Harris Hydraulics Laboratory
Pumphouse Fall Guard Addendum to the Historic Resources Addendum
University of Washington

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8 May 2013

1. INTRODUCTION

Background

The University of Washington is planning a project to install fall protection for the roof patio above the pumphouse on the east side of the Harris Hydraulics Laboratory. This addendum provides additional information specific to this project that was not included in an earlier Historic Resources Addendum, dated 14 December 2012.

This Addendum to the HRA was developed by James Cary, Architect pc of Seattle, Washington in March, April and May 2013.

2. HISTORY & ARCHITECTURAL DESCRIPTION

Property of MSCUA, University of Washington Libraries. Photo Coll 700
Exterior of Harris Lab before the pump house was constructed, undated photograph
University of Washington Special Collections, UW14776

Property of Museum of History & Industry, Seattle
Puyallup River Flood Control Model, 1938
The pump room is visible to the right of the building.
Museum of History & Industry, Image 1986.5.6554.1

The pump room was added to the Hydraulics Laboratory sometime after its completion in 1920. It is not shown in the original architectural drawings, nor does it appear in photographs taken shortly after the laboratory's completion. The earliest record of the pump room occurs in a 1938 photograph of a Puyallup River flood control model. The pump room was therefore constructed between 1920 and 1938. Since no drawings are available, the architect for the pump room addition (if any) is unknown.

Architecturally, the pump room and patio are a direct extension of the original 1920 building designed by Bebb & Gould. The stone veneer on the south wall of the Laboratory building was continued onto the south face of the pump room, and the terra cotta parapet cap on the south and east sides of the patio above is a similar design to the cap on the parapet of the main building.

Intersection of pump room parapet and 1920 Laboratory Building – Current Condition

Pump Room, South Facade – Current Condition

Parapet Wall – Existing Conditions

The parapet wall on the south and east sides of the existing patio measures approximately 1′-1″ from the high point of the patio, which slopes slightly to a point in the center of its eastern edge. The parapet is constructed of concrete with a stone veneer on its south and east faces, and the concrete face on the north and west sides (patio sides) is covered by stainless steel flashing that follows the slope of the patio paving. The parapet wall is capped with a terra cotta cap that measures approximately 13 1/2″ wide by 8″ tall at its highest point. The parapet meets the east wall of the 1920 laboratory building approximately 30″ below the terra cotta transition detail that marks the transition from stone to brick on the south façade of the building.

Detail under original stairs showing later pump room ceiling construction – Current Condition

