

SECTION 08 56 53 {11031}

SECURITY WINDOWS

{TELLER AND SERVICE WINDOWS}

This Section includes both MasterFormat 04 and MasterFormat 95 Section numbering format and Section Titles Please select which one to use for the project and delete the one not selected from the Section Number and Section Title articles as well as from the Section footer MasterFormat 95 is shown in brackets {}.

This section includes exterior and interior automatic Security Window Units and accessories as well as Bullet Resistant and Florida Building Code approved units. Refer to Section 08 56 19 for CSE's full line of products or Section 11 17 00 for just CSE's Teller and Service Equipment - Drawers, Deal Trays, and Shelves.

Revise this Section by deleting and inserting text to meet Project-specific requirements.

1. GENERAL

1.1. SUMMARY

A. Section Includes:

- 1. Exterior and interior window units.
- 2. Bullet resistant exterior and interior security pass, service and teller window units.
- 3. Glazing.
- 4. Air curtains.
- 5. Intercom and talk through.

B. Related Sections:

- 1. Section [] - [Unit Masonry] [Unit Masonry Assemblies]: Partition construction [].
- 2. Section [] - Cold Formed metal Framing: Partition construction [].
- 3. Section [] - Rough Carpentry: Partition construction [].
- 4. Section [] - Sheet Metal Flashing And Trim []: [] [].
- 5. Section [] - [Joint Protection] [Joint Sealers]: [] [].
- 6. Section [] - [Aluminum-Framed Entrances And Storefronts] [Metal Framed Storefronts]: [] [].
- 7. Section [] - []: [] [].

8. Section [_____] - Gypsum Board Assemblies: Partition construction [_____].
9. Section [_____] - Ballistics-Resistant Fiberglass [_____].
10. Section [_____] - [_____]: Electrical requirements Division [26] [16].

1.2. REFERENCES

- A. American Architectural Manufacturers Association:
 1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
 2. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
- B. American Society Mechanical Engineers Standards:
 1. ASME SA-240/SA-240M - Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
- C. ASTM International:
 1. ASTM A27/A27M - Standard Specification for Steel Castings, Carbon, for General Application.
 2. ASTM A 36/A 36M. - Standard Specification for Carbon Structural Steel.
 3. ASTM A47/A47M - Standard Specification for Ferritic Malleable Iron Castings.
 4. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 5. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 6. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
 7. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 8. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 9. ASTM B221/B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 10. ASTM C1036 - Standard Specification for Flat Glass.
 11. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
 12. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
 13. ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics.
 14. ASTM E488 - Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements.
 15. ASTM E699 - Standard Practice for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating of Building Components.

16. ASTM E2188 - Standard Test Method for Insulating Glass Unit Performance.
 17. ASTM E2189 - Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units.
 18. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.
 19. ASTM F588 - Standard Test Methods for Resistance of Window Assemblies to Forced Entry Excluding Glazing.
 20. ASTM F2329 - Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners.
- D. California Model Building Security Ordinance:
1. CMBSO - Section 15.52.100, Tests CAWM 301-90, Forced Entry Resistance Tests for Windows.
- E. Consumer Products Safety Commission:
1. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing.
- F. CSA International - Canadian Standards Association:
1. CAN/CSA C22.2 No. 68-92 - Motor-Operated Appliances (Household and Commercial).
 2. CAN/CSA C22.2 No. 247- Operators and Systems of Doors, Gates, Draperies and Louvers.
- G. DuPont Powder Coating Test Method:
1. DPC TM 10.219 - PCI Powder Smoothness.
- H. Florida Building Code:
1. Static Air Pressure Test.
- I. H.P. White Laboratory, Inc.:
1. HPW-TP0500.01:
 - a. Level V.
 - b. Level C Ballistics (.44 magnum).
 2. HPW-TP-0500.02 - Level B Ballistics (9mm).
- J. National Association of Architectural Metal Manufacturers.
1. NAAMM No. 3 Finish: Ground unidirectional uniform finish obtained with 80 - 100 grit abrasive.
- K. SAE International:
1. AMS5511 - Steel, Corrosion-Resistant, Sheet, Strip, and Plate, 19Cr - 9.5Ni (304L), Solution Heat Treated.
 2. AMS5513 - Steel, Corrosion-Resistant, Sheet, Strip, and Plate 19cr 9.2Ni (SAE 30304) Solution Heat Treated.
- L. Steel Structures Painting Council:

- 1. SSPC Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).

M. Underwriters Laboratory:

- 1. UL 73 - Motor-Operated Appliances.
- 2. UL 325 - Door, Drapery, Gate, Louver, and Window Operators and Systems.
- 3. UL 752 - Ballistic Standards:
 - a. Level I MPSA 9mm.
 - b. Level III SPSA .44 Magnum.
- 4. UL 1995 - Heating and Cooling Equipment.

1.3. PERFORMANCE REQUIREMENTS

Use this article carefully; restrict statements to identify system performance requirements or function criteria only.

