





MASONRY CLEANING NOTES

SAFETY PRECAUTIONS

A. The work specified herein requires knowledge of older materials and methods and a high degree of skill to execute properly. This work should be performed only by an experienced, pre-qualified contractor. It is not recommended that building maintenance personnel perform this work.  
B. This outline specification contains recommended materials which may be toxic. The manufacturer's literature on application techniques, appropriate protection for workers and disposal procedures for materials should be complied with in conjunction with all regulatory requirements referenced in this document.

SUBMITTALS

A. Submit manufacturer's product literature instructions for use, and Matenal Safety Data Sheets (MSDS) to the Owner and Architect for all cleaning materials.  
B. Prior to commencing the cleaning operations, the Contractor shall submit to Owner and Architect a written descripton of the entire methods and procedures proposed for cleaning the masonry including, but not limited to: Method of application, dilution of application, temperature of application, length of time of surface contact, method of rinsing surface (temperature, pressure, and duration), repetition of procedures, etc.  
C. Prior to commencing the cleaning operations, the Contractor shall submit to the Owner and Architect for approval, a written description of proposed materials and methods of protection for preventing damage to adjacent materials, vehicular and pedestrian traffic, and the building interior during the cleaning of masonry.  
D. The Contractor shall clean a sample panel(s), approximately 3' x 3' in area, on each type of masonry included in the work of this section for approval by the Architect. Locations of sample panels to be selected by the Owner or Architect.  
E. Adjust the chemical concentrations, working pressures and methodologies during test panel cleaning, as directed by the Owner or Contractor.  
F. Sample panels shall be cleaned by the Contractor using methods, materials, and working pressures previously submitted and approved. Sample panel cleaning shall be performed in the presence of the Owner or Architect. The working pressures during sample panel cleaning shall be varied up to the previously submitted and approved capacities to determine the best working pressure.  
G. Where chemical cleaners and polishes are tested, the manufacturer's representative shall be present during testing.  
H. The Contractor shall obtain written approval from the Owner or Architect of cleaning methods, working pressures, materials, equipment used and sample panels before proceeding with building cleaning operations. For this written approval purpose, the Contractor shall allow a minimum of seven calendar days after completion of sample cleaning to permit the Owner or Architect to study the sample panels for negative reaction. Retain approved panels in unaltered condition, suitably designated during construction as a standard for judging completed work.

QUALITY ASSURANCE

A. Comply with municipal and federal regulations governing all work included in this section and including, but not limited to waste disposal.  
B. The objectives of masonry cleaning are to remove dirt, grime and coatings from masonry without damaging underlying material and to give all masonry a clean, uniform appearance blotches, streaks, runs, or any other kind of spotty appearance. Over aggressive cleaning shall not be acceptable.  
C. Prepare sample panels for approval which shall establish a standard for general brick and stone cleaning. General cleaning shall not commence until written approval is obtained from the Owner or Architect.  
D. Masonry and Brck cleaning shall be performed by a specialist possessing a minimum of five (5) years of specialized experience in the cleaning of historic architectural masonry similar to that which is required by this project. Contractors shall submit to the Owner and Architect references of previous work justifying their experience. The Owner reserves the right to approve or disapprove the use of Contractors contingent upon their experience.  
E. In the event that the Contractor wishes to modify any cleaning method specified, he shall submit his proposal in writing for consideration and review. The Owner or Architect will have the right to ask for test samples before final approval. Any such or changes shall be at no additional cost to the Owner.  
F. Comply with municipal and Federal regulations governing the cleaning, chemical waste disposal, product safety, scaffolding and protection to workers and adjacent properties.

REFERENCES TO BE FOLLOWED

A. Preservation Brief #1 : Assessing Cleaning and Water-Repellant Treatments for Historic Masonry Buildings

PROJECT/SITE CONDITIONS

A. No cleaning shall be executed when air or masonry surface temperature is below 45-degrees F, unless adequate, approved means are provided for maintaining a 45-degree F, temperature of the air and materials during, and for 48 hours subsequent to, cleaning.  
B. Perform cleaning and washing of the exterior masonry only during hours of natural daylight.

MANUFACTURERS

A. ProSoCo, Inc., 755 Minnesota Avenue P.O. Box 1578 Kansas City, KS 66117  
B. Diedrich Technologies, Inc., 7373 South 6th Street Oak Creek (Milwaukee), WI 53154, or Approved Equal

MATERIALS

A. Masonry Cleaner: Commercially available very mild blend of inhibited acidic ingredients and wetting agents specifically formulated for restorative cleaning of brick and stone surfaces such as "Sure Klean Restoration Cleaner" (ProSoCo, Inc.), "101 G Granite, Terra Cotta and Brck Cleaner" (Diedrich Technologies), or approved equal.  
B. Masonry cleaner shall be a clear liquid with a PH of 1.2 and a typical Specific Gravity of 1.05.  
C. Water shall be potable, non-staining and free of oils, acids, alkalis, solids and organic matter.  
D. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film forming, strippable masking material for protecting glass, metal and polished stone surfaces from damaging effect of acidic and alkaline masonry cleaners, such as "Sure Klean Acid Stop" (ProSoCo, Inc.), "Diedrich Acid Guard", (Diedrich Technologies, Inc.), or approved equal.

