



Saunders Construction, LLC
86 Inverness Place North
Englewood CO 80112 USA

Request For Information

RFI-025

Printed On: 06/28/2021
Page 1 of 1

Subject: BP3 Gold Walk Bearing Conditions
Project: Steamboat - BV BP Promenade and Goldwalk
Address: 2305 Mount Werner Circle
Steamboat Springs CO 80487 USA
Phone:
To: John Hart
Coggins & Sons, Inc.
From: Saunders Construction, LLC

Date: 06/21/2021
Job: 2001502104
Required: 06/25/2021
Est. Cost Impact : \$
Est. Days Impact:

Alec Hallman

Co-Author:

Contact:

Co-Author RFI Number:

Reference:

Specification Section:
Posted to Asbuilts:

Drawing:
Discipline: Structural Structural

Request

PRIORITY RFI REQUESTED RETURN: ASAP

During open hole inspection following excavations for Gold Walk footers, NWCC had communicated that soils in area were composed of old building fill and that 3,000PSF would not be achievable with current subsurface conditions. Please see attached soils report with reference to location of work.

Suggestion (Saunders Construction, LLC assumes no associated design liability)

SCI suggests use of drill piers, micropiles, RAP, or the use of mud slab along with aggregate below footings. Concrete activities for Grandstair/Escalator returns are on hold until resolution achieved.

Saunders Construction, Inc. assumes no associated design liability and that the Design Team needs to furnish design directives in response to this RFI that materially changes the original intent of the Contract Documents.

Answer ☐ **Accept Suggestion**

SEE ATTACHED OBSERVATIONS AND RECOMMENDATIONS
SEE ATTACHED EMAIL DIRECTION FROM SCI TO PROCEED WITH MICROPILE DESIGN
SEE ATTACHED MARTIN/MARTIN LOAD CALCULATIONS
SUBMIT MICROPILE DESIGN AS DEFERRED SUBMITTAL
JAPPLE, GENSLER, 6/28/2021

Answered By: M. Arthur Gensler, Jr. and Associates, Inc.

Signed: _____
Jacob Apple

Date: 06/28/2021

Please find the attached RFI response. If this response should have any cost/schedule impact please reply within four (4) business days or this will be considered a no-cost/schedule issue.

Distribution:

Contact	Company	Contact	Company
Gregg Riker	Rikon Management, LLC	Bryan Sculthorpe	Saunders Construction, LLC
Reno Romagnoli	Saunders Construction, LLC		



Saunders Construction, LLC
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Page 1 of 1

Subject: BP3 Gold Walk Bearing Conditions
Project: Steamboat - BV BP Promenade and Goldwalk
Address: 2305 Mount Werner Circle
Steamboat Springs CO 80487 USA
Phone:
To: Jacob Apple
M. Arthur Gensler, Jr. and Associates, Inc.
From: Saunders Construction, LLC Alec Hallman

Date: 06/21/2021
Job: 2001502104
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SUBMIT MICROPILE DESIGN AS DEFERRED SUBMITTAL

Answered By:

Signed: **JAPPLE, GENSLER, 6/28/2021**

Date:

Distribution:

