Memorandum

To: **Planning Commission**
From: **Niall Connolly**
Date: **October 16, 2026**
Re: **Design Development Review of residential development at 201 and 211 North Fork Drive**

Introduction

This application includes a single family home plus accessory building at 201 North Fork Drive (Watchman subdivision lot 8) and a single family home at 211 North Fork Drive (Watchman subdivision lot 11). Both lots are in common ownership, and development on both lots is presented in a single application. The Planning Commission initially reviewed this application in June, but tabled making a decision, pending receipt of the geologic hazard study. The geologic hazard study has since been received and reviewed by the Town's geologic hazard consultant. This is discussed later in the staff report.

Subdivision Plat Amendment

The Commission will recall approving an amendment to the Watchman Phase II subdivision plat earlier in 2026. That plat amendment adjusted the locations of the building pods, as well as the property line between these two lots. Those amendments have facilitated the proposed development layout. The subdivision plat amendment has been recently recorded. Figure 1 shows the overall proposed layout of both lots. Development on lot 8 commenced more than twenty years ago, but was never completed.

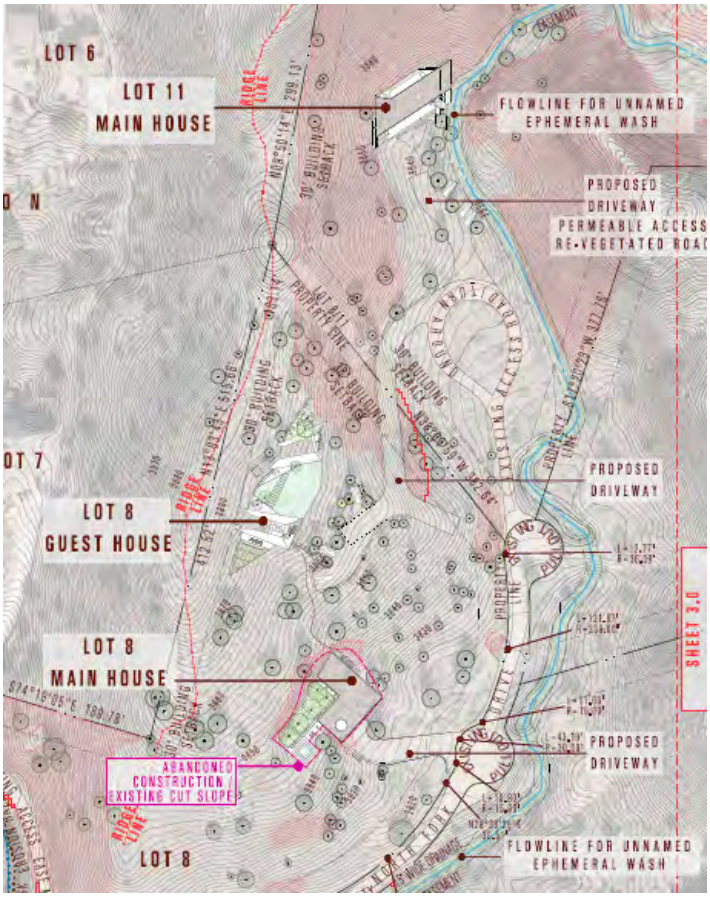


Figure 1. Overall Layout

The main house is to be located in the footprint of that original excavation, which is currently in a semi-derelict state. The accessory building/ guesthouse is to be located further up the hill of lot 8. The Town carried out a pole test at this location, and determined that this building would be view-obstructing, but not high visual impact. A separate house is proposed on lot 11.

Driveway

The Commission will note that the driveway to access the lot 8 guest house traverses slopes which are steeper than 30%. This is generally not permitted by the Town's grading ordinance. A variance was approved in April 2026, which allows the construction of this driveway.

Height and Size Bonus

The applicant has chosen not to apply for the height and size bonus (see section 10-15H of the Town Code). This means that the buildings do not need to comply with the Town's architectural standards, color palette, landscape standards and approved building materials. The maximum building size is 3,000 sq ft, and the 5 ft height bonus does not apply.

Geologic Hazards - Code Compliance

Both lots are located in the very high landslide hazard zone, and the moderate rockfall hazard zone. Under section 10-15F of the Town Code, a geotechnical report is required for DDRs for any new building over 500 sq ft in area. In addition, for properties within a Geologic Hazard Study Area (such as these) an initial analysis of the geologic hazards must be provided. Depending upon the significance of these hazards, a more detailed geologic hazard investigation and report may be required.

AGEC Applied Geotech carried out the assessment and wrote the report for this property. They determined that additional study and analysis of the site-specific geologic hazards was necessary. This additional assessment is provided within the report. Having done the detailed assessment, AGEC has certified the following:

- The proposed development does not represent an *unreasonable risk to the health, safety and welfare of persons or property, including buildings, infrastructure, or the aesthetic and natural functions of the land, because of the presence of geologic hazards or because of modifications to the site due to the proposed land use.
- The proposed use can be mitigated to a level where the risk to human life and damage to property are reduced to an acceptable or reasonable level in a manner which will not violate applicable federal, state and local statutes, ordinances and regulations.
- The proposed mitigation measures are reasonable and practical to implement.

These points above are required in section 10-15F-9 of the Town Code.

** Acceptable and reasonable risk: No loss or significant injury to occupants, no release of hazardous or toxic substances, and minimal structural damage to buildings or infrastructure during a hazard event allowing occupants egress outside.*

Geologic Hazards - Further Discussion

The lots within this subdivision are part of a large landslide complex, which extends far beyond the boundaries of this subdivision. Stabilization of the landslide complex by mechanical means is therefore not a realistic option. “Partial“, or in other words, localized mitigation is proposed in this instance In this instance, the proposed mitigation can be summarized as follows:

- Deep foundation systems support the proposed structures.
- Subgrade preparation
- Careful design of drainage and site improvements to reduce moisture reaching the underlying expansive soils
- Robust construction materials. In this instance, the buildings are proposed to be made of concrete.
- A concrete barrier to protect the building on lot 11 from rockfall

Subject to these mitigation measures, AGEC's professional opinion is that the development can proceed safely.

Chapter 10-15F of the Town Code refers to guidelines that Geologic Hazard Studies must comply with. The *Guidelines for Evaluating Landslide Hazards in Utah* recommend, as a general guideline, that the "factor of safety" for development on landslides should be greater than 1.5. Where more analysis has been provided and the risks are better understood, a factor of safety of 1.3 is deemed acceptable. In the case of this development, AGEC has estimated the factor of safety to be 1.2, which is slightly below the recommended standard. The applicant has proposed that the robust nature of the construction will mitigate this risk.

Section 10-15F-10 of the Code will require the property to record a notice running with the land, which discloses the following:

1. Notice that the parcel is located within a Geologic Hazard Study Area or as otherwise defined in this article; and
2. Notice that a geologic hazard investigation report was prepared and is available for public inspection in Springdale files.

In addition, according to Section 10-15F-13 of the Code, the property owner will need to sign a hold harmless agreement with the Town of Springdale.

Staff Analysis
The table below gives an analysis of the design, compared with the relevant Code requirements.

Code Requirement	**Compliance**
Minimum setback is 20 ft - the average of all setbacks should be no less than 30 ft.	Complies.
Maximum building height is 15 ft on lot 8; and 20 ft lot 11. This is because lot 8 is view obstructing, but lot 11 is not.	Complies.
Maximum building size is 3,000 sq ft	Complies. All three buildings are each smaller than 3,000 sq ft.
Minimum separation distance between buildings is 10 ft, 20 ft or 30 ft, depending on the height and size of the buildings.	Complies. The distance between each building far exceeds this.

Slopes of 30 % or greater must not be disturbed.	Lot 8 main house is surrounded by 30% slopes, but these are not natural slopes and were disturbed by the previous development. The proposed new house provides an opportunity to heal this landscape scar. Complies. Lot 8 guesthouse is adjacent to, but does not impinge on 30% slopes. Complies. The driveway to lot 8 guesthouse traverses 30% slopes. However, this was approved by a variance. Complies. Lot 11 house is surrounded by slopes exceeding 30%, and actually cantilevers over some of these slopes (see sheet 6.3). While the code does not specify standards for cantilevered structures, this is of concern, because the slopes must remain undisturbed during construction. The applicant and his contractor have assured staff that it will be possible to construct this building without disturbing the slopes. In staff's experience with similar cantilevered designs in the past, this has not always been successful. Should the Planning Commission approve the design, staff recommends that conditions are applied to address this point.
Outdoor Lighting	The applicant has provided an outdoor lighting plan which complies with section 10-15C of the Code.
Accessory structures (see section 10-20-8 of the Town Code)	Complies. The application has been reviewed for compliance with these standards.
Geologic Hazard Ordinance	See discussion above

Planning Commission Action

The Planning Commission should review this application and determine to either approve, approve conditionally, or deny this application. The Commission may wish to use the following motion language:

*The Planning Commission **approves/ denies** the design development review application for a single family home and accessory guesthouse at 201 North Fork Drive, and a single family home at 211 North Fork Drive. This is based on the following findings:*

LIST FINDINGS

The Commission may wish to apply the following conditions of approval:

1. The construction of the proposed development must carefully follow and adhere to the recommendations of the Geotechnical and Geologic Hazard Investigation Report, prepared by AGEC, dated August 3rd, 2026.
2. Prior to issuance of a Certificate of Occupancy, the property owner must:
    a. Record a notice running with the land, as described and required by section 10-15F-10 of the Town Code.
    b. Sign and record a hold harmless agreement, as described and required by section 10-15F-13 of the Town Code.
3. No disturbance of slopes that are 30% or greater are permitted during or post construction, with the exception of the driveway which was approved by a variance. The applicant will take particular care during the construction of the lot 11 home and its cantilevered design. If it is found that construction is not possible without disturbing these slopes, a revised design must be submitted for approval by the Town.

Appendix A: Application Drawings



Looking South from North Edge of Property

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VALLEY RESIDENTIAL

FOOTHILL RESIDENTIAL

WATCHMAN SUBDIVISION

ZION NATIONAL PARK

LOT 5

LOT 6

LOT 7

LOT 8 GUEST HOUSE

LOT 8 MAIN HOUSE

LOT 8

LOT 9 WILL NOT BE DEVELOPED BY CURRENT OWNER

LOT 10 WILL NOT BE DEVELOPED BY CURRENT OWNER

LOT 11 MAIN HOUSE

LOT 11

30% AND ABOVE SLOPE ANALYSIS PROVIDED BY ROSENBERG ASSOCIATES

MODERATE RISK EROSION HAZARD

HIGH RISK EROSION HAZARD

FEMA FLOOD PLAIN

100 YR FLOOD PLAIN

NORTH FORK DRIVE

NORTH FORK VIRGIN RIVER

BRIDGE

RIDGE LINE

PROPERTY LINE

EASEMENT

15' WIDE DRAINAGE EASEMENT

30' BUILDING SETBACK

EXISTING ACCESS ROAD

EXISTING LOOP ROAD

PROPOSED DRIVEWAY

PERMEABLE ACCESS RE-VEGETATED ROAD

FLOWLINE FOR UNNAMED EPHEMERAL WASH

ABANDONED CONSTRUCTION / EXISTING CUT SLOPE

S89°40'05"E 822.75'

N22°28'11"E 130.38'

N09°19'55"W 658.43'

N09°51'14"E 289.13'

N43°01'13"E 515.66'

N36°00'00"E 366.00'

N12°52'40"E 598.27'

S00°01'45"E 1361.12'

S89°58'54"W 1235.77'

N11°11'54"W 805.17'

S24°10'05"E 169.78'

EAST 122.86'

EAST 443.36'

402.85'

789.54'

664.02'

444.00'

352.10'

SHEET 3.0 ROTATED SITE PLAN

NATURAL FEATURE MAP LEGEND

- EXISTING PINE TREE
- EXISTING JUNIPER TREE
- 30% AND ABOVE SLOPE ANALYSIS
- VALLEY RESIDENTIAL
- FEMA FLOOD PLAIN
- 100 YR FLOOD PLAIN
- MODERATE RISK EROSION HAZARD
- HIGH RISK EROSION HAZARD

30%AND ABOVE SLOPE ANALYSIS, 1FT CONTOUR AND TREE SURVEY PROVIDED BY ROSENBERG ASSOCIATES

LOT 8

TOTAL LOT AREA- 247,354 SF

EXISTING LANDSCAPE AND/OR NATURAL OPEN SPACE TO REMAIN ON PROPERTY- 233,324 SF (94.36%)

TOTAL AREA THAT WILL BE LANDSCAPED - 1445 SF (0.5%)

LOT 11

TOTAL LOT AREA- 490,660 SF

EXISTING LANDSCAPE AND/OR NATURAL OPEN SPACE TO REMAIN ON PROPERTY- 486,673 SF (99.19%)

1.0

Scale: 1/128"= 1'-0"

Natural Features Map and Existing Devlopment

30 % and above Slope Analysis and 1 FT Contour Survey

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



LOOKING SOUTH FROM LOT 11



LOOKING WEST FROM LOT 9



LOOKING NORTH FROM LOT 8 MAIN HOUSE SITE



LOOKING NORTH FROM LOT 8 MAIN HOUSE SITE

North Fork Virgin River

SR-9

LOOKING SOUTH FROM LOT 8 MAIN HOUSE (UPPER PAD) SITE

LOT 8
MAIN HOUSE BEYOND

LOT 8
GUEST HOUSE

North Fork Virgin River

SR-9

LOT 11
MAIN HOUSE BEYOND

LOOKING SOUTH FROM LOT 8 RIDGE LINE



LOOKING NORTH FROM LOT 8 GUEST HOUSE SITE



LOOKING SOUTH FROM LOT 8 GUEST HOUSE SITE

PRESERVATION OF NATIVE LANDSCAPE SITE + RESTORATION / REVEGETATION OF FENCED CONSTRUCTION AREA NOTES:

CONSTRUCTION SITE WILL BE "ORANGE-FENCED-OFF" WITHIN 7'-0" OF DEVELOPED AREA INCLUDING NEW BUILDING PADS, EXISTING CUT AT GUEST HOUSE LOT 8, NEW DRIVEWAYS, EXISTING ACCESS ROAD, ETC. AND WILL BE RESTORED / REVEGETATED PER 10-15B-5(A) PER PLANS AS FOLLOWS:
SAVE "SITE DETRITUS" IN 5 GALLON BUCKETS AND "CRYPTOBIOTIC SOIL SOD" AT BEGINNING OF CONSTRUCTION FROM BUILDING PADS / DRIVEWAYS AND FENCED-OFF AREAS FOR USE DURING "RESTORATION OF FENCED-OFF AREAS AND CRYPTOBIOTIC SOIL ROOFS". GRID OFF PORTIONS OF SITE TO COUNT ALL NATIVE SPECIES AND THEIR PERCENTAGES AND AUTHENTICALLY SOURCE A NON-TAINTED NATIVE SEED MIX CUSTOMIZED TO THIS SITE ALONG WITH 1 & 5 GALLON NATIVE SPECIES IN CORRESPONDING PERCENTAGES FOR REVEGETATION. WE PROPOSE TO PROFESSIONALLY SALVAGE ALL NATIVE UTAH JUNIPERS ON SITE FOR RELOCATION PER PLANS IN A 1:1 RATIO. PROVIDE "ESTABLISHMENT IRRIGATION" FOR ALL OF THE ABOVE AND TURN IT OFF WHEN REVEGETATION IS ESTABLISHED AFTER 1-3 YEARS. NON-INVASIVE, NON-PROPAGATING FRUIT TREES / TURF WILL BE LIMITED TO 0.5% AND ALWAYS WITHIN WALLS OR TERRACE BOUNDARY AND WILL REQUIRE LOW-WATER USE IRRIGATION.

LANDSCAPE PLAN NOTES:

SEE ROOF / GRADING PLANS LEGEND FOR ALL STRUCTURES REFERENCING GRADING & RESTORATION / RE-VEGETATION AS PER 10-15B-5(A)

LIGHTING LEGEND

- DOWN LIGHT PER CODE(0)
- STEP LIGHT PER CODE(2)
- LD DOWN LIGHT PER CODE(5)

- ALL LIGHT SOURCE UNDER 1000 LUMENS
- LD DOWN LIGHT TREE MOUNTED BUT ILLUMINATING GROUND PLANE WALKWAYS ONLY

SITE PLAN LEGEND

1. EXISTING ACCESS EASEMENT
2. EXISTING PULLOUT
3. EXISTING TURN AROUND
4. PERMEABLE PAVEMENT DRIVEWAY 10% SLOPE
5. GUEST PARKING / INFORMAL PARKING
6. EXISTING BOULDER
7. ABANDONED CONSTRUCTION / CUT SLOPE
8. LOT 8 GUEST HOUSE
9. LOT 8 MAIN HOUSE
10. NATIVE SAGE / FRUIT ORCHARD
11. LOT 11 MAIN HOUSE
12. FOOT TRAIL
13. IN WALL / UG TRASH ENCLOSURE
14. PROPANE WEATHERED STL ENCLOSURE W/GATE
15. TRASH WEATHERED STL ENCLOSURE W/GATE
16. RECESSED MECHANICAL / PROPANE WELL

- FEMA FLOOD PLAIN
- 100 YR FLOOD PLAIN
- MODERATE RISK EROSION HAZARD
- HIGH RISK EROSION HAZARD
- SALVAGED TREE
- NEW FRUIT TREE
- RELOCATED TREE
- EXISTING TREE
- 30% AND ABOVE SLOPE ANALYSIS

SHEET 5.0 LOT 8
GUEST HOUSE SITE / ROOF PLAN

SHEET 4.1 LOT 8
MAIN HOUSE SITE / ROOF PLAN

SHEET 6.0 LOT 11
GUEST HOUSE SITE / ROOF PLAN

SHEET 6.1 LOT 11
MAIN HOUSE SITE / ROOF PLAN

LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11

LOT 8 GUEST HOUSE
LOT 8 MAIN HOUSE
LOT 11 MAIN HOUSE

PROPOSED DRIVEWAY
2 CAR PARKING IN GARAGE
3 GUEST PARKING
SELF-SCREENING / PV PANELS LOCATED 3' ABOVE GROUND SOUTH FACING
NEW OR RELOCATED FIRE HYDRANT
EXISTING FIRE HYDRANT
EXISTING PULLOUT
EXISTING FIRE ACCESS ROAD
EXISTING STONE RETAINING WALL
EXTEND FIRE LINE
PROJECT BENCHMARK REBAR AND CAP B&G 187849 ELEV: 3894.88' (NAVD 88)
FLOWLINE FOR UNNAMED EPHEMERAL WASH
PERMEABLE ACCESS RE-VEGETATED ROAD
SEE NEW ANNEXED PLAT
OTHER SIDE OF RIDGE
RIDGE LINE
PROPERTY LINE
30' BUILDING SETBACK
15' WIDE DRAINAGE EASEMENT
20' W PROPOSED DRIVEWAY
TURN AROUND
100 YR FLOOD PLAIN
HIGH RISK EROSION HAZARD
MODERATE RISK EROSION HAZARD
EXISTING ACCESS EASEMENT THRU ZION NATIONAL PARK
ZION NATIONAL PARK
NORTH FORK DRIVE
4' WIDE DRAINAGE EASEMENT

178'-9 1/2"
130'-4"
97'-3 1/2"
112'-4 1/2"
31'-8 1/2"
1'-0"
36'-11"
66'-8" (2)
259'-10 1/2"
273'-6 1/2"
73'-6"
44'-2 1/2"
57'-0"
86'-9"

LANDSCAPE PLAN NOTES:

WE ARE PROPOSING A FEW COMPLEMENTARY VARIETIES OF FRUIT TREES THAT WILL NOT PROPAGATE AND ARE NON-INVASIVE SPECIES

LOT 8

TOTAL LOT AREA- 247,354 SF

EXISTING LANDSCAPE AND/OR NATURAL OPEN SPACE TO REMAIN ON PROPERTY- 233,324 SF (94.36%)

TOTAL AREA THAT WILL BE LANDSCAPED - 1445 SF (0.5%)

LOT 11

TOTAL LOT AREA- 490,660 SF

EXISTING LANDSCAPE AND/OR NATURAL OPEN SPACE TO REMAIN ON PROPERTY- 486,673 SF (99.19%)

3.0

Scale: 1/64" = 1'-0"

Site Plan / Landscape Plan

Mechanical / Trash Receptacles / Propane Tanks/ Solar Panels

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026

MAIN HOUSE EXISTING SITE LEGEND

30% AND ABOVE SLOPE ANALYSIS

ABANDONED CONSTRUCTION (LOWER PAD)

ABANDONED CONSTRUCTION (UPPER PAD)

EXISTING CUT

30' BUILDING SETBACK

3855 3850 3845 3840 3835 3830 3825

4.0

Scale: 1/16" = 1'-0"

Lot 8 Main House Existing Site Plan

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026

MAIN HOUSE LEGEND

1. PERMEABLE PAVEMENT 10% SLOPE DRIVEWAY
2. SLIDING ENTRY GATE / MAN DOOR(S)
3. MAIN STAIR / TRAIL TO GUEST HOUSE
4. ABANDONED CONSTRUCTION / CUT SLOPE
5. NATIVE SAGE / FRUIT ORCHARD / RETENTION
6. SUNBATHING LOUNGE / FIRE LOUNGE
7. CRYPTOBIOTIC SOIL / SAGE ROOF
8. STEP POOL / LOUNGE STAIR
9. SKYLIGHT

SALVAGED TREE

RELOCATED TREE

NEW TREE

MAIN HOUSE GRADING LEGEND

(A) DRAINAGE SWALE (FINE GRADING) AT BACK OF RETAINING WALL TO BE PRESERVED PER 10-15B-5(A)

(B) NATURAL GRADE TO BE RESTORED AGAINST BUILDING WALL / TERRACE WALL AND PRESERVED PER 10-15B-5(A)

(C) CRYPTOBIOTIC SOIL / SAGE ROOF TO BE PRESERVED PER 10-15B-5(A)

(D) FINE GRADING TO BECOME DRIVEWAY PERMEABLE PAVEMENT PER 10-15B-5(A)

(E) FINE GRADING AT MAIN STAIR / TERRACE / WALL TO BE PRESERVED PER 10-15B-5(A)

TOTAL: 2876 SF

EXISTING CUT

30' BUILDING SETBACK

10% SLOPE

MECH WELL CISTERN

4.1

Scale: 1/16" = 1'-0"

Lot 8 Main House Site/Roof Plan

Condt'd - 1,871 NSF / 2,572 GSF, Covr'd - 2,876 GSF

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MAIN HOUSE LEGEND

1. PERMEABLE PAVEMENT 10% SLOPE DRIVEWAY
2. SLIDE ENTRY GATE / MAN DOOR(S)
3. 2-CAR GARAGE / STORAGE / LAUNDRY
4. ABANDONED CONSTRUCTION / CUT SLOPE
5. MAIN ARRIVAL STAIR / ENTRY DOOR
6. MAIN LIVING / DINING / KITCHEN
7. 1/2 BATH / COAT CLOSET
8. MAIN TERRACE (NOT COVERED)
9. MAIN BEDROOM / BATH / CLOSET
10. GUEST STAIR / TRAIL TO GUEST HOUSE
11. NATIVE SAGE / FRUIT ORCHARD / RETENTION
12. STEP POOL / LOUNGE STAIR
13. SUNBATHING LOUNGE / FIRE LOUNGE
14. UNDERGROUND TRASH ENCLOSURE
15. PROPANE WEATHERED STL ENCLOSURE W/GATE

D DOOR
W WINDOW
DOWN LIGHT PER CODE(16)
STEP LIGHT PER CODE(13)
LD DOWN LIGHT PER CODE(13)
SALVAGED TREE
RELOCATED TREE
NEW TREE

ASL=3835'
ASL=3831'
EXISTING CUT
30' BUILDING SETBACK
10% SLOPE
STEP DOWN
STAIRS 48" TREADS X 6 3/4" RISER

4.2

Scale: 1/16" = 1'-0"

Lot 8 Main House Site/Floor Plan

Condt'd - 1,871 NSF / 2,572 GSF, Covr'd - 2,876 GSF

Honaker Zion Project Site

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MAIN HOUSE LEGEND

1. PERMEABLE PAVEMENT 10% SLOPE DRIVEWAY
2. SLIDE ENTRY GATE / MAN DOOR(S)
3. 2-CAR GARAGE / STORAGE / LAUNDRY
4. ABANDONED CONSTRUCTION / CUT SLOPE
5. MAIN ARRIVAL STAIR / ENTRY DOOR
6. MAIN LIVING / DINING / KITCHEN
7. 1/2 BATH / COAT CLOSET
8. MAIN TERRACE (NOT COVERED)
9. MAIN BEDROOM / BATH / CLOSET
10. GUEST STAIR / TRAIL TO GUEST HOUSE
11. NATIVE SAGE / FRUIT ORCHARD / RETENTION
12. STEP POOL / LOUNGE STAIR
13. SUNBATHING LOUNGE / FIRE LOUNGE
14. UNDERGROUND TRASH ENCLOSURE
15. PROPANE WEATHERED STL ENCLOSURE W/GATE

- D DOOR
- W WINDOW
- DOWN LIGHT PER CODE(16)
- STEP LIGHT PER CODE(13)
- LD DOWN LIGHT PER CODE(13)
- SALVAGED TREE
- RELOCATED TREE
- NEW TREE

ASL=3835'

TOTAL : 2876 SF

ASL=3831'

EXISTING CUT

10% SLOPE

30' BUILDING SETBACK

4.3

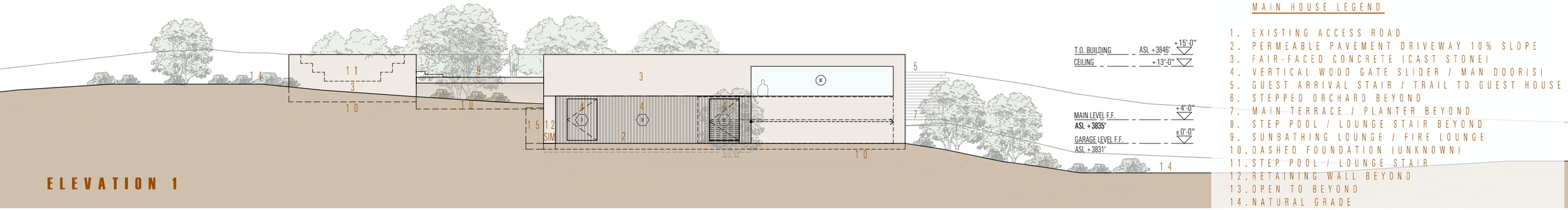
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Lot 8 Main House Site/Floor Plan

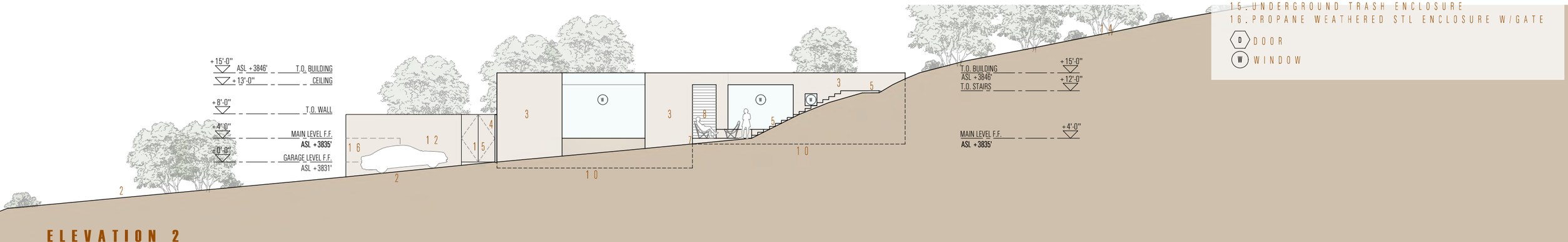
Condt'd - 1,871 NSF / 2,572 GSF, Covr'd - 2,876 GSF

Honaker Zion Project Site

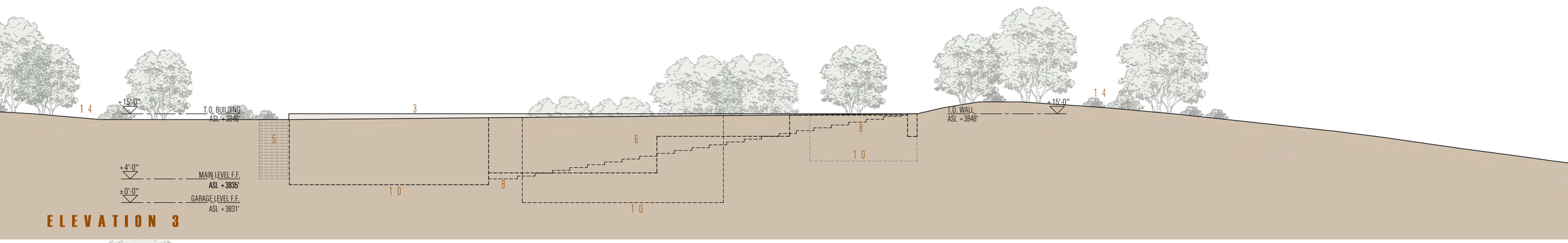
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ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

MAIN HOUSE LEGEND

1. EXISTING ACCESS ROAD
2. PERMEABLE PAVEMENT DRIVEWAY 10% SLOPE
3. FAIR-FACED CONCRETE (CAST STONE)
4. VERTICAL WOOD GATE SLIDER / MAN DOOR(S)
5. GUEST ARRIVAL STAIR / TRAIL TO GUEST HOUSE
6. STEPPED ORCHARD BEYOND
7. MAIN TERRACE / PLANTER BEYOND
8. STEP POOL / LOUNGE STAIR BEYOND
9. SUNBATHING LOUNGE / FIRE LOUNGE
10. DASHED FOUNDATION (UNKNOWN)
11. STEP POOL / LOUNGE STAIR
12. RETAINING WALL BEYOND
13. OPEN TO BEYOND
14. NATURAL GRADE
15. UNDERGROUND TRASH ENCLOSURE
16. PROPANE WEATHERED STL ENCLOSURE W/GATE

(D) DOOR

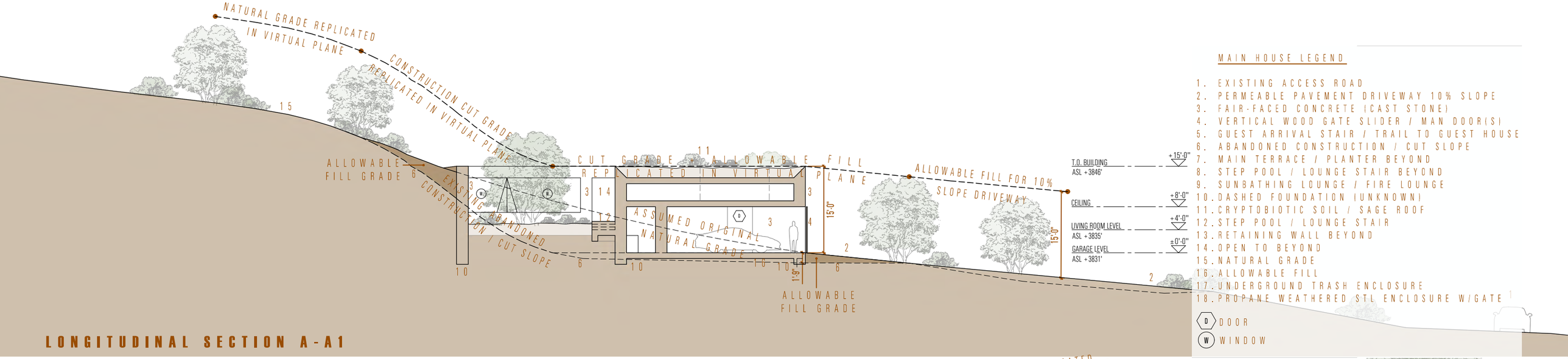
(W) WINDOW

4.4

Scale: 1/16" = 1'-0"

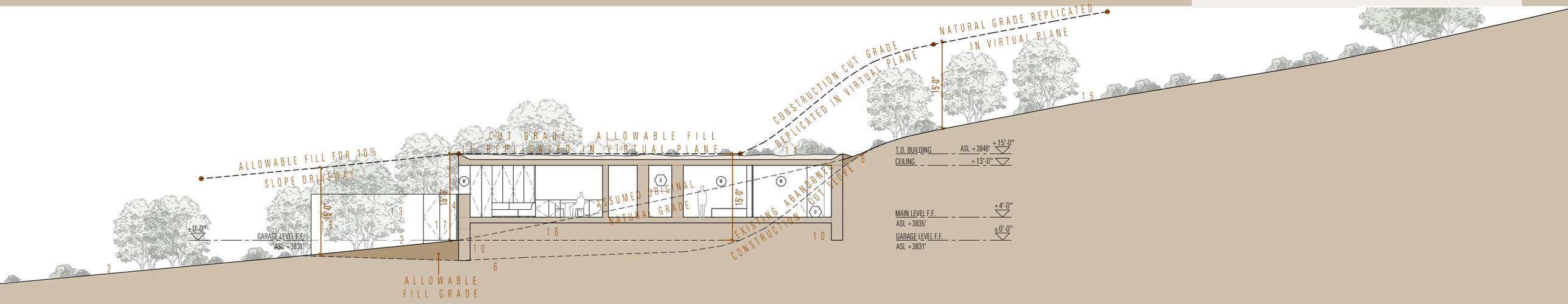
Lot 8 Main House Main Elevations

Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

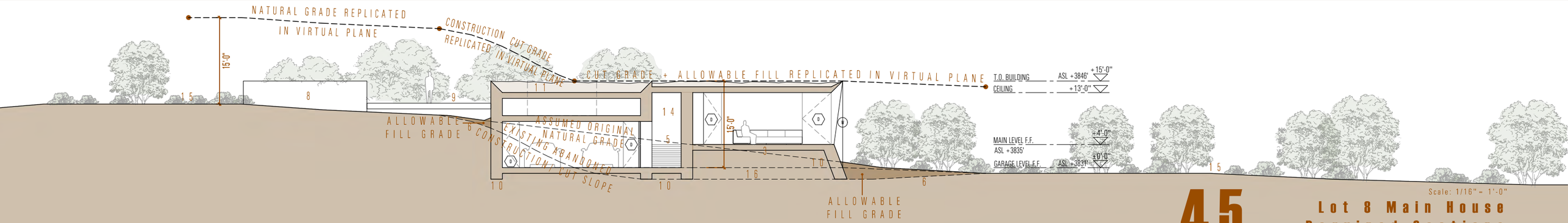


1. EXISTING ACCESS ROAD
2. PERMEABLE PAVEMENT DRIVEWAY 10% SLOPE
3. FAIR-FACED CONCRETE (CAST STONE)
4. VERTICAL WOOD GATE SLIDER / MAN DOOR(S)
5. GUEST ARRIVAL STAIR / TRAIL TO GUEST HOUSE
6. ABANDONED CONSTRUCTION / CUT SLOPE
7. MAIN TERRACE / PLANTER BEYOND
8. STEP POOL / LOUNGE STAIR BEYOND
9. SUNBATHING LOUNGE / FIRE LOUNGE
10. DASHED FOUNDATION (UNKNOWN)
11. CRYPTOBIOTIC SOIL / SAGE ROOF
12. STEP POOL / LOUNGE STAIR
13. RETAINING WALL BEYOND
14. OPEN TO BEYOND
15. NATURAL GRADE
16. ALLOWABLE FILL
17. UNDERGROUND TRASH ENCLOSURE
18. PROPANE WEATHERED STL ENCLOSURE W/GATE

LONGITUDINAL SECTION A-A1



LONGITUDINAL SECTION A-A2



TRANSVERSE SECTION B-B

Scale: 1/16" = 1'-0"

4.5

Lot 8 Main House Required Sections

Honaker Zion Project Site
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SECTION C-C

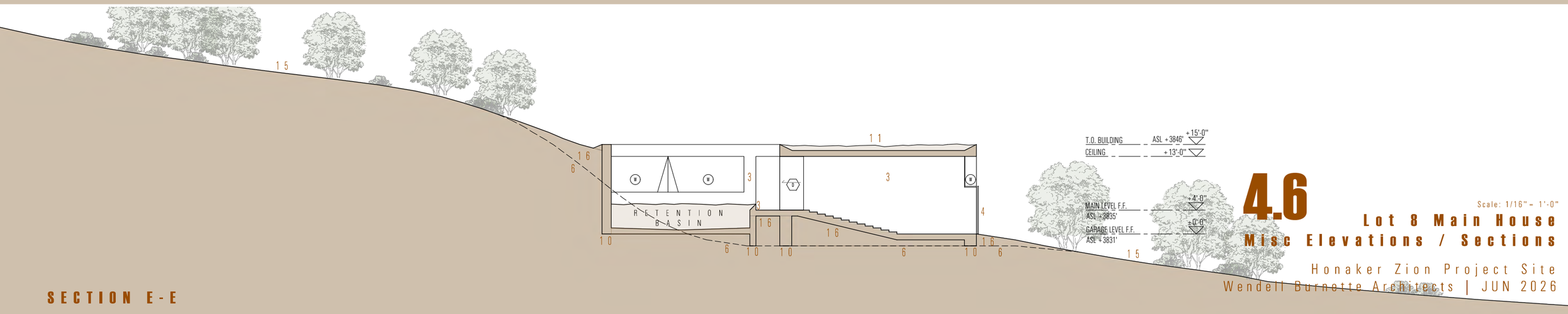
MAIN HOUSE LEGEND

1. EXISTING ACCESS ROAD
2. PERMEABLE PAVEMENT DRIVEWAY 10% SLOPE
3. FAIR-FACED CONCRETE (CAST STONE)
4. VERTICAL WOOD GATE SLIDER / MAN DOOR(S)
5. GUEST ARRIVAL STAIR / TRAIL TO GUEST HOUSE
6. ABANDONED CONSTRUCTION / CUT SLOPE
7. MAIN TERRACE / PLANTER BEYOND
8. STEP POOL / LOUNGE STAIR BEYOND
9. SUNBATHING LOUNGE / FIRE LOUNGE
10. DASHED FOUNDATION (UNKNOWN)
11. CRYPTOBIOTIC SOIL / SAGE ROOF
12. STEP POOL / LOUNGE STAIR
13. RETAINING WALL BEYOND
14. OPEN TO BEYOND
15. NATURAL GRADE
16. ALLOWABLE FILL
17. UNDERGROUND TRASH ENCLOSURE
18. PROPANE WEATHERED STL ENCLOSURE W/GATE

D DOOR
W WINDOW



SECTION D-D



SECTION E-E

4.6

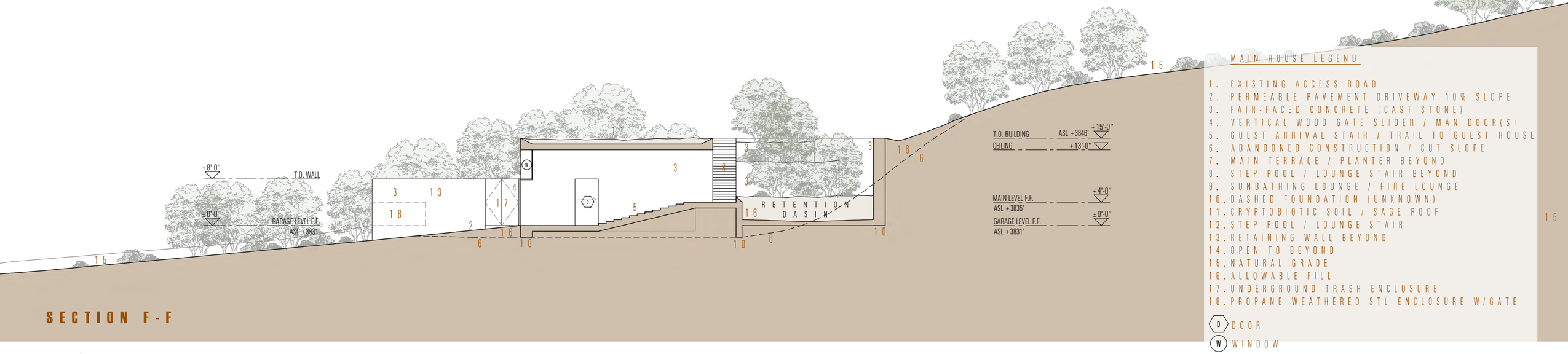
Scale: 1/16" = 1'-0"

Lot 8 Main House

Misc Elevations / Sections

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



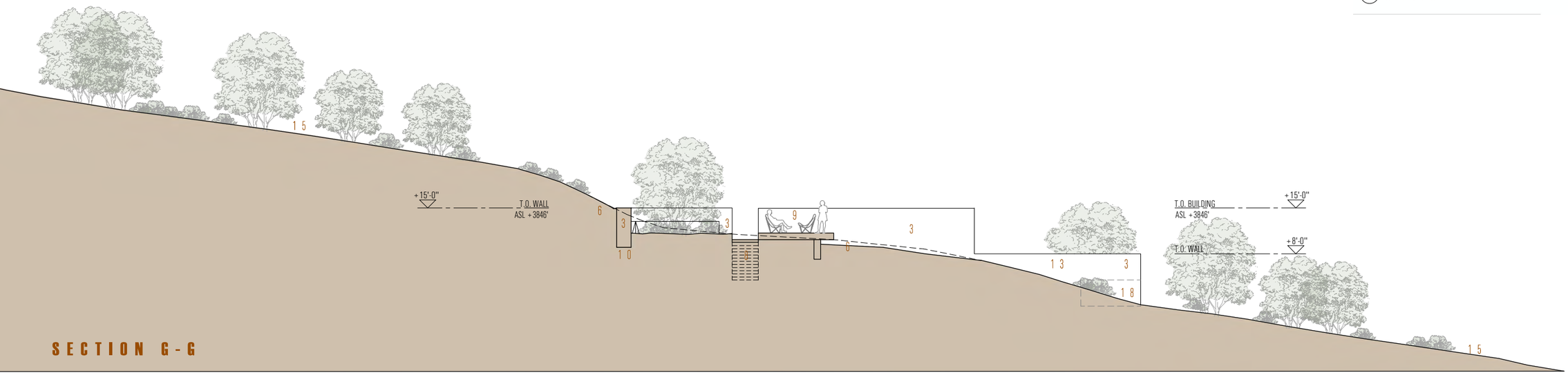
SECTION F-F

MAIN HOUSE LEGEND

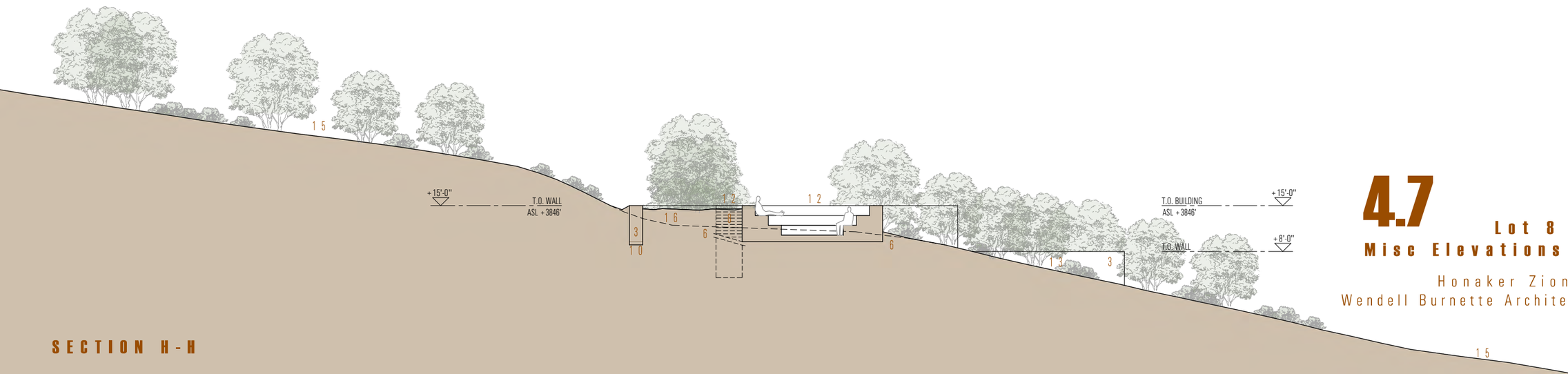
1. EXISTING ACCESS ROAD
2. PERMEABLE PAVEMENT DRIVEWAY 10% SLOPE
3. FAIR-FACED CONCRETE (CAST STONE)
4. VERTICAL WOOD GATE SLIDER / MAN DOOR(S)
5. GUEST ARRIVAL STAIR / TRAIL TO GUEST HOUSE
6. ABANDONED CONSTRUCTION / CUT SLOPE
7. MAIN TERRACE / PLANTER BEYOND
8. STEP POOL / LOUNGE STAIR BEYOND
9. SUNBATHING LOUNGE / FIRE LOUNGE
10. DASHED FOUNDATION (UNKNOWN)
11. CRYPTOBIOTIC SOIL / SAGE ROOF
12. STEP POOL / LOUNGE STAIR
13. RETAINING WALL BEYOND
14. OPEN TO BEYOND
15. NATURAL GRADE
16. ALLOWABLE FILL
17. UNDERGROUND TRASH ENCLOSURE
18. PROPANE WEATHERED STL ENCLOSURE W/GATE

D DOOR

W WINDOW



SECTION G-G



SECTION H-H

4.7

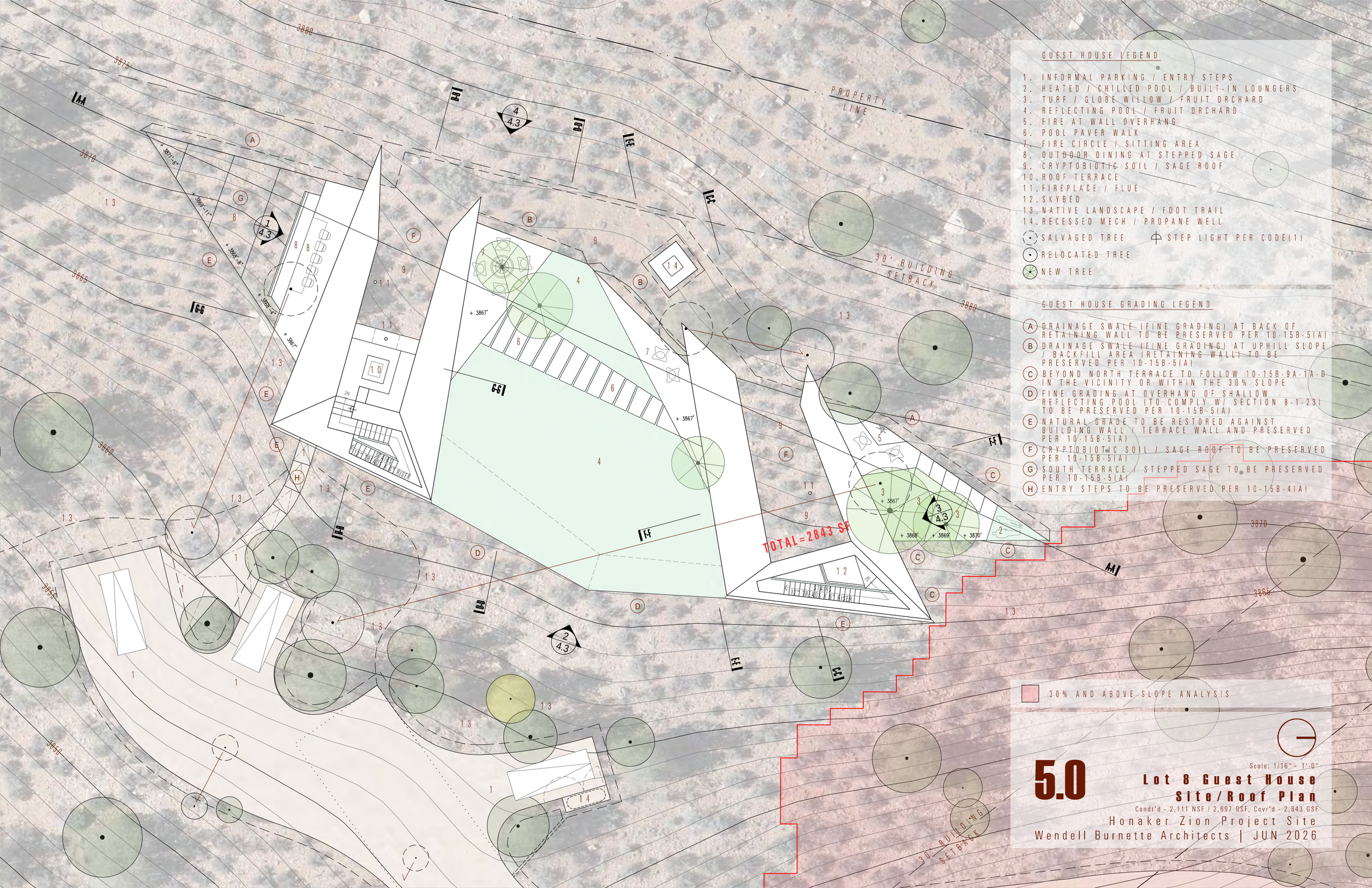
Scale: 1/16" = 1'-0"