EQUIPMENT

A. Use natural fiber bristle only. The use of wire brushes or steel wool is not permitted.  
B. Garden hose with fan tip nozzles.

PREPARATION

A. Take all necessary precautions and measures to protect surrounding materials on the site, surfaces of the building not being cleaned, adjacent buildings, pedestrians and vehicles from coming in contact with cleaning chemicals, over spray, or runoff. Products used for masonry cleaning may be harmful to painted, polished, glazed, or metallic surfaces. Any damage to materials caused by the cleaning operations is unacceptable and shall be repaired or replaced by the Contractor to the satisfaction of the Owner and Architect at no cost to the Owner.  
B. Provide protection from water damage to building, structure, or building contents as required.  
C. Protect trees and plants around the building from contamination or damage as directed by the Owner or Architect. The Contractor shall be responsible for replacing with new stock, any trees, shrubbery or grass damaged by the cleaning operations.  
D. Test all drains and other water removal systems to assure that drains and systems are functioning properly prior to performing any cleaning operations. Notify Owner immediately of any and all drains or systems that are found to be stopped or blocked. Contractor shall repair drains if so directed by the Owner. Do not begin work of this Section until the drains are in working order.  
E. Provide a method to prevent solids such as stone or mortar residue from entering the drains or drain lines. Contractor shall be responsible for cleaning out drains and drain lines that become blocked or filled by sand or other solids because of work performed under this Contract.

EXECUTION

A. Dilute masonry cleaner based on sample panel cleaning and manufacturer's requirements. When diluting, always pour water into empty bucket first, then carefully add concentrate. Handle in rubber or polyethylene buckets only. Acidic liquids and fumes will attack metal.  
B. After protecting all non-masonry surfaces, thoroughly wet the area to be cleaned.  
C. Apply the cleaning solution liberally using low pressure spray (50 psi), roller or densely filled (Tampico) masonry washing brush. Do not apply restoration cleaner with high pressure spray.  
D. Allow the cleaning solution to remain on the surface in accordance with approved test procedures an manufacturer's requirements. Light scrubbing of the surface may improve cleaning results. Do not allow cleaning solution to "dry in" to the masonry.  
E. Begin rinsing with low pressure flood rinse to remove initial acidic residue with minimum risk of wind drft.  
F. Rinse the treated area thoroughly using pressurized cold water suitable for drnking. Rinse water pressure shall not exceed 300 psi, and shall be sprayed through nozzles fitted with 15 to 20" wide tips. Nozzles shall be held perpendicular to the surface at a working distance of 1.4 to 2.0 feet. All pressure pumps shall be equipped with working pressure gauges.  
G. Rinse from the bottom of the treated area to the top flushing each section of the surface with a concentrated stream of water. To avoid streaking on vertical walls, take care to keep the wall below wet and rinsed free of cleaner and residues. Assure that all surface staining matters and cleaning residues are thoroughly flushed from the treated surface.  
H. Surrounding stone surfaces below the section of brick to be cleaned shall be pre-wetted and rinsed periodically during cleaning operations to prevent etching of stone.  
I. The surfaces below the sections of brick to be cleaned shall be protected from run-off.  
J. Repeat procedures if necessary to remove heavier build-up of soiling.

LIME MORTAR NOTES

GENERAL

A. This procedure includes guidance on mixing and producing Lime Mortar for Masonry Repairs.  
B. Materials and Procedures shall comply with American Society for Testing and Materials (ASTM), WWW.ASTM.ORG.  
C. Storage and Protection: Lime and cement must be protected from rainwater and ground moisture, as water vapor in the air can begin the setting process. Other materials also should be protected from contamination.

REFERENCES TO BE FOLLOWED

A. Preservation Brief #2: Repointing Mortar Joints in Historic Masonry Buildings

MATERIALS

A. The use of standard specifications for materials, such as those developed by the ASTM, provides an easily referenced level of quality.  
B. Lime shall conform to ASTM C207, Type S, high plasticity, Hydrated Lime for Masonry Purposes. Cement: Should conform to ASTM C150, Type I, White. It should not have more than 0.60% alkali nor more than 0.15% water soluble alkali. Use gray Portland cement ONLY if a dark mortar is to be matched.  
C. Sand: Free of impurities and conforming to ASTM C144. Sand color, size, and texture should match the original as closely as possible. Provide a sample of the sand for comparison to the original, and have it approved by the Owner or Architect before beginning repointing work.  
D. When possible, use bar sand or beach sand rather than crushed sand for the repointing mortar. NOTE: BAR SAND OR BEACH SAND SHOULD BE WASHED TO REMOVE THE SALTS BEFORE USING.  
E. The working characteristics of mortar made with crushed sand may be improved by adding a slight amount of portland cement. The amount of cement should be determined by experimentation, but should not exceed 20% of the total lime/cement binder.  
F. Clean, potable water: If the water must be transported or stored in a container, the container must not impart any chemicals to the water.  
G. Stone dust finely ground from the same stone as that to be repointed.  
H. Additives: NO antifreeze compounds or other admixture shall be used.

