

Appendix C

C.1 Historic Resources Assessment

C.2 Potential Physical Impacts Report

Historic Resources Assessment

1501 N. Marlay Drive, Los Angeles, California

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- A. **Proposed Project Plans**
- B. **Structural Focus Report (April 22, 2025)**
- C. **Historical Resource Monitoring and Protection Plan (August 2025)**

1. Executive Summary

South Environmental was retained by EcoTierra Consulting to complete a Historic Resources Assessment (HRA) Report for a property located at 1501 North Marlay Drive in the City of Los Angeles, California (project site). This study was prepared by qualified architectural historians in conformance with California Environmental Quality Act (CEQA) Guidelines § 15064.5 for historical resources and the City of Los Angeles Cultural Heritage Ordinance.

Of primary focus in this HRA is an analysis of the proposed project's potential to impact the Stahl House, also known as Case Study House #22, an iconic International-style residence and historical resource located directly above the project site at 1635 Woods Drive.

The proposed project plans and renderings were reviewed by qualified architectural historians to determine if the proposed project would have an adverse effect on any significant viewsheds to or from the Stahl House. An intensive survey of the project site and surrounding viewsheds to the Stahl House, photographs taken of the Stahl House from a distance, photographs taken from the interior and exterior of the Stahl House, and review of countless photographs of the property's iconic viewsheds indicates that the proposed development at 1501 Marlay Drive has no potential to impact any of the Stahl House's significant viewsheds.

Based on the physical impacts analysis prepared by Structural Focus, the proposed project has the potential to adversely impact the Stahl House during construction activities if vibration and slope instability are not considered and mitigated before, during, and after construction activities. However, implementation of the mitigation measures (MMs) presented in this study will ensure that physical impacts to the Stahl House remain less than significant.

2. Project Summary

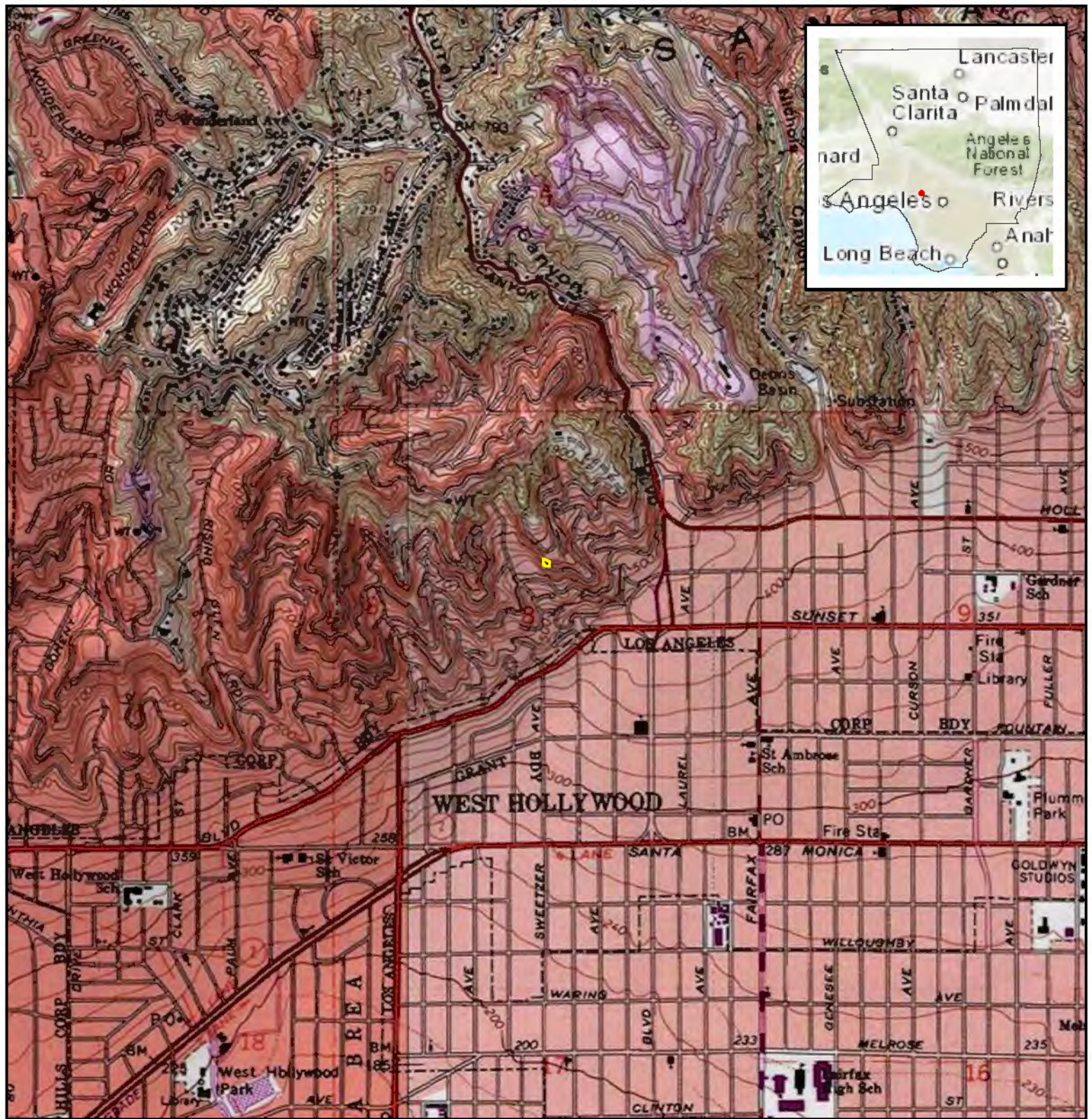
South Environmental was retained by EcoTierra Consulting to complete a Historic Resources Assessment (HRA) for an undeveloped property located at 1501 North Marlay Drive in the City of Los Angeles, California (project site). This study was prepared by qualified architectural historians and includes the results of an intensive survey of the project site and all major viewsheds to and from the Stahl House, an iconic International-style residence and historical resource located directly above the project site at 1635 Woods Drive; a historical overview of the Stahl House and why it is considered a historical resource; building development and archival research; and review of proposed project's potential to adversely impact historical resources. This report was prepared in conformance with CEQA Guidelines § 15064.5 for historical resources and the City of Los Angeles Cultural Heritage Ordinance.

Project Description

The project proposes construction of a 3,100 square foot single-family residence on what is currently an undeveloped hillside lot. The new development will consist of a one-story single-family residence with a basement, garage, sub-basement, and roof-top pool. A large concrete retaining wall would also be constructed into the hillside (see Attachment A for project plans).

Project Location

The proposed project site is an undeveloped hillside lot located at 1501 North Marlay Drive on Assessor's Parcel Number (APN) 5556-031-004 (Figure 1, Project Location). The project site is located at the terminus of a cul-de-sac on the north side of the street. The Stahl House is located directly above the project site at 1635 Woods Drive (Figure 2, Project Site Detail).



Source: ESRI USA Topo Maps and World Topo Map 2025

1501 Marlay Drive

Figure 1. Project Location Map

Project Site

Project Site is within the City of Los Angeles, California, in Los Angeles County on the USGS Hollywood 7.5-minute quadrangle map in Section 8 of Township 01 South and Range 14 West

Center Coordinate (Decimal Degrees):
Latitude: 34.1001496N Longitude: -118.3702322W



0 1,150 2,300 Feet
Scale: 1:24,000



SOUTH
ENVIRONMENTAL

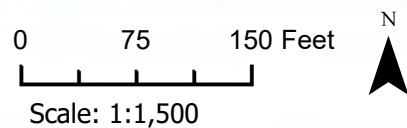


Source: ESRI Aerial Map 2025

1501 Marlay Drive

Figure 2. Project Site Detail

Project Site



3. Regulatory Framework

Federal

National Register of Historic Places

The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service, under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act, as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance, "How to Apply the National Register Criteria," as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration to be considered for listing).

State

California Register of Historical Resources

In California, the term “historical resource” includes but is not limited to “any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (California Public Resources Code Section 5020.1(j)). In 1992, the California legislature established the CRHR “to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change” (California Public Resources Code Section 5024.1(a)). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to California Public Resources Code Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains “substantial integrity,” and (ii) meets at least one of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- California Public Resources Code Section 21083.2(g) defines “unique archaeological resource.”
- California Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5(a) define “historical resources.” In addition, CEQA Guidelines Section 15064.5(b) defines the phrase “substantial adverse change in the significance of an historical resource.” It also defines the circumstances when a project would materially impair the significance of an historical resource.
- California Public Resources Code Section 21074(a) defines “tribal cultural resources.”
- California Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- California Public Resources Code Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an historical resource” (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(b).) If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code Section 5024.1(q)), it is a “historical resource” and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A “substantial adverse change in the significance of an historical resource” reflecting a significant effect under CEQA means “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines Section 15064.5(b)(1); California Public Resources Code Section 5020.1(q)). In turn, CEQA Guidelines section 15064.5(b)(2) states the significance of an historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any “historical resources,” then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource’s historical significance is materially impaired.

Local

City of Los Angeles

Municipal Code

Los Angeles Historic-Cultural Monuments (Section 22.171.7 of Cultural Heritage Ordinance)

Local landmarks in the City of Los Angeles are known as Historic-Cultural Monuments (HCMs) and are under the aegis of the Planning Department, Office of Historic Resources. They are defined in the Cultural Heritage Ordinance as follows (Los Angeles Municipal Code Section 22.171.7, added by Ordinance No. 178,402, effective April 2, 2007):

HCMs include any site (including significant trees or other plant life located on the site), building or structure of particular historic or cultural significance to the City of Los Angeles, including historic structures or sites in which the broad cultural, economic or social history of the nation, State or community is reflected or exemplified; or which is identified with historic personages or with important events in the main currents of national, State or local history; or which embodies the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period, style or method of construction; or a notable work of a master builder, designer, or architect whose individual genius influenced his or her age.

For the purposes of SurveyLA, this definition has been broken down into the following four HCM designation criteria that closely parallel the existing NRHP and CRHR criteria:

1. Is identified with important events in the main currents of national, State or local history, or exemplifies significant contributions to the broad cultural, political, economic or social history of the nation, state, city, or community; or
2. Is associated with the lives of Historic Personages important to national, state, city, or local history; or
3. Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder or architect whose genius influenced his or her age; or possesses high artistic values; or
4. Has yielded, or has the potential to yield, information important to the pre-history or history of the nation, state, city or community.

Historic Preservation Overlay Zones (Section 12.20.3)

As described by the City of Los Angeles Office of Historic Resources, the Historic Preservation Overlay Zone (HPOZ) Ordinance was adopted in 1979 and amended in 2004 to identify and protect neighborhoods with distinct architectural and cultural resources. HPOZs, commonly known as historic districts, provide for review of proposed exterior alterations and additions to historic properties within designated districts.

Regarding HPOZ eligibility, City of Los Angeles Ordinance Number 175891 states (Los Angeles Municipal Code Section 12.20.3):

Features designated as contributing shall meet one or more of the following criteria:

1. adds to the Historic architectural qualities or Historic associations for which a property is significant because it was present during the period of significance, and possesses Historic integrity reflecting its character at that time; or
2. owing to its unique location or singular physical characteristics, represents an established feature of the neighborhood, community or city; or
3. retaining the building, structure, Landscaping, or Natural Feature, would contribute to the preservation and protection of a Historic place or area of Historic interest in the City.

Permits for Historical and Cultural Buildings (Section 91.106.4.5)

Regarding effects on federal and locally significant properties, Los Angeles Municipal Code states the following:

The department shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated, or has been determined by state or federal action to be eligible for designation, on the National Register of Historic Places, or has been included on the City of Los Angeles list of historic cultural monuments, without the department having first determined whether the demolition, alteration or removal may result in the loss of or serious damage to a significant historical or cultural asset. If the department determines that such loss or damage may occur, the applicant shall file an application and pay all fees for the California Environmental Quality Act Initial Study and Check List, as specified in Section 19.05 of the Los Angeles Municipal Code. If the Initial Study and Check List identifies the historical or cultural asset as significant, the permit shall not be issued without the department first finding that specific economic, social or other considerations make infeasible the preservation of the building or structure.

4. Assessment Methodology

Research Conducted

Background research was conducted on the vertically adjacent Stahl House in an effort to establish a concise set of character-defining features and to clarify the specific reasons for why it is historically significant.

Field Methods

Architectural Historians Samantha Murray, MA and Laura Carías, MA, conducted a pedestrian survey of the project site on October 19, 2022.

The survey entailed capturing all accessible views of the Stahl House from the public right-of-way with zoom lens digital photography. Viewsheds surveyed and photographed as part of this analysis included 1) looking up at Stahl House from 1501 N. Marlay Drive; 2) looking up at the Stahl House from Sunset Boulevard; and 3) a profile view of the west elevation of the Stahl House taken from Hillside Avenue. Photographs specifically focused on character-defining features, spatial relationships, and viewsheds of the Stahl House from the public right-of-way.

Ms. Murray and Ms. Carías also visited the Stahl House as part of a public tour on November 4, 2022. Photographs of the viewsheds from the Stahl House were taken, including views looking down to Marlay Drive. All field notes and photographs are on file with South Environmental.

5. Overview of the Stahl House

The Stahl House (Figure 3), also known as Case Study House #22, is one of the most iconic mid-century homes designed as a part of the Los Angeles based *Arts & Architecture* magazine Case Study House Program that ran from 1945 until 1966. The program was launched by Editor John Entenza, who was known for sponsoring and publicizing design competitions for the magazine. He announced the Case Study House Program's launch in the January 1945 issue and envisioned that the program would entice architects to create homes "capable of duplication and in no sense being an individual performance" to address housing shortage issues and produce a new type of replicable, affordable, mid-century modern home for the average American. With a total of 36 homes designed for the program, 24 built, and 20 still extant, the Case Study House Program had a profound effect on American modernism.¹



Figure 3. The Stahl House as photographed by Julius Schulman (1960)²

¹ Michelle Hofmann, "The Case Study Houses Forever Changed American Architecture.," *Forbes*, February 5, 2021, <https://www.forbes.com/sites/michellehofmann/2021/02/05/the-case-study-house-program/?sh=53a59e7a5163>.

² Jen Carlson, "Inside The Iconic Midcentury Stahl House (Case Study House #22)," *LA ist*, November 15, 2016, <https://laist.com/news/entertainment/inside-stahl-house>

The Stahl House was designed by architect Pierre Koenig who partnered with landowners Buck and Carlotta Stahl to construct their dream house on the edge of a stark piece of land jutting out from the cliff. Built between 1959 and 1960, the famous house is highly regarded as a “superlative architectural statement in steel and glass cantilevered over the broad expanse of Los Angeles.”³ The home was designed in the International Style with features including a one-story L-shaped plan, large concrete pad, steel structural system, floor to ceiling glass, flat roof with deep overhangs, and a 240-degree panoramic view of the city.⁴ The specific structural system removed load-bearing walls which permitted wide expanses of unobstructed glass that create transparent indoor-outdoor living. Koenig’s design is also notable for its unique division of private and public spaces. The two bedrooms occupy one wing of the house while the kitchen, dining room, and living room are surrounded by glass with a freestanding fireplace framing the living room. A steel wall faces the street side to establish privacy.⁵

Soon after construction was completed on the Stahl House in 1960, architectural photographer Julius Shulman captured a photograph of the newly completed home in black and white, featuring a pair of seated women in conversation in the living room at twilight. Using a seven-and-a-half-minute exposure, Shulman was able to capture a dreamy glowing ambiance overlooking the grid of Los Angeles’s city lights below.⁶ Shulman was already an internationally recognized photographer, known for his work with capturing modern architecture, but his first photograph of the Stahl House skyrocketed his and the home’s fame. The photograph (Figure 12) has gone on to become one of the most famous pictures ever taken in Los Angeles, and one of the most recognizable pictures of residential architecture.⁷ Shulman would go on to photograph other parts of the home as well, including the kitchen, living room, carport, pool, and more.⁸

The Stahl House has maintained its fame and recognition well into the 21st century. In 2017, the American Institute of Architects (AIA) listed the Stahl House as one of the 150 buildings on its “America’s Favorite Architecture” list. It was one of only 11 in Southern California and was the only private residence on the list. In 2016, *Time* magazine named Julius Shulman’s image of the Stahl House at night one of the 100 Most Influential Images of All Time (Discover Los Angeles 2022).⁹

³ Amanda Seward, National Register of Historic Places Registration Form for Case Study House #22 (Stahl House), 2013, <https://npgallery.nps.gov/NRHP/GetAsset/21b55ed9-5129-4f45-ae5f-3067e3e9f11d>.

⁴ Seward, NRHP Form for Case Study House #22 (Stahl House).

⁵ Andrew Kroll, “AD Classics: Stahl House/ Pierre Koenig,” 2010. Arch Daily. <https://www.archdaily.com/83038/ad-classics-stahl-house-pierre-koenig>

⁶ Mark Rozzo, “Inside L.A.’s Ultimate Mid-Century Modern Home,” *Vanity Fair*, July 2, 2021, <https://www.vanityfair.com/style/2021/07/inside-la-ultimate-mid-century-modern-home>

⁷ Mary Melton, “A Shot In The Dark: The Unknown Story Behind L.A.’s Most Celebrated Photograph,” *Los Angeles Magazine*, December 5, 2016, <https://www.lamag.com/longform/a-shot-in-the-dark/>

⁸ Jeffrey Head, “Creating the iconic Stahl House,” *Curbed*, August 24, 2017, <https://archive.curbed.com/2017/8/24/16156818/stahl-house-julius-shulman-case-study-22-pierre-koenig>

⁹ Discover Los Angeles, “Discover the Landmark Houses of Los Angeles,” February 27, 2002, <https://www.discoverlosangeles.com/kr/node/11912#close>

Historical Significance

In 1999, the Stahl House was declared a Los Angeles Historic-Cultural Monument (HCM #670). It was listed for reflecting “the broad cultural, political, economic or social history of the nation, state, or community, and for its association with the Case Study House program (1945-1966), which profoundly influenced mid-twentieth century residential design.”¹⁰

In 2013, the Stahl House was listed on the National Register of Historic Places (NRHP) under Criterion A for its association with “experimental modern housing in the postwar years under the auspices of John Entenza’s *Arts & Architecture* magazine” and under Criterion C for embodying “the distinctive characteristics of residential architecture associated with the Case Study House Program,” and steel-frame dwelling subtype.¹¹ Los Angeles Conservancy spent nearly a decade trying to get the Stahl House and several other Case Study House Program homes listed in the NRHP. The Stahl House was listed along with seven other homes in Los Angeles, and two others in San Diego and Ventura Counties.¹²

The significant character-defining features of the Stahl House, designed in the International Style, include¹³:

- one-story, L-shaped plan
- large cantilevered concrete pad
- steel construction
- large expanses of non-load bearing, fixed and sliding glass
- flat roof with deep overhangs to shelter the interior spaces
- globe pendant lights
- Rectangular swimming pool
- 240-degree unobstructed panoramic view of the city

¹⁰ Historic Places LA: Los Angeles Historic Resources Inventory, Stahl House, Historic Resource Report August 13, 2014, <http://www.historicplacesla.org/reports/6af2f7e6-53f1-4d43-9a77-6f2d7a6bd5ca>

¹¹ Seward, NRHP Form for Case Study House #22 (Stahl House).