Lot 8 Main House

Misc Elevations / Sections

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



GUEST HOUSE LEGEND

1. INFORMAL PARKING / ENTRY STEPS
2. HEATED / CHILLED POOL / BUILT-IN LOUNGERS
3. TURF / GLOBE WILLOW / FRUIT ORCHARD
4. REFLECTING POOL / FRUIT ORCHARD
5. FIRE AT WALL OVERHANG
6. POOL PAVER WALK
7. FIRE CIRCLE / SITTING AREA
8. OUTDOOR DINING AT STEPPED SAGE
9. CRYPTOBIOTIC SOIL / SAGE ROOF
10. ROOF TERRACE
11. FIREPLACE / FLUE
12. SKYBED
13. NATIVE LANDSCAPE / FOOT TRAIL
14. RECESSED MECH / PROPANE WELL

SALVAGED TREE — STEP LIGHT PER CODE(1)

RELOCATED TREE

NEW TREE

GUEST HOUSE GRADING LEGEND

(A) DRAINAGE SWALE (FINE GRADING) AT BACK OF RETAINING WALL TO BE PRESERVED PER 10-15B-5(A)

(B) DRAINAGE SWALE (FINE GRADING) AT UPHILL SLOPE / BACKFILL AREA (RETAINING WALL) TO BE PRESERVED PER 10-15B-5(A)

(C) BEYOND NORTH TERRACE TO FOLLOW 10-15B-9A-1A-D IN THE VICINITY OR WITHIN THE 30% SLOPE

(D) FINE GRADING AT OVERHANG OF SHALLOW REFLECTING POOL (TO COMPLY W/ SECTION 8-1-23) TO BE PRESERVED PER 10-15B-5(A)

(E) NATURAL GRADE TO BE RESTORED AGAINST BUILDING WALL / TERRACE WALL AND PRESERVED PER 10-15B-5(A)

(F) CRYPTOBIOTIC SOIL / SAGE ROOF TO BE PRESERVED PER 10-15B-5(A)

(G) SOUTH TERRACE / STEPPED SAGE TO BE PRESERVED PER 10-15B-5(A)

(H) ENTRY STEPS TO BE PRESERVED PER 10-15B-4(A)

30% AND ABOVE SLOPE ANALYSIS

5.0

Scale: 1/16" = 1'-0"

Lot 8 Guest House Site/Roof Plan

Condt'd - 2,111 NSF / 2,697 GSF, Covr'd - 2,843 GSF

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026

GUEST HOUSE LEGEND

1. INFORMAL PARKING / ENTRY STEPS
2. ENTRY MASS THRESHOLD / ENTRY BENCH / GATE
3. STAIR TO ROOF WITH DRIPPING WATER FEATURE
4. BLIND / ACCESSIBLE ALUM KITCHEN WALL
5. KITCHEN ISLAND / CASUAL DINING TABLE
6. FIREBOX WITH DUAL TV / FIREWOOD
7. LIVING ROOM LOUNGE
8. VIEW / MEDIA LOUNGE
9. 1/2 BATH
10. STUDY / HALL
11. LAUNDRY / ELEC / AV CLOSET
12. MECHANICAL / WH ROOM
13. GUEST BATHROOM
14. VIEW BATHTUB
15. GUEST BEDROOM LOUNGE
16. FIREBOX WITH DUAL TV / FIREWOOD
17. GUEST BEDROOM WITH RECESSED HEADBOARD
18. GUEST DRESSING ROOM WITH BENCH SEAT
19. VENTILATION CHIMNEY / READING BENCH
20. STAIR TO SKYBED WITH DRIPPING WATER FEATURE
21. HEATED / CHILLED POOL / BUILT-IN LOUNGERS
22. TURF / GLOBE WILLOW / FRUIT ORCHARD
23. FIRE PIT AT WALL OVERHANG
24. UNDER SKY TERRACE
25. SHALLOW REFLECTING POOL / WADING POOL PER 8-1-23 / FRUIT ORCHARD
26. POOL PAVER WALK
27. FIRE CIRCLE / SITTING AREA
28. OUTDOOR DINING AT STEPPED SAGE
29. NATIVE LANDSCAPE
30. FOOT TRAIL

D DOOR / GATE
W WINDOW
DOWN LIGHT PER CODE(12)
STEP LIGHT PER CODE(118)
LD DOWN LIGHT PER CODE(12)
SALVAGED TREE
RELOCATED TREE
NEW TREE

30% AND ABOVE SLOPE ANALYSIS

5.1

Scale: 1/16" = 1'-0"

Lot 8 Guest House Site/Floor Plan

Condt'd - 2,111 NSF / 2,697 GSF, Covr'd - 2,843 GSF

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026

GUEST HOUSE LEGEND

1. INFORMAL PARKING / ENTRY STEPS
2. ENTRY MASS THRESHOLD / ENTRY BENCH / GATE
3. STAIR TO ROOF WITH DRIPPING WATER FEATURE
4. BLIND / ACCESSIBLE ALUM KITCHEN WALL
5. KITCHEN ISLAND / CASUAL DINING TABLE
6. FIREBOX WITH DUAL TV / FIREWOOD
7. LIVING ROOM LOUNGE
8. VIEW / MEDIA LOUNGE
9. 1/2 BATH
10. STUDY / HALL
11. LAUNDRY / ELEC / AV CLOSET
12. MECHANICAL / WH ROOM
13. GUEST BATHROOM
14. VIEW BATHTUB
15. GUEST BEDROOM LOUNGE
16. FIREBOX WITH DUAL TV / FIREWOOD
17. GUEST BEDROOM WITH RECESSED HEADBOARD
18. GUEST DRESSING ROOM WITH BENCH SEAT
19. VENTILATION CHIMNEY / READING BENCH
20. STAIR TO SKYBED WITH DRIPPING WATER FEATURE
21. HEATED / CHILLED POOL / BUILT-IN LOUNGERS
22. TURF / GLOBE WILLOW / FRUIT ORCHARD
23. FIRE PIT AT WALL OVERHANG
24. UNDER SKY TERRACE
25. SHALLOW REFLECTING POOL / WADING POOL PER 8-1-23 / FRUIT ORCHARD
26. POOL PAVER WALK
27. FIRE CIRCLE / SITTING AREA
28. OUTDOOR DINING AT STEPPED SAGE
29. NATIVE LANDSCAPE
30. FOOT TRAIL

D DOOR / GATE
W WINDOW
DOWN LIGHT PER CODE(2)
STEP LIGHT PER CODE(18)
LD DOWN LIGHT PER CODE(12)
SALVAGED TREE
RELOCATED TREE
NEW TREE

30% AND ABOVE SLOPE ANALYSIS

5.2

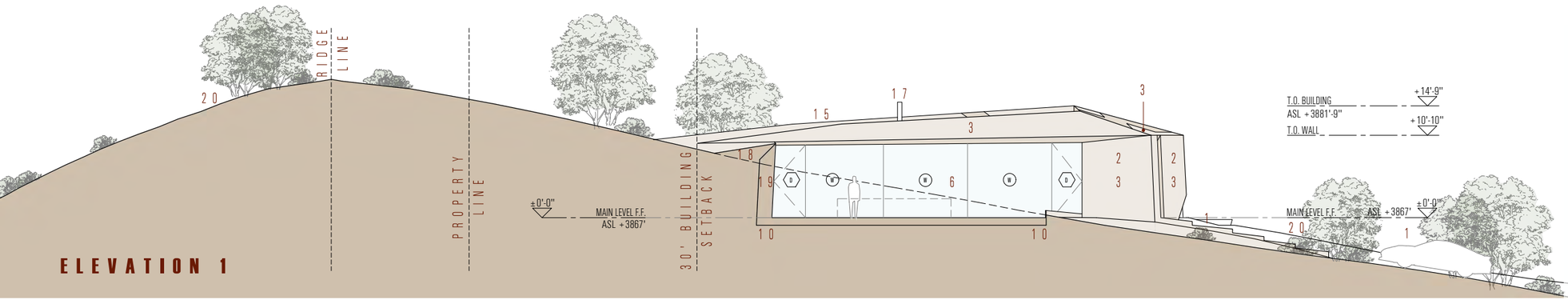
Scale: 1/16" = 1'-0"

Lot 8 Guest House Site/Floor Plan SQFT

Condt'd - 2,111 NSF / 2,697 GSF, Covr'd - 2,843 GSF

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



ELEVATION 1



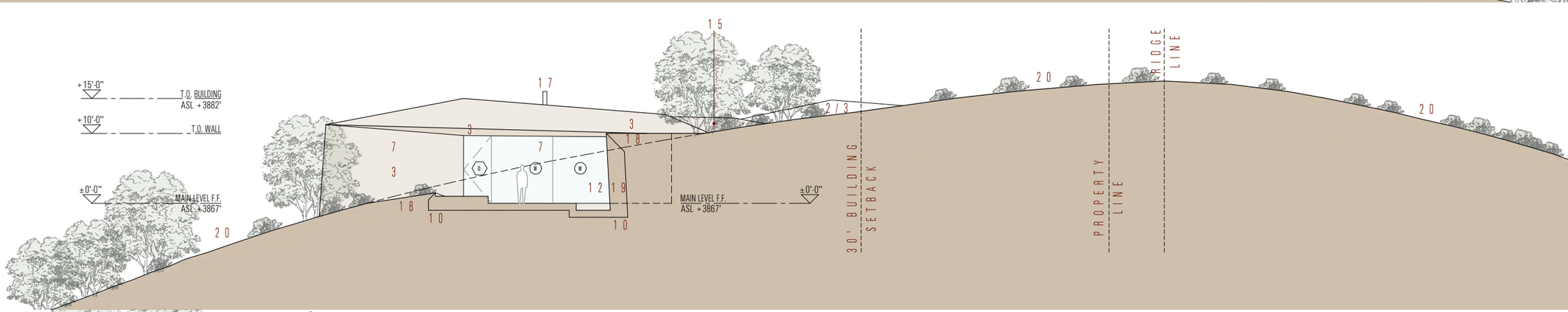
ELEVATION 2

GUEST HOUSE LEGEND

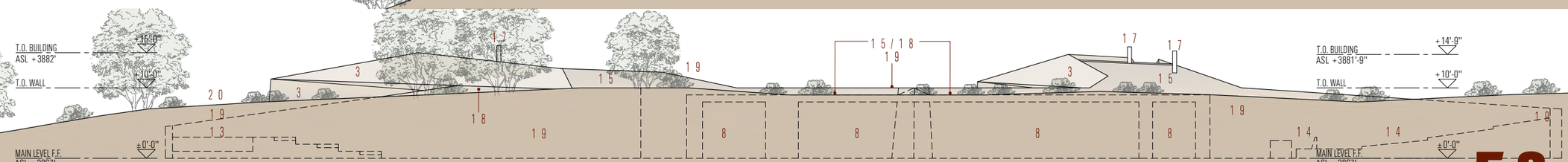
1. INFORMAL PARKING/ENTRY STEPS
2. ENTRY MASS THRESHOLD/ENTRY GATE
3. FAIR-FACED CONCRETE (CAST STONE)
4. STAIR TO ROOF W/ DRIPPING WATER FEATURE
5. STAIR TO SKYBED W/DRIPPING WATER FEATURE
6. GUEST HOUSE LIVING/DINING/KITCHEN SPACE
7. GUEST BEDROOM/LOUNGE/BATH SPACE
8. BATH/HALL/STUDY IN BACKFILL AREA
9. REFLECTING POOL W/ FLOATING PAVERS
10. DASHED FOUNDATION (UNKNOWN)
11. SKYBED AT GUEST BEDROOM
12. FIREPIT AT WALL OVERHANG
13. HEATED/CHILLED POOL/BUILT-IN LOUNGERS
14. OUTDOOR DINING AT STEPPED SAGE
15. CRYPTOBIOTIC SOIL/SAGE ROOF
16. ROOF TERRACE/GAS FIREPLACE
17. GAS FIREPLACE FLUE AT ROOF
18. RESTORED NATURAL GRADE
19. RETAINING WALL
20. NATURAL GRADE

D DOOR

W WINDOW



ELEVATION 3

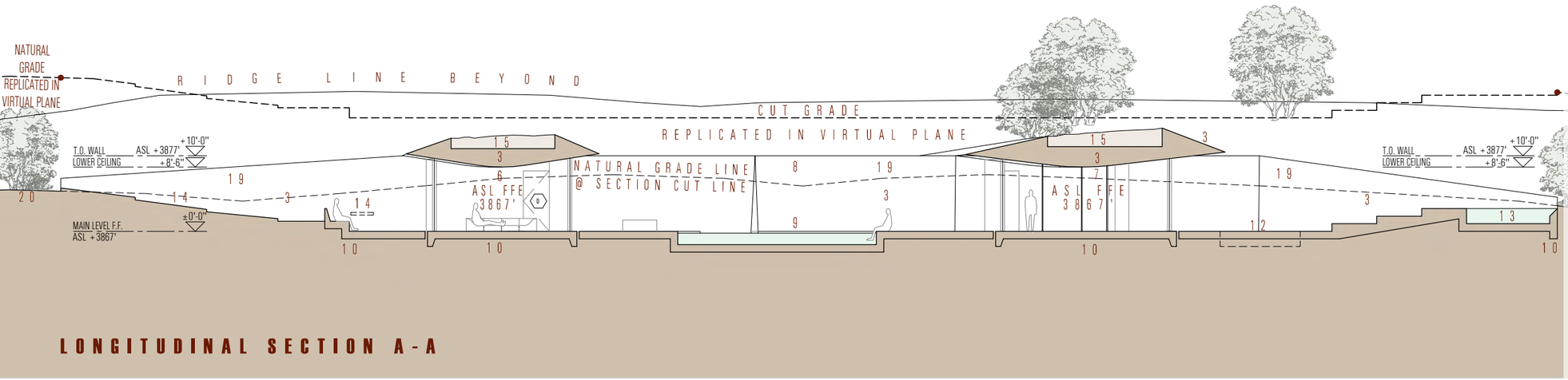


ELEVATION 4

Scale: 1/16" = 1'-0"

5.3 Lot 8 Guest House Main Elevations

Honaker Zion Project Site
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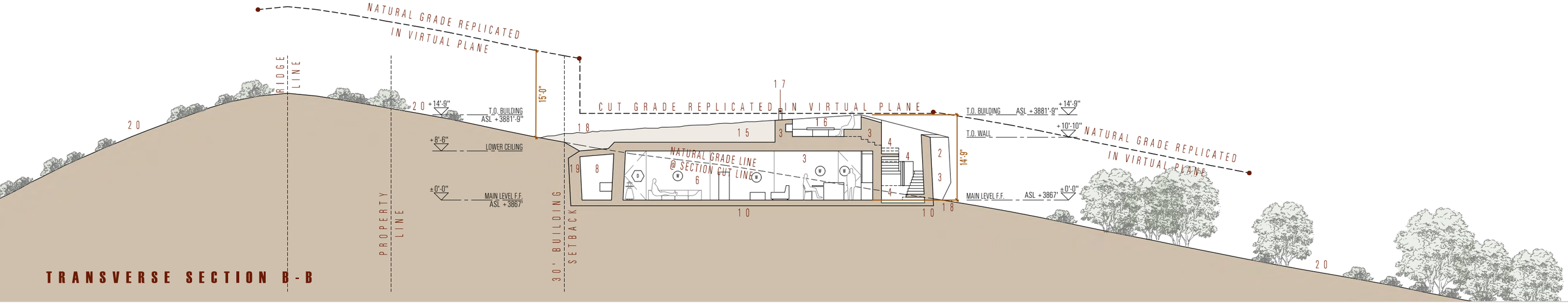
LONGITUDINAL SECTION A-A

GUEST HOUSE LEGEND

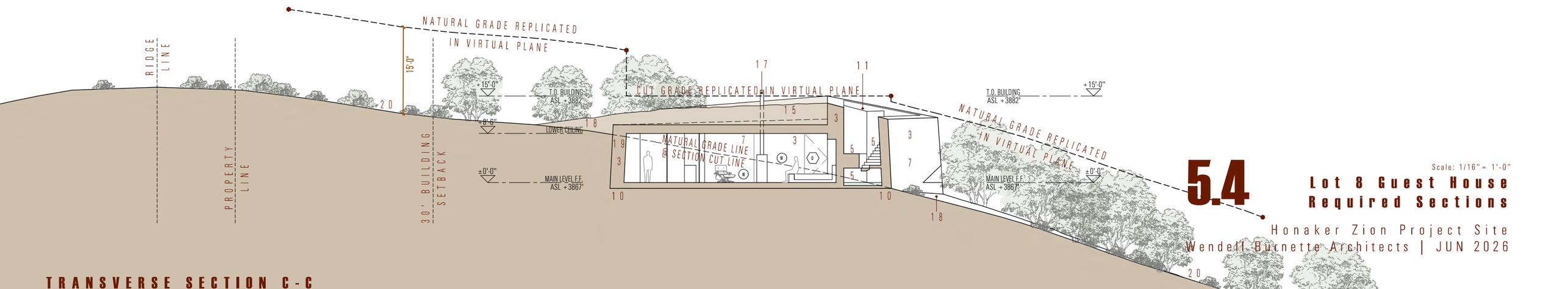
1. INFORMAL PARKING/ENTRY STEPS
2. ENTRY MASS THRESHOLD/ENTRY GATE
3. FAIR-FACED CONCRETE (CAST STONE)
4. STAIR TO ROOF W/ DRIPPING WATER FEATURE
5. STAIR TO SKYBED W/DRIPPING WATER FEATURE
6. GUEST HOUSE LIVING/DINING/KITCHEN SPACE
7. GUEST BEDROOM/LOUNGE/BATH SPACE
8. BATH/HALL/STUDY IN BACKFILL AREA
9. REFLECTING POOL W/ FLOATING PAVERS
10. DASHED FOUNDATION (UNKNOWN)
11. SKYBED AT GUEST BEDROOM
12. FIREPIT AT WALL OVERHANG
13. HEATED/CHILLED POOL/BUILT-IN LOUNGERS
14. OUTDOOR DINING AT STEPPED SAGE
15. CRYPTOBIOTIC SOIL/SAGE ROOF
16. ROOF TERRACE/GAS FIREPLACE
17. GAS FIREPLACE FLUE AT ROOF
18. RESTORED NATURAL GRADE
19. RETAINING WALL
20. NATURAL GRADE

D DOOR

W WINDOW



TRANSVERSE SECTION B-B



TRANSVERSE SECTION C-C

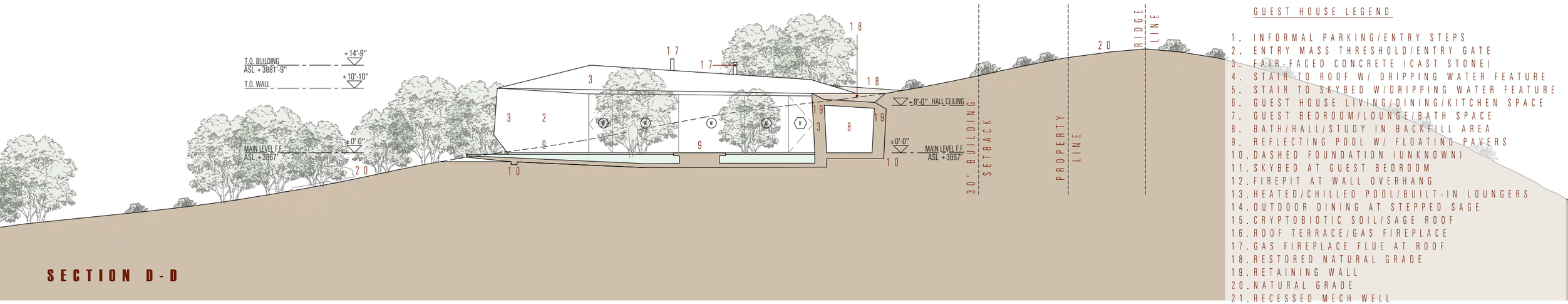
5.4

Scale: 1/16" = 1'-0"

Lot 8 Guest House Required Sections

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



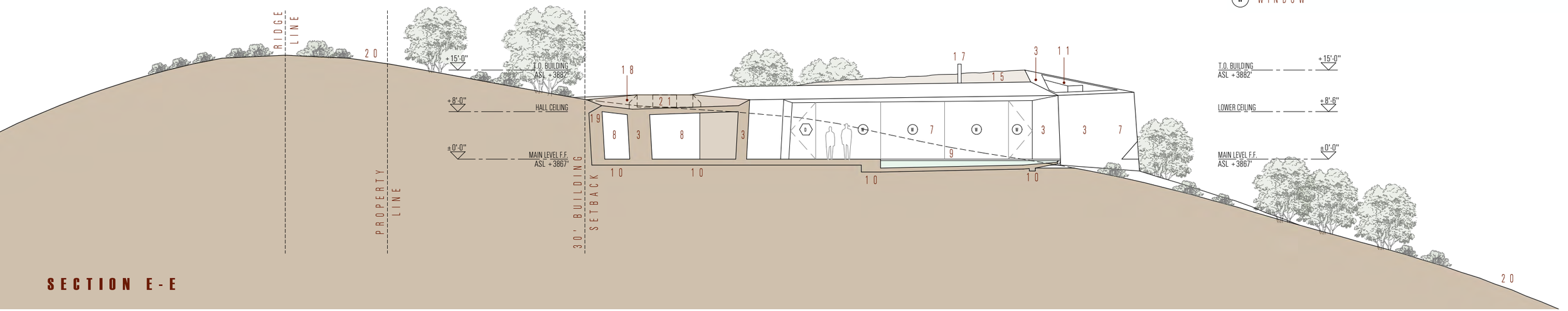
SECTION D-D

GUEST HOUSE LEGEND

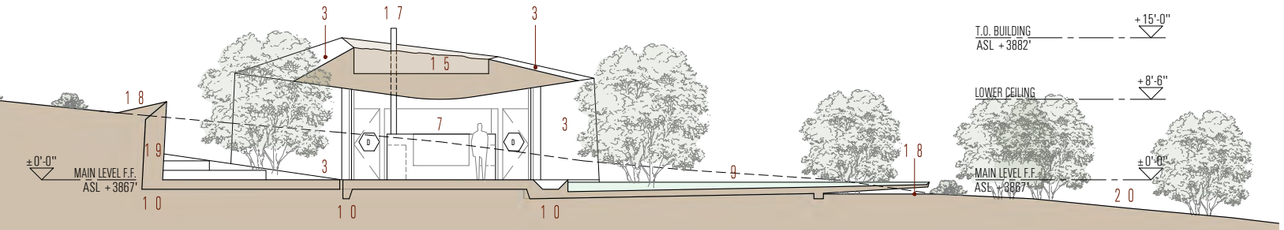
1. INFORMAL PARKING/ENTRY STEPS
2. ENTRY MASS THRESHOLD/ENTRY GATE
3. FAIR-FACED CONCRETE (CAST STONE)
4. STAIR TO ROOF W/ DRIPPING WATER FEATURE
5. STAIR TO SKYBED W/DRIPPING WATER FEATURE
6. GUEST HOUSE LIVING/DINING/KITCHEN SPACE
7. GUEST BEDROOM/LOUNGE/BATH SPACE
8. BATH/HALL/STUDY IN BACKFILL AREA
9. REFLECTING POOL W/ FLOATING PAVERS
10. DASHED FOUNDATION (UNKNOWN)
11. SKYBED AT GUEST BEDROOM
12. FIREPIT AT WALL OVERHANG
13. HEATED/CHILLED POOL/BUILT-IN LOUNGERS
14. OUTDOOR DINING AT STEPPED SAGE
15. CRYPTOBIOTIC SOIL/SAGE ROOF
16. ROOF TERRACE/GAS FIREPLACE
17. GAS FIREPLACE FLUE AT ROOF
18. RESTORED NATURAL GRADE
19. RETAINING WALL
20. NATURAL GRADE
21. RECESSED MECH WELL

D DOOR

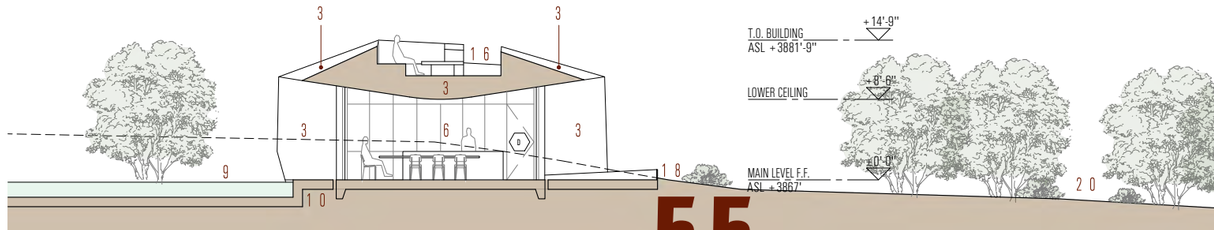
W WINDOW



SECTION E-E



SECTION F-F



SECTION G-G

5.5

Scale: 1/16" = 1'-0"

Lot 8 Guest House
Misc Elevations/Sections

Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

MAIN HOUSE LEGEND

1. TRAIL / REVEGETATED FIRE ACCESS ROAD
2. GUEST PARKING BETWEEN TREES
3. CRYPTOBIOTIC SOIL / SAGE ROOF
4. FRONT PORCH // TERRACE
5. MECHANICAL WELL
6. SLOPE TERRACE
7. ROCK PEDESTAL
8. POOL EQUIPMENT WELL
9. CANTILEVERED DRY SAUNA OVER 30% SLOPE
10. CANTILEVERED WALKWAY TO RELAXATION CAVE
11. CANTILEVERED POOL OVER WASH / 30% SLOPE
12. NATIVE LANDSCAPE
13. FOOT TRAIL
14. FIREPIT

MAIN HOUSE GRADING LEGEND

(A) NATURAL GRADE TO BE RESTORED UNDERNEATH CANTILEVERED DRY SAUNA / WALKWAY AND POOL PRESERVED PER 10-15B-5(A)

(B) NATURAL GRADE TO BE RESTORED AGAINST BUILDING WALL / TERRACE WALL AND PRESERVED PER 10-15B-5(A)

(C) CRYPTOBIOTIC SOIL / SAGE ROOF TO BE PRESERVED PER 10-15B-5(A)

TOTAL=1830 SF

30% AND ABOVE SLOPE ANALYSIS

6.0

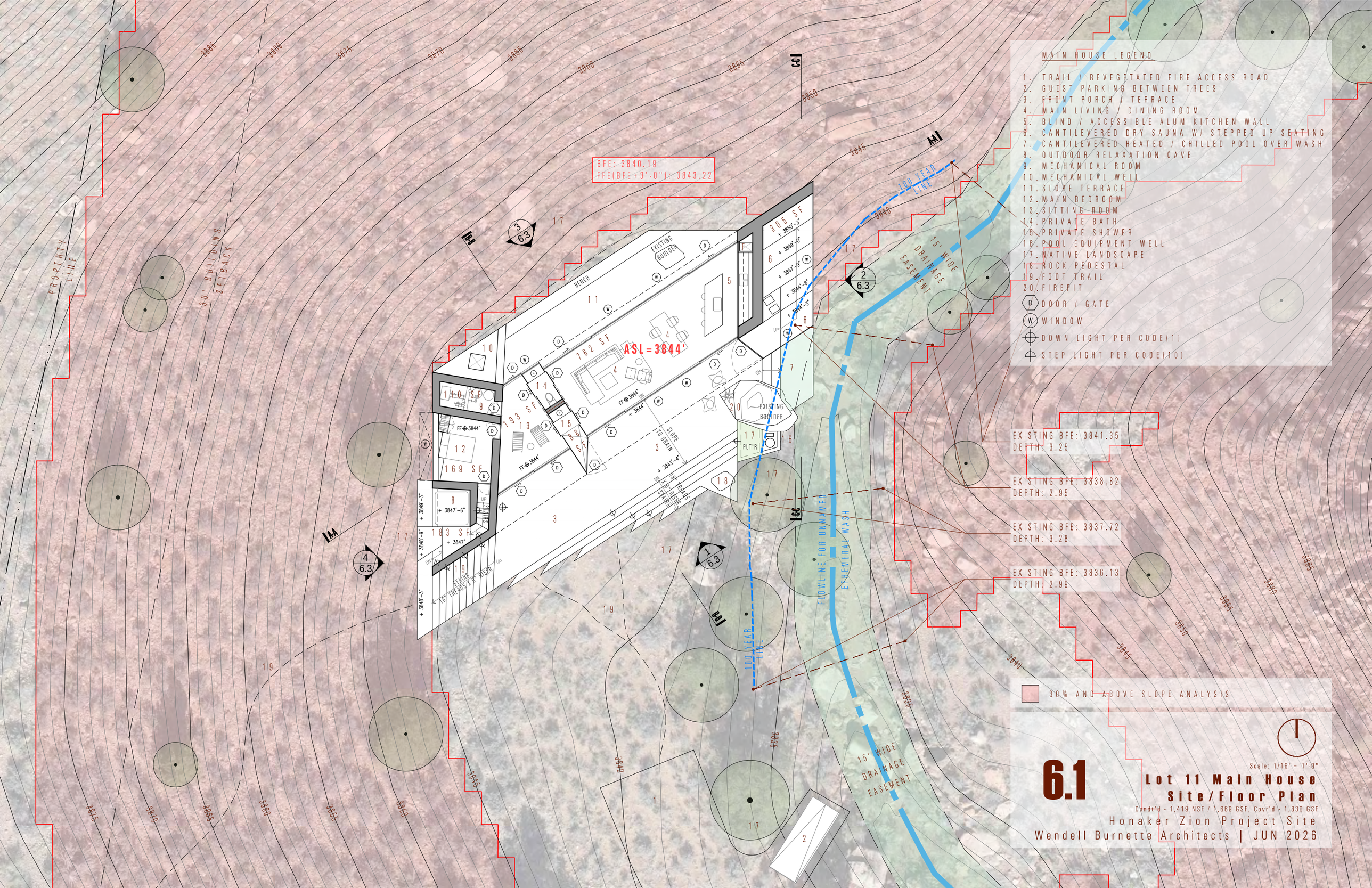
Scale: 1/16" = 1'-0"

Lot 11 Main House Site/Roof Plan

Condt'd - 1,419 NSF / 1,669 GSF, Covr'd - 1,830 GSF

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



MAIN HOUSE LEGEND

1. TRAIL / REVEGETATED FIRE ACCESS ROAD
2. GUEST PARKING BETWEEN TREES
3. FRONT PORCH / TERRACE
4. MAIN LIVING / DINING ROOM
5. BLIND / ACCESSIBLE ALUM KITCHEN WALL
6. CANTILEVERED DRY SAUNA W/ STEPPED UP SEATING
7. CANTILEVERED HEATED / CHILLED POOL OVER WASH
8. OUTDOOR RELAXATION CAVE
9. MECHANICAL ROOM
10. MECHANICAL WELL
11. SLOPE TERRACE
12. MAIN BEDROOM
13. SITTING ROOM
14. PRIVATE BATH
15. PRIVATE SHOWER
16. POOL EQUIPMENT WELL
17. NATIVE LANDSCAPE
18. ROCK PEDESTAL
19. FOOT TRAIL
20. FIREPIT

(D) DOOR / GATE
(W) WINDOW
DOWN LIGHT PER CODE(11)
STEP LIGHT PER CODE(10)

EXISTING BFE: 3841.35
DEPTH: 3.25

EXISTING BFE: 3838.82
DEPTH: 2.95

EXISTING BFE: 3837.72
DEPTH: 3.28

EXISTING BFE: 3836.13
DEPTH: 2.99

30% AND ABOVE SLOPE ANALYSIS

6.1

Scale: 1/16" = 1'-0"

Lot 11 Main House Site/Floor Plan

Condt'd - 1,419 NSF / 1,669 GSF, Covr'd - 1,830 GSF

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026

BFE: 3840.19
FFE(BFE+3'-0"): 3843.22

ASL = 3844
TOTAL = 1830 SF

MAIN HOUSE LEGEND

1. TRAIL / REVEGETATED FIRE ACCESS ROAD
2. GUEST PARKING BETWEEN TREES
3. FRONT PORCH / TERRACE
4. MAIN LIVING / DINING ROOM
5. BLIND / ACCESSIBLE ALUM KITCHEN WALL
6. CANTILEVERED DRY SAUNA W/ STEPPED UP SEATING
7. CANTILEVERED HEATED / CHILLED POOL OVER WASH
8. OUTDOOR RELAXATION CAVE
9. MECHANICAL ROOM
10. MECHANICAL WELL
11. SLOPE TERRACE
12. MAIN BEDROOM
13. SITTING ROOM
14. PRIVATE BATH
15. PRIVATE SHOWER
16. POOL EQUIPMENT WELL
17. NATIVE LANDSCAPE
18. ROCK PEDESTAL
19. FOOT TRAIL
20. FIREPIT

(D) DOOR / GATE
(W) WINDOW
DOWN LIGHT PER CODE(11)
STEP LIGHT PER CODE(10)

EXISTING BFE: 3841.35
DEPTH: 3.25

EXISTING BFE: 3838.82
DEPTH: 2.95

EXISTING BFE: 3837.72
DEPTH: 3.28

EXISTING BFE: 3836.13
DEPTH: 2.99

30% AND ABOVE SLOPE ANALYSIS

PROPERTY LINE
30' BUILDING SETBACK
100 YEAR LINE
15' WIDE DRAINAGE EASEMENT
FLOWLINE FOR UNNAMED EPHEMERAL WASH

Scale: 1/16" = 1'-0"

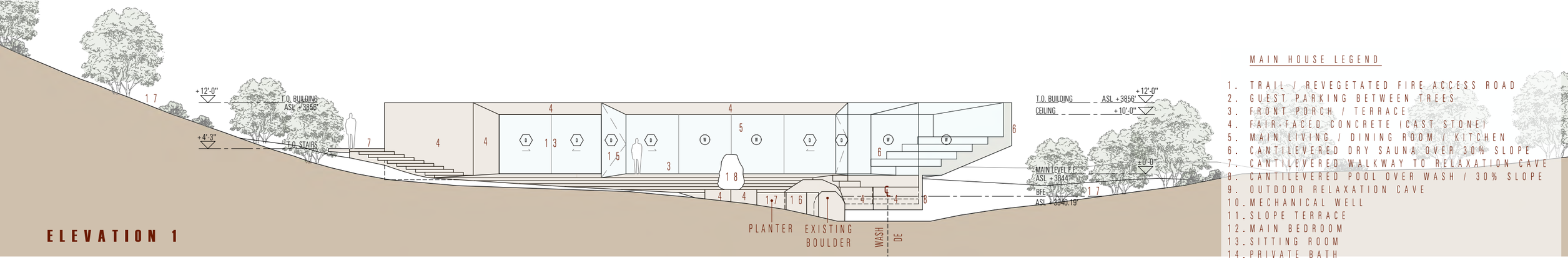
6.2

Lot 11 Main House Site/Floor Plan SQFT

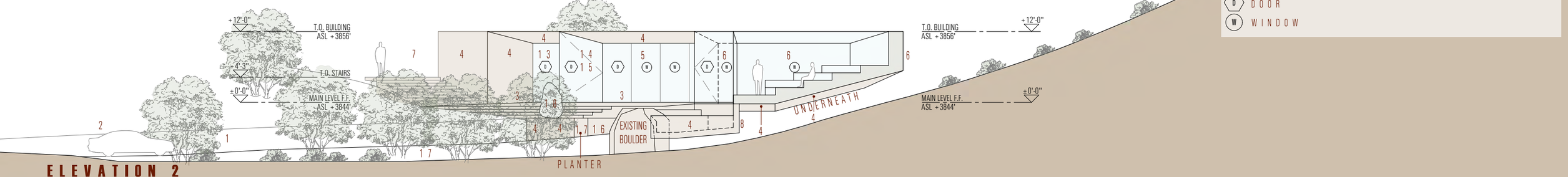
Condt'd - 1,419 NSF / 1,669 GSF, Covr'd - 1,830 GSF

Honaker Zion Project Site

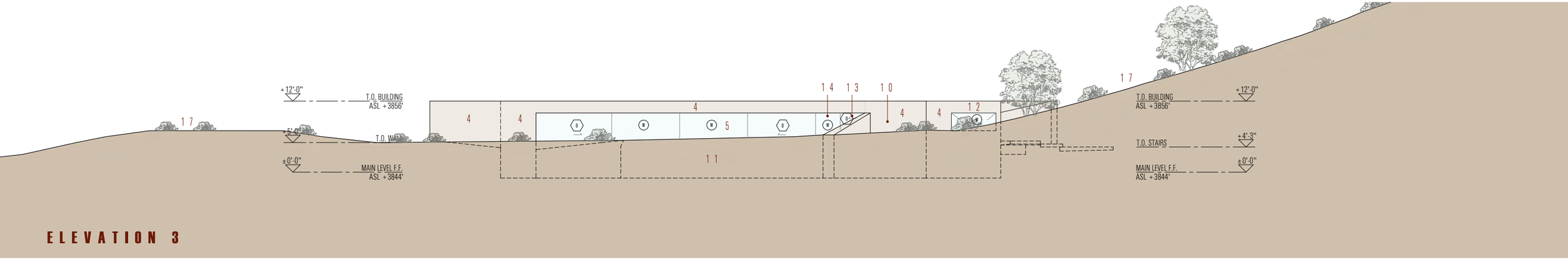
Wendell Burnette Architects | JUN 2026



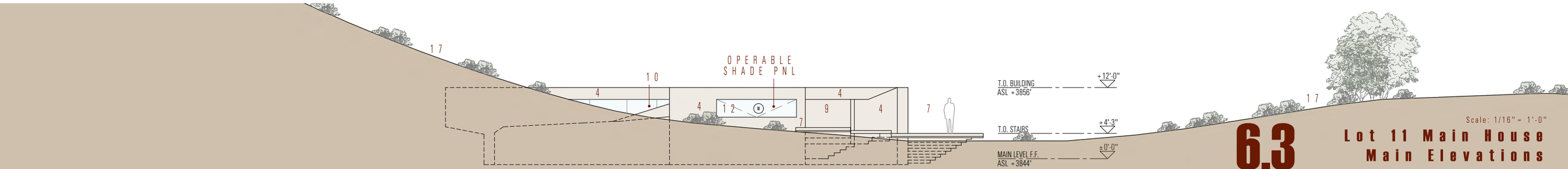
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

MAIN HOUSE LEGEND

1. TRAIL / REVEGETATED FIRE ACCESS ROAD
2. GUEST PARKING BETWEEN TREES
3. FRONT PORCH / TERRACE
4. FAIR-FACED CONCRETE (CAST STONE)
5. MAIN LIVING / DINING ROOM / KITCHEN
6. CANTILEVERED DRY SAUNA OVER 30% SLOPE
7. CANTILEVERED WALKWAY TO RELAXATION CAVE
8. CANTILEVERED POOL OVER WASH / 30% SLOPE
9. OUTDOOR RELAXATION CAVE
10. MECHANICAL WELL
11. SLOPE TERRACE
12. MAIN BEDROOM
13. SITTING ROOM
14. PRIVATE BATH
15. PRIVATE SHOWER
16. POOL EQUIPMENT WELL
17. NATIVE LANDSCAPE
18. ROCK PEDESTAL

D DOOR

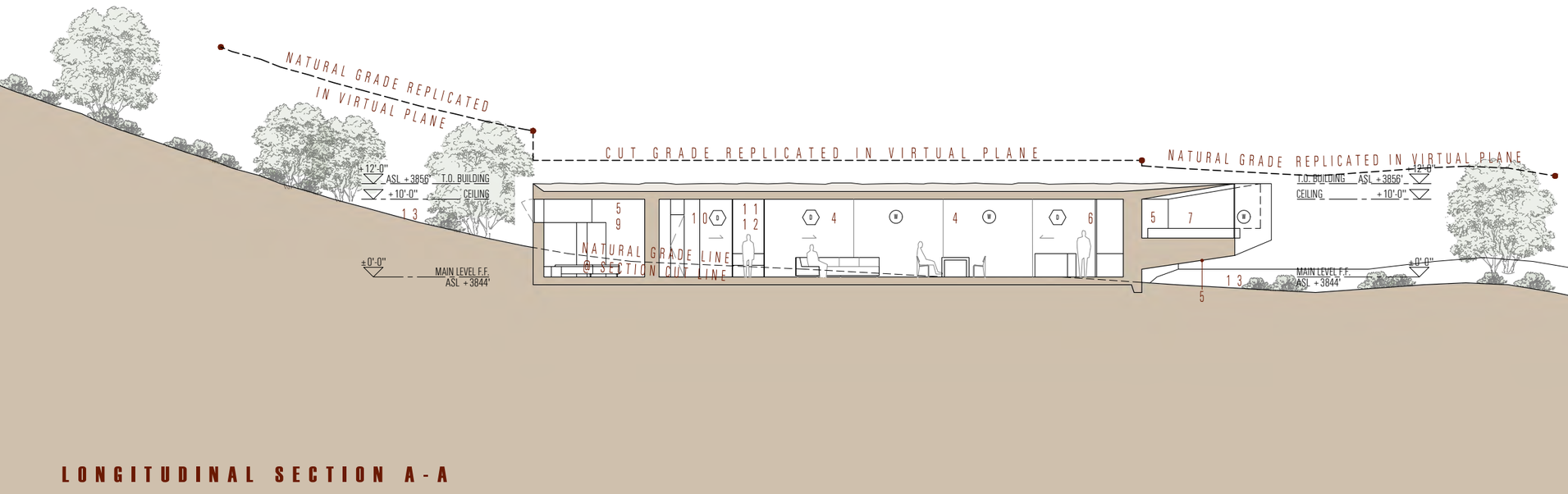
W WINDOW

Scale: 1/16" = 1'-0"

6.3 Lot 11 Main House Main Elevations

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



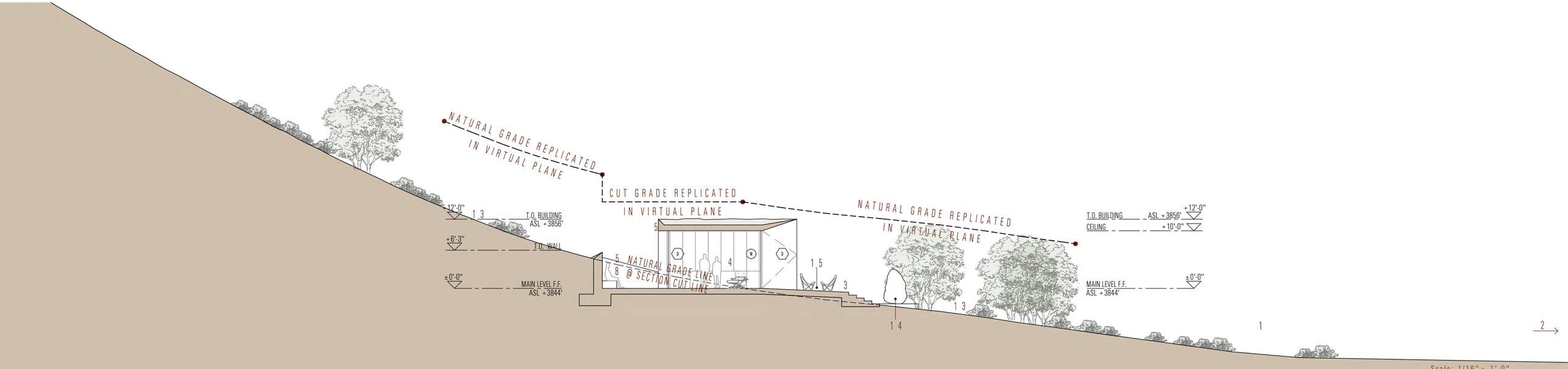
MAIN HOUSE LEGEND

1. TRAIL / REVEGETATED FIRE ACCESS ROAD
2. GUEST PARKING BETWEEN TREES
3. FRONT PORCH / TERRACE
4. MAIN LIVING / DINING ROOM
5. FAIR-FACED CONCRETE (CAST STONE)
6. BLIND / ACCESSIBLE ALUM KITCHEN WALL
7. CANTILEVERED DRY SAUNA W/ STEPPED UP SEATING
8. SLOPE TERRACE
9. MAIN BEDROOM
10. SITTING ROOM
11. PRIVATE BATH
12. PRIVATE SHOWER
13. NATIVE LANDSCAPE
14. ROCK PEDESTAL
15. FIREPIT

D DOOR

W WINDOW

LONGITUDINAL SECTION A-A



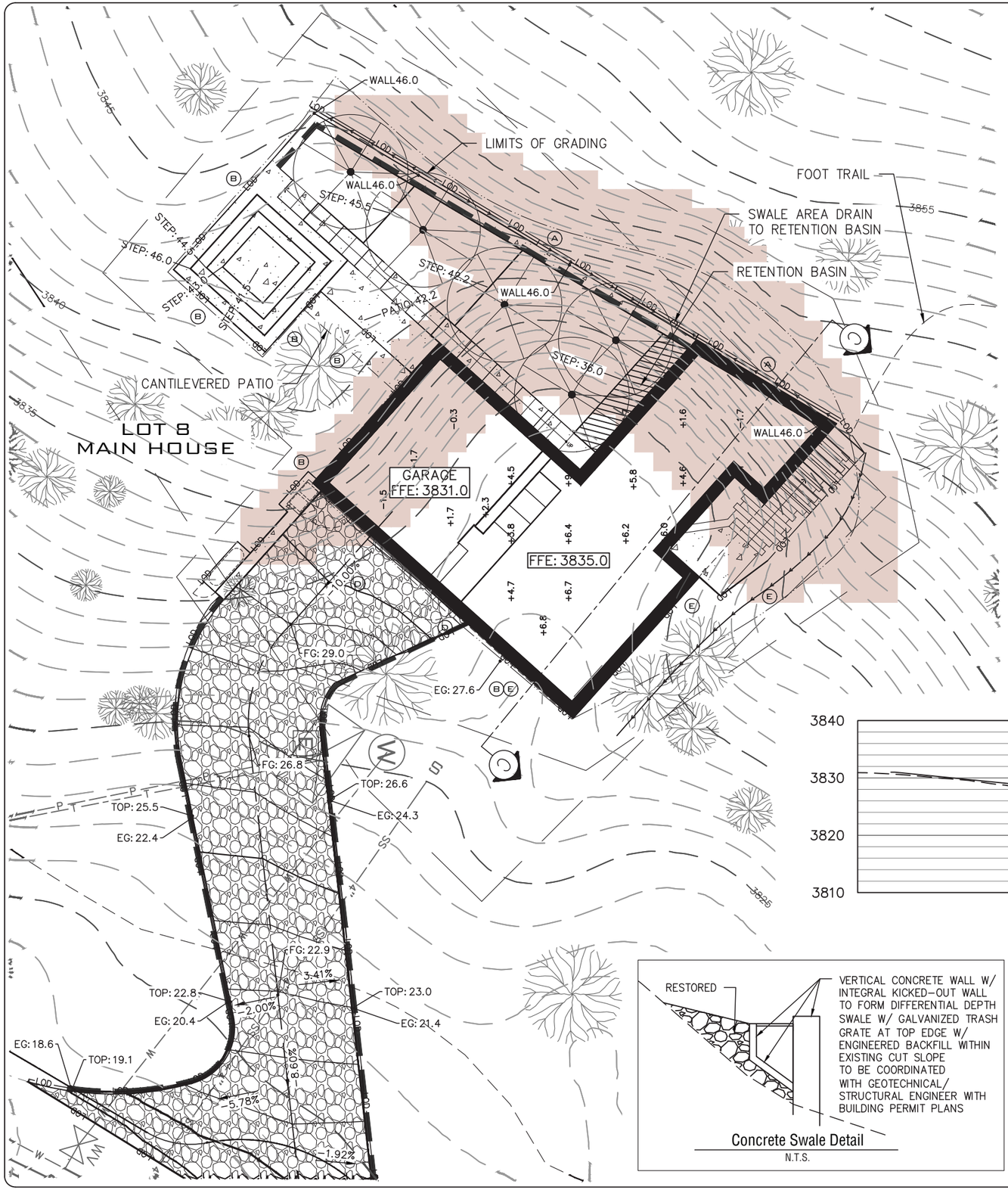
TRANSVERSE SECTION B-B

Scale: 1/16" = 1'-0"

6.4 Lot 11 Main House Required Sections

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026



LEGEND

- EXISTING CONTOURS
- EXISTING TREE
- LIMITS OF GRADING
- PROPOSED CONTOURS
- RETAINING WALL
- 30% SLOPE
- PROPOSED CONCRETE
- PERMEABLE PAVEMENT DRIVEWAY
- LANDSCAPE
- POOL/HOT TUB

MAIN HOUSE GRADING NOTES:

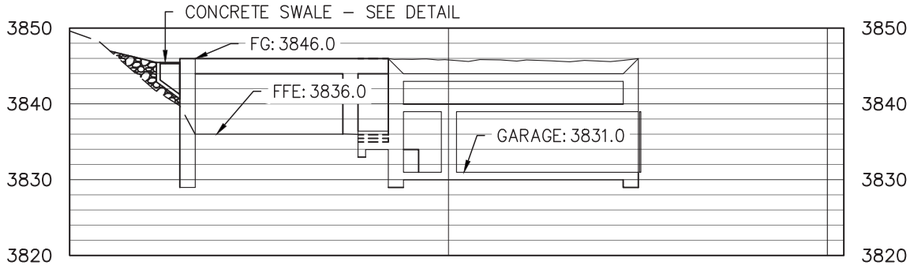
A. DRAINAGE SWALE (FINE GRADING) AT BACK OF RETAINING WALL TO BE PRESERVED PER 10-15B-5(A)

B. NATURAL GRADE TO BE RESTORED AGAINST BUILDING WALL / TERRACE WALL AND PRESERVED PER 10-15B-5(A)

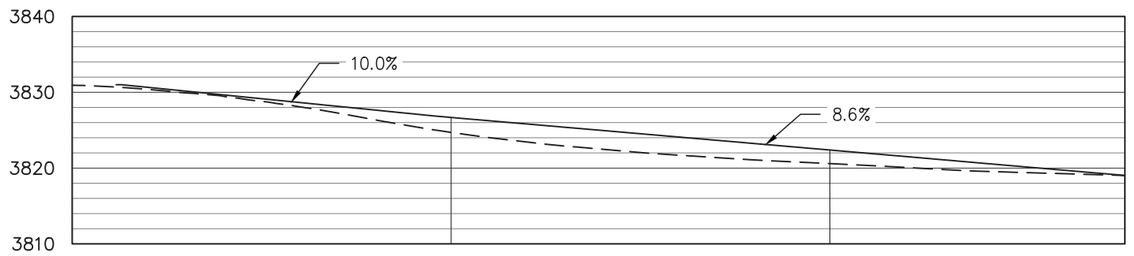
C. CRYPTOBIOTIC SOIL / SAGE ROOF TO BE PRESERVED PER 10-15B-5(A)

D. FINE GRADING TO BECOME PERMEABLE PAVEMENT DRIVEWAY PER 10-15B-5(A)

E. FINE GRADING AT GUEST STAIR / TERRACE / WALL TO BE PRESERVED PER 10-15B-5(A)

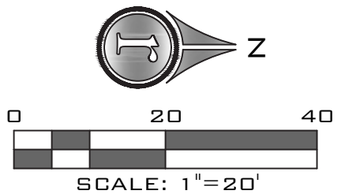


Section C-C



Main House Drive

Concrete Swale Detail
N.T.S.



