



Geotechnologies, Inc.

Consulting Geotechnical Engineers

439 Western Avenue
Glendale, California 91201-2837
818.240.9600 • Fax 818.240.9675

December 6, 2023

File No. 20489

Aragon (Sunset/Everett) Properties Corp.
1750 Glendale Boulevard, Suite 102
Los Angeles, California 90026

Attention: Jeff Farrington

Subject: Response to City of Los Angeles Soils Report Review Letter
Proposed Apartment Complex
1185 West Sunset Boulevard, Los Angeles, California

References: *Report by Geotechnologies, Inc.:*
Updated Geotechnical Engineering Investigation, dated September 6, 2023.

City of Los Angeles Department of Building and Safety Correspondence:
Soils Report Review Letter, Log # 127750, dated October 17, 2023.

Dear Mr. Farrington:

This firm is in receipt of the referenced Soils Report Review Letter, dated October 17, 2023, issued by the City of Los Angeles, Department of Building and Safety. Therein, several comments are made which require input from this office. The comments are repeated below and the response immediately follows. A copy of the review letter has been enclosed for reference.

Comment 1: *The Plot Plan provided by the consultants' does not clearly depict the number of lots of the proposed development. Provide a revised Plot Plan that clearly depicted and provides the number of lots of the proposed development.*

Response: The Plot Plan has been annotated to show the individual lot labels within the site boundaries.

Comment 2: *Proposed cut slope depicted on the Plot Plan/Site Plan does not match the proposed cut slopes depicted on the geologic cross sections. Please revise the Plot Plan or sections where the proposed cut slope is depicted.*

Response: The Geologic Map shows the location of the cross sections. The cross sections have been edited to show the existing topography and the proposed cuts. The Plot Plan depicts the same details as the Geologic Map.

Comment 3: *Cross Sections B-B', E-E', F-F', and G-G' do not appear to provide the Code required setback of the proposed building from the toe of the ascending slope (1808.7.1). Provide revised Geologic Cross Sections that clearly depict the Code required setback.*

Response: The required setback corresponds to a horizontal distance equal to one-half of the vertical height of the slope above the retaining wall, with a minimum distance of 3 feet and a maximum distance of 15 feet. The setback is created by the terrace cut at elevation 439.5 feet and is 15 feet in width. The terrace is shown on the Plot Plan, Geologic Map and cross sections.

Comment 4: *The consultants' note on page 23 of the September 6, 2023, referenced report, "Clarification of the required setback for the existing cut shown on Cross Section E-E' shall be obtained from the Building Official" The consultants shall clarify non-conforming conditions on the Cross Section E-E'. No vertical cuts are allowed to remain unsupported.*

Response: The toe of slope setback will be 15 feet. All vertical cuts will be supported with a retaining wall. No non-conforming cuts are proposed. Additional clarification from the building official is not required.

Comment 5: *The consultants note on page 2 of the September 6, 2023, referenced report that "The presence of uncertified fill at the southern end of the structure will require removal and recompaction." Clarify the location of the proposed removal and recompaction on the oversized Geologic Map and Geologic Cross Sections, where appropriate. Specify the location of the excavation for the subterranean building versus the location of the removal and recompaction of the fill.*

Response: Where fill soil is located below the subgrade elevation, the fill will be left in place. Footings will be deepened appropriately or friction piles will be used. Removal and recompaction of soils below the proposed structure will not be performed. A structural slab will be constructed if existing fill will be left in place.

Comment 6: *The consultants' note on page 49 of the September 6, 2023, referenced report where they state that "Excavations on the order of 65 feet in vertical height will be required for the subterranean levels." Clarify the location and extent of this excavation as cross sections only depict a vertical excavation of 45 feet.*

Response: Since the preparation of the September 6, 2023 report, the basement finish floor elevation on the north side of the site has been redesigned from 407.75 feet to 418 feet. Excavations on the order of 49 feet deep (including foundations) are anticipated along Cross Sections G-G' and E-E'. The highest vertical cut is anticipated to be 44 feet (including foundations) and will be on the north side of the site as shown on Cross Section H-H'



Comment 7: *Considering the depth of fill at the subject site varies from zero to 18.5 feet thick, justify the use of the Site Class C at the subject site.*

Response: The Puente Formation Bedrock underlies the site and consists of moderately hard siltstone and sandstone is considered to be Site Class C bearing material.

Where deep fill occurs, either deepened foundations or friction piles bearing in the bedrock will be used. All of the proposed structure foundations will bear in the Puente Formation siltstone and sandstone bedrock.

Comment 8: *Provide dewatering recommendations as required on pages 50 and 51 of the referenced report.*

Response: The referenced dewatering recommendations read as follows:

The dewatering recommendations on pages Temporary dewatering should be installed as necessary. Temporary dewatering should consist of gravel-filled drainage trenches leading to a sump area. The collected water should be pumped to an acceptable disposal area.

Dewatering wells may also be considered. An experienced dewatering contractor should be consulted for dewatering system design.

This firm recommends the use of gravel-filled trenches to capture water seepage as it enters the excavation. The location and design of the system may be determined during grading by the general contractor. Water disposal must be addressed by the contractor. As stated in the response to Comment 6, the northern basement subgrade elevation has been raised from 407 to 418 feet. Deeper dewatering wells will not be necessary.

Comment 9: *Evaluate the impacts of dewatering (temporary or permanent) on adjacent properties / structures.*

Response: Only nuisance water will be captured during construction. A formal dewatering program will not be necessary. The basement walls will be drained conventionally.

Water occurs in the alluvial soils in a layer that extends a few feet above the alluvium-bedrock contact. Water will be drawn from this layer and from the sandstone beds and from the fractures of the rock. Due to the ephemeral occurrence of water in the alluvium layer, the layer has been subjected to multiple cycles of saturation and draining in the past. Ground surface settlement is not anticipated during temporary dewatering. As water is drawn from the bedrock sandstone beds



and fractures, the bedrock is not anticipated to settle as a result of its long tectonic history.

Comment 10: *Permanent tiebacks are not approved. Revise recommendations accordingly.*

Response: Permanent tiebacks are not being considered for the proposed project. However, permanent cantilevered shoring may be considered.

Comment 11: *The consultants used soldier piles in slope stability analysis to improve factor of safety. Provide a diagram and a summary table identifying the design earth pressures, depth of active pressure and the depth to passive pressure for the proposed stabilization piles.*

Response: In the Geotechnical Engineering Investigation dated September 6, 2023, the slope stability analysis on Cross Section B-B' was performed as two separate analyses, an upper analysis to assess the pile stability and a lower analysis to assess the tieback stability. For this response, the upper stability analysis was rerun to identify the loads on the cantilevered shoring pile. The analysis is attached. A screen shot was taken of the support force diagram showing the resistance of the pile with depth for the pseudostatic conditions for both the curved and the block analyses. Table 1- Loads on Pile Based Relative to depth At Cross Section B-B' (Pseudostatic Analysis, Upper Slope) is based on the screen shot, and is presented for clarity.

Geotechnologies, Inc. appreciates the opportunity to provide our services on this project. Should you have any questions please contact this office.

Respectfully submitted,
GEOTECHNOLOGIES, INC.



REINARD T. KNUR
G.E. 2755/C.E.G. 1547



RTK:kk



Geotechnologies, Inc.

439 Western Avenue, Glendale, California 91201-2837 • Tel: 818.240.9600 • Fax: 818.240.9675
www.geoteq.com

Enclosures: Soils Report Review Letter dated October 17, 2023 (4 pages)
Plot Plan
Geologic Map
Cross Section A-A'
Cross Section B-B'
Cross Section C-C'
Cross Section D-D'
Cross Section E-E'
Cross Section F-F'
Cross Section G-G'
Cross Section H-H'
SLIDE Printouts (63 pages)
Support Force Diagram Images From SLIDE (2 pages)
Table 1, Loads on Pile Based Relative to depth At Cross Section B-B' (1 page)

Distribution: (1) Addressee
(2) City of Los Angeles, Department of Building and Safety

E-Mail to: [Jfarrington@aragon.ca], Attn: Jeffrey Farrington
[emoy@aragon.ca], Attn: Evan Moy
[lmoy@aragon.ca], Attn: Lenny Moy
[lramsay@aragon.ca], Attn: Luke Ramsay



CITY OF LOS ANGELES

CALIFORNIA



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DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

OSAMA YOUNAN, P.E.
GENERAL MANAGER
SUPERINTENDENT OF BUILDING

JOHN WEIGHT
EXECUTIVE OFFICER

GEOLOGY AND SOILS REPORT REVIEW LETTER

October 17, 2023

LOG # 127750

SOILS/GEOLOGY FILE - 2

Aragon (Sunset/Everett) Properties Corp.
1750 Glendale Boulevard, Suite 102
Los Angeles, CA 90026
Attn: Jeff Farrington

TRACT: TT 72553
LOT(S): 1,2, 5, 7,9,11,13, 15, 17,19, 21,and 23
LOCATION: 1185 W Sunset Blvd.

<u>CURRENT REFERENCE REPORT/LETTER(S)</u>	<u>REPORT No.</u>	<u>DATE OF DOCUMENT</u>	<u>PREPARED BY</u>
Geology/Soils Report	20489	09/06/2023	Geotechnologies, Inc.
Oversized Document	''	''	''

<u>PREVIOUS REFERENCE REPORT/LETTER(S)</u>	<u>REPORT No.</u>	<u>DATE OF DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Approval Letter	85606	09/23/2014	LADBS – Grading
Geology/Soils Report	20489	09/10/2014	Geotechnologies, Inc.
3 rd Party Cover Letter	-----	08/05/2014	Hoover Tang
3 rd Party Review Letter	-----	08/04/2014	Wilson Geosciences Inc.
Dept. Appr. Letter	83257-01	06/24/2014	Geo-Dynamics, Inc.
Geology/Soils Report (Resp.)	20489	LADBS – Grading	LADBS – Grading
Dept. Correction Letter	83257	05/22/2014	Geotechnologies, Inc.
Geology/Soils Report	20489	03/13/2014	LADBS – Grading
Geology/Soils Report	20489	03/04/2014	Geotechnologies, Inc.
Geology/Soils Report	20489	04/09/2013	Geotechnologies, Inc.

The Grading Division of the Department of Building and Safety has reviewed the referenced report dated September 6, 2023, that provides recommendations for the proposed new apartment complex, retaining walls, Mat Foundations, waterproofing, and dewatering of groundwater, as depicted on the oversized Geologic Map and Geologic Cross Sections A-A' through G-G', . The consultants report that the proposed project is seven stories in height with one to two levels of subterranean parking. Proposed retaining walls are estimated to range up to 30 feet high. Topographic relief across the site is 95 feet from highest to lowest points. Prior to development along Sunset Blvd. the westerly descending slope was up to 70 feet high and at an approximate

gradient of 4(H):1(V), afterwards, the slope was 45 feet high at an approximate gradient of 1(H):1(V). Tiebacks and shoring are proposed to support excavations.

The Grading Division of the Department of Building and Safety has reviewed the 09/10/2014 report prepared by Geotechnologies in response to 3rd party review comments presented in the 08/04/2014 letter prepared by Wilson Geosciences and Geo-Dynamics (with a cover letter dated 08/05/2014 by Hoover Tang), regarding surface fault rupture, slope stability analysis, groundwater seepage, and expansive soils.

The consultants performed numerous exploratory excavations, upwards of 30 test pits and 13 borings, from 2006, 2013, and 2016. In 2004, the previous consultant Petra excavated several test pits and hollow stem and bucket auger borings. The earth materials at the subsurface exploration locations consist of fill, from 0.5 to 18.5 feet thick, alluvium from 2 to 9 feet thick, colluvium from 3 to 6 feet thick, underlain by well bedded interbedded sandstone and siltstone Puente Formation Bedrock to a depth of 60 feet. Regional Bedrock bedding is uniform in the area of the subject site, where bedrock dips to the south and southwest ranging from 20 to 50 degrees. The regional geologic structure matches that of the subsurface exploratory excavations.

The consultants' report that groundwater was encountered in all the borings drilled along Sunset Blvd. The groundwater surface appears to descend to the south, down Sunset Blvd. In general groundwater is approximately 9 feet below the ground surface. The water is identified in the alluvium and in the joints and fractures of the bedrock. The ground water level is above the proposed basement finish floor elevation at both ends of the site. Based on the consultants review of the local Seismic Hazard Report, historic high ground water is approximately 20 feet below the ground surface. The consultants note that water seepage into the excavations will occur primarily at the alluvium-bedrock contact, along Sunset Blvd. The water will occur along a distinct zone above the contact. Some seepage may occur through fractures in the rock and along the bedding planes in deeper excavations near Sunset Blvd. .

In the consultants borings excavated in 2006, Boring B-2 (2006), seepage was encountered from 9 to 15 feet, with standing water at 14 feet. In Boring B-3 (2006), seepage was encountered from 15 to 25 feet, with standing water at 15 feet. In Boring B-4 (2006), seepage was encountered from 12 to 20 feet, with standing water at 12 feet. In Boring B-5 (2006), seepage was encountered from 9.5 to 10 feet. In Boring B-6 (2006), seepage was encountered from 11.5 to 12 feet.

In the consultants Borings excavated in 2013, Boring B-1 (2013), groundwater was encountered at 17.5 feet below the ground surface. Boring B-2(2013), groundwater was encountered at 17 feet below the ground surface. Boring B-3 (2013), groundwater was encountered at 9.5 feet below the ground surface. Boring B-4 (2013), no groundwater was encountered to the maximum depth explored of 60 feet below the ground surface.

In the consultants borings excavated in 2016, Boring B-5 (2016), seepage was encountered at 9 and 12 feet below the ground surface, with groundwater at 19 feet. In Boring B-6 (2016), seepage was encountered at 11.5 feet below the ground surface. In Boring B-7 (2016), seepage was encountered at 12 feet below the ground surface.

The subject site is not in an area zoned by the State as potentially liquefiable. This determination is based on groundwater depth records, soil type, and distance to a fault capable of producing a substantial earthquake. The proposed structure will be supported in the siltstone bedrock of the Puente Formation. The consultants note that this bedrock will not liquefy due to its moderately hard consistency and it's long tectonic history.

The consultants recommend to support the proposed structure(s) on conventional, mat, and/or drilled-pile foundations bearing on competent bedrock.

The review of the subject report dated August 28, 2023, cannot be completed at this time and will be continued upon submittal of an addendum to the report which shall include, but not be limited to, the following:

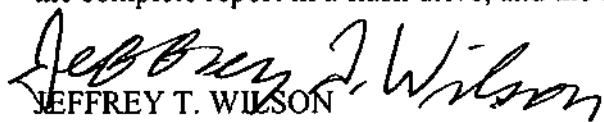
(Note: Numbers in parenthesis () refer to applicable sections of the 2023 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. The Plot Plan provided by the consultants' does not clearly depict the number of lots of the proposed development. Provide a revised Plot Plan that clearly depicted and provides the number of lots of the proposed development.
2. Proposed cut slope depicted on the Plot Plan / Site Plan does not match the proposed cut slopes depicted on the geologic cross sections. Please revise the Plot Plan or sections where the proposed cut slope is depicted.
3. Cross Sections B-B', E-E', F-F', and G-G' do not appear to provide the Code required setback of the proposed building from the toe of the ascending slope (1808.7.1). Provide revised Geologic Cross Sections that clearly depict the Code required setback.
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5. The consultants note on page 2 of the September 6, 2023, referenced report that "*The presence of uncertified fill at the southern end of the structure will require removal and recompaction.*" Clarify the location of the proposed removal and recompaction on the oversized Geologic Map and Geologic Cross Sections, where appropriate. Specify the location of the excavation for the subterranean building versus the location of the removal and recompaction of the fill.
6. The consultants' note on page 49 of the September 6, 2023, referenced report where they state that "*Excavations on the order of 65 feet in vertical height will be required for the subterranean levels.*" Clarify the location and extent of this excavation as cross sections only depict a vertical excavation of 45 feet.
7. Considering the depth of fill at the subject site varies from zero to 18.5 feet thick, justify the use of the Site Class C at the subject site.
8. Provide dewatering recommendations as required on pages 50 and 51 of the referenced report.
9. Evaluate the impacts of dewatering (temporary or permanent) on adjacent properties / structures.
10. Permanent tiebacks are not approved. Revise recommendations accordingly.

1185 W Sunset Blvd.

11. The consultants used soldier piles in slope stability analysis to improve factor of safety. Provide a diagram and a summary table identifying the design earth pressures, depth of active pressure and the depth to passive pressure for the proposed stabilization piles.

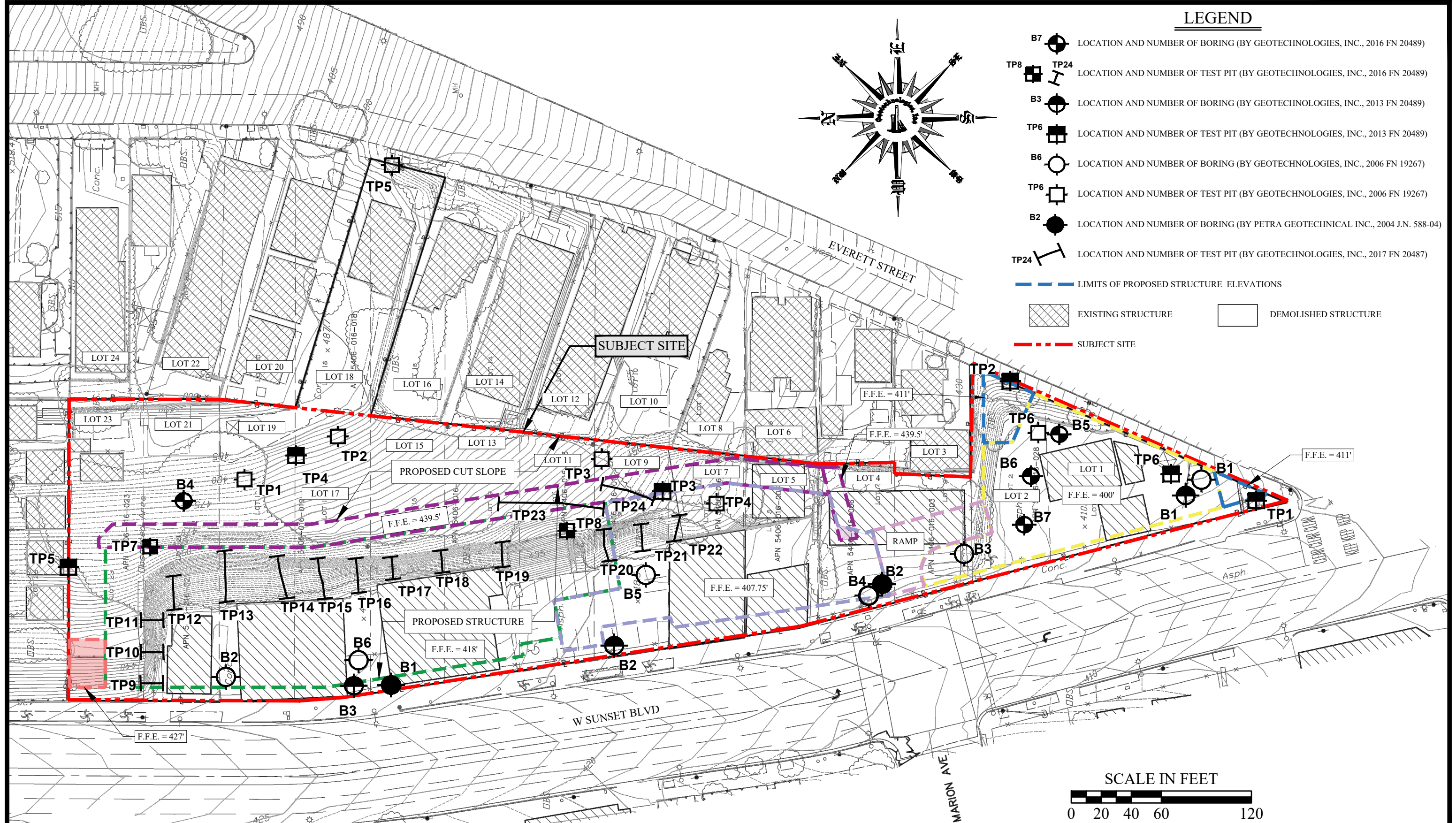
The project engineering geologist and soils engineer shall prepare a report containing an itemized response to the review items indicated in this letter. If clarification concerning the review letter is necessary, the report review engineer and/or geologist may be contacted. Two copies of the response report, including one unbound wet-signed original for archiving purposes, a pdf-copy of the complete report in a flash drive, and the appropriate fees will be required for submittal.


JEFFREY T. WILSON
Engineering Geologist I


YING LIU
Geotechnical Engineer II

JTW/YL:jtw/yl
Log No. 127750
213-482-0480

cc: Geotechnologies, Inc., Project Consultant
LA District Office



LEGEND

- B7 LOCATION AND NUMBER OF BORING (BY GEOTECHNOLOGIES, INC., 2016 FN 20489)
- TP8 LOCATION AND NUMBER OF TEST PIT (BY GEOTECHNOLOGIES, INC., 2016 FN 20489)
- B3 LOCATION AND NUMBER OF BORING (BY GEOTECHNOLOGIES, INC., 2013 FN 20489)
- TP6 LOCATION AND NUMBER OF TEST PIT (BY GEOTECHNOLOGIES, INC., 2013 FN 20489)
- B6 LOCATION AND NUMBER OF BORING (BY GEOTECHNOLOGIES, INC., 2006 FN 19267)
- TP6 LOCATION AND NUMBER OF TEST PIT (BY GEOTECHNOLOGIES, INC., 2006 FN 19267)
- B2 LOCATION AND NUMBER OF BORING (BY PETRA GEOTECHNICAL INC., 2004 I.N. 588-04)
- TP24 LOCATION AND NUMBER OF TEST PIT (BY GEOTECHNOLOGIES, INC., 2017 FN 20487)
- LIMITS OF PROPOSED STRUCTURE ELEVATIONS
- EXISTING STRUCTURE
- DEMOLISHED STRUCTURE
- SUBJECT SITE



PLOT PLAN

Geotechnologies, Inc.
Consulting Geotechnical Engineers

ARAGON PROPERTIES, LTD.	
DRAWN BY: JD	FILE NO. 20489
DATE: JULY 2023	

REFERENCE: SITETECH INC. TOPOGRAPHIC MAPPING SURVEY NO DATE

BORINGS AND TEST PITS BY GEOTECHNOLOGIES, INC. (2016)							
B4 (elev. 478)	B4 (cont.)	B4 (cont.)	B4 (cont.)	B5 (elev. 412)	B6 (elev. 412)	B7 (elev. 411)	TP8 (elev. 447)
0-4' af 4-60' Tp @ 7.6' @ 10.2' @ 12.4' @ 13.4'	@ 15.6' @ 17.1' @ 21.0' @ 23.4' @ 25.1'	@ 27.7' @ 29.9' @ 32.9' @ 33.9' @ 40.8'	@ 43.8' @ 49.0' @ 52.6' No Seepage	0-0.8' af 0.8-20' Tp @ 4.0' @ 7.0' @ 11.0' @ 14.4' @ 9' and 12' Seepage	0-3.5' Qcol 3.5-20' Tp @ 5' @ 6.3' @ 10.2' @ 12.8' @ 11.5' Seepage	0-0.75' af 0.75-6.5' Qcol 6.5-20' Tp @ 10.4' @ 14.0' @ 12.0' Seepage	0-4.5' af 4.5-9.0' Qcol 9.0-18.0' Tp @ 10.0' @ 11.4' @ 17.0' No Seepage

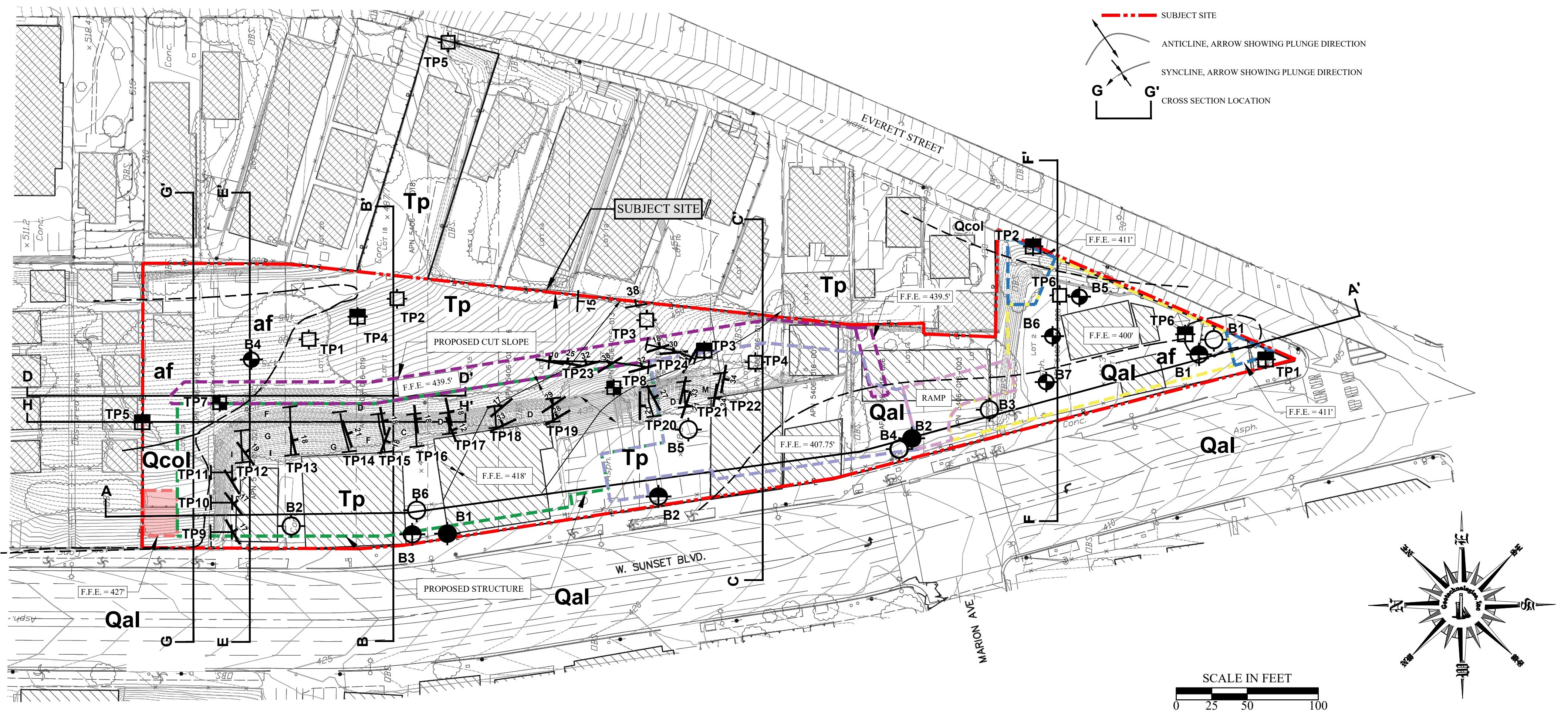
BORINGS BY PETRA GEOTECHNICAL (2004) JN 588-04	
B1 (elev. 424)	B2 (elev. 416)
0-30' Tp Seepage @ 24'	0-12' Qal 12'-31' Tp Seepage @ 17'