Patio above pump room viewed from the east – Current Condition

Southwest corner of patio – Current Condition

Southeast corner of patio – Current Condition

3. PROJECT RECOMMENDATIONS

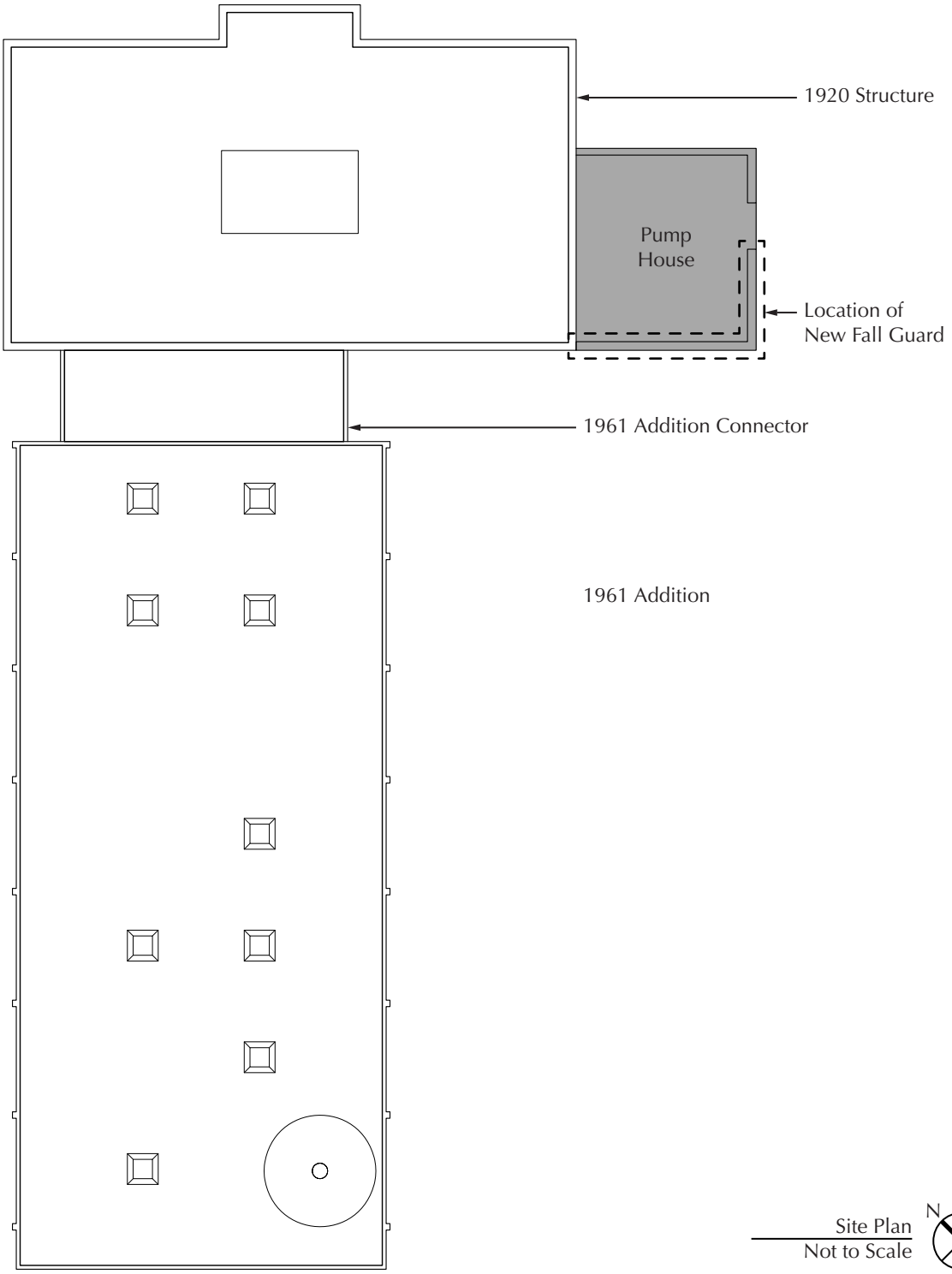
The following diagrams show the existing parapet condition and three recommended options for installing fall protection to the code-required 42″ height.

Option 1 installs a full-height railing behind the existing low parapet wall and leaves all existing construction intact. Two railing alternatives are shown for this option. Option 1A is a modern steel railing design with historic references to the interior stair guardrail in the Harris Hydraulics Lab. Option 1B is a practical, steel railing design.

