

RFI59

Project: COOLEY LABORATORY RENOVATION
Job: 3146 COOLEY LAB, PPA# 10-0023
Customer: STOFMT MSU BOZEMAN

POTENTIAL IMPACTS
Cost Impact: No
Schedule Impact: No

Issued To: CONSTRUCTION MANAGEMENT SERV.
P.O. BOX 7274
BOZEMAN, MT 59715

Attention: DONALD J. PLATISHA
Phone/Fax: 406 585-0611 / 406 585-2698

Coordination copies to:

Item: HELICAL PIER AT ARC ENTRANCE

Type: ARCH/STRUC

Reference: 2/S2.7

Spec. Section:

Attachments: SKetch A-B -Photos.

Description of Request

QUESTION:

The two helical piers shown within the elevator pit have been installed. Both of the underpinning brackets are skewed within the plane of the elevator pit. The counterbalance weights and cab rails would be in conflict. To resolve the situation we would propose to remove the vertical leg on the Chance Bracket and push the bracket to the west until it is out of conflict approximately 2 to 3 inches.

Respond By: 12/05/11 By: TIM THOLT

Response

SEE FIELD CONSTRUCTION REPORT DATED NOV 29TH
(ITEM #8) FOR NOTES ON THE INSTALLED PIERS.
AEGIS ENGINEERING DOES NOT HAVE A PROBLEM WITH
THE PROPOSED REALIGNMENT OF THE HELICAL PIERS
PROVIDED THAT THE HELICAL PIER MANUFACTURER
APPROVES THE CHANGES.

Signed:

Jerome Gann

Date:

12/2/11

Proceed as Indicated:

Date:

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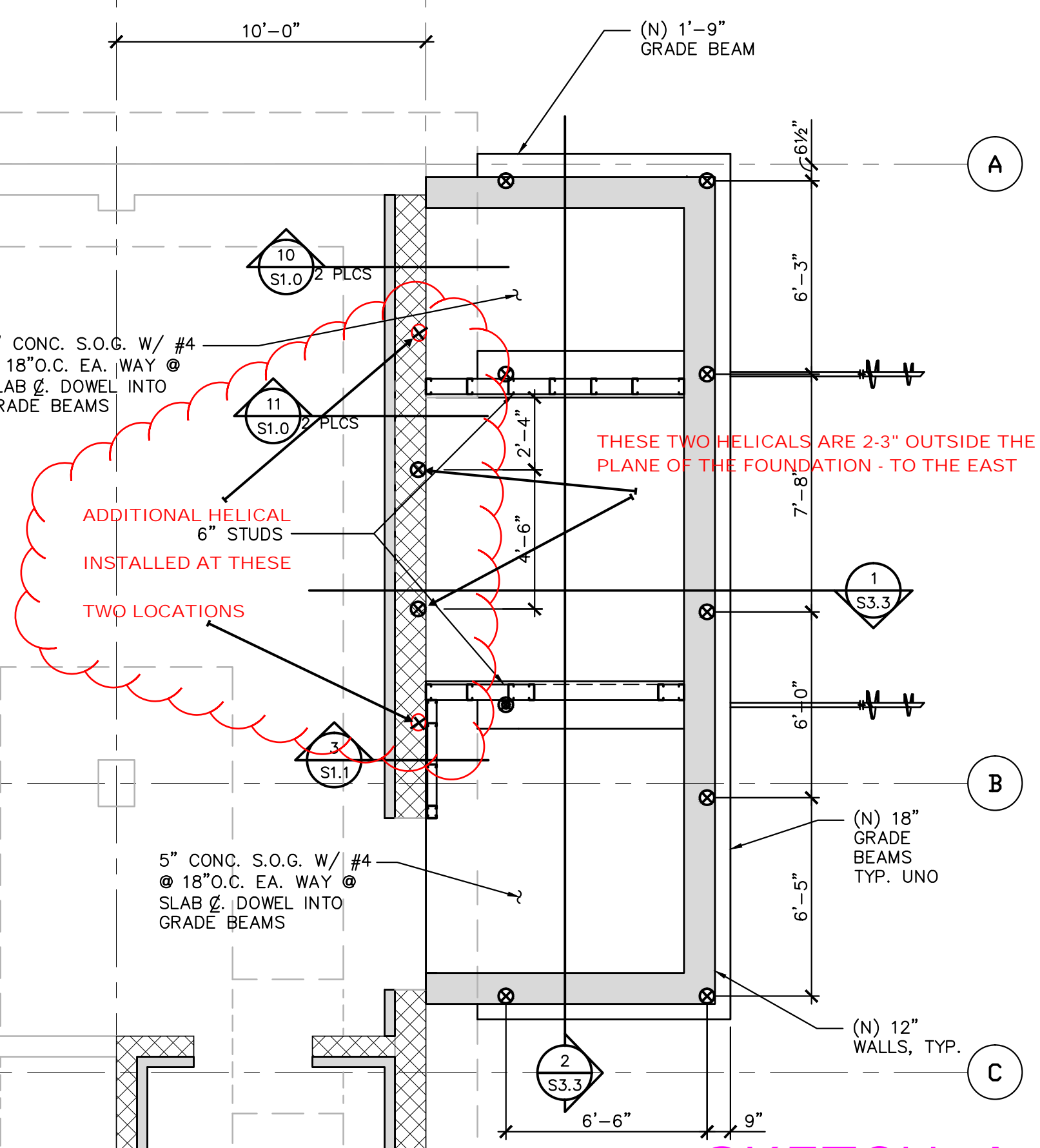
Respond By: 12/05/11 **By:** TIM THOLT

