3-PART CSI MASTERFORMAT SPECIFICATION

SECTION **079513.16**

**exterior EXPANSION JOINT COVER ASSEMBLIES**

Rev 10/23

1. GENERAL
	* + 1. SUMMARY
				1. Section includes:

Exterior building expansion joint cover assemblies.

* + - 1. Related Requirements:
				1. Section 077129 “Manufactured Roof Expansion Joints” for factory-fabricate roof expansion joint cover assemblies.
				2. Section 079100 “Preformed Joint Seals” for preformed foam and extruded-silicone joint seals.
				3. Section 079513.13 “Interior Expansion Joint Cover Assemblies”
				4. Section 079513.19 “Parking Deck Expansion Joint Cover Assemblies” for expansion joint cover assemblies subject to vehicular traffic.
				5. Floor and wall finishes: Refer to Division 09.
				6. Field painting: Refer to Section 09 91 00.
			2. COORDINATION
				1. Coordinate sizes and locations of expansion joint cover assemblies with joint widths and assumed movement.
			3. action SUBMITTALS
				1. Comply with Division 01 requirements.
				2. Product Data: Manufacturer's specifications and technical data edited specifically for proposed system, including specific requirements indicated.

Detailed specification of construction and fabrication.

* + - * 1. Shop Drawings: Indicate joint device profile, dimensions, location in the work, affected adjacent construction, anchorage devices, and location of splices.
				2. Samples: Submit 2 6-inch samples, illustrating operational properties of assemblies.
			1. informational submittals
				1. Sustainable Design Submittals:

Building Product Disclosure Requirements: To encourage the use of building products that are working to minimize their environmental and health impacts, provide the following information when available:

Material Ingredients Documentation demonstrating the chemical inventory of the product.

* + - 1. closeout submittals
				1. Manufacturer's Installation Instructions and Operation & Maintenance: Indicate installation, operation and maintenance requirements and rough-in dimensions.
				2. Provide manufacturer’s written warranty.
			2. DELIVERY, STORAGE AND HANDLING
				1. Comply with Division 01 requirements.
				2. Packing and Shipping: Deliver products in original unopened packaging with legible manufacturer's identification.
				3. Store per manufacturer’s instructions.

Store in dry area out of direct sunlight.

1. PRODUCTS
	* + 1. MANUFACTURERs
				1. Nystrom

9300 73rd Avenue N

Minneapolis, MN 55428

PH: (800) 547-2635
www.Nystrom.com

* + - 1. ASSEMBLY DESCRIPTION
				1. Furnish units in longest practicable lengths to minimize field splicing.
				2. Include factory-fabricated closure materials and transition pieces, T-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous expansion joint cover assemblies.
			2. PERFORMANCE REQUIREMENTS
				1. Seismic Performance: Expansion joint cover assemblies shall withstand the effects of earthquake motions determined according to [**ASCE/SEI 7**] <**Insert requirement**>.
				2. Fire-Resistance Ratings: Provide expansion joint cover assemblies with fire barriers identical to those of systems tested for fire resistance according to [**UL 2079**] [**or**] [**ASTM E 1966**] by a qualified testing agency.

Hose Stream Test: Wall-to-wall and wall-to-soffit assemblies shall be subjected to hose stream testing.

* + - * 1. Expansion Joint Design Criteria <**Insert drawing designation**>:

Type of Movement: [**Thermal**] [**Wind sway**].

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: [As indicated on Drawings] <Insert width>

Type of Movement: Seismic.

Joint Movement: As indicated on Drawings.

* + - 1. EXTERIOR VERTICAL EXPANSION JOINT COVERS
				1. Seismic Aluminum Exterior Wall System Surface Mount Application.

Basis-of-Design: Nystrom Model EJN-RJX

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Aluminum.

Finish: Clear anodized.

Attachment Method: Mechanical fasteners, SR-Sealant.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Seismic Aluminum Exterior Wall System Surface Mount Application.

Basis-of-Design Product: Nystrom Model EJN-RJXw

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Aluminum.

Finish: Clear anodized.

Attachment Method: Mechanical fasteners, SR-Sealant..

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Seismic Elastomeric Corridor Wall & Ceiling System Drywall Bead Application.

Basis-of-Design Product: Nystrom Model EJN-EWN

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

 Aluminum.

Finish: Mill.

Seal: Santoprene.

Attachment Method: Mechanical fasteners, SR-Sealant.

Pantograph Mechanism for units 8-inches (20.3-cm) through 24-inches (61-cm).