BORINGS AND TEST PITS BY GEOTECHNOLOGIES, INC. (2013) FILE NO 20489							
B1 (elev. 409)	B2 (elev. 419.5)	B3 (elev. 424)	TP1 (elev. 407)	TP2 (elev. 425)	TP3 (elev. 444)	TP4 (elev. 480)	TP5 (elev. 470)
0-3' af 3'-10' Qal 10'-30' Tp Seepage @ 17.5'	0-3' af 3'-30' Tp Seepage @ 17'	0-3' af 3'-40' Tp Seepage @ 9.3'	0-4' af 4'-6' Qal No Seepage	0-1' af 1'-10' Qcol 10'-11' Tp No Seepage	0-1.5' af 1.5'-10' Tp No Seepage	0-1' af 1'-4' Tp No Seepage	0-2' af 2'-6.5' Qcol 6.5'-8' Tp @ 7' No Seepage

BORINGS AND TEST PITS BY GEOTECHNOLOGIES, INC. (2006) FILE NO 19267											
B1 (elev. 408)	B2 (elev. 423)	B3 (elev. 414)	B4 (elev. 413)	B5 (elev. 419)	B6 (elev. 421.5)	TP1 (elev. 477)	TP2 (elev. 479)	TP3 (elev. 452)	TP4 (elev. 434)	TP5 (elev. 476)	TP6 (elev. 409)
0-5.5' af 5.5'-20' Tp No Seepage	0-15' Tp @ 2' @ 3.5' @ 3.5' @ 6' 9'-15' Seepage	0-7' af 7'-15' Qal 15'-25' Tp 15'-25' Seepage	0-2' af 2'-18.5' Qal 18.5'-20' Tp 12'-20' Seepage	0-2' af 2'-10' Tp @ 4.5' @ 5.5' @ 9.5'-10' Seepage	0-1.5' af 1.5'-12' Tp @ 4' @ 6.5' @ 11.5'-12' Seepage	0-0.5' af 0.5'-2' Tp 2'-4' Tp @ 3' No Seepage	0-2.5' af 2.5-5' Tp @ 4' @ 4' No Seepage	0-0.5' af 0.5'-3' Tp @ 2.5' @ 2.5' No Seepage	0-2' af 2'-5' Tp @ 4' @ 4' No Seepage	0-2' af 2'-4' Tp @ 3.5' @ 3.5' No Seepage	0-2.5' af 2.5'-4' Tp @ 3' @ 3' No Seepage

LEGEND

- af ARTIFICIAL FILL (where > 4' thick)
- Qal ALLUVIUM (where > 4' thick)
- Qcol COLLUVIUM (where > 4' thick)
- Tp BEDROCK (PUENTE FORMATION)
- C, D, E, F, G, I, K, L MARKER BEDS
- Bedding Orientation
- VERTICAL FRACTURE
- GEOLOGIC CONTACT
- B7 LOCATION AND NUMBER OF BORING (BY GEOTECHNOLOGIES, INC., 2016, FN 20489)
- TP8 LOCATION AND NUMBER OF TEST PIT (BY GEOTECHNOLOGIES, INC., 2016, FN 20489)
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- LIMITS OF PROPOSED STRUCTURE ELEVATIONS
- DEMOLISHED STRUCTURE
- EXISTING STRUCTURE
- SUBJECT SITE
- ANTICLINE, ARROW SHOWING PLUNGE DIRECTION
- SYNCLINE, ARROW SHOWING PLUNGE DIRECTION
- CROSS SECTION LOCATION



GEOLOGIC MAP

Geotechnologies, Inc.
Consulting Geotechnical Engineers

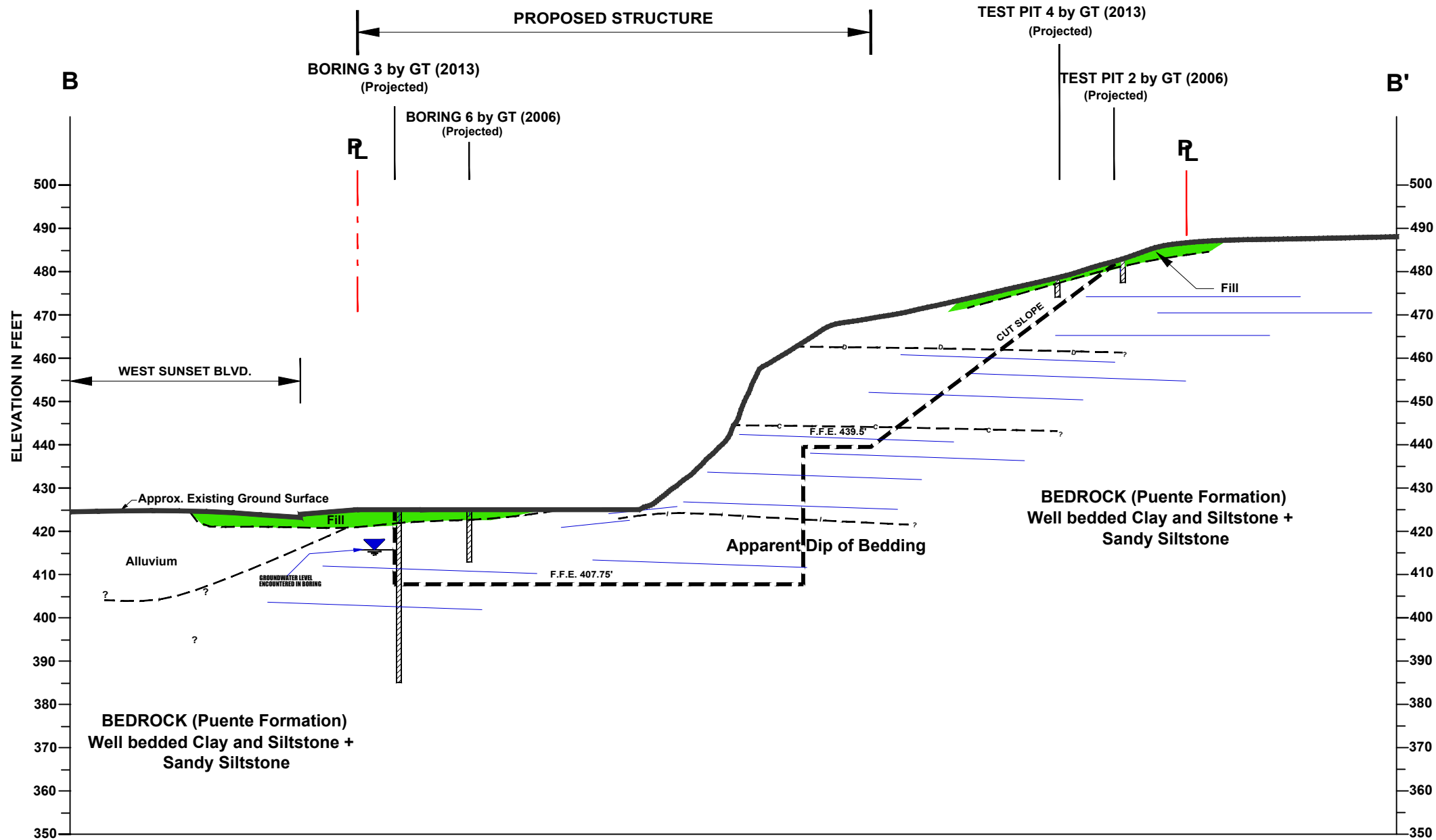
ARAGON PROPERTIES, LTD.

DRAWN BY: JD

FILE NO. 20489

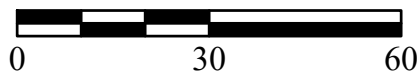
DATE: JULY 2023

N90W



CROSS SECTION B-B'

SCALE IN FEET



Geotechnologies, Inc.
Consulting Geotechnical Engineers

ARAGON PROPERTIES, LTD.

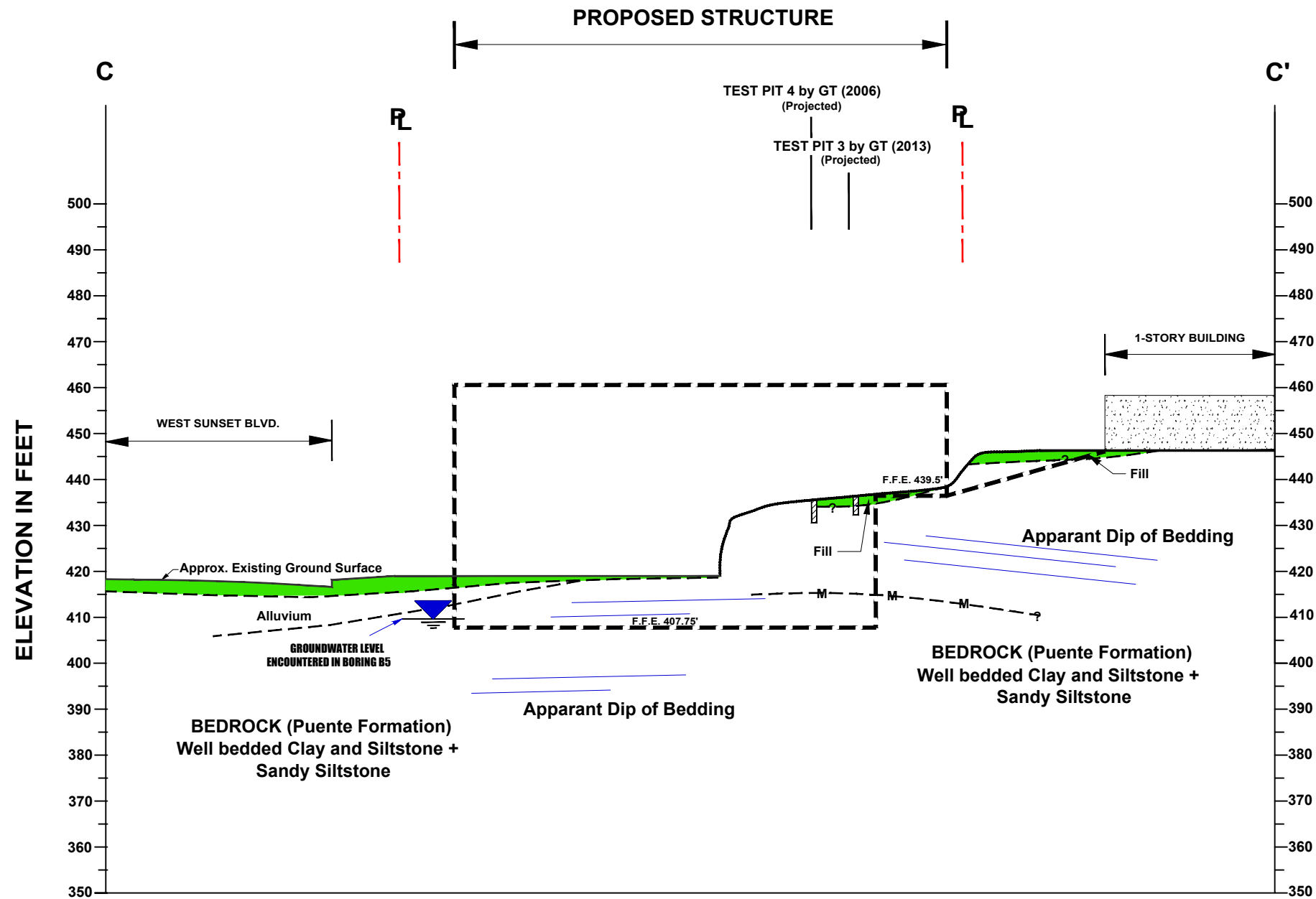
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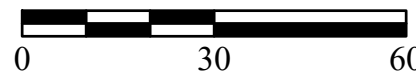
REFERENCE: TOPOGRAPHIC MAP BY SITETECH INC.
NOT DATED

N90W



CROSS SECTION C-C'

SCALE IN FEET



Geotechnologies, Inc.
Consulting Geotechnical Engineers

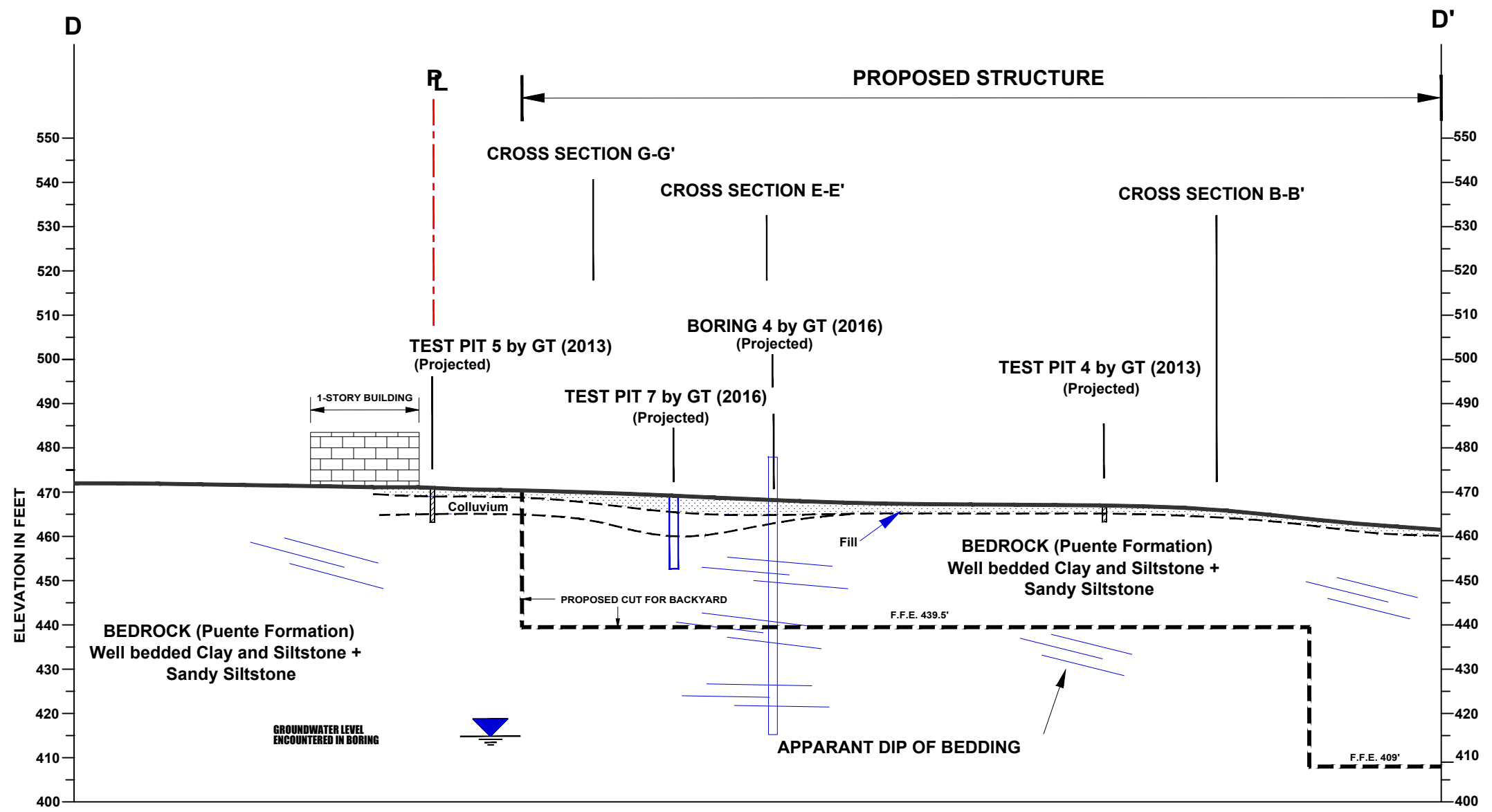
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REFERENCE: TOPOGRAPHIC MAP BY SITETECH INC.
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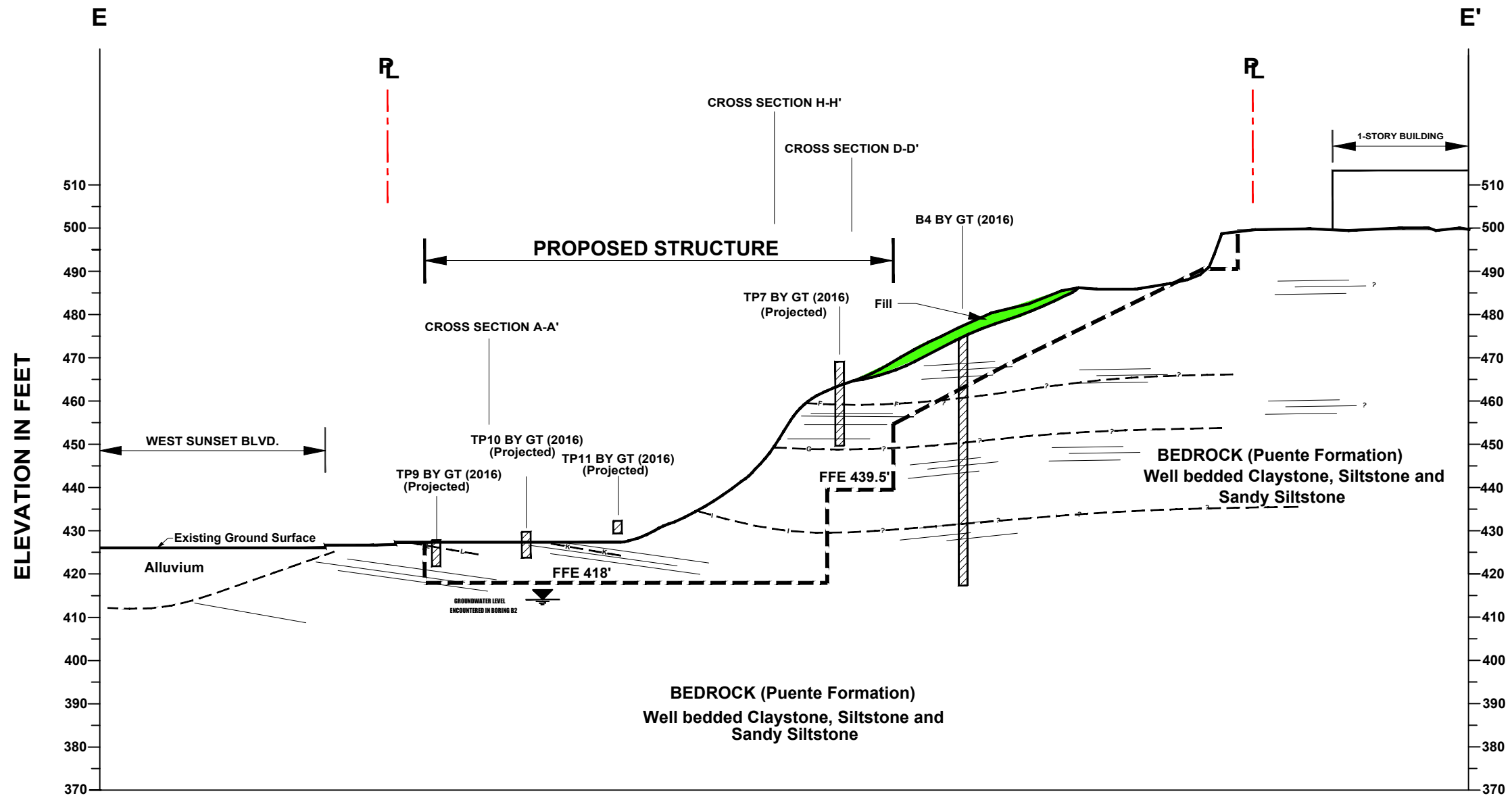
CROSS SECTION D-D'



 <p>Geotechnologies, Inc. Consulting Geotechnical Engineers</p>	ARAGON PROPERTIES, LTD.	
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REFERENCE: TOPOGRAPHIC MAP BY SITETECH INC.
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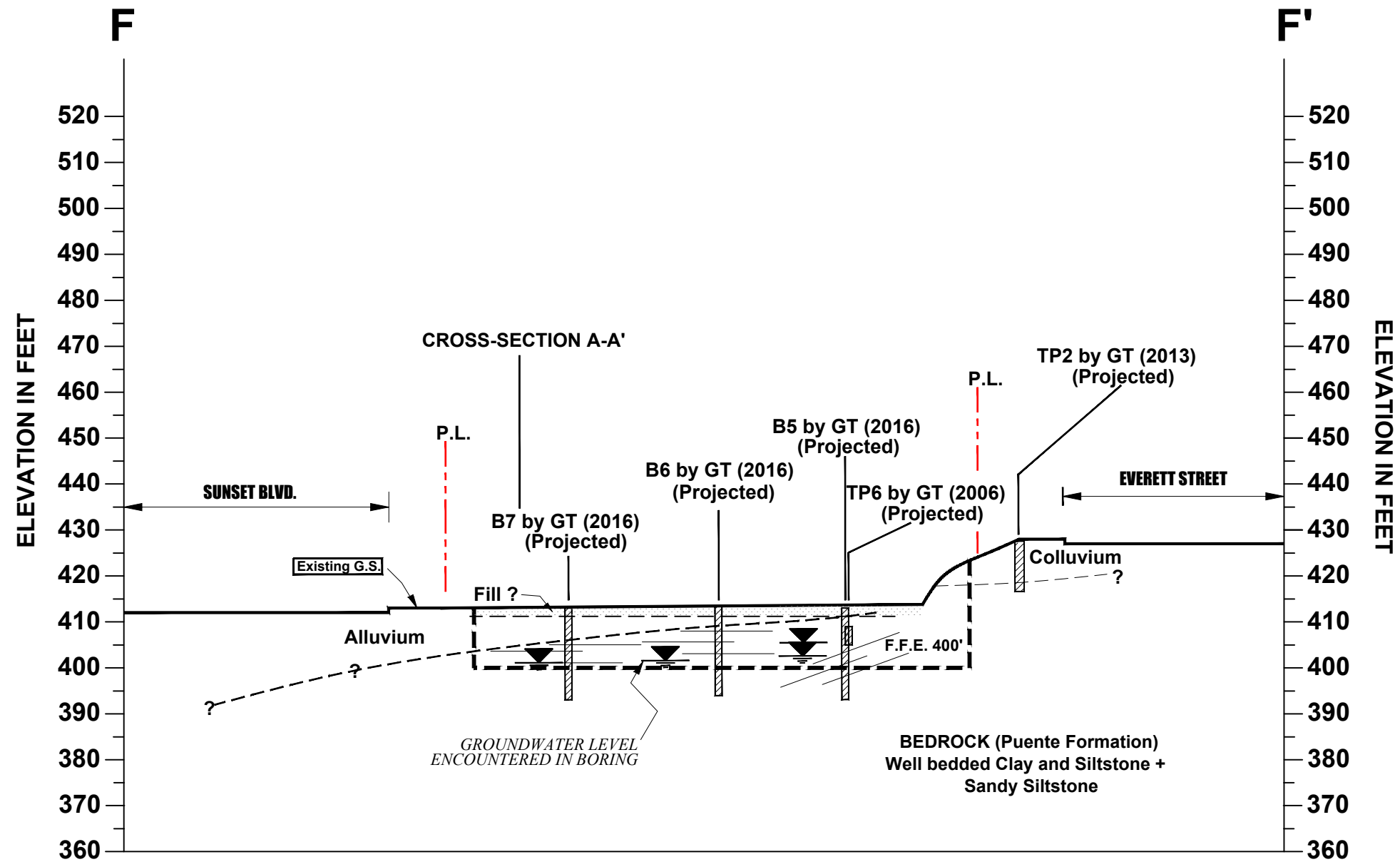
CROSS SECTION E-E'



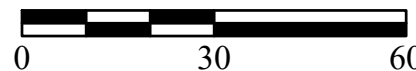
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NOT DATED

 <p>Geotechnologies, Inc. Consulting Geotechnical Engineers</p>	ARAGON PROPERTIES, LTD.	
	DRAWN BY: JD	FILE NO. 20489
	DATE: JULY 2023	

E



SCALE IN FEET



CROSS SECTION F-F'



Geotechnologies, Inc.
Consulting Geotechnical Engineers

ARAGON PROPERTIES, LTD.

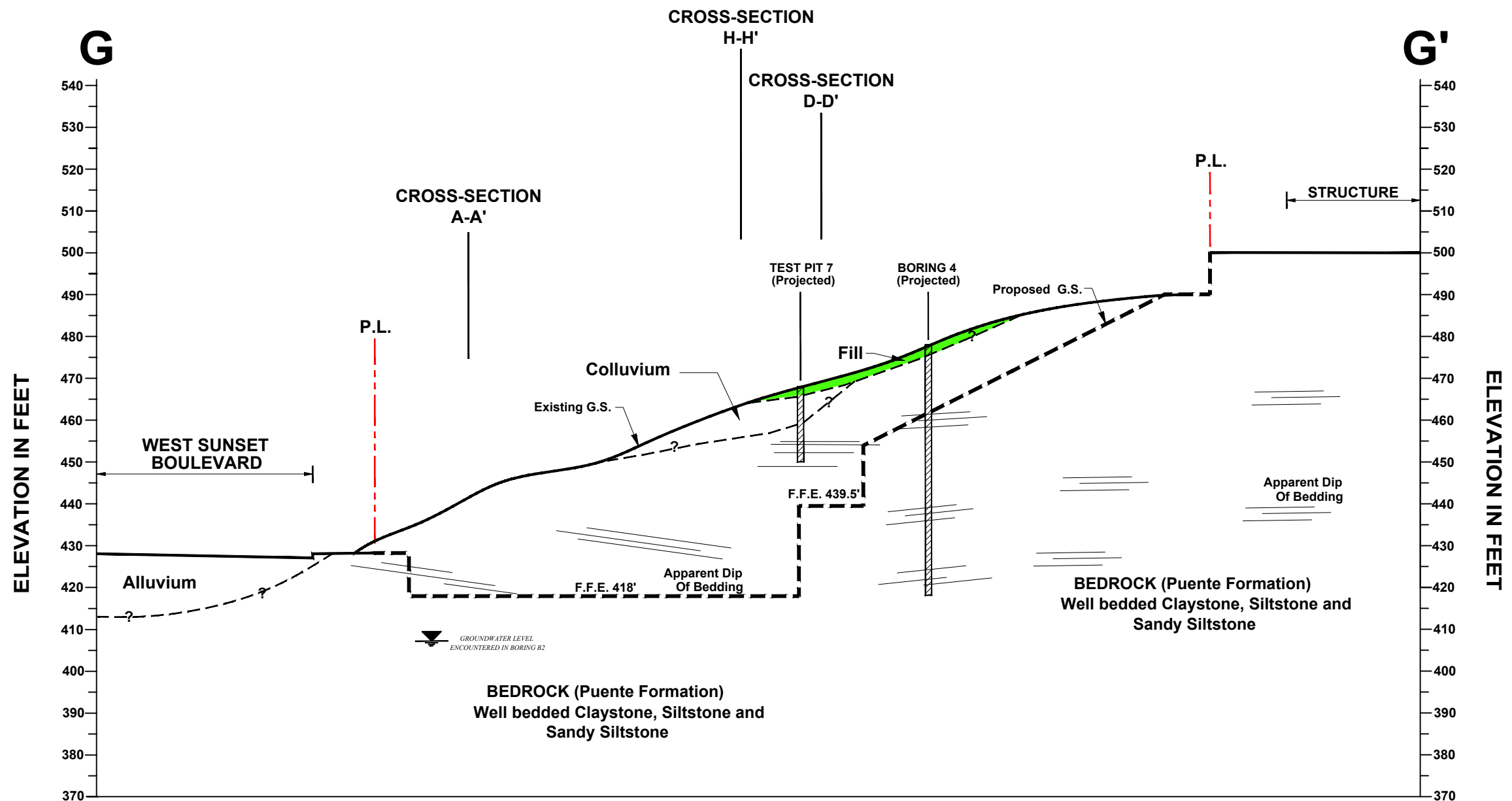
DRAWN BY: JD

FILE NO. 20489

DATE: JULY 2023

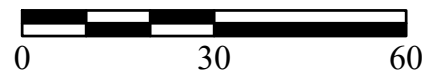
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NOT DATED

W



CROSS SECTION G-G'

SCALE IN FEET



REFERENCE: TOPOGRAPHIC MAP BY SITETECH INC.
NOT DATED



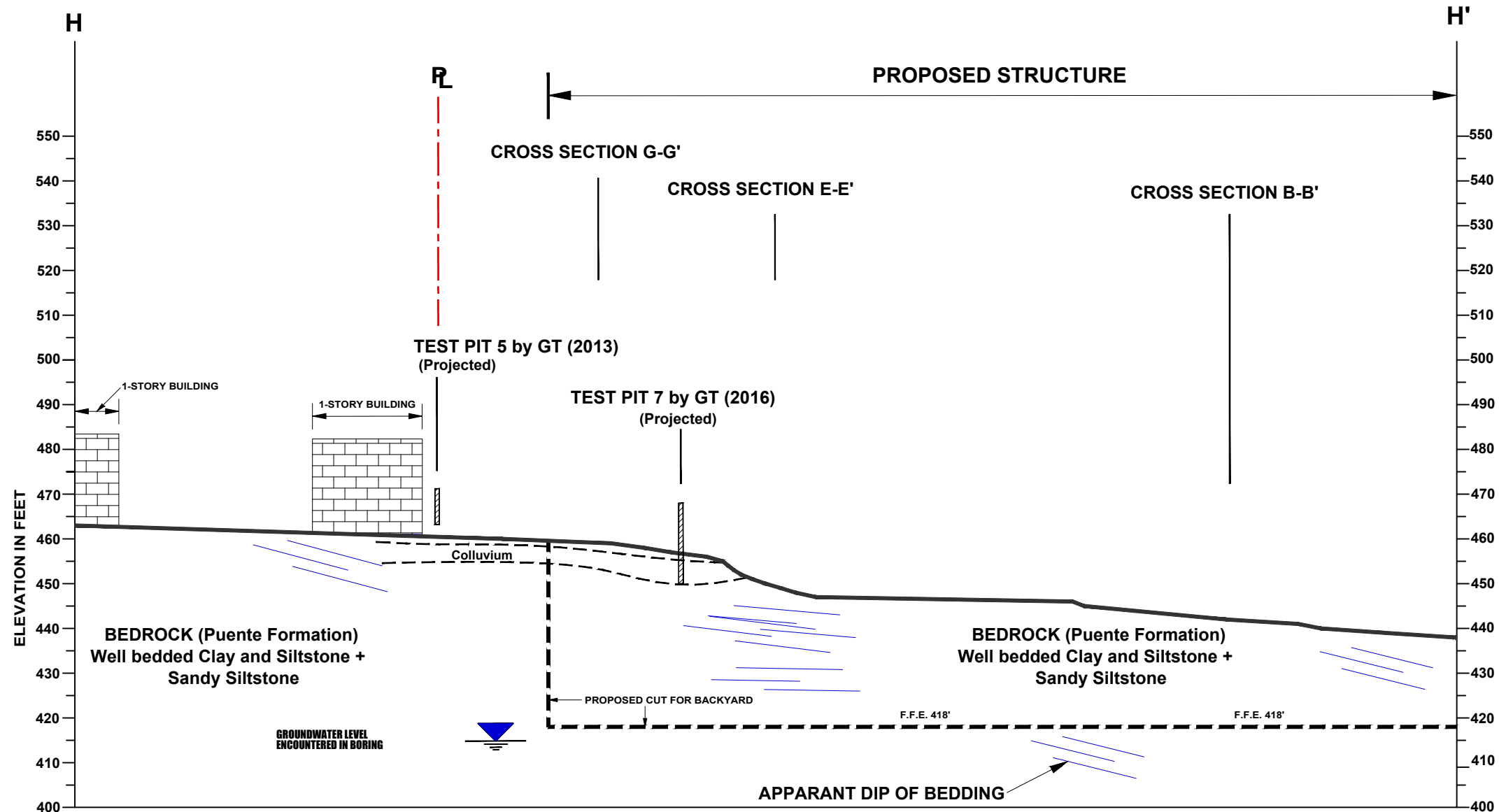
Geotechnologies, Inc.
Consulting Geotechnical Engineers

ARAGON PROPERTIES, LTD.

DRAWN BY: JD

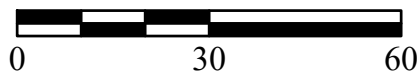
FILE NO. 20489

DATE: JULY 2023



CROSS SECTION H-H'

SCALE IN FEET



Geotechnologies, Inc.
Consulting Geotechnical Engineers

ARAGON PROPERTIES, LTD.

DRAWN BY: JD

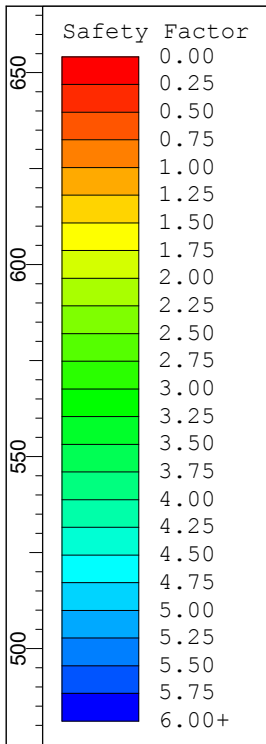
FILE NO. 20489

DATE: OCTOBER 2023

REFERENCE: TOPOGRAPHIC MAP BY SITETECH INC.
NOT DATED

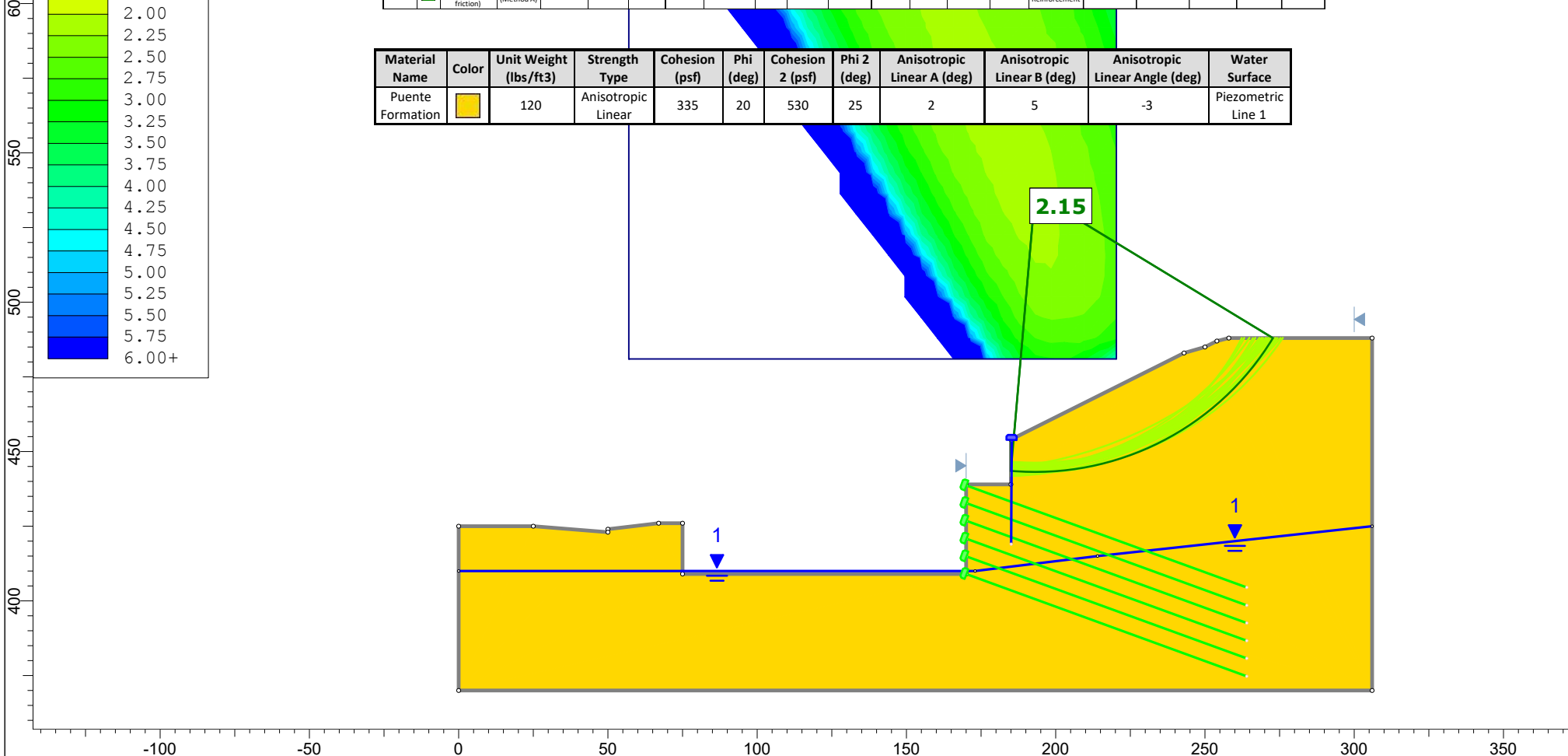


20489 BB Updated Profile upper
File No 20489
Geotechnologies, inc.
Date Created: 5/9/2017, 8:44:53 PM
Software Version: 9.012

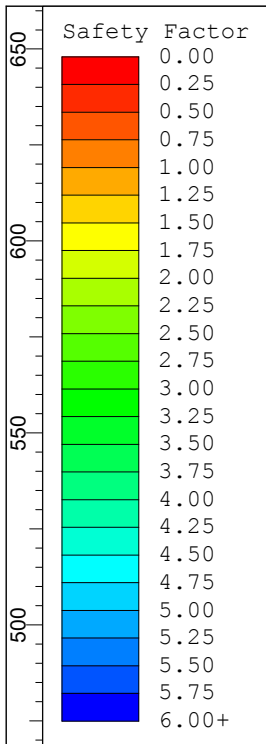


Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (ft)	Tensile Capacity (lbs)	Plate Capacity (lbs)	Shear Capacity (lbs)	Compression Capacity (lbs)	Bond Length (ft)	Percent of Length (%)	Material Dependent	Adhesion (psf)	Friction Angle (deg)	Shear Strength Model	Grout Diameter (ft)	Force Orientation	Soil Displacement Type	Soil Displacement (in)	Use Battered Pile Config	Use values from RSPile	Resistance Type
Row 1	Blue	RSPile	Active (Method A)	6													Maximum	1	Yes	No	Lateral
Tieback	Green	Grouted Tieback (with friction)	Active (Method A)	6	200000	200000	1000	0	0	60	No	2500	30	Linear	1	Parallel to Reinforcement					

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion 2 (psf)	Phi 2 (deg)	Anisotropic Linear A (deg)	Anisotropic Linear B (deg)	Anisotropic Linear Angle (deg)	Water Surface
Puente Formation	Yellow	120	Anisotropic Linear	335	20	530	25	2	5	-3	Piezometric Line 1

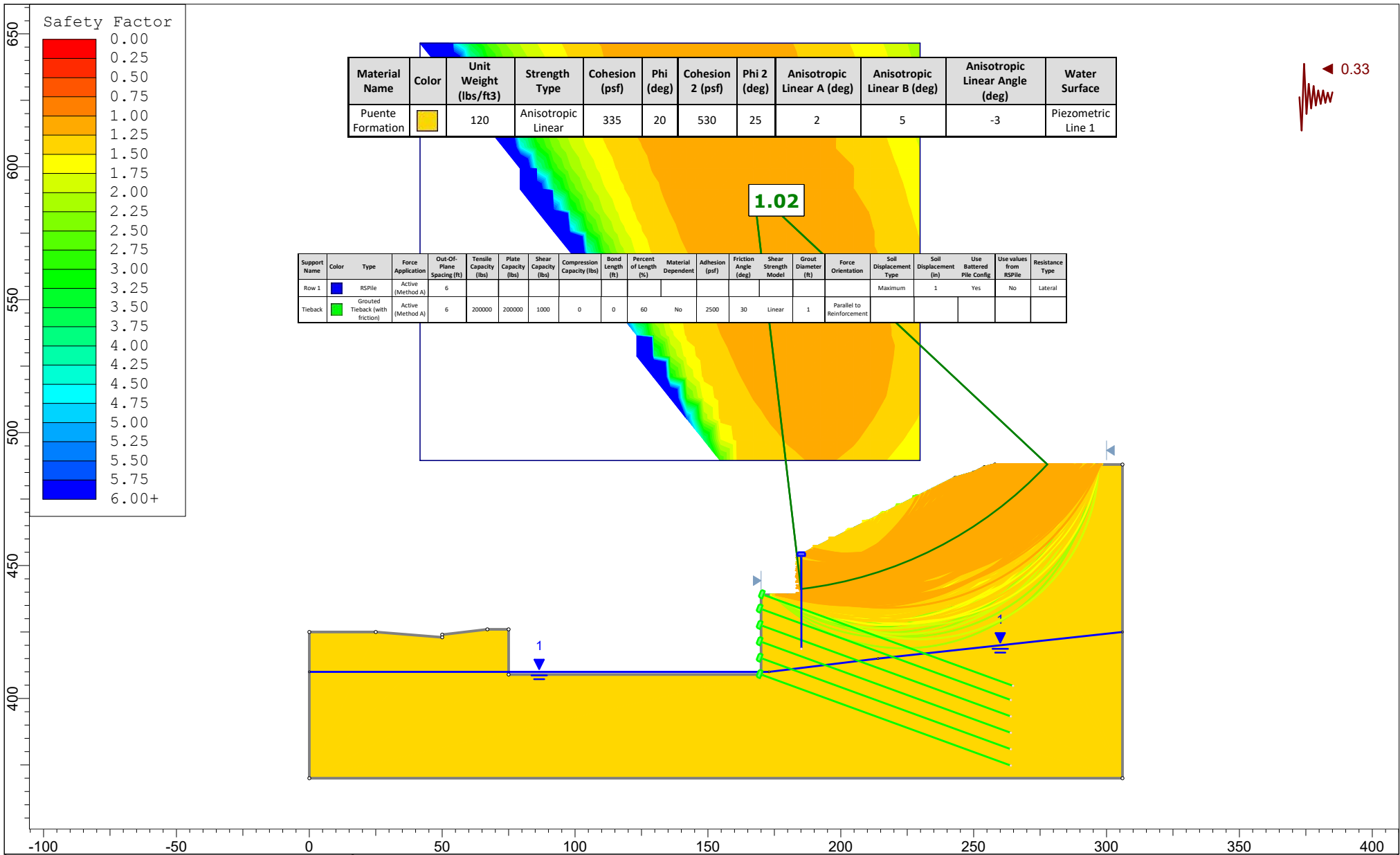


	Project	File No 20489	
	Group	Upper slope	Scenario
	Drawn By	RTK	Company
	Date	5/9/2017, 8:44:53 PM	File Name
			20489 BB Updated Profile upper.slmd
		Curved Static	Geotechnologies, inc.

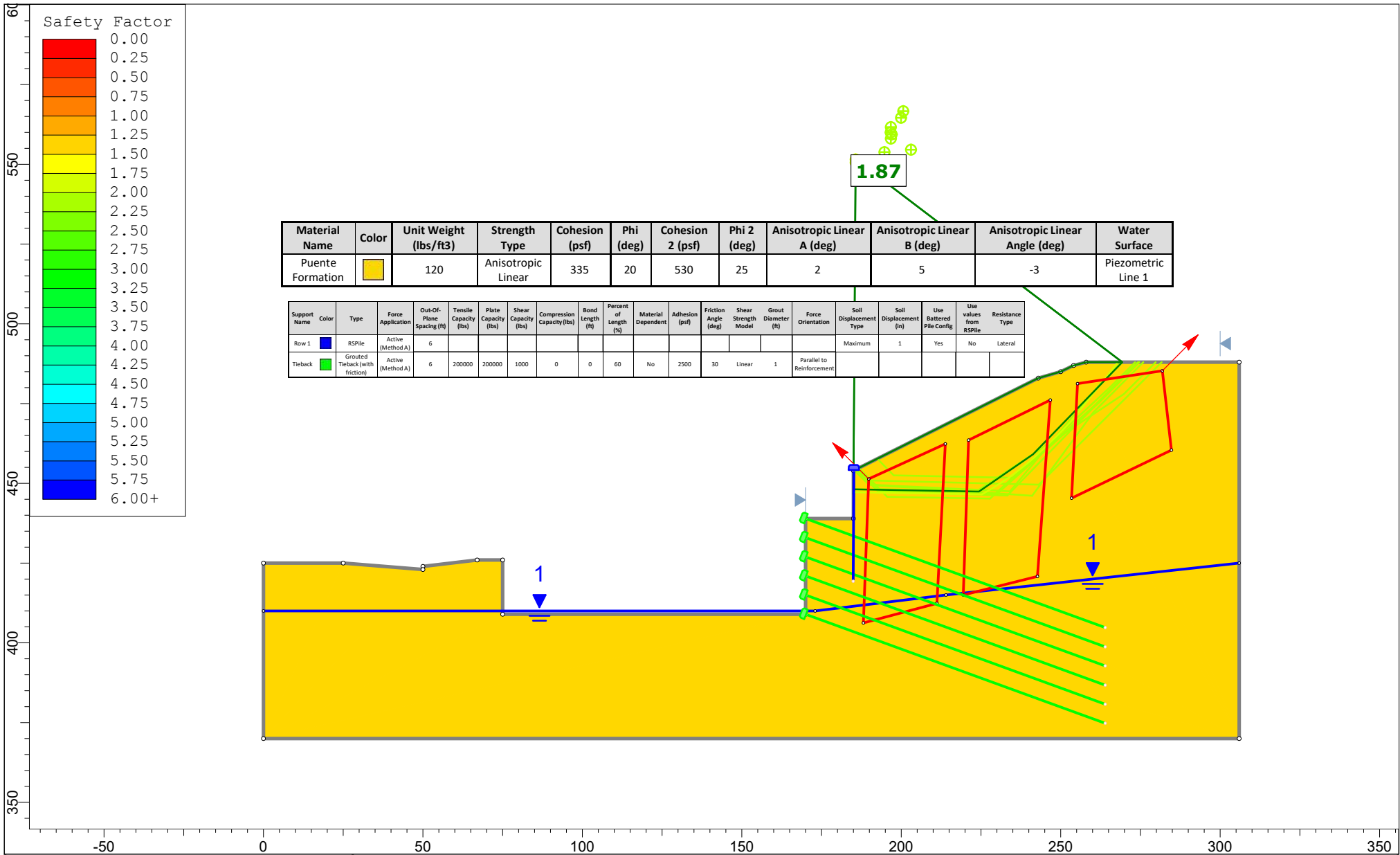
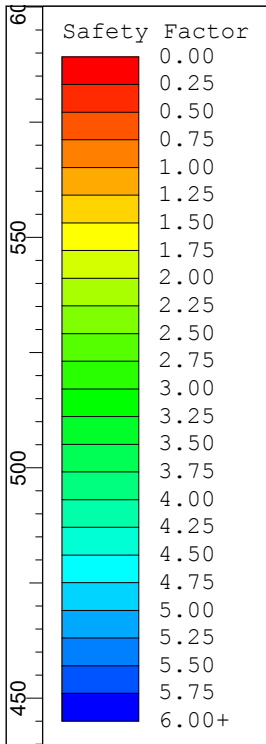


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion 2 (psf)	Phi 2 (deg)	Anisotropic Linear A (deg)	Anisotropic Linear B (deg)	Anisotropic Linear Angle (deg)	Water Surface
Puente Formation		120	Anisotropic Linear	335	20	530	25	2	5	-3	Piezometric Line 1

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (ft)	Tensile Capacity (lbs)	Plate Capacity (lbs)	Shear Capacity (lbs)	Compression Capacity (lbs)	Band Length (ft)	Percent of Length (%)	Material Dependent	Adhesion (psf)	Friction Angle (deg)	Shear Strength Model	Grout Diameter (ft)	Force Orientation	Soil Displacement Type	Soil Displacement (in)	Use Battered Pile Config	Use values from RSPile	Resistance Type
Row 1		RSPile	Active (Method A)	6													Maximum	1	Yes	No	Lateral
Tieback		Grouted Tieback (with friction)	Active (Method A)	6	200000	200000	1000	0	0	60	No	2500	30	Linear	1	Parallel to Reinforcement					



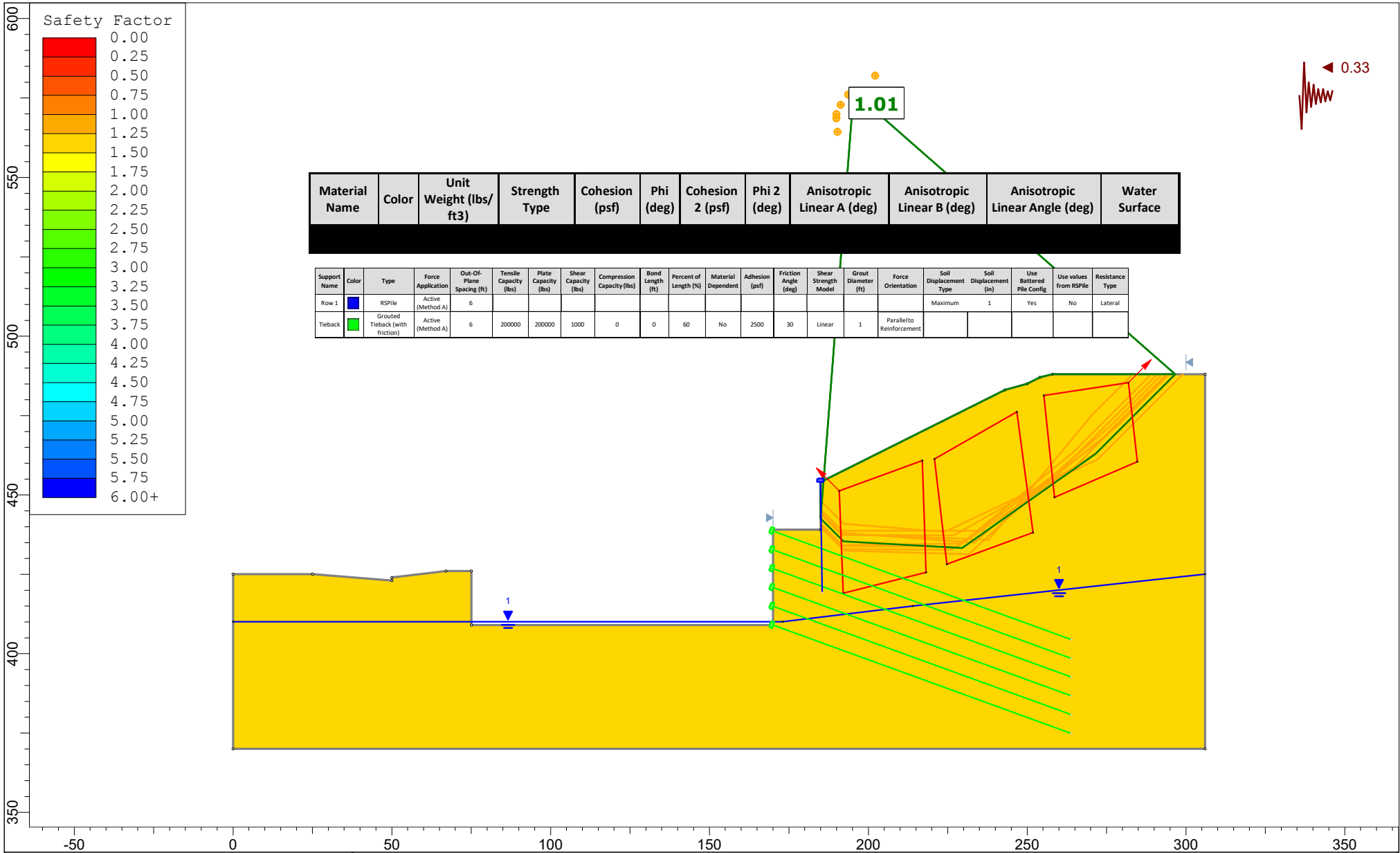
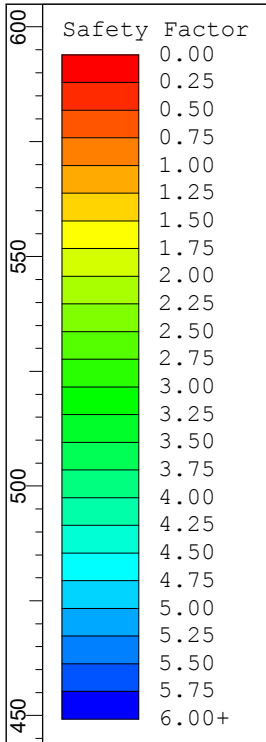
	Project	File No 20489	
	Group	Upper slope	Scenario
	Drawn By	RTK	Company
	Date	5/9/2017, 8:44:53 PM	File Name
			20489 BB Updated Profile upper.slmd
		Curved PStatic	
		Geotechnologies, inc.	



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion 2 (psf)	Phi 2 (deg)	Anisotropic Linear A (deg)	Anisotropic Linear B (deg)	Anisotropic Linear Angle (deg)	Water Surface
Puente Formation		120	Anisotropic Linear	335	20	530	25	2	5	-3	Piezometric Line 1

Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (ft)	Tensile Capacity (lbs)	Plate Capacity (lbs)	Shear Capacity (lbs)	Compression Capacity (lbs)	Bond Length (ft)	Percent of Length (%)	Material Dependent	Adhesion (psf)	Friction Angle (deg)	Shear Strength Model	Grout Diameter (ft)	Force Orientation	Soil Displacement Type	Soil Displacement (in)	Use Battered Pile Config	Use values from RSPile	Resistance Type
Row 1		RSPile	Active (Method A)	6												Parallel to Reinforcement	Maximum	1	Yes	No	Lateral
		Grouted Tieback (with friction)	Active (Method A)	6	200000	200000	1000	0	0	60	No	2500	30	Linear	1						

	Project	File No 20489	
	Group	Block	Scenario
	Drawn By	RTK	Company
	Date	5/9/2017, 8:44:53 PM	File Name
		Block Static	
		Geotechnologies, inc.	
		20489 BB Updated Profile upper.slmd	



Material Name	Color	Unit Weight (lbs/ft ³)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion 2 (psf)	Phi 2 (deg)	Anisotropic Linear A (deg)	Anisotropic Linear B (deg)	Anisotropic Linear Angle (deg)	Water Surface
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Support Name	Color	Type	Force Application	Out-Of-Plane Spacing (ft)	Tensile Capacity (lbs)	Plate Capacity (lbs)	Shear Capacity (lbs)	Compression Capacity (lbs)	Bond Length (ft)	Percent of Length (%)	Material Dependent	Adhesion (psf)	Friction Angle (deg)	Shear Strength Model	Grout Diameter (ft)	Force Orientation	Soil Displacement Type	Soil Displacement (in)	Use Battered Pile Config	Use values from RSPile	Resistance Type
Row 1	Blue	RSPile	Active (Method A)	6													Maximum	1	Yes	No	Lateral
Tieback	Green	Grouted Tieback (with friction)	Active (Method A)	6	200000	200000	1000	0	0	60	No	2500	30	Linear	1	Parallel to Reinforcement					

	Project	File No 20489	
	Group	Block	Scenario
	Drawn By	RTK	Company
	Date	5/9/2017, 8:44:53 PM	File Name
			Block Pstatic
			20489 BB Updated Profile upper.slmd

Table of Contents

Project Summary	5
Currently Open Scenarios	5
General Settings	6
Analysis Options	7
All Open Scenarios	7
Groundwater Analysis	8
All Open Scenarios	8
Random Numbers	9
All Open Scenarios	9
Surface Options	10
Block - Master Scenario	10
Block - Block Static	10
Block - Block Pstatic	10
Block - Curved Static	10
Block - Curved PStatic	11
Seismic Loading	12
Block - Master Scenario	12
Block - Block Static	12
Block - Block Pstatic	12
Block - Curved Static	12
Block - Curved PStatic	12
Materials	13
Materials In Use	13
Support	14
Global Minimums	15
Block - Master Scenario	15
Method: bishop simplified	15
Method: janbu simplified	15
Block - Block Static	15
Method: bishop simplified	15
Method: janbu simplified	15
Block - Block Pstatic	16
Method: bishop simplified	16
Method: janbu simplified	16
Block - Curved Static	16
Method: bishop simplified	16
Method: janbu simplified	17
Block - Curved PStatic	17
Method: bishop simplified	17
Method: janbu simplified	17
Global Minimum Coordinates	19
Block - Master Scenario	19

- Method: bishop simplified 19
- Method: janbu simplified 19
- Block - Block Static 19
 - Method: bishop simplified 19
 - Method: janbu simplified 19
- Block - Block Pstatic 19
 - Method: bishop simplified 19
 - Method: janbu simplified 19
- Global Minimum Support Data 21
 - Block - Master Scenario 21
 - Block - Block Static 21
 - Method: bishop simplified 21
 - Method: janbu simplified 21
 - Block - Block Pstatic 21
 - Method: bishop simplified 21
 - Method: janbu simplified 22
 - Block - Curved Static 22
 - Method: bishop simplified 22
 - Method: janbu simplified 23
 - Block - Curved PStatic 23
 - Method: bishop simplified 23
 - Method: janbu simplified 24
- Valid and Invalid Surfaces 25
 - Block - Master Scenario 25
 - Method: bishop simplified 25
 - Method: janbu simplified 25
 - Block - Block Static 25
 - Method: bishop simplified 25
 - Method: janbu simplified 25
 - Block - Block Pstatic 25
 - Method: bishop simplified 25
 - Method: janbu simplified 25
 - Block - Curved Static 26
 - Method: bishop simplified 26
 - Method: janbu simplified 26
 - Block - Curved PStatic 26
 - Method: bishop simplified 26
 - Method: janbu simplified 26
- Error Code Descriptions 26
- Slice Data 28
 - Block - Master Scenario 28
 - Global Minimum Query (bishop simplified) - Safety Factor: 3.25342 28
 - Global Minimum Query (janbu simplified) - Safety Factor: 3.03372 30

- Block - Block Static 32
 - Global Minimum Query (bishop simplified) - Safety Factor: 1.97212 32
 - Global Minimum Query (janbu simplified) - Safety Factor: 1.87244 34
- Block - Block Pstatic 36
 - Global Minimum Query (bishop simplified) - Safety Factor: 1.10479 36
 - Global Minimum Query (janbu simplified) - Safety Factor: 1.01044 38
- Block - Curved Static 40
 - Global Minimum Query (bishop simplified) - Safety Factor: 2.15144 40
 - Global Minimum Query (janbu simplified) - Safety Factor: 1.97186 42
- Block - Curved PStatic 44
 - Global Minimum Query (bishop simplified) - Safety Factor: 1.02078 44
 - Global Minimum Query (janbu simplified) - Safety Factor: 0.931676 46
- Interslice Data 48
 - Block - Master Scenario 48
 - Global Minimum Query (bishop simplified) - Safety Factor: 3.25342 48
 - Global Minimum Query (janbu simplified) - Safety Factor: 3.03372 49
 - Block - Block Static 50
 - Global Minimum Query (bishop simplified) - Safety Factor: 1.97212 50
 - Global Minimum Query (janbu simplified) - Safety Factor: 1.87244 51
 - Block - Block Pstatic 52
 - Global Minimum Query (bishop simplified) - Safety Factor: 1.10479 52
 - Global Minimum Query (janbu simplified) - Safety Factor: 1.01044 53
 - Block - Curved Static 54
 - Global Minimum Query (bishop simplified) - Safety Factor: 2.15144 54
 - Global Minimum Query (janbu simplified) - Safety Factor: 1.97186 55
 - Block - Curved PStatic 56
 - Global Minimum Query (bishop simplified) - Safety Factor: 1.02078 56
 - Global Minimum Query (janbu simplified) - Safety Factor: 0.931676 57
- Entity Information 58
 - Block 58
 - Shared Entities 58
 - Scenario-based Entities 58


Slide Analysis Information

20489 BB Updated Profile upper

Project Summary

File Name: 20489 BB Updated Profile upper.slmd
 Slide Modeler Version: 9.012
 Project Title: File No 20489
 Analysis: Cross Section B-B', Upper Slope
 Author: RTK
 Company: Geotechnologies, inc.
 Date Created: 5/9/2017, 8:44:53 PM

Currently Open Scenarios

Group Name	Scenario Name	Global Minimum	Compute Time
Block 	Master Scenario	Bishop Simplified: 3.253420	00h:00m:01.6s
		Janbu Simplified: 3.033720	
	Block Static	Bishop Simplified: 1.972120	00h:00m:44.973s
		Janbu Simplified: 1.872440	
	Block Pstatic	Bishop Simplified: 1.104790	00h:05m:25.138s
		Janbu Simplified: 1.010440	
Curved Static	Bishop Simplified: 2.151440	00h:00m:19.117s	
	Janbu Simplified: 1.971860		
Curved PStatic	Bishop Simplified: 1.020780	00h:00m:18.613s	
	Janbu Simplified: 0.931676		

General Settings

Units of Measurement:	Imperial Units
Time Units:	days
Permeability Units:	feet/second
Data Output:	Standard
Failure Direction:	Right to Left

Analysis Options

All Open Scenarios

Slices Type:	Vertical
Analysis Methods Used	
	Bishop simplified
	Janbu simplified
Number of slices:	50
Tolerance:	0.005
Maximum number of iterations:	74
Check malpha < 0.2:	Yes
Create Interslice boundaries at intersections with water tables and piezos:	Yes
Initial trial value of FS:	1
Steffensen Iteration:	Yes

Groundwater Analysis

All Open Scenarios

Groundwater Method:	Water Surfaces
Pore Fluid Unit Weight [lbs/ft ³]:	62.4
Use negative pore pressure cutoff:	Yes
Maximum negative pore pressure [psf]:	0
Advanced Groundwater Method:	None

Random Numbers

All Open Scenarios

Pseudo-random Seed:	10116
Random Number Generation Method:	Park and Miller v.3

Surface Options

◆ **Block - Master Scenario**

Surface Type:	Non-Circular Block Search
Number of Surfaces:	8000
Multiple Groups:	Disabled
Pseudo-Random Surfaces:	Enabled
Convex Surfaces Only:	Disabled
Left Projection Angle (Start Angle) [deg]:	135
Left Projection Angle (End Angle) [deg]:	135
Right Projection Angle (Start Angle) [deg]:	45
Right Projection Angle (End Angle) [deg]:	45
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

◆ **Block - Block Static**

Surface Type:	Non-Circular Block Search
Number of Surfaces:	6000
Multiple Groups:	Disabled
Pseudo-Random Surfaces:	Enabled
Convex Surfaces Only:	Disabled
Left Projection Angle (Start Angle) [deg]:	135
Left Projection Angle (End Angle) [deg]:	135
Right Projection Angle (Start Angle) [deg]:	45
Right Projection Angle (End Angle) [deg]:	45
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

◆ **Block - Block Pstatic**

Surface Type:	Non-Circular Block Search
Number of Surfaces:	8000
Multiple Groups:	Disabled
Pseudo-Random Surfaces:	Enabled
Convex Surfaces Only:	Disabled
Left Projection Angle (Start Angle) [deg]:	135
Left Projection Angle (End Angle) [deg]:	135
Right Projection Angle (Start Angle) [deg]:	45
Right Projection Angle (End Angle) [deg]:	45
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

◆ **Block - Curved Static**

Surface Type:	Circular
Search Method:	Grid Search
Radius Increment:	10
Composite Surfaces:	Disabled
Reverse Curvature:	Invalid Surfaces
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

 **Block - Curved PStatic**

Surface Type:	Circular
Search Method:	Grid Search
Radius Increment:	10
Composite Surfaces:	Disabled
Reverse Curvature:	Invalid Surfaces
Minimum Elevation:	Not Defined
Minimum Depth:	Not Defined
Minimum Area:	Not Defined
Minimum Weight:	Not Defined

Seismic Loading

◆ **Block - Master Scenario**

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

◆ **Block - Block Static**

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No

◆ **Block - Block Pstatic**

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.33


◆ **Block - Curved Static**

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No







◆ **Block - Curved PStatic**

Advanced seismic analysis:	No
Staged pseudostatic analysis:	No
Seismic Load Coefficient (Horizontal):	0.33

Materials


Puente Formation	
Color	
Strength Type	Anisotropic Linear
Unit Weight [lbs/ft3]	120
Cohesion 1 [psf]	335
Cohesion 2 [psf]	530
Friction Angle 1 [deg]	20
Friction Angle 2 [deg]	25
A [deg]	2
B [deg]	5
Anisotropic Definition	Angle
Angle from 1 [deg]	-3
Anisotropic Surface	
Water Surface	Assigned per scenario
Hu Value	Automatically Calculated

Materials In Use


Material	Block	Block Static	Block Pstatic	Curved Static	Curved PStatic
Puente Formation	 				

Support

Row 1

Color	
Support Type	RSPile
Force Application	Active
Out-of-Plane Spacing [ft]	6
Soil Displacement Type	Maximum
Soil Displacement [in]	1
Resistance Type	Lateral
Use battered pile configuration	Yes
Use values defined in RSPile	No

Tieback

Color	
Support Type	Grouted Tieback (with friction)
Force Application	Active
Force Orientation	Parallel to Reinforcement
Bond Length [percent]	60
Out-of-Plane Spacing [ft]	6
Tensile Capacity [lb]	200000
Plate Capacity [lb]	200000
Pullout Strength Adhesion [psf]	2500
Pullout Strength Friction Angle [degrees]	30
Material Dependent	No
Shear Strength Model	Linear
Use External Loads for Strength	yes
Shear Capacity [lb]	1000
Grout Diameter [ft]	1

Global Minimums

◆ Block - Master Scenario

Method: bishop simplified

FS	3.253420
Axis Location:	219.442, 546.113
Left Slip Surface Endpoint:	207.463, 465.231
Right Slip Surface Endpoint:	276.960, 488.000
Resisting Moment:	9.69043e+06 lb-ft
Driving Moment:	2.97853e+06 lb-ft
Total Slice Area:	1133.29 ft ²
Surface Horizontal Width:	69.4969 ft
Surface Average Height:	16.307 ft

Method: janbu simplified

FS	3.033720
Axis Location:	219.442, 546.113
Left Slip Surface Endpoint:	207.463, 465.231
Right Slip Surface Endpoint:	276.960, 488.000
Resisting Horizontal Force:	96124.9 lb
Driving Horizontal Force:	31685.4 lb
Total Slice Area:	1133.29 ft ²
Surface Horizontal Width:	69.4969 ft
Surface Average Height:	16.307 ft

◆ Block - Block Static

Method: bishop simplified

FS	1.972120
Axis Location:	185.680, 551.550
Left Slip Surface Endpoint:	185.000, 446.540
Right Slip Surface Endpoint:	269.280, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	269.280 488.000
Resisting Moment:	1.20449e+07 lb-ft
Driving Moment:	6.1076e+06 lb-ft
Active Support Moment:	-189617 lb-ft
Maximum Single Support Force:	1839.15 lb
Total Support Force:	1839.15 lb
Total Slice Area:	1405.69 ft ²
Surface Horizontal Width:	84.2796 ft
Surface Average Height:	16.6789 ft

Method: janbu simplified

FS	1.872440
Axis Location:	185.680, 551.550
Left Slip Surface Endpoint:	185.000, 446.540
Right Slip Surface Endpoint:	269.280, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	269.280 488.000
Resisting Horizontal Force:	96081.6 lb
Driving Horizontal Force:	51313.6 lb
Active Horizontal Support Force:	-1820.51 lb
Maximum Single Support Force:	1839.15 lb
Total Support Force:	1839.15 lb
Total Slice Area:	1405.69 ft ²
Surface Horizontal Width:	84.2796 ft
Surface Average Height:	16.6789 ft

◆ **Block - Block Pstatic**

Method: bishop simplified

FS	1.104790
Axis Location:	195.334, 576.869
Left Slip Surface Endpoint:	185.000, 442.533
Right Slip Surface Endpoint:	296.603, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	296.603 488.000
Resisting Moment:	3.02217e+07 lb-ft
Driving Moment:	2.7355e+07 lb-ft
Active Support Moment:	-178574 lb-ft
Maximum Single Support Force:	1373.48 lb
Total Support Force:	1373.48 lb
Total Slice Area:	3178.6 ft ²
Surface Horizontal Width:	111.603 ft
Surface Average Height:	28.4813 ft

Method: janbu simplified

FS	1.010440
Axis Location:	195.334, 576.869
Left Slip Surface Endpoint:	185.000, 442.533
Right Slip Surface Endpoint:	296.603, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	296.603 488.000
Resisting Horizontal Force:	189383 lb
Driving Horizontal Force:	187426 lb
Active Horizontal Support Force:	-1293.41 lb
Maximum Single Support Force:	1373.48 lb
Total Support Force:	1373.48 lb
Total Slice Area:	3178.6 ft ²
Surface Horizontal Width:	111.603 ft
Surface Average Height:	28.4813 ft

◆ **Block - Curved Static**

Method: bishop simplified

FS	2.151440
Center:	193.085, 536.442
Radius:	93.235
Left Slip Surface Endpoint:	185.000, 443.558
Right Slip Surface Endpoint:	272.748, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	272.748 488.000
Resisting Moment:	1.35298e+07 lb-ft
Driving Moment:	6.28872e+06 lb-ft
Active Support Moment:	-848010 lb-ft
Maximum Single Support Force:	9104.42 lb
Total Support Force:	9104.42 lb
Total Slice Area:	1714.93 ft ²
Surface Horizontal Width:	87.7476 ft
Surface Average Height:	19.5438 ft

Method: janbu simplified

FS	1.971860
Center:	193.085, 522.587
Radius:	80.050
Left Slip Surface Endpoint:	185.000, 442.947
Right Slip Surface Endpoint:	265.277, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	265.277 488.000
Resisting Horizontal Force:	113121 lb
Driving Horizontal Force:	57367.7 lb
Active Horizontal Support Force:	-10599 lb
Maximum Single Support Force:	10610 lb
Total Support Force:	10610 lb
Total Slice Area:	1549.81 ft ²
Surface Horizontal Width:	80.2766 ft
Surface Average Height:	19.3059 ft

◆ Block - Curved PStatic**Method: bishop simplified**

FS	1.020780
Center:	167.109, 591.554
Radius:	151.504
Left Slip Surface Endpoint:	185.000, 441.110
Right Slip Surface Endpoint:	277.699, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	277.699 488.000
Resisting Moment:	1.97093e+07 lb-ft
Driving Moment:	1.9308e+07 lb-ft
Active Support Moment:	-961938 lb-ft
Maximum Single Support Force:	6349.29 lb
Total Support Force:	6349.29 lb
Total Slice Area:	1643.92 ft ²
Surface Horizontal Width:	92.699 ft
Surface Average Height:	17.734 ft

Method: janbu simplified

FS	0.931676
Center:	192.197, 528.752
Radius:	88.422
Left Slip Surface Endpoint:	185.000, 440.623
Right Slip Surface Endpoint:	270.669, 488.000
Left Slope Intercept:	185.000 454.000
Right Slope Intercept:	270.669 488.000
Resisting Horizontal Force:	118519 lb
Driving Horizontal Force:	127211 lb
Active Horizontal Support Force:	-7440.74 lb
Maximum Single Support Force:	7458.34 lb
Total Support Force:	7458.34 lb
Total Slice Area:	1842.11 ft ²
Surface Horizontal Width:	85.6687 ft
Surface Average Height:	21.5027 ft

Global Minimum Coordinates

◆ Block - Master Scenario

Method: bishop simplified

X	Y
207.463	465.231
223.547	449.147
258.895	469.935
276.96	488

Method: janbu simplified

X	Y
207.463	465.231
223.547	449.147
258.895	469.935
276.96	488

◆ Block - Block Static

Method: bishop simplified

X	Y
185	446.54
185.204	448.146
224.367	447.463
241.337	459.132
269.28	488

Method: janbu simplified

X	Y
185	446.54
185.204	448.146
224.367	447.463
241.337	459.132
269.28	488

◆ Block - Block Pstatic

Method: bishop simplified

X	Y
185	442.533
192.173	435.36
229.522	433.272
271.492	462.89
296.603	488

Method: janbu simplified

X	Y
185	442.533
192.173	435.36
229.522	433.272
271.492	462.89
296.603	488

Global Minimum Support Data

◆ **Block - Master Scenario**

No Supports Present

◆ **Block - Block Static**

Method: bishop simplified

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170, 439	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 433	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 427	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 421	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 415	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
185.143, 454.31	35	7	28	7	28	1839.15

Method: janbu simplified

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170, 439	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 433	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 427	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 421	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 415	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
185.143, 454.31	35	7	28	7	28	1839.15

◆ **Block - Block Pstatic**

Method: bishop simplified

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170, 438.602	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 432.682	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 426.761	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 420.841	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 414.92	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
184.87, 454.178	35	11.7026	23.2974	11.7026	23.2974	1373.48

Method: janbu simplified

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170, 438.602	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 432.682	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 426.761	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 420.841	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 414.92	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
184.87, 454.178	35	11.7026	23.2974	11.7026	23.2974	1373.48

◆ Block - Curved Static**Method: bishop simplified**

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170, 438.683	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 432.746	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 426.81	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 420.873	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 414.937	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
185.222, 454.029	35	10.4853	24.5147	10.4853	24.5147	9104.42

Method: janbu simplified

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170, 438.683	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 432.746	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 426.81	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 420.873	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 414.937	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
185.222, 454.029	35	11.0985	23.9015	11.0985	23.9015	10610

◆ Block - Curved PStatic**Method: bishop simplified**

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170.828, 439	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 433.662	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 427.497	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 421.331	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 415.166	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
185.111, 453.673	35	12.549	22.451	12.549	22.451	6349.29

Method: janbu simplified

Number of Supports: 7

Tieback

Support Type: Grouted Tieback (with friction)

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
170.828, 439	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 433.662	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 427.497	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 421.331	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 415.166	100	Not Effective	Not Effective	Not Effective	Not Effective	0
170, 409	100	Not Effective	Not Effective	Not Effective	Not Effective	0

Row 1

Support Type: RSPile

Start (x, y)	Length (ft)	L Inside SS (ft)	L Outside SS (ft)	Li (ft)	Lo (ft)	Force (lb)
185.111, 453.673	35	13.0577	21.9423	13.0577	21.9423	7458.34

Valid and Invalid Surfaces

◆ **Block - Master Scenario**

Method: bishop simplified

Number of Valid Surfaces:	7564
Number of Invalid Surfaces:	436

Error Codes

Error Code -108 reported for 16 surfaces
 Error Code -111 reported for 420 surfaces

Method: janbu simplified

Number of Valid Surfaces:	6528
Number of Invalid Surfaces:	1472

Error Codes

Error Code -108 reported for 15 surfaces
 Error Code -111 reported for 1457 surfaces

◆ **Block - Block Static**

Method: bishop simplified

Number of Valid Surfaces:	5718
Number of Invalid Surfaces:	284

Error Codes

Error Code -108 reported for 10 surfaces
 Error Code -111 reported for 274 surfaces

Method: janbu simplified

Number of Valid Surfaces:	5150
Number of Invalid Surfaces:	852

Error Codes

Error Code -108 reported for 20 surfaces
 Error Code -111 reported for 832 surfaces

◆ **Block - Block Pstatic**

Method: bishop simplified

Number of Valid Surfaces:	7913
Number of Invalid Surfaces:	87

Error Codes

Error Code -108 reported for 2 surfaces
 Error Code -111 reported for 85 surfaces

Method: janbu simplified

Number of Valid Surfaces:	7658
Number of Invalid Surfaces:	342

Error Codes

Error Code -108 reported for 4 surfaces
 Error Code -111 reported for 338 surfaces

◆ **Block - Curved Static**

Method: bishop simplified

Number of Valid Surfaces:	6711
Number of Invalid Surfaces:	6960

Error Codes

Error Code -106 reported for 726 surfaces
 Error Code -107 reported for 3774 surfaces
 Error Code -108 reported for 8 surfaces
 Error Code -114 reported for 100 surfaces
 Error Code -1000 reported for 2352 surfaces

Method: janbu simplified

Number of Valid Surfaces:	6713
Number of Invalid Surfaces:	6958

Error Codes

Error Code -106 reported for 726 surfaces
 Error Code -107 reported for 3774 surfaces
 Error Code -108 reported for 6 surfaces
 Error Code -114 reported for 100 surfaces
 Error Code -1000 reported for 2352 surfaces

◆ **Block - Curved PStatic**

Method: bishop simplified

Number of Valid Surfaces:	8019
Number of Invalid Surfaces:	5652

Error Codes

Error Code -106 reported for 672 surfaces
 Error Code -107 reported for 2836 surfaces
 Error Code -108 reported for 2 surfaces
 Error Code -1000 reported for 2142 surfaces

Method: janbu simplified

Number of Valid Surfaces:	8017
Number of Invalid Surfaces:	5654

Error Codes

Error Code -106 reported for 672 surfaces
 Error Code -107 reported for 2836 surfaces
 Error Code -108 reported for 4 surfaces
 Error Code -1000 reported for 2142 surfaces

Error Code Descriptions

The following errors were encountered during the computation:

- 106 = Average slice width is less than $0.0001 * (\text{maximum horizontal extent of soil region})$. This limitation is imposed to avoid numerical errors which may result from too many slices, or too small a slip region.
- 107 = Total driving moment or total driving force is negative. This will occur if the wrong failure direction is specified, or if high external or anchor loads are applied against the failure direction.
- 108 = Total driving moment or total driving force < 0.1 . This is to limit the calculation of extremely high safety factors if the driving force is very small (0.1 is an arbitrary number).
- 111 = Safety factor equation did not converge
- 114 = Surface with Reverse Curvature.
- 1000 = No valid slip surface is generated

Slice Data

◆ Block - Master Scenario

Global Minimum Query (bishop simplified) - Safety Factor: 3.25342

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.34036	161.69	-45	Puente Formation	530	25	210.299	684.191	330.664	0	330.664	120.365	120.365
2	1.34036	485.071	-45	Puente Formation	530	25	250.656	815.49	612.233	0	612.233	361.577	361.577
3	1.34036	808.451	-45	Puente Formation	530	25	291.013	946.788	893.803	0	893.803	602.79	602.79
4	1.34036	1131.83	-45	Puente Formation	530	25	331.37	1078.09	1175.37	0	1175.37	844.003	844.003
5	1.34036	1455.21	-45	Puente Formation	530	25	371.727	1209.38	1456.94	0	1456.94	1085.22	1085.22
6	1.34036	1778.59	-45	Puente Formation	530	25	412.084	1340.68	1738.51	0	1738.51	1326.43	1326.43
7	1.34036	2101.97	-45	Puente Formation	530	25	452.441	1471.98	2020.09	0	2020.09	1567.65	1567.65
8	1.34036	2425.35	-45	Puente Formation	530	25	492.798	1603.28	2301.66	0	2301.66	1808.86	1808.86
9	1.34036	2748.73	-45	Puente Formation	530	25	533.156	1734.58	2583.23	0	2583.23	2050.07	2050.07
10	1.34036	3072.11	-45	Puente Formation	530	25	573.513	1865.88	2864.8	0	2864.8	2291.28	2291.28
11	1.34036	3395.5	-45	Puente Formation	530	25	613.868	1997.17	3146.37	0	3146.37	2532.5	2532.5
12	1.34036	3718.88	-45	Puente Formation	530	25	654.225	2128.47	3427.94	0	3427.94	2773.71	2773.71
13	1.41392	4082.97	30.46	Puente Formation	530	25	532.006	1730.84	2575.22	0	2575.22	2888.1	2888.1
14	1.41392	4061.84	30.46	Puente Formation	530	25	530.03	1724.41	2561.43	0	2561.43	2873.14	2873.14
15	1.41392	4040.7	30.46	Puente Formation	530	25	528.057	1717.99	2547.64	0	2547.64	2858.19	2858.19
16	1.41392	4019.56	30.46	Puente Formation	530	25	526.08	1711.56	2533.86	0	2533.86	2843.25	2843.25
17	1.41392	3998.43	30.46	Puente Formation	530	25	524.104	1705.13	2520.07	0	2520.07	2828.3	2828.3
18	1.41392	3977.29	30.46	Puente Formation	530	25	522.127	1698.7	2506.28	0	2506.28	2813.34	2813.34
19	1.41392	3956.15	30.46	Puente Formation	530	25	520.151	1692.27	2492.49	0	2492.49	2798.4	2798.4
20	1.41392	3935.02	30.46	Puente Formation	530	25	518.175	1685.84	2478.7	0	2478.7	2783.44	2783.44
21	1.41392	3913.88	30.46	Puente Formation	530	25	516.198	1679.41	2464.91	0	2464.91	2768.49	2768.49
22	1.41392	3892.74	30.46	Puente Formation	530	25	514.222	1672.98	2451.13	0	2451.13	2753.55	2753.55
23	1.41392	3871.61	30.46	Puente Formation	530	25	512.246	1666.55	2437.34	0	2437.34	2738.59	2738.59
24	1.41392	3850.47	30.46	Puente Formation	530	25	510.269	1660.12	2423.55	0	2423.55	2723.64	2723.64
25	1.41392	3829.33	30.46	Puente Formation	530	25	508.293	1653.69	2409.77	0	2409.77	2708.69	2708.69
26	1.41392	3806.7	30.46	Puente Formation	530	25	506.175	1646.8	2394.99	0	2394.99	2692.68	2692.68
27	1.41392	3748.93	30.46	Puente Formation	530	25	500.775	1629.23	2357.31	0	2357.31	2651.82	2651.82
28	1.41392	3676.39	30.46	Puente Formation	530	25	493.994	1607.17	2309.99	0	2309.99	2600.51	2600.51
29	1.41392	3603.85	30.46	Puente Formation	530	25	487.21	1585.1	2262.66	0	2262.66	2549.2	2549.2

30	1.41392	3531.3	30.46	Puente Formation	530	25	480.427	1563.03	2215.34	0	2215.34	2497.89	2497.89
31	1.41392	3460.93	30.46	Puente Formation	530	25	473.849	1541.63	2169.44	0	2169.44	2448.11	2448.11
32	1.41392	3426.87	30.46	Puente Formation	530	25	470.665	1531.27	2147.22	0	2147.22	2424.02	2424.02
33	1.41392	3405.74	30.46	Puente Formation	530	25	468.687	1524.84	2133.43	0	2133.43	2409.07	2409.07
34	1.41392	3378.2	30.46	Puente Formation	530	25	466.113	1516.46	2115.47	0	2115.47	2389.6	2389.6
35	1.41392	3305.77	30.46	Puente Formation	530	25	459.341	1494.43	2068.23	0	2068.23	2338.37	2338.37
36	1.41392	3224.66	30.46	Puente Formation	530	25	451.757	1469.76	2015.32	0	2015.32	2281	2281
37	1.41392	3131.54	30.46	Puente Formation	530	25	443.05	1441.43	1954.56	0	1954.56	2215.12	2215.12
38	1.38959	2896.44	45	Puente Formation	530	25	403.848	1313.89	1681.05	0	1681.05	2084.9	2084.9
39	1.38959	2664.72	45	Puente Formation	530	25	382.94	1245.87	1535.18	0	1535.18	1918.12	1918.12
40	1.38959	2433.01	45	Puente Formation	530	25	362.033	1177.85	1389.31	0	1389.31	1751.34	1751.34
41	1.38959	2201.29	45	Puente Formation	530	25	341.126	1109.83	1243.44	0	1243.44	1584.57	1584.57
42	1.38959	1969.58	45	Puente Formation	530	25	320.218	1041.81	1097.57	0	1097.57	1417.79	1417.79
43	1.38959	1737.86	45	Puente Formation	530	25	299.311	973.785	951.701	0	951.701	1251.01	1251.01
44	1.38959	1506.15	45	Puente Formation	530	25	278.404	905.765	805.831	0	805.831	1084.23	1084.23
45	1.38959	1274.43	45	Puente Formation	530	25	257.496	837.744	659.961	0	659.961	917.458	917.458
46	1.38959	1042.72	45	Puente Formation	530	25	236.589	769.724	514.091	0	514.091	750.68	750.68
47	1.38959	811.003	45	Puente Formation	530	25	215.682	701.704	368.22	0	368.22	583.902	583.902
48	1.38959	579.288	45	Puente Formation	530	25	194.774	633.683	222.349	0	222.349	417.124	417.124
49	1.38959	347.573	45	Puente Formation	530	25	173.867	565.663	76.4796	0	76.4796	250.347	250.347
50	1.38959	115.858	45	Puente Formation	530	25	152.96	497.643	-69.3902	0	-69.3902	83.5697	83.5697

Global Minimum Query (janbu simplified) - Safety Factor: 3.03372

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.34036	161.69	-45	Puente Formation	530	25	228.32	692.66	348.825	0	348.825	120.504	120.504
2	1.34036	485.071	-45	Puente Formation	530	25	272.136	825.583	633.879	0	633.879	361.743	361.743
3	1.34036	808.451	-45	Puente Formation	530	25	315.951	958.506	918.936	0	918.936	602.985	602.985
4	1.34036	1131.83	-45	Puente Formation	530	25	359.766	1091.43	1203.99	0	1203.99	844.226	844.226
5	1.34036	1455.21	-45	Puente Formation	530	25	403.581	1224.35	1489.04	0	1489.04	1085.46	1085.46
6	1.34036	1778.59	-45	Puente Formation	530	25	447.397	1357.28	1774.1	0	1774.1	1326.7	1326.7
7	1.34036	2101.97	-45	Puente Formation	530	25	491.212	1490.2	2059.16	0	2059.16	1567.95	1567.95
8	1.34036	2425.35	-45	Puente Formation	530	25	535.026	1623.12	2344.21	0	2344.21	1809.18	1809.18
9	1.34036	2748.73	-45	Puente Formation	530	25	578.844	1756.05	2629.27	0	2629.27	2050.42	2050.42
10	1.34036	3072.11	-45	Puente Formation	530	25	622.658	1888.97	2914.32	0	2914.32	2291.66	2291.66
11	1.34036	3395.5	-45	Puente Formation	530	25	666.472	2021.89	3199.37	0	3199.37	2532.9	2532.9
12	1.34036	3718.88	-45	Puente Formation	530	25	710.29	2154.82	3484.43	0	3484.43	2774.14	2774.14
13	1.41392	4082.97	30.46	Puente Formation	530	25	567.31	1721.06	2554.24	0	2554.24	2887.88	2887.88
14	1.41392	4061.84	30.46	Puente Formation	530	25	565.204	1714.67	2540.53	0	2540.53	2872.93	2872.93
15	1.41392	4040.7	30.46	Puente Formation	530	25	563.097	1708.28	2526.83	0	2526.83	2857.99	2857.99
16	1.41392	4019.56	30.46	Puente Formation	530	25	560.988	1701.88	2513.12	0	2513.12	2843.04	2843.04
17	1.41392	3998.43	30.46	Puente Formation	530	25	558.882	1695.49	2499.41	0	2499.41	2828.09	2828.09
18	1.41392	3977.29	30.46	Puente Formation	530	25	556.775	1689.1	2485.7	0	2485.7	2813.14	2813.14
19	1.41392	3956.15	30.46	Puente Formation	530	25	554.669	1682.71	2471.99	0	2471.99	2798.19	2798.19
20	1.41392	3935.02	30.46	Puente Formation	530	25	552.559	1676.31	2458.27	0	2458.27	2783.24	2783.24
21	1.41392	3913.88	30.46	Puente Formation	530	25	550.453	1669.92	2444.56	0	2444.56	2768.29	2768.29
22	1.41392	3892.74	30.46	Puente Formation	530	25	548.347	1663.53	2430.85	0	2430.85	2753.34	2753.34
23	1.41392	3871.61	30.46	Puente Formation	530	25	546.237	1657.13	2417.14	0	2417.14	2738.39	2738.39
24	1.41392	3850.47	30.46	Puente Formation	530	25	544.131	1650.74	2403.44	0	2403.44	2723.44	2723.44
25	1.41392	3829.33	30.46	Puente Formation	530	25	542.024	1644.35	2389.73	0	2389.73	2708.49	2708.49
26	1.41392	3806.7	30.46	Puente Formation	530	25	539.766	1637.5	2375.04	0	2375.04	2692.48	2692.48
27	1.41392	3748.93	30.46	Puente Formation	530	25	534.008	1620.03	2337.57	0	2337.57	2651.62	2651.62
28	1.41392	3676.39	30.46	Puente Formation	530	25	526.772	1598.08	2290.51	0	2290.51	2600.31	2600.31
29	1.41392	3603.85	30.46	Puente Formation	530	25	519.54	1576.14	2243.46	0	2243.46	2549.01	2549.01
30	1.41392	3531.3	30.46	Puente Formation	530	25	512.308	1554.2	2196.4	0	2196.4	2497.69	2497.69
31	1.41392	3460.93	30.46	Puente Formation	530	25	505.294	1532.92	2150.76	0	2150.76	2447.92	2447.92
32	1.41392	3426.87	30.46	Puente Formation	530	25	501.897	1522.61	2128.67	0	2128.67	2423.83	2423.83
33	1.41392	3405.74	30.46	Puente Formation	530	25	499.789	1516.22	2114.95	0	2114.95	2408.88	2408.88

34	1.41392	3378.2	30.46	Puente Formation	530	25	497.044	1507.89	2097.1	0	2097.1	2389.41	2389.41
35	1.41392	3305.77	30.46	Puente Formation	530	25	489.823	1485.99	2050.11	0	2050.11	2338.18	2338.18
36	1.41392	3224.66	30.46	Puente Formation	530	25	481.736	1461.45	1997.5	0	1997.5	2280.81	2280.81
37	1.41392	3131.54	30.46	Puente Formation	530	25	472.451	1433.28	1937.1	0	1937.1	2214.95	2214.95
38	1.38959	2896.44	45	Puente Formation	530	25	429.161	1301.95	1655.46	0	1655.46	2084.63	2084.63
39	1.38959	2664.72	45	Puente Formation	530	25	406.944	1234.55	1510.92	0	1510.92	1917.86	1917.86
40	1.38959	2433.01	45	Puente Formation	530	25	384.726	1167.15	1366.37	0	1366.37	1751.1	1751.1
41	1.38959	2201.29	45	Puente Formation	530	25	362.508	1099.75	1221.83	0	1221.83	1584.34	1584.34
42	1.38959	1969.58	45	Puente Formation	530	25	340.29	1032.35	1077.28	0	1077.28	1417.57	1417.57
43	1.38959	1737.86	45	Puente Formation	530	25	318.072	964.942	932.736	0	932.736	1250.81	1250.81
44	1.38959	1506.15	45	Puente Formation	530	25	295.854	897.539	788.189	0	788.189	1084.04	1084.04
45	1.38959	1274.43	45	Puente Formation	530	25	273.637	830.137	643.647	0	643.647	917.284	917.284
46	1.38959	1042.72	45	Puente Formation	530	25	251.419	762.734	499.1	0	499.1	750.519	750.519
47	1.38959	811.003	45	Puente Formation	530	25	229.201	695.332	354.555	0	354.555	583.756	583.756
48	1.38959	579.288	45	Puente Formation	530	25	206.983	627.929	210.01	0	210.01	416.993	416.993
49	1.38959	347.573	45	Puente Formation	530	25	184.765	560.526	65.4638	0	65.4638	250.229	250.229
50	1.38959	115.858	45	Puente Formation	530	25	162.548	493.124	-79.0814	0	-79.0814	83.4661	83.4661

Block - Block Static

Global Minimum Query (bishop simplified) - Safety Factor: 1.97212

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	0.204179	164.353	82.7541	Puente Formation	530	25	54.7583	107.99	-905.003	0	-905.003	-474.319	-474.319
2	1.70275	1306.99	-1	Puente Formation	335	20	312.538	616.362	773.032	0	773.032	767.577	767.577
3	1.70275	1487.03	-1	Puente Formation	335	20	332.114	654.969	879.109	0	879.109	873.312	873.312
4	1.70275	1667.06	-1	Puente Formation	335	20	351.691	693.577	985.18	0	985.18	979.042	979.042
5	1.70275	1847.1	-1	Puente Formation	335	20	371.267	732.184	1091.25	0	1091.25	1084.77	1084.77
6	1.70275	2027.13	-1	Puente Formation	335	20	390.844	770.792	1197.33	0	1197.33	1190.51	1190.51
7	1.70275	2207.17	-1	Puente Formation	335	20	410.421	809.399	1303.4	0	1303.4	1296.24	1296.24
8	1.70275	2387.2	-1	Puente Formation	335	20	429.998	848.007	1409.48	0	1409.48	1401.97	1401.97
9	1.70275	2567.23	-1	Puente Formation	335	20	449.574	886.614	1515.55	0	1515.55	1507.7	1507.7
10	1.70275	2747.27	-1	Puente Formation	335	20	469.151	925.222	1621.62	0	1621.62	1613.43	1613.43
11	1.70275	2927.3	-1	Puente Formation	335	20	488.727	963.829	1727.7	0	1727.7	1719.17	1719.17
12	1.70275	3107.34	-1	Puente Formation	335	20	508.304	1002.44	1833.77	0	1833.77	1824.89	1824.89
13	1.70275	3287.37	-1	Puente Formation	335	20	527.881	1041.04	1939.84	0	1939.84	1930.62	1930.62
14	1.70275	3467.4	-1	Puente Formation	335	20	547.458	1079.65	2045.92	0	2045.92	2036.36	2036.36
15	1.70275	3647.44	-1	Puente Formation	335	20	567.034	1118.26	2151.99	0	2151.99	2142.09	2142.09
16	1.70275	3827.47	-1	Puente Formation	335	20	586.611	1156.87	2258.06	0	2258.06	2247.82	2247.82
17	1.70275	4007.51	-1	Puente Formation	335	20	606.187	1195.47	2364.13	0	2364.13	2353.55	2353.55
18	1.70275	4187.54	-1	Puente Formation	335	20	625.764	1234.08	2470.21	0	2470.21	2459.28	2459.28
19	1.70275	4367.57	-1	Puente Formation	335	20	645.341	1272.69	2576.28	0	2576.28	2565.01	2565.01
20	1.70275	4547.61	-1	Puente Formation	335	20	664.917	1311.3	2682.35	0	2682.35	2670.75	2670.75
21	1.70275	4727.64	-1	Puente Formation	335	20	684.492	1349.9	2788.43	0	2788.43	2776.48	2776.48
22	1.70275	4907.68	-1	Puente Formation	335	20	704.07	1388.51	2894.5	0	2894.5	2882.21	2882.21
23	1.70275	5087.71	-1	Puente Formation	335	20	723.648	1427.12	3000.57	0	3000.57	2987.94	2987.94
24	1.70275	5267.75	-1	Puente Formation	335	20	743.226	1465.73	3106.64	0	3106.64	3093.67	3093.67
25	1.69695	5307.08	34.5163	Puente Formation	530	25	867.209	1710.24	2531.04	0	2531.04	3127.42	3127.42
26	1.69695	5242.22	34.5163	Puente Formation	530	25	859.436	1694.91	2498.17	0	2498.17	3089.2	3089.2
27	1.69695	5177.36	34.5163	Puente Formation	530	25	851.662	1679.58	2465.29	0	2465.29	3050.98	3050.98
28	1.69695	5112.5	34.5163	Puente Formation	530	25	843.889	1664.25	2432.42	0	2432.42	3012.76	3012.76
29	1.69695	5047.64	34.5163	Puente Formation	530	25	836.115	1648.92	2399.54	0	2399.54	2974.54	2974.54
30	1.69695	4982.77	34.5163	Puente Formation	530	25	828.342	1633.59	2366.66	0	2366.66	2936.31	2936.31
31	1.69695	4917.91	34.5163	Puente Formation	530	25	820.569	1618.26	2333.79	0	2333.79	2898.09	2898.09
32	1.69695	4853.05	34.5163	Puente Formation	530	25	812.795	1602.93	2300.91	0	2300.91	2859.87	2859.87

33	1.69695	4788.19	34.5163	Puente Formation	530	25	805.022	1587.6	2268.03	0	2268.03	2821.65	2821.65
34	1.69695	4723.33	34.5163	Puente Formation	530	25	797.249	1572.27	2235.15	0	2235.15	2783.42	2783.42
35	1.74642	4730.01	45.9326	Puente Formation	530	25	730.664	1440.96	1953.56	0	1953.56	2708.4	2708.4
36	1.74642	4492.03	45.9326	Puente Formation	530	25	704.77	1389.89	1844.04	0	1844.04	2572.13	2572.13
37	1.74642	4218.49	45.9326	Puente Formation	530	25	675.006	1331.19	1718.16	0	1718.16	2415.51	2415.51
38	1.74642	3944.95	45.9326	Puente Formation	530	25	645.241	1272.49	1592.28	0	1592.28	2258.88	2258.88
39	1.74642	3671.47	45.9326	Puente Formation	530	25	615.484	1213.81	1466.43	0	1466.43	2102.29	2102.29
40	1.74642	3440.18	45.9326	Puente Formation	530	25	590.317	1164.17	1359.99	0	1359.99	1969.85	1969.85
41	1.74642	3245.07	45.9326	Puente Formation	530	25	569.086	1122.31	1270.2	0	1270.2	1858.12	1858.12
42	1.74642	3024.29	45.9326	Puente Formation	530	25	545.063	1074.93	1168.6	0	1168.6	1731.71	1731.71
43	1.74642	2740.56	45.9326	Puente Formation	530	25	514.189	1014.04	1038.03	0	1038.03	1569.24	1569.24
44	1.74642	2444.32	45.9326	Puente Formation	530	25	481.955	950.474	901.707	0	901.707	1399.61	1399.61
45	1.74642	2079.61	45.9326	Puente Formation	530	25	442.271	872.212	733.875	0	733.875	1190.78	1190.78
46	1.74642	1701.5	45.9326	Puente Formation	530	25	401.128	791.073	559.873	0	559.873	974.277	974.277
47	1.74642	1323.39	45.9326	Puente Formation	530	25	359.986	709.935	385.872	0	385.872	757.772	757.772
48	1.74642	945.278	45.9326	Puente Formation	530	25	318.843	628.797	211.87	0	211.87	541.266	541.266
49	1.74642	567.167	45.9326	Puente Formation	530	25	277.7	547.658	37.868	0	37.868	324.759	324.759
50	1.74642	189.056	45.9326	Puente Formation	530	25	236.557	466.52	-136.134	0	-136.134	108.253	108.253

Global Minimum Query (janbu simplified) - Safety Factor: 1.87244

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	0.204179	164.353	82.7541	Puente Formation	530	25	55.7438	104.377	-912.75	0	-912.75	-474.314	-474.314
2	1.70275	1306.99	-1	Puente Formation	335	20	329.232	616.468	773.326	0	773.326	767.579	767.579
3	1.70275	1487.03	-1	Puente Formation	335	20	349.855	655.082	879.421	0	879.421	873.314	873.314
4	1.70275	1667.06	-1	Puente Formation	335	20	370.477	693.696	985.509	0	985.509	979.043	979.043
5	1.70275	1847.1	-1	Puente Formation	335	20	391.099	732.31	1091.6	0	1091.6	1084.77	1084.77
6	1.70275	2027.13	-1	Puente Formation	335	20	411.722	770.924	1197.69	0	1197.69	1190.51	1190.51
7	1.70275	2207.17	-1	Puente Formation	335	20	432.344	809.538	1303.78	0	1303.78	1296.23	1296.23
8	1.70275	2387.2	-1	Puente Formation	335	20	452.967	848.153	1409.88	0	1409.88	1401.97	1401.97
9	1.70275	2567.23	-1	Puente Formation	335	20	473.589	886.767	1515.96	0	1515.96	1507.7	1507.7
10	1.70275	2747.27	-1	Puente Formation	335	20	494.211	925.381	1622.06	0	1622.06	1613.43	1613.43
11	1.70275	2927.3	-1	Puente Formation	335	20	514.834	963.995	1728.15	0	1728.15	1719.16	1719.16
12	1.70275	3107.34	-1	Puente Formation	335	20	535.456	1002.61	1834.24	0	1834.24	1824.9	1824.9
13	1.70275	3287.37	-1	Puente Formation	335	20	556.078	1041.22	1940.33	0	1940.33	1930.63	1930.63
14	1.70275	3467.4	-1	Puente Formation	335	20	576.7	1079.84	2046.43	0	2046.43	2036.36	2036.36
15	1.70275	3647.44	-1	Puente Formation	335	20	597.323	1118.45	2152.52	0	2152.52	2142.09	2142.09
16	1.70275	3827.47	-1	Puente Formation	335	20	617.946	1157.07	2258.6	0	2258.6	2247.82	2247.82
17	1.70275	4007.51	-1	Puente Formation	335	20	638.568	1195.68	2364.7	0	2364.7	2353.55	2353.55
18	1.70275	4187.54	-1	Puente Formation	335	20	659.19	1234.29	2470.79	0	2470.79	2459.28	2459.28
19	1.70275	4367.57	-1	Puente Formation	335	20	679.812	1272.91	2576.88	0	2576.88	2565.02	2565.02
20	1.70275	4547.61	-1	Puente Formation	335	20	700.435	1311.52	2682.97	0	2682.97	2670.74	2670.74
21	1.70275	4727.64	-1	Puente Formation	335	20	721.059	1350.14	2789.07	0	2789.07	2776.48	2776.48
22	1.70275	4907.68	-1	Puente Formation	335	20	741.679	1388.75	2895.15	0	2895.15	2882.21	2882.21
23	1.70275	5087.71	-1	Puente Formation	335	20	762.299	1427.36	3001.25	0	3001.25	2987.94	2987.94
24	1.70275	5267.75	-1	Puente Formation	335	20	782.925	1465.98	3107.34	0	3107.34	3093.67	3093.67
25	1.69695	5307.08	34.5163	Puente Formation	530	25	906.63	1697.61	2503.94	0	2503.94	3127.43	3127.43
26	1.69695	5242.22	34.5163	Puente Formation	530	25	898.501	1682.39	2471.3	0	2471.3	3089.21	3089.21
27	1.69695	5177.36	34.5163	Puente Formation	530	25	890.373	1667.17	2438.67	0	2438.67	3050.98	3050.98
28	1.69695	5112.5	34.5163	Puente Formation	530	25	882.245	1651.95	2406.04	0	2406.04	3012.76	3012.76
29	1.69695	5047.64	34.5163	Puente Formation	530	25	874.121	1636.74	2373.41	0	2373.41	2974.54	2974.54
30	1.69695	4982.77	34.5163	Puente Formation	530	25	865.993	1621.52	2340.77	0	2340.77	2936.32	2936.32
31	1.69695	4917.91	34.5163	Puente Formation	530	25	857.865	1606.3	2308.14	0	2308.14	2898.09	2898.09
32	1.69695	4853.05	34.5163	Puente Formation	530	25	849.742	1591.09	2275.5	0	2275.5	2859.87	2859.87
33	1.69695	4788.19	34.5163	Puente Formation	530	25	841.613	1575.87	2242.87	0	2242.87	2821.65	2821.65

34	1.69695	4723.33	34.5163	Puente Formation	530	25	833.485	1560.65	2210.24	0	2210.24	2783.42	2783.42
35	1.74642	4730.01	45.9326	Puente Formation	530	25	761.602	1426.05	1921.59	0	1921.59	2708.4	2708.4
36	1.74642	4492.03	45.9326	Puente Formation	530	25	734.611	1375.51	1813.22	0	1813.22	2572.14	2572.14
37	1.74642	4218.49	45.9326	Puente Formation	530	25	703.587	1317.42	1688.64	0	1688.64	2415.51	2415.51
38	1.74642	3944.95	45.9326	Puente Formation	530	25	672.562	1259.33	1564.06	0	1564.06	2258.88	2258.88
39	1.74642	3671.47	45.9326	Puente Formation	530	25	641.544	1201.25	1439.51	0	1439.51	2102.29	2102.29
40	1.74642	3440.18	45.9326	Puente Formation	530	25	615.312	1152.13	1334.17	0	1334.17	1969.85	1969.85
41	1.74642	3245.07	45.9326	Puente Formation	530	25	593.183	1110.7	1245.31	0	1245.31	1858.13	1858.13
42	1.74642	3024.29	45.9326	Puente Formation	530	25	568.142	1063.81	1144.76	0	1144.76	1731.71	1731.71
43	1.74642	2740.56	45.9326	Puente Formation	530	25	535.961	1003.56	1015.54	0	1015.54	1569.24	1569.24
44	1.74642	2444.32	45.9326	Puente Formation	530	25	502.362	940.643	880.628	0	880.628	1399.62	1399.62
45	1.74642	2079.61	45.9326	Puente Formation	530	25	460.998	863.191	714.532	0	714.532	1190.79	1190.79
46	1.74642	1701.5	45.9326	Puente Formation	530	25	418.113	782.892	542.327	0	542.327	974.278	974.278
47	1.74642	1323.39	45.9326	Puente Formation	530	25	375.228	702.592	370.125	0	370.125	757.772	757.772
48	1.74642	945.278	45.9326	Puente Formation	530	25	332.343	622.293	197.923	0	197.923	541.266	541.266
49	1.74642	567.167	45.9326	Puente Formation	530	25	289.459	541.994	25.7209	0	25.7209	324.759	324.759
50	1.74642	189.056	45.9326	Puente Formation	530	25	246.574	461.695	-146.481	0	-146.481	108.253	108.253

Block - Block Pstatic

Global Minimum Query (bishop simplified) - Safety Factor: 1.10479

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	2.3911	3804.82	-45	Puente Formation	530	25	2132.44	2355.9	3915.64	0	3915.64	1783.2	1783.2
2	2.3911	4833.94	-45	Puente Formation	530	25	2305.55	2547.15	4325.81	0	4325.81	2020.26	2020.26
3	2.3911	5863.06	-45	Puente Formation	530	25	2619.75	2894.27	5070.21	0	5070.21	2450.46	2450.46
4	2.19696	6020.8	-3.19946	Puente Formation	335	20	1228.7	1357.45	2809.16	0	2809.16	2740.48	2740.48
5	2.19696	6342.77	-3.19946	Puente Formation	335	20	1277.88	1411.79	2958.46	0	2958.46	2887.03	2887.03
6	2.19696	6664.75	-3.19946	Puente Formation	335	20	1327.07	1466.13	3107.76	0	3107.76	3033.58	3033.58
7	2.19696	6986.72	-3.19946	Puente Formation	335	20	1376.25	1520.47	3257.06	0	3257.06	3180.13	3180.13
8	2.19696	7308.69	-3.19946	Puente Formation	335	20	1425.45	1574.82	3406.37	0	3406.37	3326.69	3326.69
9	2.19696	7630.67	-3.19946	Puente Formation	335	20	1474.63	1629.16	3555.67	0	3555.67	3473.24	3473.24
10	2.19696	7952.64	-3.19946	Puente Formation	335	20	1523.82	1683.5	3704.97	0	3704.97	3619.79	3619.79
11	2.19696	8274.62	-3.19946	Puente Formation	335	20	1573	1737.84	3854.27	0	3854.27	3766.34	3766.34
12	2.19696	8596.59	-3.19946	Puente Formation	335	20	1622.19	1792.18	4003.58	0	4003.58	3912.9	3912.9
13	2.19696	8918.57	-3.19946	Puente Formation	335	20	1671.38	1846.52	4152.88	0	4152.88	4059.45	4059.45
14	2.19696	9240.54	-3.19946	Puente Formation	335	20	1720.57	1900.87	4302.18	0	4302.18	4206	4206
15	2.19696	9562.51	-3.19946	Puente Formation	335	20	1769.76	1955.21	4451.48	0	4451.48	4352.55	4352.55
16	2.19696	9884.49	-3.19946	Puente Formation	335	20	1818.94	2009.55	4600.78	0	4600.78	4499.1	4499.1
17	2.19696	10206.5	-3.19946	Puente Formation	335	20	1868.13	2063.89	4750.07	0	4750.07	4645.64	4645.64
18	2.19696	10528.4	-3.19946	Puente Formation	335	20	1917.31	2118.23	4899.41	0	4899.41	4792.23	4792.23
19	2.19696	10850.4	-3.19946	Puente Formation	335	20	1966.5	2172.57	5048.7	0	5048.7	4938.77	4938.77
20	2.19696	11172.4	-3.19946	Puente Formation	335	20	2015.7	2226.92	5197.99	0	5197.99	5085.32	5085.32
21	2.20899	11335.2	35.2097	Puente Formation	530	25	2038.72	2252.36	3693.6	0	3693.6	5132.28	5132.28
22	2.20899	11214.8	35.2097	Puente Formation	530	25	2020.98	2232.76	3651.59	0	3651.59	5077.75	5077.75
23	2.20899	11094.4	35.2097	Puente Formation	530	25	2003.25	2213.17	3609.58	0	3609.58	5023.22	5023.22
24	2.20899	10973.9	35.2097	Puente Formation	530	25	1985.52	2193.58	3567.56	0	3567.56	4968.69	4968.69
25	2.20899	10853.5	35.2097	Puente Formation	530	25	1967.79	2173.99	3525.55	0	3525.55	4914.17	4914.17
26	2.20899	10733.1	35.2097	Puente Formation	530	25	1950.05	2154.4	3483.53	0	3483.53	4859.64	4859.64
27	2.20899	10562	35.2097	Puente Formation	530	25	1924.86	2126.57	3423.86	0	3423.86	4782.18	4782.18
28	2.20899	10316.7	35.2097	Puente Formation	530	25	1888.75	2086.67	3338.29	0	3338.29	4671.14	4671.14
29	2.20899	10070.8	35.2097	Puente Formation	530	25	1852.54	2046.67	3252.51	0	3252.51	4559.8	4559.8
30	2.20899	9858.3	35.2097	Puente Formation	530	25	1821.25	2012.1	3178.37	0	3178.37	4463.58	4463.58
31	2.20899	9733.27	35.2097	Puente Formation	530	25	1802.84	1991.76	3134.75	0	3134.75	4406.97	4406.97
32	2.20899	9551.06	35.2097	Puente Formation	530	25	1776.01	1962.12	3071.19	0	3071.19	4324.47	4324.47

33	2.20899	9283.86	35.2097	Puente Formation	530	25	1736.66	1918.65	2977.97	0	2977.97	4203.5	4203.5
34	2.20899	8928.89	35.2097	Puente Formation	530	25	1684.4	1860.91	2854.14	0	2854.14	4042.78	4042.78
35	2.20899	8515.67	35.2097	Puente Formation	530	25	1623.56	1793.69	2709.99	0	2709.99	3855.69	3855.69
36	2.20899	8102.46	35.2097	Puente Formation	530	25	1562.71	1726.47	2565.84	0	2565.84	3668.61	3668.61
37	2.20899	7689.25	35.2097	Puente Formation	530	25	1501.87	1659.25	2421.69	0	2421.69	3481.52	3481.52
38	2.20899	7276.03	35.2097	Puente Formation	530	25	1441.02	1592.03	2277.54	0	2277.54	3294.43	3294.43
39	2.20899	6862.82	35.2097	Puente Formation	530	25	1380.19	1524.82	2133.39	0	2133.39	3107.35	3107.35
40	2.28275	6565.8	45	Puente Formation	530	25	1191.24	1316.08	1685.74	0	1685.74	2876.99	2876.99
41	2.28275	5940.48	45	Puente Formation	530	25	1109.93	1226.24	1493.08	0	1493.08	2603.01	2603.01
42	2.28275	5315.17	45	Puente Formation	530	25	1028.61	1136.4	1300.42	0	1300.42	2329.03	2329.03
43	2.28275	4689.86	45	Puente Formation	530	25	947.29	1046.56	1107.76	0	1107.76	2055.05	2055.05
44	2.28275	4064.54	45	Puente Formation	530	25	865.972	956.717	915.099	0	915.099	1781.07	1781.07
45	2.28275	3439.23	45	Puente Formation	530	25	784.654	866.878	722.437	0	722.437	1507.09	1507.09
46	2.28275	2813.91	45	Puente Formation	530	25	703.336	777.039	529.775	0	529.775	1233.11	1233.11
47	2.28275	2188.6	45	Puente Formation	530	25	622.018	687.199	337.116	0	337.116	959.134	959.134
48	2.28275	1563.29	45	Puente Formation	530	25	540.7	597.36	144.453	0	144.453	685.153	685.153
49	2.28275	937.971	45	Puente Formation	530	25	459.382	507.52	-48.2081	0	-48.2081	411.174	411.174
50	2.28275	312.657	45	Puente Formation	530	25	378.064	417.681	-240.869	0	-240.869	137.194	137.194

Global Minimum Query (janbu simplified) - Safety Factor: 1.01044

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	2.3911	3804.82	-45	Puente Formation	530	25	2503.22	2529.35	4287.63	0	4287.63	1784.41	1784.41
2	2.3911	4833.94	-45	Puente Formation	530	25	2706.43	2734.69	4727.96	0	4727.96	2021.53	2021.53
3	2.3911	5863.06	-45	Puente Formation	530	25	3075.26	3107.37	5527.19	0	5527.19	2451.93	2451.93
4	2.19696	6020.8	-3.19946	Puente Formation	335	20	1345.8	1359.85	2815.74	0	2815.74	2740.51	2740.51
5	2.19696	6342.77	-3.19946	Puente Formation	335	20	1399.67	1414.28	2965.31	0	2965.31	2887.07	2887.07
6	2.19696	6664.75	-3.19946	Puente Formation	335	20	1453.54	1468.72	3114.87	0	3114.87	3033.62	3033.62
7	2.19696	6986.72	-3.19946	Puente Formation	335	20	1507.42	1523.16	3264.44	0	3264.44	3180.17	3180.17
8	2.19696	7308.69	-3.19946	Puente Formation	335	20	1561.3	1577.6	3414.01	0	3414.01	3326.73	3326.73
9	2.19696	7630.67	-3.19946	Puente Formation	335	20	1615.17	1632.03	3563.57	0	3563.57	3473.28	3473.28
10	2.19696	7952.64	-3.19946	Puente Formation	335	20	1669.05	1686.47	3713.14	0	3713.14	3619.84	3619.84
11	2.19696	8274.62	-3.19946	Puente Formation	335	20	1722.92	1740.91	3862.7	0	3862.7	3766.39	3766.39
12	2.19696	8596.59	-3.19946	Puente Formation	335	20	1776.8	1795.35	4012.27	0	4012.27	3912.95	3912.95
13	2.19696	8918.57	-3.19946	Puente Formation	335	20	1830.67	1849.78	4161.83	0	4161.83	4059.5	4059.5
14	2.19696	9240.54	-3.19946	Puente Formation	335	20	1884.55	1904.22	4311.4	0	4311.4	4206.06	4206.06
15	2.19696	9562.51	-3.19946	Puente Formation	335	20	1938.42	1958.66	4460.97	0	4460.97	4352.61	4352.61
16	2.19696	9884.49	-3.19946	Puente Formation	335	20	1992.3	2013.1	4610.55	0	4610.55	4499.18	4499.18
17	2.19696	10206.5	-3.19946	Puente Formation	335	20	2046.17	2067.53	4760.11	0	4760.11	4645.74	4645.74
18	2.19696	10528.4	-3.19946	Puente Formation	335	20	2100.05	2121.97	4909.68	0	4909.68	4792.29	4792.29
19	2.19696	10850.4	-3.19946	Puente Formation	335	20	2153.92	2176.41	5059.24	0	5059.24	4938.84	4938.84
20	2.19696	11172.4	-3.19946	Puente Formation	335	20	2207.8	2230.85	5208.81	0	5208.81	5085.39	5085.39
21	2.20899	11335.2	35.2097	Puente Formation	530	25	2182.04	2204.82	3591.65	0	3591.65	5131.46	5131.46
22	2.20899	11214.8	35.2097	Puente Formation	530	25	2163.06	2185.64	3550.53	0	3550.53	5076.94	5076.94
23	2.20899	11094.4	35.2097	Puente Formation	530	25	2144.08	2166.46	3509.4	0	3509.4	5022.42	5022.42
24	2.20899	10973.9	35.2097	Puente Formation	530	25	2125.09	2147.28	3468.27	0	3468.27	4967.9	4967.9
25	2.20899	10853.5	35.2097	Puente Formation	530	25	2106.11	2128.1	3427.14	0	3427.14	4913.38	4913.38
26	2.20899	10733.1	35.2097	Puente Formation	530	25	2087.14	2108.93	3386.02	0	3386.02	4858.86	4858.86
27	2.20899	10562	35.2097	Puente Formation	530	25	2060.18	2081.69	3327.6	0	3327.6	4781.42	4781.42
28	2.20899	10316.7	35.2097	Puente Formation	530	25	2021.53	2042.63	3243.84	0	3243.84	4670.38	4670.38
29	2.20899	10070.8	35.2097	Puente Formation	530	25	1982.77	2003.47	3159.87	0	3159.87	4559.06	4559.06
30	2.20899	9858.3	35.2097	Puente Formation	530	25	1949.28	1969.63	3087.29	0	3087.29	4462.85	4462.85
31	2.20899	9733.27	35.2097	Puente Formation	530	25	1929.58	1949.72	3044.6	0	3044.6	4406.25	4406.25
32	2.20899	9551.06	35.2097	Puente Formation	530	25	1900.86	1920.7	2982.38	0	2982.38	4323.76	4323.76
33	2.20899	9283.86	35.2097	Puente Formation	530	25	1858.75	1878.16	2891.13	0	2891.13	4202.81	4202.81

34	2.20899	8928.89	35.2097	Puente Formation	530	25	1802.81	1821.63	2769.91	0	2769.91	4042.11	4042.11
35	2.20899	8515.67	35.2097	Puente Formation	530	25	1737.69	1755.83	2628.8	0	2628.8	3855.05	3855.05
36	2.20899	8102.46	35.2097	Puente Formation	530	25	1672.57	1690.03	2487.7	0	2487.7	3667.99	3667.99
37	2.20899	7689.25	35.2097	Puente Formation	530	25	1607.45	1624.23	2346.59	0	2346.59	3480.92	3480.92
38	2.20899	7276.03	35.2097	Puente Formation	530	25	1542.33	1558.43	2205.48	0	2205.48	3293.86	3293.86
39	2.20899	6862.82	35.2097	Puente Formation	530	25	1477.21	1492.63	2064.37	0	2064.37	3106.8	3106.8
40	2.28275	6565.8	45	Puente Formation	530	25	1267.14	1280.37	1609.17	0	1609.17	2876.31	2876.31
41	2.28275	5940.48	45	Puente Formation	530	25	1180.64	1192.97	1421.74	0	1421.74	2602.38	2602.38
42	2.28275	5315.17	45	Puente Formation	530	25	1094.14	1105.57	1234.3	0	1234.3	2328.45	2328.45
43	2.28275	4689.86	45	Puente Formation	530	25	1007.64	1018.16	1046.87	0	1046.87	2054.51	2054.51
44	2.28275	4064.54	45	Puente Formation	530	25	921.145	930.762	859.435	0	859.435	1780.58	1780.58
45	2.28275	3439.23	45	Puente Formation	530	25	834.645	843.359	672.001	0	672.001	1506.65	1506.65
46	2.28275	2813.91	45	Puente Formation	530	25	748.146	755.957	484.568	0	484.568	1232.71	1232.71
47	2.28275	2188.6	45	Puente Formation	530	25	661.647	668.555	297.133	0	297.133	958.78	958.78
48	2.28275	1563.29	45	Puente Formation	530	25	575.149	581.153	109.698	0	109.698	684.847	684.847
49	2.28275	937.971	45	Puente Formation	530	25	488.65	493.751	-77.736	0	-77.736	410.914	410.914
50	2.28275	312.657	45	Puente Formation	530	25	402.151	406.349	-265.17	0	-265.17	136.98	136.98

Block - Curved Static

Global Minimum Query (bishop simplified) - Safety Factor: 2.15144

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.75495	2305.79	-4.43367	Puente Formation	335	20	419.213	901.912	1557.58	0	1557.58	1525.07	1525.07
2	1.75495	2515.74	-3.35264	Puente Formation	335	20	402.206	865.322	1457.05	0	1457.05	1433.48	1433.48
3	1.75495	2718.69	-2.27281	Puente Formation	335	20	420.609	904.916	1565.83	0	1565.83	1549.14	1549.14
4	1.75495	2914.67	-1.19378	Puente Formation	335	20	438.223	942.811	1669.94	0	1669.94	1660.81	1660.81
5	1.75495	3103.68	-0.115173	Puente Formation	392.514	21.512	506.631	1089.99	1769.54	0	1769.54	1768.52	1768.52
6	1.75495	3285.73	0.963392	Puente Formation	462.62	23.3134	588.074	1265.21	1862.38	0	1862.38	1872.27	1872.27
7	1.75495	3460.83	2.0423	Puente Formation	530	25	668.607	1438.47	1948.22	0	1948.22	1972.06	1972.06
8	1.75495	3628.95	3.12193	Puente Formation	530	25	686.426	1476.8	2030.43	0	2030.43	2067.87	2067.87
9	1.75495	3790.09	4.20267	Puente Formation	530	25	703.243	1512.99	2108.02	0	2108.02	2159.7	2159.7
10	1.75495	3944.21	5.28492	Puente Formation	530	25	719.063	1547.02	2181.02	0	2181.02	2247.53	2247.53
11	1.75495	4091.28	6.36905	Puente Formation	530	25	733.895	1578.93	2249.43	0	2249.43	2331.35	2331.35
12	1.75495	4231.26	7.45549	Puente Formation	530	25	747.732	1608.7	2313.27	0	2313.27	2411.12	2411.12
13	1.75495	4364.1	8.54463	Puente Formation	530	25	760.579	1636.34	2372.56	0	2372.56	2486.84	2486.84
14	1.75495	4489.75	9.63688	Puente Formation	530	25	772.441	1661.86	2427.29	0	2427.29	2558.45	2558.45
15	1.75495	4608.14	10.7327	Puente Formation	530	25	783.313	1685.25	2477.45	0	2477.45	2625.92	2625.92
16	1.75495	4719.19	11.8325	Puente Formation	530	25	793.194	1706.51	2523.04	0	2523.04	2689.22	2689.22
17	1.75495	4822.82	12.9367	Puente Formation	530	25	802.081	1725.63	2564.04	0	2564.04	2748.28	2748.28
18	1.75495	4918.94	14.0459	Puente Formation	530	25	809.969	1742.6	2600.43	0	2600.43	2803.07	2803.07
19	1.75495	5007.43	15.1604	Puente Formation	530	25	816.853	1757.41	2632.18	0	2632.18	2853.51	2853.51
20	1.75495	5088.18	16.2809	Puente Formation	530	25	822.719	1770.03	2659.25	0	2659.25	2899.54	2899.54
21	1.75495	5161.06	17.4078	Puente Formation	530	25	827.567	1780.46	2681.62	0	2681.62	2941.08	2941.08
22	1.75495	5225.94	18.5417	Puente Formation	530	25	831.383	1788.67	2699.22	0	2699.22	2978.07	2978.07
23	1.75495	5282.64	19.6832	Puente Formation	530	25	834.153	1794.63	2712.01	0	2712.01	3010.4	3010.4
24	1.75495	5331.02	20.8328	Puente Formation	530	25	835.868	1798.32	2719.91	0	2719.91	3037.98	3037.98
25	1.75495	5370.86	21.9914	Puente Formation	530	25	836.51	1799.7	2722.88	0	2722.88	3060.7	3060.7
26	1.75495	5401.98	23.1594	Puente Formation	530	25	836.063	1798.74	2720.82	0	2720.82	3078.45	3078.45
27	1.75495	5424.14	24.3378	Puente Formation	530	25	834.506	1795.39	2713.64	0	2713.64	3091.09	3091.09
28	1.75495	5437.1	25.5272	Puente Formation	530	25	831.82	1789.61	2701.25	0	2701.25	3098.49	3098.49
29	1.75495	5440.59	26.7285	Puente Formation	530	25	827.985	1781.36	2683.55	0	2683.55	3100.5	3100.5
30	1.75495	5434.3	27.9427	Puente Formation	530	25	822.97	1770.57	2660.41	0	2660.41	3096.94	3096.94
31	1.75495	5417.92	29.1707	Puente Formation	530	25	816.746	1757.18	2631.71	0	2631.71	3087.62	3087.62
32	1.75495	5391.09	30.4135	Puente Formation	530	25	809.286	1741.13	2597.29	0	2597.29	3072.35	3072.35

33	1.75495	5353.4	31.6725	Puente Formation	530	25	800.552	1722.34	2556.99	0	2556.99	3050.89	3050.89
34	1.75495	5268.62	32.9487	Puente Formation	530	25	786.631	1692.39	2492.75	0	2492.75	3002.6	3002.6
35	1.75495	5128.75	34.2436	Puente Formation	530	25	766.738	1649.59	2400.98	0	2400.98	2922.91	2922.91
36	1.75495	4976.46	35.5588	Puente Formation	530	25	745.547	1604	2303.19	0	2303.19	2836.14	2836.14
37	1.75495	4811.24	36.8959	Puente Formation	530	25	723.013	1555.52	2199.23	0	2199.23	2742	2742
38	1.75495	4669.04	38.257	Puente Formation	530	25	702.953	1512.36	2106.68	0	2106.68	2660.98	2660.98
39	1.75495	4554.94	39.644	Puente Formation	530	25	685.839	1475.54	2027.72	0	2027.72	2595.98	2595.98
40	1.75495	4404.12	41.0594	Puente Formation	530	25	664.851	1430.39	1930.89	0	1930.89	2510.05	2510.05
41	1.75495	4170.82	42.5061	Puente Formation	530	25	635.355	1366.93	1794.8	0	1794.8	2377.12	2377.12
42	1.75495	3907.96	43.987	Puente Formation	530	25	602.958	1297.23	1645.33	0	1645.33	2227.33	2227.33
43	1.75495	3557.95	45.506	Puente Formation	530	25	561.913	1208.92	1455.95	0	1455.95	2027.88	2027.88
44	1.75495	3171.23	47.0671	Puente Formation	530	25	517.538	1113.45	1251.21	0	1251.21	1807.51	1807.51
45	1.75495	2762.44	48.6754	Puente Formation	530	25	471.416	1014.22	1038.42	0	1038.42	1574.56	1574.56
46	1.75495	2329.4	50.337	Puente Formation	530	25	423.442	911.009	817.075	0	817.075	1327.78	1327.78
47	1.75495	1869.51	52.0589	Puente Formation	530	25	373.494	803.551	586.633	0	586.633	1065.7	1065.7
48	1.75495	1379.53	53.8501	Puente Formation	530	25	321.441	691.561	346.467	0	346.467	786.467	786.467
49	1.75495	855.468	55.7217	Puente Formation	530	25	267.13	574.714	95.889	0	95.889	487.806	487.806
50	1.75495	292.176	57.688	Puente Formation	530	25	210.394	452.651	-165.876	0	-165.876	166.781	166.781