¹² Adrian Glick Kudler, “LA’s Most Famous House Finally Makes the National Register,” *Curbed Los Angeles*, August 20, 2013, <https://la.curbed.com/2013/8/20/10244720/las-most-famous-house-finally-makes-the-national-register-1>

¹³ Seward, NRHP Form for Case Study House #22 (Stahl House). Cultural Heritage Commission, Historic-Cultural Monument Application, Stahl House – Case Study House #22, March 12, 1999, <https://cityclerk.lacity.org/online/docs/1999/99-1681.pdf>

6. Impacts Assessment

The Stahl House is City of Los Angeles HCM #670 and is listed in the NRHP. Therefore, the Stahl House is a historical resource under CEQA, and all proposed design and construction plans require review to ensure that the project will not adversely impact the Stahl House or any significant viewsheds to and from the property.

Viewshed Impacts Analysis

Views To the Stahl House

Viewsheds surveyed and photographed as part of this analysis included: 1) looking up at the Stahl House from 1501 N. Marlay Drive; 2) looking up at the Stahl House from Sunset Boulevard; and 3) a profile view of the west elevation of the Stahl House taken from Hillside Avenue. Each of these public viewsheds is discussed with photographs in detail below.

Looking Up from North Marlay Drive

Marlay Drive is a narrow, winding street that terminates at a dead end. The hillside on the north side of the street where 1501 N. Marlay Drive is located slopes upward sharply at a near 90-degree angle. The Stahl House is located at 1635 Woods Drive directly above the project site (Figures 4, 5, and 6). Only the southwest corner of the Stahl House is visible from this viewpoint, revealing the underside of its wide, projecting eave, southernmost globe pendant light, and a glimpse of its floor-to-ceiling windows. This particular corner of the Stahl House is arguably the most iconic and photographed element of the entire house, first made famous by Julius Shulman's 1960 photograph of two women seated in the living room, which has become one of the most important photographs of residential architecture ever taken in Los Angeles. However, this sharply upward-facing perspective of the Stahl House's southwest corner is not frequently or famously photographed.



Figure 4. Looking up at the Stahl House (circled in red) from N. Marlay Drive, facing north



Figure 5. Closer view looking up at the Stahl House (circled in red) from N. Marlay Drive, facing north



Figure 6. Looking up at the Stahl House (circled in red) from N. Marlay Drive, facing northeast

The elevation difference between Marlay Drive and Woods Drive is significant. At the time of the site visit, a concrete retaining wall (visible in all photographs presented above) associated with the neighboring lot at 1509 Marlay Drive was located midway up the slope between Marlay Drive and Woods Drive. The retaining wall is relatively new, as it does not appear in 2022 Google Imagery. This wall is as tall, if not taller than, the existing tri-level single-family residence at 1521 Marlay Drive to the east. These existing elements serve as visual markers for the approximate height of the proposed development at 1501 Marlay Drive.

Renderings of the proposed residence at 1501 Marlay Drive (Figures 7 and 8) indicate that the new residence will be built into the hillside and will be single-story. Additional height comes from a concrete retaining wall that will also be built into the hillside. Although this wall appears to be slightly taller than the adjacent concrete retaining wall at 1509 Marlay Drive and the residence at 1521 Marlay Drive, the recession of the proposed residence into the hillside will allow the Stahl House to remain visible from Marlay Drive. As demonstrated, the concrete retaining wall has no potential to obscure the view of the Stahl House from Marlay Drive.



Figure 7. Rendering of proposed residence at 1501 N. Marlay Drive with Stahl House above, facing northeast (Attachment A)



Figure 8. Rendering of proposed residence at 1501 N. Marlay Drive with Stahl House above, facing northwest (Attachment A)

Looking Up from Sunset Boulevard

The Stahl House is also visible on the north side of Sunset Boulevard at approximately Roxbury Drive (Figure 9). The south elevation of the Stahl House is visible from the street, notably the southern projection, including its wide projecting eave, its southernmost globe pendant light, and its glass and metal windows. None of the homes below the Stahl House on Marlay Drive are visible from this vantage point because 1) they are not tall enough, and 2) there are several trees that partially obscure the hillside below the Stahl House. Most prominent in this viewshed, is the house adjacent to the east of the Stahl House which was constructed in the 1980s. As made clear from the photographs below, new construction of a single-story residence on Marlay Drive below the Stahl House would not block this notable viewshed from Sunset Boulevard, as none of the existing properties on Marlay Drive are tall enough to be seen from Sunset Boulevard.



Figure 9. Looking towards the Stahl House from Sunset Boulevard, facing north

Profile of West Elevation from Hillside Avenue

A striking profile view of the Stahl House's west elevation is visible when standing between 8425 and 8401 Hillside Avenue and looking east (Figure 10). From this vantage point, the concrete retaining wall at 1509 Marlay Drive and the tri-level residence at 1521 Marlay Drive are visible well below the Stahl House and existing tree line. These existing elements serve as approximate markers for the height of the proposed residence at 1521 Marlay Drive, indicating that construction of the new residence would not impact this viewshed and would likely not even be visible due in large part to the existing tall pine trees that obscure much of Marlay Drive and the bottom portion of the hillside below the Stahl House. A project rendering (Figure 11) shows the similarity in height between the proposed residence, the tree line, and the property at 1521 Marlay Drive.



Figure 10. Profile view of Stahl House and Marlay Drive below including the concrete retaining wall at 1509 Marlay Drive and the residence at 1521 Marlay Drive, view to east



Figure 11. Rendering of the relationship between the proposed residence, the Stahl House above, and the residence at 1521 Marlay Drive to the east (Attachment A)

Views From the Stahl House

The Stahl House offers an unrivaled 240-degree of Los Angeles that extends from downtown Los Angeles to Century City to the Pacific Ocean and beyond. However, only viewsheds with the potential to be impacted by the proposed project are discussed here. These include views from the southwest corner of the Stahl House, the pool deck, and the living room. The analysis of significant viewsheds from the Stahl House also relied on the many existing photographs, historical and contemporary, taken by both professional and amateur photographers.

The Southwest Corner

Of the many publicly posted pictures of the Stahl House online, by far the most common angle photographed is the southwest corner of the property, with visitors attempting to recreate the famous Julius Shulman image of two women in conversation in the living room with the Los Angeles nighttime sky behind them (Figure 12). As demonstrated in the photographs below (Figures 12-15), none of the

existing homes located on the north side of Marlay Drive are visible from this viewshed, as they lie directly below the Stahl House at the base of a near 90-degree slope. Even when trying to see over the edge near the southwest corner, none of the homes and very little of Marlay Drive is visible (Figure 16).



Figure 12. Julius Shulman photograph of Stahl House southwest corner (1960)¹⁴

¹⁴Kate Connors, "A Dream of California Modernism: Tour the Stahl House." May 19, 2020, https://floydhome.com/blogs/livedin/tour-the-stahl-house?srltid=AfmBOoqe_n1-sR-RqrVfrs1zt_fk2PT09miXMJionXRcBXhDMXsQTZ-



Figure 13. Alison Martino recreating the famous Schulman angle¹⁵



Figure 14. Daytime version recreating the famous Schulman angle¹⁶

¹⁵ Alison Martino (@alisonmartino), "At the historic Stahl House," Twitter, March 12, 2024, <https://x.com/alisonmartino/status/1767778304092938308>

¹⁶ La Carmina, "Stahl House LA Tour: Iconic mid-century modern home!" June 24, 2020, <https://lacarina.com/blog/2020/06/stahl-house-tour-los-angeles-modern-architecture-beetle-house-tim-burton-bar/>



Figure 15. Southwest corner showing more of the view below¹⁷



Figure 16. View of the Stahl House southwest corner, facing downhill to Marlay Drive with red line defining the ridgeline above the project site. The steepness of the hillside makes it difficult to see much of the project site below (South Environmental 2022)

¹⁷ Ibid

The Pool Deck

Another important viewshed that appears in numerous photographs is the view from the pool deck, particularly its southernmost concrete walkway, closest to the steep drop-off (Figures 17 and 18). One must be standing at the edge of the concrete walkway and looking directly down to see a small section of Marlay Drive (Figure 19). It is estimated that the top of the proposed project would be just below the ridge highlighted in red. Therefore, the proposed residence at 1501 Marlay Drive has no potential to disrupt this important viewshed.



Figure 17. View from the Stahl House pool area, facing west¹⁸

¹⁸ Ibid



Figure 18. View from the Stahl House pool area, facing south (source unknown)



Figure 19. View from Stahl House pool area, facing downhill to Marlay Drive with red line defining the ridgeline above the project site (South Environmental 2022)

The Living Room

Another iconic viewshed from the Stahl House is the cityscape seen from the glass living room, overlooking Los Angeles as far as the eye can see. Of most importance to this analysis is the western portion of this view where the proposed development could potentially impact the view. As demonstrated in Figures 20 through 22, none of the existing homes located on the north side of Marlay Drive are visible from this from the southwest corner of the living room while looking straight down, as they lie directly below the Stahl House where the cliff drops off sharply at a near 90-degree angle. Residences on the south side of Marlay Drive are visible from this viewpoint. Although portions of the proposed project site are visible from this viewshed (Figure 22), the proposed development would be built into the hillside below the ridgeline and has no potential to obscure the panoramic views from the living room of the Stahl House.



Figure 20. Julius Shulman photograph of Stahl House view from living room (1960)¹⁹

¹⁹ Etan R, "#256: Stahl House / Case Study House 22 (Hollywood Hills)," May 13, 2025, <https://etandoesla.com/stahl-house-case-study-house-22-hollywood-hills/>



Figure 21. Daytime view from Stahl House living room, facing south (source unknown)



Figure 22. View from the Stahl House living room, facing downhill to Marlay Drive with red line defining the ridgeline above the project site (South Environmental 2022)

Physical Impacts Analysis

Another important element that requires consideration are the potential physical impacts to the Stahl House resulting from construction on the hillside below. Potential physical impacts including direct vibration impacts, indirect vibration impacts, slope instability, and settlement were analyzed in a letter report prepared by qualified engineers at Structural Focus on April 22, 2025 (Attachment B). The Structural Focus report concluded that “the hillside construction of 1501 Marlay Drive necessitates thoughtful strategies to prevent any adverse physical impacts to the neighboring Stahl House” and recommended a suite of vibration and slope movement mitigation (as summarized below) to ensure that impacts to the Stahl House remain less than significant, including:

1. Prohibiting percussive, impact, or hammer drilling that could generate significant ground-borne vibration, and alternatively, utilizing only auger or core drilling with diamond or tungsten carbide drill bits which is “a safer and less disruptive method for drilling through hard rock than percussion drilling”.²⁰
2. Establishing a vibration limit set at a Peak Particle Velocity (PPV) of 0.25 in/sec and placing a sensor upslope at the northern boundary of the property, near the Stahl House to detect vibrations that exceed this threshold. If the sensor detects that the limit has been exceeded construction must stop until the source has been determined and alternative construction methods can be established.
3. Implementing a monitoring program to detect any slope movement or retaining wall displacement during construction. If slope movement is detected, preventative measures can be implemented.
4. Conducting continuous data collection of PPV values to provide a record that demonstrates that vibration limits were not exceeded.
5. Conducting a preconstruction survey of the Stahl House (if possible) to document existing conditions of the residence.

Summary of Identified Impacts

The proposed project plans and renderings were reviewed by qualified architectural historians to determine if the proposed project would have an adverse effect on any significant viewsheds to or from the Stahl House. A survey of the project site and surrounding viewsheds to and from the Stahl House, and review of countless photographs of the property’s iconic viewsheds indicates that the

²⁰ Structural Focus, Assessment Report and Mitigation Recommendations Potential Physical Impacts to Stahl House During Construction, 2025.

proposed development at 1501 Marlay Drive has no potential to impact any of the Stahl House's significant viewsheds.

However, with respect to potential physical impacts to the Stahl House, a qualified engineer from Structural Focus completed a report (Attachment B) that analyzed potential physical impacts resulting from project-related construction activities, including direct vibration impacts, indirect vibration impacts, slope instability, and settlement. The report concluded that "the hillside construction of 1501 Marlay Drive necessitates thoughtful strategies to prevent any adverse physical impacts to the neighboring Stahl House" and recommended implementing a suite of vibration and slope movement mitigation to "allow the project to proceed consistent with the principles of historic preservation of the Stahl House."

7. Mitigation Measures

Based on the physical impacts analysis prepared by Structural Focus, the proposed project has the potential to adversely impact the Stahl House during construction activities if vibration and slope instability are not considered and mitigated before, during, and after construction activities. However, implementation of the following mitigation measures (MMs) would reduce potential physical impacts to the Stahl House to a less than significant level.

Retention of Qualified Structural Engineer and Architectural Historian

Prior to the start of project construction, the Applicant shall retain 1) a qualified structural engineer with demonstrated professional experience working with historic buildings and implementing vibration and slope monitoring programs; and 2) a qualified architectural historian who meets the Secretary of the Interior's Professional Qualification Standards for architectural history and/or historic architecture (per Title 36 Code of Federal Regulations Part 61) and has demonstrated professional experience implementing historical resource monitoring and protection plans to oversee implementation of the Historical Resource Monitoring and Protection Plan for the Stahl House (Attachment C). The qualifications of the selected individuals shall be reviewed and approved by City of Los Angeles Office of Historic Resources planning staff prior to the start of project construction.

Implementation of Historical Resource Monitoring and Protection Plan

A detailed Historical Resource Monitoring and Protection Plan (Plan, Attachment C) was prepared in consideration of potential impacts to the adjacent Stahl House resulting from vibration and slope instability. The Applicant shall ensure that all of the required elements of the Plan are adhered to throughout the various stages of pre-construction, construction, and post-construction, and that all training, monitoring, and reporting requirements are completed in accordance with the schedule outlined in the Plan. The project's structural engineer, architectural historian, and on-site construction manager shall be empowered to halt all construction activity that falls out of compliance with the Plan or poses a physical threat to the Stahl House. No construction activity may resume until the threat is analyzed, preventative measures are put in place, and approval is provided by both the project's structural engineer and architectural historian.

8. References

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9. Attachments

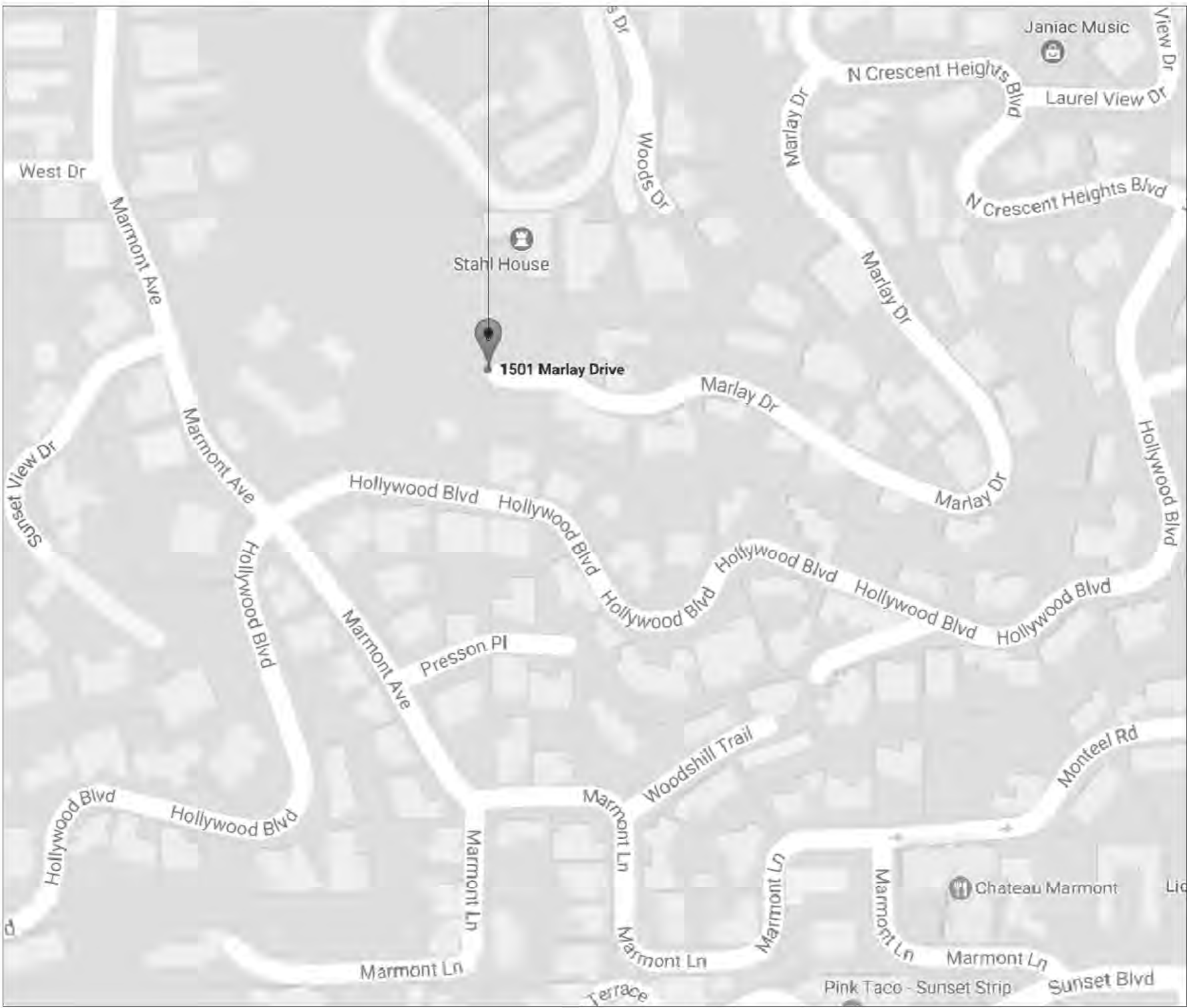
- A. Proposed Project Plans**
- B. Structural Focus Report (April 22, 2025)**
- C. Historical Resource Monitoring and Protection Plan (August 2025)**

Attachment A.
Proposed Project Plans

RETAINING WALL INFORMATION					
WALL	MAX. HEIGHT	LENGTH*	LENGTH IN PUBLIC R.O.W.	LENGTH IN FRONT YARD	NOTES
A-ROOF	22'-1 1/2"	58'-4"	-	-	TAKEN FROM ROOF DECK
A- DRWAY	22'-10 1/4"	(see above)	10'-11 1/2"	6'-11"	TAKEN FROM ADJACENT GRADE
B	35'-4"	60'-1 1/2"	-	-	TAKEN FROM ROOF DECK
C	26'-11 1/2"	7'-1"	-	-	TAKEN FROM POOL DECK
TOTAL	-	125'-6 1/2"	-	-	

* NOTE: LINEAR DIMENSIONS TAKEN FROM BACK OF RETAINING WALLS

PROJECT SITE



VICINITY MAP

ADJACENT PROPERTY:
NO EXISTING
STRUCTURES WITHIN
50' OF PROPERTY LINE

WEST RETAINING
WALL (C)

CONCRETE POOL
DECK EDGE W/ 42"
GUARD

NEW P.L. W/ HIGHWAY
DEDICATION

PAINT CURB RED-
'NO PARKING'

FRONTAGE UNDER
REQUEST FOR
REDUCED FRONT
YARD PER ZAD

DEDICATION KEY

- 5' DOT DEDICATION
- LAFD EASEMENT (FOR ALTERNATIVE MINIMUM TURNAROUND)

NOTE: SEE FLOOR PLANS FOR SPOT ELEVATIONS AT BUILDING
AND ADJACENT GRADE TO VERIFY COMPLIANCE WITH 20'
ENCROACHMENT PLANE

SITE PLAN

SCALE: 1/8" = 1'-0"

INDEX OF DRAWINGS

- A0.1- COVER SHEET/SITE PLAN
- A0.2- ZONING DIAGRAMS
- A1.1- FLOOR PLANS
- A1.2- FLOOR PLANS/ROOF PLAN
- A3.1- EXTERIOR ELEVATIONS
- A3.2- RENDERINGS
- A3.3- RETAINING WALL ELEVATIONS
- A4.1- BUILDING AND SITE SECTIONS
- A4.2- BUILDING AND SITE SECTIONS
- L1.0- LANDSCAPE PLAN
- L1.1- LANDSCAPE FORMS
- L2.0- IRRIGATION PLAN
- L2.1- IRRIGATION DETAILS
- L2.1- TOPOGRAPHIC SURVEY
- L2.1- SLOPE ANALYSIS MAP

SCOPE OF WORK

3,100 S.F. NEW 1 STORY SINGLE FAMILY RESIDENCE WITH BASEMENT AND
SUB BASEMENT: BASEMENT LEVEL W/GARAGE, FIRST LEVEL WITH DECKS,
ROOF DECK, & POOL.