GENERAL INFORMATION

A. Durability: Repointing mortar should be softer than the masonry units and the original mortar to reduce stresses at the edge of the masonry and, in the case of lime mortar, to reduce shrinkage which can cause cracks in the mortar.  
B. If the new mortar is harder than the masonry or the original mortar, it can cause serious stresses within the wall during thermal expansion and contraction, which can lead to deterioration of the masonry units rather than the mortar.  
C. If the mortar is softer, any deterioration which occurs will take place in the mortar, which is easier to replace than the units themselves.  
D. The repointing mortar should allow the passage of water, both liquid and vapor. If the mortar does not allow water to pass freely through it, the water can become trapped inside the wall, freeze and cause serious deterioration to the masonry.  
E. Color and texture: The repointing mortar should match the original mortar in color, texture and physical characteristics. Use sand which is similar to the original in color and gradation. Sand from more than one source may be required. For repointing of natural stones, use finely ground stone "dust" in the mortar to match the joints as closely as possible to the stone. If the original mortar was tinted, or if it is impossible to obtain a color match through the use of sand, it may be necessary to use a special mortar pigment. Pure mineral oxides shall be used to tint mortar as required and shall not exceed 2% of the mortar mix by weight.  
F. If the original mortar has small lumps of incompletely burned or ground lime, or other impurities, match the original appearance of the masonry using identical materials such as ground oyster shells or lumps of lime, to duplicate original characteristics.  
G. Workability: The workability or plasticity of the mortar is a direct result of the selection of materials.

MIXING

A. Have the existing mortar completely analyzed to insure that the repointing mortar will not be less permeable/harder than the masonry units or the original mortar.  
B. Measure all ingredients by cubic volume using a pre-established uniform measure. 'Shovel' measuring shall not be accepted.  
C. Mortar mix shall be equivalent to existing mortar mix.  
D. Mix a final 'job-size' batch once the correct sand color, cement content, etc. have been determined through small tests to ensure the on-site mixing conditions will result in the same final product.

EXECUTION

A. Mix Hydrated Lime: By add dry bagged hydrated lime to water. Stir and hoe the mass to form a thick cream and allow to stand at least 24 hours before use.  
B. Prepare Roughage Premix (for later use): Accurately proportion the sand and lime using techniques and measuring devices to contain the exact volume of each ingredient required to make on batch, Mix thoroughly for about ten minutes. Store in plastic-lined drums and seal until required.  
C. When required for use, add and mix the correct portion of gauging cement as specified and use immediately.  
D. Add cements to lime and aggregate mixes immediately before the use of the mortar.  
E. Perform all batching with wooden boxes or plastic pails of known volume to ensure standardization and conformity of measurement; SHOVEL MEASUREMENT OF MATERIALS IS NOT PERMITTED.  
F. Mix dry ingredients thoroughly before adding any water for approx. 5 minutes.  
G. Add a small amount of water so that the mortar is just wet enough to hang on a trowel.  
H. Mix mortars at least 10 minutes before using to improve workability and ensure thorough mixing. If using machine mixers, rubber pads/blades shall be used. Clean device thoroughly prior to mixing next batch.  
I. Repointing mortars may sit 1-2 hours after initial mixing and then may be remixed to a workable consistency.  
J. Test the mix by holding a trowel with mortar on it upside down and shaking it once. If the mortar falls off without shaking, it has too much sand. If more than one shake is required, the mortar is too sticky or "plastic" and the lime content must be decreased.  
K. Retempering is permitted only to maintain workability and may only be used once per batch. Use a spray bottle to add water to the mortar and/or board to replace only water lost through evaporation.  
L. REMIXING OF MORTAR IS NOT PERMITTED.  
M. Use all mortar within 2 hours of gauging; dispose of leftover mortar. Retempering after this time period is not acceptable. this time limit may be shortened due to environmental and weather conditions.

MORTAR COLORING AND TINTING

A. Take samples of freshly-broken mortar from the original masonry pointing. Note color of aggregate for color-matching. DO NOT TRY TO MATCH THE COLOR OF THE BINDER. Use unweathered, unsold samples only.  
B. Prepare test patties of mortar approximating the inner color of the sample and set aside to dry for at least 72 hours. Drying time may be accelerated by placing the patty sample in an oven or over a hot-plate.  
C. Break the sample test patties and compare the inner portions to the original.

CAST STONE REPAIR NOTES

SAFETY PRECAUTIONS

A. The work specified herein requires knowledge of older materials and methods and a high degree of skill to execute properly. This work should be performed only by an experienced, pre-qualified contractor. It is not recommended that building maintenance personnel perform this work.  
B. Cast stone units being repaired are to be evaluated for material make-up do determine the proper repair compound and method. This shall be determined by the repair contractor upon inspection of the units once the scaffolding and covered walkway is in place.

SUBMITTALS

A. Submit manufacturer's product literature instructions for use, and Matenal Safety Data Sheets (MSDS) to the Owner and Architect for all repair materials.  
B. Prior to commencing the repair operations, the Contractor shall submit to Owner and Architect a written description of the entire methods and procedures proposed for preparing the cast stone and for the materials and methods of repairing the same. Information to include the material, the method of preparing repair material, method of anchoring and applying the material, color, etc.

