The Edgar *Specification.*

Guide specifications for natural stone paving and stone masonry, in CSI MasterFormat sections, written from how Edgar Stone Masonry builds. Edit the brackets, delete what doesn't apply, and drop them into the project manual.

How to use this document. These are guide specifications, not a design. Structural elements — retaining walls over 3'-0" retained or carrying a surcharge, footings in problem soils, anything the jurisdiction requires an engineer to seal — are designed by a licensed professional; these sections govern the stonework around them. Local code and the project's drawings govern where they differ. Companion drawings: **The Edgar Standard**, sheets SD-1 to SD-4.

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2. Section 04 43 00 — Stone Masonry (walls, caps, piers, veneer)

Section 32 14 40 — Stone Paving

PART 1 — GENERAL

1.1 Summary. Natural stone paving wet-set in a mortar bed on a reinforced concrete slab, with joints, steps, copings, edges and drainage as shown.

1.2 References. ASTM C616 (quartz-based dimension stone); ASTM C97, C99, C170, C880 (stone test methods); ASTM C150, C207, C144, C270 (cement, lime, sand, mortar); ACI 301, ACI 306 (concrete; cold weather); ASTM A615, A1064 (reinforcing); ASTM C920 (sealants); TMS 602 (masonry construction, cold-weather procedures).

1.3 Submittals. Stone samples (minimum three pieces showing the range of color and finish); stone source and grade; mortar and bond-coat product data; a mock-up panel [4'×4'] approved before the work begins and kept as the standard.

1.4 Quality assurance. Installer with a minimum of ten years setting natural stone paving, with the work led on site by a master mason.

1.5 Field conditions. Do not set stone below 40°F unless TMS 602 cold-weather procedures are followed; protect new work from freezing and from rain for 24 hours minimum. Do not set on frozen subgrade or base.

1.6 Warranty. [Five] years on the stonework and [ten] years on the base beneath it, from substantial completion.

PART 2 — PRODUCTS

2.1 Stone. [Blue Select bluestone] [full-range Pennsylvania flagstone] [thermal-finished bluestone], ASTM C616, sound and free of seams, [1½ in.] minimum thickness for paving, [2 in.] for treads and copings. Pattern: [ashlar, sizes per drawings] [irregular, minimum 2 sq ft per piece]. Edges: [sawn] [natural cleft] [eased ⅛ in.]. Coping and treads: [bullnose] [eased], with [1 in.] nosing at treads.

2.2 Setting bed and joints. Portland cement–sand mortar, ASTM C270 Type S, 1 in. nominal setting bed; cement–sand bond coat applied to the slab immediately before setting. Joint mortar to match approved color.

2.3 Concrete slab. 4,000 psi air-entrained, ASTM C94, 4 in. minimum; reinforced with #4 bars at 18 in. o.c. each way or 6×6–W2.9×W2.9 welded wire reinforcement on chairs.

2.4 Base. Graded aggregate base [VDOT No. 21A] [MD SHA GAB], 6 in. minimum compacted thickness.

2.5 Joint sealants. At expansion joints and at coping: ASTM C920 multi-component polyurethane over closed-cell backer rod, color to match joints.

PART 3 — EXECUTION

3.1 Examination. Verify subgrade is undisturbed or compacted, free of topsoil, organics and frost. Locate utilities through 811 before excavating. Confirm finished elevations at doors, thresholds and pool coping before forming.

3.2 Base and slab. Place aggregate base in lifts not over 4 in., each compacted to 95% of maximum density. Form and pour the slab to the design pitch: 2% minimum away from the building within 10 ft (IRC R401.3), 1–2% elsewhere to drains or lawn. Tool or saw control joints at locations that will fall beneath stone joints. At pools, separate the deck slab from the bond beam with a full-depth expansion joint.

3.3 Setting. Lay out the pattern dry before setting. Apply bond coat; set each stone in a full mortar bed, beat in to full contact — no voids or spot bedding. Maintain joint width [⅜–½ in.] ±1/16 in.