NO TREES WILL BE IMPACTED BY THIS DEVELOPMENT

PROJECT DATA

LEGAL DESCRIPTION:	LOT 1, TRACT TR 12204
PIN NUMBER:	MAP SHEET PAGE 148-5A/75
APN:	148-5A 175 314
DISTRICT MAP:	5556031004
LOT TYPE:	MB 230-40/41
LOT SIZE:	IRREGULAR
COUNCIL DISTRICT:	5,025.8 SQUARE FEET
CENSUS TRACT:	CD 4- DAVID RYU
	1942.00
ZONE:	R1-1
ZONING INFORMATION:	HILLSIDE AREA BASELINE HILLSIDE ORDINANCE
HILLSIDE GRADING AREA:	YES
FRONT YARD:	5 FEET MAX. OR PREVAILING
REAR YARD:	15 FEET
SIDE YARDS:	10% LOT WIDTH- 5' MAX. +1' TO 3' MIN.
OFF STREET PARKING:	2 COVERED
OCCUPANCY GROUP:	R-3
NUMBER OF STORIES:	2
ENVELOPE HEIGHT LIMIT:	28' 24' WITHIN 20 FEET OF PROP. LINE
MAXIMUM BUILDING HEIGHT LIMIT:	45'
MAXIMUM BUILDING HEIGHT:	28'-2-1/2" NOT INCLUDING BACK IMPACT WALL
ALLOWED RESIDENTIAL FLOOR AREA (SLOPE ANALYSIS): (* SEE SECTION 12.02 BELOW)	1,206 S.F.
PROPOSED RESIDENTIAL FLOOR AREA: (*SEE SECTION 12.02 BELOW)	1,201 S.F. BASEMENT LEVEL DOES NOT CONTRIBUTE TO RFA SUB-BASEMENT LEVEL DOES NOT CONTRIBUTE TO RFA
PROPOSED TOTAL RESIDENTIAL FLOOR AREA: 3,100 S.F. (948 + 951 + 1,201) (* SEE SECTION 12.02 BELOW)	SUB-BASEMENT LEVEL: 948 S.F. (W/O STAIR @ 79 S.F.) BASEMENT LEVEL RESIDENTIAL: 951 SF (W/O STAIR @ 79 S.F.) BASEMENT LEVEL GARAGE: 414 SF FIRST LEVEL RESIDENTIAL: 1,201 SF (STAIR COUNTED) ROOF: 0 SF

PER SECTION 12.02 - IS THAT AREA IN SQUARE FEET CONFINED WITHIN THE EXTERIOR
WALLS OF A BUILDING BUT NOT INCLUDING THE AREA OF THE FOLLOWING :
EXTERIOR WALLS, STAIRWAYS, SHAFTS, ROOMS HOUSING BUILDING OPERATING
EQUIPMENT OR MACHINERY, PARKING AREAS ASSOCIATED DRIVEWAY & RAMPS, SPACE
FOR THE LANDING AND STORAGE OF HELICOPTERS, AND BASEMENT STORAGE AREAS.

APPLICABLE CODES

CITY OF LOS ANGELES PLANNING AND ZONING CODE
2016 CITY OF LOS ANGELES AMENDED BUILDING CODE
2016 CITY OF LOS ANGELES AMENDED MECHANICAL CODE
2016 CITY OF LOS ANGELES AMENDED PLUMBING CODE
2016 CITY OF LOS ANGELES AMENDED ELECTRICAL CODE
2016 CITY OF LOS ANGELES AMENDED GREEN BUILDING CODE

CONSULTANTS

Architect	Paul Coleman, Architect 1081 North Granada Drive Orange, California 92669 m 213.700.2297
SURVEY/SLOPE MAP	Voorhees & Voorhees 17049 Sunburst Street Northridge, California 91325 818.993.5611
Civil Engineer	JK & Associates 1295 Los Angeles Street Glendale, CA 91204 (818)507-9881
Structural Engineer	Structural Design Plus, Inc. 15053 Ventura Blvd. Suite 205 Sherman Oaks, CA 91403 (818)905-9871
Title 24 Energy Documentation	Structural Design Plus, Inc. 15053 Ventura Blvd. Suite 205 Sherman Oaks, CA 91403 (818)905-9871
Landscape Architect	Lewis & Associates Landscape Architecture 13351-D Riverside Drive #445 Sherman Oaks, CA 91423 T: 818-788-9382 F: 818-788-3217

PROJECT INFO

SCALE: NTS

PAUL@LUCOL.COM

213 700 2297

ORANGE CALIFORNIA 92669

1081 NORTH GRANADA DRIVE

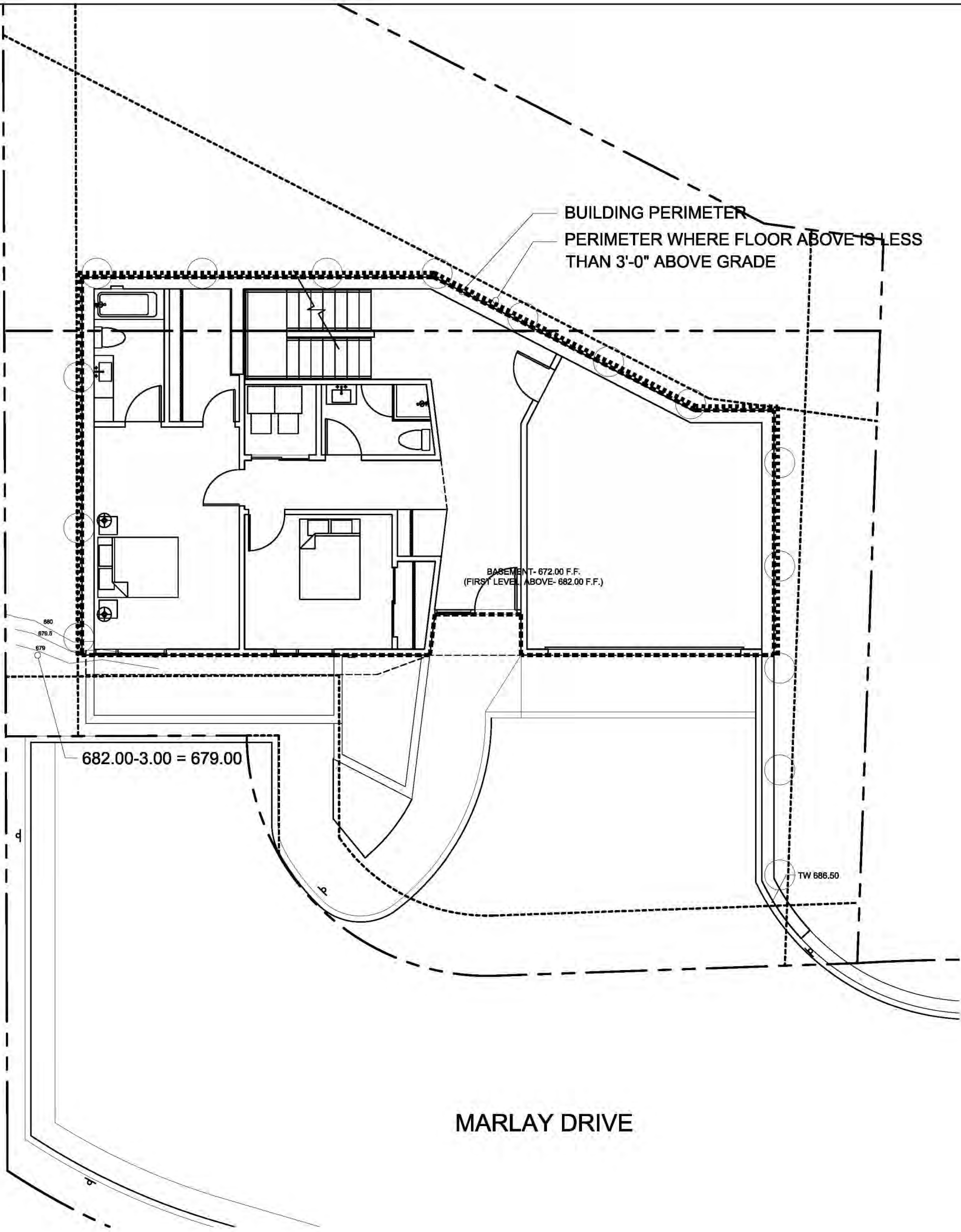
ARCHITECT

COVER SHEET/SITE PLAN

29 MARCH, 2019

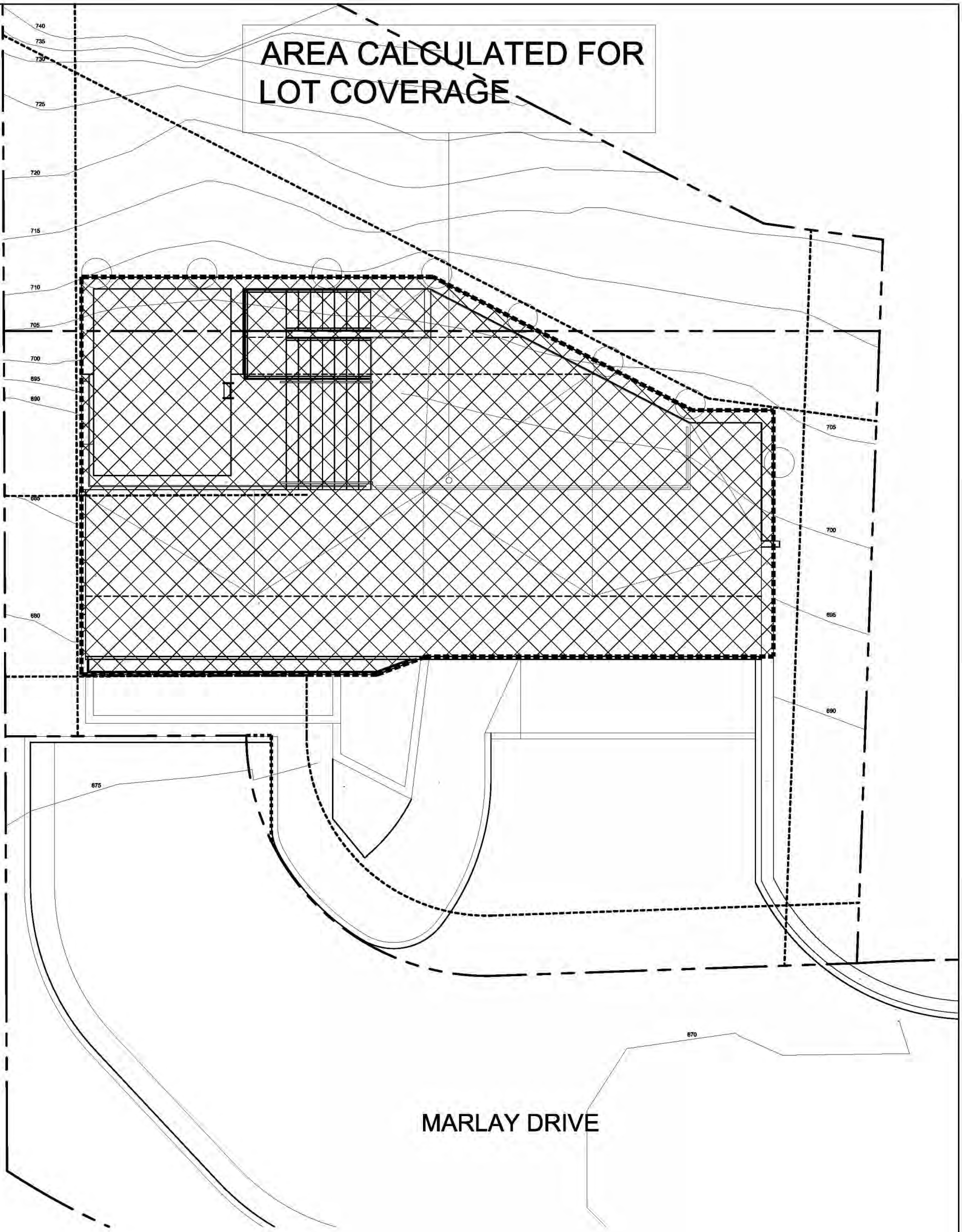
Hillside Residence
1501 Marlay Drive
Los Angeles, California 90069

A0.1



FLOOR PLAN
SCALE: 1/8" = 1'-0"

BASEMENT CALCULATION
TOTAL LENGTH = 175.75
LENGTH WHERE FLOOR ABOVE IS < 3'-0" ABOVE GRADE = 111.75
111.75/175.75= 63.58% >60% OK



SITE PLAN
SCALE: 1/8" = 1'-0"

LOT COVERAGE AREA
LOT AREA = 5,025.8 SQUARE FEET
LOT COVERAGE = 1,657.2 SQUARE FEET
1,657.2 S.F. / 5,025.8 S.F. = 0.33
LOT COVERAGE = 33% < 40%- OK

PREVAILING SETBACK CALCULATOR:

Add Lot

Enter the Lot information after adding rows:

Lot	Frontage (ft)	Setback (ft)
5	77.1	
6	79.6	
7	73.46	
34	90.22	
35	70	
15	84.41	
16	37.91	
17	52.56	