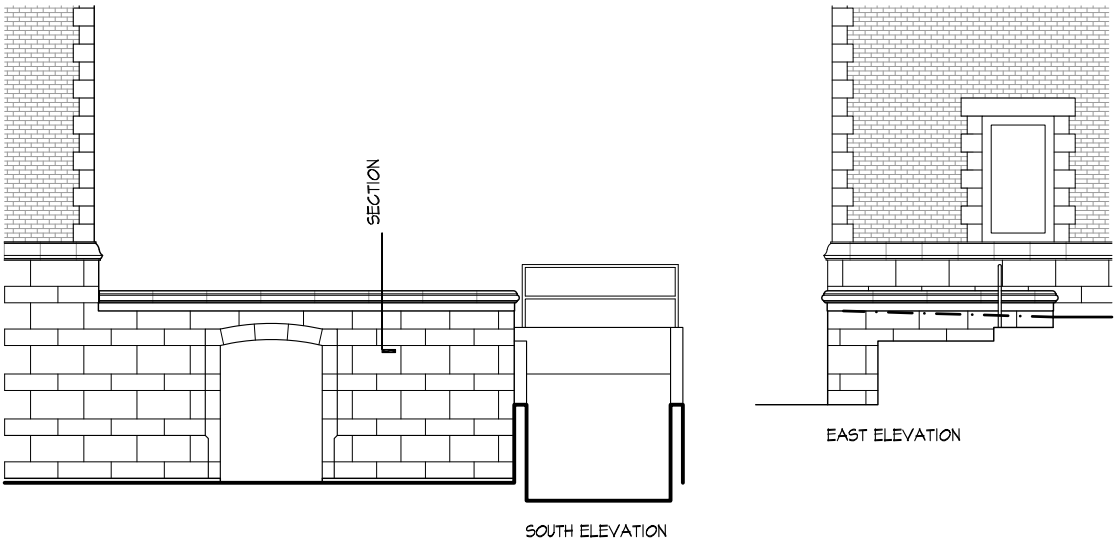
Option 2 shows raising the entire parapet by 2 stone courses, which would bring the top of the parapet cap above the required 42″ height. The addition of the new stone-faced parapet will include new Tenino stone blending with historic Tenino stone. There may be a historic preservation concern that the new construction will mimic the construction from the 1920s - 1930s, and there will not be enough differentiation between the two. The appearance of the new Tenino stone, however, will be different enough to relieve this concern.

Option 3 raises the parapet by 1 stone course, allowing for a railing to be mounted to the inside vertical face of the new parapet wall. The addition of the new stone-faced parapet will include new Tenino stone blending with historic Tenino stone. There may be a historic preservation concern that the new construction will mimic the construction from the 1920s - 1930s, and there will not be enough differentiation between the two. The appearance of the new Tenino stone, however, will be different enough to relieve this concern.

The traditional mortar joint for Tenino stone is a small raised beaded joint that is created with a bead joint tool. The joint provides the best weather protection by pushing water off the face of the stone and protecting the exposed, cut stone edge. The existing mortar joint, however, appears to be a small concave joint. This existing joint is performing adequately, and should be used for new stone mortar joints and for repointing. If repointing all of the building stone is considered as a future project, the University may consider using the small, raised beaded joint.

