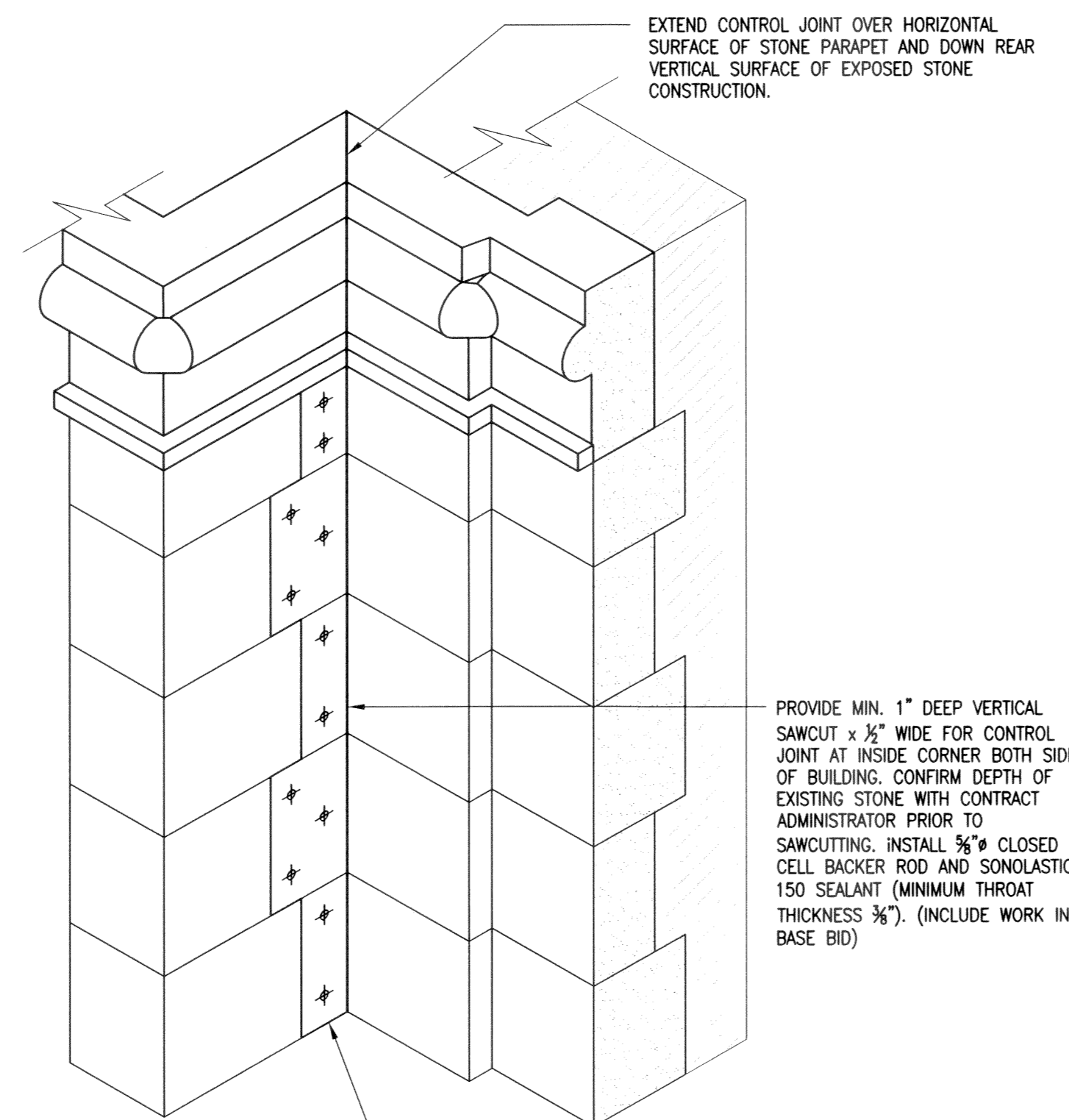


**1 PARTIAL SOUTH ELEVATION**  
S-5 3/8" = 1'-0"

CRACK FORMATION THROUGH MULTI-WYTHE BRICK CLADDING. PROVIDE REPOINTING OF MASONRY JOINTS (FIXED PRICE) AND REPLACEMENT OF CLAY BRICK UNITS (UNIT PRICE) AS DIRECTED BY CONTRACT ADMINISTRATOR.