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Seismic Elastomeric Corridor Wall & Ceiling System Drywall Bead Application.

Basis-of-Design Product: Nystrom Model EJN-EWNw

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

 Aluminum.

Finish: Mill.

Seal: Santoprene.

Attachment Method: Mechanical fasteners, SR-Sealant.

Pantograph Mechanism for units 8-inches (20.3-cm) through 24-inches (61-cm).

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard

* + - * 1. Seismic, expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model EJN-SES

Design Criteria:

Exposed Sight Line: Joint width**.**

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Small Joint compression seal designed for use in vertical and horizontal joints. Expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal

Basis-of-Design Product: Nystrom Model SER

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2-part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Integrated.

* + - * 1. Fire-rated 2 Hour, expanding foam, watertight, wax and asphalt free, non-invasve anchoring compression seal.

Basis-of-Design Product: Nystrom Model FES2

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: [**[As indicated on Drawings] <Insert width>.**

Material: Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: 2 Hour.

Standard: Meets UL-2079, ASTM E-119, E-1966 and E1399.

* + - * 1. Fire-rated 3 Hour, expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model FES3

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: 3 Hour.

Standard: Meets UL-2079, ASTM E-119, E-1966 and E1399.

* + - * 1. 2-Hour Rated Tamper-Resistant Seismic Pre-Compressed Parking Deck Foam System Recessed Application.

Basis-of-Design Product: Nystrom Model PSES2

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: 2 Hour.

Standard: Meets UL-2079, ASTM E-119, E-1966 and E1399.

* + - 1. EXTERIOR HORIZONTAL EXPANSION JOINT COVERS
				1. Seismic, expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal.

Basis-of-Design Product: Nystrom Model HES

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Load Capacity: Vehicular traffic.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Integrated.

* + - * 1. Small Joint compression seal designed for use in vertical and horizontal joints. Expanding foam, watertight, wax and asphalt free, non-invasive anchoring compression seal

Basis-of-Design Product: Nystrom Model SER

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Integrated.

* + - * 1. 2-Hour Rated Seismic Pre-Compressed Parking Deck Foam System Recessed Application.

Basis-of-Design Product: Nystrom Model FHES2

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2-part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: 2 Hour.

Moisture Barrier: Integrated.

* + - * 1. 3-Hour Rated Seismic Pre-Compressed Parking Deck Foam System Recessed Application.

Basis-of-Design Product: Nystrom Model FHES3

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2-part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: 3 Hour.

Standard: Meets UL-2079, ASTM E-119, E-1966 and E1399.

* + - * 1. 2-Hour Rated Tamper-Resistant Seismic Pre-Compressed Parking Deck Foam System Recessed Application

Basis-of-Design Product: Nystrom Model **PHES2**

Design Criteria:

Exposed Sight Line: Joint width.

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: 2 Hour.

Moisture Barrier: Integrated.

* + - * 1. 3-Hour Rated Tamper-Resistant Seismic Pre-Compressed Parking Deck Foam System Recessed Application

Basis-of-Design Product: Nystrom Model PHES3

Design Criteria:

Exposed Sight Line: Joint width

System Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Silicone bellows with foam sealant

Attachment Method: Self-compression with silicone sealant and 2 part epoxy.

Load Capacity: Standard duty.

Fire-Resistance Rating: 3 Hour.

Standard: Meets UL-2079, ASTM E-119, E-1966 and E1399.

* + - 1. EXTERIOR ROOF EXPANSION JOINT COVERS
				1. Roof Bellow System

Basis-of-Design Product: Nystrom Model EJN-EEJ

Design Criteria:

Bellow Size: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Flange: Galvanized steel

Bellow:

Flexible Membrane Cover: 60 mil (1.5 mm) EPDM sheet.

Color: Black.

Attachment Method: Mechanical fasteners.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Roof Bellow System Curb Application.

Basis-of-Design Product: Nystrom Model EJN-ECF

Design Criteria:

Bellow Size **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Flange: Galvanized steel.

Bellow:

Flexible Membrane Cover: 60 mil (1.5 mm) EPDM sheet.

Color: Black.

Attachment Method: Mechanical fasteners.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

* + - * 1. Seismic Aluminum Roof System Surface Application.

Basis-of-Design Product: Nystrom Model EJN-RJS

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: 0.25 inch (6 mm).

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Aluminum

 Mill finish.

Attachment Method: Mechanical fasteners.

Load: Snow.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

* + - * 1. Seismic Aluminum Roof System Cant Application.