Contact

Geoffrey Brooksher
Bryan Sculthorpe

Company

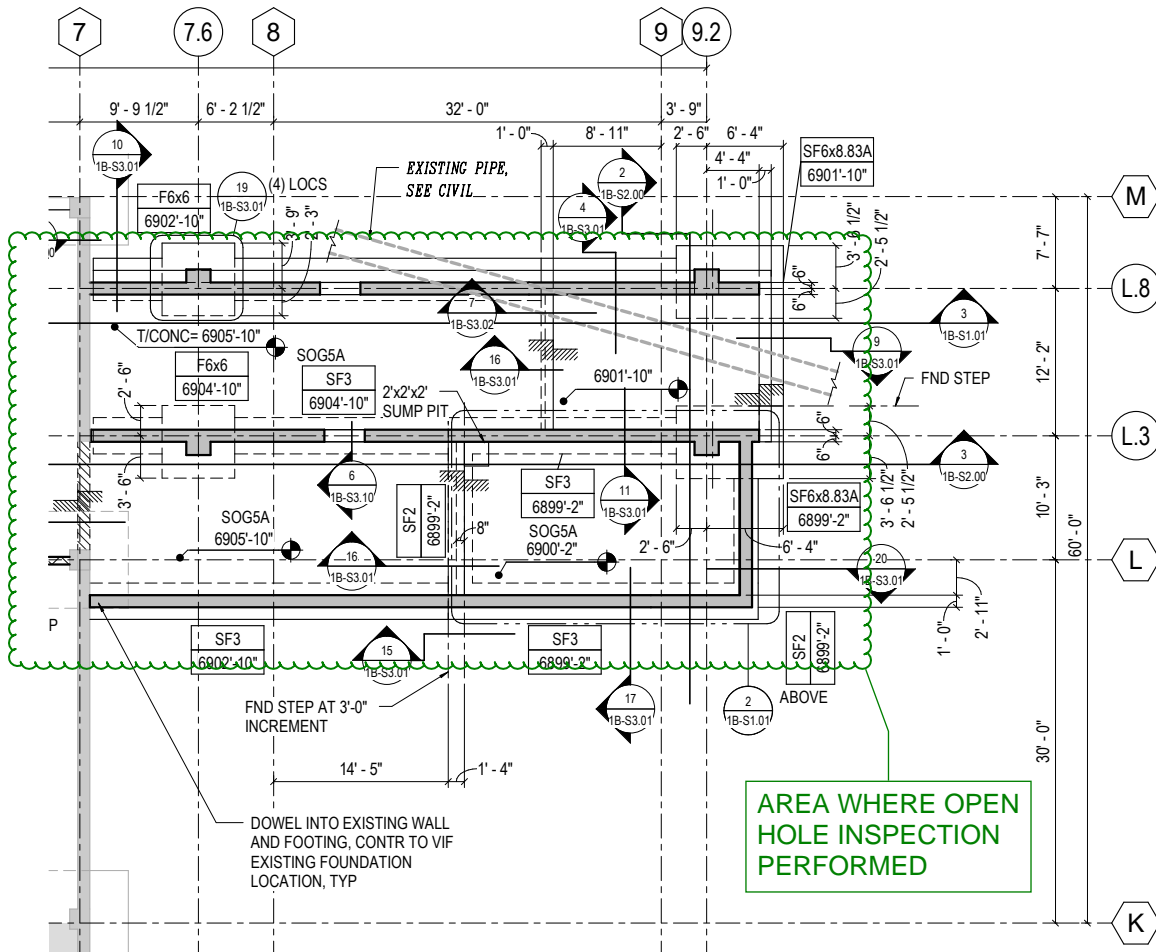
M. Arthur Gensler, Jr. and A
Saunders Construction, LLC

Contact

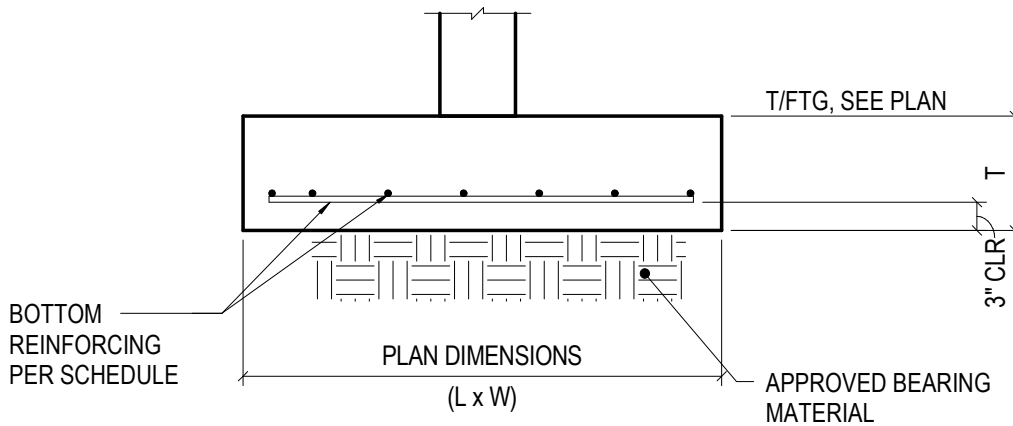
Gregg Riker
Reno Romagnoli

Company

Rikon Management, LLC
Saunders Construction, LLC



SPREAD FOOTING SCHEDULE				
SOIL ALLOWABLE PRESSURE = 3000 PSF				
MARK	FOOTING SIZE L x W x T	REINFORCING	SERVICE CAPACITY (KIPS)	REMARKS
F6x6	6'-0"x6'-0"x1'-4"	(7) #5 EW BOT	108	-