QUALITY ASSURANCE

A. Comply with municipal and federal regulations governing all work included in this section and including, but not limited to waste disposal.  
B. The objectives of the masonry repair is to prevent further deterioration of the cast stone unit and to restore the molding profile tomatch the adjacent section to appear as a cohesive unit.  
C. Cast stone repair shall be performed by a specialist possessing a minimum of five (5) years of specialized experience in the cleaning of historic architectural masonry similar to that which is required by this project. Contractors shall submit to the Owner and Architect references of previous work justifying their experience. The Owner reserves the right to approve or disapprove the use of Contractors contingent upon their experience.  
D. In the event that the Contractor wishes to modify any repair method specified, he shall submit his proposal in writing for consideration and review. The Owner or Architect will have the right to ask for test samples before final approval. Any such or changes shall be at no additional cost to the Owner.  
E. Comply with municipal and Federal regulations governing the cleaning, chemical waste disposal, product safety, scaffolding and protection to workers and adjacent properties.

PROJECT/SITE CONDITIONS

A. No cleaning shall be executed when air or masonry surface temperature is below 45-degrees F, unless adequate, approved means are provided for maintaining a 45-degree F, temperature of the air and materials during, and for 48 hours subsequent to, cleaning.  
B. Perform cleaning and washing of the exterior masonry only during hours of natural daylight.

MANUFACTURERS AND MATERIALS

A. John Mortars and Grouts: Cathedral Stone Products Incorporated.  
B. Heritage Restoration Mortar: US Heritage Group.  
C. Hohmann and Barnard.  
D. Heckman Building Products.

REFERENCES TO BE FOLLOWED



A. Cast Stone Institute - Technical Bulletin #34.  
B. National Parks Service - Preservation Brief #15: Preservation of Historic Concrete  
C. National Parks Service - Preservation Brief #42 - The Maintenance, Repair and Replacement of Historic Cast Stone.

PREPARATION

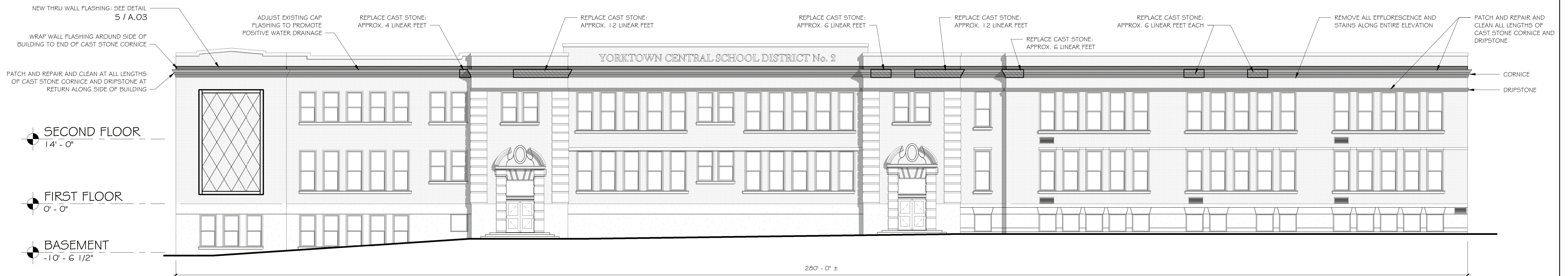
A. Take all necessary precautions and measures to protect surrounding materials on the site, surfaces of the building, adjacent buildings, pedestrians and vehicles. Products used for repair may be harmful to painted, polished, glazed, or metallic surfaces. Any damage to materials caused repair operations is unacceptable and shall be repaired or replaced by the Contractor to the satisfaction of the Owner and Architect at no cost to the Owner.  
B. Provide a method to prevent solids such as stone or mortar residue from entering the drains or drain lines. Contractor shall be responsible for cleaning out drains and drain lines that become blocked or filled by sand or other solids because of work performed under this Contract.

EXECUTION

A. Remove damaged material down to sound material capable of supporting the repair.  
B. Prepare the location for the repair matrix and install all required anchors and primers per the requirements of the manufacturer.  
C. Mix and apply the repair matrix per the manufacturer's requirements and instructions.  
D. Allow the repair material to set up properly. Do not repair damaged cast stone under weather or heat conditions that are outside of the manufacturer's allowable conditions.  
E. It is possible the Cast Stone is of a make-up that is not deemed fit for repair. In this case, an alternate solution will need to be explored, such as replacement of the unit.