Clear

Calculate

Results

Number of lots: 8

Prevailing Setback: 3.40 ft

Calculation

Total no of lots entered: 8

Total frontage entered: 565.26 ft

40% from total frontage entered: 226.10 ft

No of lots used in the calculation: 5

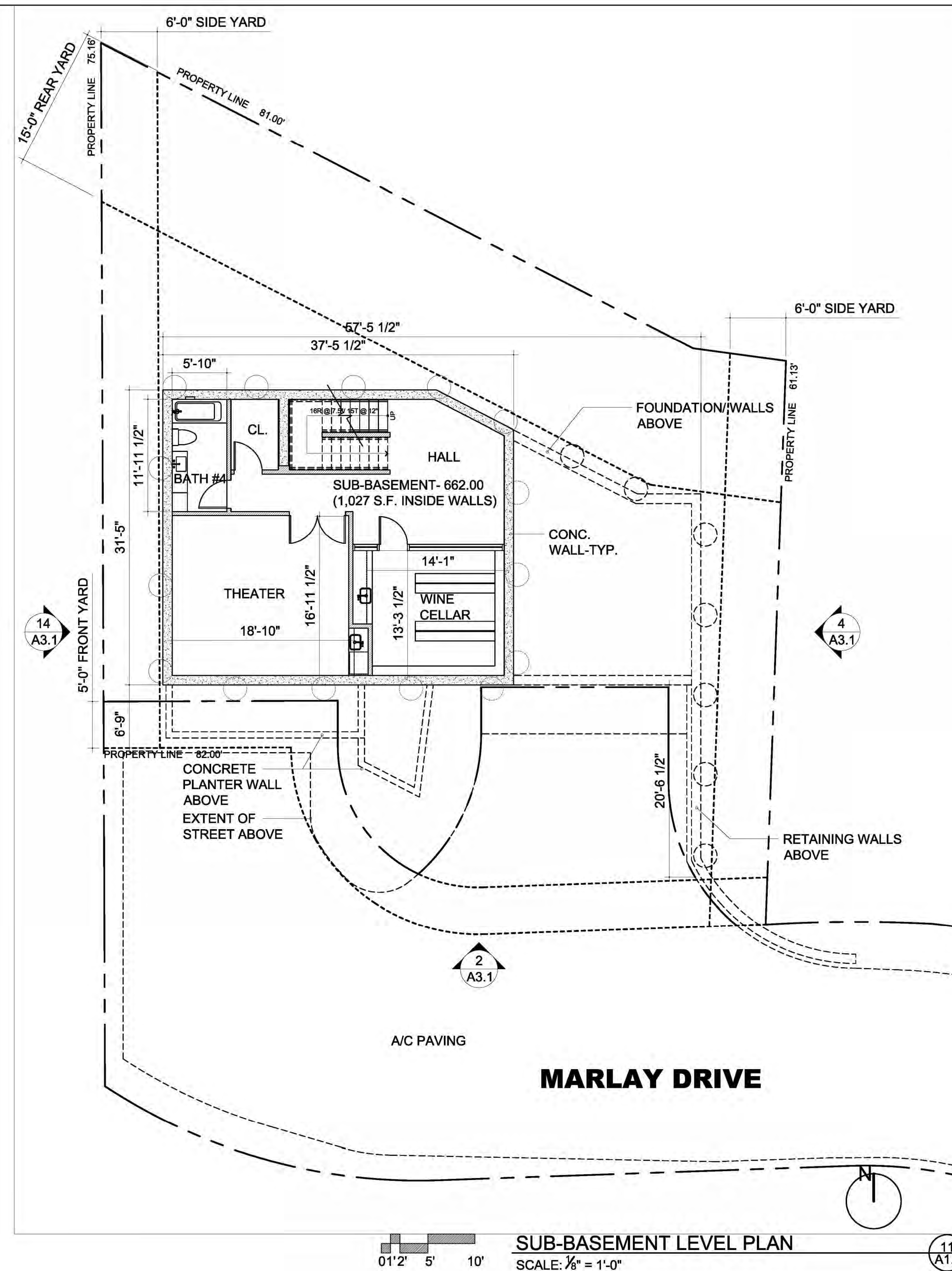
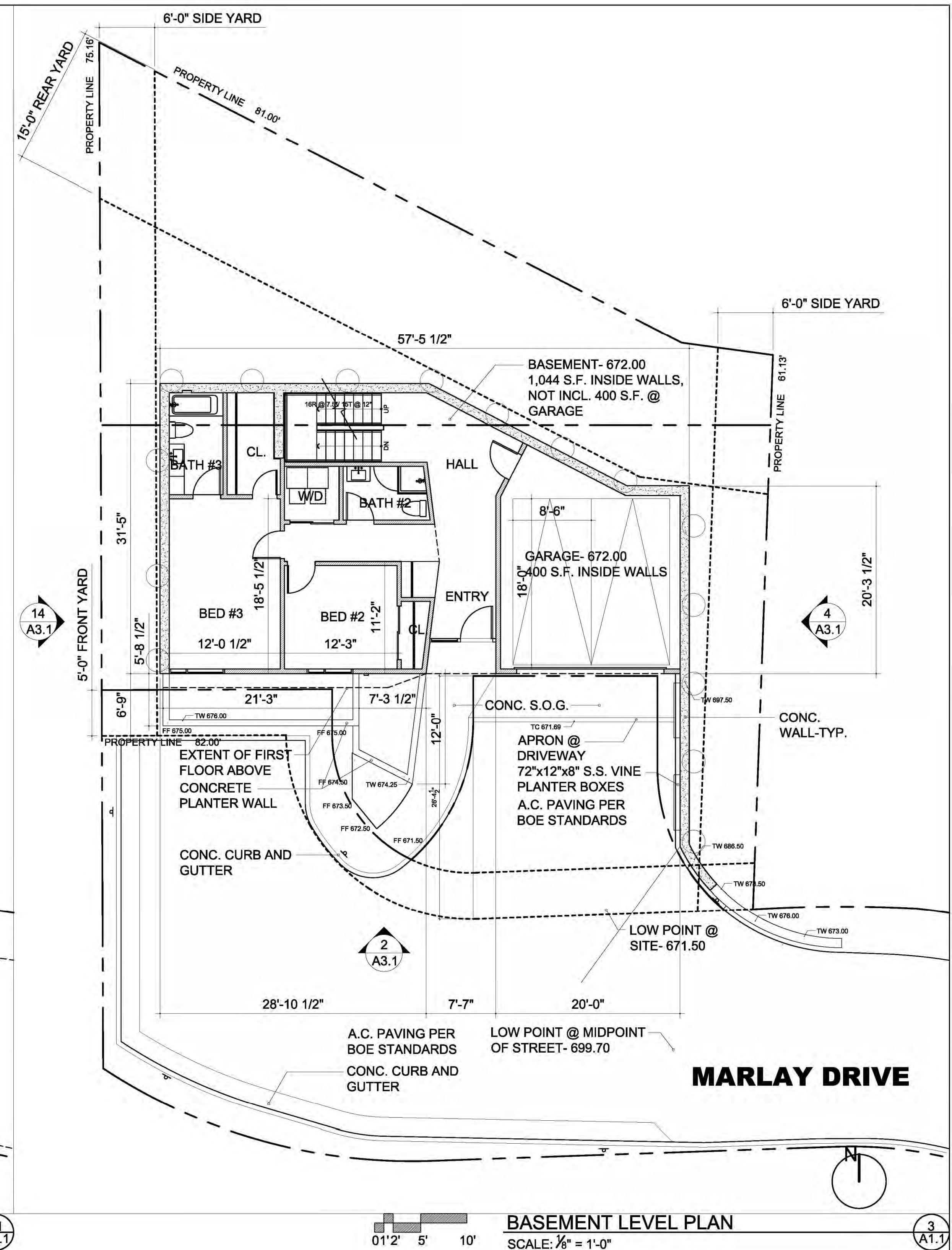
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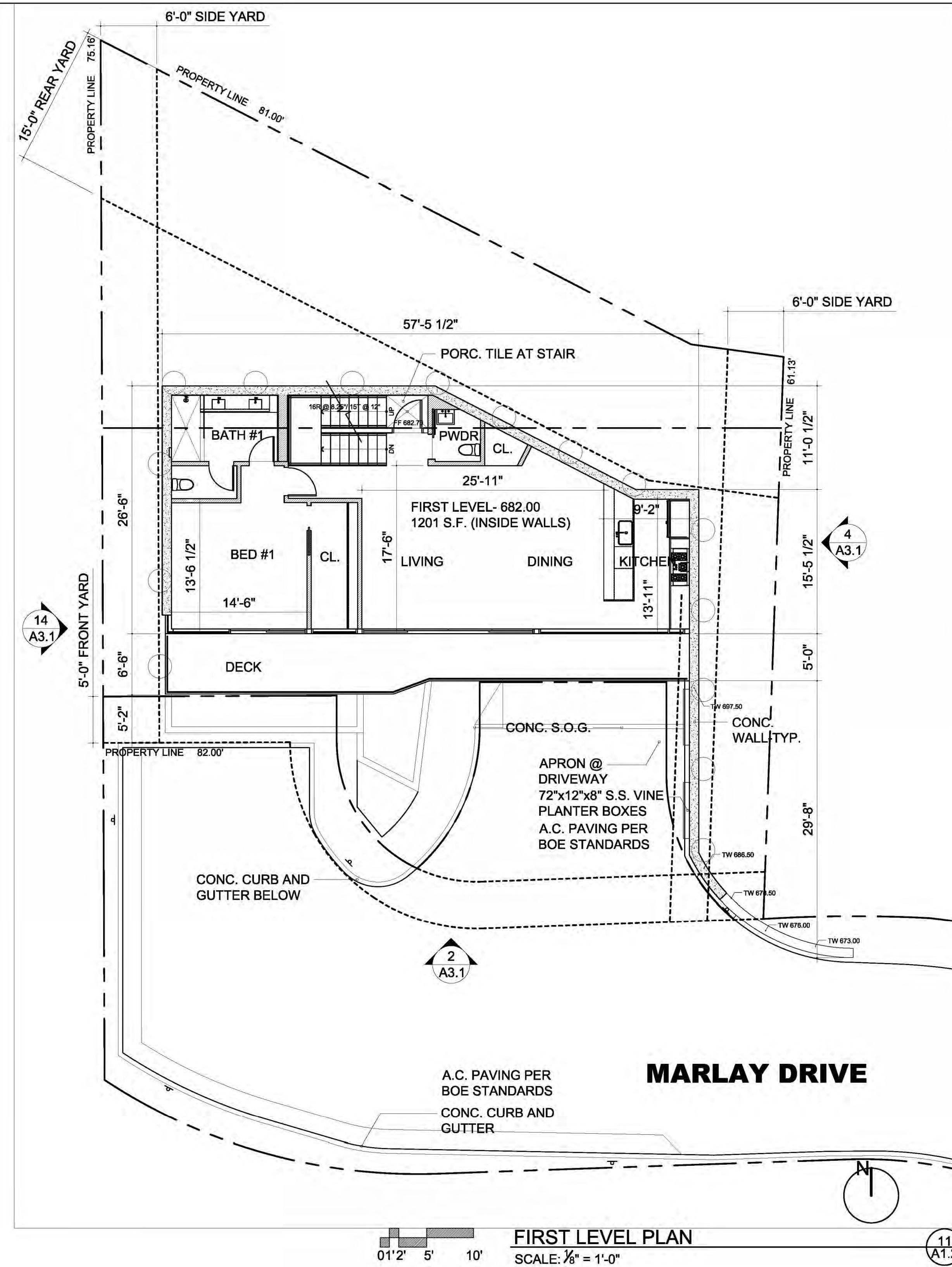
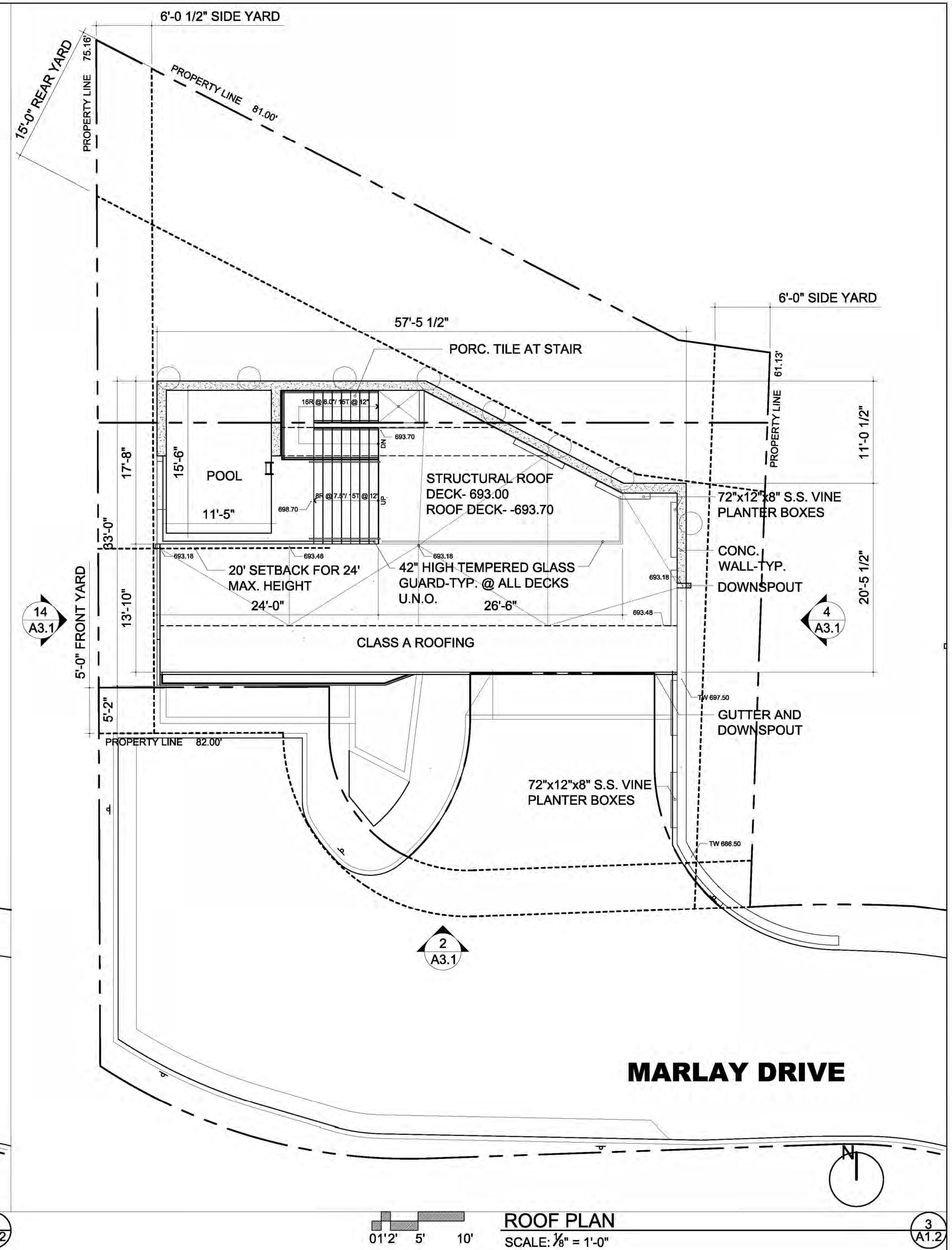
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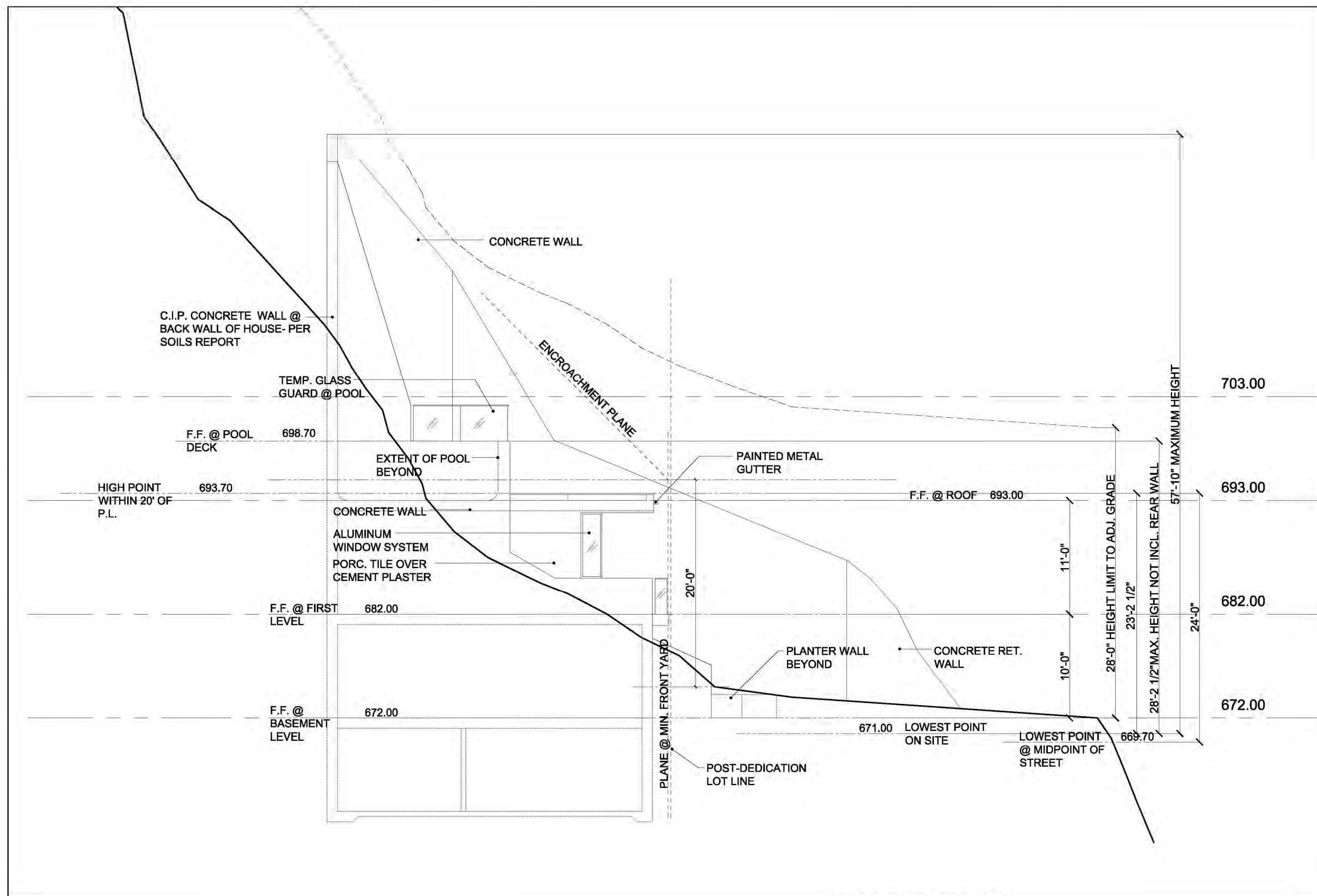
Lots Used

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15	84.41	7.50
17	52.56	6.50
34	90.22	0.00
35	70.00	2.00

View Calculation Details

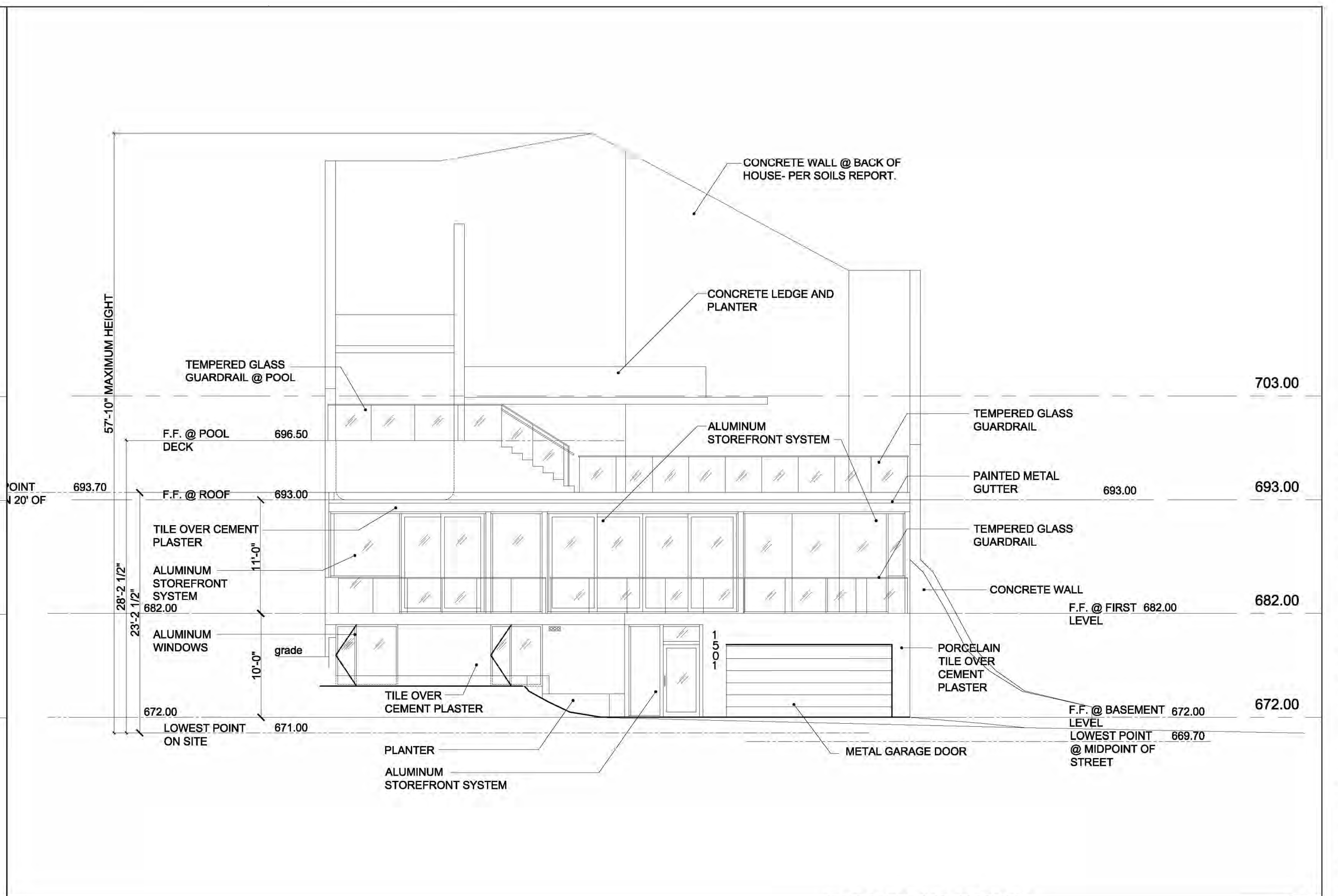






WEST ELEVATION
SCALE: 1/8" = 1'-0"

14
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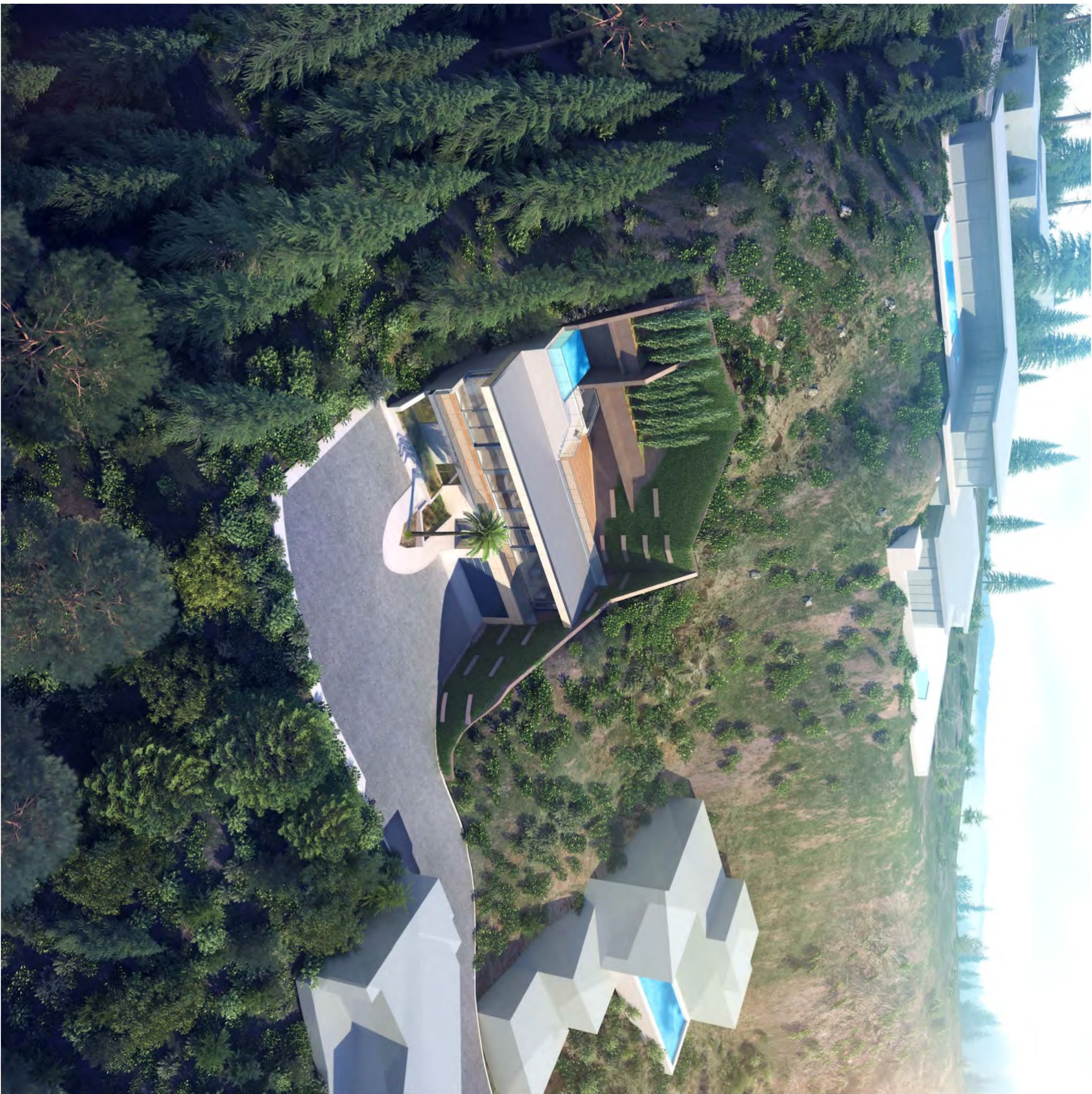
SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

2
A3.1



EAST ELEVATION
SCALE: 1/8" = 1'-0"

4
A3.1



SOUTHWEST AERIAL VIEW
SCALE: NTS

14
A3.2



VIEW FROM SOUTHWEST
SCALE: NTS

2
A3.2

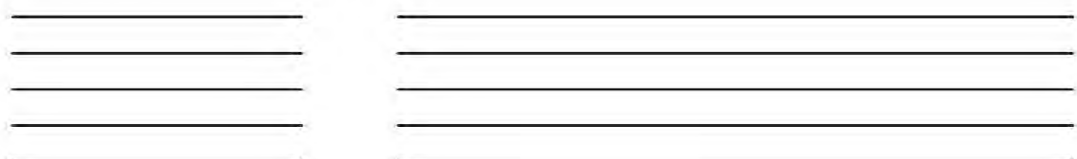


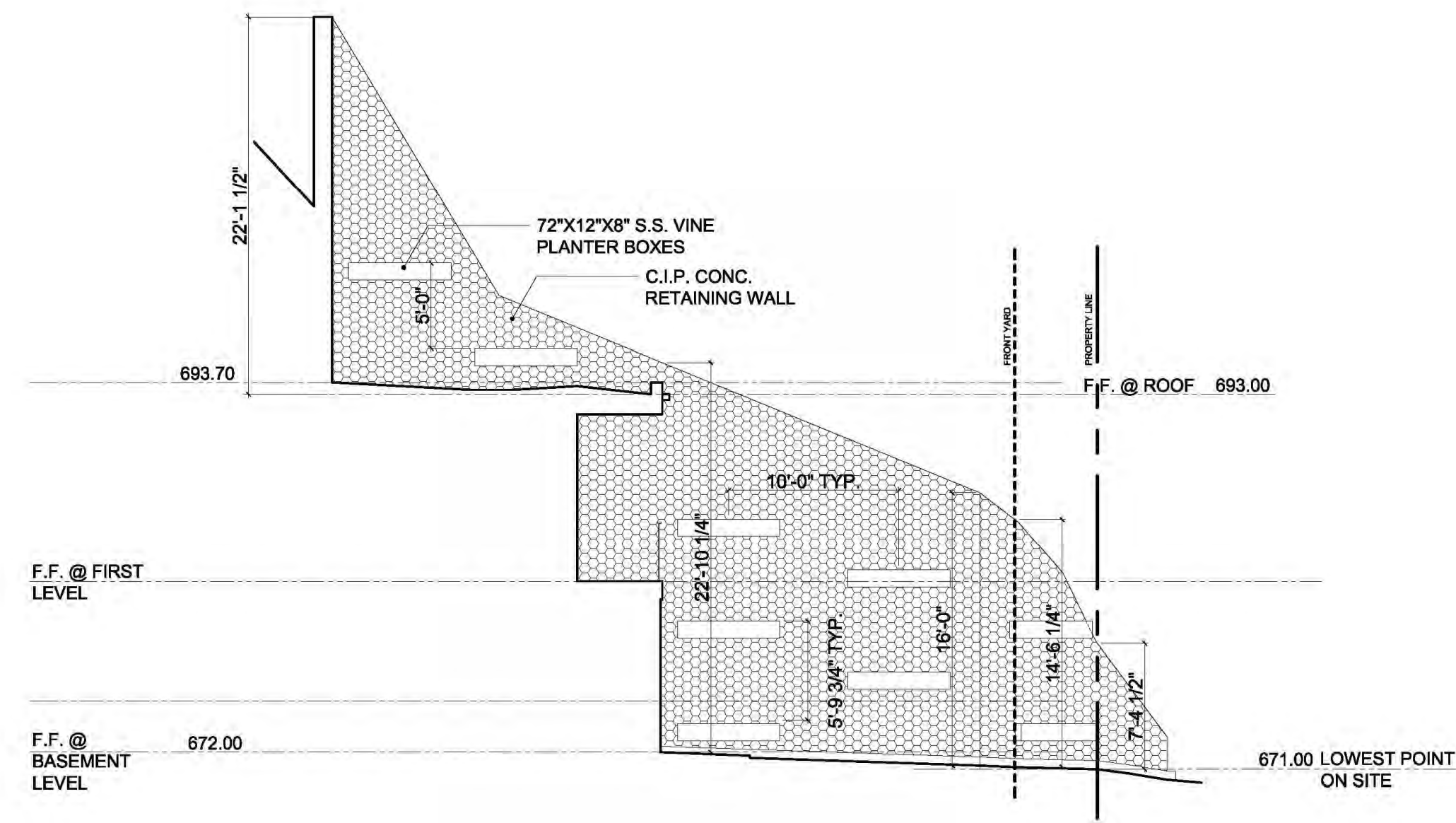
VIEW FROM SOUTHEAST
SCALE: NTS

4
A3.2

RENDERINGS
29 MARCH , 2019

PAUL COLEMAN, ARCHITECT 1081 NORTH GRANADA DRIVE, ORANGE CALIFORNIA 92869 213 700 2297 PAUL@LUCCOL.COM
Hillside Residence
1501 Marlay Drive
Los Angeles, California 90069

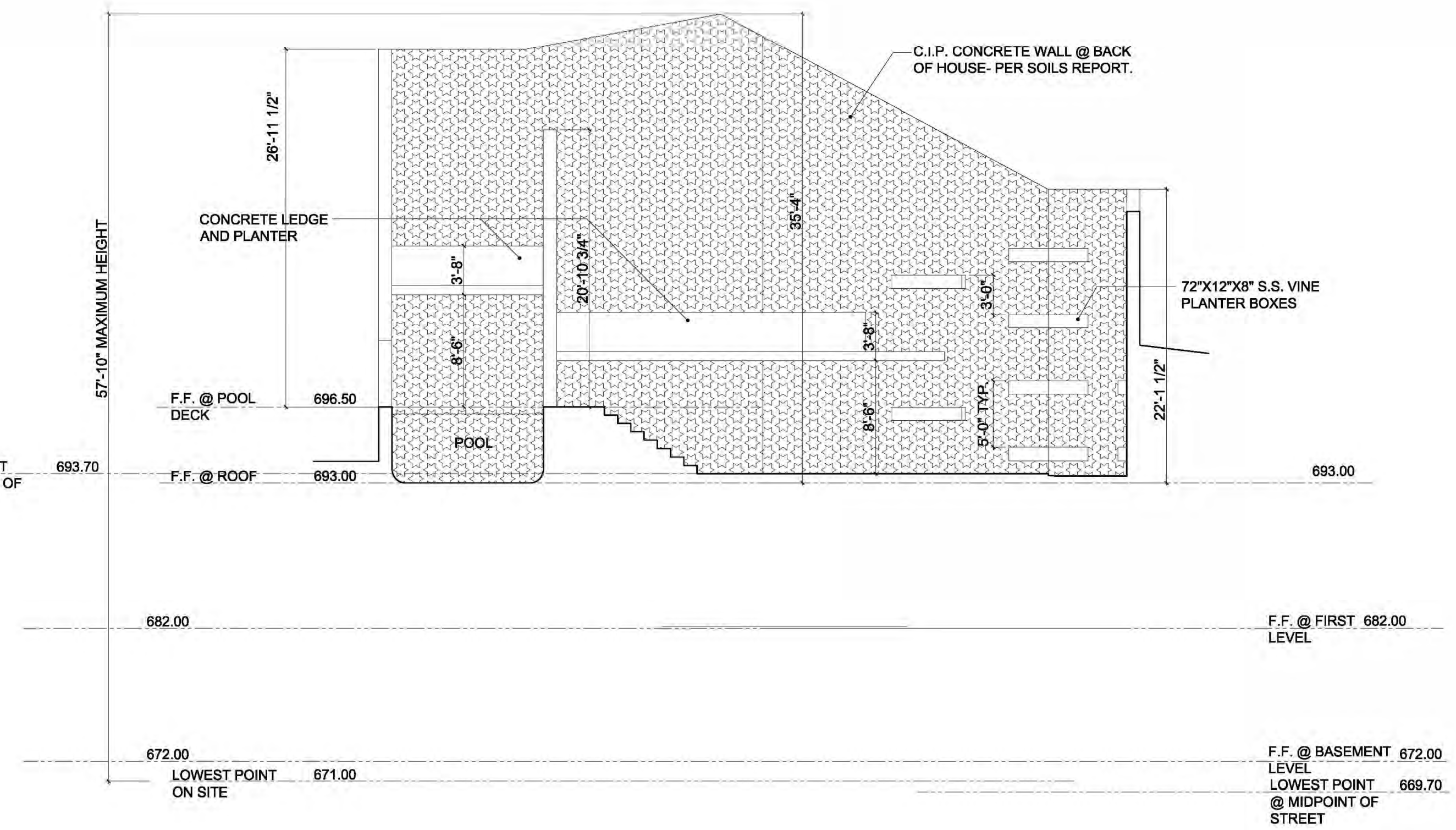




EAST RETAINING WALL ELEVATION (A)

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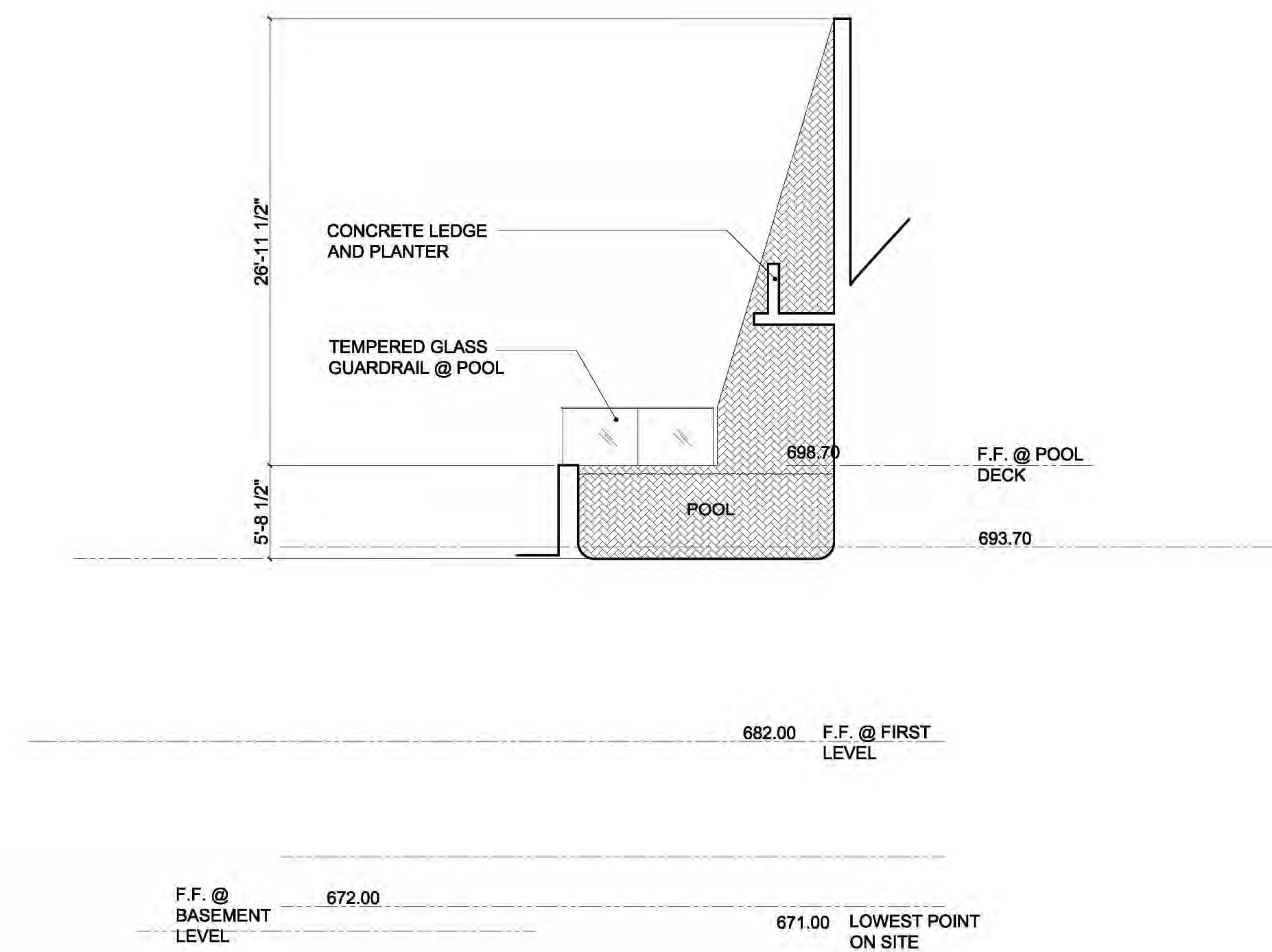
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A3.3



NORTH RETAINING WALL ELEVATION (B)

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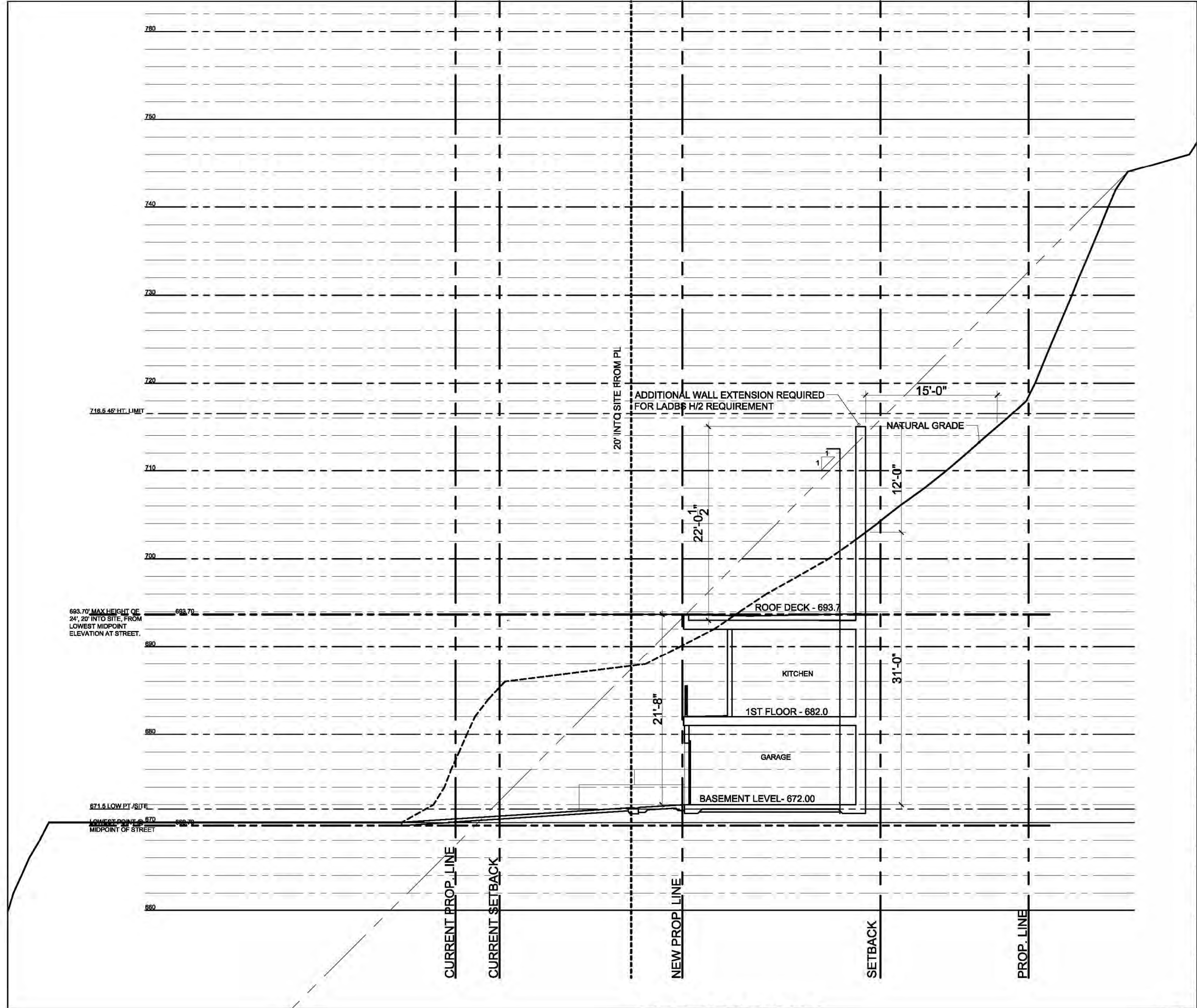
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A3.3