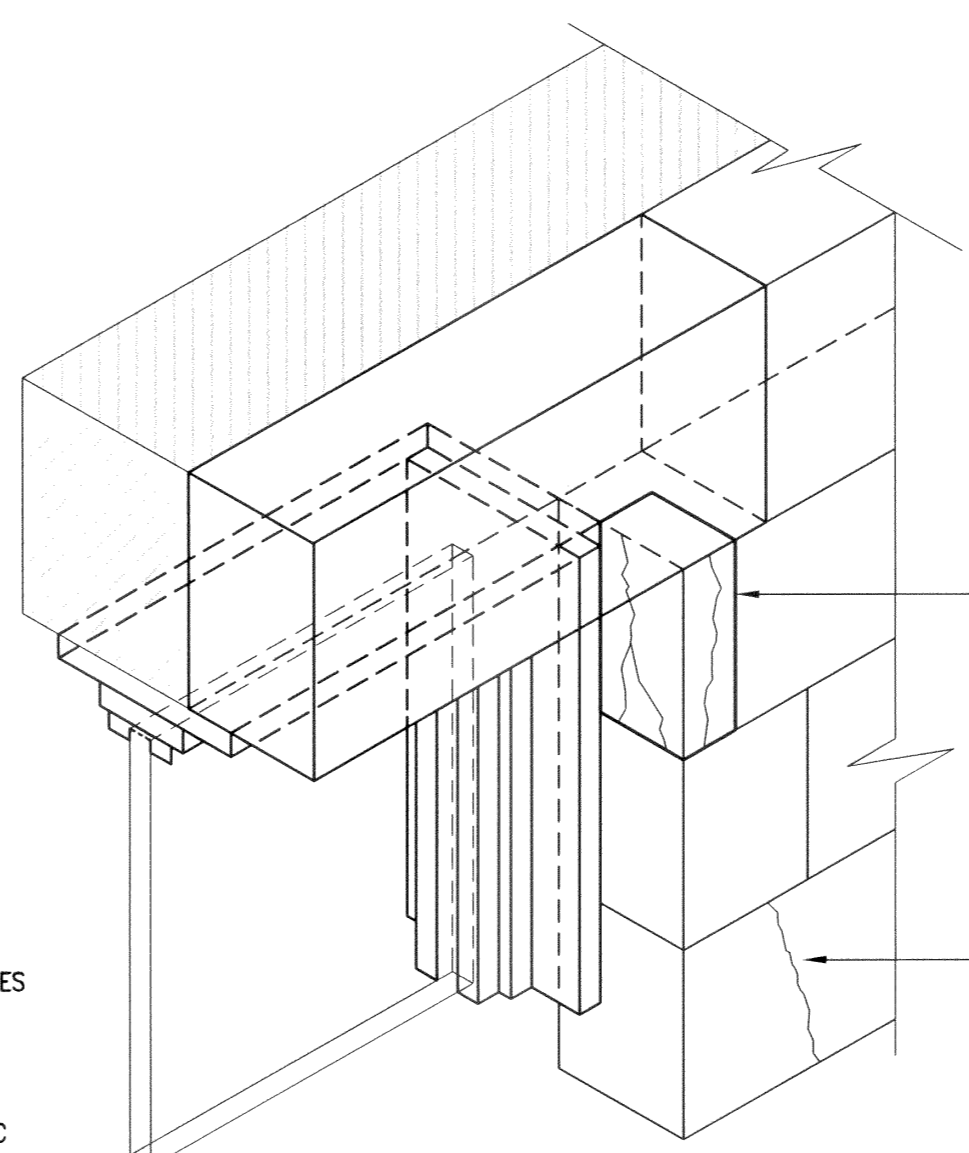
EXISTING TYNDALL STONE LINTELS. REPAIR AS DIRECTED BY CONTRACT ADMINISTRATOR. (UNIT PRICE)



**E EXTERIOR LINTEL DETAIL**  
S-5 SCALE: NTS UNIT PRICE

EXTEND CONTROL JOINT OVER HORIZONTAL SURFACE OF STONE PARAPET AND DOWN REAR VERTICAL SURFACE OF EXPOSED STONE CONSTRUCTION.