<div>REVISIONS</div>			<div>Contractor and all trades shall refer to all drawings within this set as work for each trade may appear on any drawing. G.C. and all trades shall refer to, follow and adhere to the Specifications within this set in conjunction with the plans and details.</div> <div>Copyright © David A. Tetto, Architect P.C. No portion of this document, design or content may be reproduced, stored in any system of any kind, nor distributed in any way without the expressed written permission of the Architect.</div> <div>Any entity using these drawings and/or designs without proper authorization will be liable for any legal action and/or compensation to the Architect.</div>	<div>Client:</div> <div>YORKTOWN COMMUNITY AND CULTURAL CENTER</div>	<div>Project Title:</div> <div>CAST STONE REPAIRS</div>	<div>License No: 028059 expiration May 31, 2027</div> <div></div> <div>It is a violation of the E.O.S. to use these documents in any way once the Architect's or Engineer's signature have been applied.</div>	<div>Sheet Title:</div> <div>MASONRY NOTES</div>	<div><div>DAVID A. TETRO</div><div>ARCHITECT P.C.</div><div></div><div>302 Lewis Avenue Yorktown Heights NY 10598</div><div>914.962.3113 dttetarchitect@gmail.com</div></div>	
No.	Description	Date		<div>Address:</div> <div>1974 Commerce Street Yorktown Heights, NY 10598</div>	<div>Status:</div> <div>Issued for Bid</div>	<div>Project No.:</div> <div>25 . 18</div>	<div>Issue Date:</div> <div>May 9, 2025</div>	<div>Sheet No.:</div> <div>A.02</div>	<div>2 of 3</div>
1	Issued For Review	04 . 16 . 25							
2	Issued for Coordination	04 . 22 . 25							
3	Issued for Bid	05 . 09 . 25							