7.1 Lot 8 Main House Cut/Fill Analysis Grading Plan

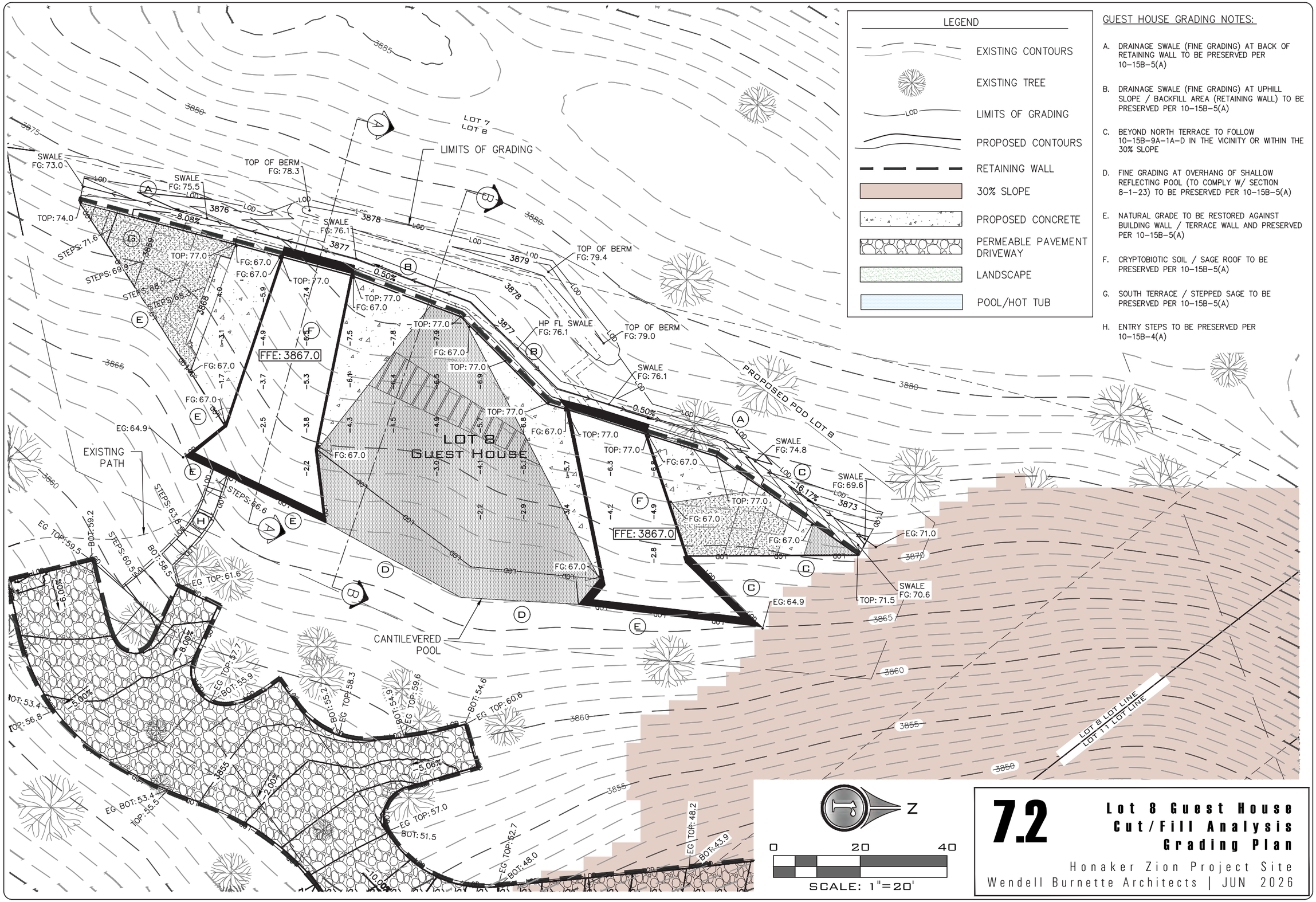
Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

DATE: 6/18/26
JOB NO.: 15107-25
DESIGNED BY: ALN
CHECKED BY: JB
DWG: 15107-25 PR SITE OPT-C
REVISIONS DATE

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

LOT 8 MAIN HOUSE CUT/FILL ANALYSIS GRADING PLAN
FOR
HONAKER HOMES, LLC
SPRINGDALE, UTAH
DRIVEWAY OPTION C

SHEET 2 OF 10 SHEETS



GUEST HOUSE GRADING NOTES:

A. DRAINAGE SWALE (FINE GRADING) AT BACK OF RETAINING WALL TO BE PRESERVED PER 10-15B-5(A)

B. DRAINAGE SWALE (FINE GRADING) AT UPHILL SLOPE / BACKFILL AREA (RETAINING WALL) TO BE PRESERVED PER 10-15B-5(A)

C. BEYOND NORTH TERRACE TO FOLLOW 10-15B-9A-1A-D IN THE VICINITY OR WITHIN THE 30% SLOPE

D. FINE GRADING AT OVERHANG OF SHALLOW REFLECTING POOL (TO COMPLY W/ SECTION 8-1-23) TO BE PRESERVED PER 10-15B-5(A)

E. NATURAL GRADE TO BE RESTORED AGAINST BUILDING WALL / TERRACE WALL AND PRESERVED PER 10-15B-5(A)

F. CRYPTOBIOTIC SOIL / SAGE ROOF TO BE PRESERVED PER 10-15B-5(A)

G. SOUTH TERRACE / STEPPED SAGE TO BE PRESERVED PER 10-15B-5(A)

H. ENTRY STEPS TO BE PRESERVED PER 10-15B-4(A)

N

0 20 40

SCALE: 1"=20'

7.2 Lot 8 Guest House Cut/Fill Analysis Grading Plan

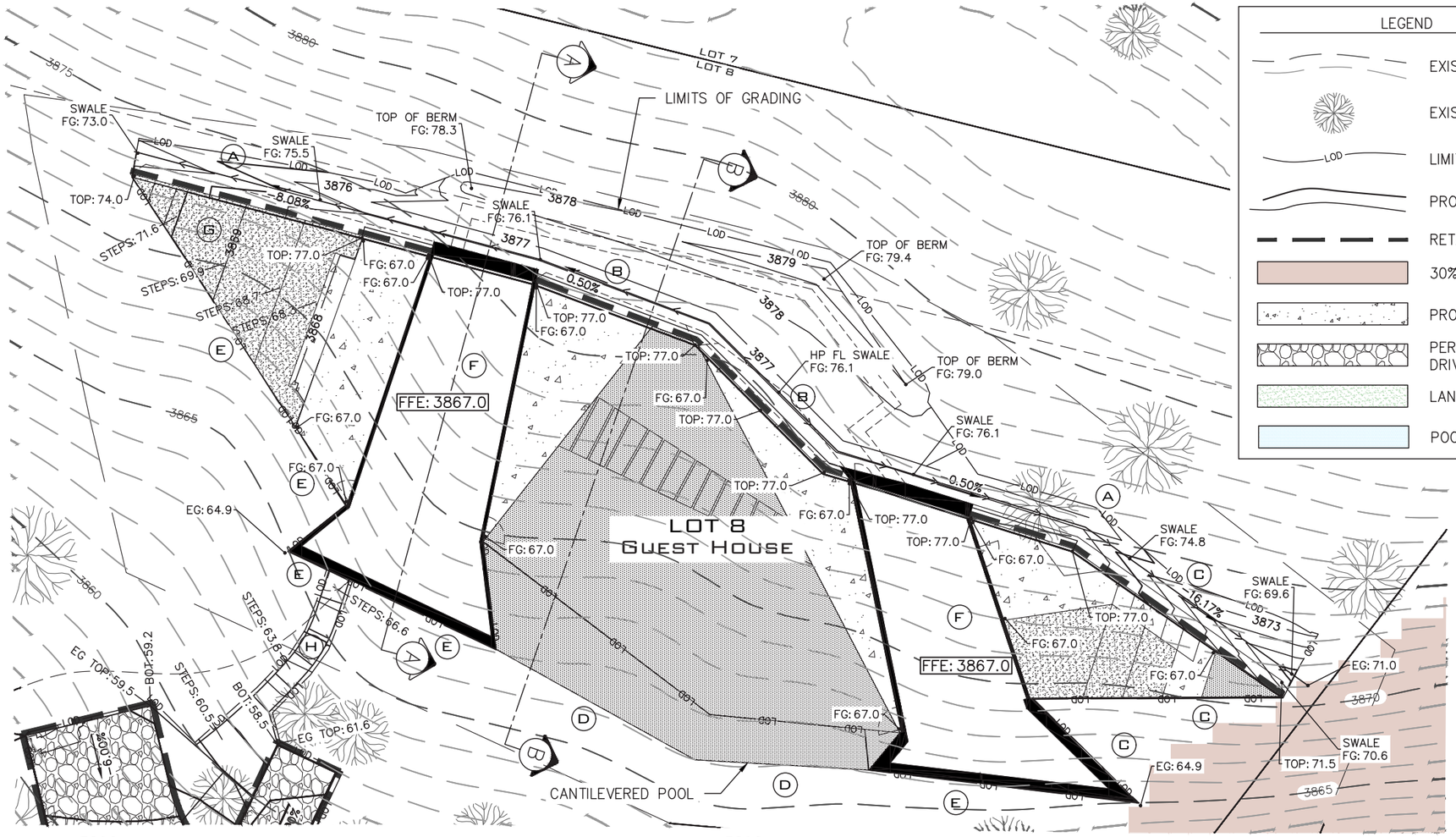
Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

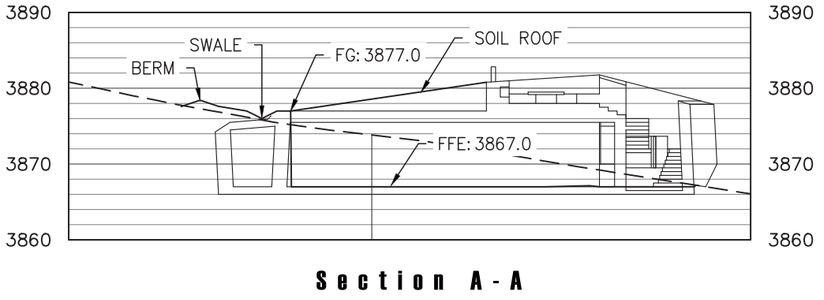
DATE: 6/18/26
JOB NO.: 15107-25
DESIGNED BY: ALN
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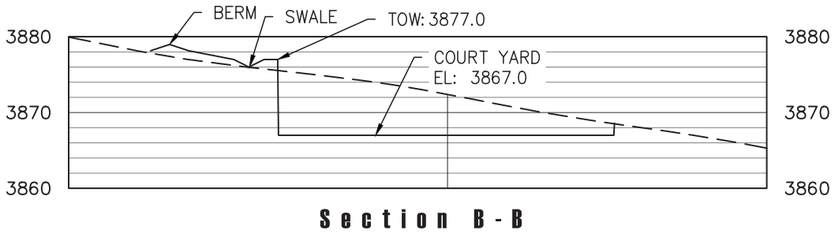
LOT 8 GUEST HOUSE CUT/FILL ANALYSIS GRADING PLAN
FOR
HONAKER HOMES, LLC
SPRINGDALE, UTAH
DRIVEWAY OPTION C

SHEET 3
3 OF 10 SHEETS





Section A-A



Section B-B

LEGEND

- EXISTING CONTOURS
- EXISTING TREE
- LIMITS OF GRADING
- PROPOSED CONTOURS
- RETAINING WALL
- 30% SLOPE
- PROPOSED CONCRETE
- PERMEABLE PAVEMENT DRIVEWAY
- LANDSCAPE
- POOL/HOT TUB

GUEST HOUSE GRADING NOTES:

A. DRAINAGE SWALE (FINE GRADING) AT BACK OF RETAINING WALL TO BE PRESERVED PER 10-15B-5(A)

B. DRAINAGE SWALE (FINE GRADING) AT UPHILL SLOPE / BACKFILL AREA (RETAINING WALL) TO BE PRESERVED PER 10-15B-5(A)

C. BEYOND NORTH TERRACE TO FOLLOW 10-15B-9A-1A-D IN THE VICINITY OR WITHIN THE 30% SLOPE

D. FINE GRADING AT OVERHANG OF SHALLOW REFLECTING POOL (TO COMPLY W/ SECTION 8-1-23) TO BE PRESERVED PER 10-15B-5(A)

E. NATURAL GRADE TO BE RESTORED AGAINST BUILDING WALL / TERRACE WALL AND PRESERVED PER 10-15B-5(A)

F. CRYPTOBIOTIC SOIL / SAGE ROOF TO BE PRESERVED PER 10-15B-5(A)

G. SOUTH TERRACE / STEPPED SAGE TO BE PRESERVED PER 10-15B-5(A)

H. ENTRY STEPS TO BE PRESERVED PER 10-15B-4(A)

N

0 20 40

SCALE: 1"=20'

7.2.1 Lot 8 Guest House Cross Sections

Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

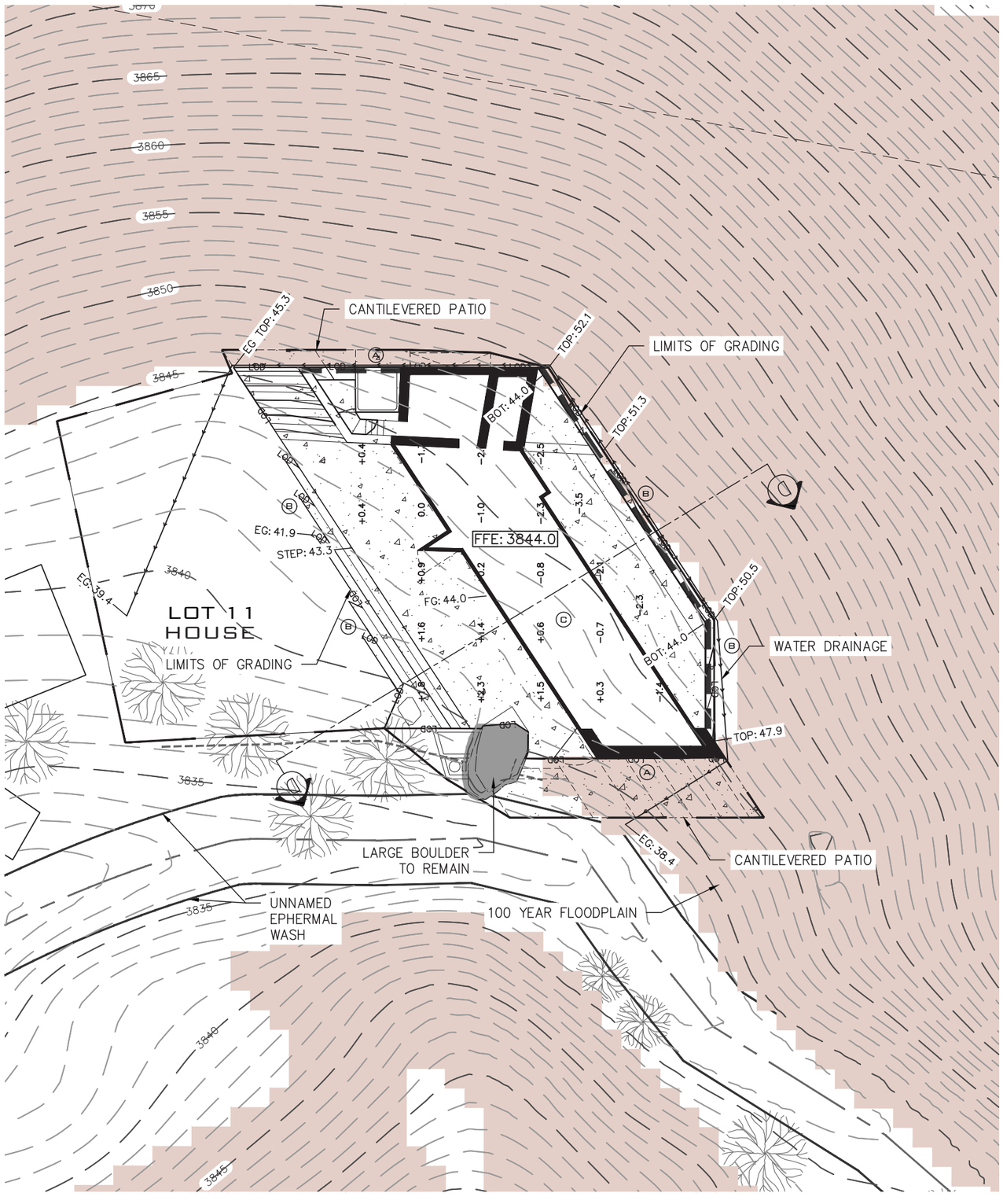
DATE: 6/18/26
JOB NO.: 15107-25
DESIGNED BY: ALN
CHECKED BY: JB
DWG: 15107-25 PR SITE OPT-C

REVISIONS DATE

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

LOT 8 GUEST HOUSE CROSS SECTIONS
FOR
HONAKER HOMES, LLC
SPRINGDALE, UTAH
DRIVEWAY OPTION C

SHEET
3A
3A OF 10 SHEETS



LEGEND

- EXISTING CONTOURS
- EXISTING TREE
- LIMITS OF GRADING (LOD)
- PROPOSED CONTOURS
- RETAINING WALL
- 30% SLOPE
- PROPOSED CONCRETE
- PERMEABLE PAVEMENT DRIVEWAY
- LANDSCAPE
- POOL/HOT TUB

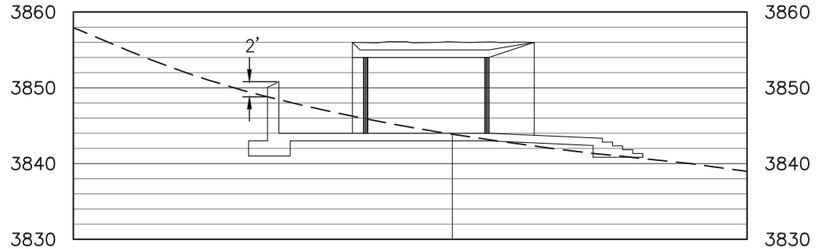
LOT 11 MAIN HOUSE GRADING NOTES:

A. NATURAL GRADE TO BE RESTORED UNDERNEATH CANTILEVERED DRY SAUNA/ WALKWAY AND POOL PRESERVED PER 20-15B-5(A)

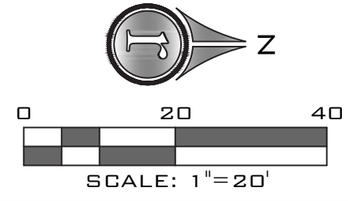
B. NATURAL GRADE TO BE RESTORED AGAINST BUILDING WALL/TERRACE WALL AND PRESERVED PER 10-15B-5(A)

C. CRYPTOBIOTIC SOIL/SAGE ROOF TO BE PRESERVED PER 10-15B-5(A)

LOT 11 MH



Section D-D



7.3

Lot 11 Main House Cut/Fill Analysis Grading Plan

Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

DATE: 6/18/26
JOB NO.: 15107-25
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LOT 11 MAIN HOUSE CUT/FILL ANALYSIS GRADING PLAN
FOR
HONAKER HOMES, LLC
SPRINGDALE, UTAH
DRIVEWAY OPTION C



LOOKING NORTH TOWARDS LOT 8 AND LOT 11 , LOT 9 AND LOT 10 (ON RIGHT)



8.1

Wendell Burnette Architects | JUN 2026

LOOKING NORTH FROM LOT 9 TOWARDS LOT 8 AND LOT 11



LOOKING WEST TOWARDS LOT 8 GUEST HOUSE (FRONT VIEW)

APPROVAL OF PLANNING COMMISSION

ON THIS 13th DAY OF November, 2007, THE PLANNING COMMISSION OF THE TOWN OF SPRINGDALE, UTAH, REVIEWED THE ABOVE SUBDIVISION PLAT AND HAS RECOMMENDED SAME FOR ACCEPTANCE BY THE TOWN.

SPRINGDALE TOWN PLANNING COMMISSION CHAIRMAN

ENGINEER'S APPROVAL

THE ABOVE SUBDIVISION HAS BEEN REVIEWED AND IS APPROVED IN ACCORDANCE WITH INFORMATION ON FILE WITH THIS OFFICE THE 20 DAY OF Nov., 2007

Wayne Thomas

SPRINGDALE TOWN ENGINEER

NOTES

1. ALL BUILDINGS SHALL BE CONSTRUCTED WITHIN THE BUILDING PODS DESIGNATED ON THIS PLAT. USES OUTSIDE THE BUILDING PODS ARE RESTRICTED TO LANDSCAPING AND AGRICULTURAL USE.

2. THE DESIGNATED BUILDING PODS HAVE BEEN LOCATED ABOVE THE 100 FLOODPLAIN OF THE VIRGIN RIVER AND THE UN-NAMED WASH RUNNING THROUGH THE PROJECT, AS DETERMINED BY VARIOUS STUDIES, BUT A FLOOD HAZARD DOES EXIST ON THESE LOTS DUE TO THE PROXIMITY OF THE WASH. BUYERS AND HOMEBUILDERS ARE HEREBY NOTIFIED OF SAID HAZARD. BY PURCHASING OR BUILDING ON THESE LOTS, BUYERS AGREE TO HOLD THE TOWN OF SPRINGDALE AND THE DEVELOPER HARMLESS IN EVENT OF FLOODING CAUSED BY FORCES OF NATURE.

3. DESIGNATED FIRE LANES AS SHOWN ON THIS PLAT SHALL REMAIN OPEN TO EMERGENCY SERVICE VEHICALS AT ALL TIMES. THE FIRE LANES SHALL BE POSTED NO PARKING.

4. THE SANITARY SEWER LINE AND PUMP ARE PRIVATELY OWNED BY THE HOMEOWNERS' ASSOCIATION TO THE POINT OF DISCHARGE INTO THE TOWN SEWER MAIN WEST OF THE VIRGIN RIVER. THE COST OF MAINTENANCE AND OPERATION OF THE SYSTEM ARE TO BE PAID IN ACCORDANCE WITH THE CONDITIONS, COVENANTS AND CONDITIONS.

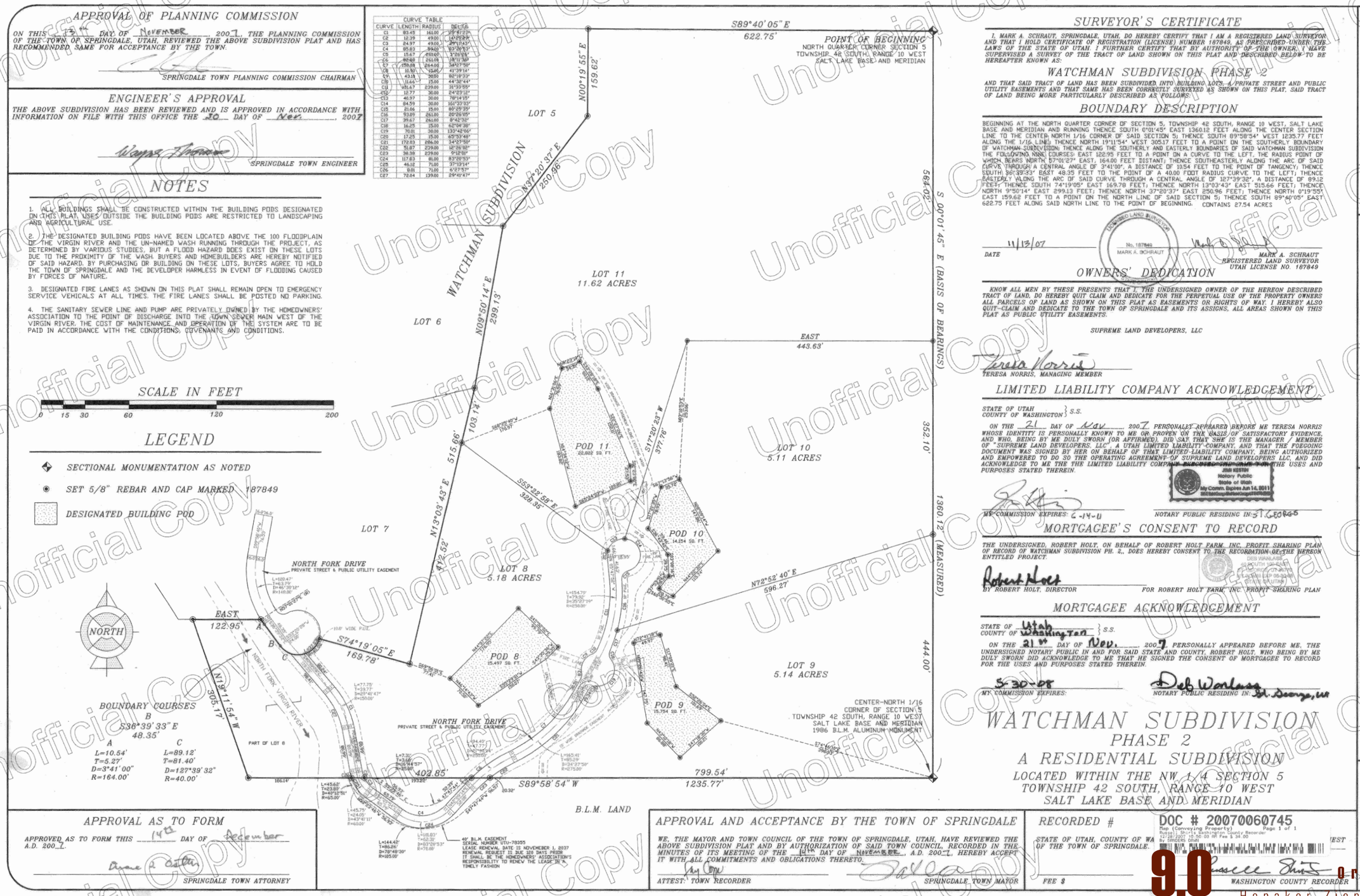
SCALE IN FEET

0 15 30 60 120 200

LEGEND

- SECTIONAL MONUMENTATION AS NOTED
- SET 5/8" REBAR AND CAP MARKED 187849
- DESIGNATED BUILDING POD

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	83.45	161.00	29°41'29"
C2	12.39	49.00	14°29'29"
C3	24.97	49.00	29°11'43"
C4	85.83	59.00	83°20'53"
C5	15.67	461.00	1°56'54"
C6	80.82	261.00	17°44'38"
C7	159.08	264.00	34°31'50"
C8	10.30	15.00	41°39'14"
C9	43.18	39.00	63°26'39"
C10	11.66	15.00	44°32'44"
C11	185.67	239.00	31°33'55"
C12	12.77	30.00	24°23'12"
C13	40.97	30.00	78°14'15"
C14	84.59	30.00	161°33'03"
C15	21.06	15.00	80°26'35"
C16	93.09	261.00	20°26'05"
C17	39.67	261.00	8°42'32"
C18	16.25	15.00	62°04'38"
C19	70.01	30.00	133°42'06"
C20	17.25	15.00	65°53'48"
C21	172.63	286.00	34°35'50"
C22	51.87	239.00	12°26'09"
C23	38.38	239.00	9°12'01"
C24	117.83	81.00	83°19'53"
C25	46.12	71.00	37°12'14"
C26	9.81	71.00	6°21'57"
C27	72.64	139.00	29°41'47"



APPROVAL AS TO FORM

APPROVED AS TO FORM THIS 14th DAY OF December A.D. 200 7

Duane A Carter

SPRINGDALE TOWN ATTORNEY

APPROVAL AND ACCEPTANCE BY THE TOWN OF SPRINGDALE

WE, THE MAYOR AND TOWN COUNCIL OF THE TOWN OF SPRINGDALE, UTAH, HAVE REVIEWED THE ABOVE SUBDIVISION PLAT AND BY AUTHORIZATION OF SAID TOWN COUNCIL, RECORDED IN THE MINUTES OF ITS MEETING OF THE 13th DAY OF November, A.D. 2007, HEREBY ACCEPT IT WITH ALL COMMITMENTS AND OBLIGATIONS THERETO.

ATTEST: TOWN RECORDER

SPRINGDALE TOWN MAYOR

RECORDED

STATE OF UTAH, COUNTY OF WA[illegible] OF THE TOWN OF SPRINGDALE.

FEE $

DOC # 20070060745
Map (Conveying Property) Page 1 of 1
Russell Shirts Washington County Recorder
12/28/2007 10:30:03 AM Fee $ 34.00
By SNIDERS DOAB

WASHINGTON COUNTY RECORDER

SURVEYOR'S CERTIFICATE

I, MARK A. SCHRAUT, SPRINGDALE, UTAH, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR AND THAT I HOLD CERTIFICATE OF REGISTRATION (LICENSE) NUMBER 187849, AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNER, I HAVE SUPERVISED A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW TO BE HEREAFTER KNOWN AS:

WATCHMAN SUBDIVISION PHASE 2

AND THAT SAID TRACT OF LAND HAS BEEN SUBDIVIDED INTO BUILDING LOTS, A PRIVATE STREET AND PUBLIC UTILITY EASEMENTS AND THAT SAME HAS BEEN CORRECTLY SURVEYED AS SHOWN ON THIS PLAT. SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BOUNDARY DESCRIPTION

BEGINNING AT THE NORTH QUARTER CORNER OF SECTION 5, TOWNSHIP 42 SOUTH, RANGE 10 WEST, SALT LAKE BASE AND MERIDIAN AND RUNNING THENCE SOUTH 0°01'45" EAST 1360.12 FEET ALONG THE CENTER SECTION LINE TO THE CENTER NORTH 1/16 CORNER OF SAID SECTION 5; THENCE SOUTH 89°58'54" WEST 1235.77 FEET ALONG THE 1/16 LINE; THENCE NORTH 19°11'54" WEST 305.17 FEET TO A POINT ON THE SOUTHERLY BOUNDARY OF WATCHMAN SUBDIVISION; THENCE ALONG THE SOUTHERLY AND EASTERLY BOUNDARIES OF SAID WATCHMAN SUBDIVISION THE FOLLOWING NINE COURSES: EAST 122.95 FEET TO A POINT ON A CURVE TO THE LEFT, THE RADIUS POINT OF WHICH BEARS NORTH 57°01'27" EAST, 164.00 FEET DISTANT; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 3°41'00", A DISTANCE OF 10.54 FEET TO THE POINT OF TANGENCY; THENCE SOUTH 36°39'33" EAST 48.35 FEET TO THE POINT OF A 40.00 FOOT RADIUS CURVE TO THE LEFT; THENCE EASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 127°39'32", A DISTANCE OF 89.12 FEET; THENCE SOUTH 74°19'05" EAST 169.78 FEET; THENCE NORTH 13°03'43" EAST 515.66 FEET; THENCE NORTH 9°50'14" EAST 299.13 FEET; THENCE NORTH 37°20'37" EAST 250.96 FEET; THENCE NORTH 0°19'55" EAST 159.62 FEET TO A POINT ON THE NORTH LINE OF SAID SECTION 5; THENCE SOUTH 89°40'05" EAST 622.75 FEET ALONG SAID NORTH LINE TO THE POINT OF BEGINNING. CONTAINS 27.54 ACRES

11/13/07
DATE

No. 187849
MARK A. SCHRAUT

MARK A. SCHRAUT
REGISTERED LAND SURVEYOR
UTAH LICENSE NO. 187849

OWNERS' DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT I, THE UNDERSIGNED OWNER OF THE HEREON DESCRIBED TRACT OF LAND, DO HEREBY QUIT CLAIM AND DEDICATE FOR THE PERPETUAL USE OF THE PROPERTY OWNERS ALL PARCELS OF LAND AS SHOWN ON THIS PLAT AS EASEMENTS OR RIGHTS OF WAY. I HEREBY ALSO QUIT-CLAIM AND DEDICATE TO THE TOWN OF SPRINGDALE AND ITS ASSIGNS, ALL AREAS SHOWN ON THIS PLAT AS PUBLIC UTILITY EASEMENTS.

SUPREME LAND DEVELOPERS, LLC

Teresa Norris
TERESA NORRIS, MANAGING MEMBER

LIMITED LIABILITY COMPANY ACKNOWLEDGEMENT

STATE OF UTAH
COUNTY OF WASHINGTON } S.S.

ON THE 21 DAY OF Nov 2007 PERSONALLY APPEARED BEFORE ME TERESA NORRIS WHOSE IDENTITY IS PERSONALLY KNOWN TO ME OR PROVEN ON THE BASIS OF SATISFACTORY EVIDENCE, AND WHO, BEING BY ME DULY SWORN (OR AFFIRMED), DID SAY THAT SHE IS THE MANAGER / MEMBER OF "SUPREME LAND DEVELOPERS, LLC" A UTAH LIMITED LIABILITY COMPANY, AND THAT THE FOEGOING DOCUMENT WAS SIGNED BY HER ON BEHALF OF THAT LIMITED-LIABILITY COMPANY, BEING AUTHORIZED AND EMPOWERED TO DO SO THE OPERATING AGREEMENT OF SUPREME LAND DEVELOPERS LLC, AND DID ACKNOWLEDGE TO ME THE THE LIMITED LIABILITY COMPANY EXECUTED THE SAME FOR THE USES AND PURPOSES STATED THEREIN.

JIM KESTEN
Notary Public
State of Utah
My Comm. Expires Jun 14, 2011

MY COMMISSION EXPIRES: 6-14-11

NOTARY PUBLIC RESIDING IN: St George

MORTGAGEE'S CONSENT TO RECORD

THE UNDERSIGNED, ROBERT HOLT, ON BEHALF OF ROBERT HOLT FARM, INC. PROFIT SHARING PLAN OF RECORD OF WATCHMAN SUBDIVISION PH. 2,, DOES HEREBY CONSENT TO THE RECORDATION OF THE HEREON ENTITLED PROJECT.

Robert Holt
BY ROBERT HOLT, DIRECTOR

FOR ROBERT HOLT FARM, INC. PROFIT SHARING PLAN

MORTGAGEE ACKNOWLEDGEMENT

STATE OF Utah
COUNTY OF Washington } S.S.

ON THE 21st DAY OF Nov., 2007 PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC IN AND FOR SAID STATE AND COUNTY, ROBERT HOLT, WHO BEING BY ME DULY SWORN DID ACKNOWLEDGE TO ME THAT HE SIGNED THE CONSENT OF MORTGAGEE TO RECORD FOR THE USES AND PURPOSES STATED THEREIN.

5-30-08
MY COMMISSION EXPIRES:

Deb Worlaug
NOTARY PUBLIC RESIDING IN: St. George, UT

WATCHMAN SUBDIVISION
PHASE 2
A RESIDENTIAL SUBDIVISION
LOCATED WITHIN THE NW 1/4 SECTION 5
TOWNSHIP 42 SOUTH, RANGE 10 WEST
SALT LAKE BASE AND MERIDIAN

DATE	REVISIONS
11/02/07	PER TOWN ENGINEER & ATTORNEY REVIEW

MARK A. SCHRAUT
PROFESSIONAL LAND SURVEYOR
100 NORTH FORK DRIVE SPRINGDALE UT 84767
PH (435)-772-3223

WATCHMAN SUBDIVISION
PHASE 2
LOCATED WITHIN THE NW 1/4 OF SECTION 5
TOWNSHIP 42 SOUTH, RANGE 10 WEST
SALT LAKE BASE AND MERIDIAN

SEPTEMBER 2007

SHEET 1 OF 1

Unofficial Copy

9.0 Original Plat
Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

OWNER'S DEDICATION:

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED OWNERS OF THE HEREON DESCRIBED TRACT OF LAND HAVING CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, PODS AND PUBLIC UTILITY EASEMENTS TO BE HEREAFTER KNOWN AS:

WATCHMAN SUBDIVISION PHASE 2
PARTIAL AMENDMENT "A"

FOR GOOD AND VALUABLE CONSIDERATION RECEIVED, DOES HEREBY DEDICATE AND CONVEY TO THE TOWN OF SPRINGDALE FOR PERPETUAL USE OF THE PUBLIC ALL PARCELS OF LAND SHOWN ON THIS PLAT AS UTILITIES EASEMENTS. ALL LOTS AND EASEMENTS ARE AS NOTED OR SHOWN. THE OWNER DOES HEREBY WARRANT AND ASSIGN TO THE TOWN OF SPRINGDALE AND ITS SUCCESSORS, TITLE TO ALL PROPERTY DEDICATED AND CONVEYED TO PUBLIC USE HEREIN AGAINST THE CLAIMS OF ALL PERSONS.

IN WITNESS WHEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____DAY OF _____, 20_____.

HONAKER HOMES, LLC, A KENTUCKY LIMITED LIABILITY COMPANY

_____

MANAGER (PRINT) - _____

ACKNOWLEDGMENT:

STATE OF UTAH)
COUNTY OF WASHINGTON) SS.

ON THIS _____ DAY OF _____ IN THE YEAR_____ , BEFORE ME _____. A NOTARY PUBLIC, PERSONALLY APPEARED _____ PROVED ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO IN THIS DOCUMENT, AND ACKNOWLEDGED (HE/SHE) EXECUTED THE SAME.

FULL NAME SIGNATURE: _____

FULL NAME PRINT: _____

COMMISSION NO.: _____

EXPIRATION DATE: _____

A NOTARY PUBLIC COMMISSIONED IN THE STATE OF _____

(OFFICIAL SEAL NOT REQUIRED PER UTAH CODE 46-1-16(7))

DO NOT STAMP

GENERAL NOTES AND RESTRICTIONS:

1. ALL BUILDINGS SHALL BE CONSTRUCTED WITHIN THE BUILDING PODS DESIGNATED ON THIS PLAT. USES OUTSIDE THE BUILDING PODS ARE RESTRICTED TO LANDSCAPING AND AGRICULTURAL USE.

2. THE DESIGNATED BUILDING PODS HAVE BEEN LOCATED ABOVE THE 100 YEAR FLOODPLAIN OF THE VIRGIN RIVER AND THE UN-NAMED WASH RUNNING THROUGH THE PROJECT, AS DETERMINED BY VARIOUS STUDIES, BUT A FLOOD HAZARD DOES EXIST ON THESE LOTS DUE TO THE PROXIMITY OF THE WASH. BUYERS AND HOMEBUILDERS ARE HEREBY NOTIFIED OF SAID HAZARD. BY PURCHASING OR BUILDING ON THESE LOTS, BUYERS AGREE TO HOLD THE TOWN OF SPRINGDALE AND THE DEVELOPER HARMLESS IN THE EVENT OF FLOODING CAUSED BY FORCES OF NATURE.

3. DESIGNATED FIRE LANES AS SHOWN ON THIS PLAT SHALL REMAIN OPEN TO EMERGENCY SERVICE VEHICLES AT ALL TIMES. THE FIRE LANES SHALL BE POSTED NO PARKING.

4. THE SANITARY SEWER LINE AND PUMP ARE PRIVATELY OWNED BY THE HOMEOWNERS' ASSOCIATION TO THE POINT OF DISCHARGE INTO THE TOWN SEWER MAIN WEST OF THE VIRGIN RIVER. THE COST OF MAINTENANCE AND OPERATION OF THE SYSTEM ARE TO BE PAID IN ACCORDANCE WITH THE COVENANTS AND CONDITIONS.

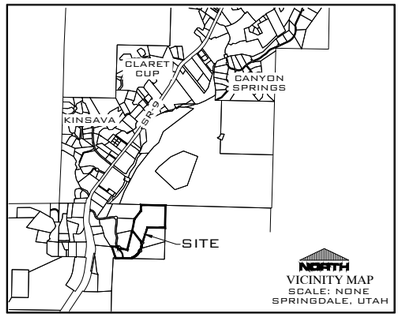
AMENDMENT NOTE:

THE PURPOSE OF AMENDING THE WATCHMAN SUBDIVISION PHASE 2 AS FOUND ON FILE WITH THE WASHINGTON COUNTY RECORDER'S OFFICE, ENTRY NO. 20070060745, IS TO CHANGE THE LOCATION OF THE ORIGINAL POD LOCATIONS OF LOTS 8 & 11. TO ADJUST THE LOCATION OF THE LINE BETWEEN SAID LOTS 8 & 11. TO EXTEND THE 20.0' FIRE LANE OF LOT 11 TO THE NEW POD LOCATION. NO OTHER CHANGES ARE MADE OR INTENDED WITH THIS PLAT.

LINE TABLE		
LINE	LENGTH	DIRECTION
L1	15.20'	N 55°58'13" E
L2	42.66'	S 0°51'52" E
L3	12.47'	S 30°32'44" W
L4	13.43'	S 38°24'20" W
L5	43.61'	S 4°00'13" E
L6	55.13'	S 77°09'08" W
L7	38.84'	S 68°39'06" E
L8	98.84'	S 4°17'57" W
L9	93.39'	S 23°52'53" W
L10	24.17'	S 75°48'39" W
L11	43.01'	S 77°04'38" W
L12	9.06'	S 80°15'34" W
L13	62.99'	N 6°53'44" E
L14	65.47'	N 12°59'48" E
L15	28.84'	N 27°13'35" E
L16	79.26'	N 37°07'19" E
L17	30.45'	N 66°11'49" E
L18	14.88'	N 76°57'34" E
L19	70.45'	S 35°14'06" E
L20	67.48'	S 18°45'02" W
L21	13.63'	S 53°48'38" W
L22	30.20'	N 49°04'12" W
L23	44.95'	S 41°53'26" W
L24	59.29'	N 50°46'46" W
L25	102.25'	N 28°17'27" E

LINE TABLE		
LINE	LENGTH	DIRECTION
L26	30.46'	N 16°05'01" W
L27	4.31'	S 66°13'21" W
L28	31.58'	N 0°51'52" W
L29	13.53'	N 1°15'14" E
L30	10.06'	N 13°31'11" E
L31	50.66'	N 55°51'44" E
L32	20.42'	N 89°03'50" E

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	22.79'	40.23'	32°27'13"
C2	29.33'	39.99'	42°01'34"
C3	37.00'	39.90'	53°07'43"
C4	83.45'	161.00'	29°41'54"
C5	72.05'	139.00'	29°41'54"
C7	8.22'	71.00'	6°37'54"
C8	12.66'	49.00'	14°47'58"
C9	12.77'	30.00'	24°23'10"
C10	40.97'	30.00'	78°14'47"



SURVEYOR'S CERTIFICATE:

I, BRANDON E. ANDERSON, PROFESSIONAL LAND SURVEYOR NUMBER 4938716, HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT AND HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRIBED HEREON IN ACCORDANCE WITH SECTION 17-73-504 AND HEREBY CERTIFY ALL MEASUREMENTS AND DESCRIPTIONS ARE CORRECT. MONUMENTS WILL BE SET AS REPRESENTED ON THIS PLAT I FURTHER CERTIFY THAT BY AUTHORITY OF THE HEREON OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND HAVE SUBDIVIDED THE SAME TRACT INTO LOTS, PODS & PUBLIC UTILITY EASEMENTS, TO BE HEREINAFTER KNOWN AS:

WATCHMAN SUBDIVISION PHASE 2
PARTIAL AMENDMENT "A"

THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND POINTS ESTABLISHED ON THE GROUND IN ACCORDANCE WITH THE HEREON LEGAL DESCRIPTION.

PROFESSIONAL LAND SURVEYOR CERTIFICATE NO. 4938716 BRANDON E. ANDERSON STATE OF UTAH

_____
DATE:

_____
BRANDON E. ANDERSON — CERTIFICATE NO. 4938716

LEGAL DESCRIPTION:

ALL OF LOTS 8 & 11 OF WATCHMAN SUBDIVISION PHASE 2, AS FOUND ON FILE WITH THE WASHINGTON COUNTY RECORDER'S OFFICE, ENTRY NO. 20070060745. BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEASTERLY CORNER SAID LOT 11, SAID POINT BEING THE NORTH QUARTER CORNER OF SECTION 5, TOWNSHIP 42 SOUTH, RANGE 10 WEST, SALT LAKE BASE & MERIDIAN, AND RUNNING;

THENCE SOUTH 00°01'45" EAST 564.02 FEET ALONG THE CENTER SECTION LINE AND EASTERLY LINE TO THE SOUTHEASTERLY CORNER SAID LOT 11;
THENCE ALONG THE SOUTHERLY LINE SAID LOT 11 THE FOLLOWING (3) COURSES;
THENCE WEST 443.63 FEET;
THENCE SOUTH 17°20'23" WEST 377.76 FEET TO THE NORTHERLY LINE OF NORTH FORK DRIVE;
THENCE SOUTHWESTERLY 53.74 FEET ALONG AN ARC OF A 30.00 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 03°39'32" WEST, LONG CHORD BEARS SOUTH 42°20'28" WEST 46.84 FEET WITH A CENTRAL ANGLE OF 102°38'09") ALONG SAID NORTHERLY LINE NORTH FORK DRIVE TO AND ALONG THE EASTERLY LINE SAID LOT 8;
THENCE ALONG SAID EASTERLY LINE LOT 8 AND WESTERLY LINE SAID NORTH FORK DRIVE THE FOLLOWING (8) COURSES;
THENCE SOUTH 05°47'52" EAST 41.63 FEET;
THENCE SOUTHERLY 131.67 FEET ALONG AN ARC OF A 239.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 84°12'11" WEST, LONG CHORD BEARS SOUTH 09°59'05" WEST 130.00 FEET WITH A CENTRAL ANGLE OF 31°33'55");
THENCE SOUTHWESTERLY 11.66 FEET ALONG AN ARC OF A 15.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 64°14'01" WEST, LONG CHORD BEARS SOUTH 48°03'13" WEST 11.38 FEET WITH A CENTRAL ANGLE OF 44°32'44");
THENCE SOUTHWESTERLY 43.10 FEET ALONG AN ARC OF A 30.00 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 19°39'34" EAST, LONG CHORD BEARS SOUTH 29°10'54" WEST 39.49 FEET WITH A CENTRAL ANGLE OF 82°18'33");
THENCE SOUTHERLY 10.90 FEET ALONG AN ARC OF A 15.00 FEET RADIUS CURVE TO THE RIGHT (CENTER BEARS SOUTH 78°01'22" WEST, LONG CHORD BEARS SOUTH 08°50'25" WEST 10.66 FEET WITH A CENTRAL ANGLE OF 41°39'14");
THENCE SOUTH 28°43'00" WEST 30.51 FEET;
THENCE SOUTHWESTERLY 158.80 FEET ALONG AN ARC OF A 264.00 FOOT RADIUS CURVE TO THE RIGHT (CENTER BEARS NORTH 60°20'27" WEST, LONG CHORD BEARS SOUTH 46°53'26" WEST 156.41 FEET WITH A CENTRAL ANGLE OF 34°27'50");
THENCE SOUTHWESTERLY 78.59 FEET ALONG AN ARC OF A 261.00 FOOT RADIUS CURVE TO THE LEFT (CENTER BEARS SOUTH 26°49'08" EAST, LONG CHORD BEARS SOUTH 54°33'17" WEST 78.30 FEET WITH A CENTRAL ANGLE OF 18°11'38") TO THE SOUTHERLY LINE SAID LOT 8;
THENCE SOUTH 89°58'54" WEST 403.00 FEET ALONG SAID SOUTHERLY LINE TO THE SOUTHWESTERLY CORNER LOT 8;
THENCE NORTH 19°11'54" WEST 305.17 FEET ALONG THE WESTERLY LINE TO THE NORTHWESTERLY CORNER LOT 8;
THENCE ALONG THE NORTHWESTERLY LINE SAID LOT 8 THE FOLLOWING (6) COURSES;
THENCE EAST 122.95 FEET TO THE WESTERLY LINE SAID NORTH FORK DRIVE;
THENCE ALONG SAID WESTERLY LINE NORTH FORK DRIVE THE FOLLOWING (2) COURSES;
THENCE SOUTHEASTERLY 10.54 FEET ALONG AN ARC OF A 164.00 FOOT RADIUS NON-TANGENT CURVE TO THE LEFT (CENTER BEARS NORTH 57°21'10" EAST, LONG CHORD BEARS SOUTH 34°29'18" EAST 10.54 FEET WITH A CENTRAL ANGLE OF 03°41'00");
THENCE SOUTH 36°39'33" EAST 48.35 FEET;
THENCE EASTERLY 89.12 FEET ALONG AN ARC OF A 40.00 FEET RADIUS CURVE TO THE LEFT (CENTER BEARS NORTH 53°20'27" EAST, LONG CHORD BEARS NORTH 79°30'48" EAST 71.80 FEET WITH A CENTRAL ANGLE OF 127°39'18");
THENCE SOUTH 74°19'05" EAST 169.78 FEET;
THENCE NORTH 13°03'19" EAST 515.66 FEET TO AND ALONG THE WESTERLY LINE SAID LOT 11;
THENCE ALONG SAID WESTERLY LINE LOT 11 THE FOLLOWING (3) COURSES;
THENCE NORTH 09°50'14" EAST 299.13 FEET;
THENCE NORTH 37°20'37" EAST 250.96 FEET;
THENCE NORTH 00°19'55" EAST 159.62 FEET TO THE NORTHWESTERLY CORNER SAID LOT 11;
THENCE SOUTH 89°40'05" EAST 622.75 FEET ALONG THE NORTHERLY LINE SAID LOT 11 TO THE POINT OF BEGINNING.

CONTAINING 736,855 SQUARE FEET OR 16.92 ACRES.

LEGEND:

- NOTHING SET OR FOUND
- FOUND REBAR & CAP (B & G)
- FOUND REBAR & CAP (SCHRAUTE)
- SET CORNER - 5/8" X 20" REBAR & PLASTIC CAP - ROSENBERG ASSOCIATES
- FOUND SECTION MONUMENTATION AS SHOWN AND DESCRIBED
- DESIGNATED BUILDING POD
- 20.0' WIDE FIRE LANE
- PODS 9 & 10 TO REMAIN AS PER ORIGINAL PLAT

THE FINAL PLAT FOR
WATCHMAN SUBDIVISION
PHASE 2, PARTIAL AMENDMENT "A"

LOCATED IN THE SOUTHWEST QUARTER OF SECTION 32
TOWNSHIP 41 SOUTH, RANGE 10 WEST,
SALT LAKE BASE AND MERIDIAN
TOWN OF SPRINGDALE, WASHINGTON COUNTY, UTAH

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 EAST RIVERSIDE DRIVE, SUITE A-2,ST. GEORGE, UTAH 84790
PH (435) 673-8586 FX (435) 673-8397 - WWW.RACIVIL.COM

SURVEY-PPA FILE NUMBER:	03/24/2026 DATE:	C.G.A. DRAWN:
15107-25 JOB NUMBER:	1"=80' SCALE:	B.E.A. CHECKED:

ENGINEER'S APPROVAL:

THE HEREON SUBDIVISION HAS BEEN REVIEWED AND IS APPROVED IN ACCORDANCE WITH INFORMATION ON FILE IN THIS OFFICE, THIS _____ DAY OF _____ , 20__.

_____
ENGINEER
TOWN OF SPRINGDALE, UTAH

APPROVAL OF THE PLANNING COMMISSION:

ON THIS THE _____ DAY OF _____ , A.D. 20__ THE PLANNING COMMISSION OF THE TOWN OF SPRINGDALE, UTAH HAVING REVIEWED THE ABOVE SUBDIVISION PLAT AND HAVING FOUND THAT IT COMPLIES WITH THE REQUIREMENTS OF THE TOWN'S ORDINANCES, AND BY AUTHORIZATION OF SAID COMMISSION HEREBY APPROVE SAID SUBDIVISION FOR ACCEPTANCE BY THE TOWN OF SPRINGDALE, UTAH.

_____
CHAIRMAN OF THE PLANNING COMMISSION
TOWN OF SPRINGDALE, UTAH

APPROVAL AS TO FORM:

APPROVED AS TO FORM, THIS _____ DAY OF _____ A.D. 20____.

_____
CITY ATTORNEY
TOWN OF SPRINGDALE, UTAH

TREASURER APPROVAL:

I, WASHINGTON COUNTY TREASURER, CERTIFY ON THIS _____ DAY OF _____ A.D. 20_____ THAT ALL TAXES, SPECIAL ASSESSMENTS, AND FEES DUE AND OWING ON THIS SUBDIVISION PLAT HAVE BEEN PAID IN FULL.

_____
WASHINGTON COUNTY
TREASURER

RECORDED NO: _____

_____ _____
FEE — COUNTY RECORDER
WASHINGTON COUNTY, UTAH

OWNER DEVELOPER
HONAKER HOMES, LLC
7001 AIRPORT ROAD
SELLERSBURG, IN 47172
(502) 377-1

9.1

New Approved Plat

Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

HONAKER ZION PROJECT
LOT 8 LUMEN CALCULATIONS/COUNTS - LOT 8 MAIN HOUSE/GUEST HOUSE

	TYPE	MANUFACTURER	DESCRIPTION	LUMENS	COUNTS	TOTAL LUMENS

HONAKER ZION PROJECT
LUMEN CALCULATIONS/COUNTS - LOT 8 MAIN HOUSE

	TYPE	MANUFACTURER	DESCRIPTION	LUMENS	COUNTS	TOTAL LUMENS
DOWN LIGHT PER CODE(6)	DN	B-K LIGHTING	**MM-WM-LOD-LHP-AL-BC-CE-DS-OSYM-e85-NFL-12-11-WL00-BZP** Surface mounted downlight, provide with dimmable driver	139	6	834
STEP LIGHT PER CODE(13)	JS	DESIGN PLAN	**SP2112-F-D-C (BRONZE)-1 / PPLT00309-P** Surface mounted downlight, provide with dimmable driver	35	13	455
LD DOWN LIGHT PER CODE(13)	TD	B-K LIGHTING	**MN-CM-LOD-LHP-AL-PM-CE-e82-MFL-12-11-WL00-BLP** Surface mounted downlight, provide with dimmable driver	435	13	5655

HONAKER ZION PROJECT
LUMEN CALCULATIONS/COUNTS - LOT 8 GUEST HOUSE

	TYPE	MANUFACTURER	DESCRIPTION	LUMENS	COUNTS	TOTAL LUMENS
DOWN LIGHT PER CODE(2)	DN	B-K LIGHTING	**MM-WM-LOD-LHP-AL-BC-CE-DS-OSYM-e85-NFL-12-11-WL00-BZP** Surface mounted downlight, provide with dimmable driver	139	2	278
STEP LIGHT PER CODE(19)	JS	DESIGN PLAN	**SP2112-F-D-C (BRONZE)-1 / PPLT00309-P** Surface mounted downlight, provide with dimmable driver	35	19	665
LD DOWN LIGHT PER CODE(12)	TD	B-K LIGHTING	**MN-CM-LOD-LHP-AL-PM-CE-e82-MFL-12-11-WL00-BLP** Surface mounted downlight, provide with dimmable driver	435	12	5220
			TOTAL LUMENS CALCULATION			13107
			ALLOWED LUMENS (7,500 LUMENS PER ACRE)	ALLOWED x 7500	ACRES **5.7** =	42750
					PASSES BY	69.3%

HONAKER RESIDENCE
LOT 11 LUMEN CALCULATIONS/COUNTS - LOT 11 MAIN HOUSE

	TYPE	MANUFACTURER	DESCRIPTION	LUMENS	COUNTS	TOTAL LUMENS
DOWN LIGHT PER CODE(1)	DN	B-K LIGHTING	**MM-WM-LOD-LHP-AL-BC-CE-DS-OSYM-e85-NFL-12-11-WL00-BZP** Surface mounted downlight, provide with dimmable driver	139	1	139
STEP LIGHT PER CODE(12)	JS	DESIGN PLAN	**SP2112-F-D-C (BRONZE)-1 / PPLT00309-P** Surface mounted downlight, provide with dimmable driver	35	12	420
LD DOWN LIGHT PER CODE(5)	TD	B-K LIGHTING	**MN-CM-LOD-LHP-AL-PM-CE-e82-MFL-12-11-WL00-BLP** Surface mounted downlight, provide with dimmable driver	435	5	2175
			TOTAL LUMENS CALCULATION			2734
			ALLOWED LUMENS (7,500 LUMENS PER ACRE)	ALLOWED x 7500	ACRES **11.3** =	84750
					PASSES BY	96.8%

HONAKER ZION PROJECT
OUTDOOR LIGHTING FIXTURE SCHEDULE

	TYPE	MANUFACTURER	DESCRIPTION	FINISH	DIMMING	WATTS	VOLTS	LAMP
DOWN LIGHT PER CODE	DN	B-K LIGHTING	**MM-WM-LOD-LHP-AL-BC-CE-DS-OSYM-e85-NFL-12-11-WL00-BZP** Surface mounted downlight, provide with dimmable driver **FULLY SHIELDED - LIGHT SOURCE RECESSED +2"**	Satin Bronze	0-10v	3 w	120/ 12v	LED: 2700K | 90+ CRI INTEGRAL TO FIXTURE **CODE COMPLIANT CCT**
STEP LIGHT PER CODE	JS	DESIGN PLAN	**SP2112-F-D-C (BRONZE)-1 / PPLT00309-P** Surface mounted downlight, provide with dimmable driver **SHIELDED - LIGHT SOURCE NOT RECESSED +2" - EXEMPT <1000 LUMENS**	Bronze	0-10v	2 w	120v/ 500mA	LED: 2700K | 80+ CRI INTEGRAL TO FIXTURE **CODE COMPLIANT CCT**
LD DOWN LIGHT PER CODE	TD	B-K LIGHTING	**MN-CM-LOD-LHP-AL-PM-CE-e82-MFL-12-11-WL00-BLP** Surface mounted downlight, provide with dimmable driver **FULLY SHIELDED - LIGHT SOURCE RECESSED +2"** **TREE MOUNTED BUT ILLUMINATING GROUND PLAN WALKWAYS**	Satin Black	0-10v	7 w	120/ 12v	LED: 2700K | 90+ CRI INTEGRAL TO FIXTURE **CODE COMPLIANT CCT**

10.0

Outdoor Lighting Fixtures Schedule & Lumen Calculations

Honaker Zion Project Site

Wendell Burnette Architects | JUN 2026

MINI MICRO - Wall Mount - Low Voltage - LED High-Power - Single - Downlight or Uplight - Symmetrical Optics

B-K LIGHTING

TYPE: SC

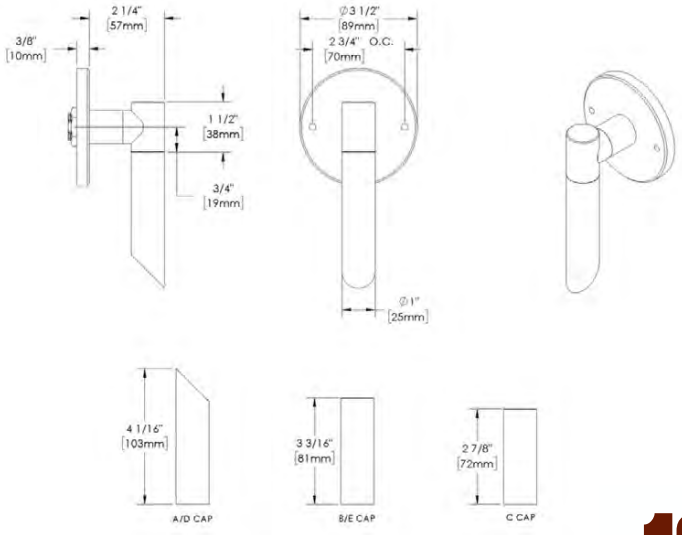
WILDLIFE FRIENDLY

IP66



Downloads
Product Images (.zip)
Technical Drawing (.zip)
IES Files (.zip)
BIM - Revit
Installation Instructions (.pdf)

Product Variant Examples



10.1

DOWN LIGHT PER CODE

Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

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MINI MICRO - Wall Mount - Low Voltage - LED High-Power - Single - Downlight or Uplight - Symmetrical Optics

Available Logic & Configurations

MM- WM- LOD- LHP- ___- BC- ___- DS-OSYM-
01 02 03 04 05 06B 06C 06D

01 SERIES
MM - MINI MICRO
02 CATEGORY
WM - Wall Mount
03 DRIVER
LOD - Low Voltage
04 LIGHT SOURCE (TYPE)
LHP - LED High-Power

05 MATERIAL
AL - Aluminum
BR - Brass
SS - Stainless Steel
06B MOUNT
BC - Canopy
06C STYLE
CA - Cap A - 45° (With Weephole)
CB - Cap B - 90° (With Weephole)
CC - Cap C - Flush Lens
CD - Cap D - 45°
CE - Cap E - 90°
06D VERSION
DS-OSYM - Single - Downlight or Uplight - Symmetrical Optics

___- ___- ___- ___- WL00- ___-
07 08 10A 10B 11 12

07 LIGHT SOURCE
e70 - 2700K CRI80 - 3W (139 - 167 lm)
e71 - 3000K CRI80 - 3W (146 - 175 lm)
e72 - 4000K CRI80 - 3W (164 - 197 lm)
e73 - Amber - 3W
e85 - 2700K CRI90 - 3W
e86 - 3000K CRI90 - 3W
e87 - 3500K CRI80 - 3W
08 OPTIC
SP - Spot (17°)
SP2 - Spot (21°)
NFL - Narrow Flood (28°)

10A LENS
12 - Soft Focus
13 - Rectilinear
10B SHIELDING
00 - Not included (Standard)
11 - Honeycomb Baffle
11 WIRING LENGTH
WL00 - Standard
12 FINISH
Standard Finishes
BLP, **BZP**, **WHP**, **SAP**, **BLW**, **BZW**, **WHW**, **VER**
Premium Finishes
CMG, **SMG**, **RMG**, **AMG**, **TXF**, **BCM**, **BGE**, **WCP**, **OCP**, **HUG**, **ABP**, **BPP**, **SDS**, **WIR**, **CAP**, **CRM**, **AQW**, **NBP**
Other - RAL
RAL
Other - Custom Color
CUS
Brass Finishes
MAB, **POB**, **MIT**
Stainless Steel Finishes
MAS, **POS**

NOTE: Not all configurations may be compatible with one another. Please configure the product for specific 2D, Photometry, Downloads, Spec Sheet and Compatible mountings and power supplies.

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Technical information is subject to change at the discretion of B-K Lighting Inc. For the most current technical data, please refer to bklighting.com

MINI MICRO - Wall Mount - Low Voltage - LED High-Power - Single - Downlight or Uplight - Symmetrical Optics

Features



Anti-condensation vent allows moisture to exit the fixture but never enter in



Lens factory adhered to fixture cap providing hermetically sealed optical compartment



Manufactured in the USA with sustainable processes



Aim & Lock knuckle eliminates need for re-aiming & adjustments



Water-tight anti-siphon plug prevents moisture ingress from wireways



Secured with tamper-resistant, stainless steel hardware



Easily replaceable modular components reduce waste and extend fixture life



Slip fit cap & high temp. silicone 'O' ring provides reliable water-tight seal



Solid billet fixture body provides unmatched durability and heat management



360SL knuckle provides 360° horizontal rotation and vertical adjustment

WARNING: This is a low voltage product. Please check "Mountings With A Power Supply" or "Power Supplies" to order remote transformer separately.

Technical

Driver: Low Voltage

Light Source (Type): LED High-Power

Material: Aluminum, Brass, Stainless Steel

CCT (K): Amber, 2700, 3500, 3000, 4000

CRI: 80, 90

Input Power (W): 3

Delivered Lumens (lm): 139 - 197

Beam Angle (°): 17, 21, 28

Control: Non-dimming (standard). For dimmable options, contact Customer Service.

Mount: Canopy

Style: Cap A - 45° (With Weephole), Cap B - 90° (With Weephole), Cap C - Flush Lens, Cap D - 45°, Cap E - 90°

Version: Single - Downlight or Uplight - Symmetrical Optics

Input Voltage: 12V

Lens: Soft Focus, Rectilinear

Shielding: Not included (Standard), Honeycomb Baffle

Wiring Length: Standard

Finish: Standard Finishes, Premium Finishes, Other - RAL, Other - Custom Color, Brass Finishes, Stainless Steel Finishes

Body: Unibody design, with enclosed, water-proof wireway and integral heat sink, fully machined from solid billet.

Material Detail: Furnished in stainless steel (304)., Furnished in brass (360)., Furnished in copper-free aluminum (6061-T6).

Light Source Detail: High power LEDs modular design with electrical disconnects., Non-dimming.

Optics: Interchangeable optics permit changes in the field.

Hardware: Tamper-resistant, stainless steel hardware. Hardware is black oxide treated for additional corrosion resistance.

Sealing: 'O' Ring provides water-tight seal.

Finish Detail: Powder coat or metal finish options available for brass material., Metal finish option only for stainless steel material., StarGuard, our 15-stage chromate-free process, cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating. It is RoHS compliant.

Warranty: 5-year limited warranty.

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MINI MICRO - Wall Mount - Low Voltage - LED High-Power - Single - Downlight or Uplight - Symmetrical Optics

Finishes

STANDARD FINISHES


[BLP] Satin Black


[BZP] Satin Bronze


[WHP] Satin White


[SAP] Satin Aluminum


[BLW] Black Wrinkle


[BZW] Bronze Wrinkle


[WHW] White Wrinkle


[VER] Verde

PREMIUM FINISHES


[CMG] Cascade Mountain Granite


[SMG] Sierra Mountain Granite


[RMG] Rocky Mountain Granite


[AMG] Aleutian Mountain Granite


[TXF] Textured Forest


[BCM] Black Chrome


[BGE] Beige


[WCP] Weathered Copper


[OCP] Old Copper


[HUG] Hunter Green


[ABP] Antique Brass Powder


[BPP] Brown Patina Powder


[SDS] Sonoran Desert Sandstone


[WIR] Weathered Iron


[CAP] Clear Anodized Powder


[CRM] Cream


[AQW] Antique White


[NBP] Natural Brass Powder

OTHER - RAL



[RAL] RAL Color

OTHER - CUSTOM COLOR



[CUS] Custom Color

BRASS FINISHES


[MAB] Machined (Brass)


[POB] Polished (Brass)


[MIT] Mitique

STAINLESS STEEL FINISHES


[MAS] Machined (Stainless Steel)


[POS] Polished (Stainless Steel)

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MINI MICRO - Wall Mount - Low Voltage - LED High-Power - Single - Downlight or Uplight - Symmetrical Optics

Light Source

Light Source	Optic	Beam Angle	CCT (K)	CRI	R9	Input Power (W)	Delivered Lumens (Lm)	CBCP
e70	SP - Spot	17	2700	80	>15	3	167	1347
e70	SP2 - Spot	21	2700	80	>15	3	139	664
e70	NFL - Narrow Flood	28	2700	80	>15	3	149	524
e71	SP - Spot	17	3000	80	>15	3	175	1411
e71	SP2 - Spot	21	3000	80	>15	3	146	695
e72	SP - Spot	17	4000	80	>15	3	197	1585
e72	SP2 - Spot	21	4000	80	>15	3	164	781
e72	NFL - Narrow Flood	28	4000	80	>15	3	175	616
e73	SP - Spot	17	Amber			3		
e73	SP2 - Spot	21	Amber			3		
e73	NFL - Narrow Flood	28	Amber			3		
e85	SP - Spot	17	2700	90	>50	3		
e85	SP2 - Spot	21	2700	90	>50	3		
e85	NFL - Narrow Flood	28	2700	90	>50	3		
e86	SP - Spot	17	3000	90	>50	3		
e86	SP2 - Spot	21	3000	90	>50	3		
e86	NFL - Narrow Flood	28	3000	90	>50	3		
e87	SP - Spot	17	3500	80	>15	3		
e87	SP2 - Spot	21	3500	80	>15	3		
e87	NFL - Narrow Flood	28	3500	80	>15	3		

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TYPE: JS

STEP OUTSIDE 2.1

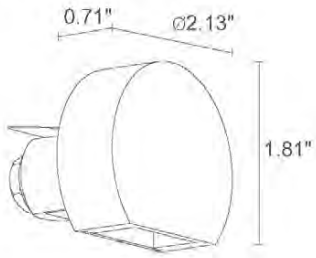
designplan

datasheet

The Step Outside 2 Series are discreet semi-recessed LED wall-mounted step lights ideal for illuminating pathways and stairs. Available in 2 styles (square and round) and 3 standard finishes.



Wall Cut-Out: Ø1.18"
Fixture Dimensions
2.13" l x .71" w x 1.81" h



TECHNICAL DATA

Wattage / Input	2W (500mA)
Power Supply	Remote, not included. See page 2.
Construction	Body: Aluminum Lens: Transparent Extra Clear Glass Cable Length: 4.92' standard
CCT	2700K, 3000K, 4000K, 5000K, Blue
CRI	>80
Delivered Lumens	35 lm (3000K, 500mA)
Efficacy	17.5 lm/W
Optics	Diffuse
Finishes	White, Black, Cor-ten, Custom RAL (see below)
Cut-Out Dimensions	Ø1.18"
Fixture Dimensions	2.13" l x 0.71" w x 1.81" h
Fixture Weight	0.44 lbs
LED Source	1 Power LED
Lumen Maintenance	L90, B10 >50,000hrs (Ta 25°C)
Color Consistency	1/4 ANSI BIN
Operating Temp.	-4°F to +113°F
IP Rating	IP54
Impact Rating	IK03
JA8	Exempt

10.1

STEP LIGHT PER CODE
Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

ORDERING INFORMATION

Example: SP21129DAT or SP21129DAT-3. Accessories / Power Supplies ordered separately.

SP2112		D		
Model No.	**CCT**	**Optics**	**Finish**	**Cable Length**
SP2112	**F** - 2700K	**D** - Diffuse	**AE** - White	4.92' standard
	5 - 3000K		**AN** - Black	**1** - 16.40'
	9 - 4000K		**AT** - Cor-ten	**2** - 32.81'
	0 - 5000K		**C** - Custom RAL *(consult factory for "C")* BRONZE	**3** - 49.21'
	1 - Blue			**4** - 65.62'

Job Name/Date:

Fixture Type Designation:

sales@designplan.com
www.designplan.com

79 Trenton Avenue, Frenchtown NJ 08825

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Published: January 25, 2024

P: 908-996-7710
F: 908-996-7042

SUGGESTED POWER SUPPLIES

500mA

Part Number	Description	Input/Output	# of Fixtures
PPLT00497	Phase Dim (120V only)	120VAC to 500mA, 12W, Class 2	2-6
PPLT00465-P	0-10V Dimming to 1.0%	120-277VAC to 500mA, 20W, Class 2	1-10
PPLT00309-P	0-10V Dimming to 0.1%	120-277VAC to 500mA, 50W, Class 2	1-16
PPLT00538-P	0-10V Dimming to 0.1%	120-277VAC to 500mA, 100W, Class 2	1-48

Suggested Lutron Compatible

Part Number	Option	Lutron SKU	Dim Range	Description	Input/Output	# of Fixtures
PPLT00259	L3DAE / L3DA3W	L3DA	100%-1%	Hi-Lume™ 1% EcoSystem™ or 1% 3-Wire LED Driver	120-277VAC to 500mA, 10W, Class 2	4-5
PPLT00195	L3DAE / L3DA3W	L3DA	100%-1%	Hi-Lume™ 1% EcoSystem™ or 1% 3-Wire LED Driver	120-277VAC to 500mA , 19W, Class 2	6-9
PPLT00180	L3DAE / L3DA3W	L3DA	100%-1%	Hi-Lume™ 1% EcoSystem™ or 1% 3-Wire LED Driver	120-277VAC to 500mA , 27W, Class 2	12-13

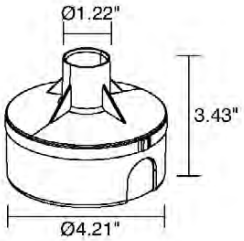
For other power supply options consult factory.

ACCESSORIES

Installation



WC0202
Outer Casing





PPMP02674
Core Drilled
Application Backbox

Job Name/Date:

Fixture Type Designation:

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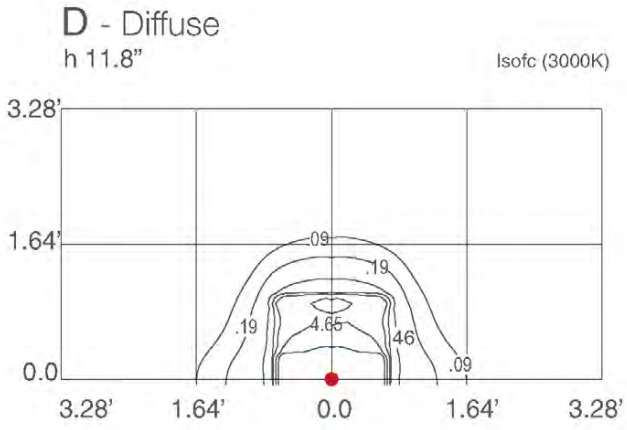
Published: January 25, 2024

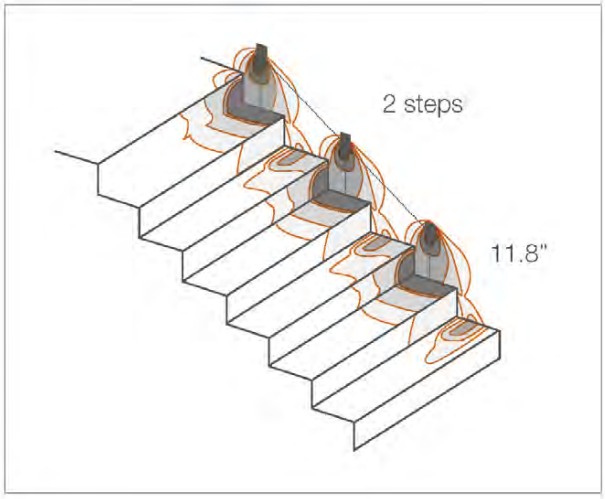
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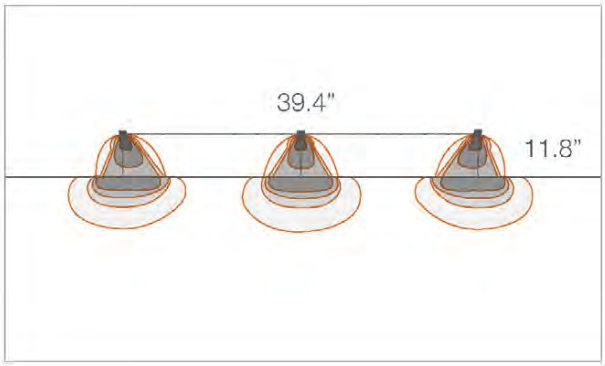
datasheet

PHOTOMETRIC DATA

Note all Photometry is 3000K







Job Name/Date:

Fixture Type Designation:

sales@designplan.com
www.designplan.com

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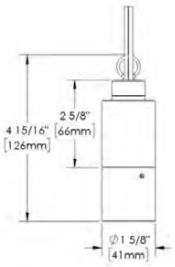
MICRO NITE - Ceiling Mount - Low Voltage - LED High-Power - Pendant Mount

TYPE: TD

WILDLIFE FRIENDLY

IP66

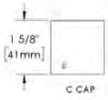












Downloads

Product Images (.zip)
Technical Drawing (.zip)
2D (.dwg)
2D (.dxf)
IES Files (.zip)
BIM - Revit
Installation Instructions (.pdf)

Product Variant Examples











10.1

LD DOWN LIGHT PER CODE

Honaker Zion Project Site
Wendell Burnette Architects | JUN 2026

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MICRO NITE - Ceiling Mount - Low Voltage - LED High-Power - Pendant Mount

Available Logic & Configurations

MN- CM- LOD- LHP- ___- PM- ___-
01 02 03 04 05 06B 06C

01 SERIES
MN - MICRO NITE
02 CATEGORY
CM - Ceiling Mount
03 DRIVER
LOD - Low Voltage
04 LIGHT SOURCE (TYPE)
LHP - LED High-Power

05 MATERIAL
AL - Aluminum
BR - Brass
06B MOUNT
PM - Pendant Mount
06C STYLE
CC - Cap C - Flush Lens
CD - Cap D - 45°
CE - Cap E - 90°

___- ___- ___- ___- ___- ___-
07 08 10A 10B 11 12

07 LIGHT SOURCE
e67 - 2700K CRI80 - 7W (435 - 459 lm)
e68 - 3000K CRI80 - 7W (464 - 489 lm)
e69 - 4000K CRI80 - 7W (478 - 504 lm)
e75 - Amber - 7W
e82 - 2700K CRI90 - 7W
e83 - 3000K CRI90 - 7W
e84 - 3500K CRI80 - 7W
08 OPTIC
SP - Spot (17°)
NFL - Narrow Flood (25°)
MFL - Medium Flood (30°)

10A LENS
12 - Soft Focus
13 - Rectilinear
10B SHIELDING
00 - Not included (Standard)
11 - Honeycomb Baffle
11 WIRING LENGTH
WL00 - Standard
WL25 - 25 Ft Leads
12 FINISH
Standard Finishes
BLP, **BZP**, **WHP**, **SAP**, **BLW**, **BZW**, **WHW**, **VER**
Premium Finishes
CMG, **SMG**, **RMG**, **AMG**, **TXF**, **BCM**, **BGE**, **WCP**, **OCP**, **HUG**, **ABP**, **BPP**, **SDS**, **WIR**, **CAP**, **CRM**, **AQW**, **NBP**
Other - RAL
RAL
Other - Custom Color
CUS
Brass Finishes
MAB, **POB**, **MIT**

NOTE: Not all configurations may be compatible with one another. Please configure the product for specific 2D, Photometry, Downloads, Spec Sheet and Compatible mountings and power supplies.

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MICRO NITE - Ceiling Mount - Low Voltage - LED High-Power - Pendant Mount

Features



Anti-condensation vent allows moisture to exit the fixture but never enter in



Lens factory adhered to fixture cap providing hermetically sealed optical compartment



Manufactured in the USA with sustainable processes



Water-tight anti-siphon plug prevents moisture ingress from wireways



Secured with tamper-resistant, stainless steel hardware



Easily replaceable modular components reduce waste and extend fixture life



Slip fit cap & high temp. silicone 'O' ring provides reliable water-tight seal



Solid billet fixture body provides unmatched durability and heat management

WARNING: This is a low voltage product. Please check "Mountings With A Power Supply" or "Power Supplies" to order remote transformer separately.

Technical

Driver: Low Voltage

Light Source (Type): LED High-Power

Material: Aluminum, Brass

CCT (K): Amber, 2700, 3500, 3000, 4000

CRI: 80, 90

Input Power (W): 7

Delivered Lumens (lm): 435 - 504

Beam Angle (°): 17, 25, 30

Control: MLV dimming capable via compatible remote magnetic transformer. See Mountings & Power Supplies section to order.

Mount: Pendant Mount

Style: Cap C - Flush Lens, Cap D - 45°, Cap E - 90°

Input Voltage: 12V

Lens: Soft Focus, Rectilinear

Shielding: Not included (Standard), Honeycomb Baffle

Wiring Length: Standard, 25 Ft Leads

Finish: Standard Finishes, Premium Finishes, Other - RAL, Other - Custom Color, Brass Finishes

Body: Unibody design, with enclosed, water-proof wireway and integral heat sink, fully machined from solid billet.

Material Detail: Furnished in brass (360)., Furnished in copper-free aluminum (6061-T6).

Light Source Detail: High power LEDs modular design with electrical disconnects.

Optics: Interchangeable optics permit changes in the field.

Hardware: Tamper-resistant, stainless steel hardware.

Sealing: 'O' Ring provides water-tight seal.

Finish Detail: Powder coat or metal finish options available for brass material., StarGuard, our 15-stage chromate-free process, cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating. It is RoHS compliant.

Warranty: 5-year limited warranty.

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MICRO NITE - Ceiling Mount - Low Voltage - LED High-Power - Pendant Mount

Finishes

STANDARD FINISHES


[BLP] Satin Black


[BZP] Satin Bronze


[WHP] Satin White


[SAP] Satin Aluminum


[BLW] Black Wrinkle


[BZW] Bronze Wrinkle


[WHW] White Wrinkle


[VER] Verde

PREMIUM FINISHES


[CMG] Cascade Mountain Granite


[SMG] Sierra Mountain Granite


[RMG] Rocky Mountain Granite


[AMG] Aleutian Mountain Granite


[TXF] Textured Forest


[BCM] Black Chrome


[BGE] Beige


[WCP] Weathered Copper


[OCP] Old Copper


[HUG] Hunter Green


[ABP] Antique Brass Powder


[BPP] Brown Patina Powder


[SDS] Sonoran Desert Sandstone


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[CAP] Clear Anodized Powder


[CRM] Cream


[AQW] Antique White


[NBP] Natural Brass Powder

OTHER - RAL



[RAL] RAL Color

OTHER - CUSTOM COLOR



[CUS] Custom Color

BRASS FINISHES


[MAB] Machined (Brass)


[POB] Polished (Brass)


[MIT] Mitique

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MICRO NITE - Ceiling Mount - Low Voltage - LED High-Power - Pendant Mount

Light Source

Light Source	Optic	Beam Angle	CCT (K)	CRI	R9	Input Power (W)	Delivered Lumens (Lm)	CBCP
e67	SP - Spot	17	2700	80	>15	7	459	3632
e67	NFL - Narrow Flood	25	2700	80	>15	7	435	1708
e67	MFL - Medium Flood	30	2700	80	>15	7	438	1337
e68	SP - Spot	17	3000	80	>15	7	489	3871
e68	NFL - Narrow Flood	25	3000	80	>15	7	464	1821
e68	MFL - Medium Flood	30	3000	80	>15	7	467	1425
e69	SP - Spot	17	4000	80	>15	7	504	3991
e69	NFL - Narrow Flood	25	4000	80	>15	7	478	1877
e69	MFL - Medium Flood	30	4000	80	>15	7	481	1469
e75	SP - Spot	17				7		
e75	NFL - Narrow Flood	25				7		
e75	MFL - Medium Flood	30	Amber			7		
e82	SP - Spot	17	2700	90	>50	7		
e82	NFL - Narrow Flood	25	2700	90	>50	7		
e82	MFL - Medium Flood	30	2700	90	>50	7		
e83	SP - Spot	17	3000	90	>50	7		
e83	NFL - Narrow Flood	25	3000	90	>50	7		
e83	MFL - Medium Flood	30	3000	90	>50	7		
e84	SP - Spot	17	3500	80	>15	7		
e84	NFL - Narrow Flood	25	3500	80	>15	7		
e84	MFL - Medium Flood	30	3500	80	>15	7		

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+7'-1 1/4"

+4'-9 5/8"

38"

Old Wall Location

New Location

24"

18"

+11'-7"

B
A3.06

3
A3.05

2
A3.05

2

1

4

4
A3.05

3

A
A3.06

2

B
A3.06

1
A3.05

UP

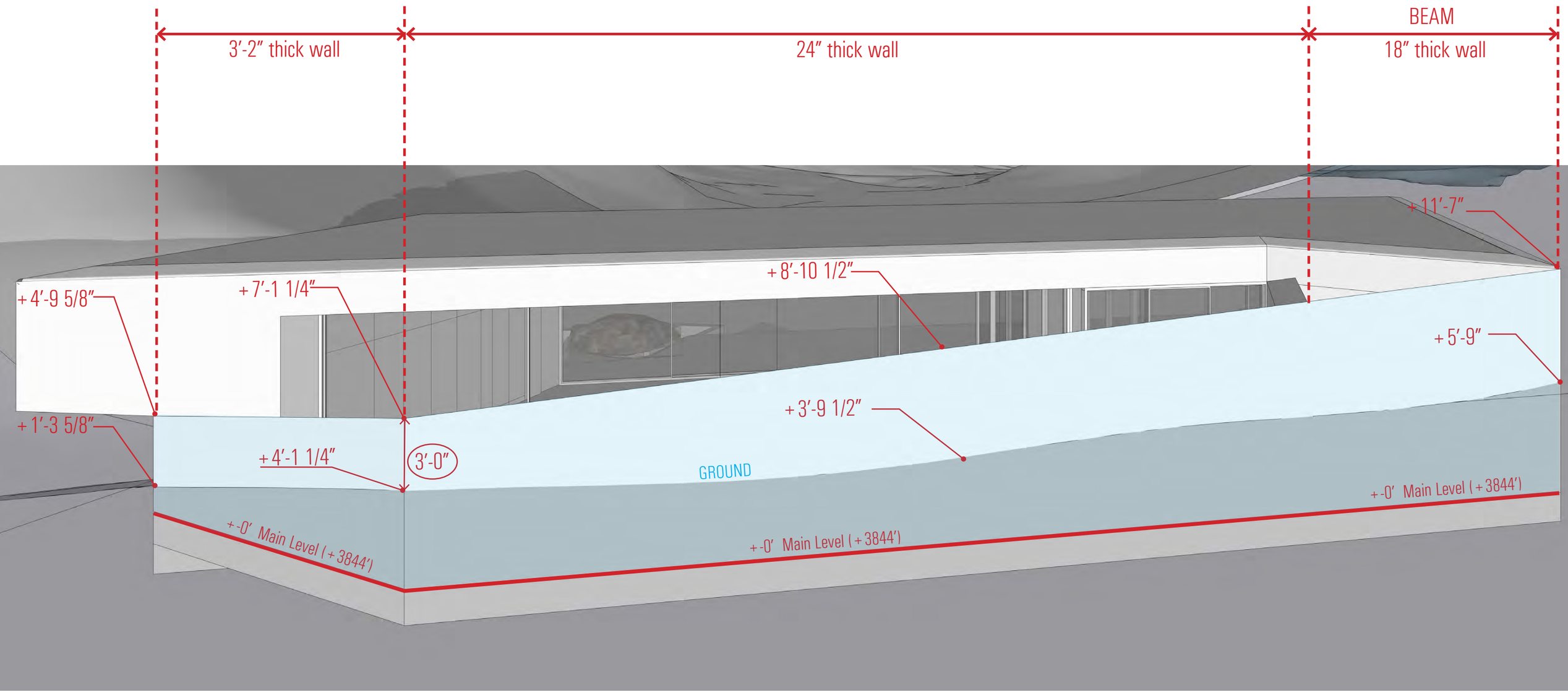
DN

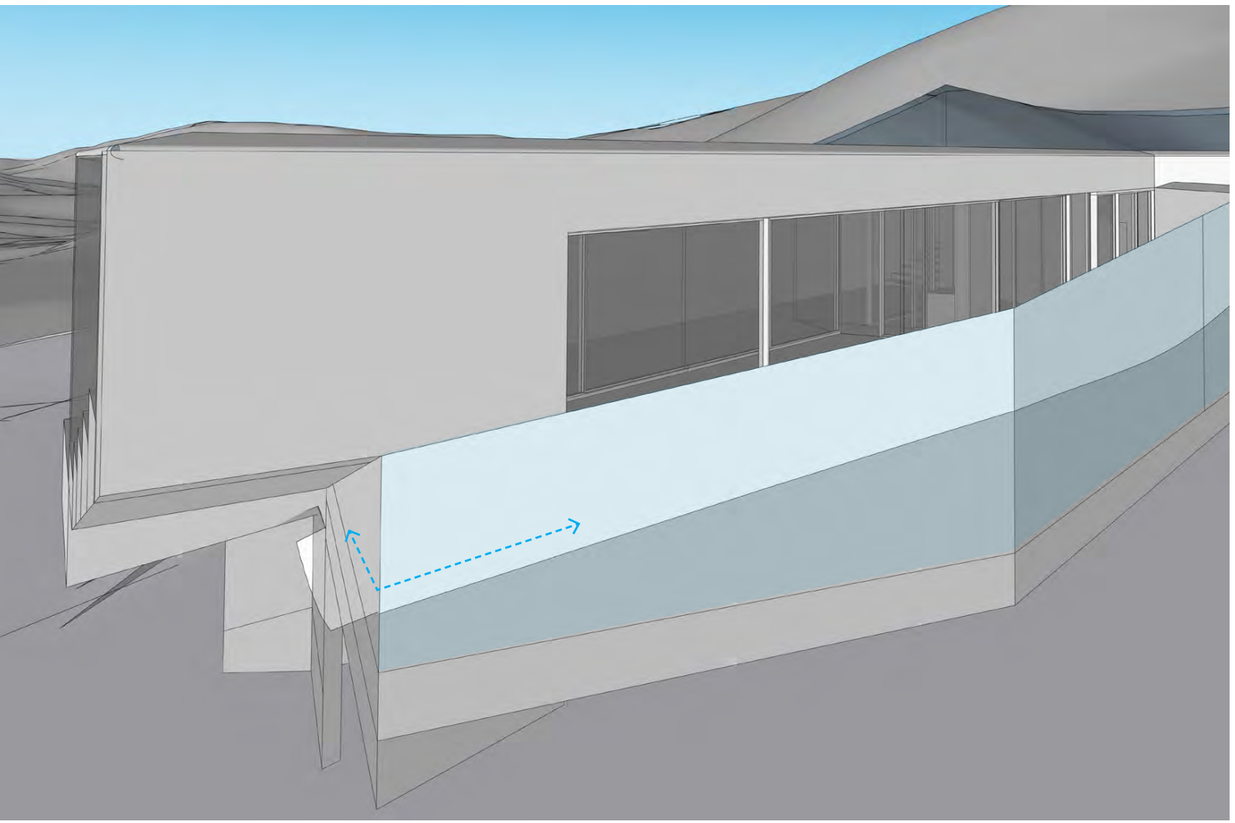
DN

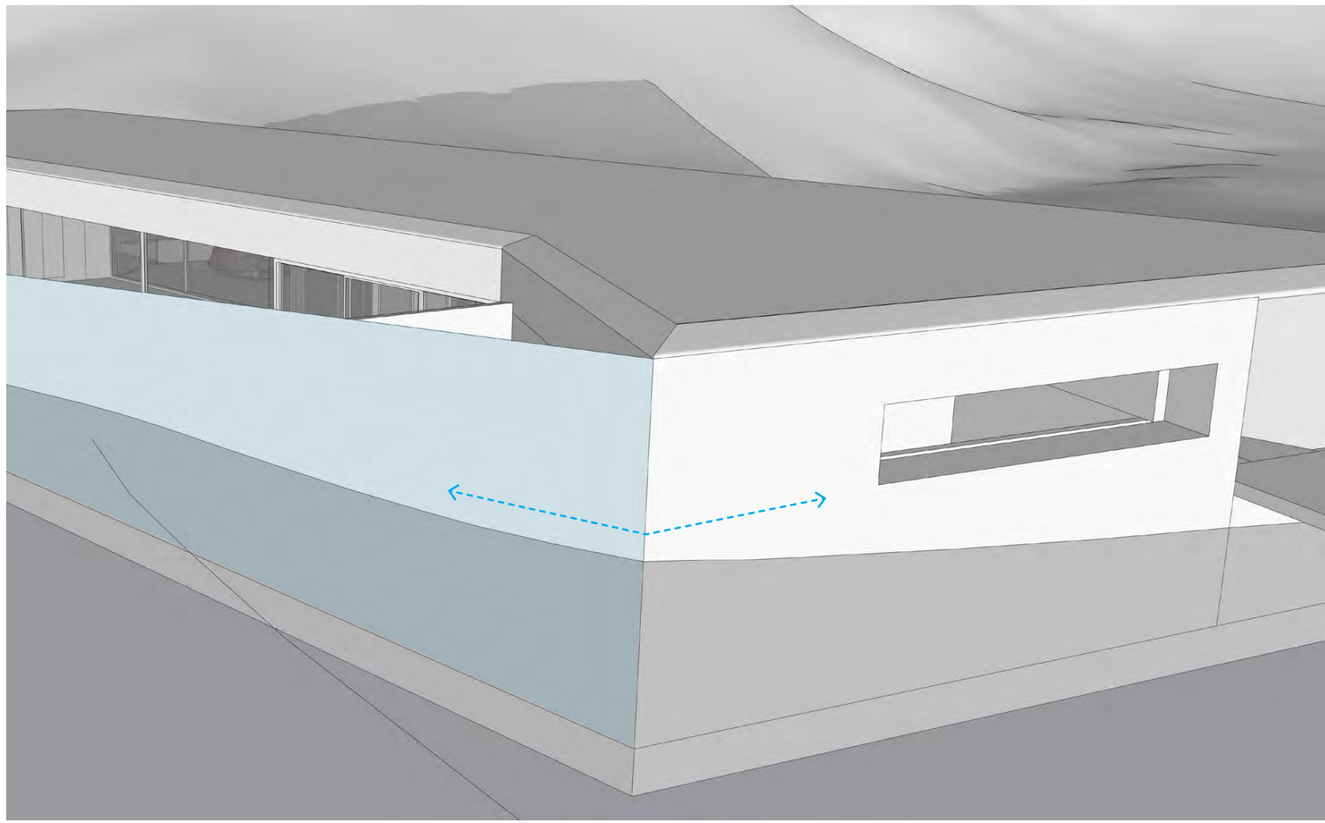
DN

UP

UP


3′-2″ thick wall
24″ thick wall
BEAM
18″ thick wall
+ 11′-7″
+ 8′-10 1/2″
+ 7′-1 1/4″
+ 4′-9 5/8″
+ 5′-9″
+ 3′-9 1/2″
+ 1′-3 5/8″
+ 4′-1 1/4″
3′-0″
GROUND
+ -0′ Main Level (+ 3844′)
+ -0′ Main Level (+ 3844′)
+ -0′ Main Level (+ 3844′)





Appendix B: Geotechnical and Geologic Hazard Investigation, with Town of Springdale Geo hazard checklist

AGEC
Applied GeoTech

GEOTECHNICAL AND GEOLOGIC HAZARD INVESTIGATION

WATCHMAN SUBDIVISION, LOTS 8 AND 11

SPRINGDALE, WASHINGTON COUNTY, UTAH

PREPARED FOR:

HONAKER HOMES, LLC
SHAWN HONAKER, MANAGER

c/o WENDELL BURNETTE ARCHITECTS
5102 N CENTRAL AVENUE 5
PHOENIX, ARIZONA 85012

ATTENTION: WENDELL BURNETTE

PROJECT NO. 2252792 **AUGUST 3, 2026**

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APPENDIX

Slope Stability Results

EXECUTIVE SUMMARY

1. The proposed development is located in an area with a potential of four geologic hazards: lateral ground movement (landslide), rockfall, collapsible soil and expansive soil/bedrock. We have conducted a slope stability analysis in order to provide our professional opinion on the risk of landslide movement. A rockfall hazard evaluation was conducted to identify the rockfall hazard area. Recommendations for constructing on the collapsible and expansive soil/bedrock areas are provided within this report.

2. The site was investigated by observing and logging subsurface conditions encountered in eight exploratory borings. The subsurface explorations on the project site were conducted at the approximate locations shown on Figure 4.

3. The upper subsurface soil and bedrock encountered within the subsurface explorations generally consist of landslide deposits consisting primarily of lean to fat clay and sand and gravel. Sandstone bedrock was encountered below the landslide materials. Laboratory testing conducted on samples of the landslide deposits exhibited both collapse and expansion when wetted under a constant load. The parent material of the landslide deposit is mudstone bedrock, known locally as “blue clay”. Our past experience, with the mudstone bedrock, is that the material exhibits highly expansive characteristics when wetted.

4. Subsurface water was not encountered in any of the borings, which extended down to an elevation of 3771 feet). Fluctuations in the water level may occur over time. An evaluation of such fluctuations is beyond the scope of this report.

5. The site is located within a landslide as mapped by the Utah Geological Survey (UGS). We conducted laboratory testing on undisturbed and remolded samples of the mudstone and landslide deposit materials to evaluate the current stability of the slope. Our evaluation has included analysis with and without a water table within the slope to illustrate the effect of introducing water into the slope. We have also utilized strength parameters based on back-calculation, our test results, analyses and our experience with similar landslides.

   We previously discussed with the architect and structural engineer the landslide risk. They have acknowledged the risk and based on our understanding, presented the information to the land owner.

   Even with the risk, we have been requested to provide recommendations that could be used in development of the project to maintain the current stability of the site.

   Our best estimate indicates that the location of the homes have a factor of safety for slope stability of 1.2 under static conditions using near residual strengths. We also estimate lateral movement of approximately 14 inches from a code specified frequency of earthquake ground motion.

EXECUTIVE SUMMARY (continued)

6. We have evaluated the site for support of the proposed structures. Based on our evaluation, the following two conditions exist on the site; (1) expansive clay or landslide materials and (2) loose soil overlying bedrock. We recommend that the proposed structures be supported on a deep foundation system.

7. To reduce the risk of settlement or heave of site improvements (flatwork, permeable pavement driveway, block walls, etc.) and structures, precautionary measures including strict site drainage and desert landscaping should be implemented as recommended in the site drainage section of this report.

8. To reduce the risk of wetting the underlying expansive mudstone and landslide material for water bearing structures such as pools, it will be important to provide risk reduction elements to reduce the potential for leakage and subsequent wetting of the subgrade soil. Wetting the soil and bedrock may potentially weaken the soil strengths and reduce the slope stability of the site.

9. Detailed recommendations for subgrade preparation, materials, foundations, and drainage are included in the report.

10. The information provided in this summary should not be used independent of that provided within the body of this report.

SCOPE

This report presents the results of a geotechnical and geologic hazard investigation for Lots 8 and 11 of the Watchman Subdivision located in Springdale, Washington County, Utah. This report presents the geologic conditions observed, subsurface conditions encountered, laboratory test results, and professional opinions on geologic hazards and provides geotechnical related recommendations for design and construction of the project.

Field exploration was conducted to obtain information on the subsurface conditions and to obtain samples for laboratory testing. Information obtained from the field investigation and laboratory testing was used to define conditions at the site and to develop recommendations for the proposed development.

This report has been prepared to summarize the data obtained during the study and to present our conclusions and recommendations based on the proposed construction and the subsurface conditions encountered. Design parameters and a discussion of geotechnical engineering considerations related to construction are included in the report.

PREVIOUS STUDIES

We have conducted a geotechnical investigation for the subdivision in 2007. The report reference is presented below:

> Geotechnical Investigation, Watchman Subdivision Phase 2, Lots 9-11, Springdale, Utah, prepared for Supreme Land Developers dated June 28, 2007 under project number 2071030.

We also have reviewed the following documents for this study.

1. Preliminary Plat, Watchman Subdivision, prepared by Mark A. Schraut, dated August 11, 1994, Job Number S1100.

2. The Springdale, Utah, Landslide: An Extraordinary Event, Environmental & Engineering Geoscience, Vol. II, No. 2, Summer 1996, pp 137-150 prepared by Randall W. Jibson, Geologist and Edwin L. Harp, Geologist of the U.S. Geological Survey.

3. May 2005 landslide in Springdale, Washington County, Utah, Incident Investigation, by William R. Lund, P.G. & Garrett Vice, Utah Geological Survey dated July 14, 2005, Job number 05-10.

4. Chapter 4, Landslide Hazard, Utah Geological Survey Special Study 133, Geologic Hazards of the Zion National Park Geologic-Hazard Study Area, Washington and Kane Counties, Utah, 2010, particular sections on the Springdale and Paradise Road Landslides, and the Watchman Landslide.

5. Landslide Hazard, State Route 9 Corridor Geologic-Hazard Study Area, Washington County, Utah by Tyler R. Knudsen and William R. Lund, Utah Geologic Survey, 2013

6. Geotechnical Investigation, Watchman Subdivision, Lots 9, 10 & 11, North Fork Drive, Springdale, Washington, Utah, prepared by GEM, dated April 19, 2024, Report Number 24-2028-RG3576.

SITE CONDITIONS

The project site consists of 27.5 acres located on North Fork Drive, Springdale, Washington County, Utah as shown on Figures 1 and 2. The topography of the site and the areas adjacent to the site (East, Northeast) is irregular with significant variation in elevation increasing towards Johnson Mountain. The irregular surface area has been mapped as the Johnson Mountain Landslide and covers an area of approximately 1.7 miles long and 1.5 miles wide, see Figure 2.

The area proposed for improvement is located near the top, midpoint and bottom of a hill that is approximately 70 feet high with an east facing slope of approximately 4 to 6 horizontal to 1 vertical.

The ground surface is predominantly without plant growth with a few bushes and small trees scattered across the site.

It appears that a number of years ago a road and the associated underground utilities were installed.

It also appears that construction of a home was initiated in the area of the proposed Lot 8 main house.

The hillside upslope of the proposed Lot 11 main house includes large boulders that appear to be potential sources for rockfall hazard.

FIELD STUDY

The subsurface conditions of the site were investigated by drilling four borings in the area proposed for the Lot 8 guest house, two borings for the Lot 8 main house and two borings for the Lot 11 main house. The borings were drilled between May 18 through May 22, 2022.

The borings were drilled with a track mounted drill rig equipped with 8-inch hollow-stem augers, and with air rotary tools.

SUBSURFACE SOIL CONDITIONS

The subsurface conditions consist of landslide deposits over bedrock.

The landslide deposit consists of clay with silty sand and gravel along with blocks of bedrock. The bedrock consists of mudstone and dirty sandstone.

Descriptions of the soil and bedrock follow:

Landslide Deposit - The landslide deposit consists of clayey gravel and fat clay (soil and bedrock).

Laboratory tests conducted on the landslide deposit indicate in-place moisture contents ranging from 1 to 18 percent, gravel contents range from 0 to 70 percent, fines contents ranging from 3 to 99 percent and in-place dry densities range from 93 to 130 pounds per cubic feet (pcf).

One-dimensional consolidation tests conducted on samples of the fine grained material indicate the material is non to highly expansive when wetted at a constant pressure of 1,000 pounds per square foot (psf). The test samples that exhibited swell measured 0.6 and 5.3 percent swell with swell pressures of approximately 2,050 and 8,700 psf.

Atterberg Limits tests conducted on the landslide deposit indicate the material is non-plastic (granular zones) and low plastic to high plastic (lean to fat clay zones). Liquid Limits in the plastic soils from 17 to 66 percent and a plasticity indexes ranged from 0 to 66 percent.

Sandstone Bedrock - hard, dry, and is yellow to grey in color.

The Logs of Exploratory Borings are shown on Figures 5 to 7 with the Legend and Notes shown on Figure 8. Results of the laboratory tests are also shown on Figures 9 to 24 and are summarized in Table I. The One-dimensional Consolidation (swell) tests are plotted on Figures 15 to 21.

The strength of the materials were evaluated by conducting triaxial shear tests, unconfined compressive strength tests and ring shear tests. The test results for the strength characteristics are included on the boring logs, Figures 21, 22 and 23, and on Table I.

SUBSURFACE WATER

No free water was encountered in the borings at the time of drilling. The lowest elevation investigated was 3,772 feet, which is approximately 58 feet below grade at the location of that

boring. Fluctuations in the groundwater level may occur over time. An evaluation of such fluctuations is beyond the scope of this report.

GEOLOGY/ GEOLOGIC HAZARDS

A. GEOLOGY

Willis and others (2002) have mapped the geology of the area (See Figure 1) to be underlain by landslide formed in the Petrified Forest Member of the Chile Formation, which consists of shale, siltstone, claystone and some sandstone and conglomerate. The bedrock below the Petrified Forest Member is the Shinarump Conglomerate Member of the Chinle Formation composed of conglomerate and sandstone. Its bedding is relatively horizontal whereas bedding in the overlying Petrified Forest Member is irregular due to the landslide activity that has occurred in this unit. There are no outcrops at the site to determine potential discontinuities, but the more brittle beds in the bedrock are expected to be highly fractured due to landslide movement.

No subsurface water was encountered in borings drilled at the site. We expect the depth to water to be near the Virgin River water level at more than 40 feet below the lower proposed building site.

Review of 1-meter bare-earth lidar DEMs of 2017 obtained from the Utah AGRC website for the area finds the geomorphology of the site and vicinity to be hummocky and irregular consistent with landslide deposits. Stereo-pair aerial photographs from 1960 (Commodity Stabilization Service, 1960) show similar features. The landslide movement appears to be old as drainages are well developed, there are no undrained depressions, the topography at the site is smooth and rolling and landslide headscarps are poorly defined and heavily eroded. The landslide deposit classifies as an inactive mature landslide with an age of 5,000 to 10,000 years (McCalpin, 1984).

B. GEOLOGIC HAZARDS

Landslide Hazard - Willis and others (2002) have mapped the site and surrounding area to consist of landslide deposits. Landslide deposits in the area planned for development are inactive and show no evidence of recent movement.

The landslide area is likely a result of previous wetting of the Petrified Forest Member of the Chinle Formation and the slope of the site. Previous seismic events may also have triggered the landslide movement. A slope stability evaluation was conducted to determine current factors of safety regarding the landslide area, these safety factors are discussed below. Recommendations for constructing within the landslide deposit are provided below in the Recommendation section.

Debris-Flow - The site is not located on or near an alluvial fan. The drainage that extends through the property does not have sufficient gradient to produce a debris flow. Thus, the proposed residences will not be subject to debris flows events.

Debris flow is not considered to be hazards at the site.

Rockfall - The southern and middle building sites on Lot 8 are not in an area with slopes steep enough to produce rockfall. The northern building site on Lot 11 is situated below a steep slope with boulders on the ground surface. There is no cliff face but the slope is of sufficient gradient to sustain rockfall if rocks on the ground surface were to be dislodged. The potential runout of rocks could extend down to the drainage base.

Modifying grades toward the bottom of the rockfall-hazard zone can affect the extent of the hazard area of concern. Generally, lowering the grade will increase the extent of the hazard area and raising the grade will decrease the extent of the hazard area.

Rockfall hazard is typically limited to a zone between the rockfall-originating cliff and a limit line based on a shadow angle of 20 to 22 degrees in this area. The shadow angle is the angle from horizontal formed from the base of the originating cliff to the farthest rockfall rock. Cross sections were developed along the north side of the property to estimate the potential rock runout. The rockfall-limit line extends over and beyond the house on Lot 11.

The rockfall hazard should be mitigated for the main house on Lot 11. Rockfall mitigation could consist of removal of the source rock, construction of a protective wall in conjunction with the house or placement of properly designed rockfall barriers such as fences or berms.

Surface-fault-rupture and Earthquake Ground Motion Hazard - Surface traces of the Hurricane Fault, which is the closest potentially an active fault system to the site, are mapped to be approximately 14.3 miles to the west (Utah Geological Survey, 2026).

Aerial photographs and lidar data were reviewed and site reconnaissance performed for evidence consistent with active faults. We found no evidence of topographic or vegetation lineations, soil or vegetation contrasts, or scarps that would indicate there are surface traces of active faults extending through or near the site.

Thus, surface fault rupture is not considered a hazard at the site.

The site is in an area expected to experience strong ground motions due to earthquake activity nearby. The expected earthquake ground motions for the site are included in the geotechnical section. Earthquake ground motions are mitigated through structural design of the residences.

Liquefaction - Liquefaction is not considered a hazard since the site is underlain by bedrock at a shallow depth.

Shallow Groundwater - Shallow groundwater is not a hazard at the site since the depth to water is expected to be 40 feet or greater below the lowest proposed residence.

As indicated in the geology section above, the site contains areas mapped as the Petrified Forest member of the Chinle Formation, which typically consists of low to highly plastic mudstone. Much of the landslide area consists of this material. Laboratory testing and our experience with the Petrified Forest member, indicate it will exhibit expansive characteristics when wetted. Recommendations for constructing within expansive soils are provided in the Subgrade Preparation and Foundation sections of this report.

Collapsible Soil (landslide material) - The knoll upon which the main and adjacent guest house are proposed, appears to be geologically formed by being shoved up as the landslide material towards the east has moved west. This process has resulted in some loosening of materials and therefore, the potential for densification, resulting in settlement, should there be sufficient load and the introduction of water into the materials.

SLOPE STABILITY

1. Slope Modification

   Based on our current understanding, the proposed construction does not include modification of the existing slopes around each of the three homes being considered.

2. Landslide Hazard

   The potential hazard from the landslide slopes located east and northeast of the new construction has been evaluated. Our analysis indicates a safety factor of 1.2 under static conditions. Lateral movement is calculated to occur from the ground shaking from earthquake ground motion.

3. Geologic Impact

   The analysis was conducted incorporating the geologic aspects of the area of interest. Included in the areas of interest include the bedding planes that are reported in the geologic mapping to be approximately 2 to 3 degrees down to the east (into the hillside). The exploratory drilling included visual observation of the bedding planes observed on the samples obtained.

   The ground shaking potentially resulting on seismic activity is also used in the analysis.

4. Mechanism of Movement

   Based on the orientation of the blocks of natural soil and bedrock, which are visually apparent on the site, we have modeled the sliding of the soil and rock mass above

the weak layer located above the sandstone. The configuration of the blocks involved in the landslide were also individually evaluated to determine the strengths that would be necessary in order for the steep slopes to maintain their integrity over time.

Prior landslides within the Springdale area provides evidence of some movement that has been historical and those configurations back calculated strengths were also incorporated in selecting the strengths and mechanisms of movement that could potentially occur.

5. Water Conditions

As indicated in the Subsurface Conditions section of the report, we did not encounter free water within the borings drilled at the site. Included in our analysis is the elevation of the water within the Virgin River (~3780 feet).

The potential impact of disposed water is not considered in our analysis due to the fact that there is a sewer system installed at the site. Therefore, moisture will be limited to precipitation.

Pore pressures were not incorporated in the analysis due to the lack of free water.

6. Material Sampling

Samples were obtained during the drilling observations using the modified California drive sampler. The samples obtained were retained in brass liners that were capped with plastic caps in order to maintain relatively consistent moisture contents between the time of sampling and being tested in the laboratory. In essence, the sampling process was accomplished in general accordance with standard practice.

7. Laboratory Testing

Samples obtained from this site were tested based on the general procedures presented by ASTM as indicated below:

Test Description	ASTM Designation
Moisture Content	D-2216
Dry Density	D-7263
Grain Size Distribution	D-422
Atterberg Limit	D-4318
Consolidation	D-2435/2435m
Unconfined Compression	D-2166
Triaxial Shear	D-4767
Ring Shear	D-6467
Water Soluble Sulfates	C-1580

The strength tests conducted for this evaluation were focused on a layer of fat clay that we anticipate is the weak material upon which the soil mass has moved. Included in our testing are two triaxial shear tests and one ring shear test. The ring shear was conducted at normal loads of 1, 2, 4 and 8 kips per square foot and were sheared at a rate of 0.0008 inches per minute.

8. Strengths used in the Analysis

Based on the soil mass being involved in landslide movements, back calculations were conducted to determine the strength of material upon which the landslide has likely occurred. The back calculated strengths for the various tilted blocks of materials were also calculated to determine the strengths that would be required for these steep slopes to remain intact over a significant amount of time that they have remained in the existing condition.

The strengths used include the following:

Material	Strength Used
The weak plane	Back calculated strengths of existing profile. This is stronger than the laboratory test results
Landslide mass	Back calculated strengths of existing slide blocks
Parent foundation material	The same strengths as the blocks of soil and rock incorporated in the landslide
Sandstone	Conservative strength

Using these values allows the search for failure planes to focus on the weak layer of fat clay with the possibility of going deeper or shallower with the uniform strengths below and above the weak layer.

The back calculated strengths for the weak plane are stronger than those measured in the ring shear and the undisturbed strengths are also stronger than those obtained in the shear tests. The materials were modeled using the minimum back calculated strength.

9. Stability Analysis

The section evaluated for stability follows that shown on Figure A1. This profile follows the general direction of the landslide movement as it continues from the base of the cliffs to the northeast extending down to the southwest and then turning more westerly towards the actual site for the homes. This profile includes the highest slope, the most adverse bedding planes along with approaching the specific locations where the homes are being considered.

Due to the lack of water within the borings drilled, we have selected a water level that is below the slide mass and then within the weak soil layer.

We have not installed any inclinometers due to the likelihood of collecting little, if any, valuable information.

SLOPE STABILITY EVALUATION

The following conditions have been incorporated in the stability analysis.

A. Profile

Our study was conducted using a profile obtained by using the 1 Meter 2017 Washington County Lidar Elevation Data contained in the Utah Geospatial Resource Center. This information indicates that the landslide slope is at elevations of 3800 feet to 4300 feet. The lidar data also indicates that the approximate 500 foot drop in elevation occurs over a distance of approximately 4430 feet (~9H:1V).

Individual ridges along the surface profile of the landslide mass has the following approximate heights and slopes.

Ridge #	Northeast/North Facing Slope		Southwest/West Facing Slope	
	Slope Angle (degrees)	Height (Feet)	Slope Angle (degrees)	Height (feet)
1st	28.5	215		
	28.5	145		
			10.5	300
2nd	32 to 47	225		
			17 to 40	290
3rd	20	80		
			22 to 28	185
4th	9	70		
			24	80

Note: The 4th ridge is the ridge upon which the main house and the Lot 8 guesthouse is located.

B. Subsurface Conditions

1. Slide Plane

Based on the borings at the locations of our investigation, the thickness of the landslide deposit is estimated to vary from 8 to 58 feet in the areas investigated.

There appears to be a distinctive change from landslide materials with varying colors and material types down to a near horizontal bedded dirty sandstone that is gray in color. This same deposit is visible south of the site in the areas where the Virgin River has cut through and exposed the sandstone.

Based on these observations, our estimate of the slide plane depth and elevations are presented below:

Included in this table are the earlier investigation by we have conducted:

Potential Slide Plane Depth & Elevation

Exploration	Approximate Thickness (feet)	Approximate Interface Elevation (feet)
B-1	44	3,831
B-2	58	3,815
B-3	41	3,828
B-4	29	3,838½
B-5	14	3,816
B-6	9	3,819
B-7	28	3816
B-8	27	3816
TP-1	Not deep enough	
TP-2	10	3,815
TP-3	14	3,812
TP-4	8	3,811
TP-5	10	3,808
TP-6	11	3807
Range		3807 - 3838½
Average		3,818

2. Materials

The subsurface conditions were estimated for our analysis based on typical profiles and typical behavior of the various materials that we anticipate are located within the hillside along with the profiles observed in the borings. The high plastic mudstone of the Chinle Formation will frequently have layers of weak material, that when wet will

result in layers of weakness. These weak layers increase the potential for lateral movement (landsliding) of materials located above the weak layer.

Due to the significant volume of soil and bedrock involved with this landslide and our small amount of subsurface information, we have modeled the landslide materials as one material. The strength used in the analysis was determined by back-calculating the strengths necessary to have a safety factor of 1 for the ridge with the highest strength needed to maintain its integrity. The ridge that was found to provide this condition is the second ridge up-slide from the area of development.

3. Water level

Water can have a significant influence on the overall stability of a slope. Water can potentially reduce the resisting forces of the materials that are being relied upon to maintain stability. No free water was encountered in our explorations at the time of drilling.

Our analysis has included two different potential water levels. A water level was assumed to be at the elevation of the water in the Virgin River (elevation 3780 feet) and a second option with the water level up at an elevation of 3820 feet, which is approximately the lowest elevation on the property east of the main house location.

C. Material Strengths

The strength of materials determined in the laboratory along with back-calculated strengths from existing slopes and previous landslide events (in areas similar to those at the site).

Listed below are the strength parameters that have been used for this analysis:

Material	Unit Weight (pcf)	Strength	
		ö' (°)	c'(psf)
Landslide	125	28	375
Undisturbed Bedrock	125	28	375
Weak Plane	125	17	0
Sandstone	120	35	1000

D. Analysis

The stability of earth slopes can be evaluated by calculating a factor of safety, which is the ratio of the forces available to support the slope to forces pushing the ground down slope (driving forces). Driving forces include gravity and seismic forces during an earthquake.

The slope stability "factor-of-safety" for development of an earth slope ideally would be at least 1.5 in static conditions. If an area has experienced landslide movement (like this site has), a factor of safety on the order of 1.3 could be considered acceptable, if the strength parameters used in the analysis are representative of residual (post slide) strengths. The weak plane strengths used in this analysis are higher than values obtained in the laboratory.

Using the profile presented on Figure A-2, assumed subsurface profile along with our estimate on material strengths, the following factors of safety have been calculated.

Area of Evaluation	Water Level	Factor of Safety	
		Static	Seismic
Entire Landslide Mass (weakest profile)	Below weak layer	1.0	< 1
Entire Landslide Mass (profile to main house)	Below weak layer	1.2	< 1
Entire Landslide Mass (profile to main house)	Below weak layer	1.1	—

The factors of safety obtained from this study indicate that there is the potential for landslide movement. Therefore the area mapped as landslide and the areas that may be impacted by the mapped landslide area are not typically considered suitable for development.

It should be noted that the factors of safety obtained from the analysis include strengths, that assume that the overall landslide mass has a factor of safety of near 1.0. Our laboratory strengths are lower than the values used in the analysis. The weak plane values used have been found on similar materials in southwestern Utah within other landslides that we have evaluated. It is our professional opinion that we would expect higher factors of safety can be realized due to the unsaturated conditions within the landslide mass and the weak plane before with the added understanding that the likelihood of having lower values is very low.

With the seismic factor of safety being below 1.0, we estimate approximately 14 inches of movement could occur from a significant seismic event. This lateral displacement could include vertical movement at the locations contemplated for the homes.

Data from the results of our analysis are included within the appendix of this report.

PROPOSED CONSTRUCTION

We understand it is proposed to construct three homes at the locations indicated on Figure 3. Each of these homes will be primarily constructed of reinforced concrete and are proposed to be located at the locations and elevations listed below:

Construction	Lowest Floor Elevation (ft)
Lot 8 Main Home	3831 to 3835
Lot 8 Guest Home	3867
Lot 11 Home	3844

We understand that any additional grading or access to each of these homes is being restricted to be as little as possible. Each case will likely be constructed within the more granular type soil than the expansive soil.

RECOMMENDATIONS

Based on our experience in the area, the subsurface conditions encountered within the subsurface explorations, laboratory test results, engineering analysis and the proposed construction, the following recommendations are provided to 1) reduce the risk of landslide movement 2) provide support of the homes, and 3) prepare the subgrade to properly support surface improvements:

A. Site Grading

As mentioned above, the project site is located within a mapped landslide deposit. Landslide movement may be triggered by man-made or natural events such as: changes to site grades, wetting subsurface soils, and groundshaking.

To reduce the risk of landslide movement at the site, we recommend the following items be considered during the design:

- Limit cuts and fills to keep grades similar to their current profile. Removing soil at the toe of slopes or placing fill or other heavy loads at the top of slopes should be avoided.

- We understand that the current grading plan includes as little a change in grade as possible. We should review the final grading plan prior to construction to provide additional recommendations, and comments, needed. If any changes to the grading plans are made after the start of construction, we should be notified to address potential geotechnical concerns, which may result from such changes.

1. Subgrade Preparation

a. General Subgrade Preparation

Prior to new construction, existing vegetation and soil containing significant roots and organics should be removed and discarded offsite or used in landscaping areas.

Structures should be supported on deep foundation elements, such as micro piles, to reduce the potential damage if the ground surface were to heave. Design parameters for micro piles can be found in the Foundations Section.

b. Pavement, flatwork and improvements

Expansive Clay Subgrade: If during grading, expansive clay is encountered, it should be removed to a depth of at least 3 feet below subgrade. We estimate approximately 1½ inches of heave may occur if the expansive clay subgrade below the 3 feet of non-expansive material becomes wetted.

Non-expansive Subgrade: If the subgrade consists of poorly graded sand with gravel or clayey sand, we recommend it be scarified, moisture conditioned, and properly compacted. Scarification is not necessary if sandstone is exposed.

2. Excavation

We anticipate that excavation of the soils at the site can be accomplished with typical excavation equipment. The lean to fat clay that is stiff may require pre-ripping or a heavy duty excavator for removal during the overexcavation process. Excavations extending into the sandstone may require blasting or the use of a heavy duty excavator equipped with a ripper tooth, or hammer-hoe attachment.

3. Grading Slopes and Trenches

The following table summarizes recommendations for excavation of temporary and permanent unretained cut slope excavations, trench excavations and permanent unretained fill slope construction. Slopes should include benches in accordance with the 2024 IBC.

Slope Condition	Maximum Slope (Horizontal:Vertical)
Permanent Cut Slopes in Landslide Soil	2:1
Permanent Cut Slopes in Sandstone	½:1
Permanent Cut Slopes in Mudstone within/landslide deposit	1:1*
Permanent Fill Slopes - Compacted fill	2½:1
Utility Trenches in On-site Clayey Soils (OSHA Soil Class A)	¾:1
Utility Trenches in On-site Silty Gravel with Sand (OSHA Soil Class C)	1½:1**

** Cuts into landslide deposits should be evaluated on an individual basis.*
***Steeper trenches will require the use of shoring or a trench box to provide a safe work environment. Safe trench excavation is the responsibility of the contractor.*

Fill slopes should be graded by overbuilding and then cutting back to the desired grade to provide a compacted slope face. Fill placed on existing slopes steeper than 3:1 should be placed using a benching procedure to key the fill into the existing slope. Benches should be of sufficient width to allow adequate area for the compaction equipment. Slopes should include benches in accordance with the 2024 IBC.

Cut and fill slopes will be susceptible to erosion, particularly resulting from run-off from the adjacent slopes. Water should be directed around slopes using drainage swales to reduce potential erosion. A site specific drainage study should be conducted by the civil engineer to control localized runoff.

4. Material Suitability

a. Import Materials

Import materials should be non-expansive, non-gypsiferous or granular soil. Listed below are the materials recommended for imported fill.

Area	Fill Type	Recommendations
Slabs	Site grading/ structural fill	-200 <35%, LL <30% Maximum size: 4 inches Solubility < 1%
Underslab (upper 4 inches)	Base course	-200 <12%, Maximum size: 1 inch Solubility < 1%

-200 = Percent Passing the No. 200 Sieve
LL = Liquid Limit

b. Onsite Materials

The on-site poorly graded sand with gravel and clayey sand, free of organics, debris and material greater than 6 inches in size, is suitable for use as site grading fill, structural fill, wall backfill and utility trench backfill. Sandstone is suitable to reuse as site grading fill, structural fill, wall backfill and utility trench backfill provided that it is crushed down to 6-inch minus material and a minimum of 60 percent of the material passes the No. 4 sieve.

5. Moisture Conditioning

When using clayey soils as fill, the process should be conducted in a manner to allow uniform moisture conditioning throughout the mixture. Clay clods should be processed to less than 1-inch in size prior to and during the preparation process. Our experience has shown that when moisture conditioning clayey soils for re-use, it is best to allow the moisture conditioned soil “sitting time” for moisture to uniformly penetrate the soil particles. This may require a sitting/curing time of up to 24 (but not limited to) hours. Consideration to allowing the additional moisture conditioning sitting/curing time should be given to the curing process.

6. Compaction

Compaction of materials placed at the site should meet the following moisture content and densities when compared to the maximum dry density as determined by ASTM D-1557:

Area	Moisture Content (%)	Compaction (%)
Subgrade	±2 of w_{opt}	≥90
Structural Fill, Foundation Subgrade, and Utility Trench Backfill	±2 of w_{opt}	≥95
Site Grading - Non Structural Areas	±2 of w_{opt}	≥90
Wall Backfill - Nonstructural	±2 of w_{opt}	≥90
Wall Backfill - Supporting Improvements	±2 of w_{opt}	≥95

w_{opt} = Optimum moisture content
**Low permeable fill criteria to be verified with lab testing prior to use*

Fill placed at the site should be tested to verify proper compaction. Fill should be placed in loose lift thicknesses which do not exceed the capacity of the equipment being utilized. Generally, 6 to 8-inch loose lifts are adequate. Lift thicknesses should be reduced to 4-inches for hand compaction equipment.

7. Surface Drainage

Positive measures to eliminate the potential for moisture to infiltrate the underlying expansive soils and bedrock is needed in order to reduce the potential for future movement of buildings and site improvements. Strict site drainage measures should be maintained and improved upon throughout the life of the improvements. We recommend the drainage plan implement the following criteria:

a. Positive site drainage should be maintained at all times.

b. After construction has been completed, positive drainage of surface water away from the buildings should be maintained throughout the life of the structures. We recommend a minimum slope of 6 inches in the first 10 feet from the perimeter of the structures. **In no case should ponding of water be allowed onsite.**

c. As a part of the surface drainage away from structures, consideration may be given to providing a hard surface such as a 3 to 4 foot concrete skirt (sidewalk) around the perimeter of the structures.

d. Desert-type landscaping or landscaping which requires little to no water should be implemented. If underground irrigation is utilized frequent monitoring and maintenance of valves and timer settings should be conducted to reduce potential of saturating the subsurface soils.

e. We recommend surface drainage be controlled using rain gutters and roof down spouts. Downs spouts should be piped horizontally to discharge down gradient and away from the structures and preferably off-site.

f. Drain pipes and catch basins should be designed and constructed in a manner and with the appropriate materials to provide sealed/water tight connections and fittings.

g. Drainage resulting from development of the site from: structures, roadways/pavements and other improvements should be designed and constructed to drain off the site.

h. Any water storage facilities are constructed should be frequently monitored for leaks. Additional design/construction techniques to reduce the risk of leaks should be highly considered during the design of these structures. Design professionals should consider the use of impermeable membranes as part of the design of water retaining structures.

B. Foundations

Structures should be supported on deep foundation elements such as micro piles. Deep foundation elements should be designed with the following parameters.

a. Minimum embedment length = 35 feet.

b. End bearing should not be considered for micropile capacity. Capacity of micro piles will be developed through skin friction.

Micro piles should be designed with a minimum dead load of 10 kips for the support of the Lot 8 guest house. The main house and the Lot 11 guest house do not need a minimal dead load.

If the dead load cannot be achieved, the micropile should be extended below the 35-foot depth. The deficiency in dead load can be accomplished by assuming 1.7 kips per foot of additional penetration, for a 6-inch diameter pile.

c. The micro piles should be structurally reinforced to resist tensile forces on the pile due to upward skin friction (uplift) which could result if the expansive clay is wetted and swells. The tensile force may be calculated utilizing at least 20 feet of pile length with an ultimate skin friction of 1,700 psf. A "greased PVC bond breaker" may also be considered to reduce uplift forces on the micro piles.

d. Care should be taken to assure the micro piles are not over-sized (mushroomed) at the ground surface, which could provide an area where swelling soil/rock could exert uplift forces on the piles.

e. The water cement ratio of the grout should be on the order of 0.45 to 0.50. This should be verified during construction using a grout scale to verify the grout has a specific gravity on the order of 1.8 to 1.9. The grout volume should be recorded for each micropile constructed to ensure the appropriate volume is placed.

f. Grout should be placed in the micro piles the same day they are drilled using a tremmie pipe which extends to the bottom of the drill hole. The

tremmie pipe should be raised as the grout is placed to ensure the element is free of voids. If water enters the drill holes, it would be necessary to place grout immediately after the drill hole is completed using a tremmie. The tremmie will also displace water out of the hole as grout is placed. Failure to place grout the day of drilling may require re-drilling for additional bedrock penetration.

g. Micro pile holes should be observed during drilling to verify depth. If air rotary methods are used, they can also be inspected to verify caving does not occur below the ground surface which could also result in additional uplift forces.

h. "Centralizers" should be used on the micropile steel reinforcing bar at approximately a 5 to 7 foot spacing to ensure the appropriate grout cover on the reinforcing.

C. Concrete Slab-on-Grade

1. Slab Support

When using deep foundation elements the lowest level concrete slabs should be structurally supported with a crawl space below. If concrete flatwork is constructed outside the structure, fill placed to support the slab should be tested frequently to verify compaction meets the recommendations provided within this report.

2. Underslab Base Course

A 4-inch layer of properly compacted base course should be placed below slabs to provide a firm and consistent subgrade and promote even curing of the concrete.

D. Lateral Earth Pressures

1. Lateral Resistance for Footings

Lateral resistance for spread footings is controlled by sliding resistance developed between the footing and the subgrade soil. An ultimate friction value of 0.45 may

be used in design for ultimate lateral resistance of footings bearing on properly compacted structural fill.

2. Retaining Structures

The following equivalent fluid weights are given for design of subgrade walls and retaining structures. The active condition is where the wall moves away from the soil. The passive condition is where the wall moves into the soil and the at-rest condition is where the wall does not move. The values listed below assume a horizontal surface adjacent the top and bottom of the wall and do not account for hydrostatic pressures or surcharge loads.

Description	Active	At-Rest	Passive
Fine grained soil (lean clay) Equivalent Fluid Weight	45 pcf	65 pcf	220 pcf
Lateral Coefficient	0.35 pcf	0.55 pcf	—
Granular soil (silty sand) Equivalent Fluid Weight	35pcf	55pcf	320 pcf
Lateral Coefficient	0.28 pcf	0.44 pcf	—

Lateral loading should be increased to account for surcharge loading (using the appropriate earth pressure coefficient) and a rectangular distribution if structures are placed above the wall and are within a horizontal distance equal to the height of the wall. If the ground surface slopes up away from the wall, the equivalent fluid weights should also be increased.

Care should be taken to prevent percolation of surface water into the backfill material adjacent to the retaining walls. The risk of hydrostatic buildup can be reduced by placing a subdrain behind the walls consisting of free-draining gravel wrapped in a filter fabric.

3. Seismic Conditions

Under seismic conditions, the equivalent fluid weights should be modified as follows according to the Mononobe-Okabe method assuming a level backfill condition:

Lateral Earth Pressure Condition	Seismic Modification (2% Probability of Exceedance in 50 yrs)
Active	15 pcf increase
At-rest	No increase
Passive	15 pcf decrease

The resultant of the seismic increase should be placed up one-third of the height from the base of the wall.

4. Safety Factors

The values recommended assume mobilization of the soil to achieve the assumed soil strength. Conventional safety factors used for structural analysis for such items as overturning and sliding resistance should be used in design.

E. Seismicity, Liquefaction and Faulting

1. Building Code Parameters

Listed below is a summary of the mapped seismic parameters that may be used for design with the 2024 International Building Code:

Description	IBC 2024[1]
Site Class	CD[2]
PGA_M - site-modified peak ground acceleration	0.23g
S_{DS} - site-modified design ground motion	0.37g
S_{D1} - site-modified design ground motion	0.18g

[1] *Values obtained from information provided by the ASCE Hazard tool at hhttps://ascehazardtool.org based on ASEC/SEISMIC 7-22.*

[2] *Site class designation is based on correlations to shear wave velocity, and includes a 30 percent error band, as per ASCE 7-22 §20.3. Seismic parameters reflect highest acceleration for each site class considered.*

If the improvements address the potential lateral movement from the landslide hazard, Site Class F should be used.

2. Liquefaction

Based on subsurface soil and groundwater conditions encountered in the borings drilled, the subsurface soils observed are non-liquefiable during a seismic event.

3. Faulting

Based on our review of geologic maps provided by the Utah Geological Survey (UGS), the nearest mapped fault is an undetermined concealed fault approximately 1⅓ miles to the east. The location of the mapped fault can be found on the geologic hazard portal by the UGS at https://geology.utah/apps/hazards/.

F. Soil Corrosion

Our experience has shown that water soluble sulfates are known to exist within the local soils. Therefore, we recommend concrete elements that will be exposed to the on-site soils be designed in accordance with provisions provided in the American Concrete Institute Manual of Concrete Practice (ACI) 318-14. Tables 19.3.1.1 and 19.3.2.1 of ACI 318-14 should be referenced for design of concrete elements utilizing a Sulfate Exposure Class of S2.

Consideration should also be given to cathodic protection of buried metal pipes. We recommend utilizing PVC pipes where local building codes allow.

G. Construction Testing and Observations

We recommend the following testing and observations be done as a minimum as required by the Washington County.

1. Observe grubbing and verify removal of soil containing roots and organics.

2. Verify that recommended overexcavation depths are achieved in the building pads, and beneath roadways and improvements. The lateral extent of the building pad should be located by survey (by others).

3. Verify that recommended fill depths are provided below pads, foundations and slabs.

4. Conduct compaction testing on fill placed below foundations and in building pads, roadways and improvements. We recommend testing each foot of fill placed.

5. Conduct construction materials testing on city improvements at a frequency which meets or exceeds Washington County requirements.

H. Geotechnical Recommendation Review

The client should familiarize themselves with the information contained in this report. If specific questions arise or if the client does not fully understand the conclusions/recommendations provided, weshould be contacted to provide clarification.

LIMITATIONS

This report has been prepared in accordance with generally accepted soil and foundation engineering practices in the area for the use of the client for design purposes. The conclusions and recommendations included within the report are based on the information obtained from the subsurface exploration, the data obtained from laboratory testing, our experience in the area and information from previous studies. Variations in the subsurface conditions may not become evident until excavation is conducted. If the subsurface conditions or groundwater level are found to be significantly different from those described above, we should be notified to reevaluate our recommendations.

If you have any questions or if we can be of further service please call.

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



James E. Nordquist, P.E., BC. GE.

Reviewed by Douglas R. Hawkes, P.E., P.G.

JEN/rs

REFERENCES

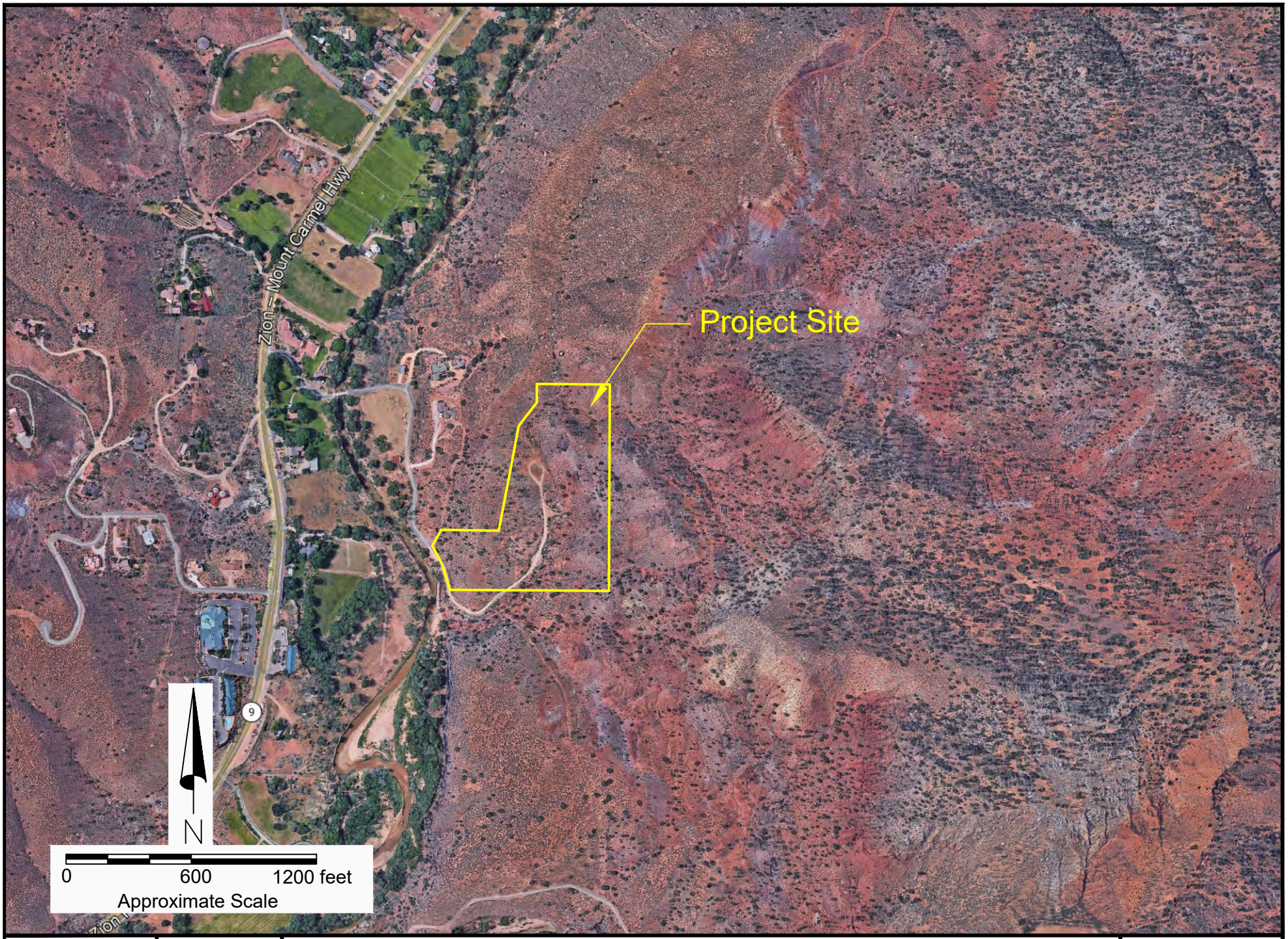
AGRC, 2017; 1 Meter Bare Earth LiDAR DEM

Commodity Stabilization Service, 1960; Aerial photographs dated July 11, 1960, Roll 12AA, Frames 76 and 77, Scale 20,000, Frame Format 9X9 inch.

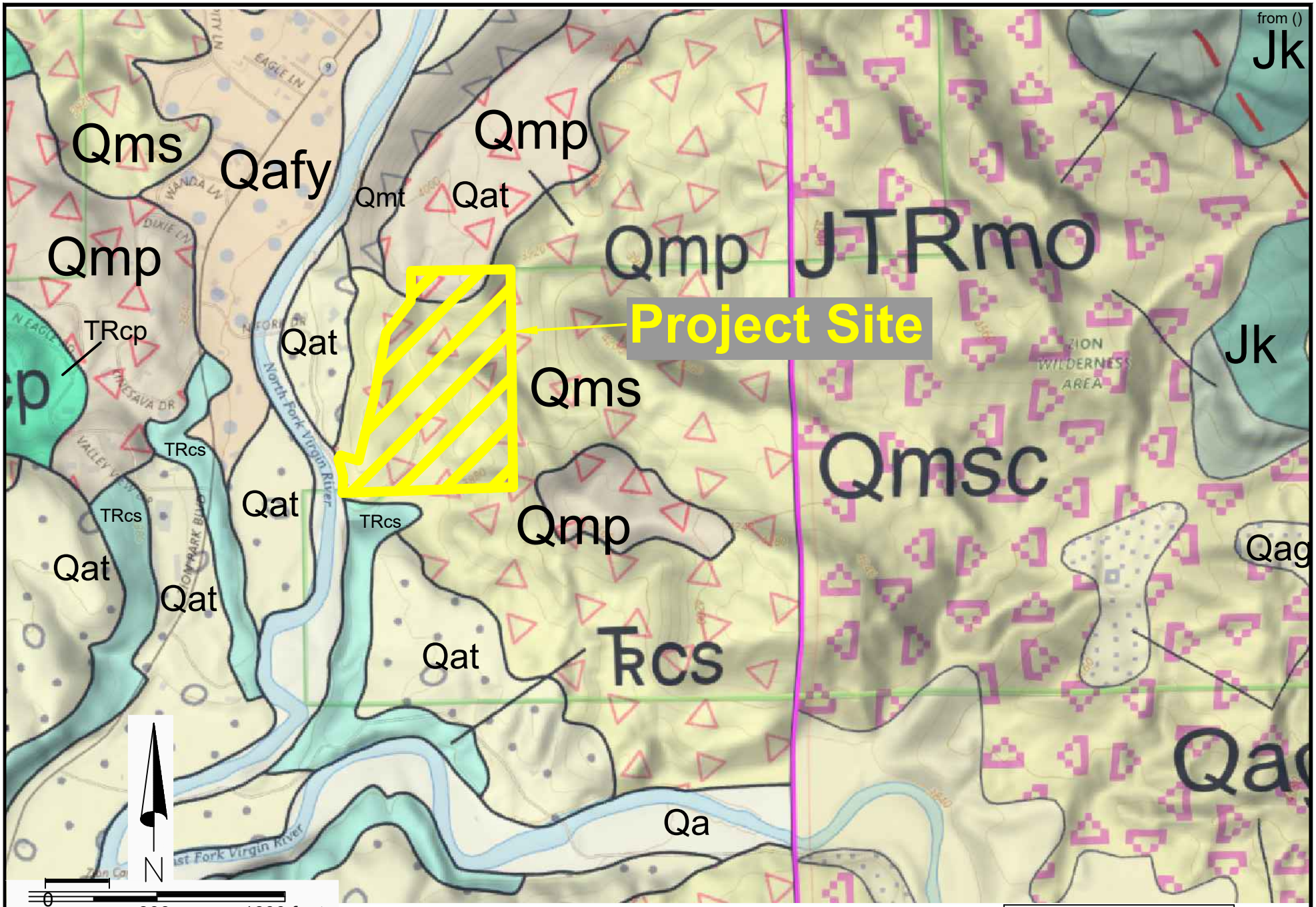
McCalpin, James, 1984; Preliminary age classification of landslides for inventory mapping: 21st Annual Symposium on Engineering Geology and Soils Engineering, Proceedings, University of Idaho, Moscow, ID, p. 99-111.

Utah Geological Survey, 2026; Utah Geologic Hazard Portal access July 15, 2026 at https://maps.geology.utah.gov/hazards.

Willis, G.C., Doelling, H.H., Solomon, B.J. and Sable, E.G., 2002; Interim geologic map of the Springdale West quadrangle, Washington County, Utah, Utah Geological Survey Open-file Report 394.