PROVIDE MIN. 1" DEEP VERTICAL SAWCUT x 1/2" WIDE FOR CONTROL JOINT AT INSIDE CORNER BOTH SIDES OF BUILDING. CONFIRM DEPTH OF EXISTING STONE WITH CONTRACT ADMINISTRATOR PRIOR TO SAWCUTTING. INSTALL 3/8" CLOSED CELL BACKER ROD AND SONOLASTIC 150 SEALANT (MINIMUM THROAT THICKNESS 3/8"). (INCLUDE WORK IN BASE BID)

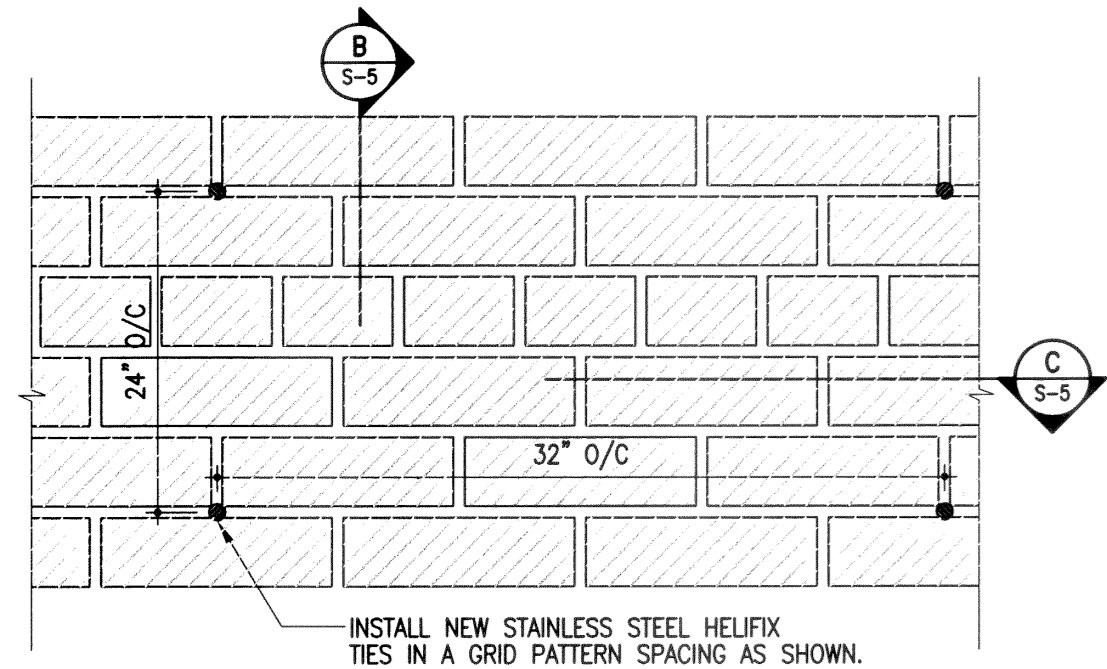


SAWCUT EXISTING STONE AS DIRECTED BY CONSULTANT AND PROVIDE TEMPORARY SUPPORT FOR SURROUNDING STONE WORK. CUT NEW TYNDALL STONE SECTION AND EPOXY TO EXISTING SECTION OF STONE. INSTALL FOUR STAINLESS STEEL PINS AS PER DETAIL J/S-5.

INJECT CRACKED SECTION OF STONE USING SIKADUR INJECTION GEL. SEE DETAIL H/S-5.

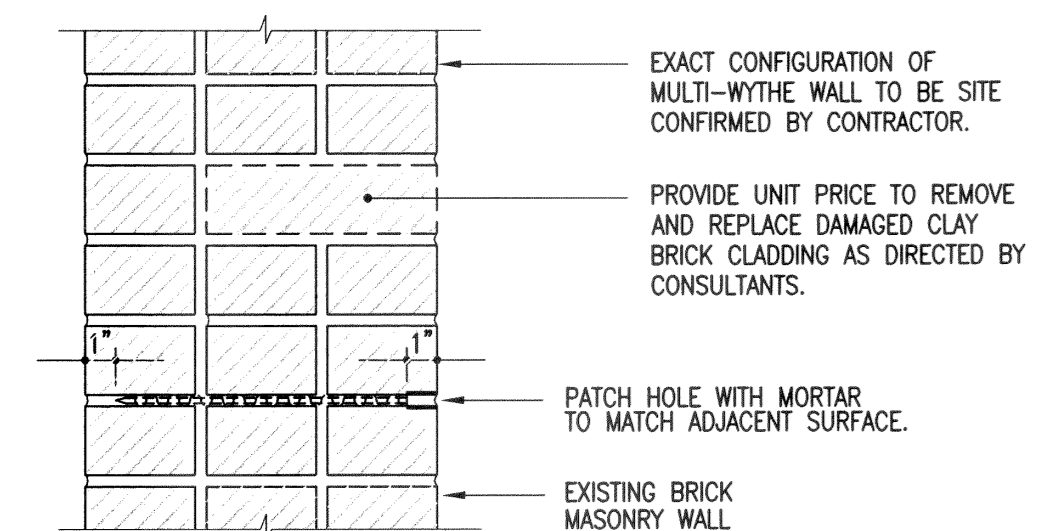
ANCHOR TYNDALL STONE TO MASONRY BACKUP WALL. INSTALL MINIMUM 2 HELIFIX ANCHORS PER STONE.