Response

Signed: _____ **Date:** _____

Proceed as Indicated: _____ **Date:** _____

Owner Authorized Representative



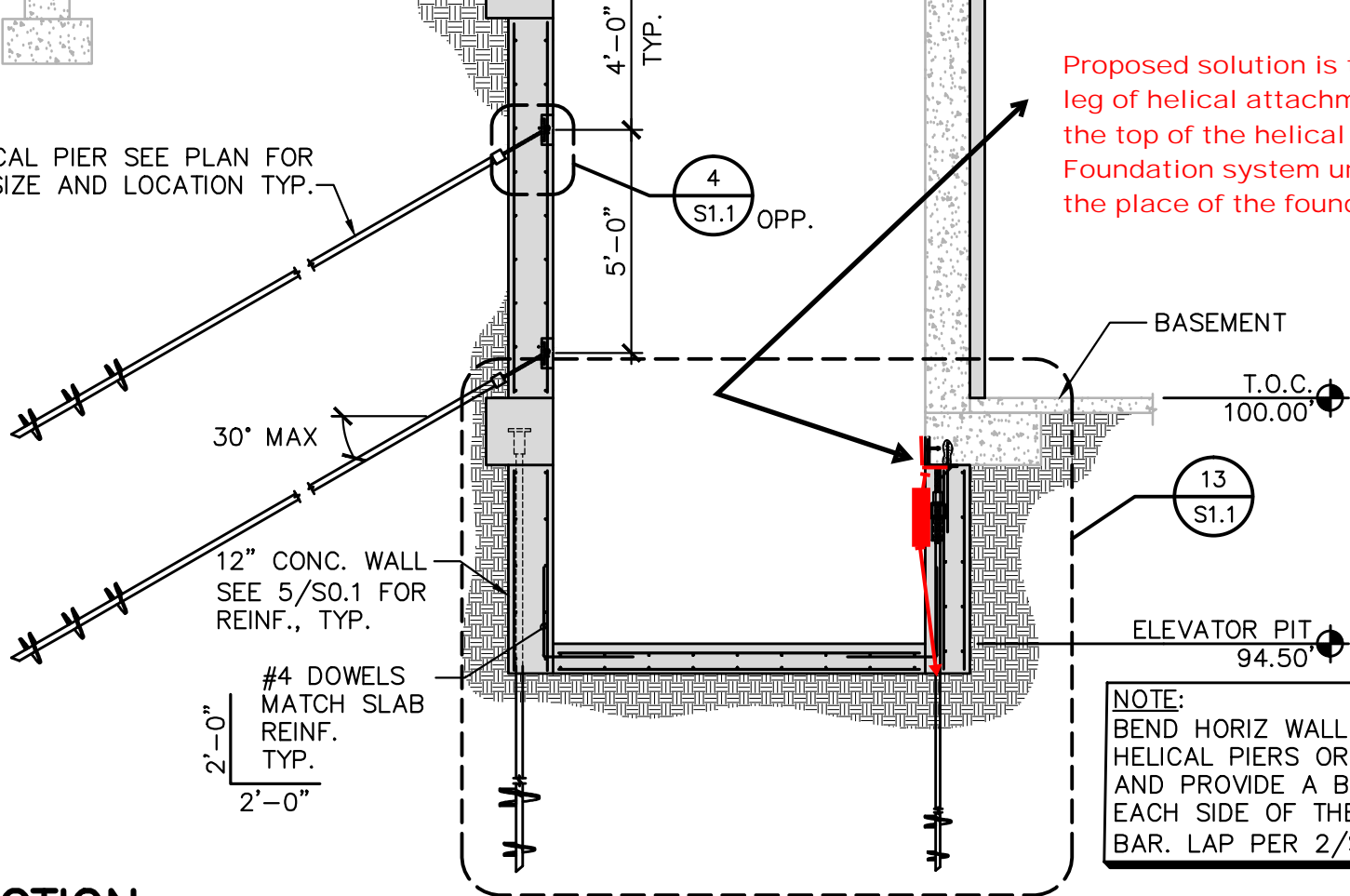
1 PARTIAL FOUNDATION PLAN

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

NOTE: SEE S2.0 FOR PLAN NOTES

SKETCH A

HELICAL PIER SEE PLAN FOR SIZE AND LOCATION TYP.



Proposed solution is to cut top leg of helical attachment and jack the top of the helical under the Foundation system until it is within the place of the foundation.

NOTE:
BEND HORIZ WALL REINF AROUND HELICAL PIERS OR INTERRUPT BAR AND PROVIDE A BAR TO LAP EACH SIDE OF THE INTERRUPTED BAR. LAP PER 2/S01.

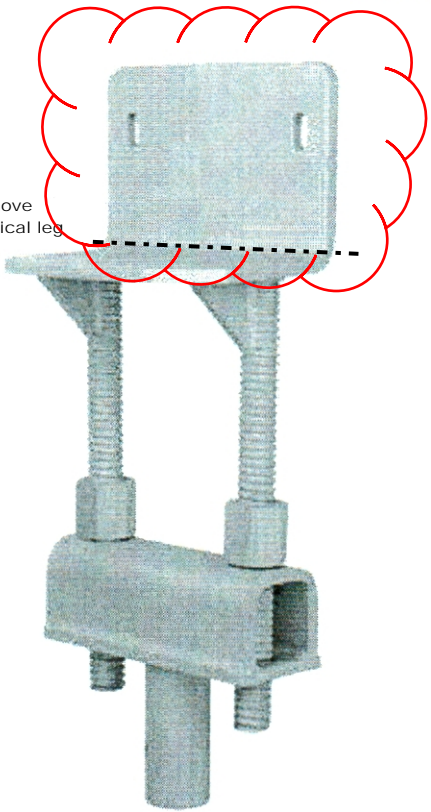
1

SECTION

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

SKETCH B

Remove
Vertical leg







EARTH STABILIZATION AND DRILLING, LLC

December 7, 2011

Mr. Kirk Scheel
Dick Anderson Construction, Inc.
4498 Jackrabbit Lane
Bozeman, MT 59718

RE: Cooley Laboratory Renovation – PPA#10-0023

Dear Mr. Scheel:

As you know the two underpinning helical piles below the foundation of the Cooley Lab extend beyond the wall and would affect the action of the elevator. We have proposed that the vertical leg of the angle bracket be removed and the horizontal leg of the angle and bracket be moved inward to be clear of the elevator. The flat would be drilled with four 9/16" holes and 6-inch long 1/2" diameter Hilti or Redhead bolts would be drilled upward and into the bottom of the footing to provide restraint. The entire bracket can then be encased in concrete when it is poured for the wall. To accomplish this task we plan to install wooden cribbing and place a 60-ton jack on top of the cribbing to temporarily support the load. The jack will be placed snug to a 6" x 6" x 1/4" piece of tubing approximately 24 inches long. We will remove one bracket at a time and replace it before reinstalling the second bracket.