3.4 Tolerances. Lippage between adjacent units: 1/16 in. maximum for sawn stone, ⅛ in. for natural cleft. Surface: within ¼ in. in 10 ft of the design slope. Steps: risers [7 in.], 7¾ in. maximum (IRC R311.7.5.1), varying no more than ⅜ in. within a flight; treads [14 in.], 10 in. minimum (IRC R311.7.5.2); nosing ¾–1¼ in. where treads are under 11 in. Handrails where a flight has four or more risers (IRC R311.7.8).

3.5 Joints. Fill joints full depth after the bed has set; tool slightly concave. Keep mortar off the stone face; clean as the work proceeds.

3.6 Drainage. Provide area drains, linear drains at thresholds and outlet piping as shown, to daylight or an approved dry well; no surface may drain toward a foundation.

3.7 Curing and protection. Keep new work protected and damp-cured for 72 hours; no foot traffic for 24 hours and no vehicle or equipment loads for 7 days. Protect from freezing per 1.5.

3.8 Cleaning. Clean with water and stiff brushes and a cleaner approved by the stone supplier. Do not acid-wash bluestone. Efflorescence in the first season is normal and is brushed dry, not acid-washed.

3.9 Sealing (optional). If specified, apply a breathable penetrating sealer no sooner than 28 days after setting, per the manufacturer.

Notes to the specifier. Delete Part 3.4 step requirements where no steps occur. For vehicular paving, replace 2.3 with a slab designed for the load. For porcelain pavers, substitute a bonded mortar system made for porcelain and the manufacturer's joint requirements.

Section 04 43 00 — Stone Masonry

Natural stone retaining and seat walls, stone faces over concrete masonry, caps, piers and columns, and adhered thin stone veneer.

PART 1 — GENERAL

1.1 References. ASTM C270, C476 (mortar; grout); ASTM C90 (concrete masonry units); ASTM A615; TMS 402/602 (design and construction of masonry structures); AASHTO M43 No. 57 (drainage aggregate); AASHTO M288 (geotextile); ASTM D2729 (perforated drain pipe).

1.2 Design. Retaining walls over 3'-0" retained height, walls supporting a surcharge (driveways, slopes, structures), tiered walls and walls on a lot line are designed by a licensed engineer and permitted per the jurisdiction (Montgomery County DPS; Fairfax County LDS; others as applicable). This section governs the stone and the workmanship.

1.3 Submittals. Stone samples and a sample panel [4'×4'] showing stone, coursing, joint width and mortar color, approved before the work begins.

1.4 Field conditions. As Section 32 14 40, 1.5 (cold weather per TMS 602).

PART 2 — PRODUCTS

2.1 Stone. [Natural fieldstone] [coursed ashlar] [thin natural veneer, 1½ in. nominal], sound, from a single source for the project. Caps: [2 in.] [3 in.] thermal bluestone, sawn edges, with [1½ in.] overhang and a drip groove.

2.2 Mortar and grout. ASTM C270 Type S for stone; ASTM C476 grout for CMU cores; color to match the approved panel.

2.3 Cores and footings. CMU, ASTM C90; footings 4,000 psi concrete, reinforced, bearing below frost depth — 24 in. in Fairfax County, 30 in. in Montgomery County, or as the jurisdiction requires.

2.4 Drainage. No. 57 clean stone, 12 in. wide behind retaining walls to within 6 in. of grade; geotextile separation from soil; 4 in. perforated pipe at the heel to daylight; weeps at 6'-0" o.c. where the face is solid.

PART 3 — EXECUTION

3.1 Laying. Full mortar beds and head joints — no dry or spot-bonded stone in mortared work. Lay to line; corners plumb; joints [⅜–¾ in.], raked or tooled to match the panel. Tie the stone face to the core with corrosion-resistant ties at 16 in. o.c. each way.

3.2 Caps. Set caps in a full mortar bed with a slight pitch to shed water; joints sealed or mortared to match.

3.3 Adhered veneer. Clean the substrate; where painted, sealed or non-absorbent, install galvanized metal lath with a ½ in. scratch coat. Set each unit with full mortar coverage; adhered veneer 15 psf maximum — heavier stone bears on a ledge or footing.

3.4 Piers and columns. Grouted CMU core with reinforcement hooked into the footing; conduit set in the core for lighting before the stone face; reinforced core and deeper footing where a gate hangs, to the gate maker's loads.

3.5 Cleaning and protection. As Section 32 14 40, 3.7–3.8.

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