**D EXTERIOR WALL CORNER**  
S-5 SCALE: NTS UNIT PRICE



**A PARTIAL BRICK ELEVATION**  
S-5 SCALE: NTS UNIT PRICE

INSTALL NEW STAINLESS STEEL HELIFIX TIES IN A GRID PATTERN SPACING AS SHOWN.



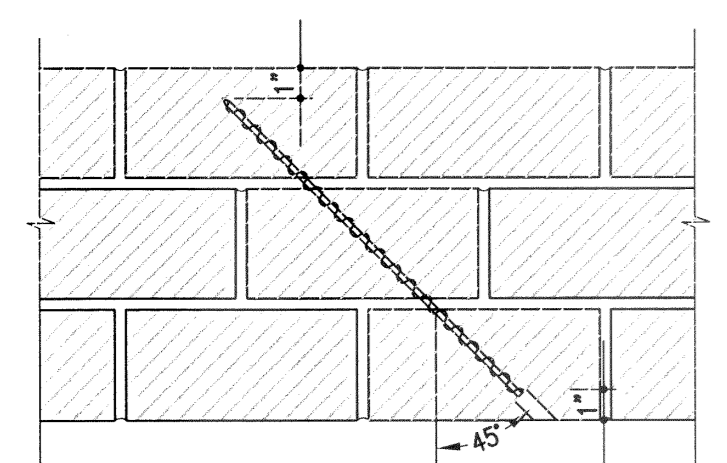
EXACT CONFIGURATION OF MULTI-WYTHE WALL TO BE SITE CONFIRMED BY CONTRACTOR.

PROVIDE UNIT PRICE TO REMOVE AND REPLACE DAMAGED CLAY BRICK CLADDING AS DIRECTED BY CONSULTANTS.

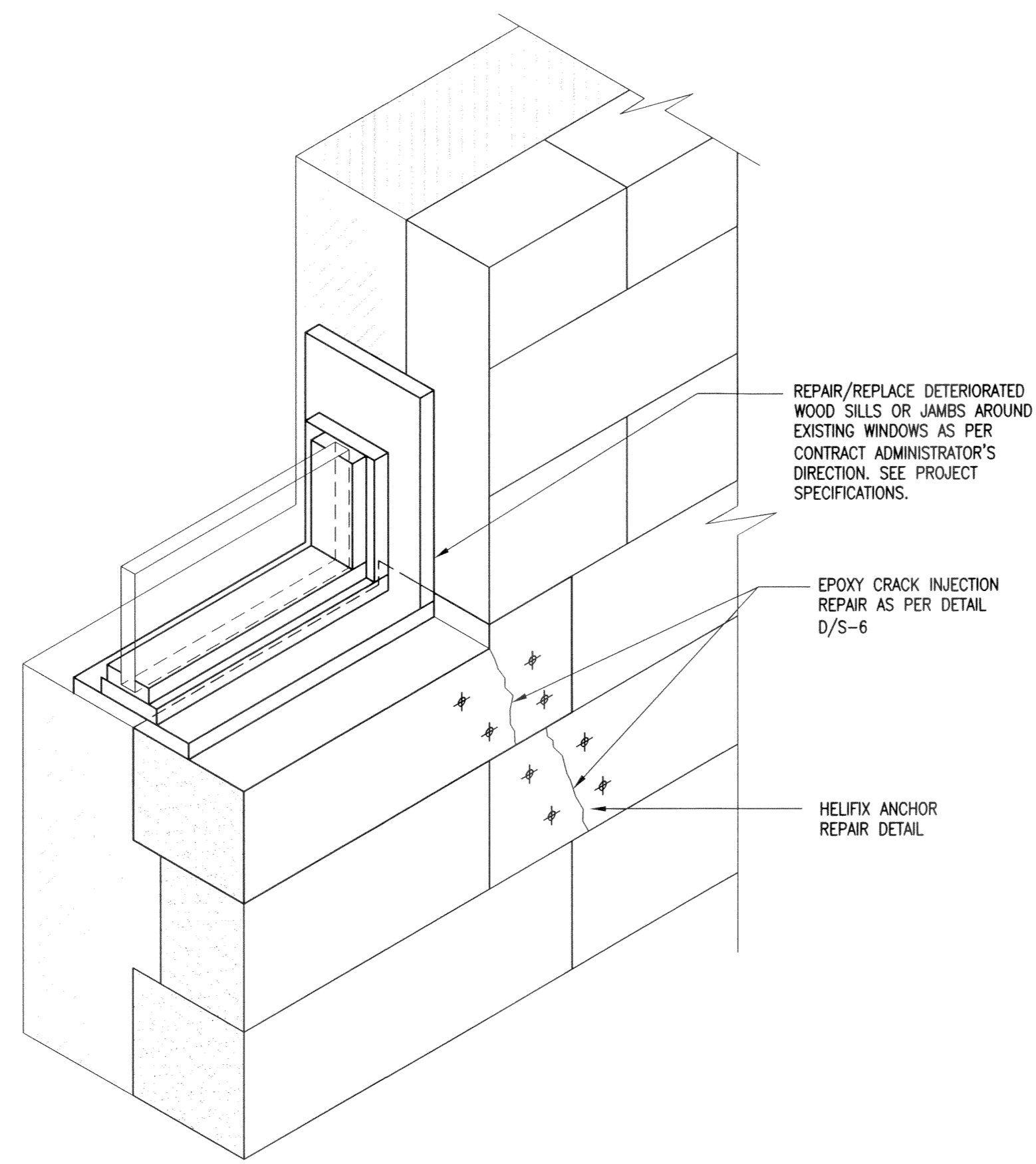
PATCH HOLE WITH MORTAR TO MATCH ADJACENT SURFACE.