Following paragraphs represent suggested listing of performance criteria. When more stringent criteria is being considered, refer to ASTM test methods and associated documents for guidance. Avoid guessing at design wind loads in following paragraph, use applicable building code or AAMA 101.

- A. System Design:
 - 1. Design and size components to withstand dead loads and live loads caused by pressure and negative wind loads acting normal to plane of window as calculated in accordance with applicable code.
- B. System Internal Drainage: Drain water entering joints, condensation occurring in glazing channels, and migrating moisture occurring within system, to exterior by weep drainage network.
- C. Air and Vapor Seal: Maintain continuous air barrier and vapor retarder throughout assembly, primarily in line with [inside] pane of glass and heel bead of glazing compound. [Position thermal insulation on exterior surface of air barrier and vapor retarder.]

Retain one of three subparagraphs below. First subparagraph requires that products be UL listed, which requires ongoing performance verification; second subparagraph requires that materials be tested at least once. Coordinate ballistics test indicated in second subparagraph with that indicated for ballistics performance specified in Part 2.

- D. Ballistics-Resistance Performance: Provide units identical to those tested for compliance with requirements indicated, and as follows:
 - 1. Listed and labeled as bullet resisting according to UL 752.

2. Tested for ballistics resistance according to UL 752, [HPW-TP-0500.01], [HPW-TP-0500.02] [_____] by a testing agency acceptable to authorities having jurisdiction.

Retain one of two subparagraphs below. First option in first subparagraph is the most common test standard; second subparagraph is usually for Federal Government work. Coordinate forced-entry test indicated in first subparagraph with that indicated for forced-entry performance specified in Part 2.

- E. Forced-Entry-Resistance Performance: Provide units identical to those tested for compliance with requirements indicated, and as follows:
 1. Tested for forced-entry resistance according to ASTM F588 [_____] by a testing agency acceptable to authorities having jurisdiction.
 2. California Model Building Security Ordinance, CMBSO - Section 15.52.100, Tests CAWM 301-90, Forced Entry Resistance Tests for Windows.
- F. Provide glass and glazing materials for continuity of building enclosure vapor retarder and air barrier:
 1. To utilize the inner pane of multiple pane sealed units for the continuity of the air barrier and vapor retarder seal.
- G. Structural Design: Design glass and glazing in accordance with [applicable] [_____] code for most critical combination of wind, snow, seismic, and dead loads.
- H. Electrical Requirements:
 1. Motor operated to comply with CAN/CSA C22.2 No. 68-92 and UL 73.
 2. Operators and systems for doors, gates, and window operators to comply with CAN/CSA C22.2 No. 247 and UL 325.

1.4. SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures {01330 - Submittal Procedures}: Requirements for submittals.
- B. Shop Drawings:
 1. Indicate configuration, sizes, rough-in, mounting, construction and glazing details as well as installation clearances and finishes.
- C. Product Data:
 1. Submit manufacturer's product data for specified Products indicating materials, operation characteristics, and finishes.
- D. Samples:
 1. Submit two samples, 4 x 4 inches (100 x 100 mm) in size illustrating metal finishes for each finish specified.
- E. Test Reports:

1. [Indicate compliance with specified bullet resistance performance.]

F. Manufacturer's Installation Instructions:

1. Submit installation instructions with requirements to accommodate specific site conditions.

1.2. QUALITY ASSURANCE

Use this article when special code, regulation, or constructed assembly applies to the Project; delete this article when none apply.

A. Products Requiring Electrical Connection: Listed and classified by UL or testing firm acceptable to authority having jurisdiction.

1.3. QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum 10 years documented experience.

- 1. Participates in a Quality Assurance validation Program.
 - a. Facility Audit.

B. Installer: Company specializing in installation of window systems specified with minimum three years documented experience.

Retain paragraph below if Contractor or manufacturer selects testing agency.

C. Testing Agency Qualifications:

1. Qualified according to ASTM E699 and experienced in [ballistics-] [and] [forced-entry-] resistance testing.

1.4. DELIVERY, STORAGE, AND PROTECTION

A. Section 01 60 00 - Product Requirements {01600 - Product Requirements}: Requirements for transporting, handling, storing, and protecting products.

B. Ordering: To avoid construction delays comply with ordering instructions and lead time requirements as set by window system manufacturer.

C. Pack window units in manufacturer's standard shipping containers and protective packaging. Deliver units in manufacturer's original packaging and unopened containers with identification labels intact.

D. Store window units and accessories on raised blocks to prevent moisture damage protected from exposure to weather and vandalism.

1.5. FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.6. COORDINATION

- A. Section 01 30 00 - Administrative Requirements {01300 - Administrative Requirements} : Requirements for coordination.
- B. Coordinate work with adjacent materials specified in other Sections and as indicated on Drawings and approved shop drawings.
- C. Coordinate installation of anchorages for security windows. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in [concrete] [or] [masonry]. Deliver such items to Project site in time for installation.