Basis-of-Design Product: Nystrom Model EJN-RJF

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: 0.25 inch (6 mm).

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Aluminum, Mill finish.

Attachment Method: Mechanical fasteners.

Load: Snow.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

* + - * 1. Roof Bellow System Cover Membrane Application

Basis of Deign: Nystrom Model EJN-EWCF

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: 1 inch (25 mm).

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: **[Black][White]** EPDM

Attachment Method: Concealed Attachment Flanges: 1 3/8 inch (35 mm) wide by .015 inch (0.4 mm) thick tin strip wrapped with neoprene-coated nylon fabric.

* + - 1. EXTERIOR ROOF-TO-WALL EXPANSION CONTROL
				1. Roof Bellow System.

Basis-of-Design Product: Nystrom Model EJN-EEJw

Design Criteria:

Bellow Size: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Flange: Galvanized steel

Bellow:

Flexible Membrane Cover: 60 mil (1.5 mm) EPDM sheet.

Color: Black.

Attachment Method: Mechanical fasteners.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Roof Bellow System Curb Application.

Basis-of-Design Product: Nystrom Model EJN-ECFw

Design Criteria:

Bellow Size: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: **[As indicated on Drawings] <Insert width>.**

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material:

Flange: Galvanized Steel

Bellow:

Flexible Membrane Cover: 60 mil (1.5 mm) EPDM sheet.

Color: Black.

Attachment Method: Mechanical fasteners.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Roof Bellow System Cover Membrane Application

Basis of Deign: Nystrom Model EJN-EWCFw

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: 1 inch (25 mm).

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: **[Black][White]** EPDM

Attachment Method: Concealed Attachment Flanges: 1 3/8 inch (35 mm) wide by .015 inch (0.4 mm) thick tin strip wrapped with neoprene

* + - * 1. Seismic Aluminum Roof System Surface Application

Basis-of-Design Product: Nystrom Model EJN-RJSw

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: 0.25 inch (6 mm).

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Aluminum

Mill finish.

Attachment Method: Mechanical fasteners.

Load: Snow.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - * 1. Seismic Aluminum Roof System Cant Application.

Basis-of-Design Product: Nystrom Model EJN-RJFw

Design Criteria:

System Width: **[As indicated on Drawings] <Insert width>.**

Nominal Joint Width: **[As indicated on Drawings] <Insert width>.**

Minimum Joint Width: 0.25 inch (6 mm).

Maximum Joint Width: **[As indicated on Drawings] <Insert width>.**

Material: Aluminum

Mill finish.

Attachment Method: Mechanical fasteners.

Load: Snow.

Fire-Resistance Rating: Provide expansion control system and fire-barrier assembly with a rating not less than [**that of adjacent construction**] <**Insert rating**>.

Moisture Barrier: Manufacturer's standard.

* + - 1. MATERIALS
				1. Aluminum: ASTM B 221 (ASTM B 221M), Alloy 6063-T5 for extrusions; ASTM B 209 (ASTM B 209M), Alloy 6061-T6 for sheet and plate.
				2. Apply manufacturer's standard protective coating on aluminum surfaces to be placed in contact with cementitious materials.
				3. Stainless Steel: ASTM A 240/A 240M or ASTM A 666, Type 304 for plates, sheet, and strips.
				4. Brass: ASTM B 36/B 36M, UNS Alloy C26000 for half hard sheet and coil.
				5. Bronze: ASTM B 455, Alloy C38500 for extrusions; Alloy C23000 red brass for plates.
				6. Elastomeric Seals: Manufacturer's standard preformed elastomeric membranes or extrusions to be installed in metal frames.
				7. Fire Barriers: Any material or material combination, when fire tested after cycling, designated to resist the passage of flame and hot gases through a movement joint and to comply with performance criteria for required fire-resistance rating.
				8. Moisture Barrier: Manufacturer's standard, flexible elastomeric material.
1. EXECUTION
	* + 1. EXAMINATION
				1. Verify that rough openings for joint covers are correctly sized and located.
				2. Verify block outs are in place, where required.
			2. PREPARATION
				1. Provide anchoring devices for installation and embedment.
				2. Provide templates or rough-in measurements.
			3. INSTALLATION
				1. Install components and accessories to comply with manufacturer's instructions.

Exterior conditions: Heat weld splices and intersections to form a continuous joint system.

* + - * 1. Align work plumb and level, flush with adjacent surfaces.
				2. Rigidly anchor to substrate to prevent movement or misalignment.
				3. Where required install flexible fire barrier to comply with manufacturer's instructions.

END OF SECTION