the foam along with sealing it from excessive air exposure.
        2. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      1. Intermediate Reinforcing: nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\* Select one base color. Delete base colors not required.

* + - * 1. Base Color: Polar White.
        2. Base Color: Almond.
        3. Base Color: Bronze.
        4. Base Color: Brown.
        5. Base Color: Charcoal.
        6. Base Color: Gray.
        7. Base Color: Sandstone.
        8. Premium Color: Graywood.
        9. Premium Base Color: Ash.
        10. Premium Base Color: Mahogany.
        11. Premium Base Color: American Walnut.
        12. Premium Base Color: English Oak.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Base Color: Carbon Black.
      1. Overlay Color:

\*\* NOTE TO SPECIFIER \*\* Select one color. Available in eight solid and four wood grain base colors. Overlay boards are available in the base colors, with an option to mix and match. (Example: almond boards on a sandstone door). Select combination. Delete overlay colors not required.

* + - * 1. Overlay Color: Polar White.
        2. Overlay Color: Almond.
        3. Overlay Color: Bronze.
        4. Overlay Color: Brown.
        5. Overlay Color: Charcoal.
        6. Overlay Color: Gray.
        7. Overlay Color: Sandstone.
        8. Premium Overlay Color: Ash.
        9. Premium Overlay Color: Mahogany.
        10. Premium Overlay Color: American Walnut.
        11. Premium Overlay Color: English Oak.
        12. Premium Overlay Color: Graywood.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Overlay Color: Carbon Black.
      1. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.
      2. Top Section Design:

\*\* NOTE TO SPECIFIER \*\* Select one top section design. Delete types not required.

* + - * 1. Top Section Design: Solid Rectangle top.
        2. Top Section Design: Solid Arch top.
        3. Top Section Design: Glazed Rectangle top.
        4. Top Section Design: Glazed Arch top.
      1. Glazed Top Design:

\*\* NOTE TO SPECIFIER \*\* Select one top design. Not available on a solid top section. Delete types not required.

* + - * 1. Glazed Top Design: 3-Pane Top.
        2. Glazed Top Design: 4-Pane Top.
        3. Glazed Top Design: 6-Pane Top.
        4. Glazed Top Design: 8-Pane Top.
      1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. Not available on a solid top section. Delete type not required.

* + - * 1. Glass: 1/4 Inch (6 mm):

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

* + - * 1. Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

\*\* NOTE TO SPECIFIER \*\* Enjoy the handcrafted quality and rich tradition carriage house style without the maintenance of wood. American Tradition Series� doors contain environmentally compliant polyurethane insulation with an R value of 13.45. The overlay boards are painted white as standard, but are also available in all base colors with an option to mix and match. Delete if not required.

* + 1. Overlay Carriage House Garage Door - American Tradition 9600 Series as manufactured by Haas Door Co.

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

* + - 1. Application: Residential.
      2. Application: Commercial.
      3. Construction:
         1. Sections: shall be 2 inches (51 mm) thick roll formed inside and outside, hot-dipped galvanized steel, insulated with high density polyurethane foam.
         2. Overlay: 5/8 inch (15.9 mm) textured high density polyurethane boards glued and pinned to the section.
         3. Thermal Break: Full tongue-and-groove thermal break construction with rigid vinyl extrusions.
         4. Material: Hot-dipped galvanized steel (ASTM A-653).

Gauge: 26 gauge woodgrain texture exterior and 26 gauge woodgrain texture interior.

* + - 1. Insulation: Fully insulated section using high density environmentally compliant polyurethane foam, pressure injected to completely fill the section. Calculated R value = 13.45, U value = .074.

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

* + - * 1. Fire Rated Foam: Class II fire rated foam.
      1. Doors are built to meet or exceed standards established by ANSI/DASMA 102.
      2. End Stiles:

\*\* NOTE TO SPECIFIER \*\* Select one end stile. Delete type not required.

* + - * 1. Vinyl End Stiles: shall be integral rigid vinyl to ensure consistent thermal break and provide protection to the foam along with sealing it from excessive air exposure.
        2. Steel End Stile: 16 ga. hot-dipped galvanized steel, installed over vinyl end cap to maintain the thermal break.
      1. Intermediate Reinforcing: nominal 18 gauge full vertical steel back-up plates, inserted prior to foaming, to provide proper position and reinforcing for attachment of various hardware.
      2. Exterior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.