1.7. WARRANTY

- A. Furnish manufacturer's standard warranty document, executed by an authorized CSE Corp. officer in which manufacturer agrees to repair or replace windows, drawers and air curtains that fail in materials or workmanship within specified warranty period. This warranty is in addition to, and not a limitation of other rights Owner has under the contract.
 - 1. Warranty Period:
 - a. One year parts and labor from date of installation.
 - 2. Failures include, but are not limited to, the following:
 - a. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
 - b. Structural failures including deflections exceeding 1/4 inch.
 - c. Failure of welds.
 - d. Excessive air leakage.
 - e. Faulty operation of sliding window hardware.
 - f. Faulty operation of transaction drawers.
 - g. Faulty operation of air curtains.

2. PRODUCTS

2.1. MATERIALS

- A. Aluminum Extrusions: ASTM B221/B221M. Provide alloy and temper recommended by manufacturer for strength, corrosion resistance, and application of required finish, but not less than 22,000-psi (150-MPa) ultimate tensile strength and not less than 0.125 inch (3.2 mm) thick at any location for main frame and sash members.
- B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.

- C. Metallic-Coated Steel Sheet:
 - 1. ASTM A653/A653M, CS (Commercial Steel), Type B; with G90 (Z275)zinc (galvanized) coating designation.
 - 2. AMS5511, steel, corrosion-resistant, sheet, strip, and plate, 19Cr - 9.5Ni (304L), solution heat treated.
 - 3. AMS5513, steel, corrosion-resistant, sheet, strip, and plate 19cr 9.2Ni (SAE 30304) solution heat treated.
- D. Stainless-Steel Sheet, Strip, Plate, and Flat Bars:
 - 1. ASTM A666, austenitic stainless steel, Type 304, stretcher-leveled standard of flatness.
 - 2. ASME SA-240/SA-240M, chromium and chromium-nickel stainless steel plate, sheet, and strip for general applications..
- E. Concealed Bolts: ASTM A307, Grade A unless otherwise indicated.
- F. Cast-in-Place Anchors in Concrete: Fabricated from corrosion-resistant materials capable of sustaining, without failure, a load equal to [four] [_____] times the load imposed, as determined by testing per ASTM E488, conducted by a qualified testing agency.
 - 1. Threaded or wedge type; galvanized ferrous castings, either ASTM A27/A27M cast steel or ASTM A 47/A 47M malleable iron. Provide bolts, washers, and shims as required; hot-dip galvanized per ASTM A153/A153M or ASTM F2329.
- G. Embedded Plate Anchors: Fabricated from steel shapes and plates, minimum 3/16 inch (4.8 mm) thick; with minimum 1/2-inch- (12.7-mm-) diameter, headed studs welded to back of plate..
- H. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- I. Bituminous Paint: Cold-applied, asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos; formulated for 30-mil (0.76-mm) thickness per coat.
- J. Sealants: For sealants required within fabricated security windows, provide type recommended by manufacturer for joint size and movement. Sealant shall remain permanently elastic, nonshrinking, and nonmigrating.
- K. Gaskets: For gaskets required within fabricated security windows, provide type recommended by manufacturer for joint size and movement. Gaskets shall remain permanently elastic, nonshrinking, and nonmigrating.

2.2. WINDOW COMPONENTS

- A. Comply with requirements of UL listing for ballistics-resistance levels as specified.
- B. Glass:

- 1. Tempered Glass: 1/4 inch thick.
- 2. Insulated Glass: 5/8 inch thick total thickness.

C. Bullet Resistant Glazing:

Level 1 and Level 3 Bullet Resistant glass. Common uses are pharmacies, banks, utility payment windows and other monetary transaction points. Custom sized fixed frames to any dimension.

- 1. Model QSBR - Sheet:
 - a. LEXGARD® MP-750 Level 1 - 9mm or .38 Special caliber rated.
 - b. SPARTECH POLYCAST MP 1.25 Level 1-9mm or .38 Special caliber rated.
 - c. LEXGARD® SP1250 Level 3 - .44 Magnum caliber rated.

D. Track/Slides: Stainless steel ball bearing slides all windows and drawers.

E. Miscellaneous Glazing Materials: Provide material, size, and shape complying with requirements of glass manufacturers, and with a proven record of compatibility with surfaces contacted in installation:

- 1. Cleaners, Primers, and Sealers: Type recommended by sealant or gasket manufacturer.
- 2. Setting Blocks: Elastomeric material with a Type A Shore durometer hardness of 85, plus or minus 5.
- 3. Spacers: Elastomeric blocks or continuous extrusions with a Type A Shore durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- 4. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

F. Flashing.

G. Welding Materials.

H. Anchors, Clips, and Window Accessories: Stainless steel; hot-dip, zinc-coated steel or iron, of sufficient strength to withstand design pressure indicated.

2.3. FULLY-AUTOMATIC EXTERIOR AND INTERIOR WINDOW UNITS

A. Manufacturers:

- 1. CSE Corp.

Flush Mount, Electric Single Slider

Units are offered with restricted openings for California customers. Top-hung with no bottom track system unit, comes with an offset in the base preventing intrusion and providing rain protection.