2252792	AGEC	Vicinity Map- Watchman Subdivision	Figure 1



Note: See Figure 3 for Legend and Notes

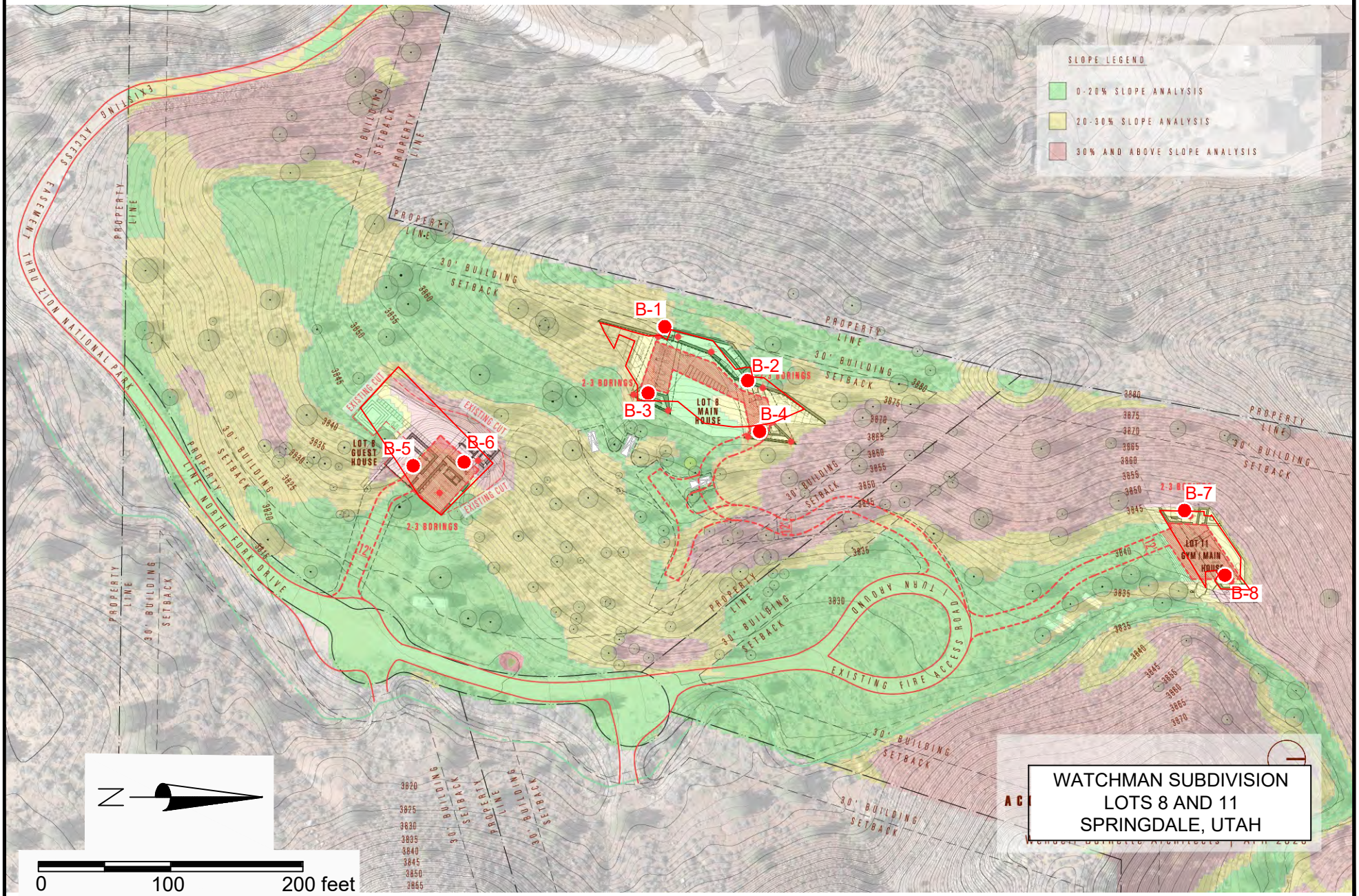
WATCHMAN SUBDIVISION
SPRINGDALE, UTAH

2252792	AGEC	Geologic Map and Subdivision Development	Figure 2

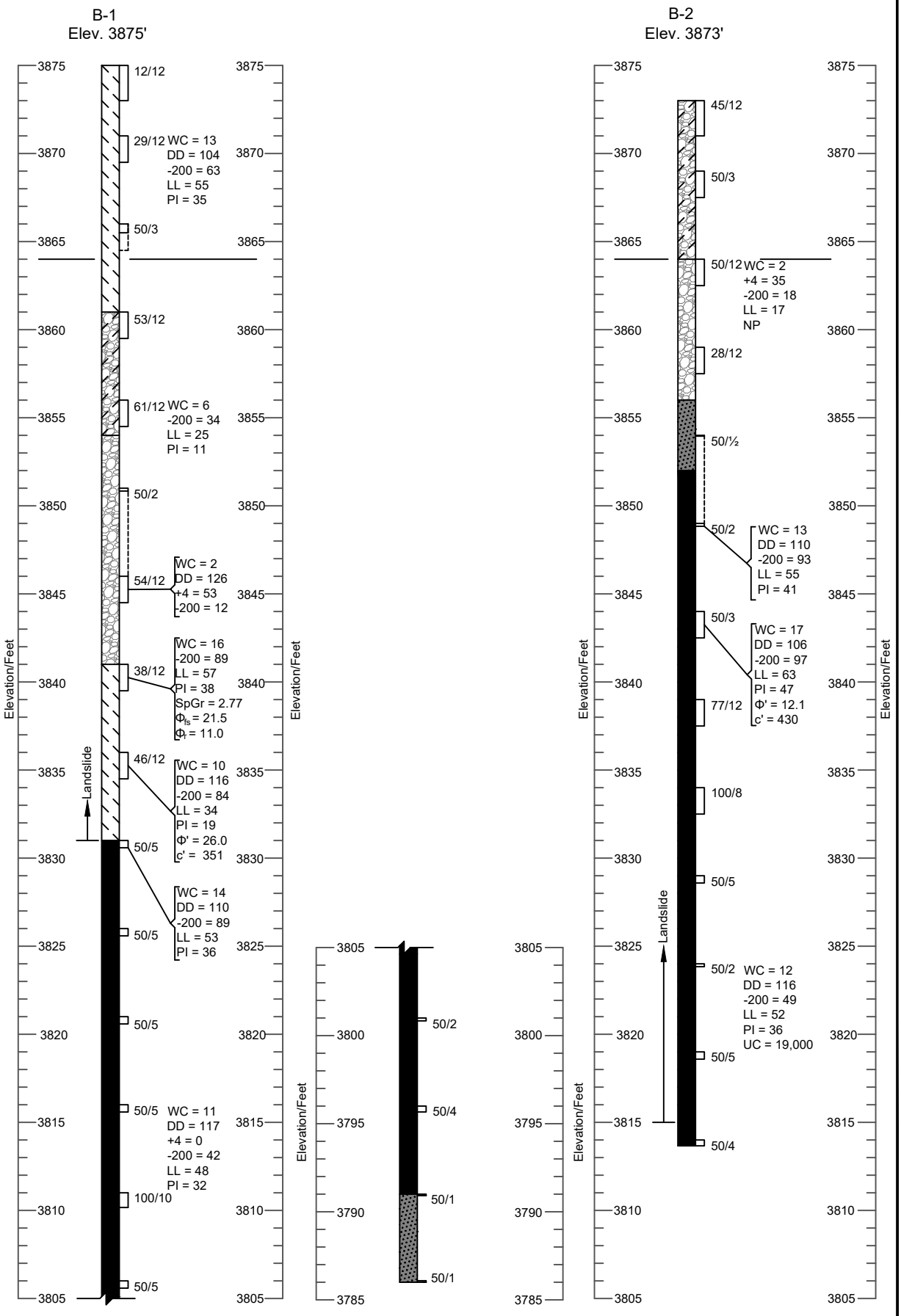
EXPLANATION OF SYMBOLS AND GEOLOGIC UNITS IN AREA OF PROPOSED DEVELOPMENT

Qa	-	Alluvium (Holocene).
Qag	-	Alluvial Gravel (Holocene to upper Pleistocene).
Qat	-	Old River and Stream Alluvium (Holocene to middle Pleistocene).
Qafy	-	Younger Fan Alluvium (Holocene).
Qmt	-	Talus (Holocene to upper Pleistocene).
Qms	-	Landslides (Historical to middle Pleistocene).
Qmp	-	Older Landslides, Colluvium and Pediment Alluvium (Holocene to Pleistocene).
Jn	-	Navajo Sandstone (Lower Jurassic).
Jk	-	Kayenta Formation, Main Body (Lower Jurassic).
JTRmo	-	Moenave Formation (Lower Jurassic to Upper Triassic).
TRcp	-	Petrified Forest Member of the Chinle Formation (Upper Triassic).
TRcs	-	Shinarump Conglomerate Member of the Chinle Formation (Upper Triassic).
———		Geologic contact between units.
		Property Boundary

Geology from the Utah Geological Survey Interactive Geology Map

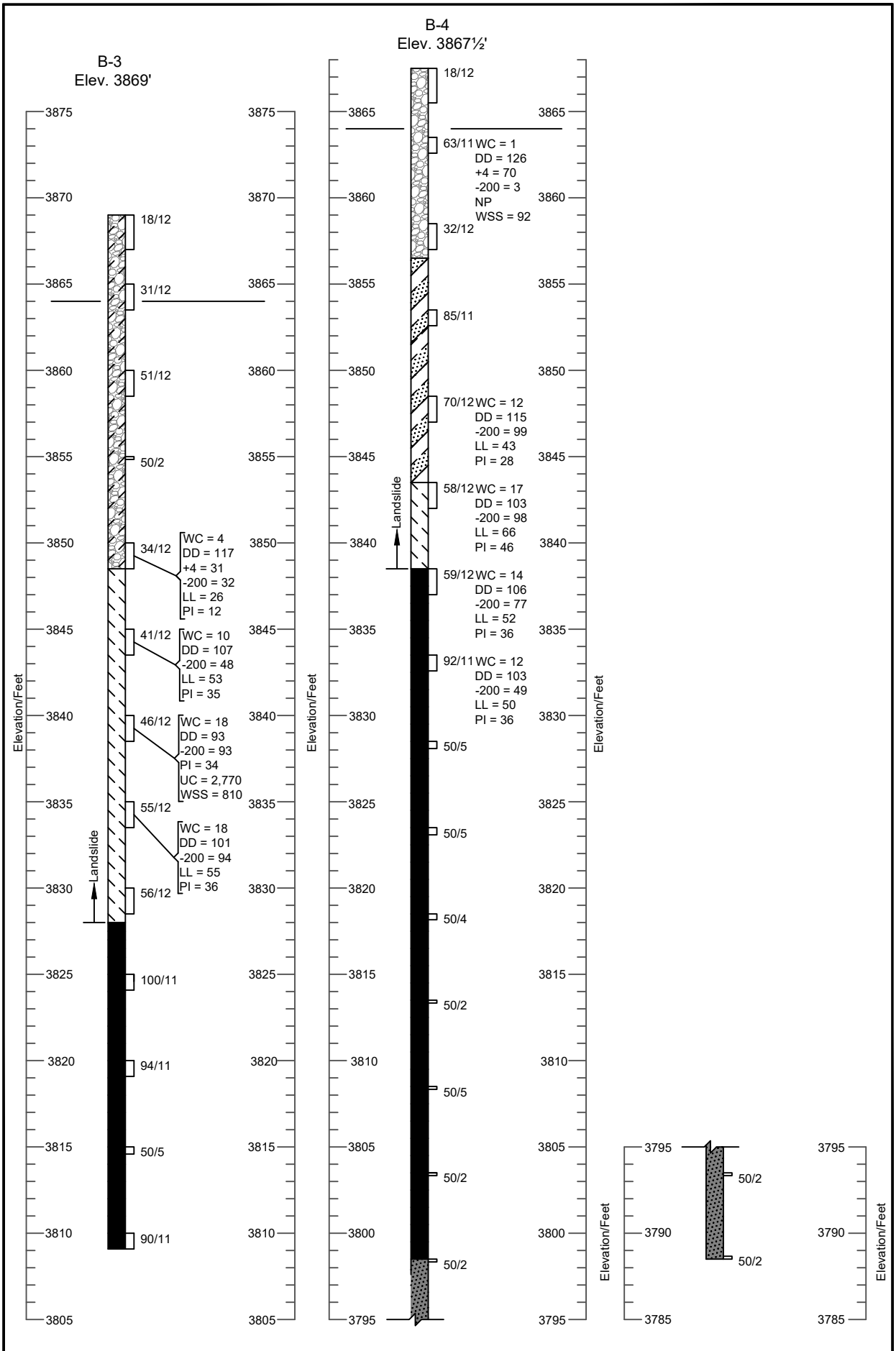


2252792	AGEC	Exploratory Boring Locations	Figure 4



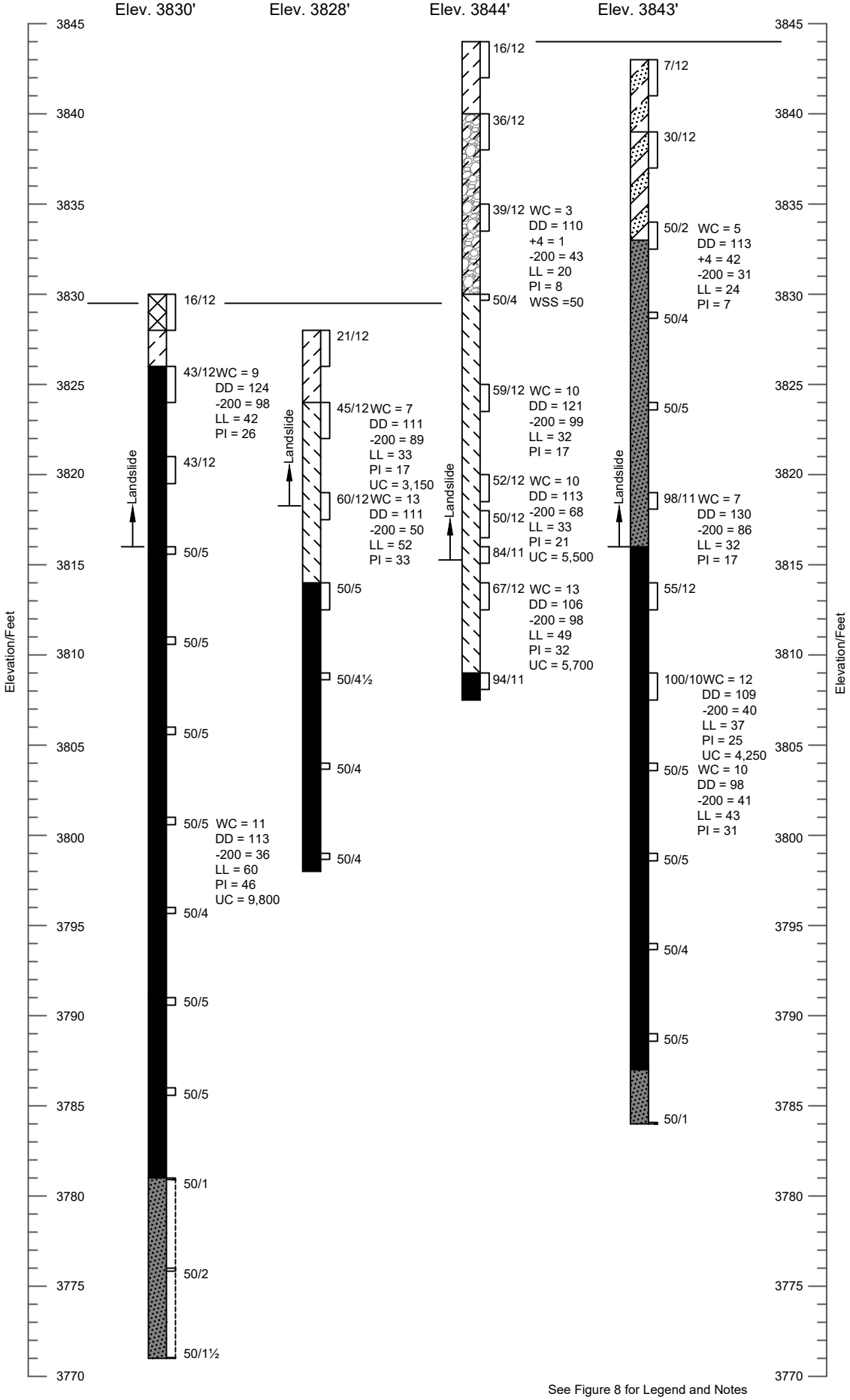
See Figure 8 for Legend and Notes

2252792	AGEC	Exploratory Boring Logs	Figure 5



See Figure 8 for Legend and Notes

252792	AGEC	Exploratory Boring Logs	Figure 6



See Figure 8 for Legend and Notes

2252792	AGEC	Exploratory Boring Logs	Figure 7

LEGEND:


Fill; silty gravel with sand, moist, brown.


Lean Clay (CL); sandy, very stiff, slightly moist, reddish brown.


Fat Clay (CH); slightly sandy, stiff to very hard, slightly moist, reddish brown.


Sandy Lean Clay interlayered with Silty Sand (CL-SM); occasional gravel, stiff or loose, slightly moist, reddish brown.

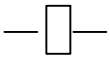

Silty Sand to Silt (SM-ML); dense to very dense, moist, dark reddish brown.


Clayey Gravel with Sand (GC); dense to very dense, moist, reddish brown and brown.


Poorly Graded Gravel with Sand (GP); possible cobbles, boulders, dense to very dense, slightly moist to moist, brown to grayish brown, often rounded.


Sandstone; very hard, slightly moist, gray.


Mudstone; very hard, moist, yellowish gray to gray.


Anticipated Floor Level


Indicates disturbed sample taken.

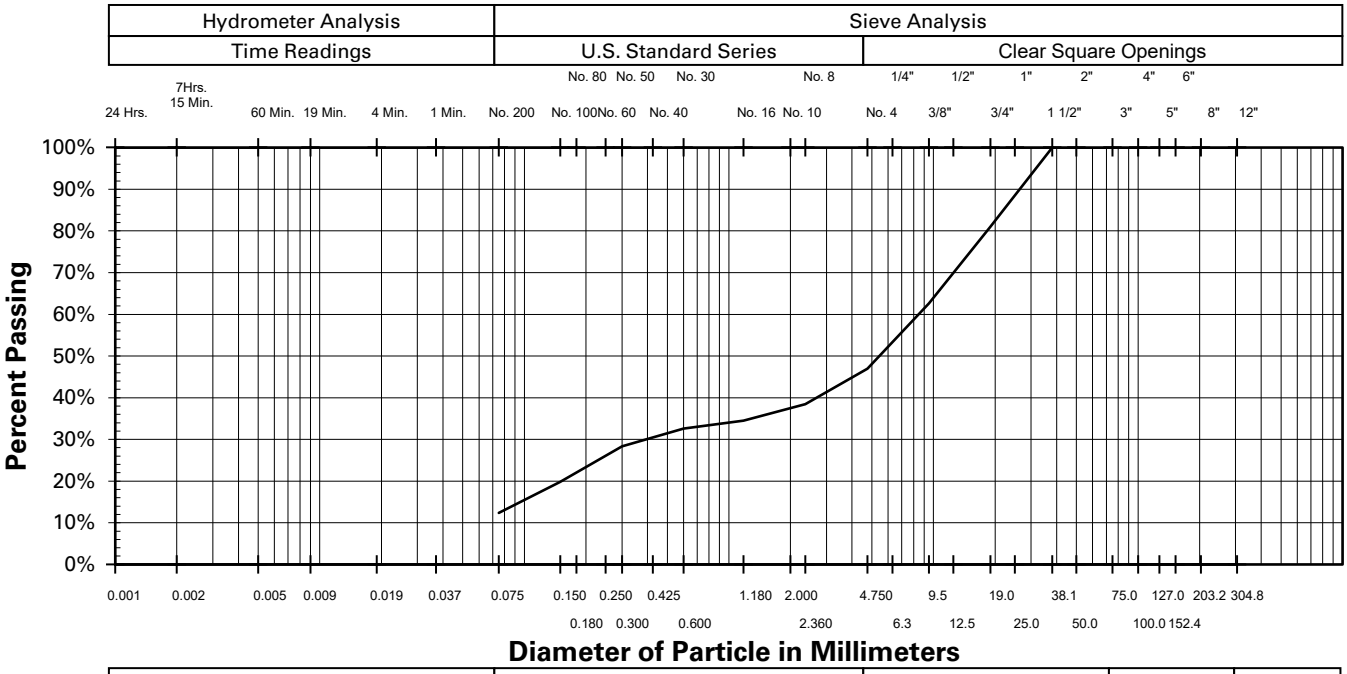


California Drive sample taken. The symbol 10/12 indicates that 10 blows from a 140-pound automatic hammer falling 30 inches were required to drive the sampler 12 inches.

NOTES:

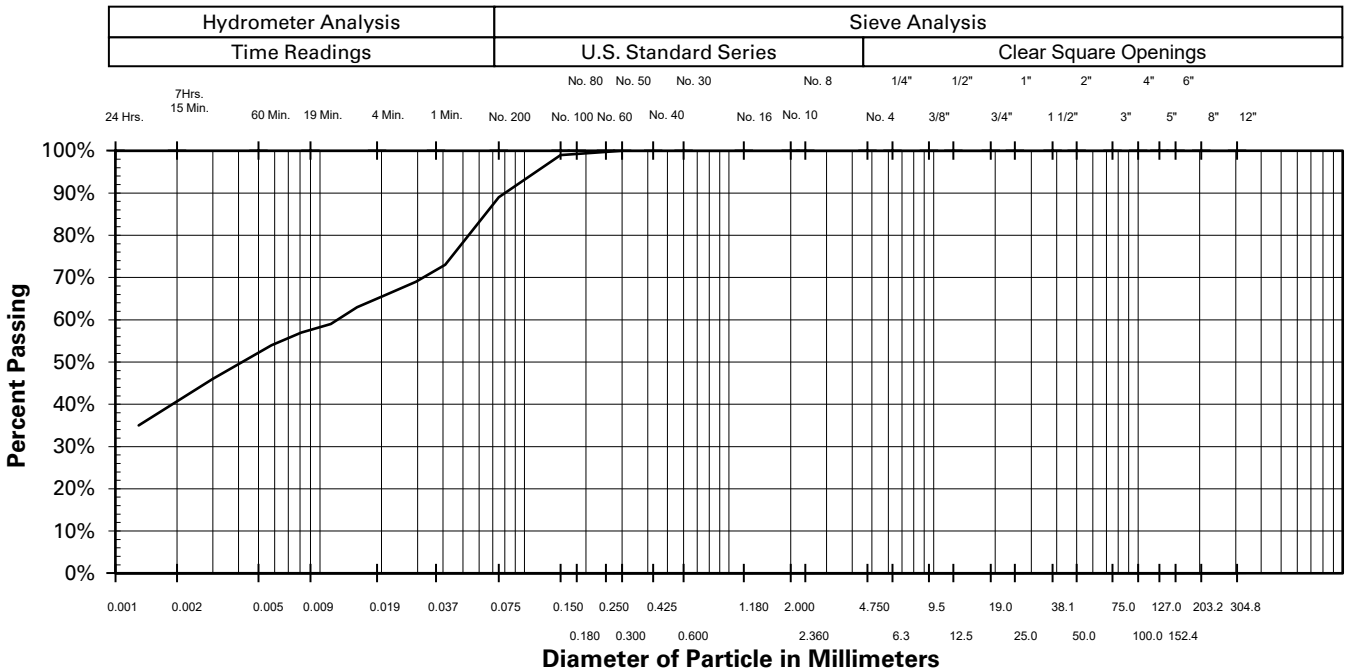
1. The borings were drilled on May 18-22, 2026 with air rotary and ODEX.
2. Locations of the borings were measured approximately by pacing from features shown on Figure 4.
3. Elevations of the borings were determined by interpolating between contours shown on the site plan provided, Figure 4.
4. The boring locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between materials shown on the boring logs represent the approximate boundaries between material types and the transitions may be gradual.
6. No free water was encountered in the borings at the time of drilling.
7. WC = Water Content (%);
   DD = Dry Density (pcf);
   +4 = Percent Retained on the No. 4 Sieve;
   -200 = Percent Passing the No. 200 Sieve;
   LL = Liquid Limit (%);
   PI = Plasticity Index (%);
   UC = Unconfined Compressive Strength (psf);
   WSS = Water Soluble Sulfates (ppm);
   SpGr = Specific Gravity;
   Φ' = Effective Friction (degrees);
   c' = Effective Cohesion (psf);
   Φ_{fs}= Fully Softened Friction (degrees)
   Φ_r = Residual Friction (degrees).

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Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

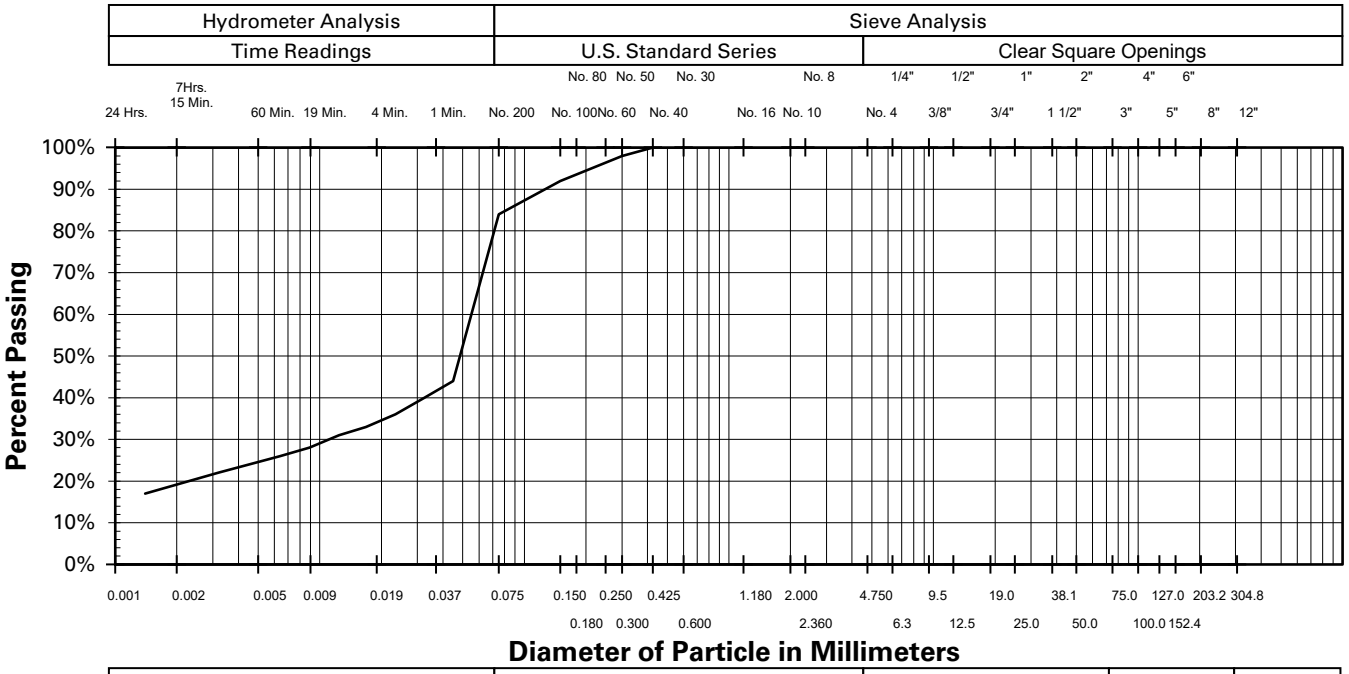
Gravel	53%	Liquid Limit	-
Sand	35%	Plasticity Index	-
Silt and Clay	12%	Sample Location	B-1 @ 29 Feet
Sample Description	Poorly Graded Gravel with Silt and Sand		



Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

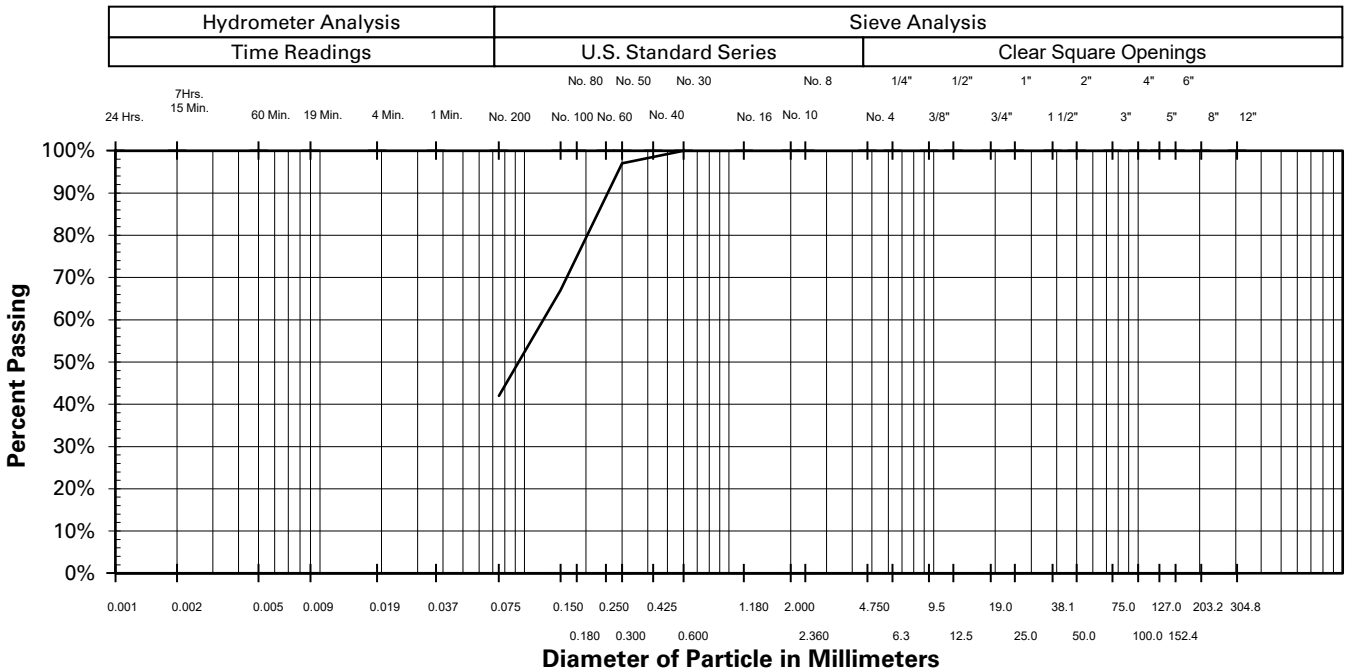
Gravel	0%	Liquid Limit	57%
Sand	11%	Plasticity Index	38%
Silt and Clay	89%	Sample Location	B-1 @ 34 Feet
Sample Description	Fat Clay		

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Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	0%	Liquid Limit	34%
Sand	16%	Plasticity Index	19%
Silt and Clay	84%	Sample Location	B-1 @ 39 Feet
Sample Description	Lean Clay with Sand		

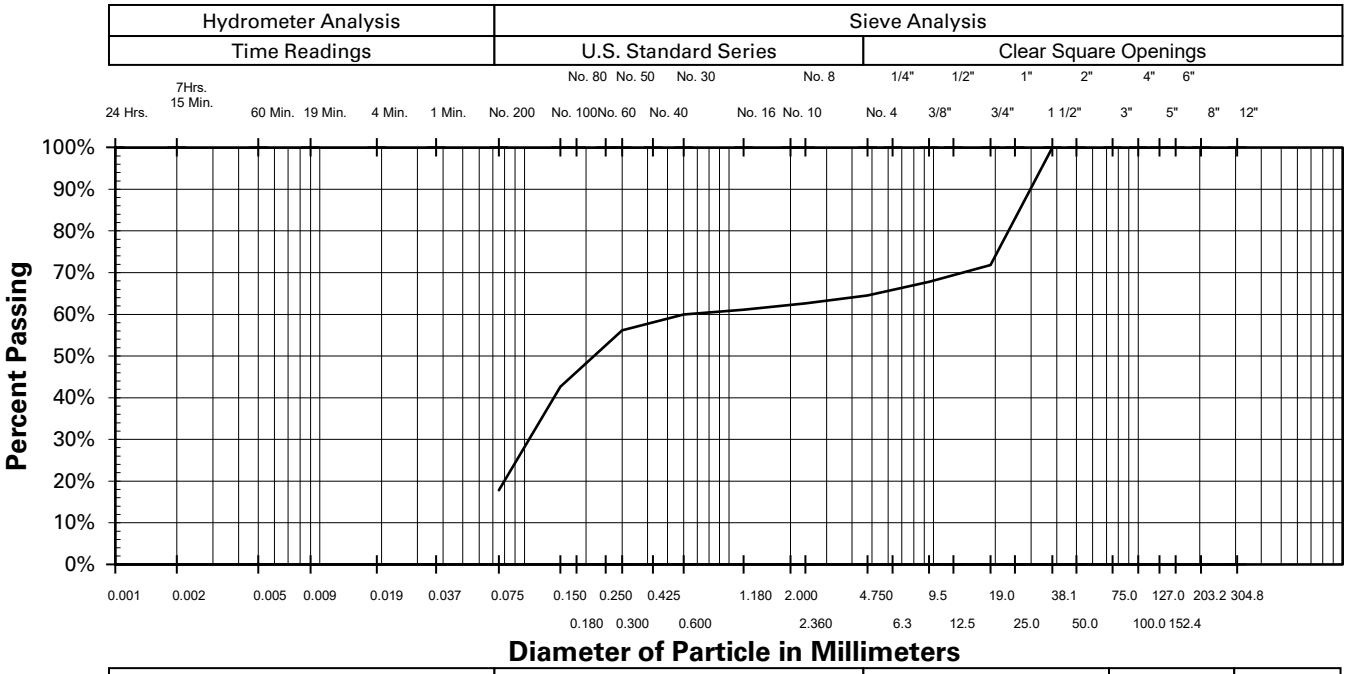


Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	0%	Liquid Limit	48%
Sand	58%	Plasticity Index	32%
Silt and Clay	42%	Sample Location	B-1 at 59 Feet
Sample Description	Mudstone		

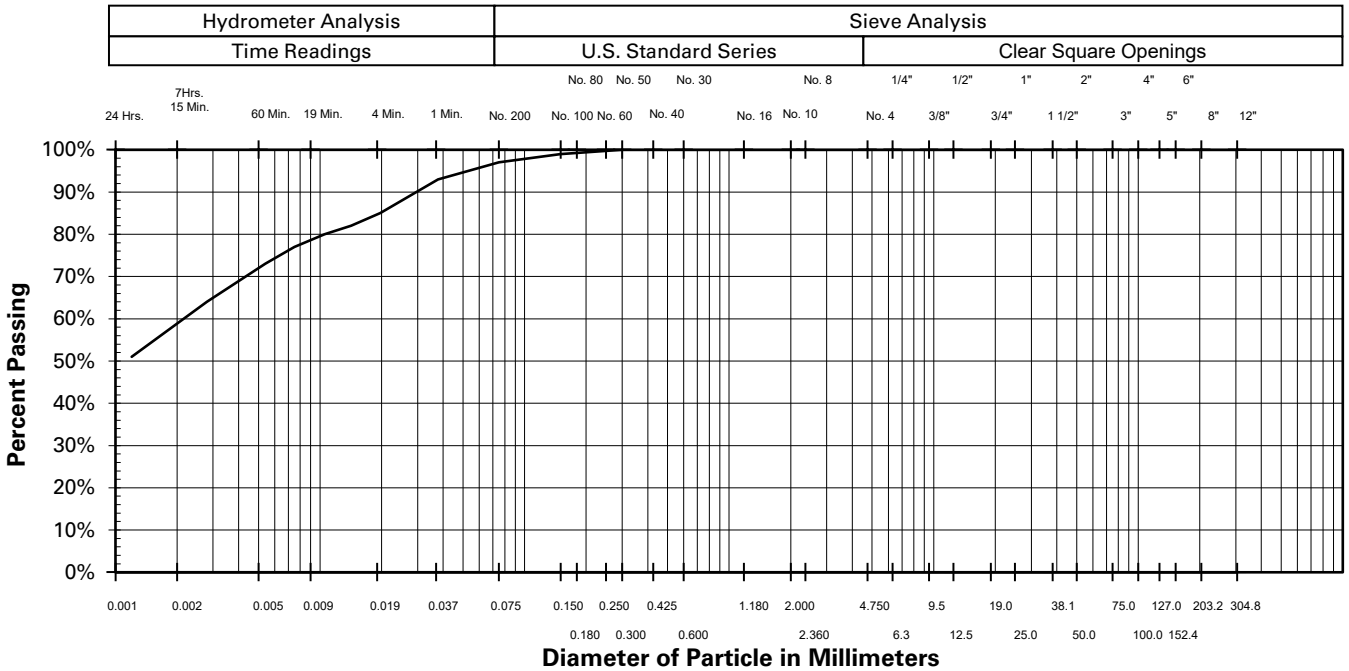
Project No. 2252792 **GRADATION TEST RESULTS** Figure 10

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Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	35%	Liquid Limit	17%
Sand	47%	Plasticity Index	0%
Silt and Clay	18%	Sample Location	B-2 @ 9 Feet
Sample Description	Silty Sand with Gravel		

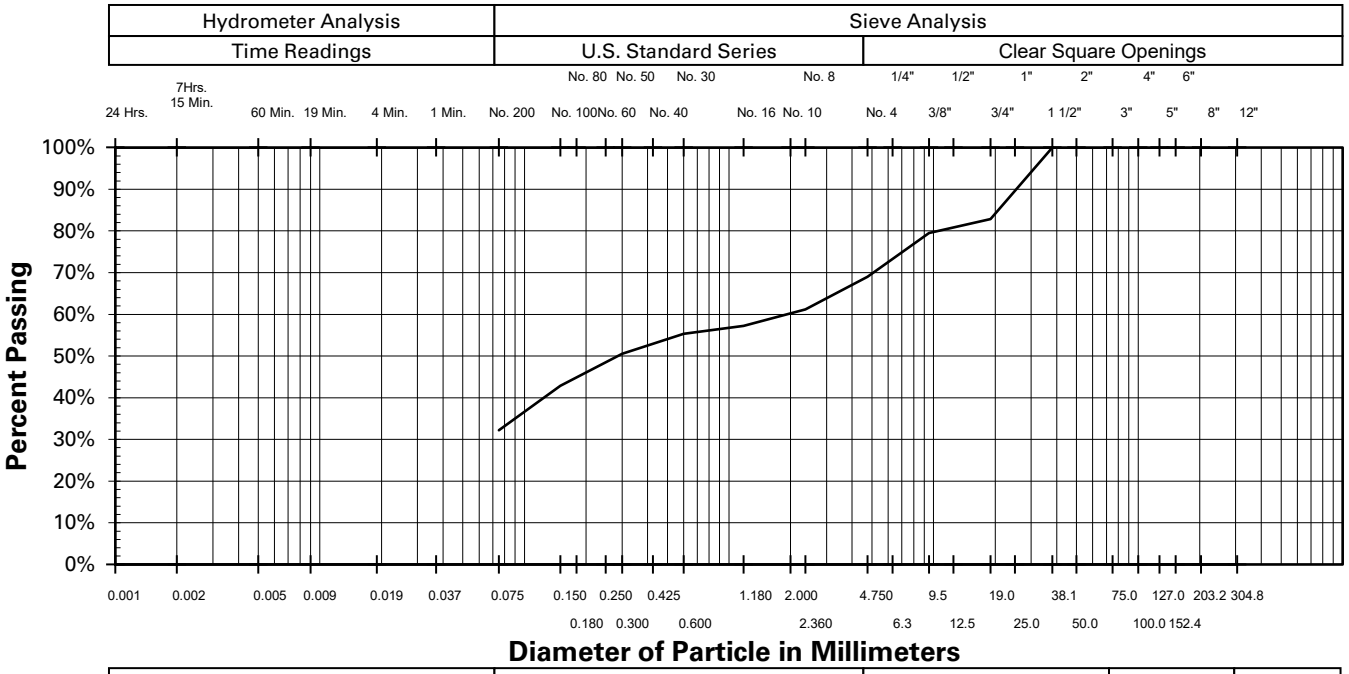


Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	0%	Liquid Limit	63%
Sand	3%	Plasticity Index	47%
Silt and Clay	97%	Sample Location	B-2 @ 29 Feet
Sample Description	Mudstone		

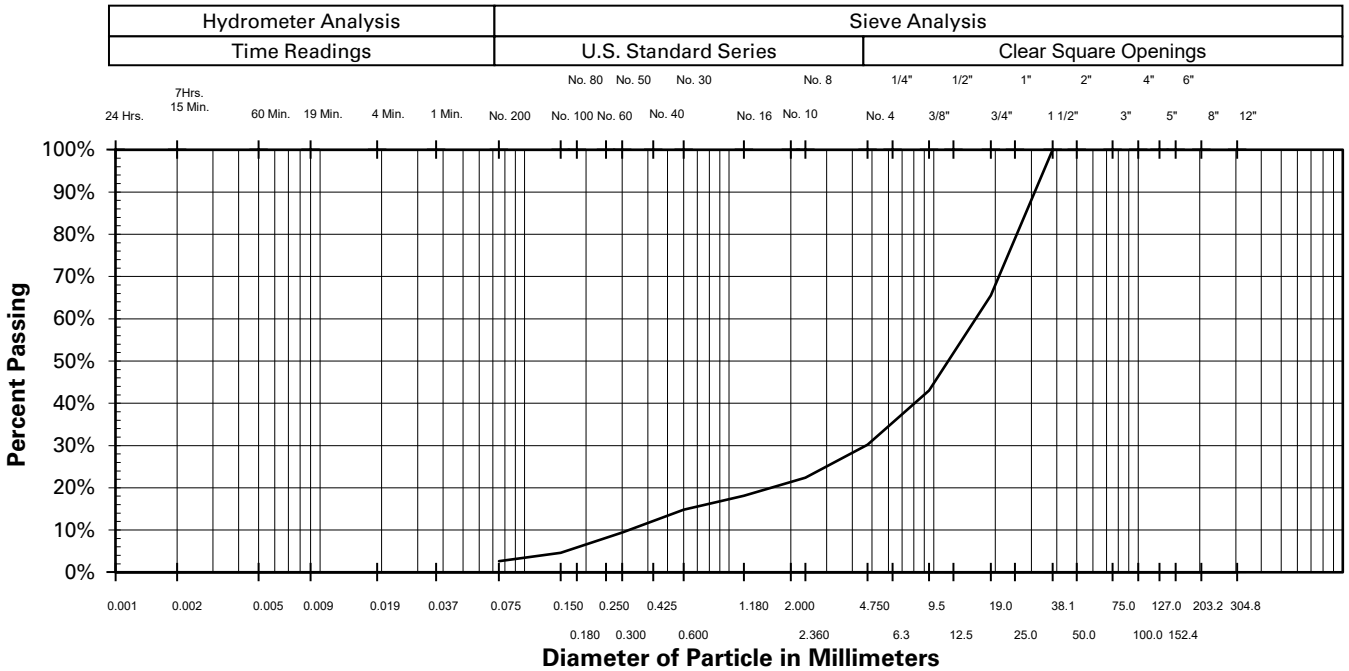
Project No. 2252792 **GRADATION TEST RESULTS** Figure 11

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	31%	Liquid Limit	26%
Sand	37%	Plasticity Index	12%
Silt and Clay	32%	Sample Location	B-3 @ 19 Feet
Sample Description	Clayey Sand with Gravel		

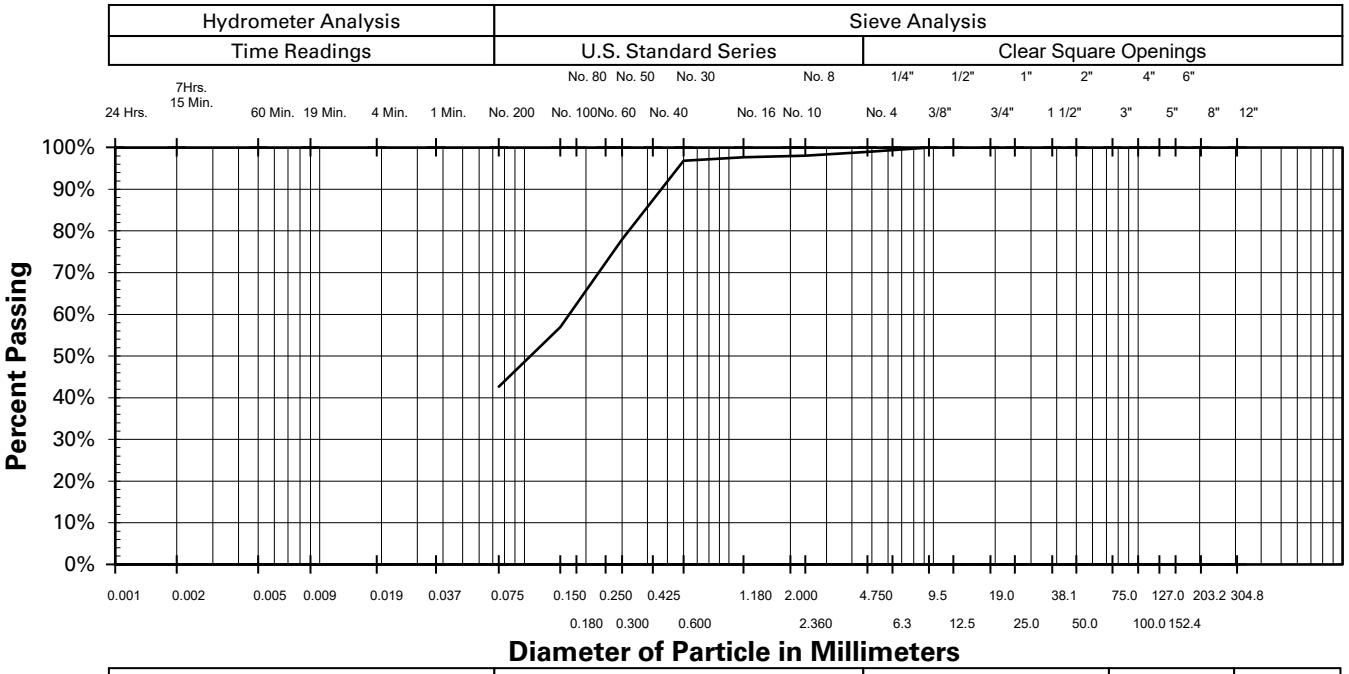


Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	70%	Liquid Limit	-
Sand	27%	Plasticity Index	NP
Silt and Clay	3%	Sample Location	B-4 @ 4 Feet
Sample Description	Poorly Graded Gravel with Sand		

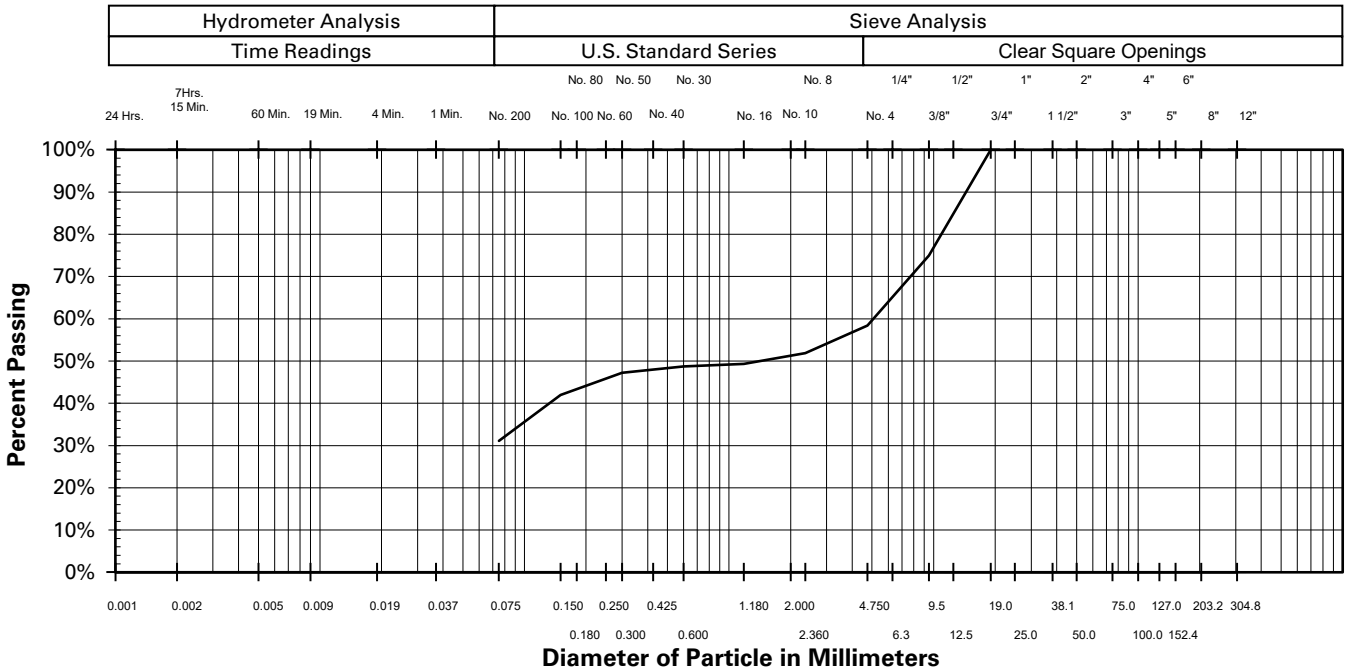
Project No. 2252792 **GRADATION TEST RESULTS** Figure 12

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	1%	Liquid Limit	20%
Sand	56%	Plasticity Index	8%
Silt and Clay	43%	Sample Location	B-7 @ 9 Feet
Sample Description	Clayey Sand		

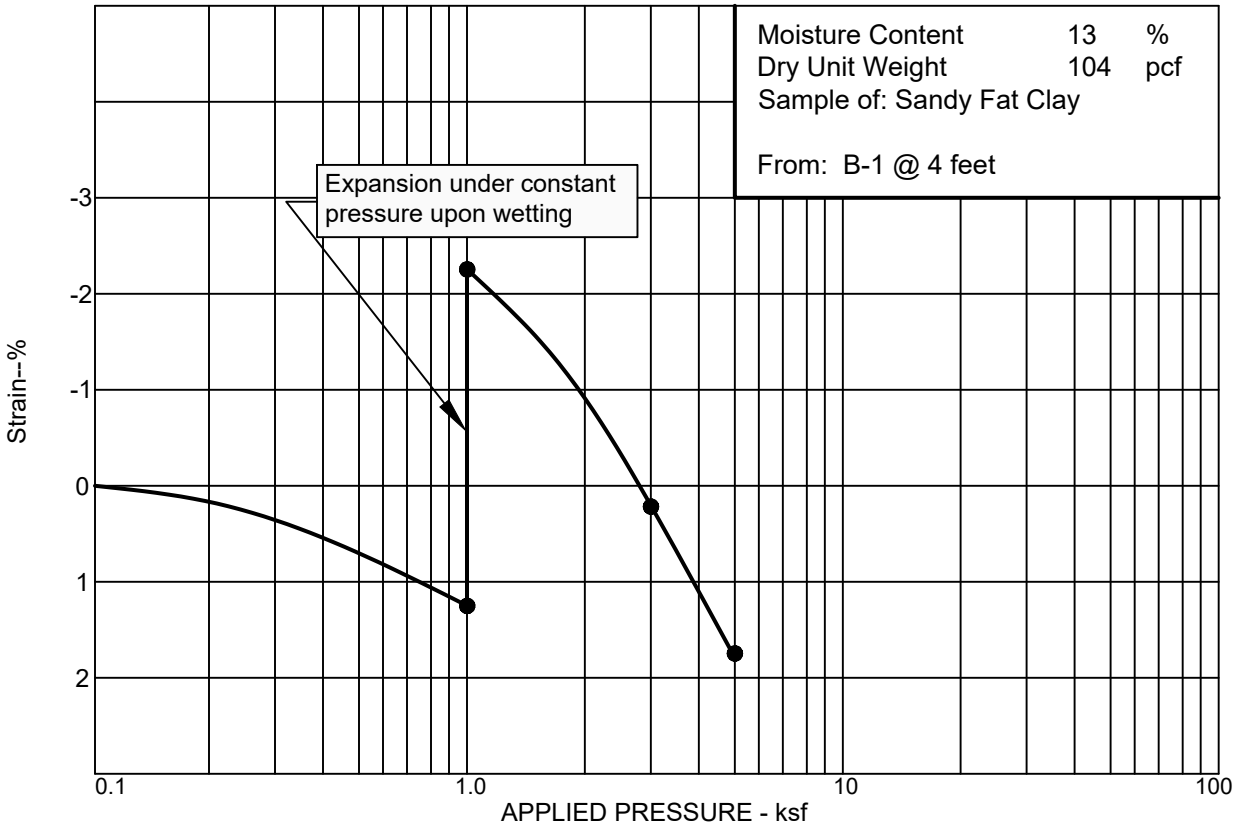


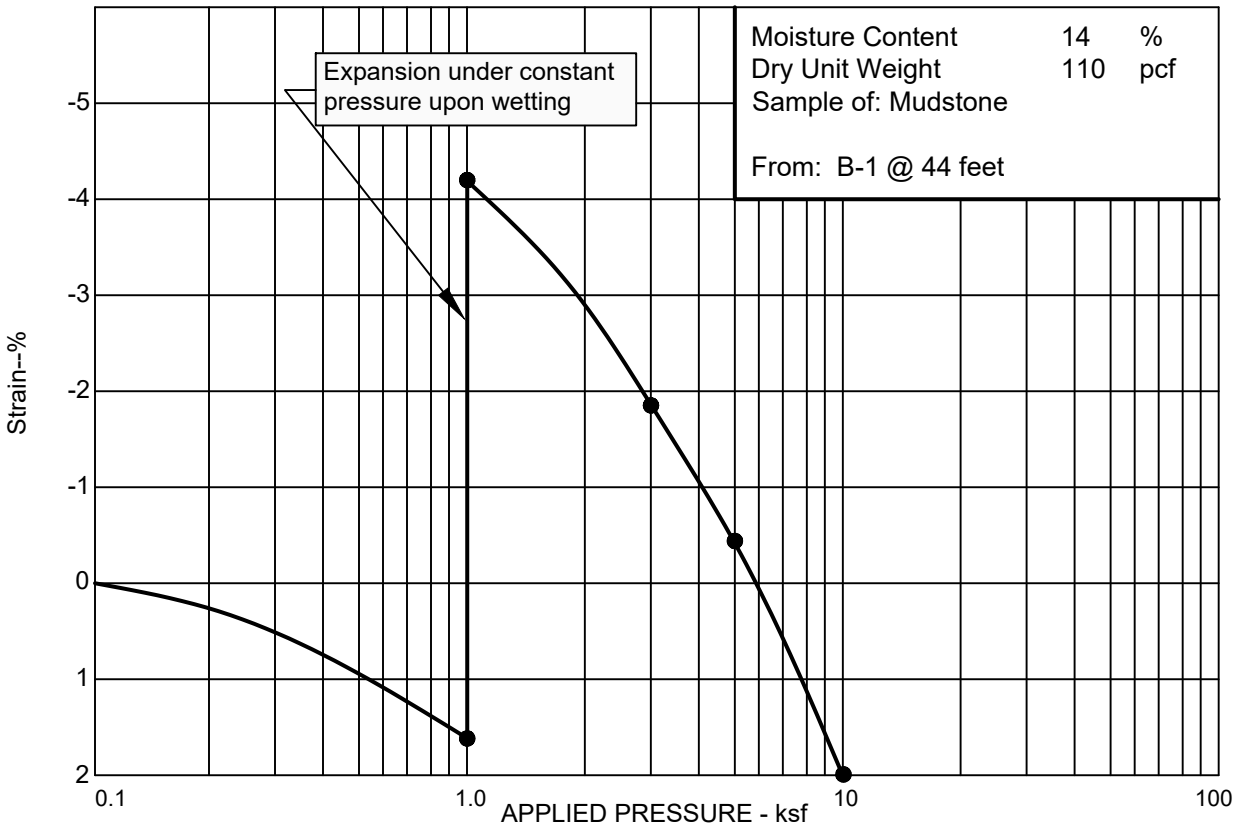
Clay to Silt	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

Gravel	42%	Liquid Limit	24%
Sand	27%	Plasticity Index	7%
Silt and Clay	31%	Sample Location	B-8 @ 9 Feet
Sample Description	Silty, Clayey Gravel with Sand		

Project No. 2252792 **GRADATION TEST RESULTS** Figure 13

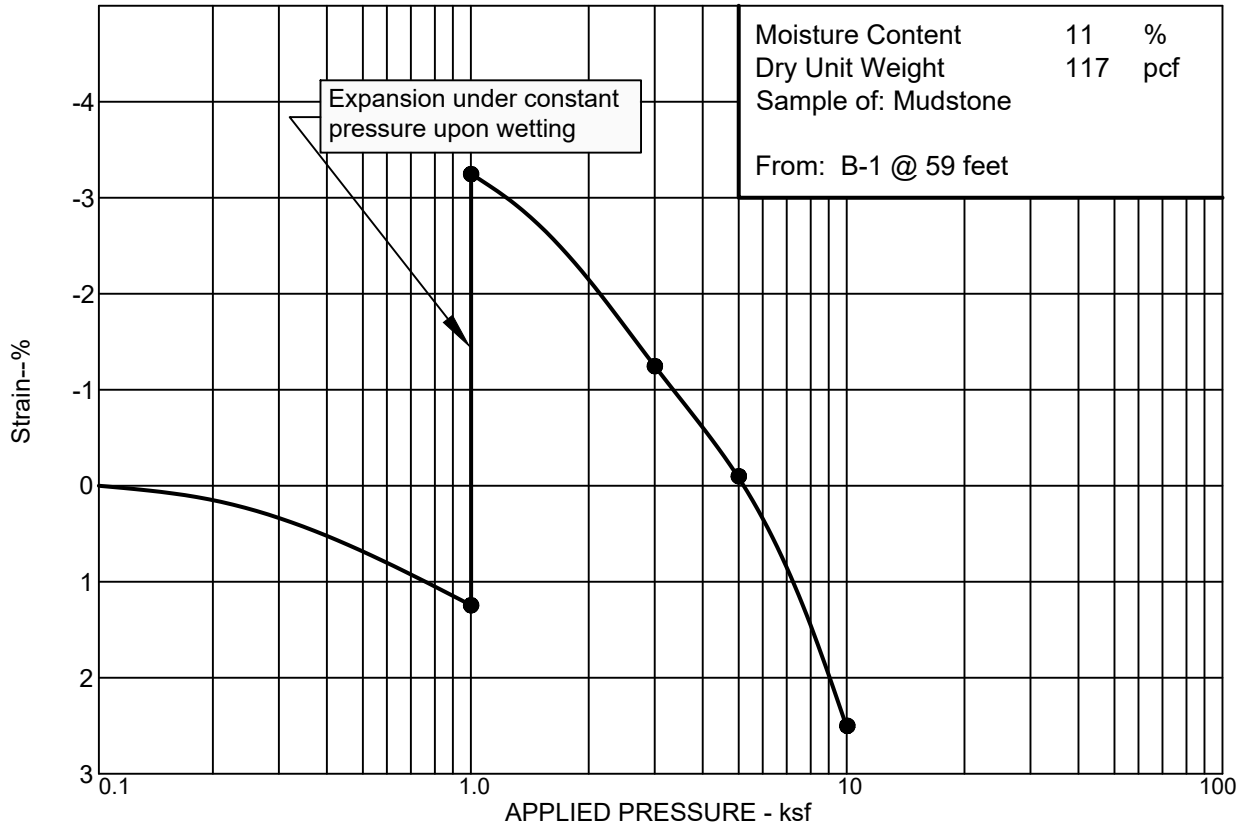
Applied Geotechnical Engineering Consultants, Inc.

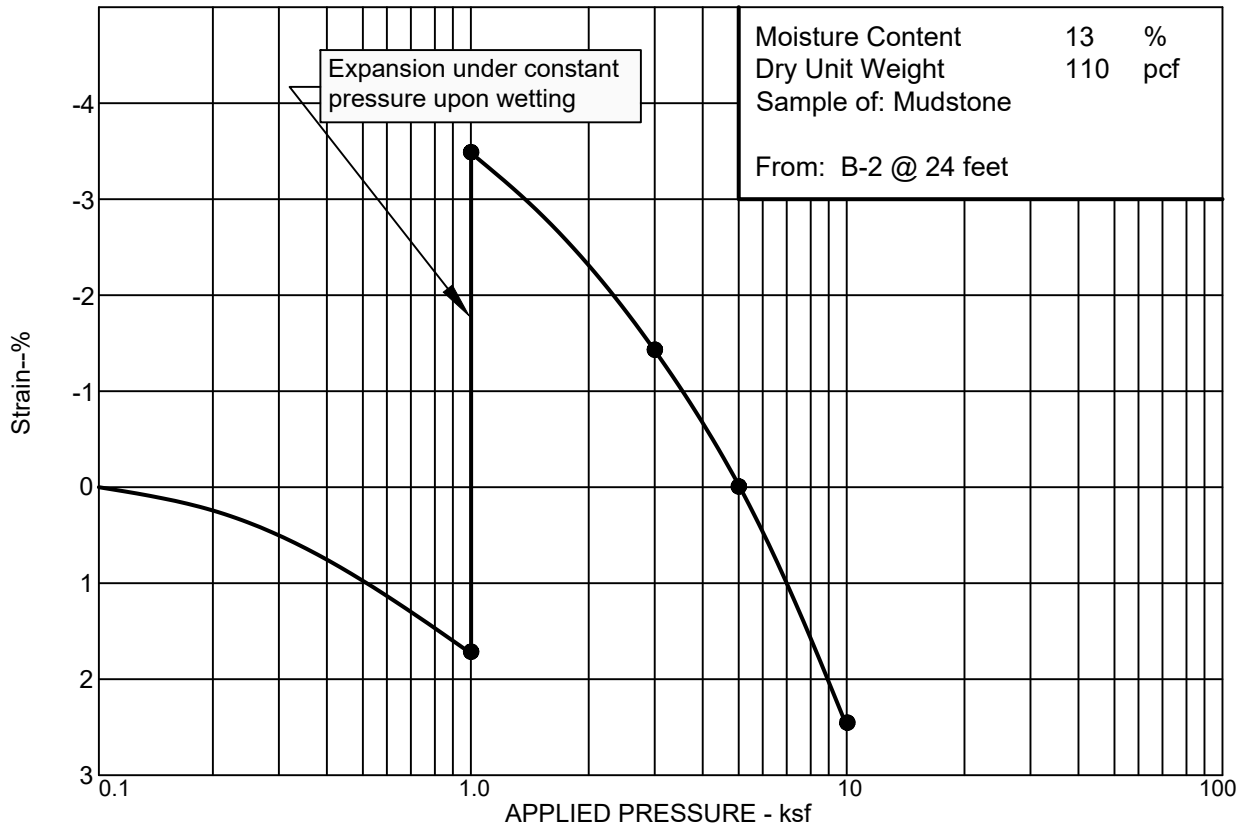




Project No. 2252792 **CONSOLIDATION TEST RESULTS** **Figure 14**

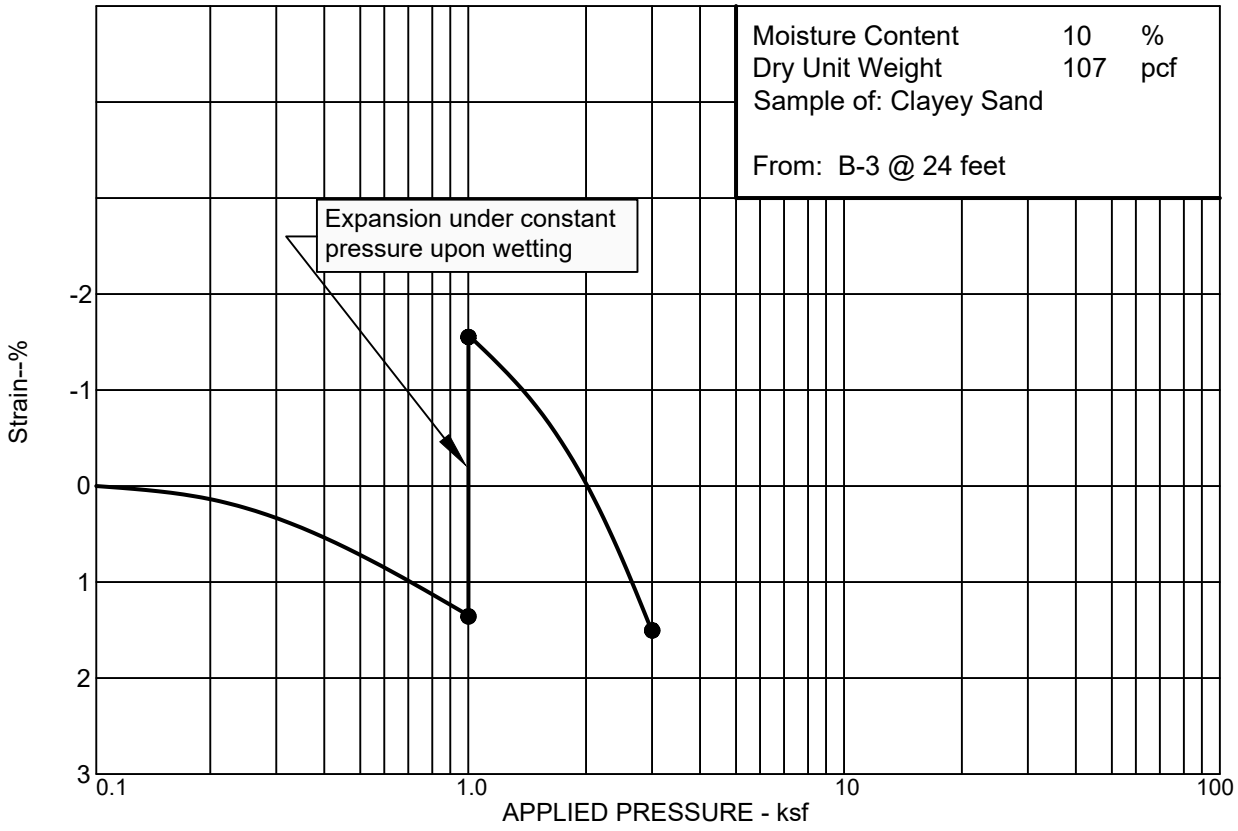
Applied Geotechnical Engineering Consultants, Inc.

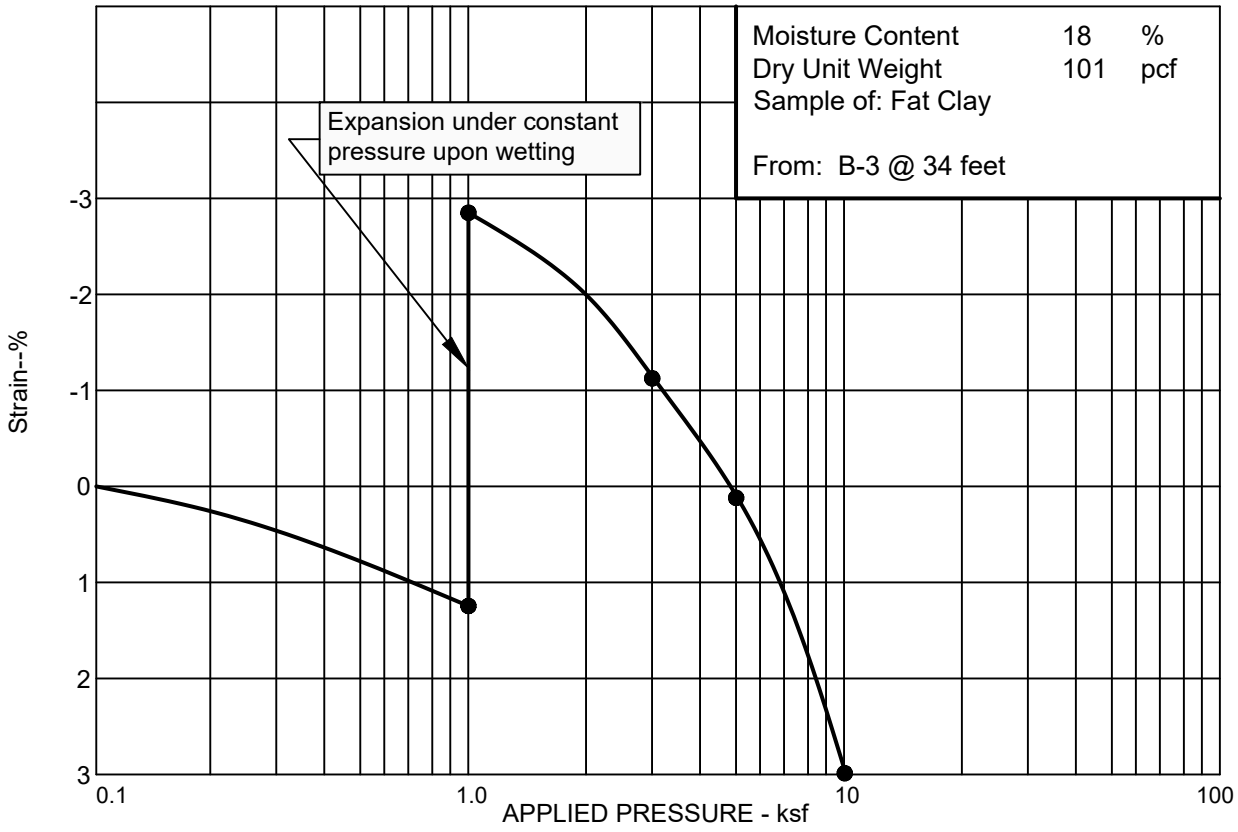




Project No. 2252792 **CONSOLIDATION TEST RESULTS** **Figure 15**

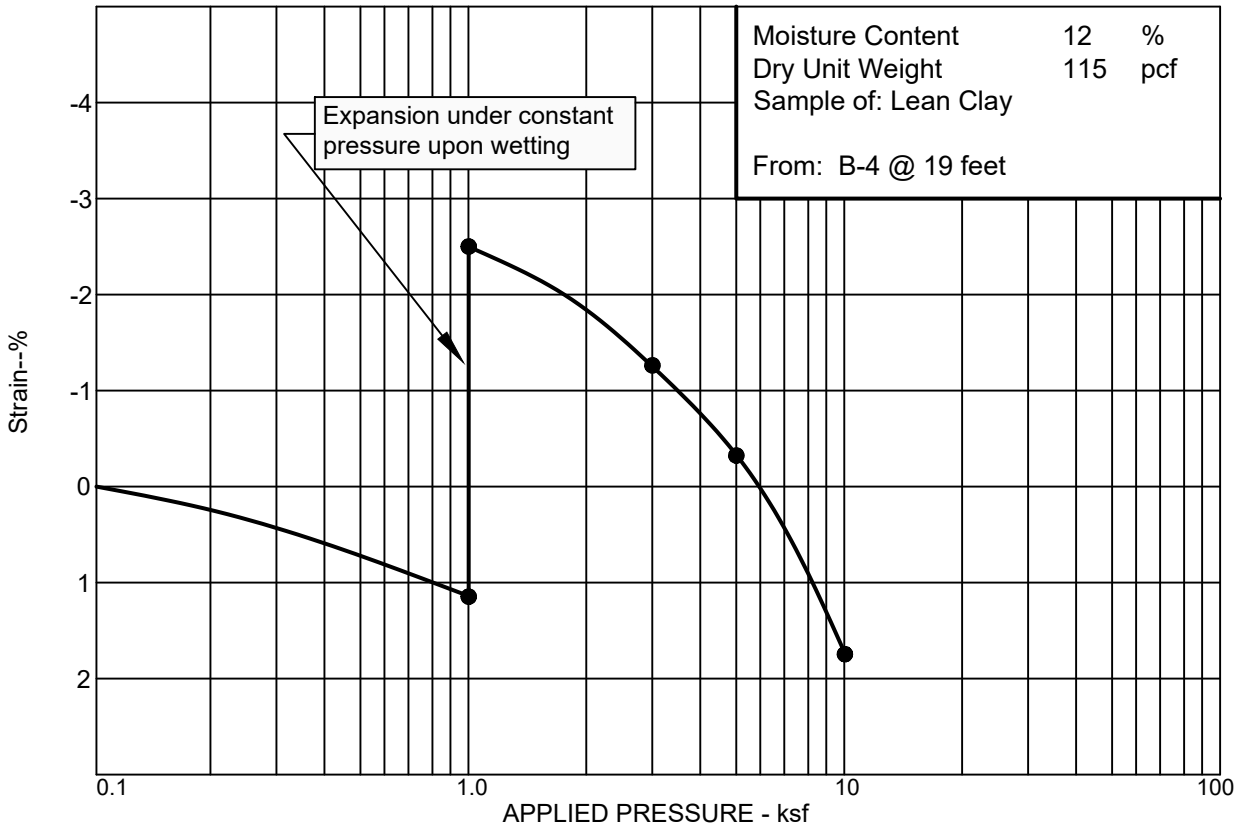
Applied Geotechnical Engineering Consultants, Inc.

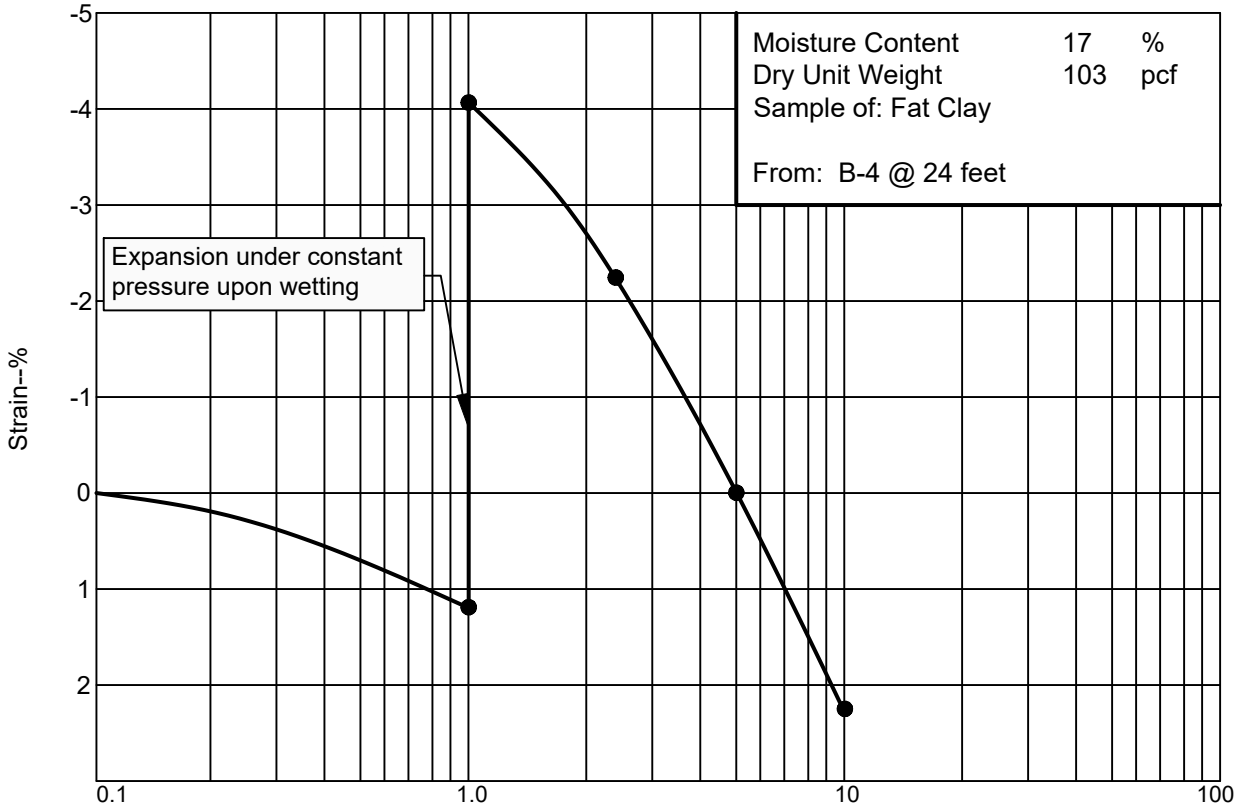




Project No. 2252792 **CONSOLIDATION TEST RESULTS** **Figure 16**

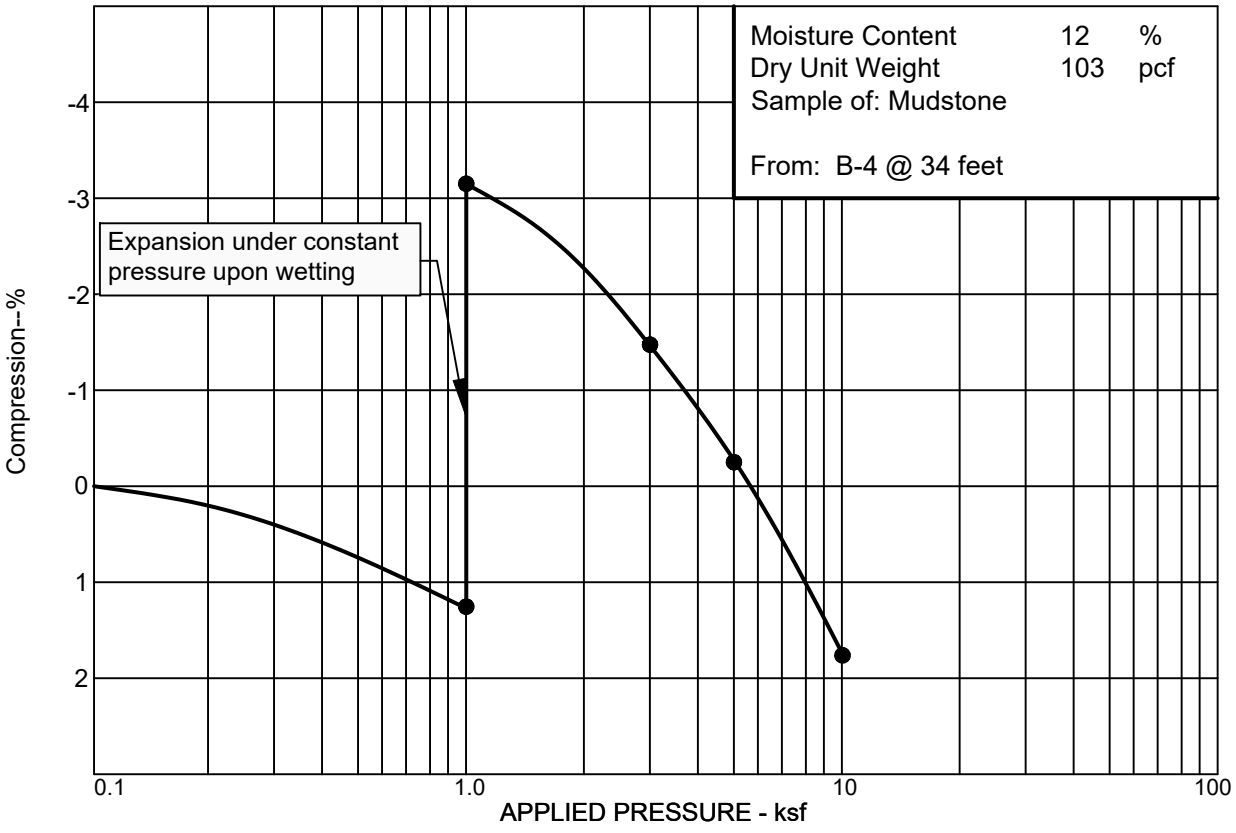
Applied Geotechnical Engineering Consultants, Inc.

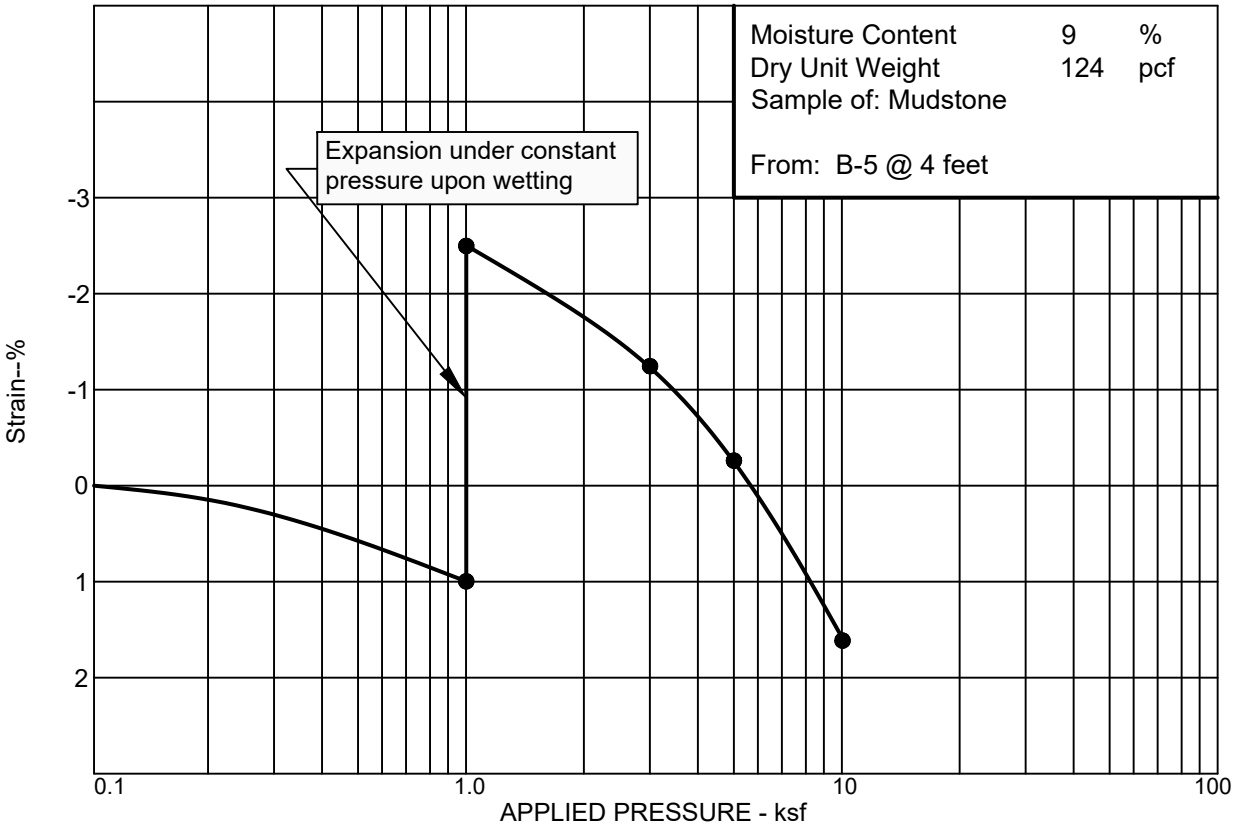




Project No. 2252792 **CONSOLIDATION TEST RESULTS** **Figure 17**

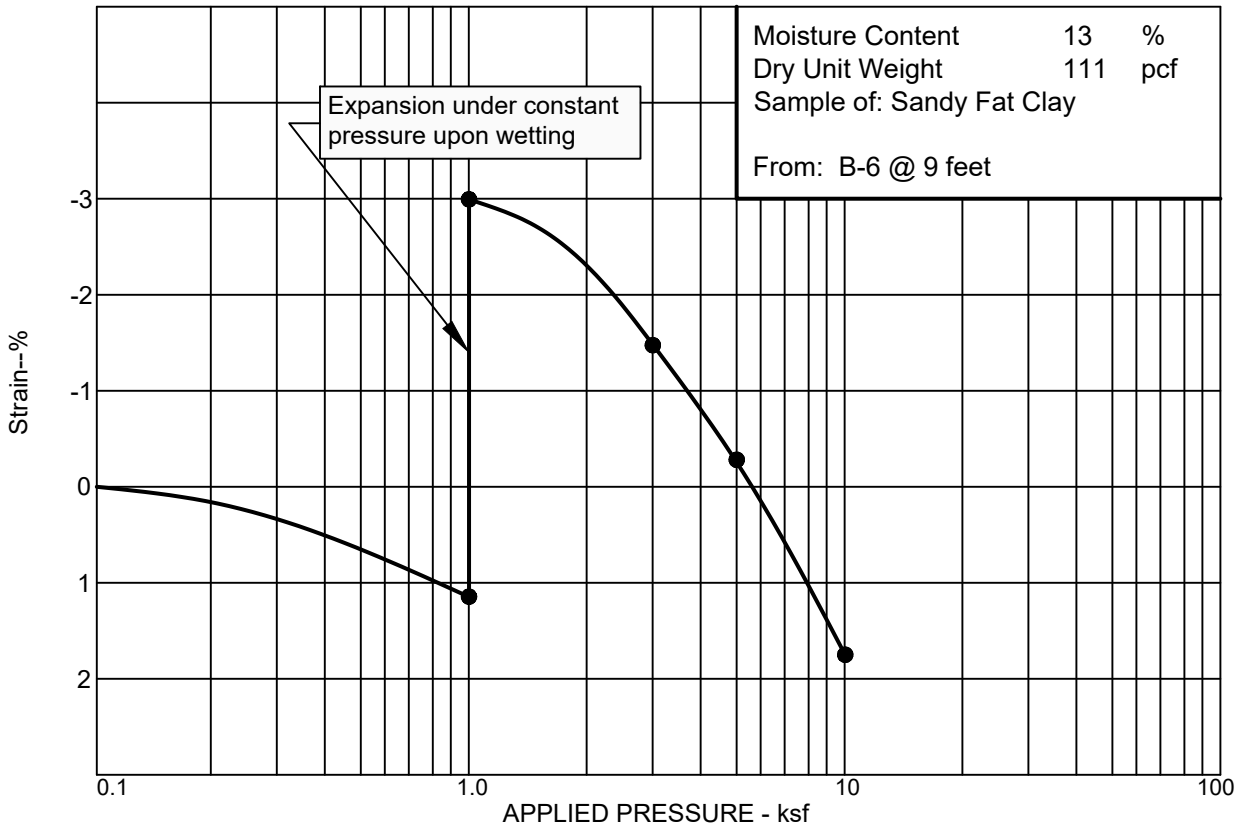
Applied Geotechnical Engineering Consultants, Inc.

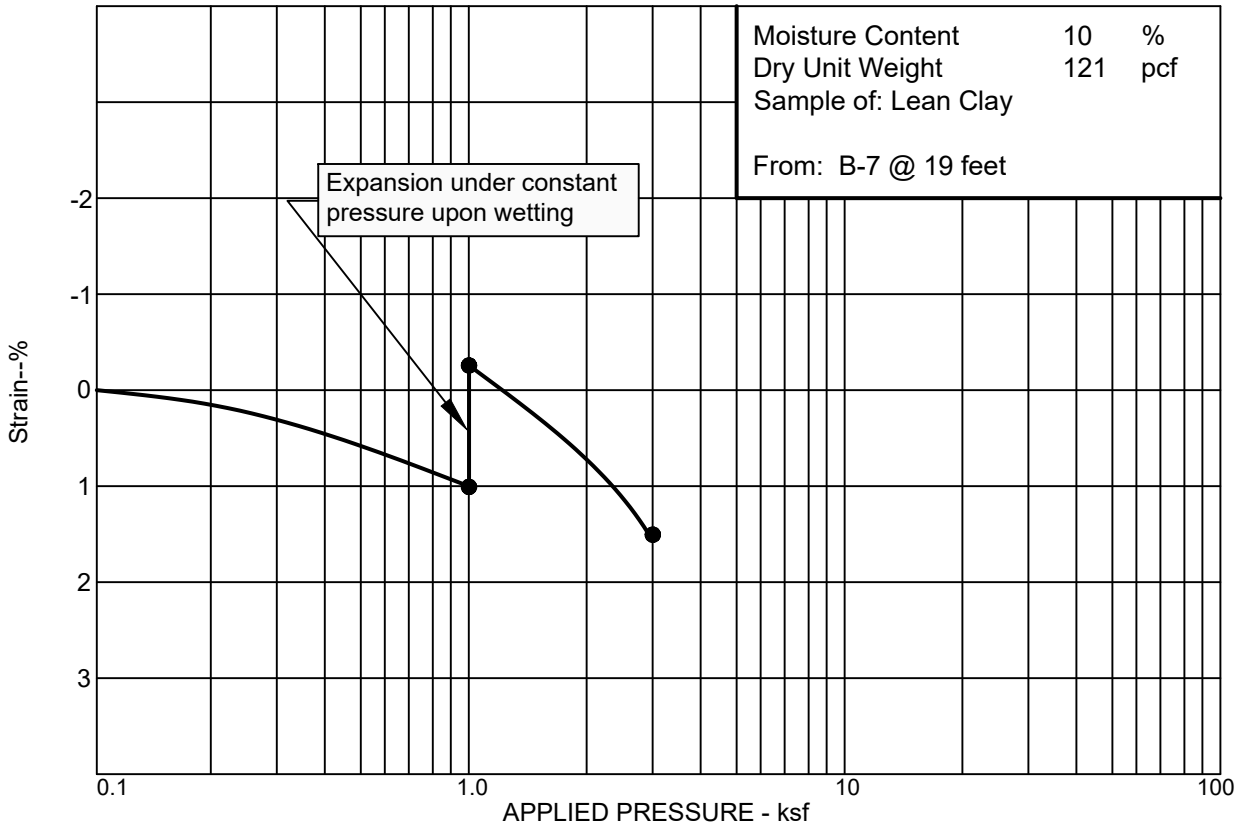




Project No. 2252792 **CONSOLIDATION TEST RESULTS** **Figure 18**

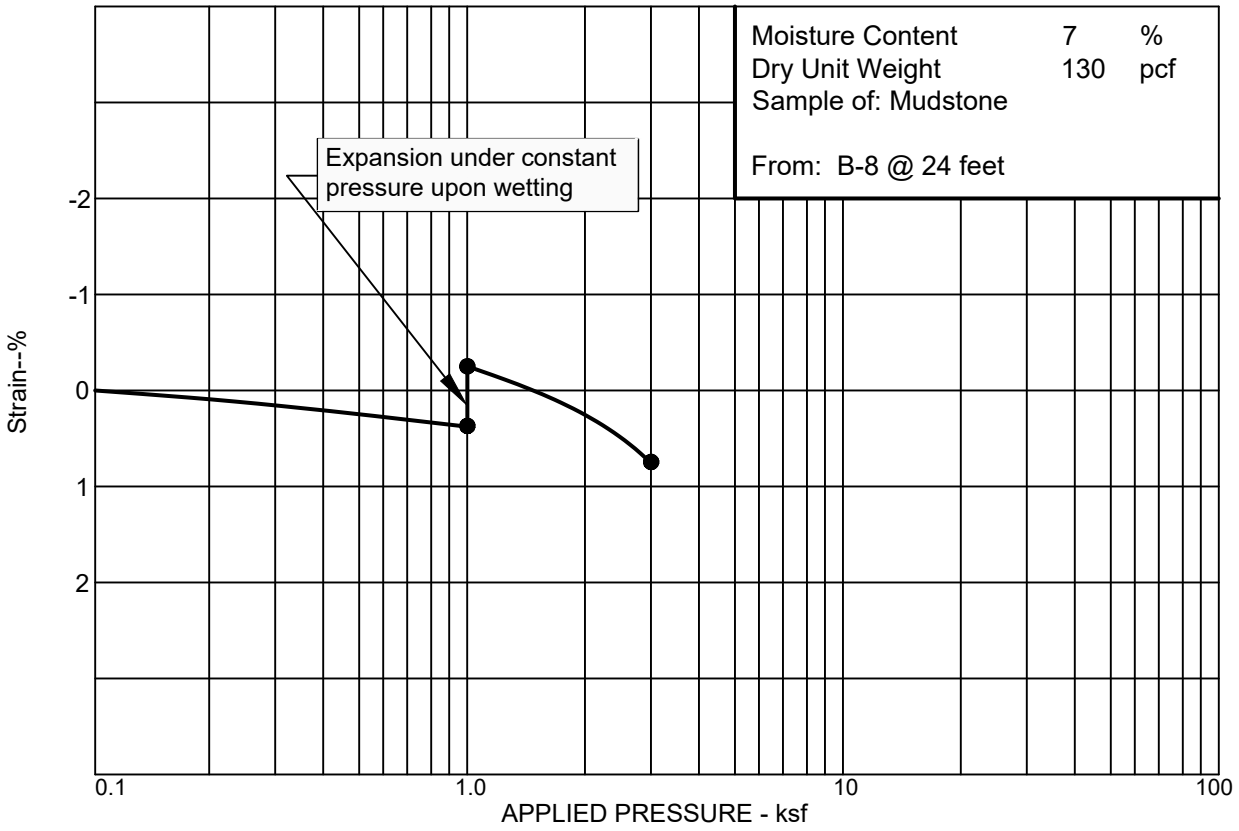
Applied Geotechnical Engineering Consultants, Inc.





Project No. 2252792 **CONSOLIDATION TEST RESULTS** **Figure 19**

Applied Geotechnical Engineering Consultants, Inc.



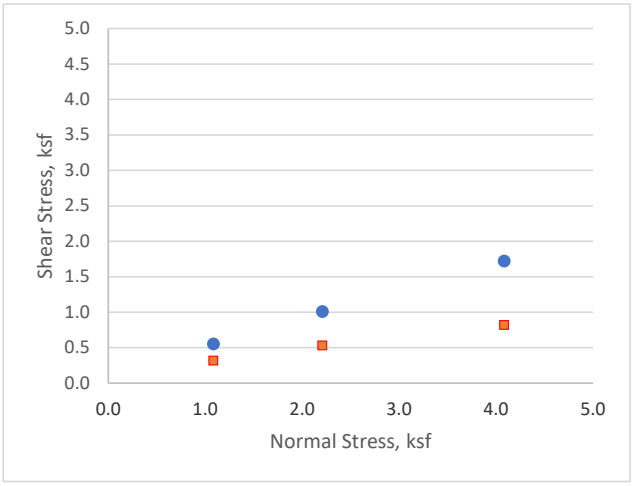
Project No. 2252792 **CONSOLIDATION TEST RESULTS** **Figure 20**

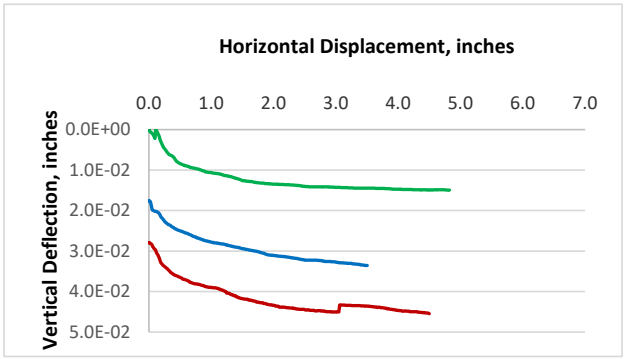
Applied Geotechnical Engineering Consultants, Inc.

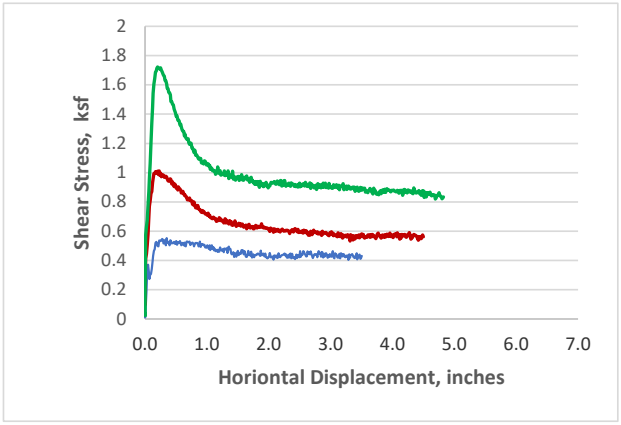
All Testing Completed Using a Wykeham Farrance Torshear Device

Project Number 2252792

Project Name Watchman







Sample and Test Information			
Sample Identification	B-1 at 34'		
Sample Description	Fat Clay		
Test Type	Fully Softened and Residual Shear Strength		
Sampe Type	Remolded		
Test Equipment and Procedures			
Specimen Container	Modified Bromhead		
Porous Disc Construction	Serrated Stainless Steel Manufactured by Illinois University		
Test Procedure	Consolidated by Incremental Loading and then Sheared.		
Test Data			
Test No. (Symbol)	1 (▲)	2 (■)	3 (●)
Dry Density, pcf			
Moisture Content, %			
Initial Height of Sample, in	0.1815	0.1815	0.1815
Radii of Sample, in	1.378-1.9685		
Consol. Load, ksf	1.084	2.209	4.084
Peak Shear Stress, ksf	0.553	1.012	1.722
Peak Secant Friction Angle	27.0	24.6	22.9
Residual Sher Stress, ksf	0.32	0.53	0.82
Residual Secant Friction Angle	16.4	13.5	11.4
Rate of Strain, in/min	0.0008	0.0008	0.0008
Test specimens consisted of -#40 sieve material moisture-conditioned to a paste-like condition and allowed to hydrate.			

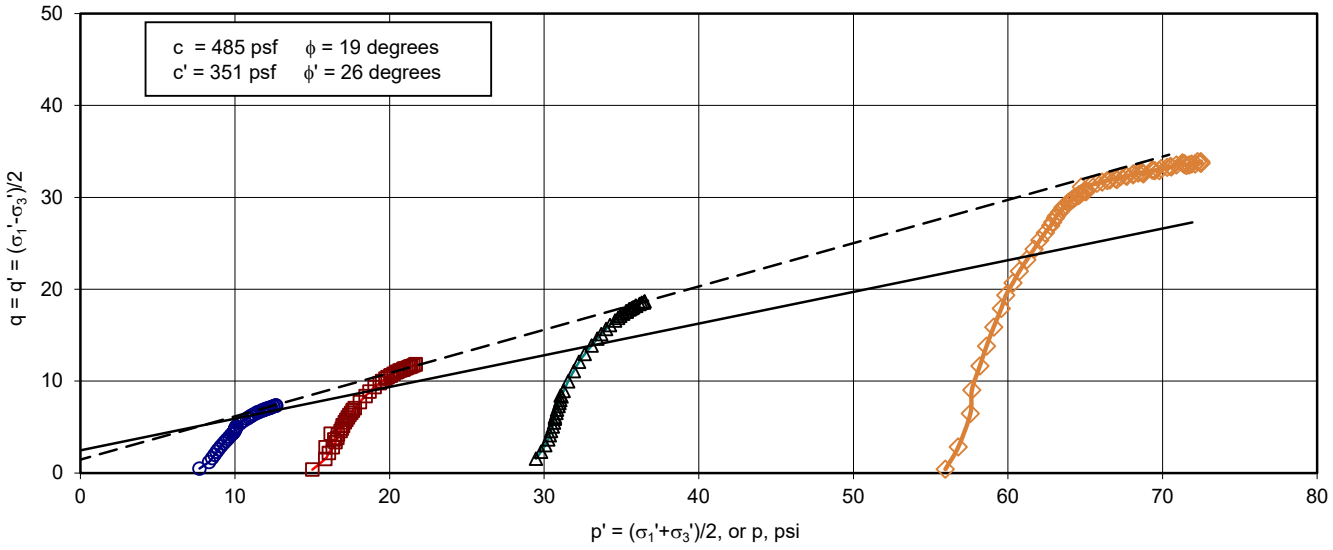
Sample Index Properties	
Liquid Limit	57
Plasticity Index	38
Clay Fraction, <0.002mm	41
Percent Gravel, >4.750mm	0
Percent Coarse Sand, 2.000mm-4.750mm	0
Percent Medium Sand, 0.425mm-2.000mm	0
Percent Fine Sand, 0.075mm-0.425mm	11
Percent Silt, 0.005mm-0.075mm	36
Percent Clay, 0.001mm-0.005mm	21
Percent Colloidals, <0.001mm	32

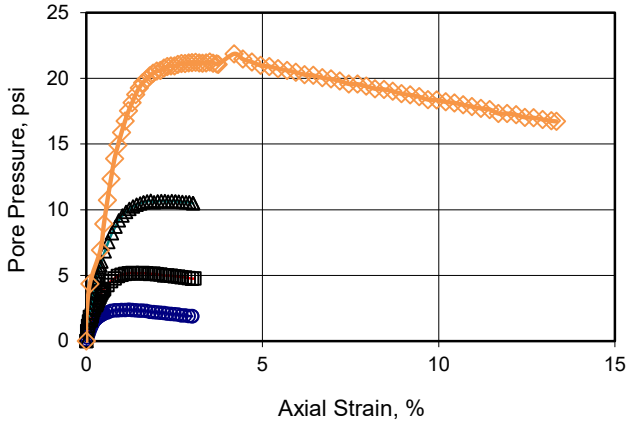
Project No. 2252792

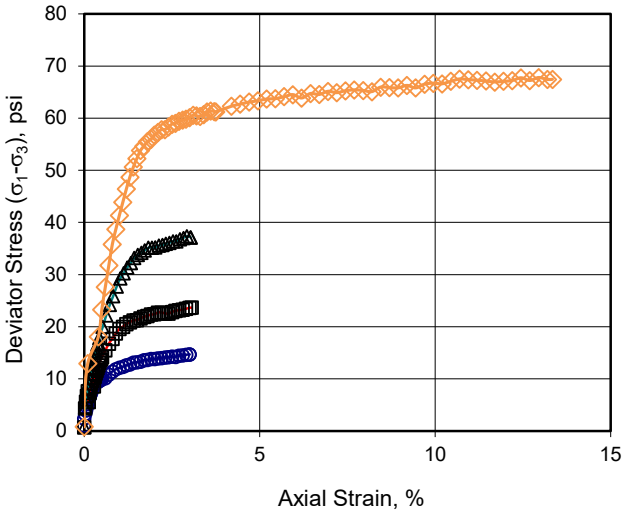
Ring Shear Results

Figure 21

Applied Geotechnical Engineering Consultants, Inc.







Test No. (Symbol)	○	□	△	◊
Sample Type	Undisturbed			
Length, in.	3.94	3.76	3.56	3.44
Diameter, in.	1.93	NM	NM	NM
Dry Density, pcf	116	NM	NM	NM
Moisture Content, %	10	NM	NM	NM
Consolidation Pressure, psi	6.94	13.88	27.8	55.5
"B" Parameter	95	NM	NM	NM
Total Confining Stress (σ_3), psi	7.2	14.6	28.4	55.5
Total Axial Stress (σ_1), psi	21.9	38.3	65.5	115.6
Deviator Stress (σ_1-σ_3), psi	14.7	23.6	37.1	60.1
Effective Lateral Stress (σ_3'), psi	5.3	9.9	17.9	34.3
Effective Axial Stress (σ_1'), psi	20.0	33.5	55.0	94.5
Pore Pressure (μ), psi	1.9	4.8	10.5	21.2
Strain, %	3.0	3.0	3.0	3.0

Remarks	Multistage (CIU) Triaxial Shear Compression Test.
Sample Saturated with BackPressure.	
Isotropic Consolidation.	
Undrained Shear with Pore Pressure Measurements.	

Sample Index Properties	
Natural Dry Density, pcf	116
Natural Moisture Content, %	10
Liquid Limit	34
Plasticity Index	19
Percent Gravel	0
Percent Sand	16
Percent Passing No. 200 Sieve	84
USCS Classification	
Mudstone	

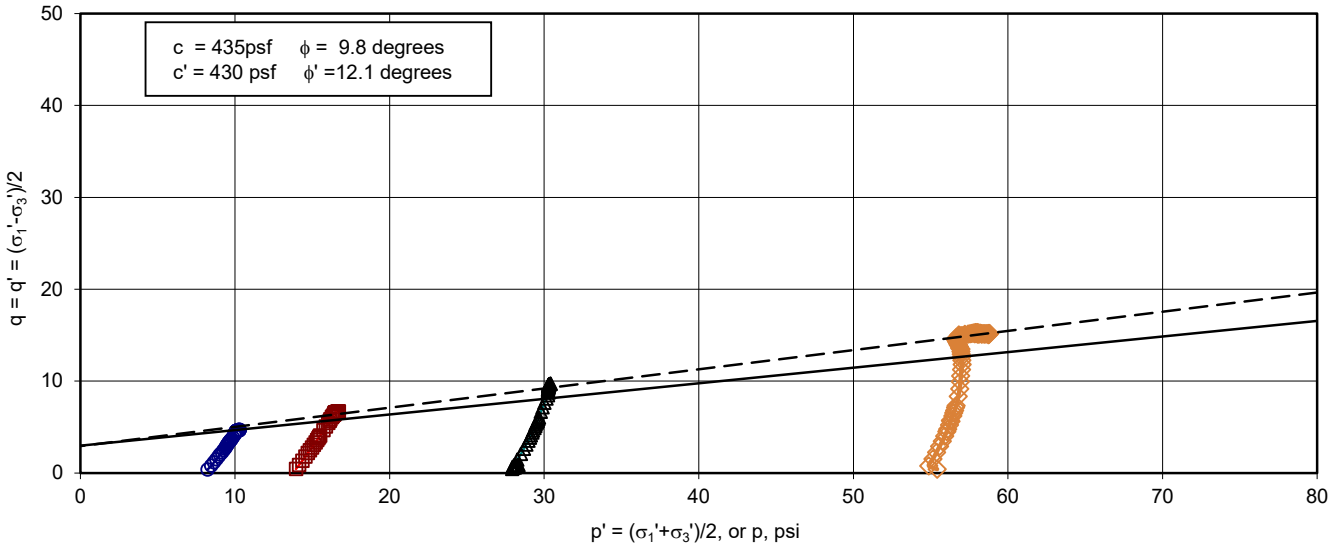
Test Description: Multi-Stage CIU Triaxial Shear Compression Test
Test Sample Location: B-1 at 39'
Project Name: Watchman

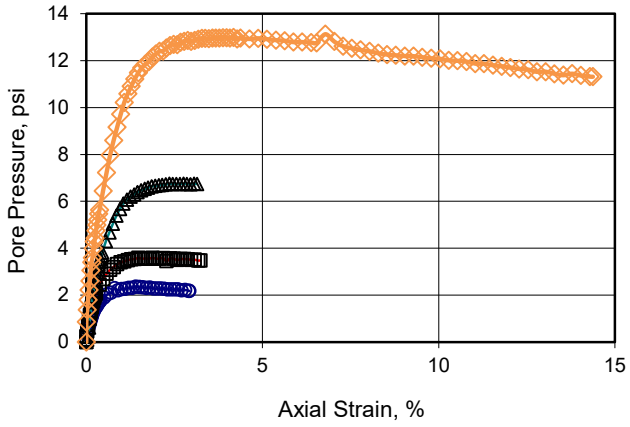
Project No. 2252792

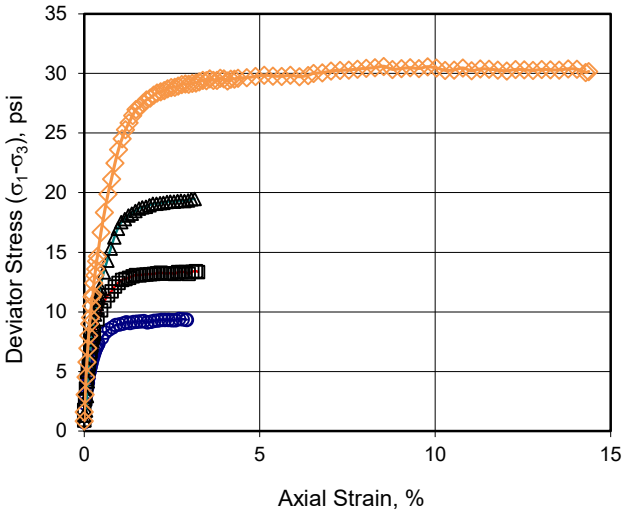
Triaxial Compression Test

Figure 22

Applied Geotechnical Engineering Consultants, Inc.







Test No. (Symbol)	○	□	△	◊
Sample Type	Undisturbed			
Length, in.	3.96	3.86	3.75	3.60
Diameter, in.	1.93	NM	NM	NM
Dry Density, pcf	106	NM	NM	NM
Moisture Content, %	17	NM	NM	NM
Consolidation Pressure, psi	6.94	13.88	27.8	55.5
"B" Parameter	99	NM	NM	NM
Total Confining Stress (σ_3), psi	7.8	13.5	27.4	54.9
Total Axial Stress (σ_1), psi	17.2	26.7	46.9	84.0
Deviator Stress (σ_1-σ_3), psi	9.3	13.2	19.5	29.1
Effective Lateral Stress (σ_3'), psi	5.6	10.0	20.7	42.1
Effective Axial Stress (σ_1'), psi	15.0	23.2	40.1	71.2
Pore Pressure (μ), psi	2.2	3.5	6.8	12.8
Strain, %	3.0	3.0	3.0	3.0
Remarks	Multistage (CIU) Triaxial Shear Compression Test.			
Sample Saturated with BackPressure.				
Isotropic Consolidation.				
Undrained Shear with Pore Pressure Measurements.				

Sample Index Properties	
Natural Dry Density, pcf	106
Natural Moisture Content, %	17
Liquid Limit	63
Plasticity Index	47
Percent Gravel	0
Percent Sand	3
Percent Passing No. 200 Sieve	97
USCS Classification	
Mudstone	

Test Description: Multi-Stage CIU Triaxial Shear Compression Test
Test Sample Location: B-2 at 29'
Project Name: Watchman

Project No. 2252792

Triaxial Compression Test

Figure 23

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

TABLE I
SUMMARY OF LABORATORY TEST RESULTS PROJECT NUMBER: 2252792

SAMPLE LOCATION		NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (PCF)	GRADATION			ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (PSF)	WATER SOLUBLE SULFATE (ppm)	SAMPLE CLASSIFICATION
BORING	DEPTH (FEET)			GRAVEL (%)	SAND (%)	SILT/ CLAY (%)	LIQUID LIMIT (%)	PLASTICITY INDEX			
B-1	4	13	104			63	55	35			Sandy Fat Clay (CH)
	19	6				34	25	11			Clayey Sand (SC)
	29	2	126	53	35	12					Poorly Graded Gravel with Silt and Sand (GP-GM)
	34	16		0	11	89	57	38			Fat Clay (CH)
	39	10	116	0	16	84	34	19			Lean Clay with Sand (CL)
	44	14	110			89	53	36			Mudstone
	59	11	117	0	58	42	48	32			Mudstone
B-2	9	2		35	47	18	17	0			Silty Sand with Gravel (SM)
	24	13	110			93	55	41			Mudstone
	29	17	106	0	3	97	63	47			Mudstone
	49	12	116			49	52	36	18,000		Mudstone
B-3	19	4	117	31	37	32	26	12			Clayey Sand with Gravel (SC)
	24	10	107			48	53	35			Clayey Sand (SC)
	29	18	93			93	61	34	2,700	810	Fat Clay (CH)
	34	18	101			94	55	36			Fat Clay (CH)
B-4	4	1	126	70	27	3		NP		92	Poorly Graded Gravel with Sand (GP)
	19	12	115			99	43	28			Lean Clay (CL)
	24	17	103			98	66	46			Fat Clay (CH)
	29	14	106			77	52	36	9,700		Mudstone
	34	12	103			49	50	36			Mudstone

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

TABLE I

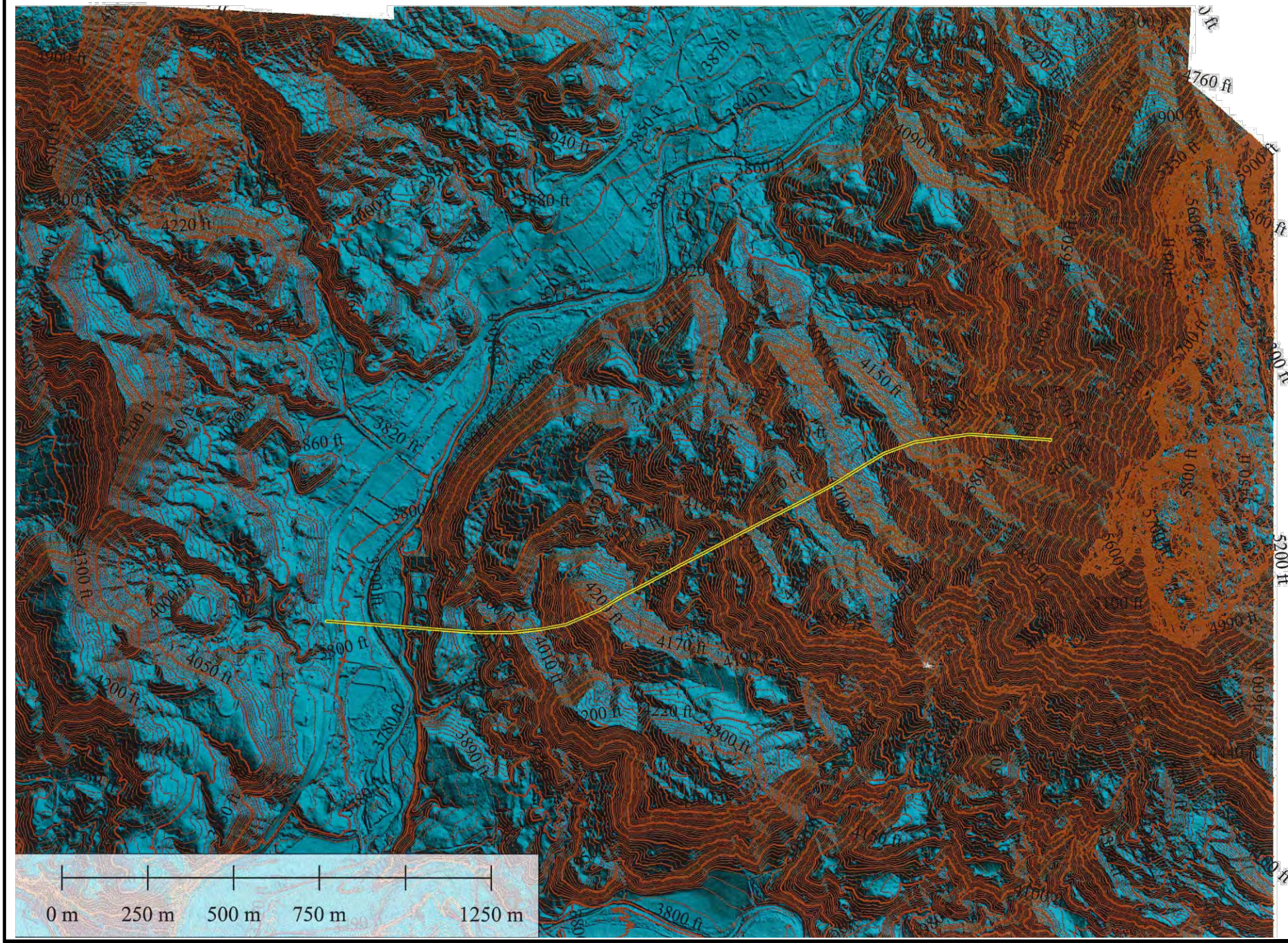
SUMMARY OF LABORATORY TEST RESULTS PROJECT NUMBER: 2252792

SAMPLE LOCATION		NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (PCF)	GRADATION			ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (PSF)	WATER SOLUBLE SULFATE (ppm)	SAMPLE CLASSIFICATION
BORING	DEPTH (FEET)			GRAVEL (%)	SAND (%)	SILT/ CLAY (%)	LIQUID LIMIT (%)	PLASTICITY INDEX			
B-5	4	9	124			98	42	26			Mudstone
	29	11	113			36	60	46	9,800		Mudstone
B-6	4	7	111			89	33	17	3,150		Lean Clay (CL)
	9	13	111			50	52	33			Sandy Fat Clay (CH)
B-7	9	3	110	1	56	43	20	8		49	Clayey Sand (SC)
	19	10	121			99	32	17			Lean Clay (CL)
	24	10	113			68	33	21	5,500		Sandy Lean Clay (CL)
	30	13	106			98	49	32	5,700		Lean Clay (CL)
B-8	9	5	113	42	27	31	24	7			Silty, Clayey Gravel with Sand (GC-GM)
	24	7	130			86	32	17			Mudstone
	34	12	109			40	37	25	4,265		Mudstone
	39	10	98			41	43	31			Mudstone

APPENDIX

Slope Stability Results

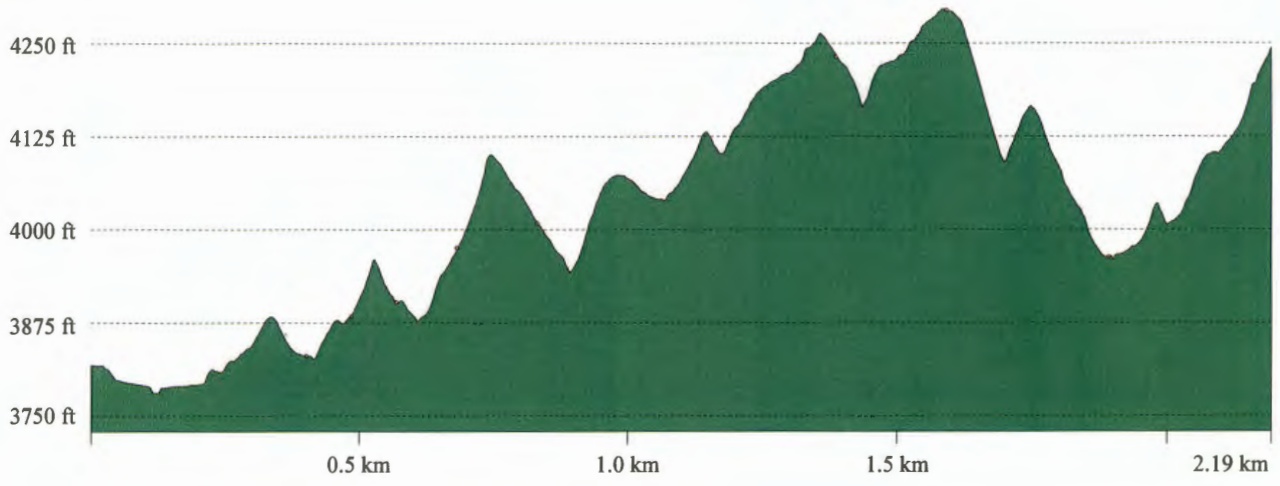
Figure	Description
A1	Contour map with location of profile
A2	Profile
A3	Back calculated stability of second ridge (strength of landslide materials)
A4	Back calculated stability of second ridge with intact strength below landslide
A5	Back calculated strength of weak layer
A6	Stability search forced to area of development (static)
A7	Yield acceleration with search forced to development area
A8	Stability search forced to development area with water level at the top of the weak layer.



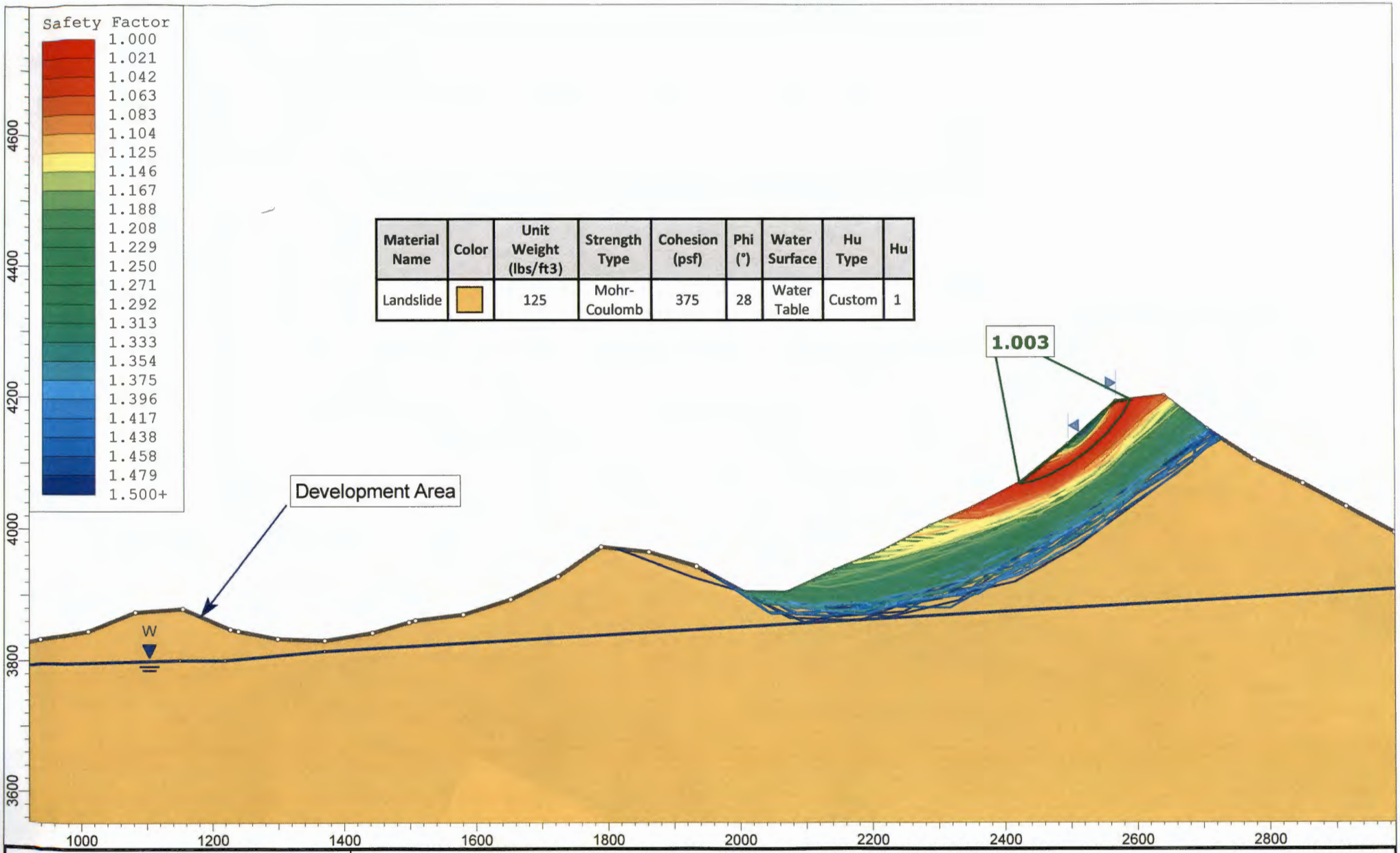
2252792	AGEC	Watchman Profile	A-1

From Pos: 321247.664, 4115633.100

To Pos: 323136.137, 4116422.508



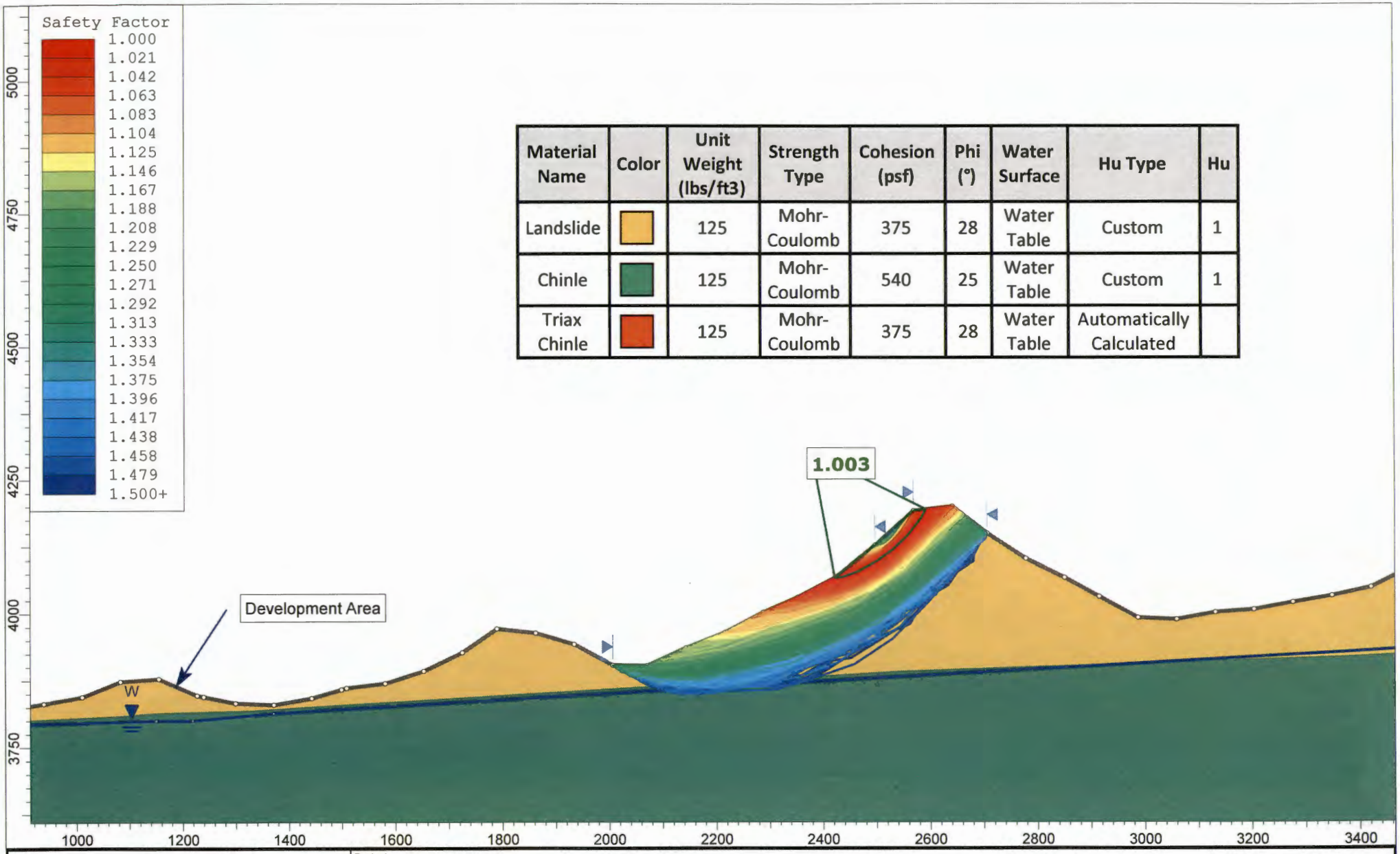
2/23/26 Profile



AGEC Applied GeoTech

SLIDEINTERPRET 9.040

Project	Watchman Subdivision - Back Calculated Landslide Material Strength		
Group	Group 1	Scenario	Master Scenario
Drawn By			Project # 2252792
Date	2/23/2026, 2:23:55 PM	File Name	7 17 26 Profile.slmd

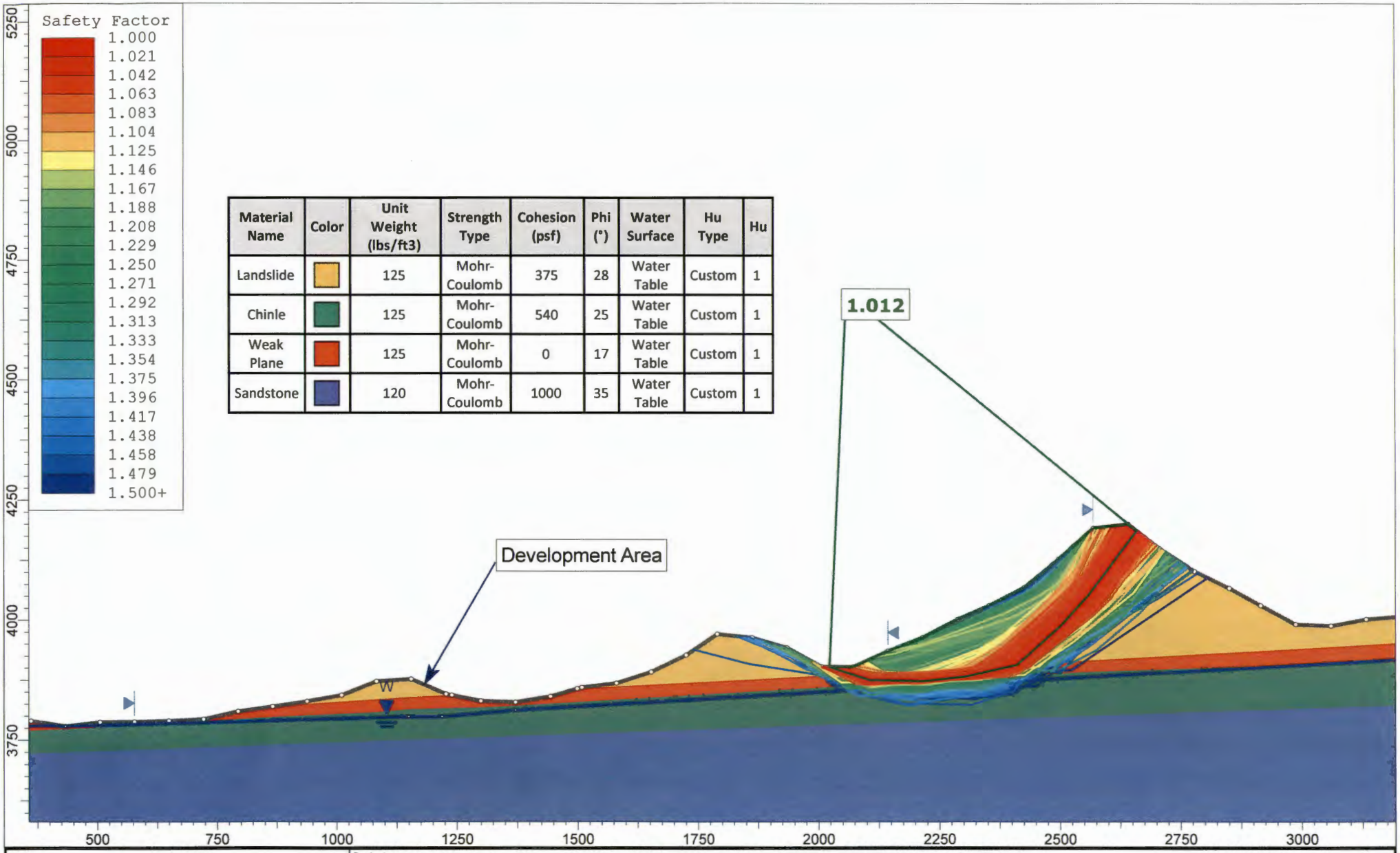


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Water Surface	Hu Type	Hu
Landslide		125	Mohr-Coulomb	375	28	Water Table	Custom	1
Chinle		125	Mohr-Coulomb	540	25	Water Table	Custom	1
Triax Chinle		125	Mohr-Coulomb	375	28	Water Table	Automatically Calculated	

AGEC Applied GeoTech

SLIDEINTERPRET 9.040

Project	Watchman Subdivision - Back Calculated Landslide Material Strength		
Group	Group 1	Scenario	Master Scenario
Drawn By			Project # 2252792
Date	2/23/2026, 2:23:55 PM	File Name	7 17 26 Profile.slmd

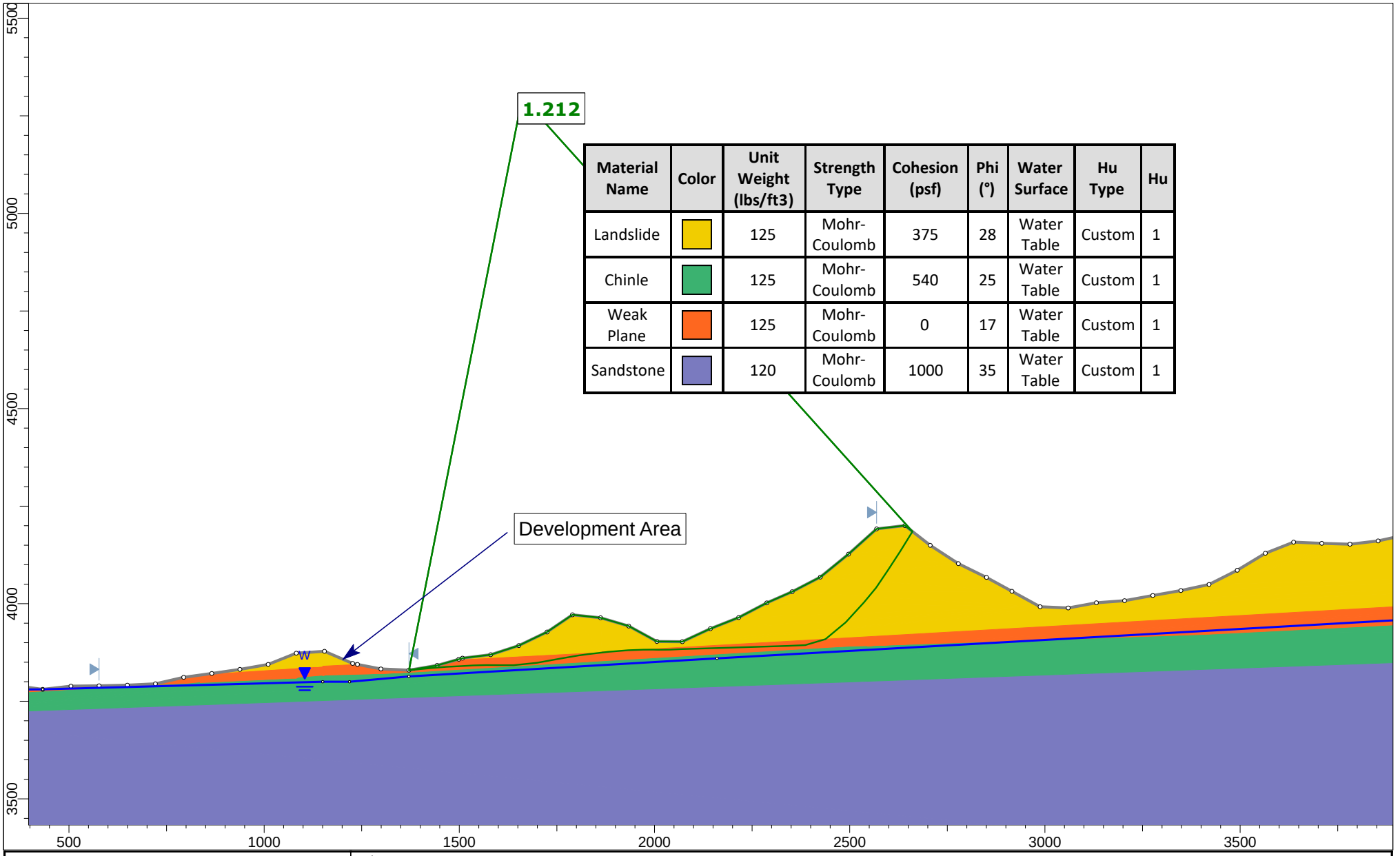


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Water Surface	Hu Type	Hu
Landslide		125	Mohr-Coulomb	375	28	Water Table	Custom	1
Chinle		125	Mohr-Coulomb	540	25	Water Table	Custom	1
Weak Plane		125	Mohr-Coulomb	0	17	Water Table	Custom	1
Sandstone		120	Mohr-Coulomb	1000	35	Water Table	Custom	1

AGEC Applied GeoTech

SLIDEINTERPRET 9.040

Project	Watchman Subdivision - Back Calculated Landslide Material Strength		
Group	Group 1	Scenario	Master Scenario
Drawn By			Project # 2252792
Date	2/23/2026, 2:23:55 PM	File Name	7 17 26 Overall slope.slmd

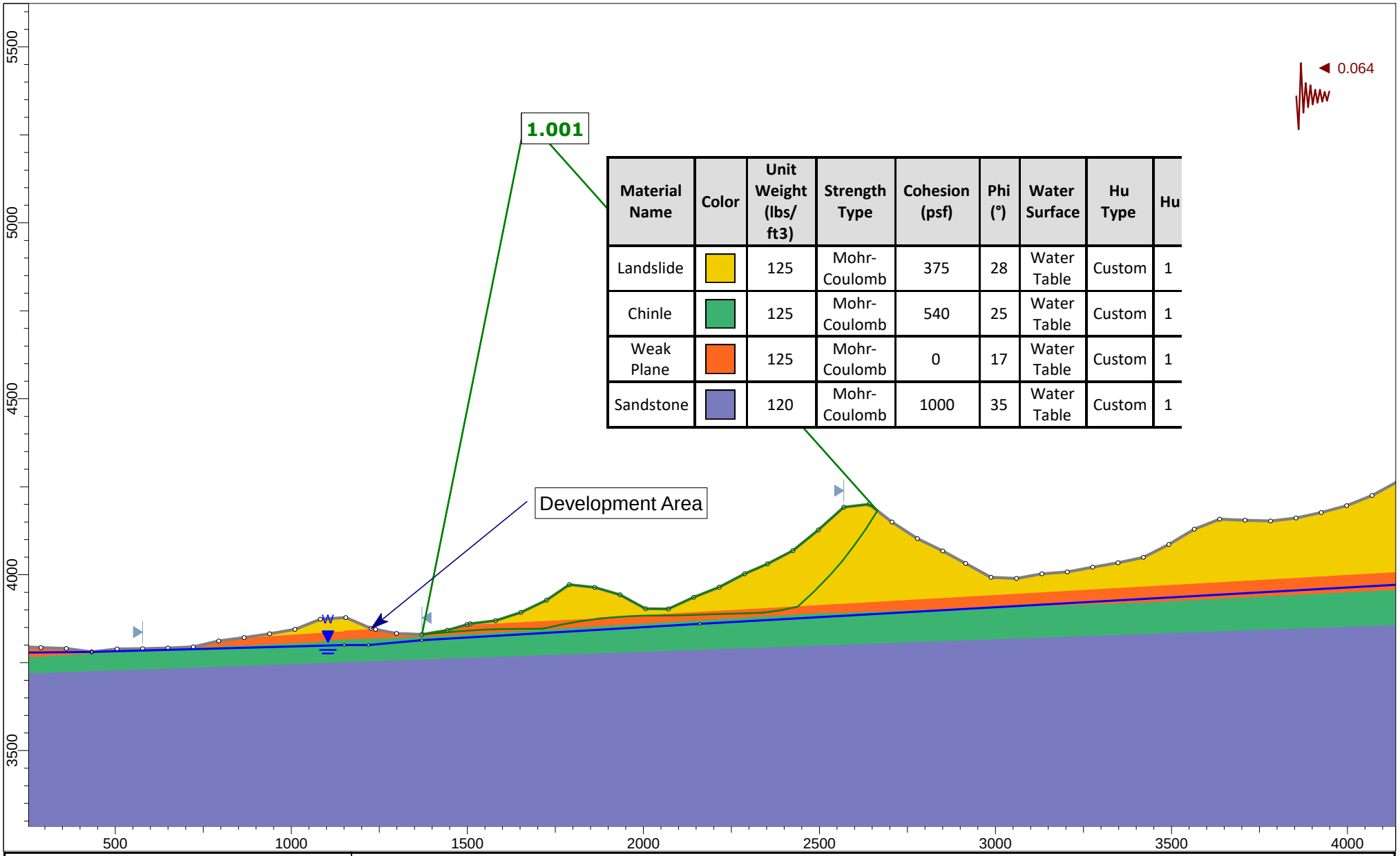


Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Water Surface	Hu Type	Hu
Landslide		125	Mohr-Coulomb	375	28	Water Table	Custom	1
Chinle		125	Mohr-Coulomb	540	25	Water Table	Custom	1
Weak Plane		125	Mohr-Coulomb	0	17	Water Table	Custom	1
Sandstone		120	Mohr-Coulomb	1000	35	Water Table	Custom	1

AGEC Applied GeoTech

SLIDEINTERPRET 9.040

Project	Watchman Subdivision - Slide plane in development area		
Group	Group 1	Scenario	Master Scenario
Drawn By			Project # 2252792 Figure A-6
Date	2/23/2026, 2:23:55 PM	File Name	7 25 26 development location.slmd

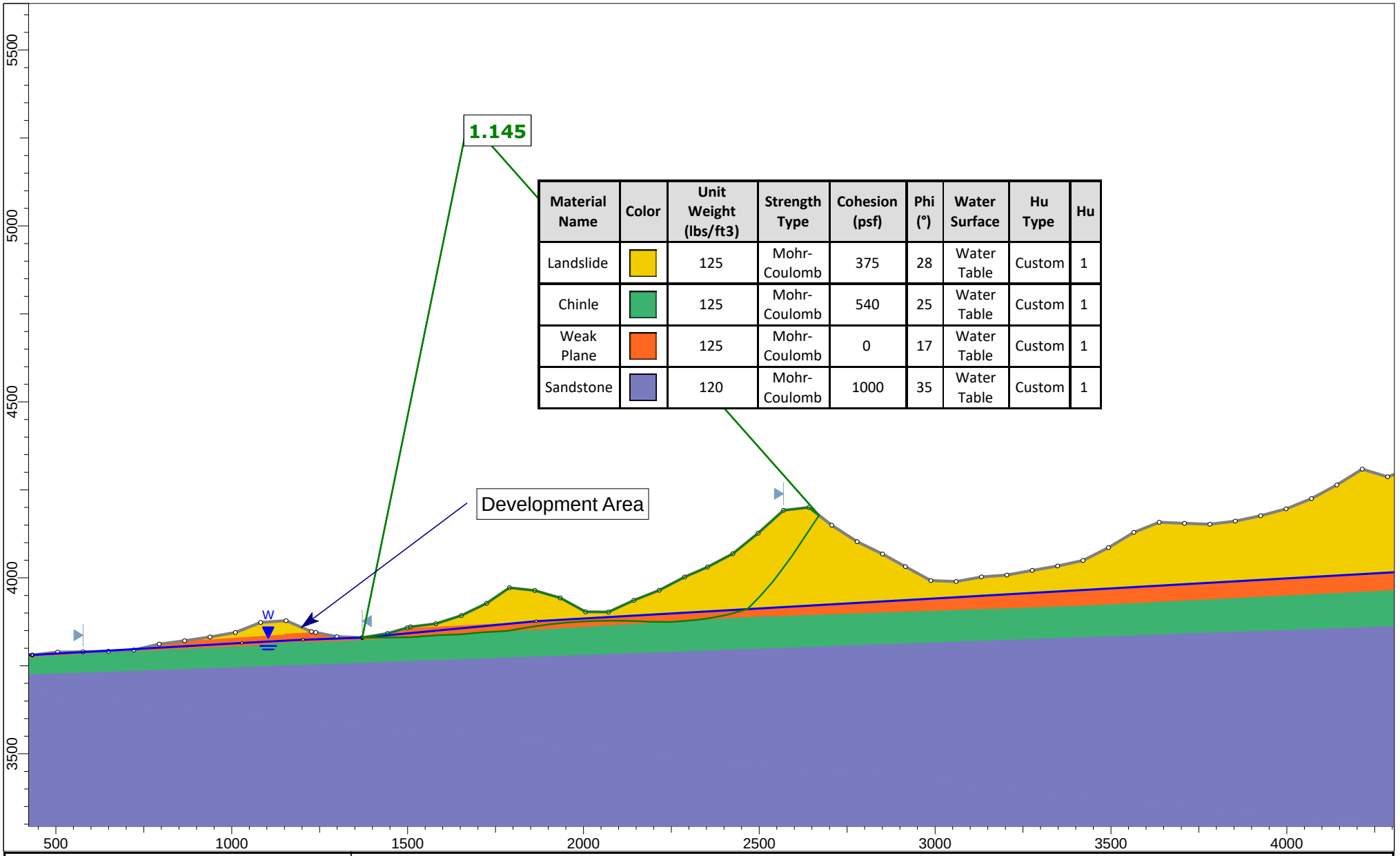


Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	Water Surface	Hu Type	Hu
Landslide		125	Mohr-Coulomb	375	28	Water Table	Custom	1
Chinle		125	Mohr-Coulomb	540	25	Water Table	Custom	1
Weak Plane		125	Mohr-Coulomb	0	17	Water Table	Custom	1
Sandstone		120	Mohr-Coulomb	1000	35	Water Table	Custom	1

AGEC Applied GeoTech

SLIDEINTERPRET 9.040

Project	Watchman Subdivision - Slide plane in development area seismic		
Group	Group 1	Scenario	Master Scenario
Drawn By			Project # 2252792 Figure A-7
Date	2/23/2026, 2:23:55 PM	File Name	7 25 26 development area seismic.slmd



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Water Surface	Hu Type	Hu
Landslide		125	Mohr-Coulomb	375	28	Water Table	Custom	1
Chinle		125	Mohr-Coulomb	540	25	Water Table	Custom	1
Weak Plane		125	Mohr-Coulomb	0	17	Water Table	Custom	1
Sandstone		120	Mohr-Coulomb	1000	35	Water Table	Custom	1

AGEC Applied GeoTech

SLIDEINTERPRET 9.040

Project	Watchman Subdivision - Slide plane in development area with water		
Group	Group 1	Scenario	Master Scenario
Drawn By			Project # 2252792 Figure A-8
Date	2/23/2026, 2:23:55 PM	File Name	7 25 26 development area with water.slmd

Geologic Hazard Checklist

Instructions for completing this form:
Please complete this form and submit it with your Design Development Review or Preliminary Plat application if your project is within a Geologic Hazard Study Area (see Town code 10-15F-4). This form should be completed by a Geotechnical Engineer. Please attach details of your professional qualifications (see Town Code 10-15F-6 for minimum professional qualifications).

PART A

1. **Property Address:** 201 / 211 North Fork Drive, Springdale, UT 84767
2. **Parcel No. (or Tax ID):** S-WMAN-2-11, S-WMAN-2-8
3. **Name of Property Owner:** Honaker Homes, LLC
4. **Name of Geotechnical Engineer who is completing this form, and name of firm (if applicable):** Jim Nordquist (AGEC)
5. **The development project is located in the following areas (check all that apply):**

Very High Landslide Hazard Area	☑
High Landslide Hazard Area	☐
Very High Liquefaction Hazard Area	☐
High Liquefaction Hazard Area	☐
Very High Rockfall Hazard Area	☐
High Rockfall Hazard Area	☐

6. **Have you submitted a Geotechnical Report?** Yes (●) No ( )

7. **Does the Geotechnical Report include an initial analysis of the geological hazards associated with the development of the site?** Yes (●) No ( )

8. **In your professional opinion as a geotechnical engineer, is additional study and analysis of site-specific geologic hazards necessary for the safe development of the property?** Yes (●) No ( )

   If the answer to Question 8 is NO, please sign and stamp the statement in <u>part B</u> of this form. You do not need to complete part C.

   If the answer to Question 8 is YES, please have a Utah-licensed Professional Geologist specializing in engineering geology and geologic hazards complete, sign and stamp <u>part C</u> of this form. You do not need to complete part B.



<u>NOTE</u>

- Applicants receiving any permit or approval within a geologic hazard study area are required to sign and record on the property a hold harmless agreement available from the Town of Springdale.
- Whenever a geologic hazard investigation report is required, the owner of the parcel shall record a notice running with the land on a form provided by the Town of Springdale prior to approval of any development or subdivision. This disclosure gives notice that the parcel is within a geologic hazard study area and that the investigation was prepared and is available for public inspection in Springdale's files. Where setbacks or non-buildable areas are delineated in a subdivision, these shall be noted on the final plat.
- All direct costs associated with Springdale's review of the geologic report, including any third-party reviewer, shall be paid by the applicant as a precondition to any approval.

PART B

Based on my initial analysis of the geologic hazards associated with the development of the site referenced below, it is my professional opinion that additional study and analysis of site-specific geologic hazards is not necessary for the safe development of the property.

Property Address:

Parcel No. (or Tax ID):

Signed:

Date:

Professional Engineer Stamp:

No Necessary

SPRINGDALE
Utah

PART C

9. **I certify that I have submitted a Geologic Hazard Investigation and Report pertaining to the property referenced below that meets the standards of the Town's Geologic Hazard ordinance.** Yes (●) No ( )

10. **I certify that the proposed land use on the subject property does not represent an unreasonable risk to the health, safety and welfare of persons or property, including buildings, infrastructure, or the aesthetic and natural functions of the land, because of the presence of geologic hazards or because of modifications to the site due to the proposed land use.**
    Yes (●) No ( )

11. **I certify that the proposed land use on the subject property can be mitigated to a level where the risk to human life and damage to property are reduced to an acceptable and reasonable level in a manner which will not violate applicable federal, state, and local statutes, ordinances, and regulations.** Yes (●) No ( )

12. **I certify that the identified hazards or limitations on the property can be addressed without impacting or adversely affecting off site areas, including adjacent properties. Mitigation measures must be reasonable and practical to implement. (If applicable, please attach a one-page written summary of any proposed mitigation measures identified in the Geologic Hazard Investigation and Report.)** Yes (●)
    No ( )

13. **Is the issuer of the Geologic Hazard Investigation and Report covered by professional errors and omissions liability insurance, in the amount of $2,000,000.00?** Yes (●) No ( )

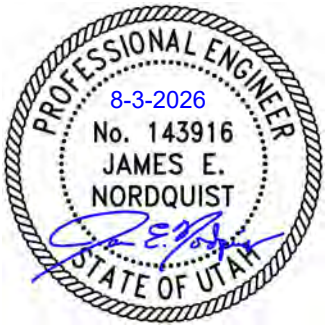
Property Address: 201 / 211 North Fork Drive, Springdale, UT 84767

Parcel No. (or Tax ID): S-WMAN-2-11, S-WMAN-2-8

Signed:

Date: 8-3-2026

Professional Engineer Stamp:



Professional Geologist Stamp:





JAMES E. NORDQUIST, P.E.
President

PROJECT RESPONSIBILITY:

As AGEC President, Mr. Nordquist will be responsible to bring the most qualified team of staff members together to complete the project in a reliable manner, on time, and within budget. As Project Engineer, Mr. Nordquist will have responsibility for the engineering aspects of designated geotechnical and construction quality control projects. As review engineer, Mr. Nordquist will provide review of the work performed and supervised by Project Engineers to provide quality control and add to the expertise of projects.

EDUCATION:

Master of Science in Civil Engineering, Massachusetts Institute of Technology, January 1979

Bachelor of Science in Civil Engineering, University of Utah, June 1977

PROFESSIONAL REGISTRATION:

Professional Engineer in Utah, Nevada, Colorado, Oklahoma, Wyoming, Idaho, New Mexico, California Arizona, North Dakota, Washington and Montana.

PROFESSIONAL EXPERIENCE:

PRESIDENT/SENIOR GEOTECHNICAL ENGINEER - Applied Geotechnical Engineering Consultants, Inc., Sandy, Utah - 1990 to present

Geotechnical consultation for low to high-rise commercial and residential buildings, earth dams, soil and rock retaining systems, slope stability, distress analysis, geotechnical/geologic hazards, earth embankments, clay liners for ponds and hazardous waste facilities, utility lines, roadways, airport runways and taxi ways, aircraft hangars, water storage tanks, water treatment plants, wastewater treatment plants, schools and hospitals.

Unique experience includes soil and foundation investigations for slope stability, embankments supported on soft, compressible soils and structures built on collapsible and expansive soils. Specializes in clay liner design and construction for facilities requiring low permeable layers, soil modification procedures to reduce permeability, along with field and laboratory permeability testing.

SENIOR GEOTECHNICAL ENGINEER - Chen-Northern, Inc., Denver, Colorado and Salt Lake City, Utah, 1979 to 1990.

Supervised the field exploration, laboratory testing, field observation and testing, engineering and report preparation for the geotechnical section (staff of 17 professionals and technicians) of the Salt Lake office.

PROFESSIONAL SOCIETIES: ASCE, CECU, ASFE, AEG, DFI
2017 President of EERI



DOUGLAS R. HAWKES, P.E., P.G.
Senior Engineering Geologist/Geotechnical Engineer

PROJECT RESPONSIBILITY: Project/Review Engineer

As a senior engineering geologist/geotechnical engineer, Mr. Hawkes, P.E., P.G. oversees the geotechnical/geological engineering consultation projects and is responsible for geotechnical/geologic engineering aspects of assigned projects.

EDUCATION:

Bachelor of Science in Engineering Geology, Brigham Young University, April 1981

PROFESSIONAL REGISTRATION:

Professional Engineer, Utah, Colorado and Wyoming
Professional Geologist, Utah and Wyoming

PROFESSIONAL EXPERIENCE:

ENGINEERING GEOLOGIST/GEOTECHNICAL ENGINEER - Applied Geotechnical Engineering Consultants, Inc. Sandy, Utah - 1991 to present.

Supervise the field exploration, laboratory testing, field observation and testing, engineering analysis and report preparation of geologic and geotechnical investigations. Performs the review of environmental site assessments. Projects include the evaluation of earthquake related hazards, landslide and slope stability, debris flow, rock fall and other geologic hazards in areas of proposed development. Geotechnical studies include commercial, retail and residential buildings, roads, highways, utilities, bridges, dams and other development projects.

ENGINEERING GEOLOGIST - Chen-Northern, Inc., Salt Lake City, Utah - 1981-1991

Supervised the field exploration, laboratory testing, field engineering and report preparation for the engineering geology section. Supervised drilling operations at the Salt Lake City office. Projects included an investigation for tunnel and large rock cuts through Provo Canyon, evaluation of rock cuts for various highway projects, geologic hazard studies for a major pipeline and residential and commercial developments, landslide studies, slope stability and earth embankment studies.

PROFESSIONAL SOCIETIES:

Association of Engineering Geologists