3

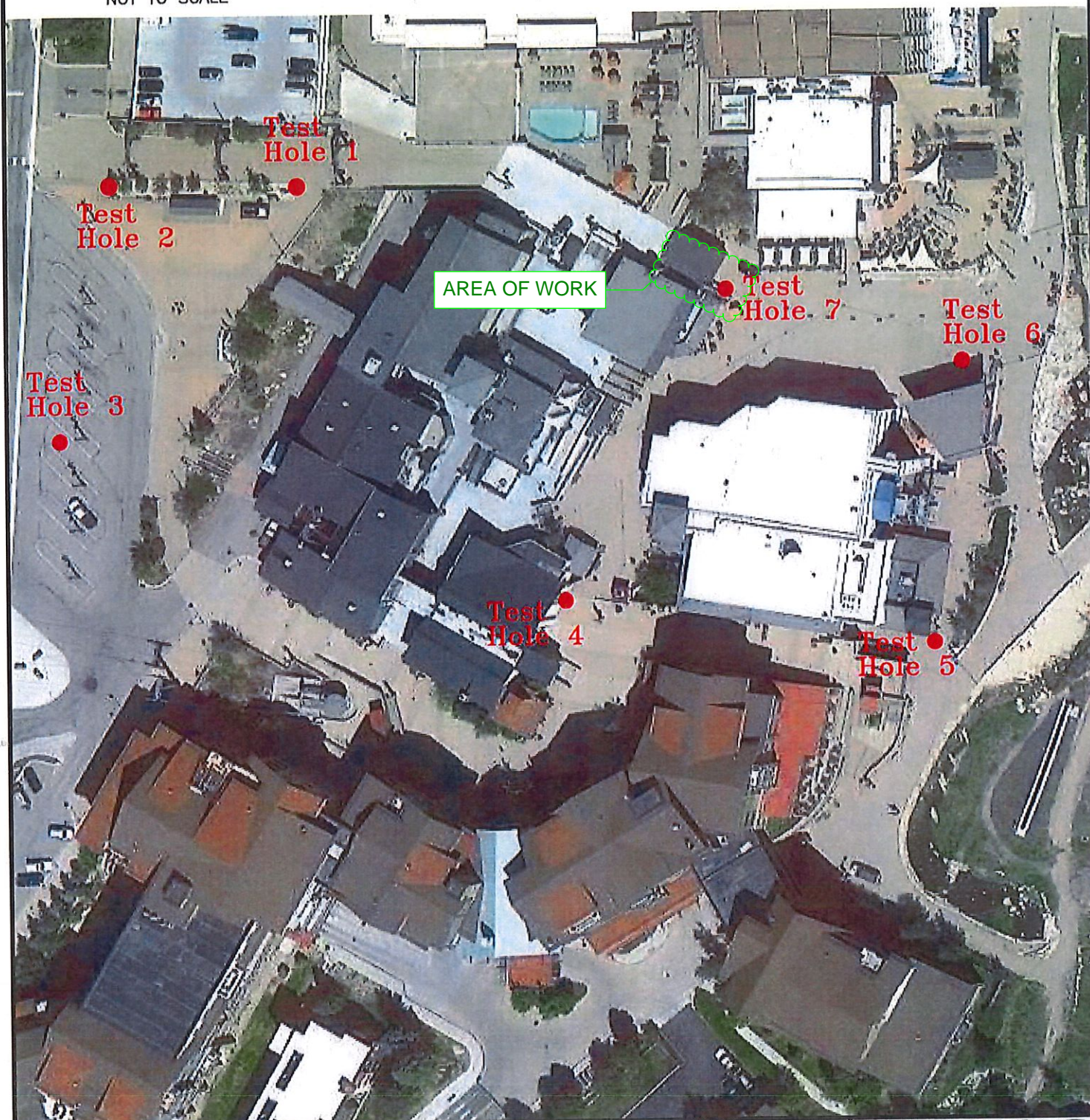
NO SCALE

TYP SPREAD FOOTING





NOT TO SCALE



Title: SITE PLAN-LOCATION OF TEST HOLES

Date: 12/18/2020

Job Name: Steamboat Base Area Redevelopment

Job No. 20-12000

Location: Steamboat Ski Area, Steamboat Springs, Colorado

Figure #2



Test Hole 7
Elevation: 6,905.7'



NWCC
North West Colorado Consultants, Inc.
Geotechnical / Environmental Engineering - Materials Testing
(970)879-7888 - Fax (970)879-7891
2580 Copper Ridge Drive - P.O. Box 775226
Steamboat Springs, Colorado 80477

LEGEND:



BRICK PAVER UNDERLAIN BY: WELDED WIRE MESH, SNOWMELT LINE AND LEVELING SAND.



ASPHALT PAVEMENT.



FILL: Aggregate Base Course and Subbase Aggregate.



FILL: Sandy clays to clayey sands, low to moderately plastic, fine to coarse grained with gravels and occasional cobbles and boulders, soft to very stiff to loose to medium dense, slightly moist to very moist and gray to dark brown.



CLAYS: Slightly sandy to very sandy, low to moderately plastic, fine to coarse grained with gravels and occasional cobbles, soft to stiff, moist to wet and light brown to brown.