EXISTING BRICK MASONRY WALL.

**B SECTION THROUGH BRICK WALL**  
S-5 SCALE: NTS UNIT PRICE



**C PLAN VIEW**  
S-5 SCALE: NTS UNIT PRICE

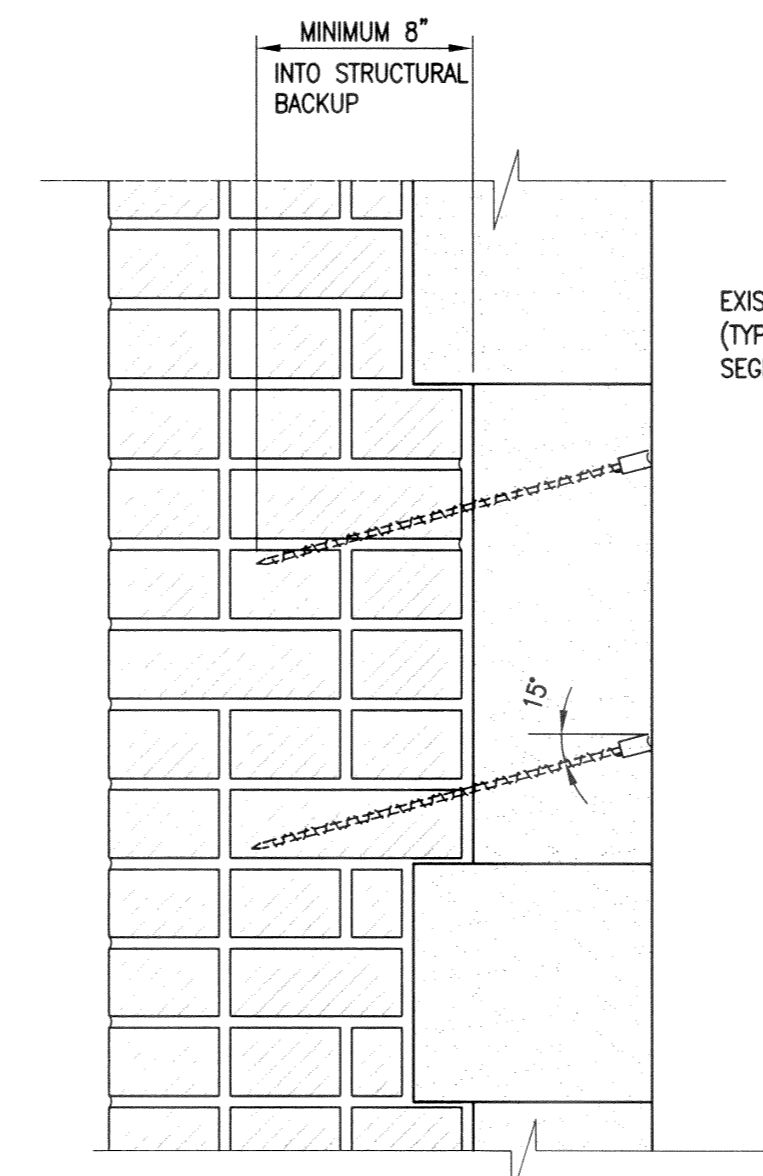


**F EXTERIOR SILL DETAIL**  
S-5 SCALE: NTS UNIT PRICE

REPAIR/REPLACE DETERIORATED WOOD SILLS OR JAMBS AROUND EXISTING WINDOWS AS PER CONTRACT ADMINISTRATOR'S DIRECTION. SEE PROJECT SPECIFICATIONS.

EPOXY CRACK INJECTION REPAIR AS PER DETAIL D/S-6

HELIFIX ANCHOR REPAIR DETAIL



**G STONE ANCHORAGE SECTION**  
S-5 SCALE: NTS UNIT PRICE

**INSTALLATION PROCEDURES**

INSTALL HELIFIX STAINLESS STEEL TIES INTO EXTERIOR MASONRY (DRYFIX TECHNIQUE) AT SPECIFIED SPACING. PATCH ALL PENETRATIONS TO MATCH EXISTING SURFACE USING JAHN M160 MARBLE PATCHING MORTAR.

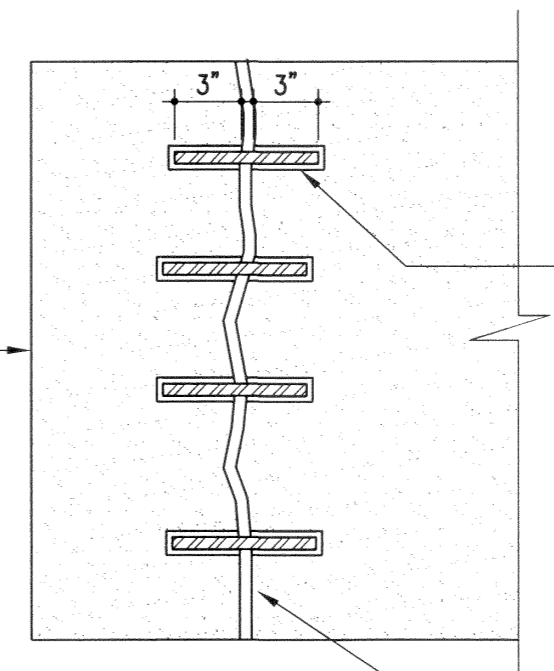
