SECTION 07916 – EXPANSION JOINT

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. The General Provisions of the contract, including the General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this Section.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Pre-Installation Conference:

1. Convene at Project site 2 weeks prior to beginning work of this Section.

2. Attendance: Contractor, Construction Manager, joint seal installer, joint seal manufacturer representative, and related trades.

3. Review and discuss:

a. Joint seal manufacturer's requirements, project conditions, substrate requirements allowable structural movement at joints, and protection of completed work.

b. Transitions in plane and direction, and requirement for continuity of seal through watertight transitions from wall expansion joint to other interfacing expansion joint systems at adjacent construction.

1.03 SUBMITTALS

A. Action Submittals:

1. Shop Drawings:

a. Indicate joint locations, dimensions, and adjacent construction.

b. Provide details for transitions in plane and direction for continuity of seal through watertight transitions from wall expansion joint to other interfacing expansion joint systems at adjacent construction.

2. Product Data: Material description and application instructions.

3. Samples:

a. Minimum 6 inch long samples of each joint seal.

B. Informational Submittals:

1. Manufacturer's certification that:

a. Products are capable of withstanding temperature of 150 degrees F (65 degrees C) for 3 hours while compressed to minimum of movement capability dimension without evidence of bleeding of impregnation medium from material.

b. Same material after heat stability test and after cooling to room temperature will self-expand to maximum of movement capability dimension within 24 hours at 68 degrees F (20 degrees C).

1.04 QUALITY CONTROL

A. Manufacturer Qualifications:

1. Minimum 10 years documented experience in production of specified materials.

2. Certified to ISO 9001 and 14001.

B. Installer Qualifications: Minimum 2 years documented experience in work of this Section.

1.05 DELIVERY, STORAGE AND HANDLING

A. In accordance with manufacturer's instructions.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Roadway Expansion Joint Seal, Main Waterproofing:

1. System: Extruded sealing gland with punched flanges embedded in high-strength, flexible, impact-absorbing elastomeric concrete nosing.

2. Gland:

a. Description: Extruded thermoplastic vulcanizate gland with punched flanges and heat welded transitions.

b. Shore A hardness: Minimum 65, tested to ASTM D 2240.

c. Tensile strength: Minimum 1,000 PSI, tested to ASTM D 412.

d. Ultimate elongation, Minimum 400 percent, tested to ASTM D 412.

3. Nosing:

a. Description: High strength, flexible, impact-absorbing elastomeric concrete material composed of two-part polyurethane resin reinforced with silica free aggregate.

b. Tensile strength: 490 PSI, tested to ASTM D638.

c. Compressive strength: Minimum 4,000 PSI, tested to ASTM D695.

d. Adhesion to primed concrete: Minimum 400 PSI, tested to ASTM D2734.

e. Impact resistance: No cracking at 19 inches, tested to ASTM D5628.

f. Shore A hardness: 54.0, tested to ASTM D2240.

4. Color: Black.

B. Roadway Expansion Joint Seal, Secondary Waterproofing:

1. System: Precompressed, silicone coated and acrylic impregnated-foam hybrid installed into field-applied epoxy adhesive, with silicone sealant band on joint faces.

2. Form: Procompressed to less than nominal material size for installation into designed joint size equal to material nominal size.

3. Movement capability: Plus or minus 50 percent, total 100 percent; pass ASTM E1399.

4. Adhesive: Epoxy type, furnished by joint seal manufacturer.

5. Silicone: Field applied sealant band at face of seal so substrate interface, furnished by joint seal manufacturer; same material and color as factory coating.

a. Abrasion resistance: Maximum 1 percent wight loss, tested to ASTM D4060.

b. Fuel resistance: Pass ASTM C719 and ASTM C1135

PART 3 – EXECUTION

3.01 PREPARATION

A. Clean joints thoroughly; remove loose and foreign matter that could impair adhesion or performance.

3.02 INSTALLATION

A. Install joint seal in accordance with manufacturer's instructions and approved Shop Drawings.

B. Remove joint seal from precompressed packaging, immediately insert into joint, and allow to expand.

C. Use temporary retainers if required to maintain joint seals in position until expansion is complete.

D. Secondary Waterproofing:

1. To be installed after pavement slab is demolished, but before new pavement slab is cast.

E. Main Waterproofing:

1. To be installed after new pavement slab is cast.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT

No measurement shall be made for the items in this Section

4.02 BASIS OF PAYMENT

Work involving the reinstallation of the expansion joint waterproofing for the Second level Ewa Concourse, Second level Diamond Head Concourse, and Third Level Ewa Concourse, shall be paid for at the contract Lump Sum prices for the Ewa Concourse Second Level Expansion Joint Waterproofing, Diamond Head Concourse Second Level Expansion Joint Waterproofing, and for the Ewa Concourse Third Level Expansion Joint Waterproofing. The contract prices paid shall be full compensation for all labor, tools, equipments, and all other incidentals necessary to complete the work.

Item No.	Description	Unit
07916.1	Ewa Concourse Second Level Expansion Joint	Lump Sum
07916.2	DH Concourse Second Level Expansion Joint	Lump Sum
07916.3	Ewa Concourse Third Level Expansion joint	Lump Sum

END OF SECTION