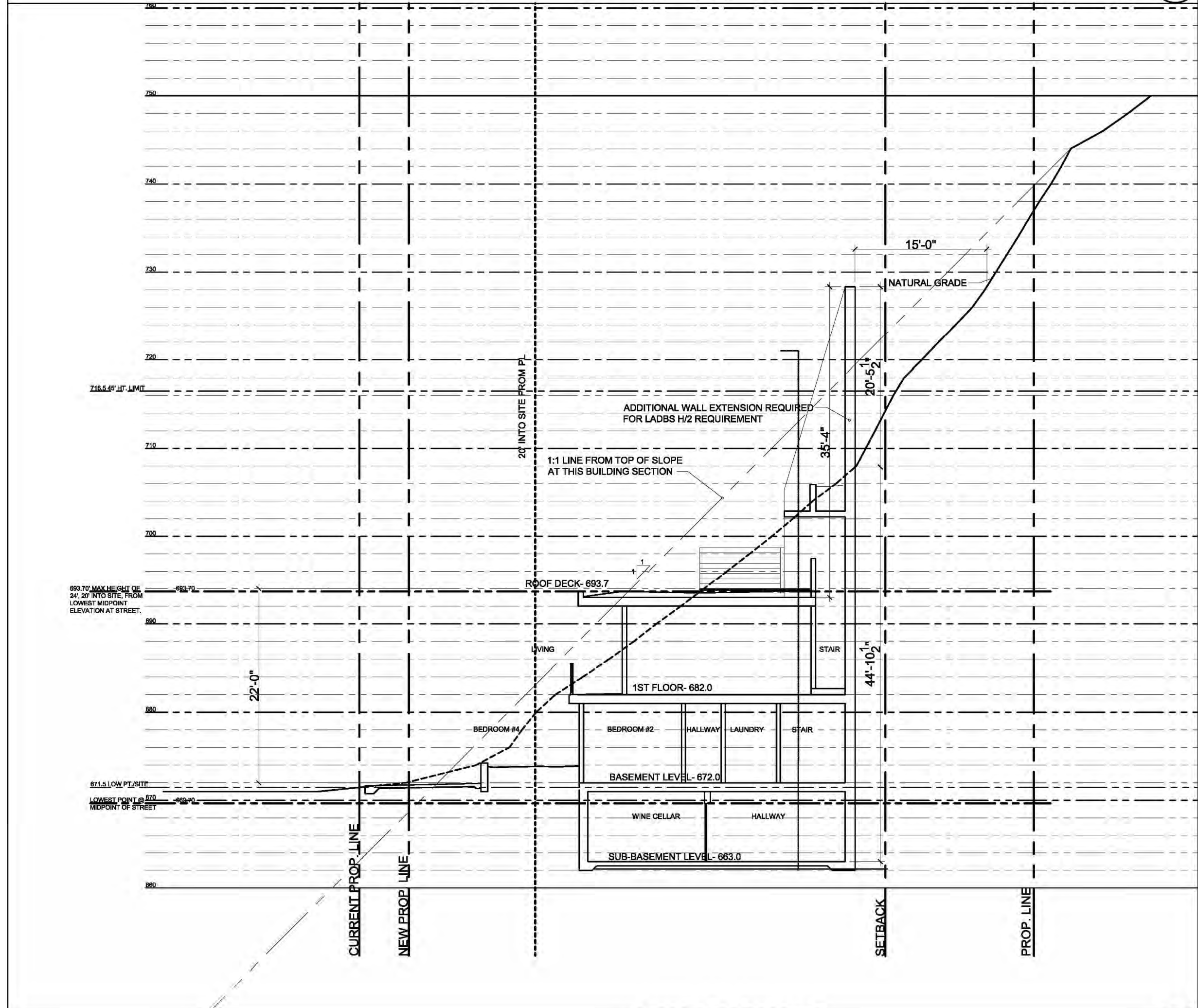
WEST RETAINING WALL ELEVATION (C)

SCALE: 1/8" = 1'-0"

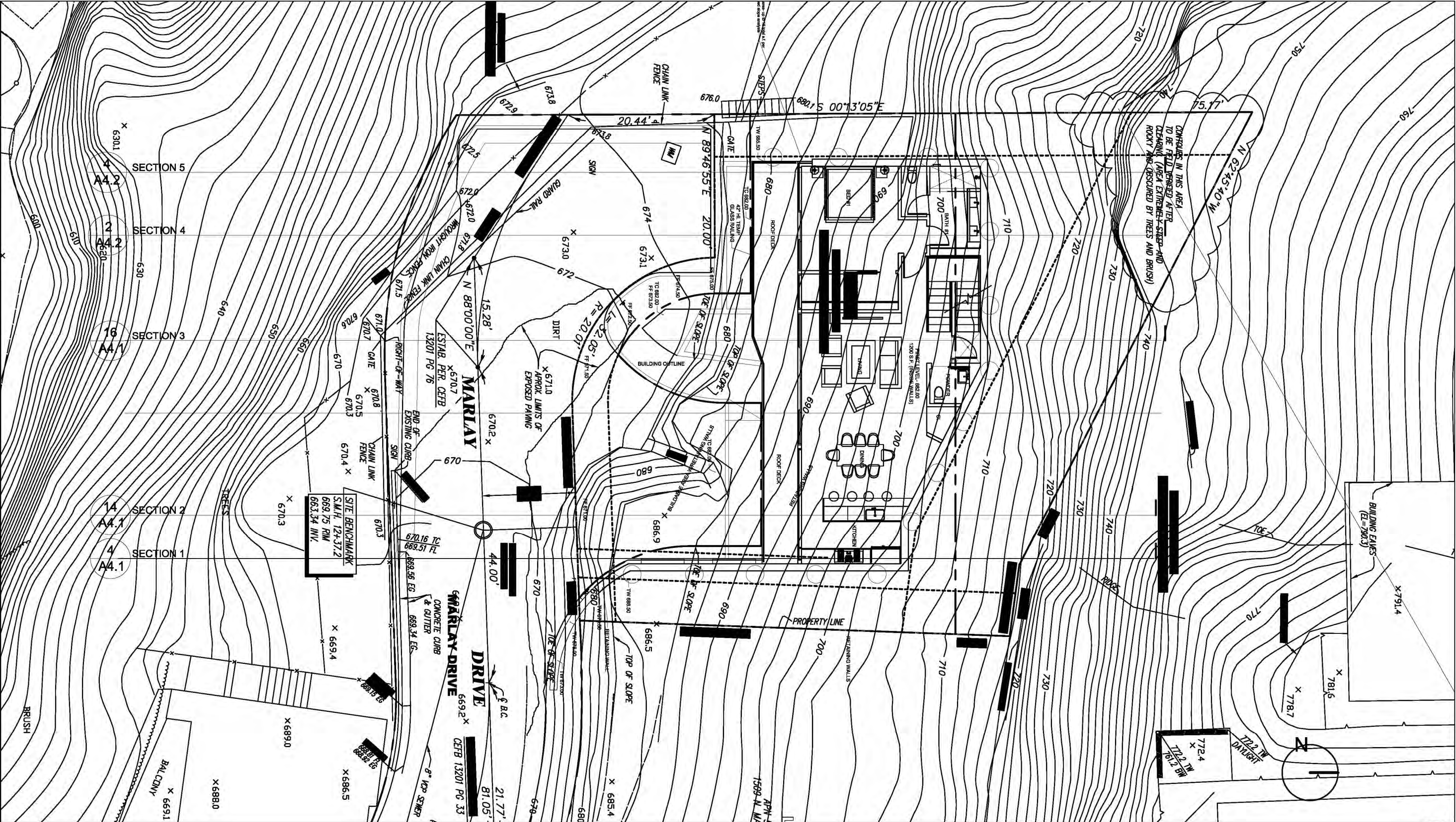
4
A3.3



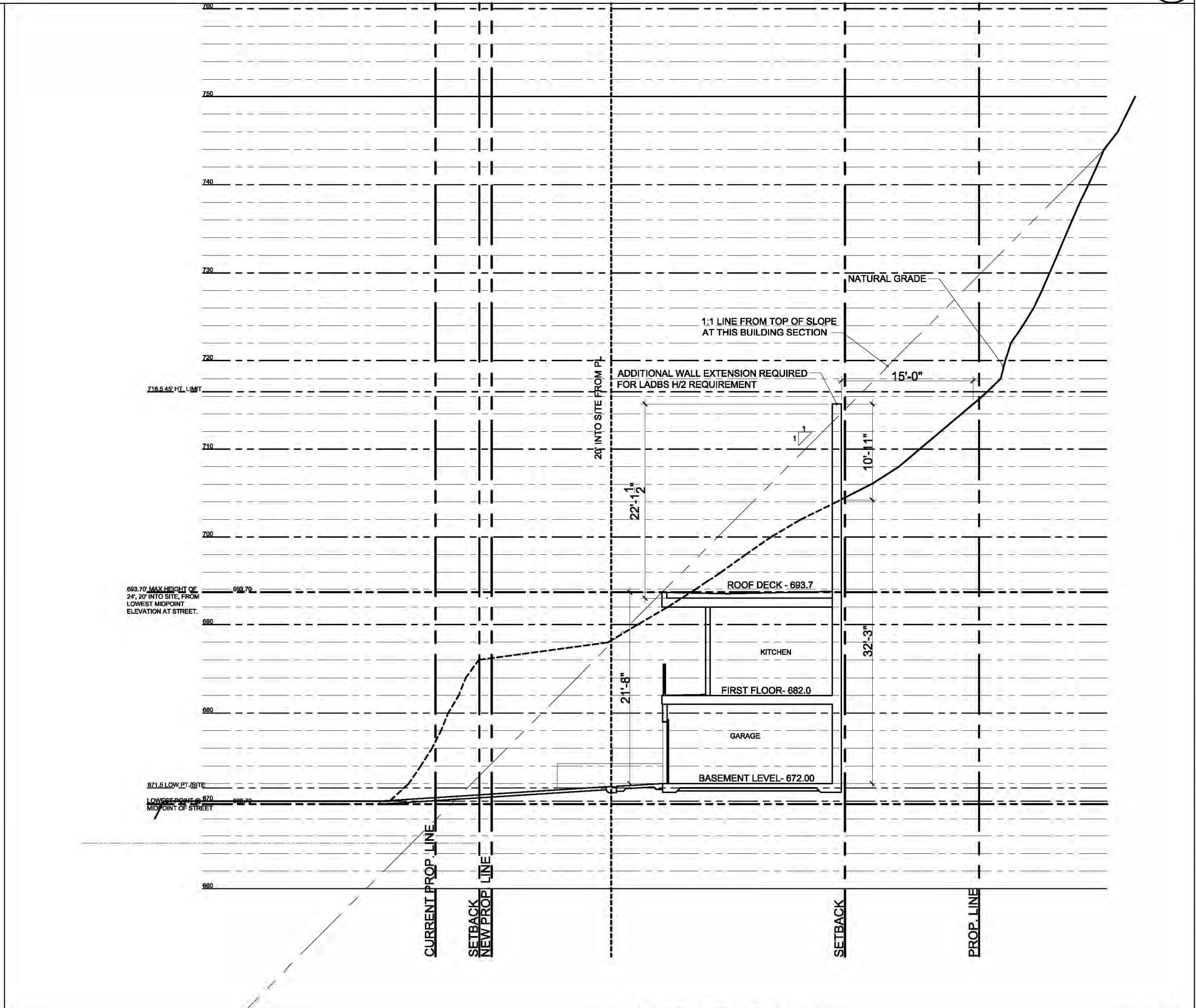
SITE SECTION 2
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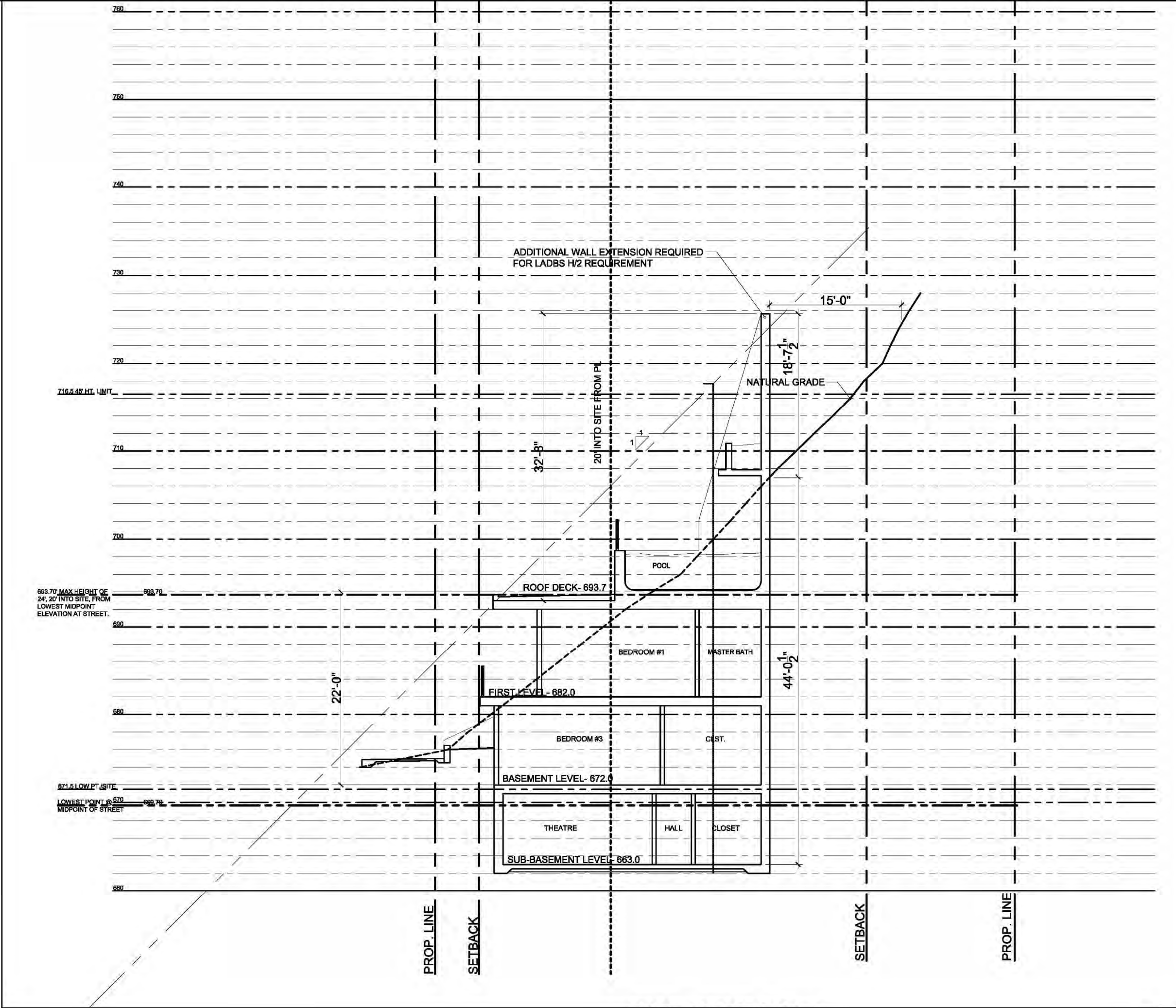
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SITE PLAN
SCALE: 3/32" = 1'-0"

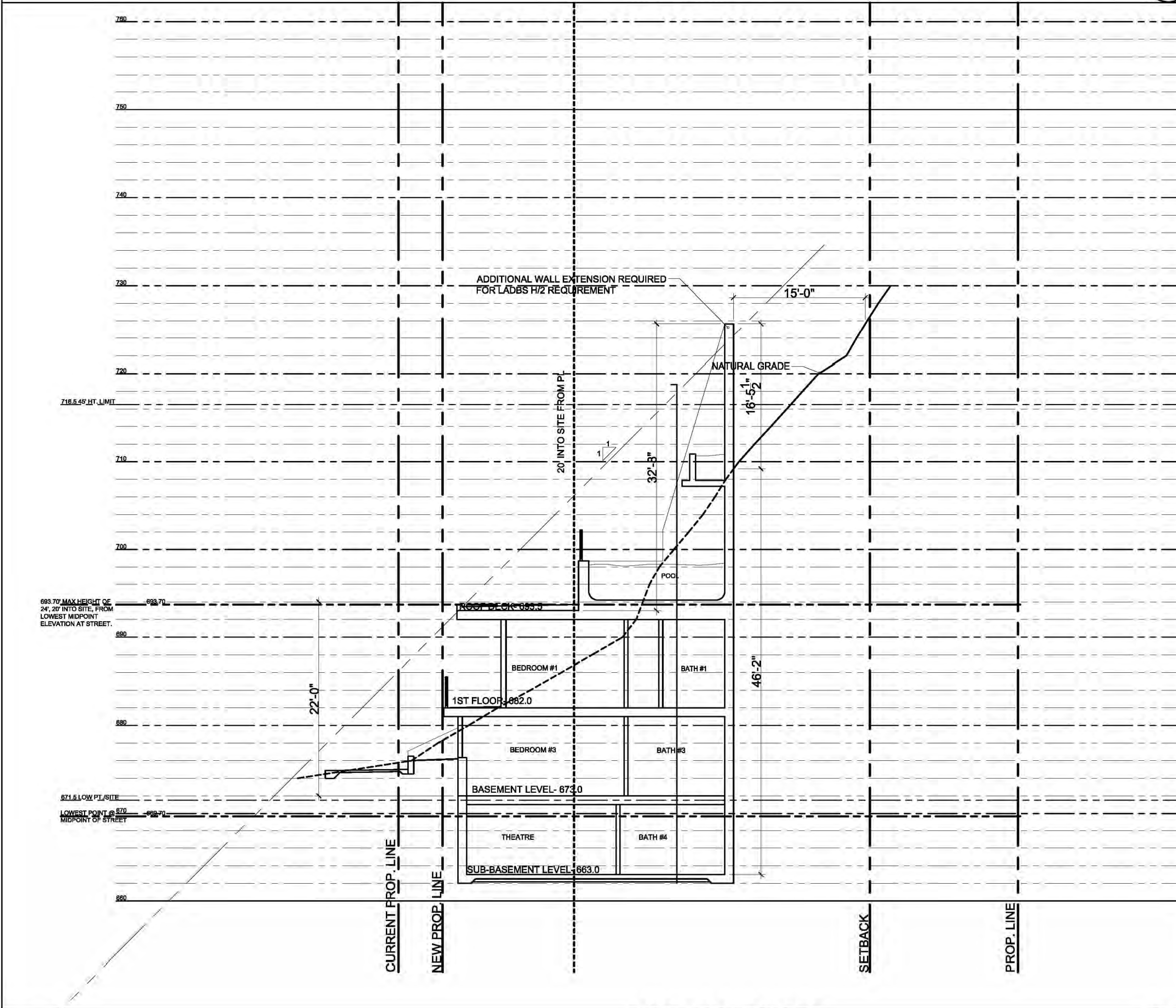


SITE SECTION 1
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SITE SECTION 4
SCALE: 1/16" = 1'-0"

2
A4.2



SITE SECTION 5
SCALE: 1/16" = 1'-0"

4
A4.2

PLANTING LEGEND

Symbol	Botanical Name/Common Name	Quantity	Size	WUCOLS	Remarks
TREES					
	Syagrus romanzoffiana / Queen palm	1	24" box	M	
SHRUBS					
	Lessingia filaginifolia 'Silver carpet' / Silver carpet aster	15	1g	L	
	Pennisetum 'Fairy Tails' / Fountain grass @ 24"	37	5g	L	
VINE					
	Ficus pumila / Creeping fig	19	5g	L	

TOTAL LANDSCAPE AREA: 309 s.f.