A 1/4" ENTRY HOLE SHALL BE PREDRILLED THROUGH THE EXISTING STONE PANEL AND CONTINUOUSLY DRILLED INTO THE SECOND AND THIRD WYTHES OF MASONRY TO A HORIZONTAL PENETRATION DEPTH OF NOT LESS THAN 8". THIS DRILL PROCEDURE IS BE CARRIED OUT BY MEANS OF A HIGH SPEED ELECTRIC HAMMER DRILL (3 JAW CHUCK TYPE).

NOTE: A DRYFIX SUPPORT TOOL MAY BE REQUIRED WHEN INSTALLING LONGER LENGTHS OF HELIFIX TIE INTO DENSE MASONRY UNITS.

THE 5/16" HELIFIX 304 STAINLESS STEEL ANCHOR SHALL THEN BE DRIVEN INTO POSITION WITH A HELIFIX 'DRYFIX' POWER TOOL MOUNTED ON AN S.D.S. TYPE CONCRETE HAMMER DRILL AND RECESSED 1/4" MINIMUM FROM THE SURFACE. THE STONE SHALL THEN BE PATCHED AT THE LOCATIONS OF THE PENETRATIONS TO MATCH EXISTING ADJACENT STONE SURFACE AS PER SPECIFICATIONS.

CONTRACTOR TO OBTAIN ALL RELEVANT DRILL BITS AND SETTING TOOLS FROM BLOK-LOK LIMITED.