SANDS AND GRAVELS: Silty to clayey, low to non-plastic, fine to coarse grained with cobbles and boulders, medium dense to very dense, moist to wet and brown to gray.



CLAYSTONE BEDROCK: Sandy to very sandy to silty, low to moderately plastic, fine to medium grained with occasional gravels, weathered to very hard, slightly moist to moist and light brown in color.



Drive Sample, 2-inch I.D. California Liner Sampler.



Drive Sample, Split Spoon Sampler.

35/12 Drive Sample Blow Count, indicates 35 blows of a 140-pound hammer falling 30 inches were required to drive the sampler 12 inches.
*Indicates hammer was bouncing on a suspected cobble or boulder.

3/5/20 Drive Sample Blow Count, indicates split spoon sampler with 3,5, and 20 blows of a 140-pound hammer falling 30 inches were required to drive the sampler 6 inches.

0,4,5
==

Indicates depth at which groundwater was encountered when measured at time of drill and when measured 4 or 5 days after drilling.



Indicates depth at which practical rig refusal was encountered in very dense cobbles and boulders.

Title: **LEGEND AND NOTES**

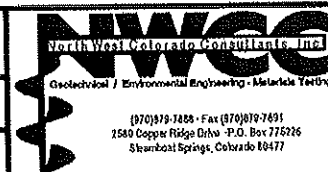
Job Name: **Steamboat Base Area Redevelopment**

Location: **Steamboat Ski Area, Steamboat Springs, Colorado**

Date: **12/18/2020**

Job No. **20-12000**

Figure **#5**





June 22, 2021

Steamboat Ski & Resort Corp.
Attn: Jim Schneider
2305 Mt. Werner Circle
Steamboat Springs, CO 80487

Job Number: 20-12000

Subject: Excavation Observations and
Recommendations, Steamboat Base Area
Redevelopment – Gold Walk, Steamboat
Springs, Colorado.

Jim,

As requested by Saunders, NWCC, Inc. (NWCC) visited the project site on June 21, 2021 to observe the foundation excavation for the Gold Walk at the Steamboat Ski Resort Base Area in Steamboat Springs, Colorado. NWCC previously conducted a Subsoil and Foundation Investigation (S&FI) for the Steamboat Base Area Redevelopment under job number 20-12000 in a report dated December 30, 2020 and revised April 22, 2021.

Site Observations: At the time of visit, the excavation had been advanced to approximately 8 feet below the former paver grade. The excavation is in the vicinity of Test Hole 7, drilled at the time of the S&FI (NWCC, 2020). The soils exposed in the sidewall and base of the excavation consisted of existing, uncontrolled fill materials and were consistent with soils encountered during the S&FI. Fill materials were variable and consisted of clays with sands, gravels and occasional cobbles and debris. During the S&FI, fill materials in Test Hole 7 were encountered to a depth of approximately 14 feet below the original grade of the pavers. It should also be noted that groundwater was encountered at approximately 14 feet below the paver grade in Test Hole 7.

Recommendations: Fill materials encountered in the excavation are not considered suitable bearing soils. NWCC does not recommend placing footings, structural fill materials, or a mud slab on the existing fill materials. Additionally, existing fill materials are not suitable for replacement and recompaction. NWCC recommends the following options:

- Footings founded on properly compacted granular structural fill materials or flow fill material placed directly on natural sands and gravels after all existing fill materials are removed.
- Rammed aggregate pier (RAP) foundation system extending into natural sands and gravels.
- Helical screw piles advanced through fill materials into natural sands and gravels.
- Micro piles extending into natural sands and gravels.

Modifications to the recommendations for RAP and helical screw piles provided in the S&FI report are not required at this time. If micro piles are opted for, NWCC should be contacted to coordinate with the micro pile contractor/design team.

Footing recommendations included in the S&FI report should be observed with the following additional recommendations for flow fill. Based on the amount of over excavation which would be required if footings are opted for, we recommend backfilling the excavation with flow fill material to the proposed footing grade. Flow fill should have a minimum 28-day compressive strength of 200 psi and extend at least 5 feet beyond the edges of the footings. An allowable bearing capacity of 3,000 psf can be used for footings placed on flow fill materials placed on the natural sands and gravels.

If you have any questions regarding our observations or recommendations or if we may be of further service, please do not hesitate to contact us.

Sincerely,
NWCC, INC.