\*\* NOTE TO SPECIFIER \*\* Select one base color. Delete base colors not required.

* + - * 1. Base Color: Polar White.
        2. Base Color: Almond.
        3. Base Color: Bronze.
        4. Base Color: Brown.
        5. Base Color: Charcoal.
        6. Base Color: Gray.
        7. Base Color: Sandstone.
        8. Premium Color: Graywood.
        9. Premium Base Color: Ash.
        10. Premium Base Color: Mahogany.
        11. Premium Base Color: American Walnut.
        12. Premium Base Color: English Oak.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Base Color: Carbon Black.
      1. Overlay Color:

\*\* NOTE TO SPECIFIER \*\* Select one color. Available in eight solid and five wood grain base colors. Overlay boards are available in the base colors, with an option to mix and match. (Example: almond boards on a sandstone door). Select combination. Delete overlay colors not required.

* + - * 1. Overlay Color: Polar White.
        2. Overlay Color: Almond.
        3. Overlay Color: Bronze.
        4. Overlay Color: Brown.
        5. Overlay Color: Charcoal.
        6. Overlay Color: Gray.
        7. Overlay Color: Sandstone.
        8. Premium Overlay Color: Ash.
        9. Premium Overlay Color: Mahogany.
        10. Premium Overlay Color: American Walnut.
        11. Premium Overlay Color: English Oak.
        12. Premium Overlay Color: Graywood.

\*\* NOTE TO SPECIFIER \*\* Not recommended for extreme heat and sunlight. Delete if not required.

* + - * 1. Premium Overlay Color: Carbon Black.
      1. Interior Finish Coat: Two-coat finish 1.0 mil total thickness painting process consisting of a bake-on urethane primer and a baked polyester finish.
         1. Color: Polar White.
      2. Top Section Design:

\*\* NOTE TO SPECIFIER \*\* Select one top section design. Delete types not required.

* + - * 1. Top Section Design: Solid Rectangle top.
        2. Top Section Design: Solid Arch top.
        3. Top Section Design: Glazed Rectangle top.
        4. Top Section Design: Glazed Arch top.
      1. Glazed Top Design:

\*\* NOTE TO SPECIFIER \*\* Select one top design. Not available on a solid top section. Delete types not required.

* + - * 1. Glazed Top Design: 3-Pane Top.
        2. Glazed Top Design: 4-Pane Top.
        3. Glazed Top Design: 6-Pane Top.
        4. Glazed Top Design: 8-Pane Top.
      1. Glazing Types:

\*\* NOTE TO SPECIFIER \*\* Select one glass type. Not available on a solid top section. Delete type not required.

* + - * 1. Glass: 1/8 inch (3 mm):

Clear Tempered.

Frosted Tempered.

Bronze Tempered.

Dark Gray Tempered.

Light Gray Tempered.

Obscure Pattern 62.

* + - * 1. Glass: 1/4 Inch (6 mm):

Hurricane Impact Resistant Clear Polycarbonate.

Hurricane Impact Resistant Bronze Polycarbonate.

Hurricane Impact Resistant Dark Gray Polycarbonate.

Hurricane Impact Resistant Pebble Polycarbonate.

Hurricane Impact Resistant Frosted Polycarbonate.

* + - * 1. Glass: 1/2 Inch (12 mm) Insulated:

Clear Tempered.

Frosted over Clear Tempered.

Bronze over Clear Tempered.

Bronze over Frosted Tempered.

Dark Gray over Clear Tempered.

Dark Gray over Frosted Tempered.

Dark Gray over Dark Gray Tempered.

Light Gray over Clear Tempered.

Low E - Standard Tempered.

Solar Ban 60 Tempered.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. General: Install door, track and operating equipment complete with all necessary accessories and hardware according to shop drawings, manufacturer's instructions.
      2. Lubricate bearings and sliding parts, and adjust doors for proper operation, balance, clearance and similar requirements.
   4. PROTECTION
      1. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove and legally dispose of construction debris from project site.
      2. Remove temporary coverings and protection of adjacent work areas. Repair or replace installed products damaged prior to or during installation.
      3. Lubricate bearings and sliding parts, assure weather tight fit around door perimeter and adjust doors for proper operation, balance, clearance and similar requirements. Protect installed products until completion of project.
      4. Touch-up, repair or replace damaged products before Substantial Completion.
   5. PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION