This 3-part specification utilizes the Construction Specifications Institute (CSI) Manual of Practice, including MasterFormat, SectionFormat, and PageFormat and is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and masterguide specifications. Optional text is indicated by brackets [ ]; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This 3-part specification specifies concrete tile manufactured by Arto Brick California Pavers. Revise section number and title below to suit project requirements, specification practices and section content. Refer to CSI MasterFormat for other section numbers and titles.

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Concrete wall and pier caps

B. Related sections:

1. Division 09 Section: Concrete and Masonry Coatings

Specifier Note: Article below may be omitted when specifying manufacturer’s proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 01 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

1.02 REFERENCES

A. American Society of Testing and Materials (ASTM International)

1. C 33 Specification for Concrete Aggregates
2. C 39/C 39M Test Method for Compressive Strength of Cylindrical Concrete Specimens
4. C 140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
5. C 150 Specification for Portland Cement
7. C 260 Specification for Air-Entraining Admixtures for Concrete
8. C270 Specification for Mortar for Unit Masonry
CONCRETE WALL AND PIER CAPS 03 48 00

9. C331 Specification for Lightweight Aggregates for Concrete Masonry Units
10. C482 Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste
11. C494/C494M Specifications for Chemical Admixtures for Concrete
12. C 979 Specification for Pigments for Integrally Colored Concrete
13. C1116/C1116M Specification for Fiber-Reinforced Concrete

1.03 SYSTEM REQUIREMENTS

A. Performance Requirements
   1. Absorption (ASTM C140): Not more than 12%.
   2. Compressive Strength (ASTM C39): Not less than 4000 psi (27,560 kPa).
   4. Bond Strength (ASTM C482): 50 psi (0.3 MPa).

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect’s and Contractor’s duties and responsibilities in Conditions of the Contract and Division 01 Submittal Procedures Section.

1.04 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures Section.

B. Product Data: Submit product data for specified products.

C. Shop Drawings: Indicate layout, corners, terminals, radius sizes, junctions with dissimilar materials, accessories and setting details.

D. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 01 Quality Assurance Section.

E. Samples: Submit selection and verification samples of finishes, colors and textures.

1.05 QUALITY ASSURANCE

A. Qualifications
   1. Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project for a minimum of 5 years.

B. Regulatory Requirements and Approvals: [Specify applicable requirements of regulatory agencies.]
   1. [Code agency name].
Specifier Note: Retain paragraph below for erected assemblies (either onsite or offsite) required for review of construction, coordination of work of several sections, testing or observation of operation. Mock-ups, when accepted or approved, establish standards by which work will be judged. Coordinate below with Division 01 Quality Control (Mock-Up Requirements) Section.

C. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern and workmanship standard(s). Comply with Division 01 Quality Control (Mock-Up Requirements) Section.

1. Mock-Up Size: [Specify mock-up size.]

2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required

3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 01 Product Requirements Section.

1.06 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 01 Product Requirements Section.

B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

1.07 ENVIRONMENTAL REQUIREMENTS

A. Install mortar, set caps and grout when surface temperature is a minimum of 50 degrees F (10 degrees C) and rising but no greater than 90 degrees F (32 degrees C).

B. Do not install mortar, set caps or grout when inclement weather conditions are expected within 48 hours of completion.

1.08 EXTRA MATERIALS

A. Extra materials: Provide _ pcs of each size, color and accessories specified.

PART 2 PRODUCTS
CONCRETE WALL AND PIER CAPS 03 48 00

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 PRODUCTS

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to 3-part specificaton. Retain or delete paragraph below per project requirements and specifier's practice.

A. Manufacturer: Arto Manufacturing Company.
   1. Contact: 15209 S. Broadway St., Gardena, CA 90248-1823; Telephone: (310) 768-8500; Fax: (310) 768-8544; website: www.artobrick.com.

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 01 Project Requirements (Product Substitutions Procedures) Section.

B. Substitutions: No substitutions permitted.

Specifier Note: Paragraphs below list proprietary products offered by Arto Brick California Pavers. All measurements are nominal; consult manufacturer regarding exact measurements and product options. Select product characteristics required; delete characteristics not required.

2.02 WALL AND PIER CAPS

1. Roman Wall Caps (width/length/thickness)
   1. 8" x 24" x 2"
   2. 10" x 24" x 2"
   3. 12" x 24" x 2"
   4. 14" x 24" x 2"
   5. 16" x 24" x 2"
   6. 18" x 24" x 2"
   7. 20" x 24" x 2"

2. Roman Pier Caps (overall/base)
   1. 10" x 10" x 3", 8" base
   2. 14" x 14" x 3", 13" base
   3. 16" x 16" x 3", 14.5" base
   4. 19" x 19" x 3.5", 17.5" base
   5. 22" x 22" x 4", 20.5" base
   6. 26" x 26" x 2.5", 13" base (flat top)
   7. 15" x 20" x 2.5", 13" x 18" base (flat top)

3. Colors
1. Antik Gray
2. Artillo
3. Artillo Café
4. Beachwood Flash
5. Buff
6. Café Olay
7. Cauqi
8. Charcoal
9. Charley Brown
10. Chicago
11. City Hall Red
12. Cotto Dark
13. Cotto Gold
14. Desert
15. Early Gray
16. Flagstone
17. Gold
18. Hacienda
19. Hacienda Flash
20. Hancock
21. Jose Gray
22. Lopez Brown
23. Mission Red
24. Natural Gray
25. Ocean Green
26. Old California
27. Plumish
28. Red Flash
29. Rosa
30. Rosa White Wash
31. Sangria
CONCRETE WALL AND PIER CAPS 03 48 00

32. Sidewalk Gray
33. Smoke
34. Sonora Sunset
35. Tuscan Mustard

4. Surface Textures
   1. Standard
   2. Limestone
   3. Luna
   4. Travertine
   5. Vintage
   6. Acid Wash
   7. Sand Blast

2.03 ACCESSORIES

A. Roman Wall Cap Corners
B. Roman Wall Cap Terminals
C. Roman Wall Cap Radius Pieces
   1. Insert radius size(s) specified.

2.04 MATERIALS

A. Mortar
   1. ASTM C270; Type S.
B. Grout
   1. Fill joints between units with Type S mortar or grout appropriate for specified joint width.
C. Sealer (optional)
   1. Seal all components with penetrating sealer to protect surface finish and color.
   2. Sealing is recommended in areas subject to freeze thaw conditions.

PART 3 EXECUTION

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to this three-part specification. Retain or delete paragraph below per project requirements and specifier’s practice.

3.01 MANUFACTURER’S INSTRUCTIONS
CONCRETE WALL AND PIER CAPS 03 48 00

A. Compliance: Comply with manufacturer’s product data, including product technical bulletins, product catalog installation instructions and product pallet instructions for installation.

3.02 EXAMINATION

A. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer’s instructions.

3.03 PREPARATION

A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   1. Ensure all substrates are clean and free of contaminants and have a roughened surface to encourage bonding.

3.04 CLEANING

A. Clean with water and soft nylon brushes only; do not allow mortar to set up on surfaces.
B. Do not use acid or alkali cleansers which may damage the surface of the product.
C. Fine grained sandpaper may be used to remove marks and stains, depending on color.
D. Test all products before wholesale application.

3.05 PROTECTION

A. Protect installed products until completion of project.
B. Repair or replace damaged products prior to Substantial Completion.

END OF SECTION