Erika K. Hill, P.E., P.G.
Project Engineer

Reviewed by Brian D. Len, P.E.
Principal Engineer



Jacob Apple

From: Alec Hallman <A.Hallman@saundersinc.com>
Sent: Wednesday, June 23, 2021 10:00 AM
To: John Hart; TIM LACK; C. Abraham Chen; Jacob Apple; Geoffrey Brooksher; blen@nwccusa.com
Cc: Reno Romagnoli; Bryan Sculthorpe; Gregg@rikonllc.com; Josh Boh
Subject: RE: 2001502104SC5AHA RFI RFI-025 BP3 Gold Walk Bearing Conditions

Importance: High

Categories: 01 - 00 Steamboat

All,

After evaluating the size and impact that over excavating the entire footing area would have on the existing sanitary line, micro piles are the direction we need to proceed. We will also be bringing the shoring tie-back rig onsite ~Monday which can also perform this work. This makes sense from a logistics and schedule perspective.

Martin/Martin – can you please indicate the information that John has requested below? This will progress the design and allow the impact to schedule to be minimized as much as possible.

Thank you,



Alec Hallman

Project Engineer

86 Inverness Place North, Englewood, CO 80112

d (303) 386-9065 **o** (303) 699-9000 **m** (720) 445-0436

A.hallman@saundersinc.com

www.saundersinc.com

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From: John Hart <jhart@cogginsandsons.com>
Sent: Tuesday, June 22, 2021 10:04 AM
To: Alec Hallman <A.Hallman@saundersinc.com>; Timothy J. Lack <TLACK@martinmartin.com>; C. Abraham Chen <AChen@martinmartin.com>; Jacob Apple <Jacob_Apple@gensler.com>; Geoffrey Brooksher (Geoffrey_Brooksher@gensler.com) <Geoffrey_Brooksher@gensler.com>; blen@nwccusa.com
Cc: Reno Romagnoli <R.Romagnoli@saundersinc.com>; Bryan Sculthorpe <B.Sculthorpe@saundersinc.com>; Gregg@rikonllc.com; Josh Boh <j.boh@saundersinc.com>
Subject: RE: 2001502104SC5AHA RFI RFI-025 BP3 Gold Walk Bearing Conditions

This message originated outside of Saunders Construction. Even if this looks like a Saunders e-mail, it is not.

All

Good morning. In regard to the micropile alternative. We can figure out micropile design components such as bond stress and resistance provided. What we need from Martin and Martin is axial (compression and tension) loads and lateral loads (if any)? Can they provide? We could design a micropile in this geotechnical condition ranging from 50 to 75 kips service load utilizing the same drill components as we have proposed for the tieback anchors through the foundation wall.

Any questions, please contact us.

Thanks

John H. Hart, P.E., [D.GE](#)
P.E. (CO, ID, NM, SD, WY, UT)



Coggins and Sons, Inc.
9512 Titan Park Circle
Littleton, CO 80125

PH: 303-791-9911
CELL: 303-828-6983
ihart@cogginsandsons.com
cogginsandsons.com

From: Alec Hallman <A.Hallman@saundersinc.com>

Sent: Tuesday, June 22, 2021 9:41 AM

To: John Hart <ihart@cogginsandsons.com>; Timothy J. Lack <TLACK@martinmartin.com>; C. Abraham Chen <ACHen@martinmartin.com>; Jacob Apple <Jacob_Apple@gensler.com>; Geoffrey Brooksher <Geoffrey_Brooksher@gensler.com>; blen@nwccusa.com

Cc: Reno Romagnoli <R.Romagnoli@saundersinc.com>; Bryan Sculthorpe <B.Sculthorpe@saundersinc.com>; Gregg@rikonllc.com; Josh Boh <j.boh@saundersinc.com>

Subject: RE: 2001502104SC5AHA RFI RFI-025 BP3 Gold Walk Bearing Conditions

After a brief discussion this morning the two options are as follows:

1. Mud Slab Design
 - a. **NWCC** - What is the current soil bearing pressure?
 - i. Saunders is furnishing a bucket of material to NWCC for proctor testing today. How soon can we get results?
2. Micro Piles

- a. **NWCC** – These would need be installed down to the sands and gravels layer @6891.7', correct? What is the bearing pressure at that layer? Keep in mind we have the existing sewer line which may impact deep foundation design.

I do have a follow up note- bore hole 7 was nearly in this exact location and notes unsuitable material until elevation 6891.7'. The shallow foundation design at the Goldwalk had the deepest footing designed with B.O.F elevation 6897.83' but typically 6903.5'.

Time is of the essence, we are currently being delayed for the GW footings in preparation for escalator delivery 8/17.

