

**SECTION 04 21 29
TERRA COTTA COPING TILES**

PART 1 – GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM C126 - Standard Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units; 2022.

1.02 GENERAL REQUIREMENTS

- A. The Contractor is referred to the “Form of Proposal”; the “Form of Bid Bond”; “Division 1 - General” of the “Contract Specifications”; the “Contract Drawings” and all Amendments and Addenda thereto; all of which govern the Work of this Section. .
 - 1. SCOPE OF WORK
 - a. The Work of this Section includes all labor, materials, equipment and services necessary to complete the required Terra Cotta Coping work as indicated on the Drawings and/or specified herein including, but not limited to, the following:
 - 1) Remove existing deteriorated Terra Cotta coping and replace with new, - to match.
 - 2) Provide all other labor and materials as may be reasonably inferred to make the work of this Section complete.

1.03 RELATED WORK

THE FOLLOWING SECTIONS/DIVISIONS CONTAIN REQUIREMENTS THAT RELATE TO THE WORK OF THIS SECTION:

1. SECTION 02 41 19 – DEMOLITION AND REMOVALS

1.04 SUBMISSIONS

A. SEE DIVISION 1, SECTION 01 32 33 - SUBMISSIONS

1.05 QUALITY ASSURANCE

A. QUALIFICATIONS

8.01 COMPANY SPECIALIZING IN THE WORK OF THIS SECTION SHALL HAVE A MINIMUM OF THREE YEARS EXPERIENCE AND AT LEAST THREE SUCCESSFUL PROJECTS WITH SIMILAR QUANTITY OF MATERIALS.

B. REGULATORY REQUIREMENTS

BUILDING CODE: WORK OF THIS SECTION SHALL CONFORM TO ALL REQUIREMENTS OF THE NYC BUILDING CODE AND ALL APPLICABLE REGULATIONS OF GOVERNMENTAL AUTHORITIES HAVING JURISDICTION, INCLUDING SAFETY, HEALTH, NOISE, AND ANTI-POLLUTION REGULATIONS. WHERE MORE SEVERE REQUIREMENTS THAN THOSE CONTAINED IN THE BUILDING CODE ARE GIVEN IN THIS SECTION, THE REQUIREMENTS OF THIS SECTION SHALL GOVERN.

C. CERTIFICATION

10.01 REINFORCED AND UN-REINFORCED MASONRY SHALL CONFORM TO THE

10.02 MATERIAL ACCEPTANCE CERTIFICATION AND INSPECTION REQUIREMENTS OF ARTICLE 7, CHAPTER 1 - SUBCHAPTER 1 AND TABLES 10-1 AND 10-2 OF THE BUILDING CODE (TITLE 27).

1.06 DELIVERY, STORAGE, AND HANDLING

A. PACKAGED PRODUCTS

12.01 DELIVER MATERIALS TO THE SITE IN MANUFACTURER'S ORIGINAL, SEALED CONTAINERS. DO NOT DELIVER MATERIALS THAT HAVE EXCEEDED SHELF LIFE LIMITATION SET FORTH BY THE MANUFACTURER. MATERIAL CONTAINERS SHALL BEAR THE MANUFACTURER'S LABEL INDICATING MANUFACTURER'S NAME, TRADE NAME OF PRODUCT, LOT NUMBER, SHELF LIFE OF PRODUCT, AND MIX RATIO (IF APPLICABLE). THIS INCLUDES INDIVIDUAL BAGS OF PRE-BAGGED MORTAR MIXES.

12.02 COMPLY WITH MANUFACTURER'S PRINTED INSTRUCTIONS FOR STORING AND PROTECTING MATERIALS.

B. BULK AGGREGATE

13.01 STORE IN A MANNER WHICH WILL KEEP AGGREGATE CLEAN AND PROTECTED FROM THE WEATHER ELEMENTS.

1.07 ENVIRONMENTAL REQUIREMENTS

A. CONSTRUCTION REQUIREMENTS

15.01 FOR FACTORY PACKAGED PRODUCTS, COMPLY WITH MANUFACTURER'S PRINTED LIMITATIONS AND INSTRUCTIONS.

15.02 SALT OR OTHER CHEMICALS FOR LOWERING THE FREEZING TEMPERATURE OF THE MORTAR SHALL NOT BE USED.

15.03 MASONRY UNITS, MORTAR, AND GROUT SHALL BE PRECONDITIONED AND MASONRY PROTECTED FOR THE FOLLOWING COLD WEATHER CONDITIONS:

15.04 AIR TEMPERATURE 40oF TO 32oF:

- A. Heat mixing water or sand to minimum of 70oF and to maximum of 160oF.**

15.05 AIR TEMPERATURE 32OF TO 25OF:

- A. Heat mixing water and sand to minimum of 70oF and to maximum of 160oF.
- B. Provide heat source to maintain a minimum air temperature 32°F on each side of masonry construction.

15.06 AIR TEMPERATURE 25OF TO 20OF:

- A. Heat mixing water and sand to minimum of 70oF and to maximum of 160oF.
- B. Provide heat source to maintain a minimum air temperature of 32° on each side of masonry construction.
- C. Provide wind breaks for wind in excess of 15 miles per hour.