GENERAL PLANTING NOTES

- THE CONTRACTOR SHALL MAINTAIN A QUALIFIED SUPERVISOR ON THE SITE AT ALL TIMES DURING CONSTRUCTION THROUGH COMPLETION OF PICK-UP WORK.
- THE CONTRACTOR SHALL VERIFY ALL PLANT MATERIAL QUANTITIES PRIOR TO INSTALLATION. PLANT MATERIAL QUANTITIES LISTED FOR CONVENIENCE OF CONTRACTOR. ACTUAL NUMBER OF SYMBOLS SHALL HAVE PRIORITY OVER QUANTITY DESIGNATED.
- THE CONTRACTOR SHALL FURNISH AND PAY FOR ALL CONTAINER GROWN TREES, SHRUBS AND VINES, INCLUDING SEEDED AND SODDED TURF, HYDROMULCHES AND FLATTED GROUNDCOVERS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE AND PAY FOR: PLANTING OF ALL PLANT MATERIALS. THE SPECIFIED GUARANTEE OF ALL PLANT MATERIALS. THE STAKING AND GUYING OF TREES AND THE CONTINUOUS PROTECTION OF ALL PLANT MATERIALS UPON THEIR ARRIVAL AT THE SITE.
- ALL PLANT MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- ALL BOXED TREES IN PAVING SHALL BE SELECTED AND SPOTTED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE IN CONJUNCTION WITH PAVING CONTRACTOR AND GENERAL CONTRACTOR. GENERAL CONTRACTOR TO ASSUME ALL LIABILITY FOR ACCURATE PLACEMENT OF TREES.
- ALL VINE RUNNERS SHALL BE INSTALLED WITH THE NURSERY STAKES REMOVED AND VINE RUNNERS SHALL BE ESPALIÉRED TO THE ADJACENT WALL OR FENCE.
- ALL SOIL PREPARATION SHALL BE INSTALLED AS PER THE SOIL AGRONOMY REPORT TO BE PROVIDED AND PAID FOR BY THE SUBCONTRACTOR. THE REPORT SHALL BE IMMEDIATELY FORWARDED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
- THE SOIL AMENDMENTS SPECIFIED ARE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL PROVIDE FOR A SOILS AGRONOMY REPORT FROM WALLACE SOILS LABORATORY (310) 615-0116 AND/OR ANY ADDITIONAL SPECIFICATION PROVIDED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF PLANT MATERIALS.
- FOR BIDDING AREA TO BE LANDSCAPED, THE FOLLOWING AMENDMENTS SHALL BE USED UNTIL CONTRACTOR IS PROVIDED WITH SOILS AGRONOMY REPORT. AMENDMENTS SHALL BE UNIFORMLY BROADCAST AND THOROUGHLY INCORPORATED BY MEANS OF A ROTOTILLER OR EQUAL.

AMOUNT PER 1,000 SQUARE FEET

- 4 CU. YDS. NITROGEN STABILIZED ORGANIC AMENDMENT DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST OR CEDAR SAWDUST.
- 15 LBS. SOIL SULFUR
- 15 LBS. 12-12-12 FERTILIZER

- INSTALL 2" (TWO INCHES) SHREDDED BARK MULCH OVER ALL SHRUB AREAS. - CONTRACTOR TO SUBMIT 1/2 CU. FT BAG AS SAMPLE FOR APPROVAL PRIOR TO INSTALLATION.

- THE PLANTING PITS FOR BOXED TREES SHALL BE EXCAVATED TWICE THE DIAMETER OF THE ROOTBALL WITH A MAXIMUM OF THE HEIGHT OF THE ROOTBALL TO THE BOTTOM OF THE PLANTING PIT.

DO NOT OVER EXCAVATE!!!

THE BACKFILL MIX FOR USE AROUND THE ROOTBALL OF ALL TREES AND SHRUBS SHALL CONSIST OF THE FOLLOWING FORMULA:

- 6 PARTS ON-SITE SOIL
- 4 PARTS BY VOLUME ORGANIC AMENDMENT PER ABOVE SOIL PREPARATION
- 1 LB./CU. YD. OF MIX 12-12-12 COMMERCIAL FERTILIZER
- 2 LBS./CU. YD. OF MIX IRON SULFATE
- 10 LBS./CU. YD. OF MIX AGRICULTURAL GYPSUM

- THIRTY (30) DAYS AFTER INSTALLATION ALL LANDSCAPE SHALL BE FERTILIZED WITH BEST FERTILIZER COMPANY 16-6-8 OR APPROVED EQUAL, APPLIED AT THE RATE OF SIX POUNDS (6 LBS.) PER 1,000 SQUARE FEET OR PER SOIL AGRONOMY REPORT. FERTILIZER APPLICATION SHALL BE CONTINUED THEREAFTER AT MONTHLY INTERVALS.

- FOR ALL STAKED TREES, SEE DETAIL 1, SHEET L1.1.

- FOR ALL SHRUBS, SEE DETAIL 2, SHEET L1.1.

- FERTILIZER TABLETS SHALL BE AGRIFORM, 21 GRAM TABLETS (20-10-5) IN QUANTITIES AS FOLLOWS:

- 1 GALLON SHRUBS 1
- 5 GALLON SHRUBS 3
- 15 GALLON SHRUBS 5
- BOXED TREES 1 PER 4" OF BOX SIZE

PLACE TABLETS AT HALF THE DEPTH OF THE ROOTBALL.

- ALL EXISTING LANDSCAPE AREAS DISTURBED DURING THE CONSTRUCTION PROCESS WILL BE RECONDITIONED TO THEIR ORIGINAL STATE AT NO ADDITIONAL COST TO THE OWNER.

- INSTALL 24" DEEP ROOT BARRIER ON ALL TREES WITHIN 4 FEET OF PAVING.

PROJECT DATA

LEGAL DESCRIPTION:	LOT 1, TRACT TR 12204
PIN NUMBER:	MAP SHEET PAGE 593 - GRID A4
APN:	148-SA-175-314
DISTRICT MAP:	5556031004
LOT TYPE:	MB 230-40/41
LOT SIZE:	IRREGULAR
COUNCIL DISTRICT:	5,025.8 SQUARE FEET
CENSUS TRACT:	CD 4- TOM LABONGE
	1942.00
ZONE:	R1-1
ZONING INFORMATION:	HILLSIDE AREA
HILLSIDE GRADING AREA:	YES
STANDARD HILLSIDE LIMITED ZONE:	BASELINE HILLSIDE ORDINANCE
FRONT YARD:	5 FEET MAX. OR PREVAILING
REAR YARD:	15 FEET
SIDE YARDS:	10% LOT WIDTH- 5' MAX. +1 TO 3' MIN.
OFF STREET PARKING:	2 COVERED
OCCUPANCY GROUP:	R-3
NUMBER OF STORIES:	2
HEIGHT LIMIT:	28"
	24" WITHIN 20 FEET OF PROP. LINE
BUILDING HEIGHT:	35'-3" TO TOP OF ROOF AT STAIR
	21'-6" TO TOP OF PARAPET WITHIN 20' OF FRONT PROP. LINE
ALLOWED RESIDENTIAL FLOOR AREA (SLOPE ANALYSIS):	1,218 S.F.
ALLOWED ARE WITH INCREASE FOR TIER 1 GREEN (20%):	1,461 S.F.
PROPOSED RESIDENTIAL FLOOR AREA:	1,458 S.F.*
	FIRST LEVEL NOT COUNTED (BASEMENT)
	ROOF LEVEL NOT COUNTED (STAIR COUNTED BELOW ON SECOND LEVEL)
ALLOWABLE RFA AREA: 1,461 AREA (INSIDE WALLS) 0 S.F. (STAIR COUNTED ON LEVEL BELOW)	
TOTAL LANDSCAPE AREA:	360

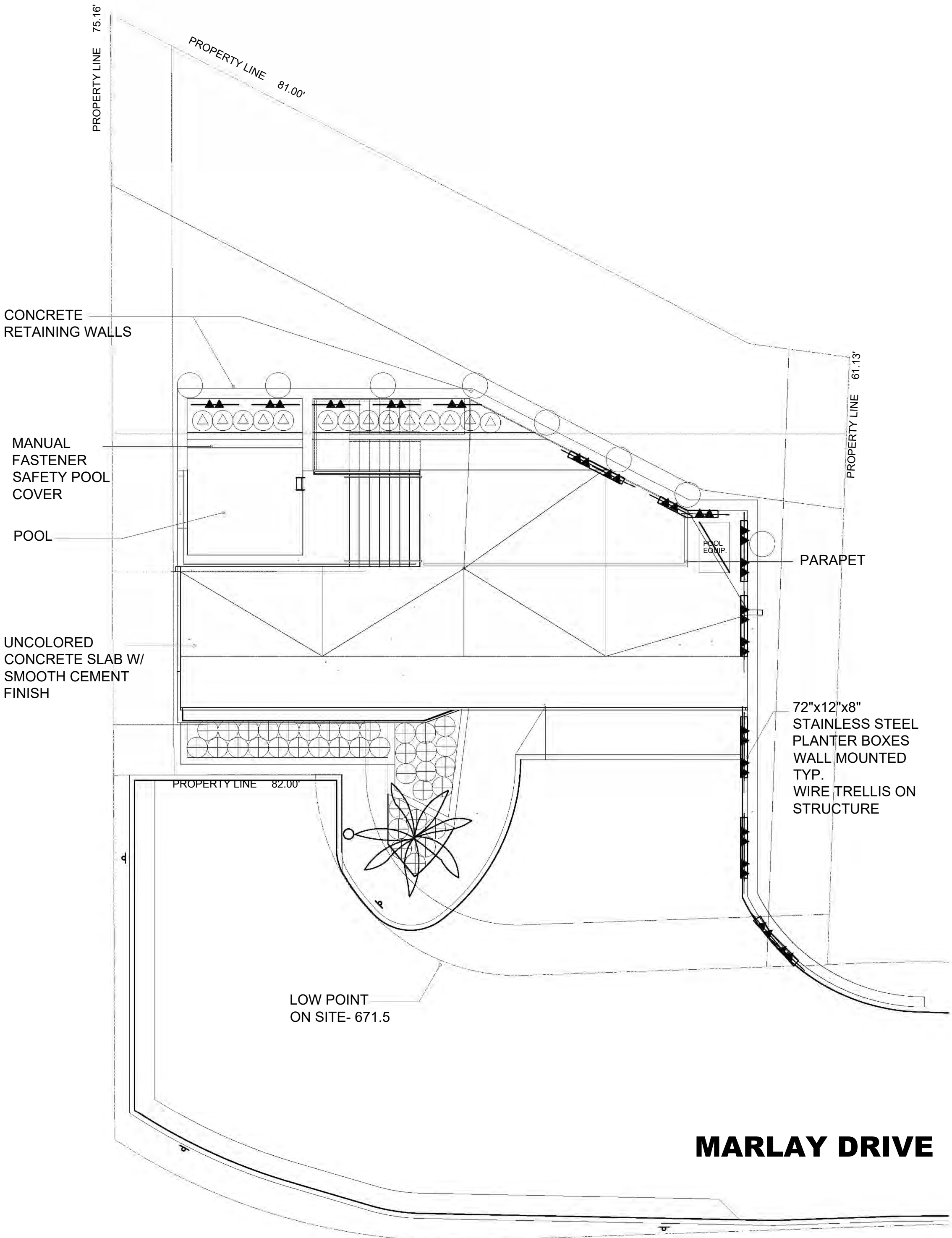
CONSULTANTS

SURVEY/SLOPE MAP	VOORHEIS & VOORHEIS 17049 SUNBURST STREET NORTHridge, CALIFORNIA 91325 818.993.5611
LANDSCAPE ARCHITECT	COURTLAND STUDIO, LLC 505 E. COLORADO BLVD, MEZZ. C PASADENA, CA 91101 T: 818-788-9382 F: 818-788-3217

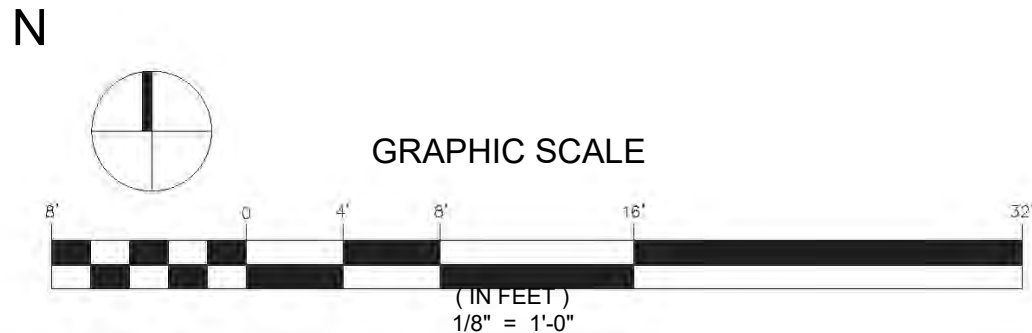
POOL COVER

MANUAL FASTENER POOL SAFETY COVER SHALL BE CUSTOM DESIGNED TO FIT AND IS AVAILABLE FROM:

POOL COVERS, INC.
1-844-360-4100



LANDSCAPE PLAN
SCALE: 1/8" = 1'-0"



LANDSCAPE PLAN
12 JULY 2017

PAUL COLEMAN, ARCHITECT
2912 PYRENEES DRIVE, ALHAMBRA CALIFORNIA 91803
Hillside Residence
1501 Marlay Drive
Los Angeles, California 90069

PAUL@LUCCOL.COM
213 700 2297

P.C. SUBMITTAL 23 June, 2016	PLAN CHECK SUBMITTAL
24 February, 2017	2/20 SUBMITTAL
2 October, 2017	PLAN CHECK RESUBMITTAL

L1.0



OWNER MANUAL/LANDSCAPE CERTIFICATION FORM GRN 12
2011 Los Angeles Green Building Code
(This form is required at final inspection)

OWNER'S MANUAL

- ☐ I hereby certify that an owner's manual, compact disc, or web-based reference complying with the Los Angeles Green Building Code has been provided to the owner and will be placed and stored within the building; **OR**
☐ No new equipment or fixture was installed in the construction of this project.

Name: _____ Relationship to project: _____
Company Name (if applicable): _____ State License No. (if applicable): _____
Signature: _____ Date: _____

LANDSCAPING

Section A: Landscape Designer

- ☒ I certify that I am qualified by the State of California to perform landscape design services; the landscape design and water use calculations for this project were prepared by me or under my supervision; the landscape design and water use calculations comply with the requirements of the City of Los Angeles Irrigation Guidelines, and the Landscape Documentation Package is complete; **OR**
☐ Interior T.L., no landscape work performed (do not need to complete sections B or C below); **OR**
☐ This project is not subject to the City of Los Angeles Irrigation Guidelines.

Name: PAUL LEWIS Relationship to Project: CONSULTANT
Company Name (if applicable): COURTLAND STUDIO, LLC State License # (if applicable): #3620
Signature: _____ Date: OCTOBER 2, 2017

Section B: Landscape Installer

- ☐ I certify that I am qualified by the State of California to provide landscape design services; the landscape project for this project was installed by me or under my supervision; the landscaping for the identified property has been installed in substantial conformance with the approved Landscape Documentation Package and complies with the requirements of the City of Los Angeles Irrigation Guidelines; the Certificate of Completion has been prepared in compliance with the requirements of the City of Los Angeles Irrigation Guidelines and shall be implemented.

Name: _____ Relation to Project: _____
Company Name (if applicable): _____ State License # (if applicable): _____
Signature: _____ Date: _____

Section C: Owner/Representative

- ☐ I certify that I am the property owner or an authorized representative and have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is my responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule.

Signature: _____ Date: _____

Revised 06-30-2011

Page 1 of 2

www.ladbs.org



OWNER MANUAL/LANDSCAPE CERTIFICATION FORM GRN 12
2011 Los Angeles Green Building Code
(This form is required at final inspection)

LANDSCAPE IRRIGATORS

- ☐ I hereby certify that the automatic irrigators are installed in such a way that they do not spray on the building

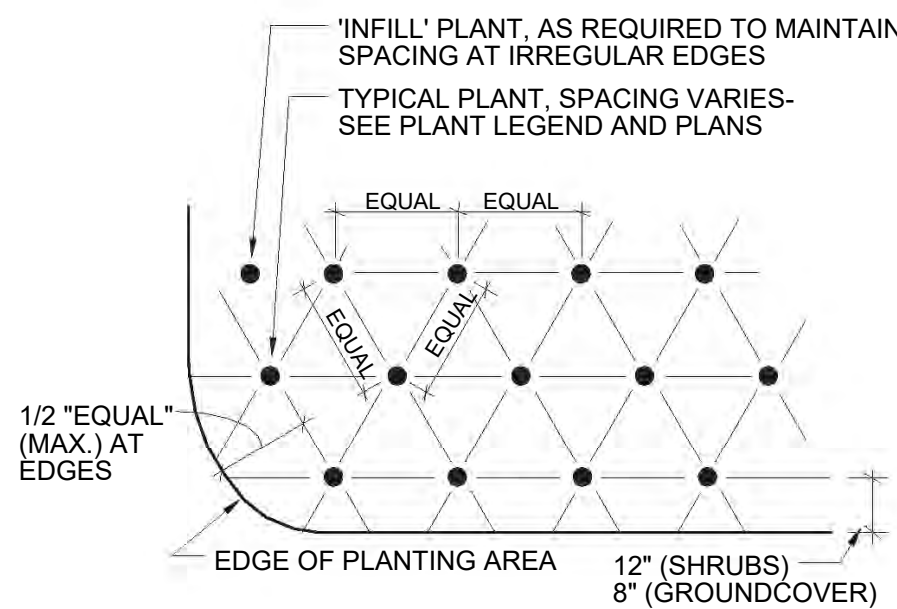
Name: _____ Relation to Project: _____
Company Name (if applicable): _____ State License # (if applicable): _____
Signature: _____ Date: _____

Qualified irrigation service provider: The following individuals are authorized to provide services required by the Irrigation Guidelines in the State of California: Landscape Architects, Landscape Contractors, Landscape Designers and Irrigation Consultants. Personal property owners may design and sign plans for work on any property they own. (Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.3 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code.)