Thank you,



Alec Hallman

Project Engineer

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A.hallman@saundersinc.com

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From: Alec Hallman

Sent: Monday, June 21, 2021 5:10 PM

To: John Hart <jhart@cogginsandsons.com>; Timothy J. Lack <TLACK@martinmartin.com>; C. Abraham Chen <ACHen@martinmartin.com>; Jacob Apple <Jacob_Apple@gensler.com>; Lucas Derifield <lucasd@pcius.com>; Jacob Apple <Jacob_Apple@gensler.com>; Geoffrey Brooksher <Geoffrey_Brooksher@gensler.com>

Cc: Reno Romagnoli <R.Romagnoli@saundersinc.com>; Bryan Sculthorpe <b.sculthorpe@saundersinc.com>; Gregg@rikonllc.com

Subject: RE: 2001502104SC5AHA RFI RFI-025 BP3 Gold Walk Bearing Conditions

Team,

I've copied you all on this email to hopefully streamline a resolution. From the contractor perspective I have included John with Coggins (Shoring/Foundations) and Lucas with Peterson (RAP), both working on this job for the Promenade scope. Although based on the contents of the RFI, we will likely have additional earlier work at the Goldwalk stair and escalator returns.

John had mentioned micro piles, RAP are an option, Reno and I had discussed a potential waste slab below footings. Just wanted to get the ball rolling with some ideas.

Thank you,



Alec Hallman

Project Engineer

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d (303) 386-9065 o (303) 699-9000 m (720) 445-0436
A.hallman@saundersinc.com
www.saundersinc.com

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From: Building Confidence <collaboration@buildingconfidence.us>
Sent: Monday, June 21, 2021 4:54 PM
To: Alec Hallman <A.Hallman@saundersinc.com>
Subject: 2001502104SC5AHA RFI RFI-025 BP3 Gold Walk Bearing Conditions

RFI RFI-025

From	Alec Hallman
To	Jacob Apple
CC	Alec Hallman, Bryan Sculthorpe, Gregg Riker, Geoffrey Brooksher, Reno Romagnoli
Project	Steamboat - BV BP Promenade and Goldwalk
Subject	BP3 Gold Walk Bearing Conditions

Subject: BP3 Gold Walk Bearing Conditions
Date Required: 2021-06-25
Cost Impact: Potentially
Cost Amount:
Question: PRIORITY RFI REQUESTED RETURN: ASAP

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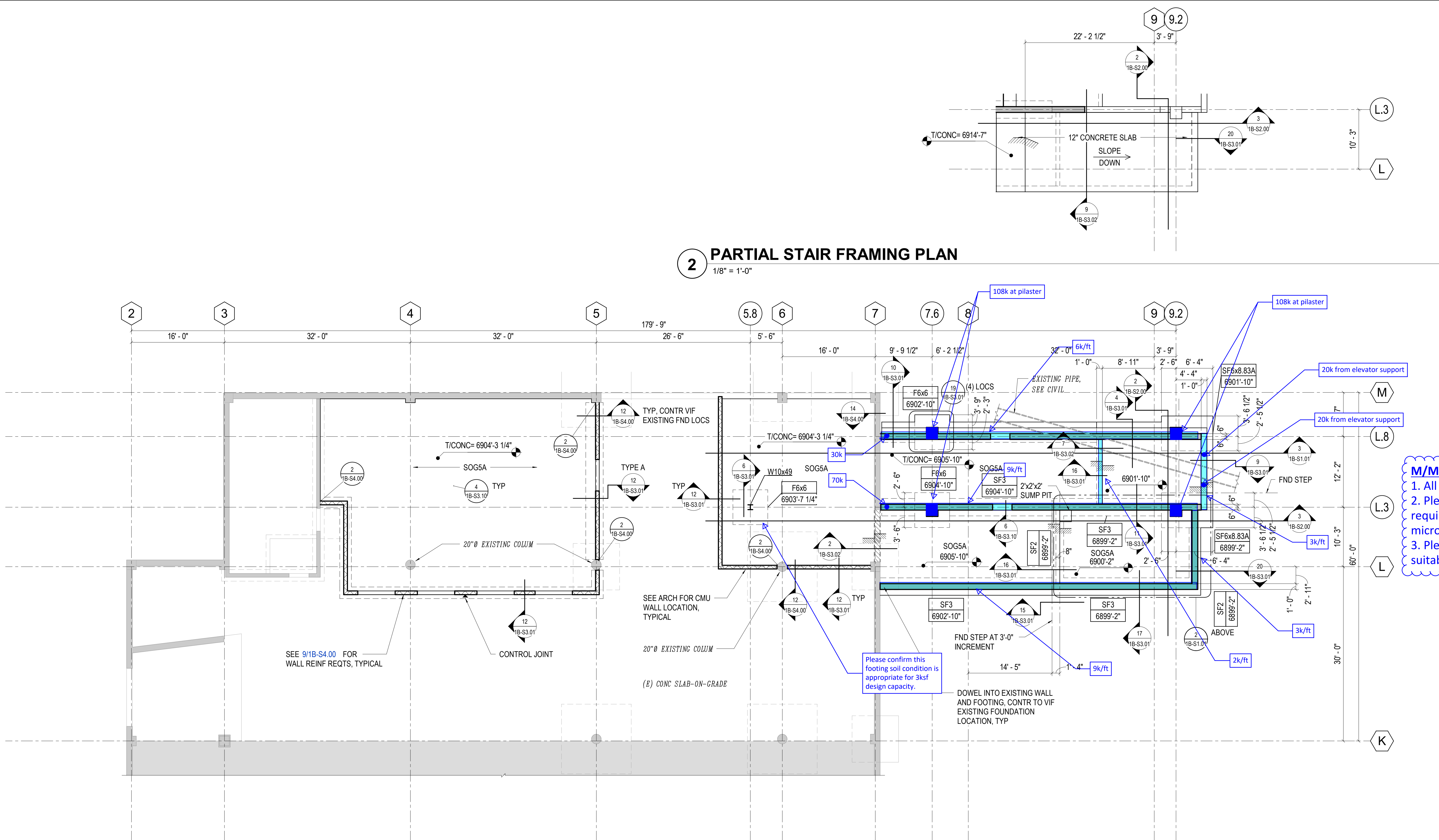
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Answer:

[Click here](#) to access this RFI on-line, or simply reply to this email with your comments and any required attachments.

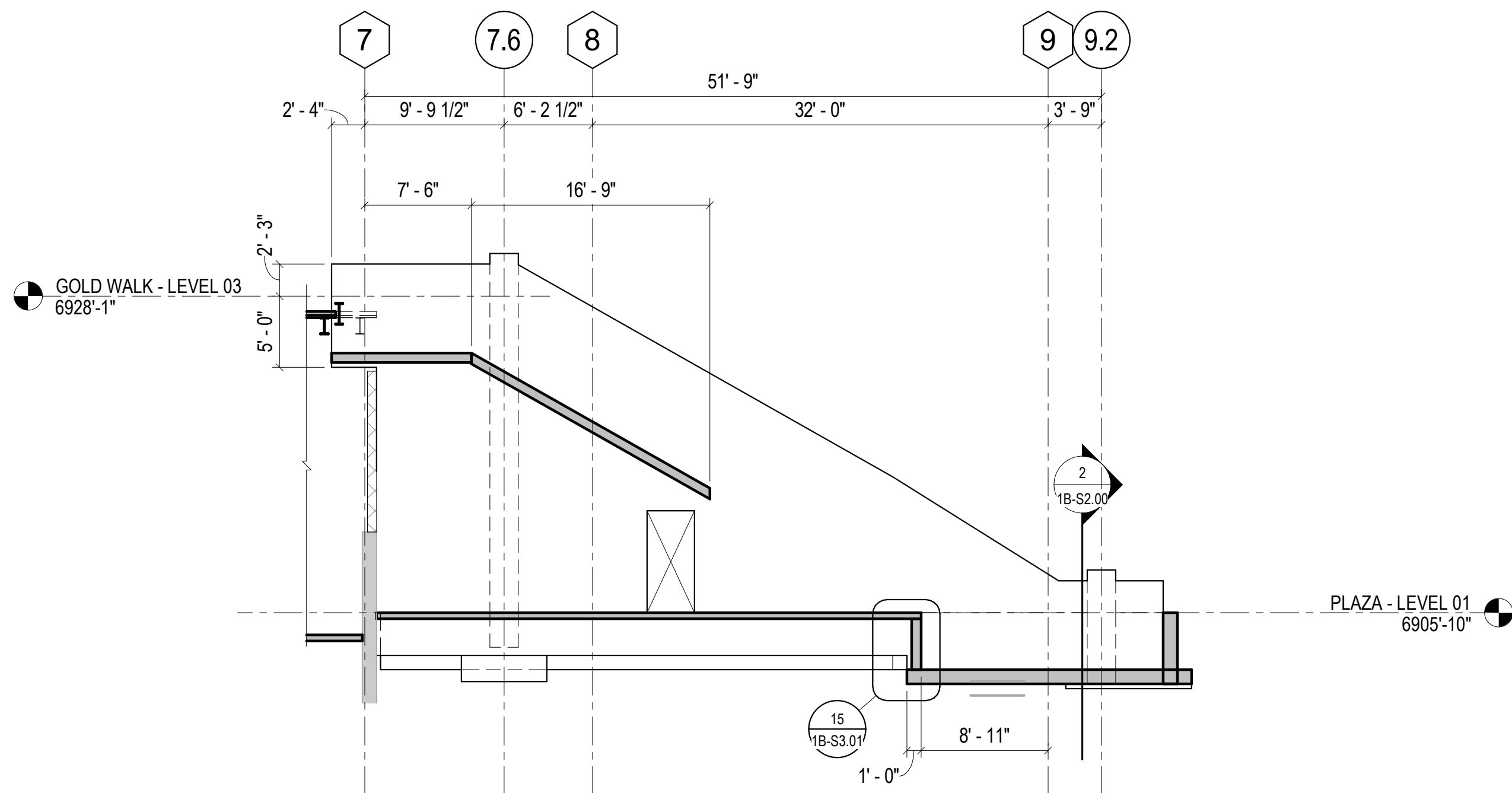
Note: Please ensure that you leave "2001502104SC5AHA RFI RFI-025" in the subject line of all emails you send related to this RFI. Replies must be **above** the original message. Attachments will also be accepted.