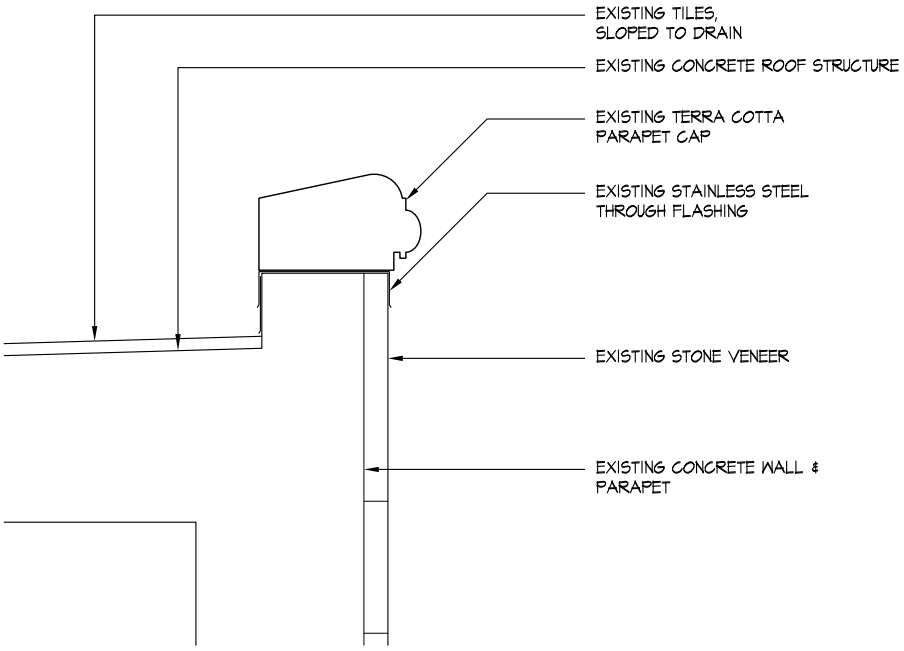


Site Plan
Not to Scale



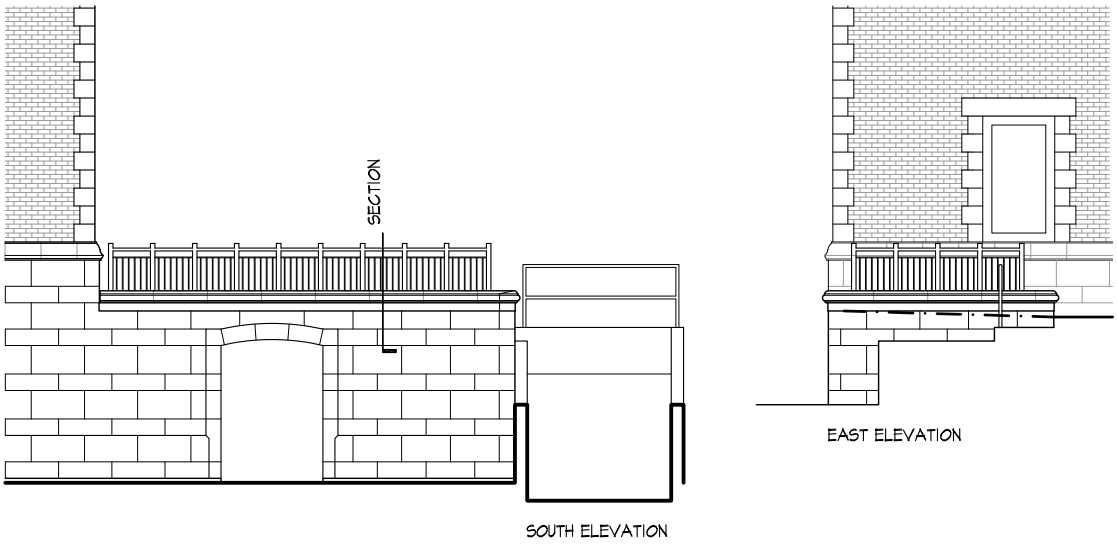
EXISTING PARTIAL ELEVATIONS

SCALE: 3/32" = 1'-0"



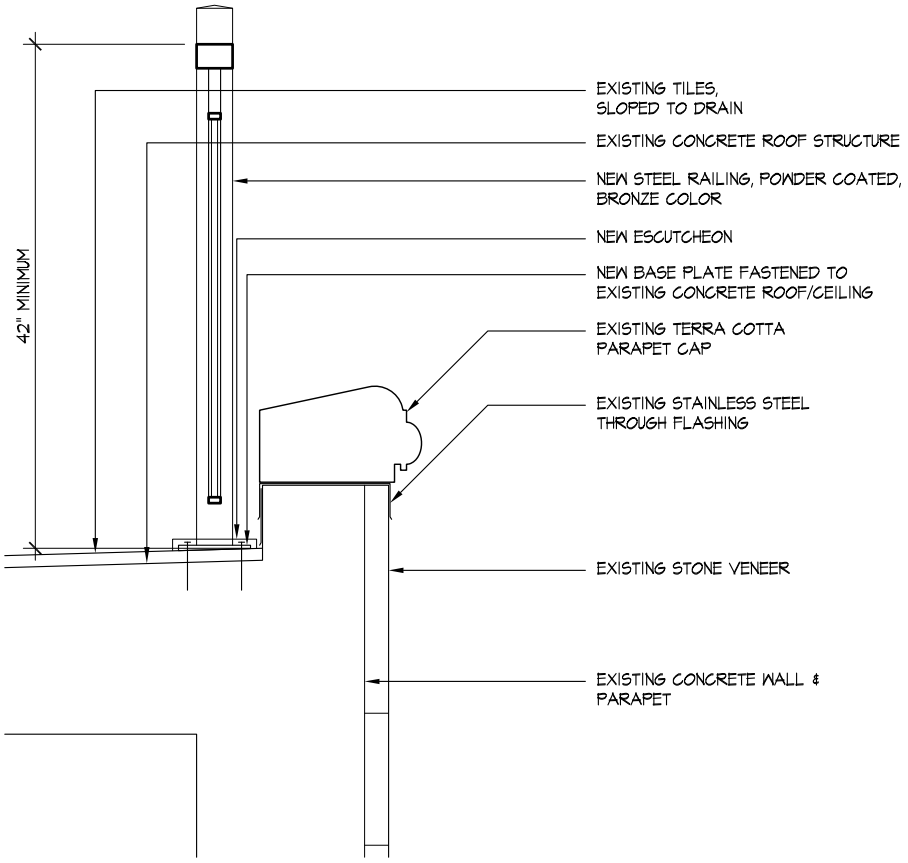
EXISTING PARAPET SECTION ABOVE PUMP HOUSE