Miami-Dade County Approved: (Large and Small Missile Impact) #13-1203.09 for models indicated.

Florida Building Code Approved: No. FL-12643.R2 for models indicated.

- a. Model SS-4035E (Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 20-3/4 inches (w) x 29 inches (h).
 - 2) Rough Opening: 48-3/8 inches (w) x 41-3/8 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 5) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 6) Hand: [Left.] [Right.]
 - 7) Florida Building Code Approved: No. FL-12643.R2 (Model SS-4035E-IP)
 - 8) Miami-Dade County Approved: No. 13-1203.09 (Model SS-4035E-IP)

- b. Model IF-4035E (Insulated Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 20-3/4 inches (w) x 29 inches (h).
 - 2) Rough Opening: 48-3/8 inches (w) x 41-3/8 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 5) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 6) Hand: [Left.] [Right.]
 - 7) Florida Building Code Approved: No. FL-12643.R2 (Model SS-4035E-IP)
 - 8) Miami-Dade County Approved: No. 13-1203.09 (Model SS-4035E-IP)

- c. Model SS-4538E (Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 18 inches (w) x 26 inches (h).
 - 2) Rough Opening: 45 7/8 inches (w) x 38 3/8 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:

- a) [Level 1 Bullet Resistant.]
- b) [5/8 inch insulated.]
- c) [1/4 inch tempered.]
- 5) Finish: [Bronze.] [Clear.] [Custom Color.]
- 6) Hand: [Left.] [Right.]
- d. Model IF-4538E (Insulated Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 18 inches (w) x 26 inches (h).
 - 2) Rough Opening: 45 7/8 inches (w) x 38 3/8 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 5) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 6) Hand: [Left.] [Right.]
- e. Model SS-36E (Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 15 inches (w) x 29 inches (h).
 - 2) Rough Opening: 36 3/8 inches (w) x 41 3/8 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 5) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 6) Hand: [Left.] [Right.]
- f. Model IF-36E (Insulated Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 15 inches (w) x 29 inches (h).
 - 2) Rough Opening: 36 3/8 inches (w) x 41 3/8 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 5) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 6) Hand: [Left.] [Right.]

Flush mount, Electric Bi-parting slider.

Top-hung with no bottom track system unit, comes with an offset in the base preventing intrusion and providing rain protection.

Meets Forced Entry Performance Requirements for California Model Building Security Ordinance (CMBSO) and ASTM F 588.

- g. Model BP-7241E (Bi-Parting Horizontal Sliding Window Unit):
 - 1) Service Opening: 29-1/2 inches (w) x 32 inches (h).
 - 2) Rough Opening: 72-1/2 inches (w) x 41-1/2 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 5) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 6) Meets Performance Requirements of CMBSO, Section 15 52 100, Tests CAWM 301-90, Forced Entry Resistance Test for Windows, and ASTM F588.
- h. Model BP-7241E IP (Bi-Parting Horizontal impact slider)
 - 1) Service Opening: 27 inches (w) x 27 inches (h).
 - 2) Rough Opening: 72 ½ inches (w) x 41 ½ inches (h).
 - 3) Miami-Dade NOA #13-0822.06
 - 4) Florida Building Code #FL-16711
- i. Model BP-7236E (Bi-Parting Horizontal Sliding Window Unit):
 - 1) Service Opening: 29-1/2 inches (w) x 26-1/2 inches (h).
 - 2) Rough Opening: 72-1/2 inches (w) x 36-1/2 inches (h).
 - 3) Operating Sensor:
 - a) Thru-Beam Horizontal Eye Bar.
 - b) Push Button.
 - 4) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 5) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 6) Meets Performance Requirements of CMBSO, Section 15 52 100, Tests CAWM 301-90, Forced Entry Resistance Test for Windows, and ASTM F588.
- j. Model BP-7236E IP (Bi-Parting Horizontal impact slider)
 - 1) Service Opening: 27 inches (w) x 22 inches (h).
 - 2) Rough Opening: 72 ½ inch (w) x 36 ½ inches (h).
 - 3) Miami-Dade NOA #13-0822.06
 - 4) Florida Building Code # FL-16711

Flush Mount, Manual Self-Closing Single Slider

Units are offered with restricted openings for California customers. Top-hung with no bottom track system unit, comes with an offset in the base preventing intrusion and providing rain protection.

Miami-Dade County Approved: (Large and Small Missile Impact) #13-1203.09 for models indicated.

Florida Building Code Approved: No. FL-12643.R2 for models indicated.