DESIGNER: NC MARTIN
LEAD REVIT TECH COLIN KNOWLES
DATE PRINTED: 5/19/2021 11:35:59 AM
PLOT PATH: E:\03-7835\03-7835-001 - Steamboat Redevel 03-7835-001_SRF.dwg
MIL JOB #: 23-14115-01
PRINCIPAL: KELLY KNOWLES
FOR: KELLY KNOWLES
PROJECT MANAGER: C. A. CHEN



2 PARTIAL STAIR FRAMING PLAN
1/8" = 1'-0"

1 PLAZA PARTIAL FRAMING PLAN
1/8" = 1'-0"



3 ESCALATOR PIT SECTION
1/8" = 1'-0"

PLAN NOTES

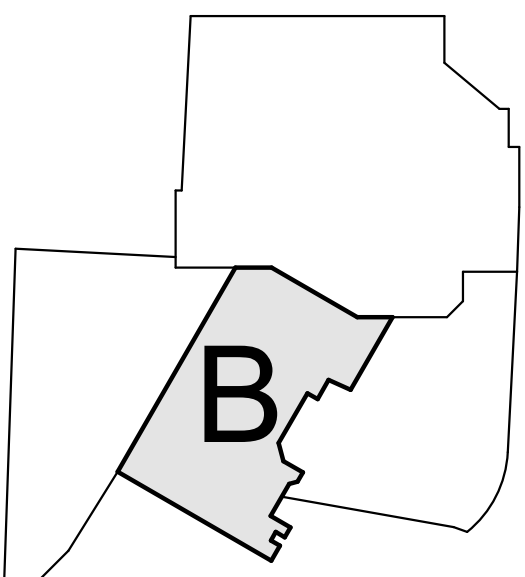
1. CONTRACTOR TO VERIFY ALL EXISTING CONDITION PRIOR TO STEEL FABRICATION.
2. CONTRACTOR TO FIELD LOCATE ALL UTILITIES BELOW GRADE. CONTRACTOR SHALL NOTIFY ARCHITECT BY DIMENSIONED DRAWING OF LOCATIONS WHERE UTILITIES CONFLICT WITH FOUNDATION INSTALLATION. CONTRACTOR SHALL MAKE ALLOWANCE FOR THE RESOLUTION OF SUCH DISCOVERIES PRIOR TO PROCEEDING WITH EFFECTED FOUNDATIONS.
3. SEE ARCH AND MECH DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, FILL, PADS, AND CURBS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
4. SEE 1B-S4.00 FOR TYPICAL MASONRY WALL DETAILS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF ALL MASONRY WALLS.

M/M Notes:
1. All loads are given in ASD load combination.
2. Please provide proposed micropile capacities and spacing requirements, M/M to revise walls and foundation elements to micropile design.
3. Please confirm with NWCC that the current soil condition is suitable for slab on grade.

LEGEND

OUT OF SCOPE

KEY PLAN



Steamboat
ALTErra east west partners
2305 Mount Werner Circle
Steamboat Springs, CO 80487

Gensler
1225 17th Street
Suite 150
Denver, CO 80202
United States
Tel 303.595.8586
Fax 303.825.6823

LANDMARK
141 9th Street
PO Box 774943
Steamboat Springs, CO 80477
Tel 970.871.9494

DESIGNWORKSHOP
1390 Lawrence Street
Suite 100
Denver, CO 80204
Tel 303.623.5186

MARTIN/MARTIN
12499 West Colfax Ave.
Lakewood, CO 80215
United States
Tel 303.431.6100

me engineers
14143 Denver West Pkwy
Suite 300
Golden, CO
United States
Tel 303.421.6655

Date	Description
2021.05.19	BP3: GOLDWALK - ISSUE FOR BID AND PERMIT

Project Name
SSRC | BASE AREA IMPROVEMENTS

Project Number
003.7835.000

Description
GOLDWALK - LEVEL 1 FRAMING PLAN

Scale
As indicated

Ref North

1B-S1.01