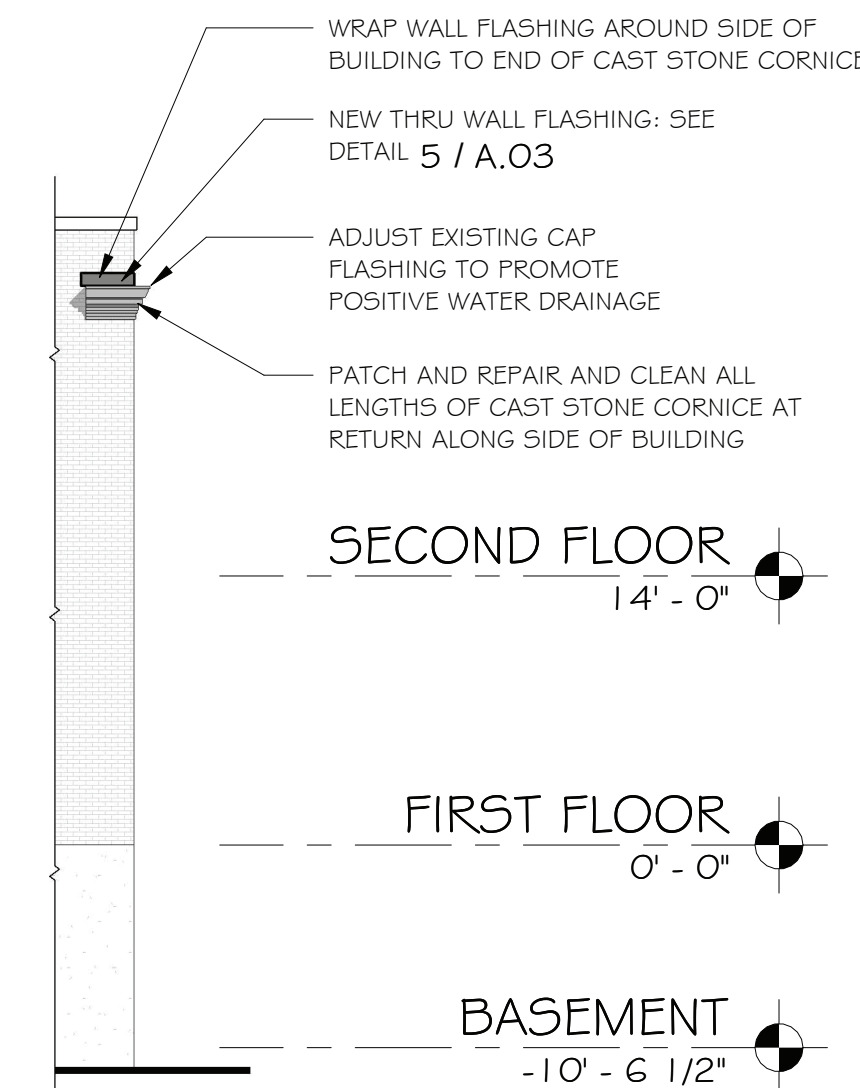




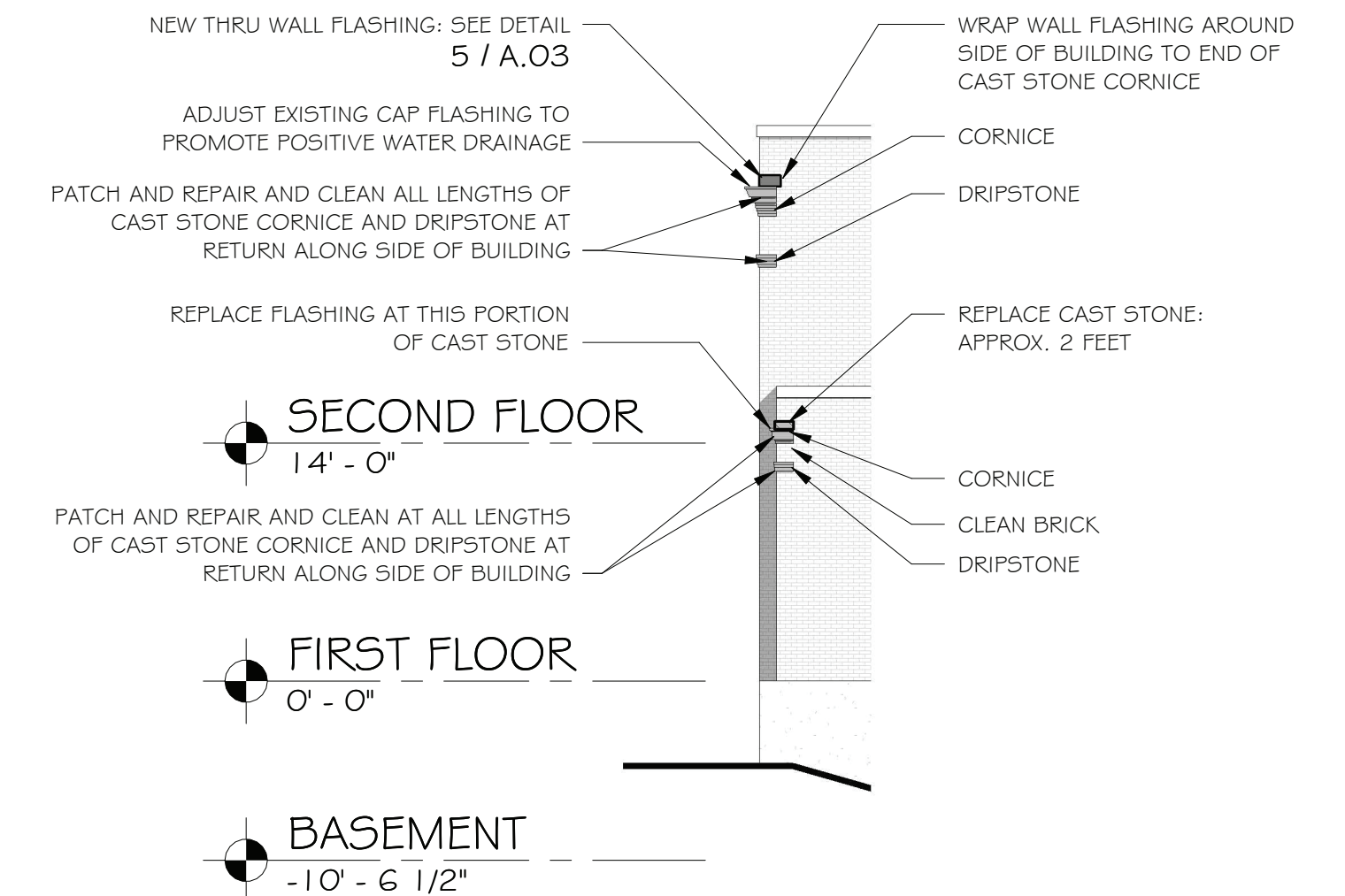
1 FRONT ELEVATION  