SCALE: 3/4" = 1'-0"



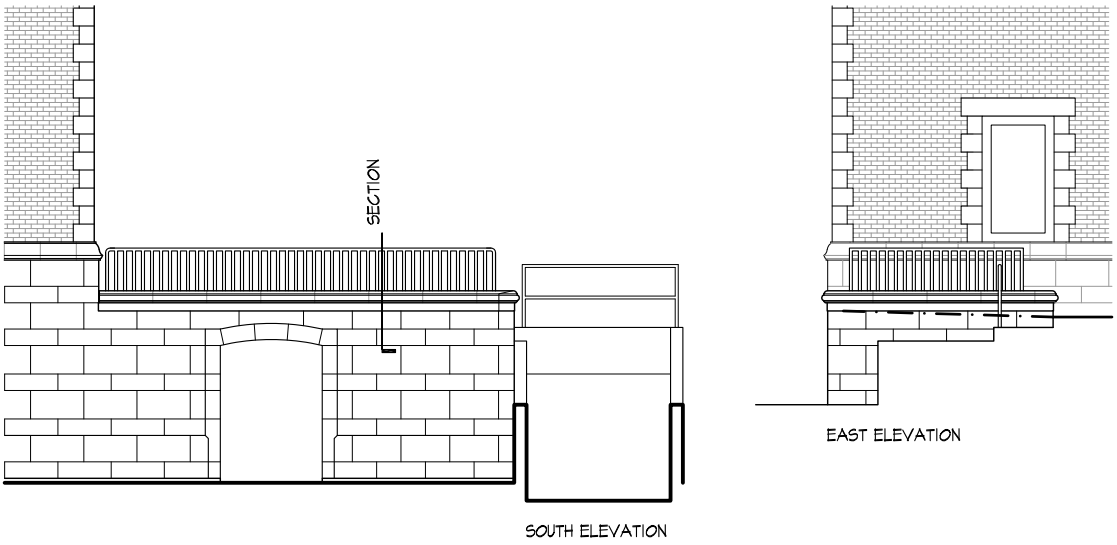
EXISTING PARTIAL ELEVATIONS

SCALE: 3/32" = 1'-0"