Global Minimum Query (janbu simplified) - Safety Factor: 1.97186

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.60553	2221	-5.21954	Puente Formation	349.27	20.378	503.004	991.854	1729.89	0	1729.89	1683.94	1683.94
2	1.60553	2400.79	-4.06651	Puente Formation	335	20	451.829	890.943	1527.44	0	1527.44	1495.31	1495.31
3	1.60553	2574.32	-2.91513	Puente Formation	335	20	470.271	927.308	1627.35	0	1627.35	1603.4	1603.4
4	1.60553	2741.63	-1.76493	Puente Formation	335	20	487.86	961.991	1722.64	0	1722.64	1707.61	1707.61
5	1.60553	2902.72	-0.615445	Puente Formation	359.996	20.6609	529.397	1043.9	1813.64	0	1813.64	1807.95	1807.95
6	1.60553	3057.6	0.533796	Puente Formation	434.697	22.6016	621.282	1225.08	1898.63	0	1898.63	1904.42	1904.42
7	1.60553	3206.28	1.68325	Puente Formation	509.411	24.4894	714.803	1409.49	1976.02	0	1976.02	1997.02	1997.02
8	1.60553	3348.75	2.83339	Puente Formation	530	25	753.209	1485.22	2048.48	0	2048.48	2085.76	2085.76
9	1.60553	3484.98	3.98467	Puente Formation	530	25	769.417	1517.18	2117.02	0	2117.02	2170.62	2170.62
10	1.60553	3614.97	5.13756	Puente Formation	530	25	784.559	1547.04	2181.04	0	2181.04	2251.57	2251.57
11	1.60553	3738.67	6.29254	Puente Formation	530	25	798.632	1574.79	2240.56	0	2240.56	2328.63	2328.63
12	1.60553	3856.06	7.4501	Puente Formation	530	25	811.65	1600.46	2295.61	0	2295.61	2401.74	2401.74
13	1.60553	3967.08	8.61073	Puente Formation	530	25	823.608	1624.04	2346.17	0	2346.17	2470.89	2470.89
14	1.60553	4071.67	9.77493	Puente Formation	530	25	834.512	1645.54	2392.28	0	2392.28	2536.05	2536.05
15	1.60553	4169.79	10.9432	Puente Formation	530	25	844.35	1664.94	2433.9	0	2433.9	2597.16	2597.16
16	1.60553	4261.34	12.1161	Puente Formation	530	25	853.134	1682.26	2471.04	0	2471.04	2654.18	2654.18
17	1.60553	4346.26	13.2942	Puente Formation	530	25	860.852	1697.48	2503.67	0	2503.67	2707.07	2707.07
18	1.60553	4424.45	14.4781	Puente Formation	530	25	867.501	1710.59	2531.78	0	2531.78	2755.77	2755.77
19	1.60553	4495.79	15.6683	Puente Formation	530	25	873.069	1721.57	2555.32	0	2555.32	2800.21	2800.21
20	1.60553	4560.19	16.8655	Puente Formation	530	25	877.552	1730.41	2574.28	0	2574.28	2840.32	2840.32
21	1.60553	4617.5	18.0703	Puente Formation	530	25	880.935	1737.08	2588.59	0	2588.59	2876.02	2876.02
22	1.60553	4667.59	19.2834	Puente Formation	530	25	883.212	1741.57	2598.21	0	2598.21	2907.22	2907.22
23	1.60553	4710.29	20.5057	Puente Formation	530	25	884.358	1743.83	2603.08	0	2603.08	2933.82	2933.82
24	1.60553	4745.45	21.7377	Puente Formation	530	25	884.368	1743.85	2603.12	0	2603.12	2955.72	2955.72
25	1.60553	4772.86	22.9804	Puente Formation	530	25	883.217	1741.58	2598.25	0	2598.25	2972.8	2972.8
26	1.60553	4792.31	24.2347	Puente Formation	530	25	880.889	1736.99	2588.39	0	2588.39	2984.92	2984.92
27	1.60553	4803.58	25.5014	Puente Formation	530	25	877.349	1730.01	2573.44	0	2573.44	2991.94	2991.94
28	1.60553	4806.4	26.7816	Puente Formation	530	25	872.582	1720.61	2553.28	0	2553.28	2993.7	2993.7
29	1.60553	4800.5	28.0765	Puente Formation	530	25	866.557	1708.73	2527.78	0	2527.78	2990.03	2990.03
30	1.60553	4785.56	29.3872	Puente Formation	530	25	859.234	1694.29	2496.82	0	2496.82	2980.72	2980.72
31	1.60553	4761.23	30.715	Puente Formation	530	25	850.583	1677.23	2460.23	0	2460.23	2965.57	2965.57
32	1.60553	4727.13	32.0614	Puente Formation	530	25	840.557	1657.46	2417.85	0	2417.85	2944.34	2944.34
33	1.60553	4682.83	33.4278	Puente Formation	530	25	829.116	1634.9	2369.47	0	2369.47	2916.75	2916.75

34	1.60553	4627.85	34.8162	Puente Formation	530	25	816.209	1609.45	2314.88	0	2314.88	2882.5	2882.5
35	1.60553	4561.64	36.2284	Puente Formation	530	25	801.771	1580.98	2253.84	0	2253.84	2841.26	2841.26
36	1.60553	4483.59	37.6666	Puente Formation	530	25	785.751	1549.39	2186.09	0	2186.09	2792.66	2792.66
37	1.60553	4367.65	39.1333	Puente Formation	530	25	764.934	1508.34	2098.06	0	2098.06	2720.44	2720.44
38	1.60553	4198	40.6312	Puente Formation	530	25	737.483	1454.21	1981.98	0	1981.98	2614.78	2614.78
39	1.60553	4013.61	42.1635	Puente Formation	530	25	708.287	1396.64	1858.52	0	1858.52	2499.93	2499.93
40	1.60553	3813.95	43.7339	Puente Formation	530	25	677.315	1335.57	1727.55	0	1727.55	2375.58	2375.58
41	1.60553	3606.6	45.3467	Puente Formation	530	25	645.51	1272.86	1593.06	0	1593.06	2246.43	2246.43
42	1.60553	3431.02	47.0069	Puente Formation	530	25	617.521	1217.66	1474.7	0	1474.7	2137.07	2137.07
43	1.60553	3243.59	48.7205	Puente Formation	530	25	588.125	1159.7	1350.4	0	1350.4	2020.33	2020.33
44	1.60553	2994.02	50.4947	Puente Formation	530	25	551.586	1087.65	1195.88	0	1195.88	1864.89	1864.89
45	1.60553	2683.37	52.3384	Puente Formation	530	25	508.297	1002.29	1012.83	0	1012.83	1671.4	1671.4
46	1.60553	2334.42	54.2627	Puente Formation	530	25	461.1	909.224	813.25	0	813.25	1454.06	1454.06
47	1.60553	1896.19	56.2816	Puente Formation	530	25	404.691	797.994	574.714	0	574.714	1181.1	1181.1
48	1.60553	1412.9	58.4138	Puente Formation	530	25	344.435	679.177	319.911	0	319.911	880.084	880.084
49	1.60553	885.931	60.6845	Puente Formation	530	25	280.962	554.017	51.5045	0	51.5045	551.855	551.855
50	1.60553	305.249	63.1295	Puente Formation	530	25	213.914	421.809	-232.016	0	-232.016	190.17	190.17

Block - Curved PStatic

Global Minimum Query (bishop simplified) - Safety Factor: 1.02078

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.85398	2945.02	7.13498	Puente Formation	530	25	997.384	1018.11	1046.76	0	1046.76	1171.61	1171.61
2	1.85398	3097.04	7.84217	Puente Formation	530	25	1206.19	1231.25	1503.84	0	1503.84	1669.97	1669.97
3	1.85398	3243.86	8.55056	Puente Formation	530	25	1233.51	1259.14	1563.64	0	1563.64	1749.1	1749.1
4	1.85398	3385.46	9.26027	Puente Formation	530	25	1259.3	1285.46	1620.1	0	1620.1	1825.42	1825.42
5	1.85398	3521.81	9.97142	Puente Formation	530	25	1283.57	1310.24	1673.23	0	1673.23	1898.9	1898.9
6	1.85398	3652.88	10.6841	Puente Formation	530	25	1306.34	1333.48	1723.07	0	1723.07	1969.53	1969.53
7	1.85398	3778.62	11.3985	Puente Formation	530	25	1327.61	1355.19	1769.63	0	1769.63	2037.29	2037.29
8	1.85398	3899.01	12.1147	Puente Formation	530	25	1347.39	1375.39	1812.94	0	1812.94	2102.16	2102.16
9	1.85398	4014	12.8328	Puente Formation	530	25	1365.7	1394.08	1853.01	0	1853.01	2164.12	2164.12
10	1.85398	4123.54	13.5529	Puente Formation	530	25	1382.53	1411.26	1889.86	0	1889.86	2223.13	2223.13
11	1.85398	4227.59	14.2753	Puente Formation	530	25	1397.9	1426.95	1923.5	0	1923.5	2279.18	2279.18
12	1.85398	4326.09	15	Puente Formation	530	25	1411.8	1441.14	1953.95	0	1953.95	2332.24	2332.24
13	1.85398	4418.98	15.7271	Puente Formation	530	25	1424.26	1453.85	1981.21	0	1981.21	2382.28	2382.28
14	1.85398	4506.22	16.4569	Puente Formation	530	25	1435.26	1465.09	2005.3	0	2005.3	2429.26	2429.26
15	1.85398	4587.74	17.1894	Puente Formation	530	25	1444.81	1474.84	2026.21	0	2026.21	2473.16	2473.16
16	1.85398	4663.46	17.9248	Puente Formation	530	25	1452.92	1483.11	2043.96	0	2043.96	2513.94	2513.94
17	1.85398	4733.33	18.6633	Puente Formation	530	25	1459.59	1489.92	2058.55	0	2058.55	2551.55	2551.55
18	1.85398	4797.26	19.405	Puente Formation	530	25	1464.81	1495.25	2069.98	0	2069.98	2585.96	2585.96
19	1.85398	4855.17	20.1501	Puente Formation	530	25	1468.58	1499.1	2078.24	0	2078.24	2617.13	2617.13
20	1.85398	4906.98	20.8988	Puente Formation	530	25	1470.92	1501.48	2083.35	0	2083.35	2645	2645
21	1.85398	4952.6	21.6512	Puente Formation	530	25	1471.8	1502.38	2085.29	0	2085.29	2669.54	2669.54
22	1.85398	4991.93	22.4076	Puente Formation	530	25	1471.24	1501.81	2084.06	0	2084.06	2690.69	2690.69
23	1.85398	5024.87	23.1681	Puente Formation	530	25	1469.22	1499.75	2079.64	0	2079.64	2708.38	2708.38
24	1.85398	5051.32	23.933	Puente Formation	530	25	1465.75	1496.21	2072.04	0	2072.04	2722.58	2722.58
25	1.85398	5071.15	24.7024	Puente Formation	530	25	1460.82	1491.17	2061.24	0	2061.24	2733.21	2733.21
26	1.85398	5084.25	25.4766	Puente Formation	530	25	1454.41	1484.64	2047.22	0	2047.22	2740.22	2740.22
27	1.85398	5090.49	26.2559	Puente Formation	530	25	1446.54	1476.6	2029.98	0	2029.98	2743.52	2743.52
28	1.85398	5089.73	27.0404	Puente Formation	530	25	1437.18	1467.04	2009.49	0	2009.49	2743.04	2743.04
29	1.85398	5081.83	27.8304	Puente Formation	530	25	1426.33	1455.97	1985.74	0	1985.74	2738.72	2738.72
30	1.85398	5066.62	28.6262	Puente Formation	530	25	1413.97	1443.36	1958.7	0	1958.7	2730.46	2730.46
31	1.85398	5043.95	29.4281	Puente Formation	530	25	1400.11	1429.2	1928.35	0	1928.35	2718.18	2718.18
32	1.85398	4990.98	30.2364	Puente Formation	530	25	1380.32	1409	1885.03	0	1885.03	2689.57	2689.57

33	1.85398	4868.02	31.0514	Puente Formation	530	25	1347.05	1375.04	1812.19	0	1812.19	2623.22	2623.22
34	1.85398	4733.46	31.8734	Puente Formation	530	25	1311.77	1339.03	1734.97	0	1734.97	2550.63	2550.63
35	1.85398	4590.66	32.7028	Puente Formation	530	25	1275.17	1301.67	1654.85	0	1654.85	2473.59	2473.59
36	1.85398	4478.46	33.54	Puente Formation	530	25	1244.63	1270.5	1588	0	1588	2413.05	2413.05
37	1.85398	4406.69	34.3854	Puente Formation	530	25	1221.86	1247.25	1538.14	0	1538.14	2374.31	2374.31
38	1.85398	4294.5	35.2395	Puente Formation	530	25	1191.62	1216.38	1471.95	0	1471.95	2313.78	2313.78
39	1.85398	4103.95	36.1026	Puente Formation	530	25	1147.09	1170.92	1374.47	0	1374.47	2211.02	2211.02
40	1.85398	3881.24	36.9753	Puente Formation	530	25	1097.07	1119.86	1264.96	0	1264.96	2090.92	2090.92
41	1.85398	3572.9	37.8582	Puente Formation	530	25	1031.99	1053.44	1122.51	0	1122.51	1924.68	1924.68
42	1.85398	3247.06	38.7517	Puente Formation	530	25	964.538	984.581	974.851	0	974.851	1749.02	1749.02
43	1.85398	2910.58	39.6566	Puente Formation	530	25	896.027	914.646	824.876	0	824.876	1567.63	1567.63
44	1.85398	2563.02	40.5735	Puente Formation	530	25	826.453	843.627	672.577	0	672.577	1380.27	1380.27
45	1.85398	2203.94	41.5031	Puente Formation	530	25	755.816	771.522	517.944	0	517.944	1186.71	1186.71
46	1.85398	1832.84	42.4463	Puente Formation	530	25	684.111	698.327	360.979	0	360.979	986.673	986.673
47	1.85398	1449.16	43.4039	Puente Formation	530	25	611.34	624.043	201.677	0	201.677	779.872	779.872
48	1.85398	1052.31	44.377	Puente Formation	530	25	537.502	548.671	40.0409	0	40.0409	565.979	565.979
49	1.85398	641.624	45.3664	Puente Formation	530	25	462.603	472.216	-123.919	0	-123.919	344.639	344.639
50	1.85398	216.367	46.3735	Puente Formation	530	25	386.648	394.683	-290.188	0	-290.188	115.457	115.457

Global Minimum Query (janbu simplified) - Safety Factor: 0.931676

Slice Number	Width [ft]	Weight [lbs]	Angle of Slice Base [deg]	Base Material	Base Cohesion [psf]	Base Friction Angle [deg]	Shear Stress [psf]	Shear Strength [psf]	Base Normal Stress [psf]	Pore Pressure [psf]	Effective Normal Stress [psf]	Base Vertical Stress [psf]	Effective Vertical Stress [psf]
1	1.71337	2851.04	-4.11226	Puente Formation	335	20	1158.92	1079.74	2046.14	0	2046.14	1962.82	1962.82
2	1.71337	3049.08	-2.99982	Puente Formation	335	20	1076.82	1003.25	1836.01	0	1836.01	1779.57	1779.57
3	1.71337	3240.26	-1.88851	Puente Formation	335	20	1112.7	1036.68	1927.84	0	1927.84	1891.15	1891.15
4	1.71337	3424.59	-0.77791	Puente Formation	349.436	20.3823	1178.53	1098.01	2014.75	0	2014.75	1998.74	1998.74
5	1.71337	3602.1	0.332397	Puente Formation	421.606	22.2653	1372.89	1279.09	2094.38	0	2094.38	2102.35	2102.35
6	1.71337	3772.78	1.44283	Puente Formation	493.784	24.099	1568.2	1461.06	2162.46	0	2162.46	2201.96	2201.96
7	1.71337	3936.63	2.5538	Puente Formation	530	25	1681.29	1566.42	2222.6	0	2222.6	2297.59	2297.59
8	1.71337	4093.63	3.66574	Puente Formation	530	25	1709.85	1593.03	2279.68	0	2279.68	2389.22	2389.22
9	1.71337	4243.76	4.77906	Puente Formation	530	25	1735.9	1617.3	2331.72	0	2331.72	2476.85	2476.85
10	1.71337	4386.99	5.89419	Puente Formation	530	25	1759.46	1639.25	2378.8	0	2378.8	2560.44	2560.44
11	1.71337	4523.28	7.01157	Puente Formation	530	25	1780.59	1658.93	2420.99	0	2420.99	2639.99	2639.99
12	1.71337	4652.58	8.13164	Puente Formation	530	25	1799.3	1676.36	2458.37	0	2458.37	2715.46	2715.46
13	1.71337	4774.86	9.25485	Puente Formation	530	25	1815.61	1691.56	2490.97	0	2490.97	2786.82	2786.82
14	1.71337	4890.02	10.3817	Puente Formation	530	25	1829.56	1704.56	2518.86	0	2518.86	2854.04	2854.04
15	1.71337	4998.02	11.5125	Puente Formation	530	25	1841.18	1715.38	2542.06	0	2542.06	2917.07	2917.07
16	1.71337	5098.75	12.648	Puente Formation	530	25	1850.46	1724.03	2560.61	0	2560.61	2975.86	2975.86
17	1.71337	5192.14	13.7885	Puente Formation	530	25	1857.44	1730.53	2574.53	0	2574.53	3030.37	3030.37
18	1.71337	5278.07	14.9346	Puente Formation	530	25	1862.1	1734.87	2583.85	0	2583.85	3080.52	3080.52
19	1.71337	5356.43	16.0869	Puente Formation	530	25	1864.46	1737.07	2588.57	0	2588.57	3126.26	3126.26
20	1.71337	5427.1	17.2459	Puente Formation	530	25	1864.52	1737.13	2588.7	0	2588.7	3167.5	3167.5
21	1.71337	5489.92	18.4123	Puente Formation	530	25	1862.29	1735.05	2584.23	0	2584.23	3204.17	3204.17
22	1.71337	5544.75	19.5865	Puente Formation	530	25	1857.74	1730.81	2575.15	0	2575.15	3236.17	3236.17
23	1.71337	5591.41	20.7695	Puente Formation	530	25	1850.88	1724.42	2561.45	0	2561.45	3263.41	3263.41
24	1.71337	5629.72	21.9617	Puente Formation	530	25	1841.7	1715.87	2543.1	0	2543.1	3285.77	3285.77
25	1.71337	5659.47	23.1641	Puente Formation	530	25	1830.17	1705.13	2520.08	0	2520.08	3303.13	3303.13
26	1.71337	5680.43	24.3774	Puente Formation	530	25	1816.29	1692.19	2492.33	0	2492.33	3315.36	3315.36
27	1.71337	5692.35	25.6024	Puente Formation	530	25	1800.01	1677.03	2459.81	0	2459.81	3322.33	3322.33
28	1.71337	5694.96	26.8401	Puente Formation	530	25	1781.33	1659.62	2422.47	0	2422.47	3323.85	3323.85
29	1.71337	5687.96	28.0915	Puente Formation	530	25	1760.19	1639.93	2380.24	0	2380.24	3319.76	3319.76
30	1.71337	5671	29.3577	Puente Formation	530	25	1736.57	1617.92	2333.05	0	2333.05	3309.87	3309.87
31	1.71337	5643.73	30.6398	Puente Formation	530	25	1710.42	1593.56	2280.81	0	2280.81	3293.95	3293.95
32	1.71337	5605.73	31.9392	Puente Formation	530	25	1681.7	1566.8	2223.41	0	2223.41	3271.78	3271.78
33	1.71337	5556.55	33.2572	Puente Formation	530	25	1650.34	1537.58	2160.77	0	2160.77	3243.07	3243.07

34	1.71337	5494.86	34.5954	Puente Formation	530	25	1616.11	1505.69	2092.38	0	2092.38	3207.06	3207.06
35	1.71337	5373.61	35.9556	Puente Formation	530	25	1568.99	1461.79	1998.22	0	1998.22	3136.3	3136.3
36	1.71337	5212.12	37.3396	Puente Formation	530	25	1513.52	1410.11	1887.4	0	1887.4	3042.05	3042.05
37	1.71337	5037.03	38.7496	Puente Formation	530	25	1455.58	1356.13	1771.65	0	1771.65	2939.86	2939.86
38	1.71337	4847.69	40.1881	Puente Formation	530	25	1395.13	1299.81	1650.87	0	1650.87	2829.35	2829.35
39	1.71337	4685.21	41.6578	Puente Formation	530	25	1340.58	1248.99	1541.87	0	1541.87	2734.52	2734.52
40	1.71337	4539.46	43.1618	Puente Formation	530	25	1289.61	1201.5	1440.04	0	1440.04	2649.45	2649.45
41	1.71337	4352.71	44.704	Puente Formation	530	25	1230.73	1146.64	1322.38	0	1322.38	2540.46	2540.46
42	1.71337	4085.45	46.2883	Puente Formation	530	25	1156.72	1077.69	1174.53	0	1174.53	2384.47	2384.47
43	1.71337	3787.37	47.92	Puente Formation	530	25	1077.8	1004.16	1016.84	0	1016.84	2210.5	2210.5
44	1.71337	3401.47	49.605	Puente Formation	530	25	983.824	916.605	829.078	0	829.078	1985.27	1985.27
45	1.71337	2974.21	51.3505	Puente Formation	530	25	884.267	823.85	630.163	0	630.163	1735.9	1735.9
46	1.71337	2518.81	53.1653	Puente Formation	530	25	782.081	728.646	425.999	0	425.999	1470.11	1470.11
47	1.71337	2031.53	55.0606	Puente Formation	530	25	677.183	630.915	216.413	0	216.413	1185.71	1185.71
48	1.71337	1507.66	57.0506	Puente Formation	530	25	569.511	530.599	1.28519	0	1.28519	879.953	879.953
49	1.71337	940.963	59.154	Puente Formation	530	25	459.038	427.675	-219.437	0	-219.437	549.204	549.204
50	1.71337	323.013	61.3963	Puente Formation	530	25	345.82	322.192	-445.644	0	-445.644	188.538	188.538

Interslice Data

◆ Block - Master Scenario

Global Minimum Query (bishop simplified) - Safety Factor: 3.25342

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	207.463	465.231	0	0	0
2	208.803	463.891	724.726	0	0
3	210.143	462.551	1880.88	0	0
4	211.484	461.21	3468.46	0	0
5	212.824	459.87	5487.48	0	0
6	214.164	458.53	7937.92	0	0
7	215.505	457.189	10819.8	0	0
8	216.845	455.849	14133.1	0	0
9	218.185	454.508	17877.8	0	0
10	219.526	453.168	22054	0	0
11	220.866	451.828	26661.6	0	0
12	222.207	450.487	31700.6	0	0
13	223.547	449.147	37171	0	0
14	224.961	449.979	35780.9	0	0
15	226.375	450.81	34399.4	0	0
16	227.789	451.642	33026.7	0	0
17	229.203	452.473	31662.6	0	0
18	230.616	453.305	30307.2	0	0
19	232.03	454.136	28960.4	0	0
20	233.444	454.968	27622.3	0	0
21	234.858	455.799	26292.9	0	0
22	236.272	456.631	24972.2	0	0
23	237.686	457.462	23660.2	0	0
24	239.1	458.294	22356.8	0	0
25	240.514	459.125	21062.1	0	0
26	241.928	459.957	19776.1	0	0
27	243.342	460.788	18499.3	0	0
28	244.756	461.62	17246.3	0	0
29	246.17	462.452	16023.1	0	0
30	247.584	463.283	14829.6	0	0
31	248.997	464.115	13665.9	0	0
32	250.411	464.946	12531	0	0
33	251.825	465.778	11410.2	0	0
34	253.239	466.609	10298	0	0
35	254.653	467.441	9197.14	0	0
36	256.067	468.272	8125.99	0	0
37	257.481	469.104	7088.13	0	0
38	258.895	469.935	6088.49	0	0
39	260.284	471.325	4312.99	0	0
40	261.674	472.715	2711.17	0	0
41	263.064	474.104	1283.04	0	0
42	264.453	475.494	28.5913	0	0
43	265.843	476.883	-1052.17	0	0
44	267.232	478.273	-1959.25	0	0
45	268.622	479.662	-2692.65	0	0
46	270.012	481.052	-3252.36	0	0
47	271.401	482.442	-3638.39	0	0
48	272.791	483.831	-3850.74	0	0
49	274.18	485.221	-3889.4	0	0
50	275.57	486.61	-3754.38	0	0
51	276.96	488	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 3.03372

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	207.463	465.231	0	0	0
2	208.803	463.891	773.409	0	0
3	210.143	462.551	1987.59	0	0
4	211.484	461.21	3642.54	0	0
5	212.824	459.87	5738.27	0	0
6	214.164	458.53	8274.76	0	0
7	215.505	457.189	11252	0	0
8	216.845	455.849	14670.1	0	0
9	218.185	454.508	18528.9	0	0
10	219.526	453.168	22828.4	0	0
11	220.866	451.828	27568.8	0	0
12	222.207	450.487	32749.9	0	0
13	223.547	449.147	38371.8	0	0
14	224.961	449.979	37049.6	0	0
15	226.375	450.81	35735.7	0	0
16	227.789	451.642	34430.3	0	0
17	229.203	452.473	33133.3	0	0
18	230.616	453.305	31844.8	0	0
19	232.03	454.136	30564.6	0	0
20	233.444	454.968	29292.9	0	0
21	234.858	455.799	28029.6	0	0
22	236.272	456.631	26774.7	0	0
23	237.686	457.462	25528.3	0	0
24	239.1	458.294	24290.2	0	0
25	240.514	459.125	23060.6	0	0
26	241.928	459.957	21839.4	0	0
27	243.342	460.788	20627.3	0	0
28	244.756	461.62	19438.1	0	0
29	246.17	462.452	18277.9	0	0
30	247.584	463.283	17146.6	0	0
31	248.997	464.115	16044.1	0	0
32	250.411	464.946	14969.8	0	0
33	251.825	465.778	13908.9	0	0
34	253.239	466.609	12856.5	0	0
35	254.653	467.441	11815.1	0	0
36	256.067	468.272	10802.6	0	0
37	257.481	469.104	9822.34	0	0
38	258.895	469.935	8879.21	0	0
39	260.284	471.325	7174.82	0	0
40	261.674	472.715	5640.43	0	0
41	263.064	474.104	4276.05	0	0
42	264.453	475.494	3081.67	0	0
43	265.843	476.883	2057.28	0	0
44	267.232	478.273	1202.91	0	0
45	268.622	479.662	518.531	0	0
46	270.012	481.052	4.158	0	0
47	271.401	482.442	-340.213	0	0
48	272.791	483.831	-514.581	0	0
49	274.18	485.221	-518.947	0	0
50	275.57	486.61	-353.311	0	0
51	276.96	488	0	0	0