1" = 10'-0"



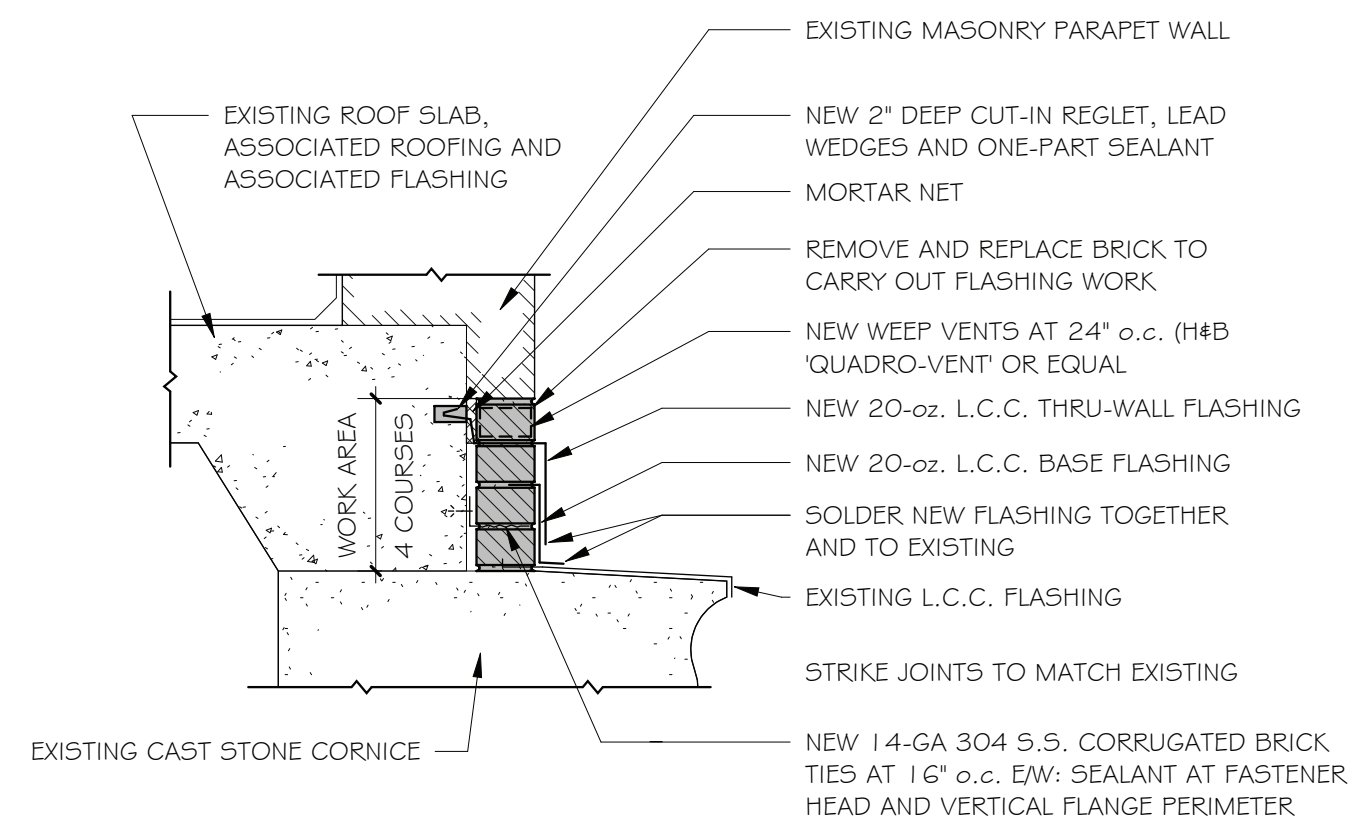
2 RIGHT ELEVATION  
1" = 10'-0"