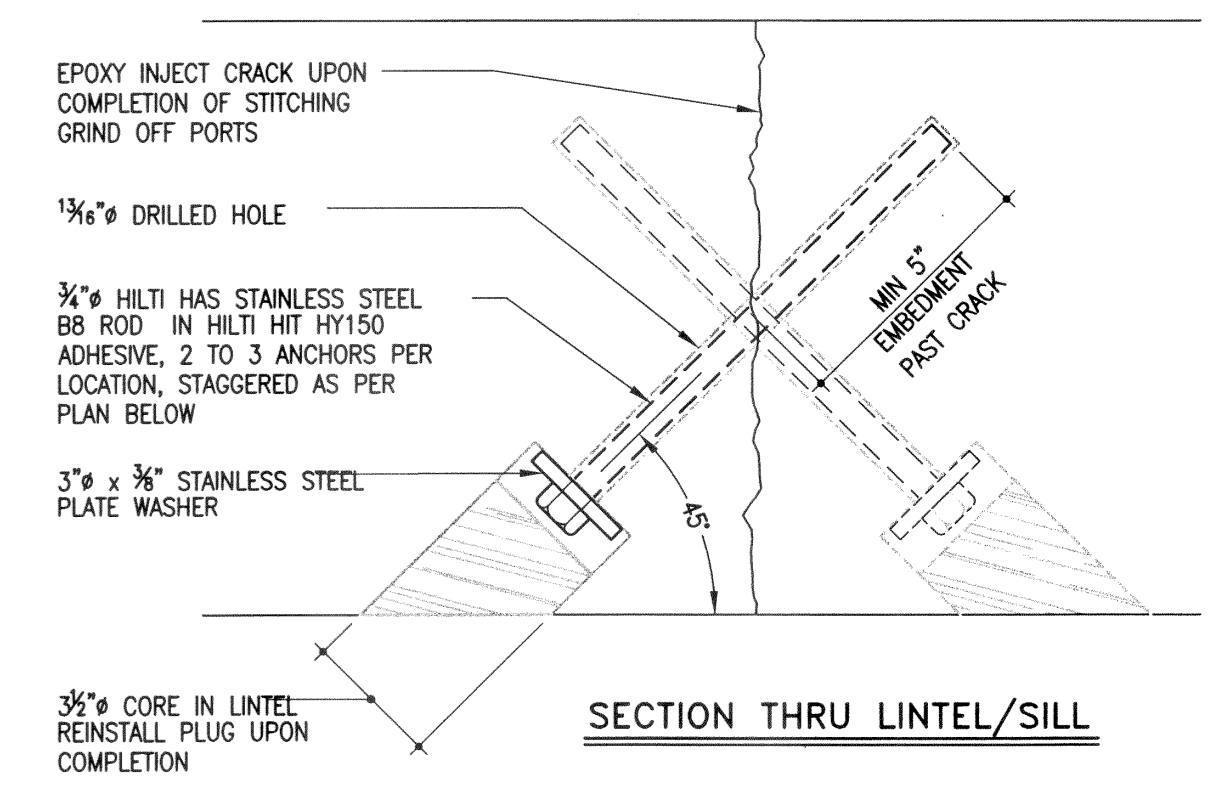
SEE SPECIFICATION REGARDING FURTHER INFORMATION WITH RESPECT TO METHODS, MATERIALS & TESTING.



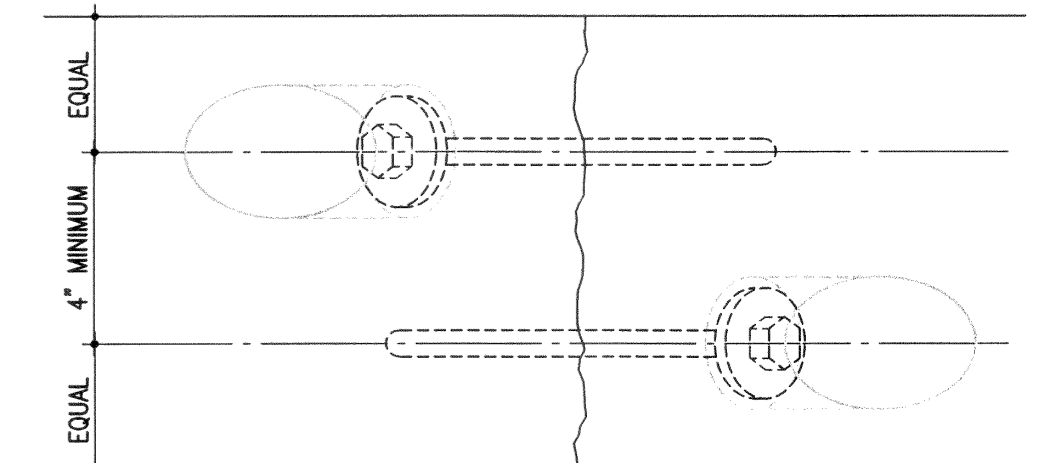
**H DUTCHMAN REPAIR DETAIL**  
S-5 SCALE: NTS UNIT PRICE

3/8" DRILLED HOLES AT 4" o/c MINIMUM WITH 1/4" STAINLESS STEEL THREADED DOWELS. PROVIDE MINIMUM 2" EMBEDMENT INTO STONE EACH SIDE.