I have discussed this with Jerome and (Chance's Regional Distributor). It was their opinion that this appeared to place the pile in a suitable alignment and that as long as the bracket is securely bolted to the footing it would provide similar restraint from movement that is provided by the vertical leg of the existing bracket. It was the opinion of Chance's regional distributor that there would be no adverse impact to the carrying capacity of the bracket by removing the vertical leg, as long as the horizontal leg is securely bolted to the bottom of the footing with expansion bolts before ultimately being encased in the new cast in place concrete wall. The vertical leg of the angle is to provide restraint to keep the pile in place so it does not move along the foundation. The existing angle bracket forces the slightly angled pile shaft to deflect outward when weight is placed on the bracket causing it to deflect outward against the side of the hole. Due to the configuration of helical piles and the bolt that secures subsequent pile sections to each other the hole is always larger than the diameter of the pile. This allows piles to be adjusted slightly in their location. We will then pour a neat cement grout with a W/C ratio of 0.45 down the hole to secure the pile into place. This will secure the pile to the edge of the native soil in the annulus around the pile. We feel this will produce piles that are equivalent to, if not superior to, the existing piles because the alignment is improved.

Please call if you have any questions.

Sincerely,

Patrick Redmond, PE
Geotechnical Engineer/Principal

dp@cmsco.net

From: Frank John Di Stefano [FJdistefano@architects-design-group.com]
Sent: Thursday, December 08, 2011 1:49 PM
To: dp@cmsco.net
Cc: Jerome Gannon
Subject: RE: Cooley Underpinning Piles

Don, the response from Aegis to the RFI indicated that realigning the pier was acceptable to them as long as the manufacturer signed off on the remedial action that was proposed. The letter that Earth Stabilization provided is sufficient in my view to satisfy the comments made by Aegis. In my view, you have the green light to proceed with the remedial work you have proposed. I have copied Aegis so that if they disagree with my interpretation they can do so.

Frank John di Stefano, AIA
Architect Design Group, pc
1 Sunset Plaza
Kalispell, MT 59901
406-257-7125 (phone)
406-756-3409 (fax)
fjdistefano@architects-design-group.com

From: dp@cmsco.net [mailto:dp@cmsco.net]
Sent: Thursday, December 08, 2011 1:39 PM
To: 'Frank John Di Stefano'
Subject: FW: Cooley Underpinning Piles

Frank

It is difficult to assess where the helical pier corrective action is currently , perhaps the RFI action originally submitted is adequate to resolve both piers. The letter attached indicates Jerome - Subcontractor and AB Chance have had discussion resulting in the consequential assessment that " No adverse impact of the carrying capacity of the bracket by removing the vertical leg" . Can you let me know if you & (Jerome) concur that DAC can proceed with the corrective action noted in Earth Stabilization's letter at this point after which the issue can be considered corrected?

If we need to request additional information would you or Jerome provide some guidance?

Donald J. Platisha
CMS. Co.

dp@cmsco.net
406-585-0611
406581-0250

From: Greg Schermele [mailto:Greg@daconstruction.com]
Sent: Thursday, December 08, 2011 12:02 PM
To: dp@cmsco.net
Subject: FW: Cooley Underpinning Piles

Thank You, Greg

Greg Schermele



Superintendent
Dick Anderson Construction
Cooley Lab Renovation @
Montana State University
406-600-1777

From: Patrick Redmond [<mailto:piedengineering@qwestoffice.net>]
Sent: Thursday, December 08, 2011 10:47 AM
To: Kirk Scheel; Greg Schermele; Tim Tholt
Cc: 'Ian Romain'; jjupka_esd@qwestoffice.net
Subject: Cooley Underpinning Piles

Please see attached letter.

Thank you,

Patrick Redmond, PE
Pioneer Technical Services, Inc.
Earth Stabilization and Drilling, LLC
1215 Apple's Way
Belgrade, MT 59714

406-388-8578 (phone)
406-388-8579 (fax)
406-209-2054 (cell)

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