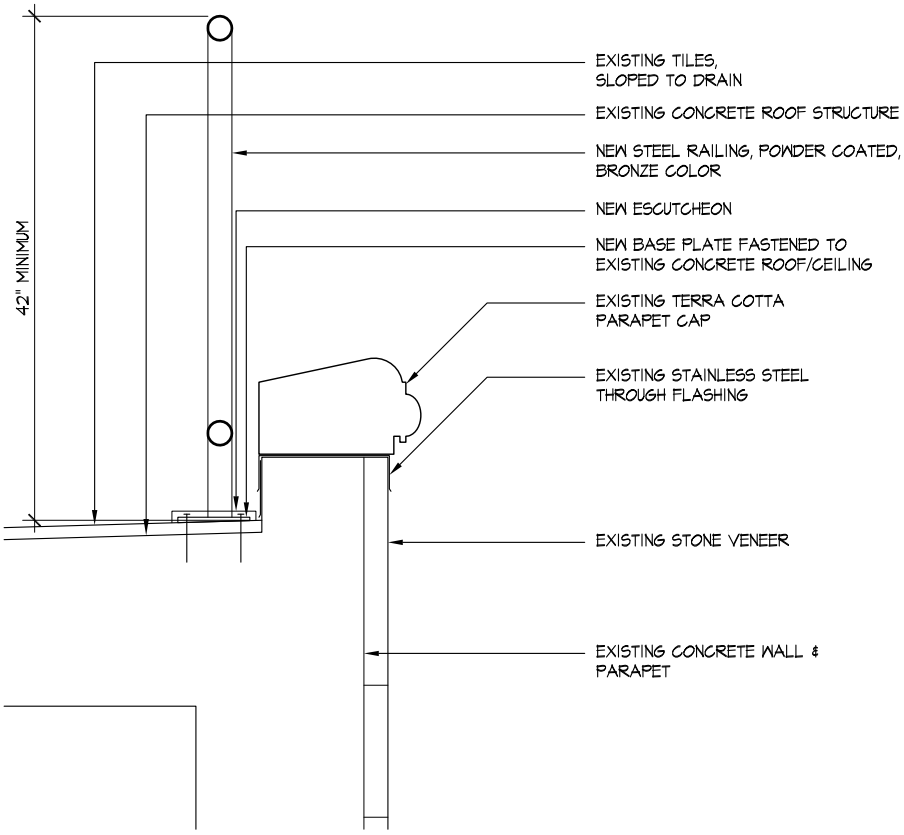
PARAPET SECTION ABOVE PUMP HOUSE
OPTION 1A - FLAT BAR RAILING BEHIND EXISTING PARAPET

SCALE: 3/4" = 1'-0"



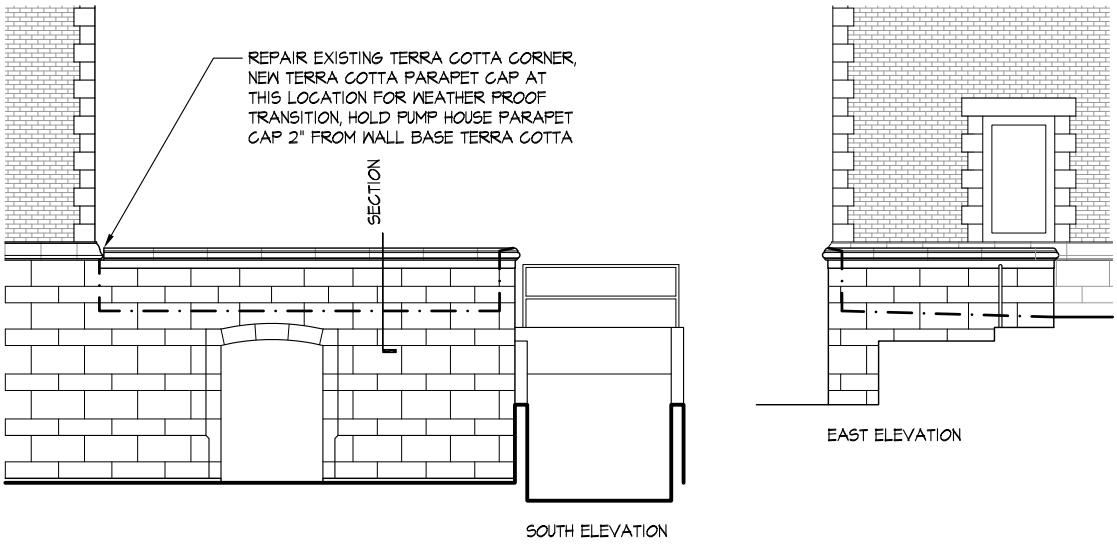
EXISTING PARTIAL ELEVATIONS

SCALE: 3/32" = 1'-0"