- k. Model SC-4030 (Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 20-1/4 inches (w) x 29 inches (h).
 - 2) Rough Opening: 48-3/8 (w) x 36-3/8 (h).
 - 3) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 4) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 5) Hand: [Left.] [Right.]
 - 6) Florida Building Code Approved: No. FL-12643.R2 (Model SC-4030-IP)
 - 7) Miami-Dade County Approved: No. 13-1203.09 (Model SC-4030-IP)

- l. Model IFSC-4030 (Insulated Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 20-1/4 inches (w) x 29 inches (h).
 - 2) Rough Opening: 48-3/8 (w) x 36-3/8 (h).
 - 3) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 4) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 5) Hand: [Left.] [Right.]
 - 6) Florida Building Code Approved: No. FL-12643.R2 (Model SC-4030-IP)
 - 7) Miami-Dade County Approved: No. 13-1203.09 (Model SC-4030-IP)

- m. Model SC-3030 (Single Horizontal Sliding Window Unit):
 - 1) Service Opening: 14-1/2 inches (w) x 29 inches (h).
 - 2) Rough Opening: 36-3/8 (w) x 36-3/8 (h).
 - 3) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]

- 4) Finish: [Bronze.] [Clear.] [Custom Color.]
- 5) Hand: [Left.] [Right.]
- 6) Florida Building Code Approved: No. FL-12643.R2 (Model SC-3030-IP)
- 7) Miami-Dade County Approved: No. 13-1203.09 (Model SC-3030-IP)

n. Model IFSC-3030 (Single Horizontal Sliding Window Unit):

- 1) Service Opening: 14-1/2 inches (w) x 29 inches (h).
- 2) Rough Opening: 36-3/8 (w) x 36-3/8 (h).
- 3) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
- 4) Finish: [Bronze.] [Clear.] [Custom Color.]
- 5) Hand: [Left.] [Right.]
- 6) Florida Building Code Approved: No. FL-12643.R2 (Model SC-3030-IP)
- 7) Miami-Dade County Approved: No. 13-1203.09 (Model SC-3030-IP)

2.4. BULLET RESISTANT EXTERIOR AND INTERIOR SECURITY PASS, SERVICE AND TELLER WINDOW UNITS

A. Manufacturers:

- 1. CSE Corp.

Security Exchange / Ticket Windows & Package Receivers:

Used in cash express locations, ticket booths, hotels, security deposit locations, and where security is required for the transfer of funds or smaller items. Package receivers used in secure areas where larger items are safely transferred.

UL Rated Level 3 Framing available—UL report #BP 20789-20140501

a. Model T1 - 2436S:

- 1) Rough Opening: 24-3/8 inches (w) x 36-3/8 inches (h). [Custom size as indicated on Drawings plus 3/8 inch on all sides.]
- 2) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [1/4 inch tempered for Non-Bullet Resistant applications.]
- 3) Finish: [Bronze.] [Clear.] [Stainless.] [Custom Color.]

b. Model T1 - 3036S:

- 1) Rough Opening: 30-3/8 inches (w) x 36-3/8 inches (h). [Custom size as indicated on Drawings plus 3/8 inch on all sides.]
 - 2) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [1/4 inch tempered for Non-Bullet Resistant applications.]
 - 3) Finish: [Bronze.] [Clear.] [Stainless.] [Custom Color.]
- c. Model T1 - 3636S:
- 1) Rough Opening: 36-3/8 inches (w) x 36-3/8 inches (h). [Custom size as indicated on Drawings plus 3/8 inch on all sides.]
 - 2) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [1/4 inch tempered for Non-Bullet Resistant applications.]
 - 3) Finish: [Bronze.] [Clear.] [Stainless.] [Custom Color.]
- d. PR-1515 (Package Receiver):
- 1) Rough Opening: 15-1/2 inches (w) x 15-1/2 inches (h).
 - 2) Internal Transfer Area: 13-1/2 inches (w) x 13-1/4 inches (h) x 15-3/8 inches (d).
 - 3) Attendant Service door:
 - a) [Level 3 Bullet Resistant.]
 - b) [Stainless steel.]
- e. PR-2020 (Package Receiver)
- 1) Rough Opening: 20 1/2 inches (w) x 20 1/2 inches (h)
 - 2) Internal Transfer Area: 18 3/4 inches (w) x 18 inches (h) x 15 3/8 inches (d)
 - 3) Attendant Service door:
 - a) [Level 3 Bullet Resistant]
 - b) [Stainless Steel]

Combination unit offers daytime operation through either a self-closing manual slider or bullet resistant manual slider and night time operation through the transaction drawer. Standard glazing is 1/4" clear tempered safety glass or Level 1 Bullet Resistant Glazing. Offered are two drawers that work in conjunction with this unit.

- f. Model BRDW1-4855 (Single Horizontal Sliding Combination Window Unit):
- 1) Rough Opening: 48-3/8 inches (w) x 55-3/8 inches (h).
 - 2) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 3) Finish: [Bronze.] [Clear.] [Custom Color.]

- 4) [Drawer: Model [(QSB-12S)]
- g. Model BRDW1-4851 (Single Horizontal Sliding Combination Window Unit):
 - 1) Rough Opening: 48-3/8 inches (w) x 51-3/8 inches (h).
 - 2) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered.]
 - 3) Finish: [Bronze.] [Clear.] [Custom Color.]
 - 4) [Drawer: Model [(QSP-713S)]

This combination unit includes Level 1 or Level 3 bullet resistant glazing, pharmacy drawers and optional night time drop slot. Standard with call button, speaker, and mic.

- h. Model (PCJ-130) Safeserv (Pharmacy Combo Unit):
 - 1) Rough Opening: 60-1/2 inches (w) x 54 inches (h).
 - 2) Glazing:
 - a) [Level 1 Bullet Resistant.]
 - b) [5/8 inch insulated.]
 - c) [1/4 inch tempered for Non-Bullet Resistant applications.]
 - 3) Finish: [Bronze.] [Clear.] [Stainless.] [Custom Color.]
 - a) UL rated Level 3 framing available
 - 4) Pharmacy Drawer: Model [QSP-713.] QSP-713S.] [QSP-713E].
 - 5) [Night Time Drop Slot: Manufacturer's standard design.]
- 2. Substitutions: [In accordance with Contract Documents.] [Not Permitted.]

2.5. DRAWERS

- A. Refer Section 11 17 00 {11030} Teller and Service Equipment.

2.6. GLAZING

- A. Float Glass Materials:
 - 1. Annealed Glass: ASTM C1036, Type 1 transparent flat, Quality Q3, float glass.
 - a. Furnish annealed glass except where tempered glass is required to meet specified performance requirements.
 - 2. Tempered Glass: ASTM C1048, Type 1 transparent flat, Quality Q3, Kind FT fully tempered, Condition A uncoated, float glass with horizontal tempering.
 - a. Fabricate tempered glass with roller-wave distortion parallel to bottom edge of glass as installed.
 - b. Furnish tempered glass conforming to CPSC 16 CFR 1201 Category II.
- B. Clear Glass: Annealed and Tempered float glass as specified; Class 1 clear.

1. Clear annealed glass (FG-CA).
 2. Clear tempered glass (FG-CT).
 3. Minimum Thickness: 1/4 inch.
- C. Tinted Glass: Tempered float glass as specified; Class 2 tinted.
1. Tinted tempered glass (FG-TT).
 2. Minimum Thickness: 1/4 inch.
 3. Tint: Tint color as indicated on Drawings, if not indicated on Drawings as selected by Architect.
- D. Low E Glass: Tempered float glass as specified; [[Class 1 clear.] [Class 2 tinted.]]
1. Clear Low E tempered glass (FG-ECT).
 2. Tinted Low E tempered glass (FG-ETT).
 3. Minimum Thickness: 1/4 inch.
 4. Tint: Tint color as indicated on Drawings, if not indicated on Drawings as selected by Architect.
- E. Insulating Glass:
1. Insulating Glass: ASTM E2190 certified by Insulating Glass Certification Council and Insulating Glass Manufacturers Alliance; [with Low E coating on surface 2] [and] glass elastomer edge seal; purge interpane space with dry air; tested in accordance with ASTM E2188 for unit performance and ASTM E2189 for resistance to fogging..
 - a. Insulating Glass Unit Edge Seal Construction: Aluminum, bent and spot welded corners.
 - b. Double Pane Insulating Vision Glass (IG-DP):
 - 1) Total Unit Thickness: 5/8 inch.
 - 2) Outer Pane: Glass Type [_____].
 - 3) Inner Pane: Glass Type [_____].
- F. Bullet Resistant Glazing:
1. LEXGARD® MP-750 Laminate: 3-ply, clear, extruded polycarbonate and acrylic sheet of the following construction:
 - a. 1/8 inch polycarbonate sheet with high AR abrasion-resistant surface.
 - b. Polyurethane bonding interlayer.
 - c. 1/2 inch Acrylic sheet.
 - d. Polyurethane bonding interlayer.
 - e. 1/8 inch polycarbonate sheet with high AR abrasion-resistant surface.
 - f. Material shall have a flexural strength of at least 13,500 psi per ASTM D790; and shall have AR (high performance abrasion-resistant) surfaces for enhanced service life and resistance to marring. Material shall conform to applicable code as a CC-1 rated Approved Light Transmitting Plastic.
 - g. Level 1 - 9mm or .38 Special caliber rated.
 2. SPARTECH POLYCAST MP 1.25 Acrylic
 - a. Monolithic bullet resistant acrylic 1.25" thick.

- b. Super Abrasion Resistant Coating.
- c. Greater than 90% light transmission.
- d. 9,500 psi tensile strength.
- e. Level 1- 9mm or .38 Special caliber rated.
- 3. LEXGARD® SP1250 laminate: 4-ply, clear, polycarbonate of the following construction:
 - a. 1/8 inch polycarbonate sheet with high AR abrasion-resistant surface.
 - b. Polyurethane bonding interlayer.
 - c. 1/2 inch polycarbonate sheet.
 - d. Polyurethane bonding interlayer.
 - e. 1/2 inch polycarbonate sheet.
 - f. Polyurethane bonding interlayer.
 - g. 1/8 inch polycarbonate sheet with high AR abrasion-resistant surface.
 - h. Material shall have a flexural strength of at least 13,500 psi per ASTM D790; and shall have AR (high performance abrasion-resistant) surfaces for enhanced service life and resistance to marring. Material shall conform to applicable code as a CC-1 rated Approved Light Transmitting Plastic.
 - i. Level 3 - .44 Magnum caliber rated.

2.7. AIR CURTAINS

- A. Manufacturers:
 - 1. CSE Corp.

Used over pass-thru/drive-thru windows to help keep the employee comfortable during the coldest of climates and helps protect against dust, insects, and odors while maintaining a controlled climate during the summer.

Note: Heated Air Curtain does not work in conjunction with a micro switch due to the timing of heating the heating element.

- a. Model CHF-25:
 - 1) Actual Dimensions - Housing: 25 inches (w) x 14-3/8 inches (h) x 9 inches (d).
 - 2) Finish: Clear anodized aluminum and black resin composite caps.
 - 3) Electrical requirements:
 - a) 208/240 VOLT.
 - b) 30 AMP circuit.
 - c) Wiring Requirements: Copper.
 - d) ETL-Listed for interior installation.

This unit produces a greater velocity of air flow and is used to help eliminate above average insect condition.

- b. Model CF-25:
 - 1) Actual Dimensions - Housing: 25 inches (w) x 10-3/8 inches (h) x 9 inches (d).
 - 2) Finish: Clear anodized aluminum and black resin composite caps.
 - 3) Electrical requirements:
 - a) 120 VOLT.
 - b) 20 AMP circuit.
 - c) Wiring Requirements: Copper.
 - d) ETL-Listed for interior and exterior installations.

2. Substitutions: [In accordance with Contract Documents.] [Not Permitted.]

2.8. DEAL TRAYS AND SHELVES

A. Refer Section 11 17 00 {11030} Teller and Service Equipment.

2.9. INTERCOM AND TALK THROUGH

A. Manufacturers - Intercom:

Single station application.

a. Model: Audio Authority Model 1580S and 1580HS Series:

B. Manufacturers - Talk Through:

1. CSE Corp.

Non-electronic, heavy-duty, stainless steel speak thru offering Level 3 bullet resistant protection. Can be installed on any CSE Ticket Windows or other Bullet Resistant Windows.

a. Model: 6 inch Round Heavy Stainless Steel Level 3 Speak-Thru.

Two-way communication is accomplished through the use of speakers and microphones located on each side of the partition; inside operator controls the operation by speaking into the microphone.

- b. Haventech Model SC-100L.
 - 1) Rugged Aluminum Construction.
 - 2) Compact 4 inch diameter design with gooseneck microphone.
 - 3) Level 2 bullet resistant.
 - 4) Voice activated switch.
 - 5) Background noise level monitoring.

- 6) Linear volume control.
- 7) Operates with a rechargeable battery pack.
- 8) On/Off switch.
- 9) AC version available.

2. Substitutions: [In accordance with Contract Documents.] [Not Permitted.]

1.2. SECURITY DEVICE ACCESSORIES

- A. Security Lock Bar: Sliding aluminum lock bar.
- B. Auto-Lock Handle: Stainless steel constructed auto-locking handle on all self-closing sliders to prevent intrusion.
- C. Electric Auto-Lock: 3/4 inch stainless steel pin automatically locks behind electric window units to prevent intrusion.
- D. Hook-Lock: Maximum security Adams Rite style hook lock on all sliders.

1.3. ELECTRICAL REQUIREMENTS

- A. Electrical Windows: 120V / 60 Hz, 20 amp branch circuit, single phase. Conforms to UL Standard 325 – Certified to CAN/CSA C22.2 NO. 247.
- B. Non-Heated Air Curtains: 120V / 60 Hz, 15 amp branch circuit, single phase. Conforms to UL Standard 1995 – CSA C22.2.
- C. Heated Air Curtains: 208 / 230V / 60 Hz, 30 amp branch circuit, single phase. Conforms to UL Standard 1995 – CSA C22.2.

1.4. FABRICATION

- A. Fabricate window to dimensions indicated on Drawings.
- B. Fabricate windows, and accessories to provide a complete system for assembly of components and anchorage of window, drawers and accessories.
 1. Provide units that are reglazable from the secure side without dismantling the nonsecure side of framing.
 2. Prepare security windows for glazing unless preglazing at the factory is indicated.
- C. Provide weep holes and internal water passages for exterior security windows to conduct infiltrating water to the exterior.
- D. Rigidly fit and secure joints and corners with internal reinforcement. Make joints and connections flush, hairline, and weatherproof. Fully weld corners.
 1. Fabricate framing with manufacturer's standard, internal opaque armoring in thicknesses required for security windows to comply with ballistics-resistance performance indicated.

- E. Prepare components with reinforcement required for hardware.
- F. Welding: To greatest extent possible, weld before finishing and in concealed locations to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- G. Metal Protection: Separate dissimilar metals to protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose.
- H. Factory-cut openings in glazing for speaking apertures.
- I. Preglazed Fabrication: Preglaze window units at factory, where required for applications indicated.
- J. Weather Stripping: Factory applied.
- K. Bottom Sills: Stainless steel construction, no bottom tracks and no pop rivets.
- L. Handles: Stainless steel, manufacturer's standard profile and finish.