3 LEFT ELEVATION  
1" = 10'-0"

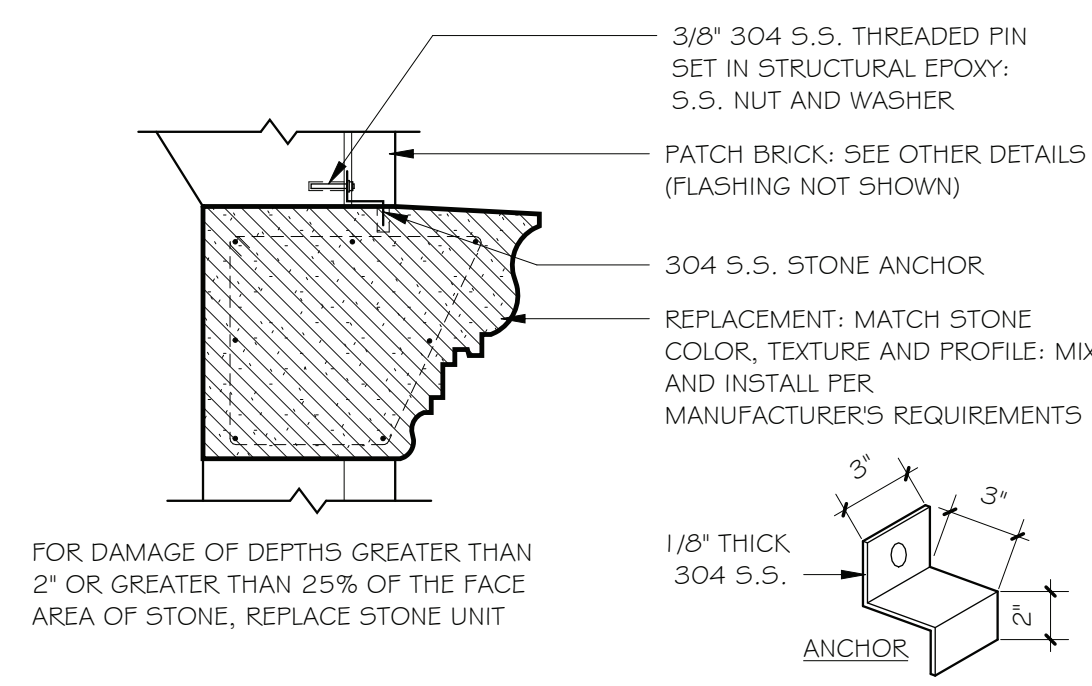


4 REAR ELEVATION  
1" = 10'-0"

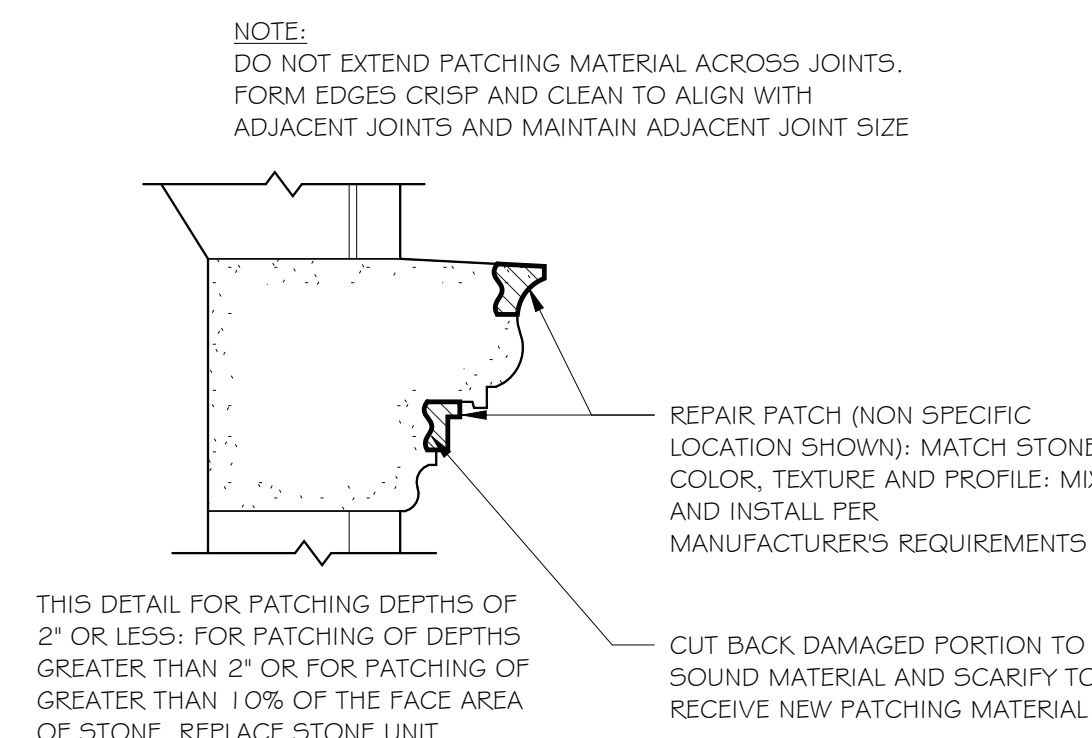


5 THRU WALL FLASHING DETAIL (FOR FULL-SCOPE BID)  
1" = 1'-0"

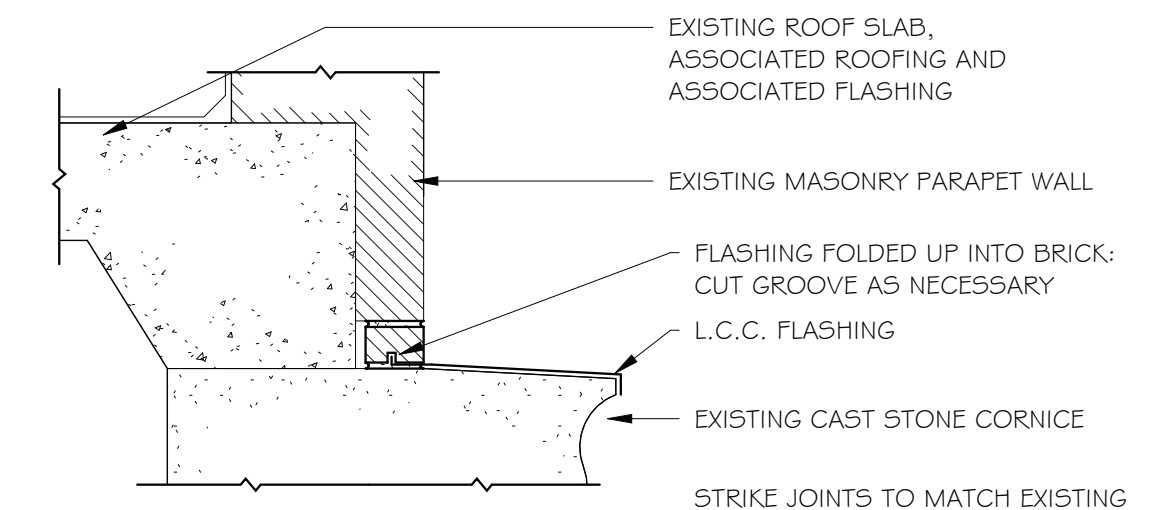
NOTE: REUSE EXISTING BRICK TO MAXIMUM EXTENT POSSIBLE AT LOCATIONS EXPOSED TO VIEW



6 CAST STONE REPLACEMENT DETAIL  
3/4" = 1'-0"



7 CAST STONE REPAIR - SHALLOW  
3/4" = 1'-0"



8 FLASHING REPLACEMENT DETAIL  
1" = 1'-0"

(APPLICABLE AT LOCATIONS WHERE FLASHING IS BEING REPLACED AND FULL THRU WALL FLASHING IS OMITTED AS ALTERNATE DEDUCT)

REVISIONS		
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Client:  
**YORKTOWN COMMUNITY AND CULTURAL CENTER**  
Address:  
**1974 Commerce Street  
Yorktown Heights, NY 10598**

Project Title:  
**CAST STONE REPAIRS**  
Status:  
**Issued for Bid**

License No: 028059  
Project No.: 25 . 18  
Issue Date: May 9, 2025  
Sheet No.: A.03

Sheet Title:  
**ELEVATIONS AND DETAILS**  
3 of 3

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