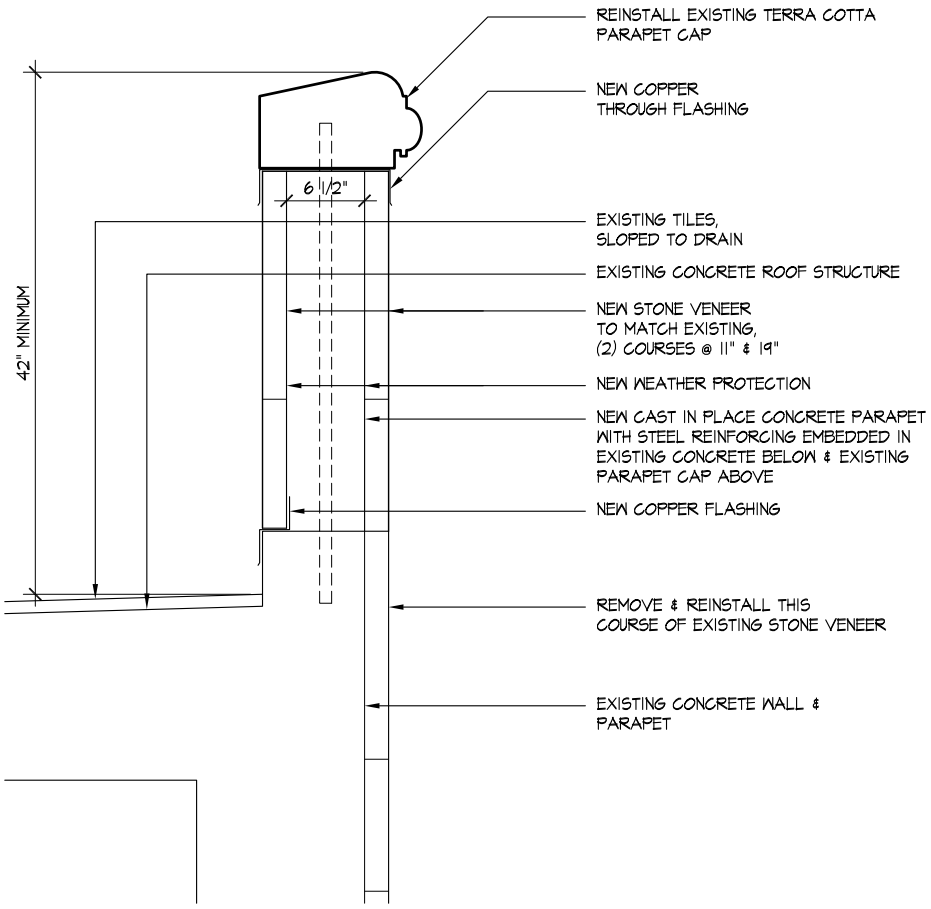
PARAPET SECTION ABOVE PUMP HOUSE
OPTION 1B - 2" PIPE RAILING BEHIND EXISTING PARAPET

SCALE: 3/4" = 1'-0"