15.07 AIR TEMPERATURE 20OF AND BELOW:

- A. Heat mixing water and sand to a minimum of 70oF and to maximum of 160oF.
- B. Provide enclosures and heat source to maintain a minimum air temperature of 32oF on each side of masonry construction during construction.
- C. Keep temperature of masonry units a minimum of 30oF when laid.

B. PROTECTION REQUIREMENTS

16.01 1. MEAN DAILY AIR TEMPERATURE OF 40°F TO 32°F:

- A. Protect masonry from rain or snow for 24 hours.

16.02 MEAN DAILY AIR TEMPERATURE OF 32°F AND BELOW:

- A. An air temperature of at least 32°F shall be maintained on each side of masonry for a period of at least 72 hours for Type N mortar and for pointing mortar.

C. WETTING OF CLAY MASONRY UNITS

17.01 FOR UNITS WITH INITIAL RATES OF ABSORPTION THAT REQUIRE THEIR WETTING BEFORE LAYING, FOLLOW THE FOLLOWING COLD WEATHER REQUIREMENTS:

17.02 IF SURFACE TEMPERATURES ARE ABOVE 32OF, USE WATER HEATED TO ABOUT 70OF.

17.03 IF SURFACE TEMPERATURES ARE BELOW 32OF, USE WATER HEATED TO ABOUT 120OF.

PART 2 – PRODUCTS

18.01 TERRA COTTA COPING TILE

- A. Shall match the camel-back profile of existing copings and consist of vitrified glazed tile as per ASTM C126, having minimum compressive strength of 600 psi and a water absorption rate of glaze, 15% as per ASTM C67. Tiles shall be equal to existing, sound and free from cracks, checks and other defects impairing durability or water tightness and be true and even.

2.02 MIXES

A. MORTAR TYPES

20.01 ALL MORTAR:

- A. Latex Reinforced Mortar, color to match the color and texture of existing corresponding materials.

PART 3 EXECUTION

21.01 3.01 EXAMINATION

- A. Examine all adjoining Work on which this Work is in anyway dependent for proper installation and workmanship. Report to the Authority any conditions that prevent the performance of this Work.

3.02 PREPARATION AND PROTECTION

A. PROTECTION

23.01 PROTECT ADJACENT SURFACES NOT BEING RESTORED. PROTECT SILLS, LEDGES, AND PROJECTIONS FROM MATERIAL DROPPINGS. ALSO PROTECT ANY PAINTED SURFACES THAT ARE NOT INCLUDED IN THE WORK FROM IMPACT OR DAMAGE.

- A. Cover top of parapet wall with waterproof plastic membrane at the end of the work period and at other times when Work needs to be protected from rain and other precipitation. Extend cover down sides as needed to thoroughly protect the Work.
- B. During cold weather, do not use wet coping units and frozen coping units.
- C. Do not use frozen materials or lay coping on frozen materials; remove frozen materials from wall.
- D. 5. Remove excess mortar from parapet as soon after laying units as practicable to prevent staining and to facilitate cleaning of parapet
- E. Scaffolding shall not be supported from a parapet wall on which work is being performed.

B. SURFACE PREPARATION

24.01 PREPARE SURFACES TO BE REPLACED IN COMPLIANCE WITH PRODUCT MANUFACTURER'S PRINTED INSTRUCTIONS AND AS SPECIFIED.

- A. Remove dirt, dust, and foreign material from surfaces.

C. MATERIAL PREPARATION

25.01 PREPARE EXPOSED MORTAR TO MATCH THE COLOR AND APPEARANCE OF EXISTING ADJOINING MORTAR.

3.03 REPLACEMENT OF TERRA-COTTA COPING STONE

EXISTING DAMAGED COPING STONES SHALL BE REMOVED AND REPLACED. RESET/REPLACE ANY LOOSE BRICK AND REPOINT AS NECESSARY TO ASSURE THE PARAPET TOP IS FLAT AND STABLE PRIOR TO REPLACING ANY COPING.

CLEAN THE TOP OF THE BRICK WALLS AND ADJACENT FACES OF REMAINING COPINGS. NEW COPING SIMILAR TO EXISTING SHALL THEN BE INSTALLED ON A FULL BED OF LATEX REINFORCED MORTAR AND ANCHORED TO THE BRICK WALLS WITH STEEL DOWELS. JOINTS BETWEEN COPINGS SHALL BE FILLED WITH MORTAR UP TO 1/4" FROM THE SURFACE. AFTER THE MORTAR IS SET, ALL JOINTS SHALL BE FILLED WITH URETHANE CAULKING FLUSH WITH THE FACE OF THE COPING

3.04 MIXING PROCEDURE FOR MORTAR

A. MEASURE MATERIAL BY VOLUME OR EQUIVALENT WEIGHT. IN MEASURING BY VOLUME, USE A CONTAINER TO MEASURE INGREDIENTS. DO NOT MEASURE BY SHOVEL.

3.05 CLEANING

AS THE WORK PROCEEDS AND AFTER COMPLETION OF WORK, REMOVE EXCESS MORTAR, DROPPINGS, SMEARS, STAINS, AND OTHER SOILING SUBSTANCES RESULTING FROM THE WORK OF THIS SECTION. REMOVE MISPLACED MATERIALS FROM SURFACES IMMEDIATELY.

END OF SECTION

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