JOIN SECTIONS TOGETHER USING EPOXY RESIN.



**SECTION THRU LINTEL/SILL**

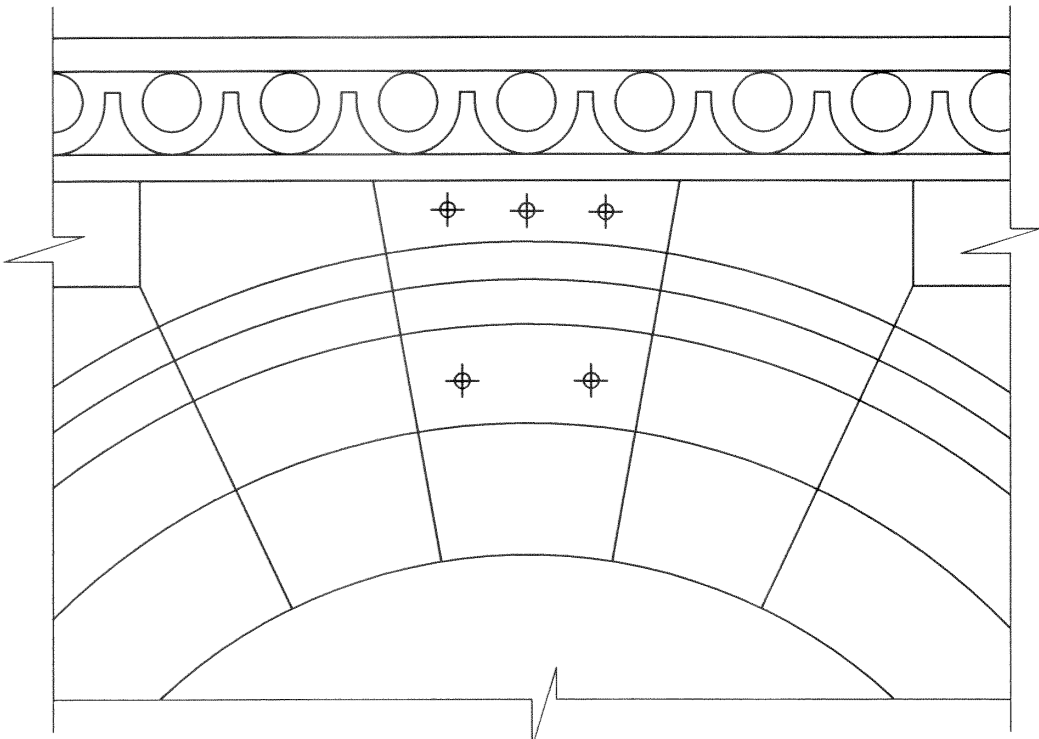


**PLAN OF UNDERSIDE OF LINTEL**

NOTE: INSTALL 2 ANCHORS FOR LINTEL/SILL STONES UP TO 10" WIDE. INSTALL 3 ANCHORS FOR WIDER LINTEL STONES

**J FLAT STONE LINTEL/SILL STITCHING**  
S-5 SCALE: N.T.S. UNIT PRICE

NOTES:  
> INSTALL ANCHORS IN SOUND STONE.  
> FOLLOW HILTI SPECIFICATIONS FOR ALL ASPECTS OF ANCHOR INSTALLATION, INCLUDING MINIMUM TEMPERATURE.  
> SHORE LINTELS/SILLS PRIOR TO STARTING WORK.



**K KEYSTONE ANCHOR REPAIR**  
S-5 SCALE: NTS



No.	Date	Issue/Revision	By
	JUNE 3/09	ISSUED FOR TENDER	HJL



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Crosier Kilgour & Partners Ltd.  
CONSULTING STRUCTURAL ENGINEERS

The General Contractor shall check & verify all dimensions and report any errors or omissions to the designers.

Project <b>CARNEGIE BUILDING - EXTERIOR MASONRY REPAIRS</b> 380 WILLIAM AVENUE WINNIPEG, MANITOBA						Sheet No. <b>S-5</b>
Sheet Title <b>MASONRY REPAIR DETAILS</b>						
Design HJL	Drawn HJ	Checked HJL	Scale AS NOTED	Date JUNE 2009	File 2008-245	