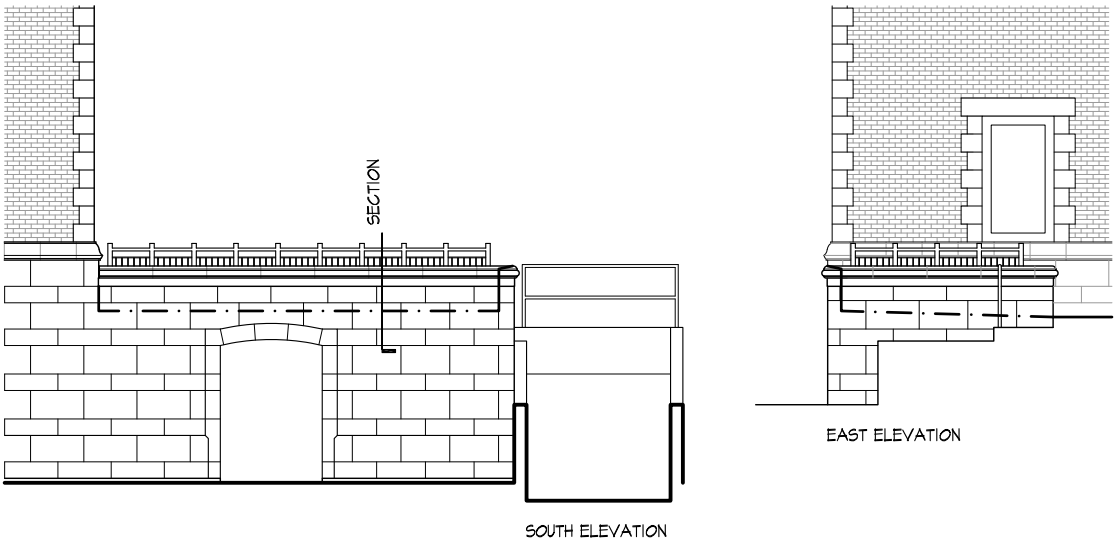
EXISTING PARTIAL ELEVATIONS

SCALE: 3/32" = 1'-0"



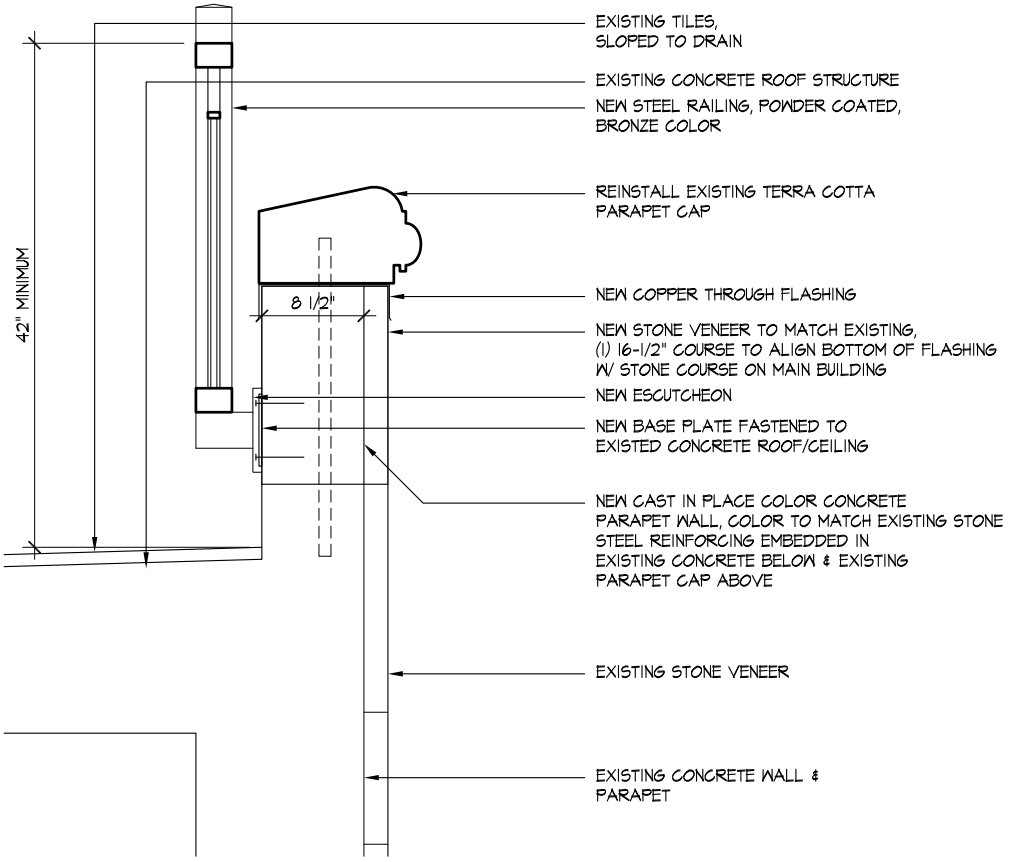
PARAPET SECTION ABOVE PUMP HOUSE
OPTION 2 - EXTEND PARAPET HEIGHT TO 42" MINIMUM

SCALE: 3/4" = 1'-0"



EXISTING PARTIAL ELEVATIONS

SCALE: 3/32" = 1'-0"



PARAPET SECTION ABOVE PUMP HOUSE
OPTION 3 - EXTEND PARAPET HEIGHT W/ RAILING BEHIND

SCALE: 3/4" = 1'-0"