1.5. SHOP FINISHING

Select applicable finishes for project.

- A. Aluminum Finishes:
 - 1. Mill Finished Aluminum Surfaces: manufacturer's standard finish.
 - 2. Clear Anodized Aluminum Surfaces: AA-M10C22A31 non-specular as fabricated mechanical finish, medium matte chemical finish, and Architectural Class II 0.7 mils (0.018 mm) clear anodized coating.
 - a. Conform to AAMA 611
 - 3. Color Anodized Aluminum Surfaces: AA-M10C22A34 non-specular as fabricated mechanical finish, medium matte chemical finish, and Architectural Class II 0.7 mils (018 mm) bronze or black coating.
 - a. Conform to AAMA 611.
 - 4. Painted Finish:
 - a. AA-M12C12R1x non-specular as fabricated mechanical finish, chemically cleaned, and prepared for applied coating; with organic coating.
 - 1) Organic Coating: Manufacturer’s standard powder coat finish.
 - a) [Conform to AAMA 2603.]
 - b. DPC TM 10.219 - PCI Powder Smoothness.
 - 1) DuPont Powder Coating Test Method.

- B. Concealed Steel Items: [Galvanized in accordance with ASTM A123 to thickness Grade 85, 2.0 oz/sq ft (610 gm/sq m).
- C. Stainless Steel: 304 Stainless Steel with NAAMM No. 3 finish.
- D. Apply bituminous paint to concealed metal surfaces in contact with cementitious or dissimilar materials.
- E. Touch-Up Primer for Galvanized Steel Surfaces: SSPC Paint 20 zinc rich.
- F. Extent of Finish:
 - 1. Apply factory coating to all surfaces exposed at completed assemblies.
 - 2. Apply finish to surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
 - 3. Apply touch-up materials recommended by coating manufacturer for field application to cut ends and minor damage to factory applied finish.

2. EXECUTION

2.1. EXAMINATION

- A. Section 01 30 00 - Administrative Requirements {01300 - Administrative Requirements}: Verification of existing conditions before starting work
- B. Verify construction is ready to receive Products specified in this section.
- C. Verify rough openings are correct size and in correct location.
- D. Examine roughing-in for embedded and built-in anchors to verify actual locations of security window connections before security window installation.
- E. Inspect built-in and cast-in anchor installations, before installing security windows, to verify that anchor installations comply with requirements. Prepare inspection reports.
 - 1. Remove and replace anchors where inspections indicate that they do not comply with specified requirements. Reinspect after repairs or replacements are made.
 - 2. Perform additional inspections to determine compliance of replaced or additional work. Prepare anchor inspection reports.
- F. For glazing materials whose orientation is critical for performance, verify installation orientation.
- G. Proceed with installation only after unsatisfactory conditions have been corrected.

2.2. PREPARATION

- A. Furnish frames and anchors to other sections as required for installation in surrounding partition and casework construction.

2.3. INSTALLATION

- A. Install Products in accordance with manufacturer's instructions.
- B. Align Products plumb, level and square.
- C. Rigidly secure Products to adjacent supporting construction.
- D. Glaze windows in accordance with manufacturer's instructions and Section _____.
- E. Seal perimeter joints in accordance with Section _____.
- F. Connect electrical components to power source.
- G. Protection: Where dissimilar metals will contact each other, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended in writing by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

2.4. ADJUSTING

- A. Section 01 70 00 - Execution and Closeout Requirements {01700 - Execution Requirements}: Requirements for adjusting.
- B. Adjust horizontal-sliding, transaction security windows to provide a tight fit at contact points for smooth operation and a secure enclosure.
- C. Adjust transaction drawers to provide a tight fit at contact points for smooth operation and [weathertight and] secure enclosure.
- D. Remove and replace defective work, including security windows that are warped, bowed, or otherwise unacceptable.

2.5. CLEANING AND PROTECTION

- A. Section 01 70 00 - Execution and Closeout Requirements {01700 - Execution Requirements}: Requirements for cleaning.
- B. Remove protective material from factory finished surfaces.
- C. Wash surfaces by method recommended and acceptable to sealant and window manufacturer; rinse and wipe surfaces clean.

- D. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant and window manufacturer.
- E. Clean metal and glass surfaces to polished condition.
 - 1. Lubricate sliding security window hardware.
 - 2. Lubricate transaction drawer hardware.
- F. Provide temporary protection to ensure that security windows are without damage at time of Substantial Completion.

2.6. DEMONSTRATION

Retain this article if operable security windows or transaction drawers are included.

- A. [Engage a factory-authorized service representative to train] [Train] Owner's maintenance personnel to adjust, operate, and maintain [operable security windows] [and] [security windows with transaction drawers].

END OF SECTION