 **Block - Block Static**
Global Minimum Query (bishop simplified) - Safety Factor: 1.97212

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	446.54	0	0	0
2	185.204	448.146	3285.04	0	0
3	186.907	448.116	3840.19	0	0
4	188.61	448.087	4431.83	0	0
5	190.312	448.057	5059.95	0	0
6	192.015	448.027	5724.56	0	0
7	193.718	447.998	6425.66	0	0
8	195.421	447.968	7163.24	0	0
9	197.123	447.938	7937.31	0	0
10	198.826	447.908	8747.87	0	0
11	200.529	447.879	9594.91	0	0
12	202.232	447.849	10478.4	0	0
13	203.934	447.819	11398.5	0	0
14	205.637	447.789	12355	0	0
15	207.34	447.76	13348	0	0
16	209.043	447.73	14377.4	0	0
17	210.745	447.7	15443.4	0	0
18	212.448	447.671	16545.9	0	0
19	214.151	447.641	17684.8	0	0
20	215.854	447.611	18860.2	0	0
21	217.556	447.581	20072.1	0	0
22	219.259	447.552	21320.5	0	0
23	220.962	447.522	22605.4	0	0
24	222.665	447.492	23926.8	0	0
25	224.367	447.463	25284.7	0	0
26	226.064	448.63	23802.6	0	0
27	227.761	449.797	22345.6	0	0
28	229.458	450.964	20913.9	0	0
29	231.155	452.131	19507.3	0	0
30	232.852	453.298	18125.9	0	0
31	234.549	454.465	16769.7	0	0
32	236.246	455.631	15438.7	0	0
33	237.943	456.798	14132.8	0	0
34	239.64	457.965	12852.1	0	0
35	241.337	459.132	11596.6	0	0
36	243.033	460.937	9348	0	0
37	244.83	462.741	7251.77	0	0
38	246.576	464.545	5330.67	0	0
39	248.323	466.349	3584.71	0	0
40	250.069	468.154	2013.84	0	0
41	251.815	469.958	591.056	0	0
42	253.562	471.762	-706.808	0	0
43	255.308	473.566	-1863.32	0	0
44	257.055	475.37	-2838.16	0	0
45	258.801	477.175	-3623.35	0	0
46	260.547	478.979	-4175.03	0	0
47	262.294	480.783	-4484.62	0	0
48	264.04	482.587	-4552.13	0	0
49	265.787	484.392	-4377.56	0	0
50	267.533	486.196	-3960.9	0	0
51	269.28	488	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.87244

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	446.54	0	0	0
2	185.204	448.146	3297.68	0	0
3	186.907	448.116	3881.27	0	0
4	188.61	448.087	4503.12	0	0
5	190.312	448.057	5163.24	0	0
6	192.015	448.027	5861.63	0	0
7	193.718	447.998	6598.29	0	0
8	195.421	447.968	7373.21	0	0
9	197.123	447.938	8186.4	0	0
10	198.826	447.908	9037.86	0	0
11	200.529	447.879	9927.59	0	0
12	202.232	447.849	10855.6	0	0
13	203.934	447.819	11821.9	0	0
14	205.637	447.789	12826.4	0	0
15	207.34	447.76	13869.2	0	0
16	209.043	447.73	14950.3	0	0
17	210.745	447.7	16069.6	0	0
18	212.448	447.671	17227.2	0	0
19	214.151	447.641	18423.1	0	0
20	215.854	447.611	19657.2	0	0
21	217.556	447.581	20929.6	0	0
22	219.259	447.552	22240.3	0	0
23	220.962	447.522	23589.2	0	0
24	222.665	447.492	24976.4	0	0
25	224.367	447.463	26401.9	0	0
26	226.064	448.63	25018.3	0	0
27	227.761	449.797	23659.1	0	0
28	229.458	450.964	22324.1	0	0
29	231.155	452.131	21013.4	0	0
30	232.852	453.298	19726.9	0	0
31	234.549	454.465	18464.8	0	0
32	236.246	455.631	17227	0	0
33	237.943	456.798	16013.5	0	0
34	239.64	457.965	14824.2	0	0
35	241.337	459.132	13659.3	0	0
36	243.033	460.937	11522.4	0	0
37	244.83	462.741	9533.88	0	0
38	246.576	464.545	7715.97	0	0
39	248.323	466.349	6068.64	0	0
40	250.069	468.154	4591.86	0	0
41	251.815	469.958	3259.31	0	0
42	253.562	471.762	2048.44	0	0
43	255.308	473.566	975.256	0	0
44	257.055	475.37	79.0088	0	0
45	258.801	477.175	-632.5	0	0
46	260.547	478.979	-1116.57	0	0
47	262.294	480.783	-1364.85	0	0
48	264.04	482.587	-1377.33	0	0
49	265.787	484.392	-1154.02	0	0
50	267.533	486.196	-694.906	0	0
51	269.28	488	0	0	0

Block - Block Pstatic

Global Minimum Query (bishop simplified) - Safety Factor: 1.10479

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	442.533	0	0	0
2	187.391	440.142	14496.3	0	0
3	189.782	437.751	28753.9	0	0
4	192.173	435.36	45202.7	0	0
5	194.37	435.237	46258.6	0	0
6	196.567	435.114	47334.6	0	0
7	198.764	434.991	48430.6	0	0
8	200.961	434.868	49546.7	0	0
9	203.158	434.746	50682.9	0	0
10	205.355	434.623	51839.2	0	0
11	207.552	434.5	53015.6	0	0
12	209.749	434.377	54212	0	0
13	211.946	434.254	55428.6	0	0
14	214.143	434.132	56665.2	0	0
15	216.34	434.009	57921.9	0	0
16	218.537	433.886	59198.6	0	0
17	220.734	433.763	60495.5	0	0
18	222.931	433.64	61812.4	0	0
19	225.128	433.518	63149.4	0	0
20	227.325	433.395	64506.5	0	0
21	229.522	433.272	65883.7	0	0
22	231.731	434.831	60886.1	0	0
23	233.94	436.39	55954.7	0	0
24	236.149	437.948	51089.3	0	0
25	238.358	439.507	46290	0	0
26	240.567	441.066	41556.8	0	0
27	242.776	442.625	36889.7	0	0
28	244.985	444.184	32316.5	0	0
29	247.194	445.743	27877.8	0	0
30	249.403	447.301	23574.1	0	0
31	251.612	448.86	19387	0	0
32	253.821	450.419	15268.5	0	0
33	256.03	451.978	11250	0	0
34	258.239	453.537	7378.13	0	0
35	260.448	455.096	3701.04	0	0
36	262.656	456.654	250.702	0	0
37	264.865	458.213	-2972.89	0	0
38	267.074	459.772	-5969.74	0	0
39	269.283	461.331	-8739.84	0	0
40	271.492	462.89	-11283.2	0	0
41	273.775	465.172	-14580.4	0	0
42	276.058	467.455	-17416.9	0	0
43	278.341	469.738	-19792.8	0	0
44	280.623	472.021	-21708.1	0	0
45	282.906	474.303	-23162.7	0	0
46	285.189	476.586	-24156.7	0	0
47	287.472	478.869	-24690.1	0	0
48	289.754	481.152	-24762.8	0	0
49	292.037	483.434	-24374.9	0	0
50	294.32	485.717	-23526.4	0	0
51	296.603	488	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.01044

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	442.533	0	0	0
2	187.391	440.142	16275.2	0	0
3	189.782	437.751	32456.1	0	0
4	192.173	435.36	51090.3	0	0
5	194.37	435.237	52405.8	0	0
6	196.567	435.114	53751.7	0	0
7	198.764	434.991	55128.1	0	0
8	200.961	434.868	56535	0	0
9	203.158	434.746	57972.4	0	0
10	205.355	434.623	59440.3	0	0
11	207.552	434.5	60938.6	0	0
12	209.749	434.377	62467.4	0	0
13	211.946	434.254	64026.6	0	0
14	214.143	434.132	65616.4	0	0
15	216.34	434.009	67236.6	0	0
16	218.537	433.886	68887.3	0	0
17	220.734	433.763	70568.4	0	0
18	222.931	433.64	72280	0	0
19	225.128	433.518	74022.2	0	0
20	227.325	433.395	75794.7	0	0
21	229.522	433.272	77597.8	0	0
22	231.731	434.831	73078.3	0	0
23	233.94	436.39	68620.7	0	0
24	236.149	437.948	64225.1	0	0
25	238.358	439.507	59891.4	0	0
26	240.567	441.066	55619.6	0	0
27	242.776	442.625	51409.7	0	0
28	244.985	444.184	47287.9	0	0
29	247.194	445.743	43292.1	0	0
30	249.403	447.301	39422.8	0	0
31	251.612	448.86	35662.7	0	0
32	253.821	450.419	31967	0	0
33	256.03	451.978	28365	0	0
34	258.239	453.537	24900.3	0	0
35	260.448	455.096	21618.2	0	0
36	262.656	456.654	18548.6	0	0
37	264.865	458.213	15691.4	0	0
38	267.074	459.772	13046.7	0	0
39	269.283	461.331	10614.5	0	0
40	271.492	462.89	8394.81	0	0
41	273.775	465.172	5447.22	0	0
42	276.058	467.455	2936.39	0	0
43	278.341	469.738	862.333	0	0
44	280.623	472.021	-774.951	0	0
45	282.906	474.303	-1975.46	0	0
46	285.189	476.586	-2739.2	0	0
47	287.472	478.869	-3066.17	0	0
48	289.754	481.152	-2956.37	0	0
49	292.037	483.434	-2409.8	0	0
50	294.32	485.717	-1426.46	0	0
51	296.603	488	0	0	0

Block - Curved Static

Global Minimum Query (bishop simplified) - Safety Factor: 2.15144

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	443.558	0	0	0
2	186.755	443.422	10043.9	0	0
3	188.51	443.319	10898.9	0	0
4	190.265	443.249	11745.4	0	0
5	192.02	443.213	12574.9	0	0
6	193.775	443.209	13469.5	0	0
7	195.53	443.239	14445.6	0	0
8	197.285	443.301	15496.1	0	0
9	199.04	443.397	16505.3	0	0
10	200.795	443.526	17466.5	0	0
11	202.55	443.688	18373.3	0	0
12	204.304	443.884	19219.4	0	0
13	206.059	444.114	19999.2	0	0
14	207.814	444.377	20707.2	0	0
15	209.569	444.675	21338.3	0	0
16	211.324	445.008	21887.7	0	0
17	213.079	445.376	22350.9	0	0
18	214.834	445.779	22723.6	0	0
19	216.589	446.218	23002.1	0	0
20	218.344	446.693	23182.7	0	0
21	220.099	447.206	23262.3	0	0
22	221.854	447.756	23237.8	0	0
23	223.609	448.345	23106.8	0	0
24	225.364	448.973	22866.8	0	0
25	227.119	449.64	22516.1	0	0
26	228.874	450.349	22053	0	0
27	230.629	451.1	21476.4	0	0
28	232.384	451.894	20785.6	0	0
29	234.139	452.732	19980.2	0	0
30	235.894	453.616	19060.5	0	0
31	237.649	454.546	18026.9	0	0
32	239.404	455.526	16880.9	0	0
33	241.158	456.556	15624.2	0	0
34	242.913	457.639	14259.4	0	0
35	244.668	458.776	12803.4	0	0
36	246.423	459.971	11279.5	0	0
37	248.178	461.226	9697.36	0	0
38	249.933	462.543	8067.69	0	0
39	251.688	463.927	6384.95	0	0
40	253.443	465.381	4639	0	0
41	255.198	466.91	2852.89	0	0
42	256.953	468.518	1080.06	0	0
43	258.708	470.212	-649.848	0	0
44	260.463	471.998	-2265.25	0	0
45	262.218	473.885	-3718.07	0	0
46	263.973	475.881	-4964.07	0	0
47	265.728	477.997	-5951.05	0	0
48	267.483	480.248	-6616.67	0	0
49	269.238	482.65	-6885.36	0	0
50	270.993	485.225	-6663.87	0	0
51	272.748	488	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 1.97186

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	442.947	0	0	0
2	186.606	442.8	11660.2	0	0
3	188.211	442.686	12559.9	0	0
4	189.817	442.604	13447.9	0	0
5	191.422	442.555	14316.3	0	0
6	193.028	442.538	15197.5	0	0
7	194.633	442.553	16166.5	0	0
8	196.239	442.6	17220.8	0	0
9	197.844	442.679	18267.1	0	0
10	199.45	442.791	19265.6	0	0
11	201.055	442.935	20210.2	0	0
12	202.661	443.112	21095.6	0	0
13	204.266	443.322	21916.7	0	0
14	205.872	443.565	22668.4	0	0
15	207.477	443.842	23346.4	0	0
16	209.083	444.153	23946.3	0	0
17	210.689	444.497	24464.2	0	0
18	212.294	444.877	24896.4	0	0
19	213.9	445.291	25239.5	0	0
20	215.505	445.741	25490.3	0	0
21	217.111	446.228	25646.1	0	0
22	218.716	446.752	25704.2	0	0
23	220.322	447.314	25662.6	0	0
24	221.927	447.914	25519.3	0	0
25	223.533	448.554	25272.6	0	0
26	225.138	449.235	24921.5	0	0
27	226.744	449.958	24464.9	0	0
28	228.349	450.724	23902.5	0	0
29	229.955	451.534	23234.2	0	0
30	231.56	452.391	22460.5	0	0
31	233.166	453.295	21582.2	0	0
32	234.772	454.249	20601	0	0
33	236.377	455.254	19518.9	0	0
34	237.983	456.314	18338.8	0	0
35	239.588	457.431	17064.4	0	0
36	241.194	458.607	15700.4	0	0
37	242.799	459.846	14252.3	0	0
38	244.405	461.153	12739.6	0	0
39	246.01	462.53	11193.1	0	0
40	247.616	463.984	9627.93	0	0
41	249.221	465.52	8061.57	0	0
42	250.827	467.145	6508.99	0	0
43	252.432	468.868	4960.68	0	0
44	254.038	470.696	3435.14	0	0
45	255.643	472.644	1991.88	0	0
46	257.249	474.724	700.99	0	0
47	258.855	476.955	-373.358	0	0
48	260.46	479.361	-1106.29	0	0
49	262.066	481.972	-1388.69	0	0
50	263.671	484.831	-1084.91	0	0
51	265.277	488	0	0	0

Block - Curved PStatic

Global Minimum Query (bishop simplified) - Safety Factor: 1.02078

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	441.11	0	0	0
2	186.854	441.342	6942.2	0	0
3	188.708	441.597	7779.28	0	0
4	190.562	441.876	8566.87	0	0
5	192.416	442.179	9301.83	0	0
6	194.27	442.504	9981.26	0	0
7	196.124	442.854	10602.5	0	0
8	197.978	443.228	11163	0	0
9	199.832	443.626	11660.6	0	0
10	201.686	444.048	12093.1	0	0
11	203.54	444.495	12458.8	0	0
12	205.394	444.967	12756	0	0
13	207.248	445.464	12983.2	0	0
14	209.102	445.986	13139.3	0	0
15	210.956	446.533	13223.1	0	0
16	212.81	447.107	13234	0	0
17	214.664	447.707	13171.2	0	0
18	216.518	448.333	13034.5	0	0
19	218.372	448.986	12823.6	0	0
20	220.226	449.666	12538.7	0	0
21	222.08	450.374	12180	0	0
22	223.934	451.11	11748	0	0
23	225.788	451.875	11243.6	0	0
24	227.642	452.668	10667.7	0	0
25	229.496	453.491	10021.6	0	0
26	231.35	454.344	9306.86	0	0
27	233.203	455.227	8525.33	0	0
28	235.057	456.142	7679.11	0	0
29	236.911	457.088	6770.61	0	0
30	238.765	458.067	5802.58	0	0
31	240.619	459.079	4778.08	0	0
32	242.473	460.124	3700.54	0	0
33	244.327	461.205	2583.47	0	0
34	246.181	462.321	1459.25	0	0
35	248.035	463.474	336.592	0	0
36	249.889	464.664	-776.791	0	0
37	251.743	465.893	-1891.69	0	0
38	253.597	467.162	-3025.16	0	0
39	255.451	468.472	-4154.21	0	0
40	257.305	469.824	-5233.68	0	0
41	259.159	471.22	-6239.96	0	0
42	261.013	472.661	-7117.51	0	0
43	262.867	474.149	-7845.96	0	0
44	264.721	475.686	-8407.82	0	0
45	266.575	477.273	-8784.44	0	0
46	268.429	478.914	-8955.83	0	0
47	270.283	480.61	-8900.53	0	0
48	272.137	482.363	-8595.49	0	0
49	273.991	484.177	-8015.81	0	0
50	275.845	486.055	-7134.56	0	0
51	277.699	488	0	0	0

Global Minimum Query (janbu simplified) - Safety Factor: 0.931676

Slice Number	X coordinate [ft]	Y coordinate - Bottom [ft]	Interslice Normal Force [lbs]	Interslice Shear Force [lbs]	Interslice Force Angle [deg]
1	185	440.623	0	0	0
2	186.713	440.5	8737.57	0	0
3	188.427	440.41	9741.18	0	0
4	190.14	440.354	10687.2	0	0
5	191.853	440.331	11623.2	0	0
6	193.567	440.341	12765.9	0	0
7	195.28	440.384	14114.4	0	0
8	196.994	440.46	15526.1	0	0
9	198.707	440.57	16854.5	0	0
10	200.42	440.713	18094.3	0	0
11	202.134	440.89	19240.4	0	0
12	203.847	441.101	20288.3	0	0
13	205.56	441.346	21233.8	0	0
14	207.274	441.625	22073.4	0	0
15	208.987	441.939	22803.7	0	0
16	210.701	442.288	23421.8	0	0
17	212.414	442.672	23925.2	0	0
18	214.127	443.093	24311.6	0	0
19	215.841	443.55	24579.4	0	0
20	217.554	444.044	24727.2	0	0
21	219.267	444.576	24753.9	0	0
22	220.981	445.146	24659	0	0
23	222.694	445.756	24442.2	0	0
24	224.408	446.405	24103.8	0	0
25	226.121	447.096	23644.4	0	0
26	227.834	447.829	23065	0	0
27	229.548	448.606	22367.4	0	0
28	231.261	449.427	21553.4	0	0
29	232.974	450.294	20625.8	0	0
30	234.688	451.208	19587.8	0	0
31	236.401	452.172	18443.1	0	0
32	238.115	453.187	17196.5	0	0
33	239.828	454.255	15853	0	0
34	241.541	455.379	14419	0	0
35	243.255	456.561	12902	0	0
36	244.968	457.803	11333.5	0	0
37	246.681	459.11	9739.58	0	0
38	248.395	460.486	8135.06	0	0
39	250.108	461.933	6536.35	0	0
40	251.822	463.457	4936.83	0	0
41	253.535	465.064	3334.46	0	0
42	255.248	466.76	1764.27	0	0
43	256.962	468.552	292.921	0	0
44	258.675	470.45	-1039.79	0	0
45	260.388	472.463	-2146.05	0	0
46	262.102	474.606	-2962.63	0	0
47	263.815	476.893	-3428.3	0	0
48	265.529	479.345	-3469.21	0	0
49	267.242	481.989	-2994.37	0	0
50	268.955	484.858	-1888.84	0	0
51	270.669	488	0	0	0






Entity Information

◆ Block

Shared Entities

Type	Coordinates (x,y)
External Boundary	0, 425
	0, 370
	306, 370
	306, 488
	258, 488
	254, 487
	250, 485
	243, 483
	185, 454
	185, 439
	170, 439
	170, 409
	75, 409
	75, 426
	67, 426
	50, 424
50, 423	
25, 425	

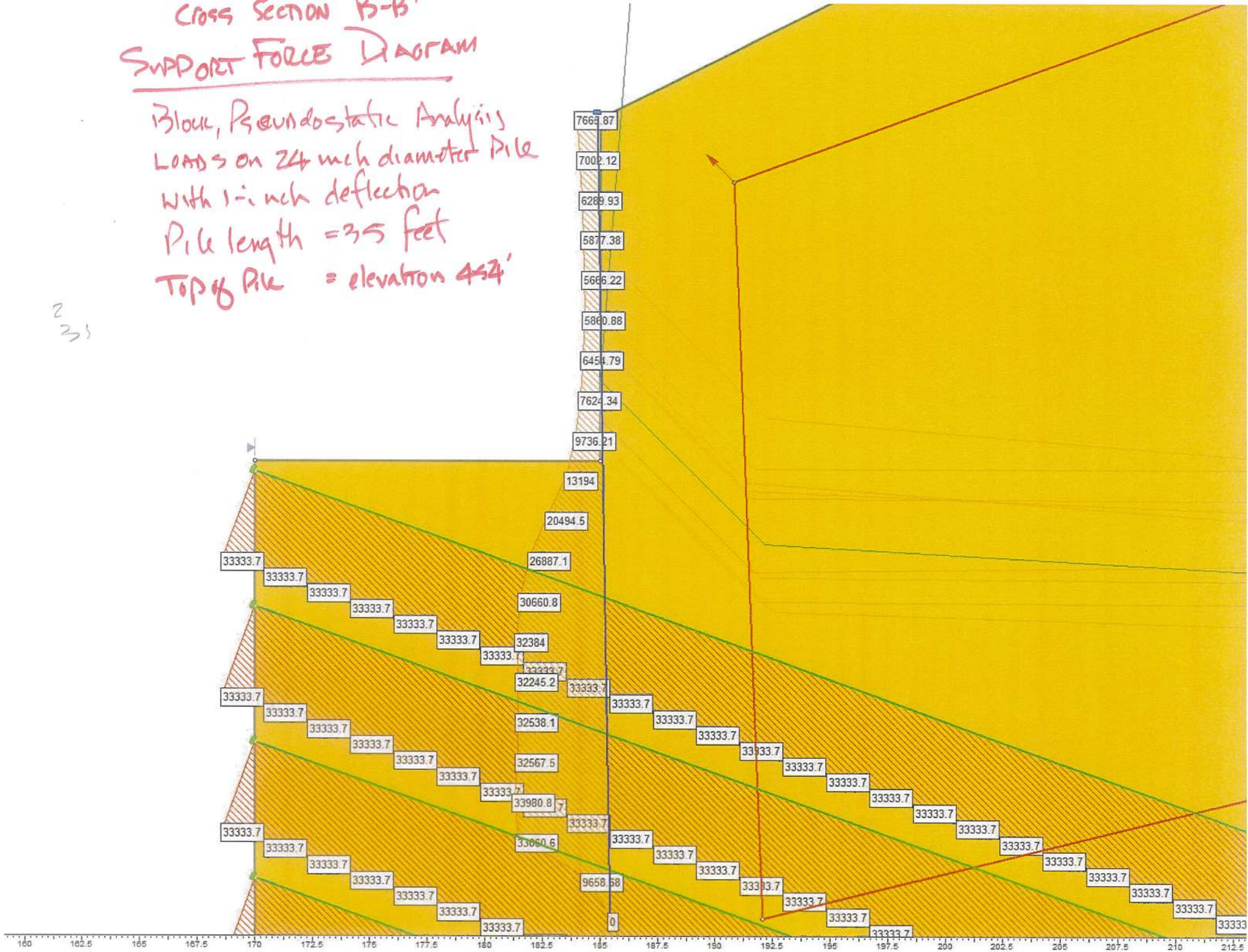
Scenario-based Entities

Type	Coordinates (x,y)	Master Scenario	Block Static	Block Pstatic	Curved Static	Curved PStatic
Piezoline	0, 410 173, 410 214, 415 306, 425	Assigned to:  Puente Formation	Assigned to:  Puente Formation	Assigned to:  Puente Formation	Assigned to:  Puente Formation	Assigned to:  Puente Formation
Block Search Window	224.746, 428.163 251.812, 438.157 246.718, 476.149 222.665, 458.268					
Block Search Window	255.267, 481.297 258.604, 449.193 284.71, 460.442 281.904, 485.321					
Block Search Window	188.122, 406.314 211.173, 412.381 213.842, 462.365 189.821, 451.446					
Block Search Window	192.08, 419.04 218.189, 425.567 216.945, 460.807 190.807, 451.198					

Cross Section B-B' SUPPORT FORCE DIAGRAM

Blume, Pseudostatic Analysis
 LOADS on 24 inch diameter pile
 with 1-inch deflection
 Pile length = 35 feet
 Top of pile = elevation 454'

2
33



File No. 20489
 Client: Aragon-Sunset

TABLE 1
Loads on Pile Based Relative to depth At Cross Section B-B'
(Pseudostatic Analysis, Upper Slope)

DEPTH (feet)	ELEVATION (feet)	Load (Pounds)	
		CURVED ANALYSIS	BLOCK ANALYSIS
0	454	7773	7666
1.75	452.25	6869	7002
3.5	450.5	6024	6289
5.25	448.75	5716	5877
7	447	5896	5666
8.75	445.25	6852	5861
10.5	443.5	9027	6455
12.25	441.75	13189	7624
14	440	22905	9736
15.75	438.25	29720	13194
17.5	436.5	34129	24495
19.25	434.75	37464	26887
21	433	40264	30661
22.75	431.25	43461	32384
24.5	429.5	45044	32245
26.25	427.75	45538	32538
28	426	42862	32568
29.75	424.25	42243	33981
31.5	422.5	42478	33061
33.25	420.75	17386	9659
35	419	0	0