Revised 06-30-2011

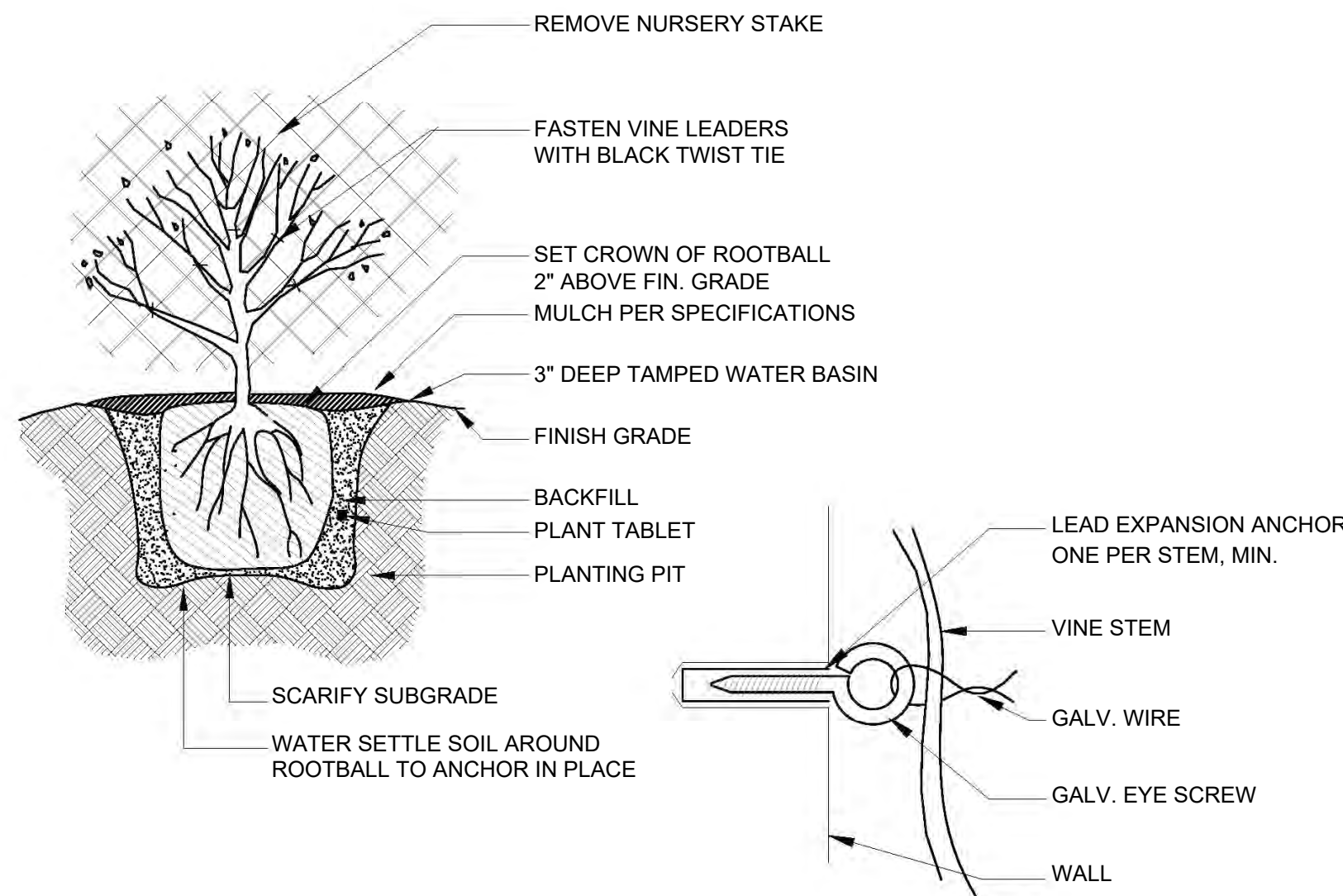
Page 2 of 2

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SHRUB AND GROUNDCOVER SPACING

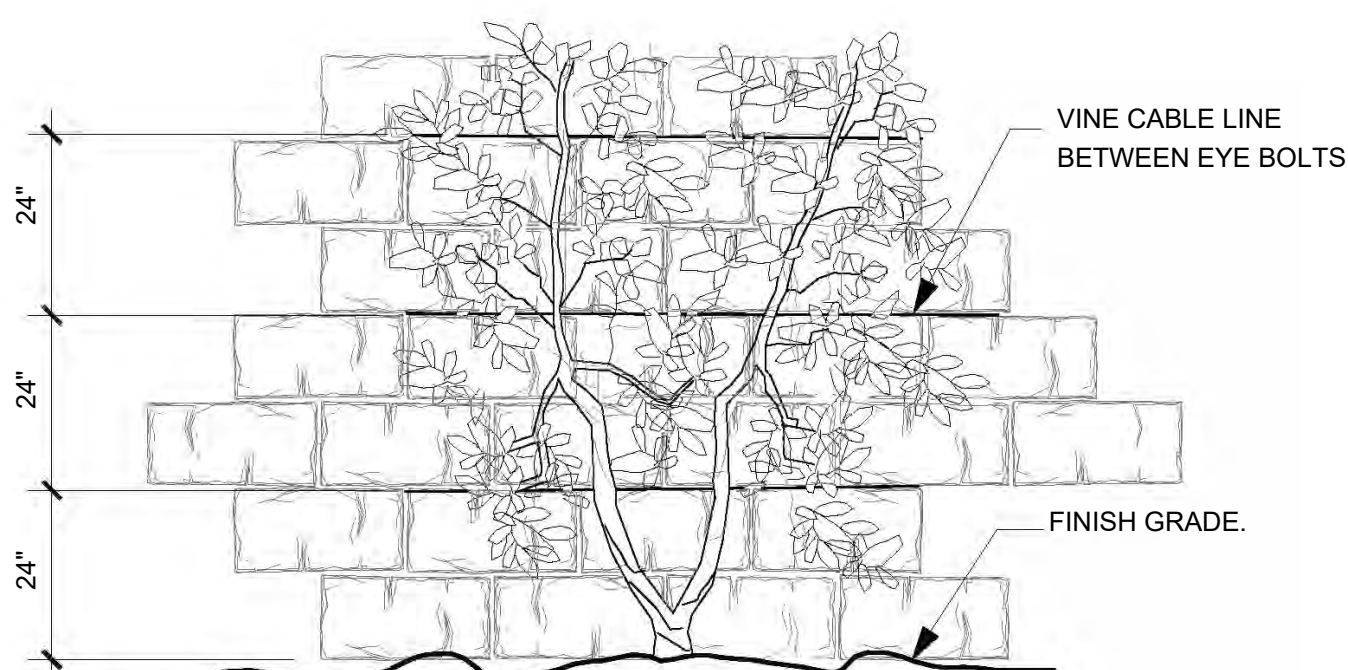
SCALE: N.T.S.



SEE SPECIFICATIONS FOR FURTHER INFORMATION

VINE ON WALL

SCALE: N.T.S.

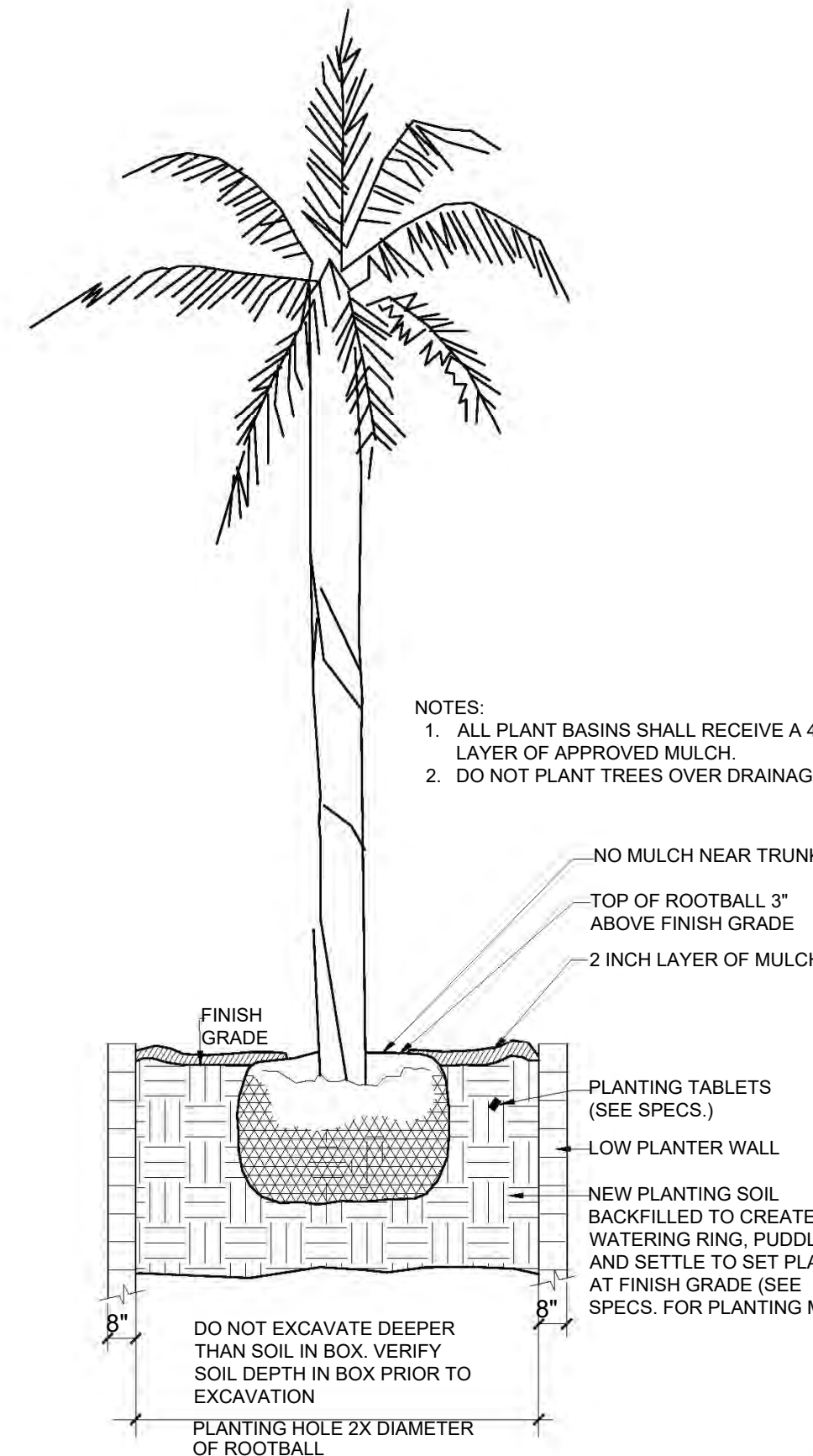


NOTES:

- A. SET VINE AS CLOSE TO SURFACE OF PIT AS POSSIBLE.
B. ALL VINES SHALL BE TIED TO SUPPORTING WALLS AND FENCING. CONTRACTOR SHALL SECURE VINES TO WALLS AND FENCES WITH PLASTIC NURSERY TAPE.
C. ESPALIER VINE ONTO WALL/FENCE, TYPICAL.
D. VINE CABLE SHALL BE STRUNG THROUGH EYE BOLTS AND CRIPED ONTO ITSELF.

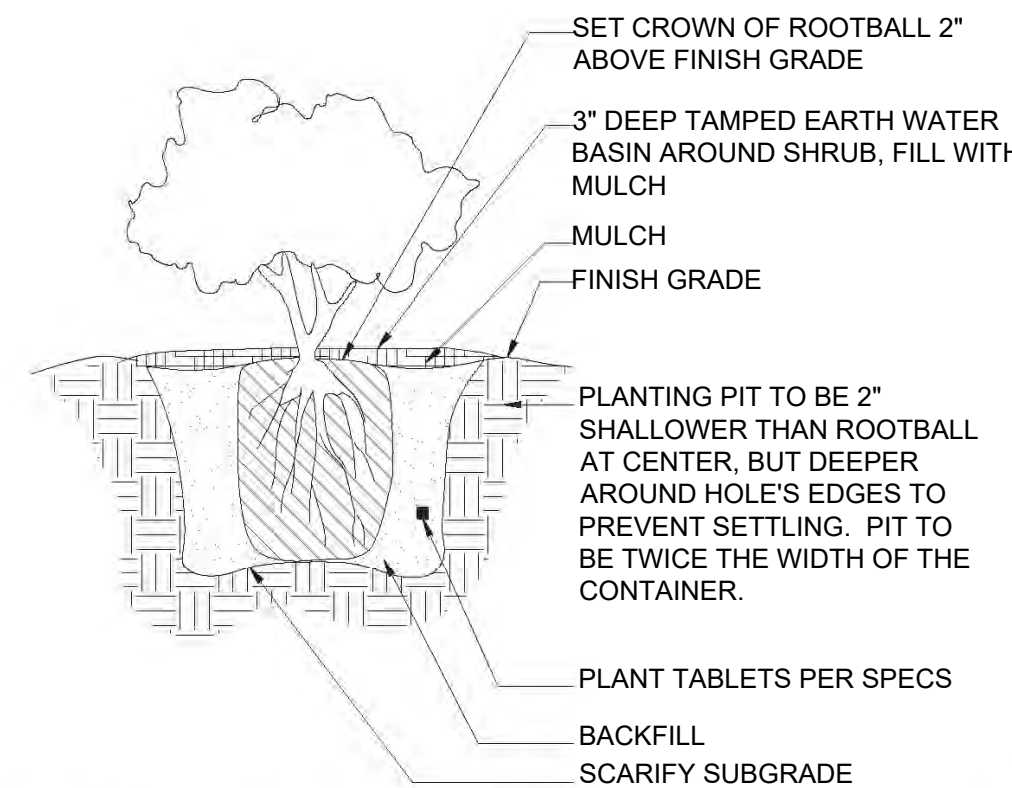
VINE ON WALL - ELEVATION

SCALE: N.T.S.



CMU PLANTER - PALMS

SCALE: N.T.S.



SHRUB PLANTING

SCALE: N.T.S.



PAUL@LUCCOL.COM

213 700 2297

ALHAMBRA CALIFORNIA 91803

PAUL COLEMAN, ARCHITECT

12 JULY 2017

LANDSCAPE FORMS

Hillside Residence

1501 Marlay Drive

Los Angeles, California 90069

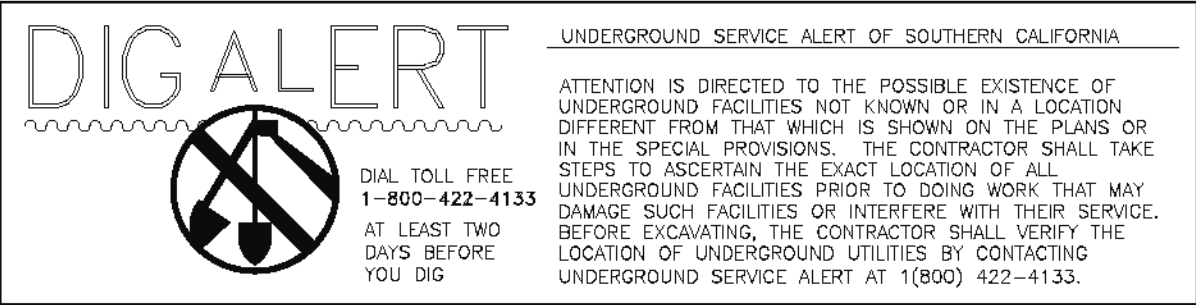
PLAN CHECK SUBMITTAL	23 June, 2016
2ND SUBMITTAL	24 February, 2017
PLAN CHECK RESUBMITTAL	2 October, 2017

1. ALL MAINLINE PIPING AND CONTROL WIRES UNDER PAVING SHALL BE INSTALLED IN SEPARATE SLEEVES. ALL SLEEVING SIZES SHALL BE AS INDICATED ON THE PLANS. ALL SLEEVES SHALL BE AT A DEPTH OF 18" MINIMUM BELOW SUB GRADE.
2. ALL LATERAL LINE PIPING UNDER PAVING SHALL BE PVC SCHEDULE 40 AND SHALL BE INSTALLED PRIOR TO PAVING. THE PIPING SHALL BE A MINIMUM OF 12" BELOW SUB GRADE.
3. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF THE REJECTION.
4. THE 120 VAC ELECTRICAL POWER SOURCE AT THE CONTROLLER LOCATION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. MAKE THE FINAL CONNECTION FROM THE SOURCE TO THE CONTROLLER OR AS ALLOWED BY LOCAL CODES.
5. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE SPECIFIED OR DIRECTED.
6. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, OR OTHER SIMILAR APPURTENANCES SHOWN IN PAVED AREAS IS FOR DESIGN AND GRAPHIC CLARIFICATION AND SHALL BE INSTALLED IN IRRIGATED PLANTING AREAS. WHEREVER POSSIBLE INSTALL ALL VALVES AND BOXES IN SHRUB AREAS AND NOT IN TURF AREAS.
7. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, STRUCTURES AND UTILITIES OF THE SITE. COORDINATE WORK WITH OTHER TRADES AND CONTRACTORS FOR THE LOCATION AND INSTALLATION OF ALL IRRIGATION EQUIPMENT. REPAIR AND/OR REPLACE ALL ITEMS DAMAGED BY WORK PERFORMED.
8. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS THAT THE FIELD CONDITIONS VARY FROM THE DRAWINGS AND THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT HAVE NOT BEEN INDICATED ON THE ENGINEERING. SUCH ITEMS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS IN THE EVENT THAT THIS NOTIFICATION IS NOT HEEDED.
9. FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR THEIR OPTIMUM OPERATION.
10. THE IRRIGATION SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE OF 7.5 PSI AND A MAXIMUM FLOW DEMAND OF 10.8 GPM. VERIFY WATER PRESSURES PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCES BETWEEN THE WATER PRESSURE SHOWN ON THE PLANS AND THE PRESSURE READING IN THE FIELD TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
11. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED HEREIN SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
12. REFER TO THE SPECIFICATIONS FOR ADDITIONAL DETAILED INFORMATION.

1. THE CONTRACTOR SHALL PROVIDE IN HIS BID FOR A ONE-YEAR (1-YEAR) MAINTENANCE PERIOD.
2. THE CONTRACTOR SHALL INSTALL ALL MAINLINES IN LANDSCAPE AREAS AND NOT UNDER PAVING UNLESS IT IS A NECESSARY CROSSING OF A STREET OR WALK. THE MAINLINE SHALL BE INSTALLED AT THE DEPTH NOTED IN THE IRRIGATION DETAILS AND AT A HORIZONTAL DISTANCE OF 12'-24" FROM THE EDGE OF ALL CURBS OR WALKS. ALL MAINLINE AND VALVES SHALL BE LOCATED BEHIND THE PROPERTY LINE.

SYMBOL	MFG.	MODEL NUMBER/ DESCRIPTION	REMARKS
	HUNTER	ICZ-101G-LS-AS-ADJ. 1" DRIP REMOTE CONTROL VALVE.	SEE DETAIL A
	FIBCO	HOSE BIBB 825-YA. 1" REDUCED PRESSURE BACKFLOW DEVICE	SEE DETAIL C
	FIBCO	APPROVED BRONZE 150 PSI RATED BALL VALVE; LINE SIZE IN VALVE BOX.	SEE DETAIL D
	HUNTER	XC-400, 4 STN. WALL MOUNT CONTROLLER W-SOLAR SYNC SENSOR; 120 VAC POWER TO THE CONTROLLER LOCATION BY OTHERS. 3/4" CONDUIT TO ROOF FROM CONTROLLER FOR CONTROL VALVE & WEATHER BASED SOLAR SYNC CONTROL MODULE.	SEE DETAIL E
	BAILEY	#72 BASKET STRAINER, 2"	SEE DETAIL F
	APPROVED	METER	
	RAINBIRD	AR VALVE KIT; 1" AIR/ VACUUM RELIEF VALVE IN VALVE BOX.	SEE DETAIL G
	NETAFIM	TL050-MFV AUTOMATIC FLUSH VALVE IN VALVE BOX.	SEE DETAIL G
	RAINBIRD	XFS-09-12-xxx DRIPLINE W/ COPPER SHIELD EMITTERS; EMITTERS @12" O.C. & 12" ROW SPACING.	SEE DETAIL H
	APPROVED	PVC SCH. 315 MAINLINE; SIZE 2" AND LARGER	SEE DETAIL I
	APPROVED	PVC SCH. 40 MAINLINE; SIZE 1 1/2" AND SMALLER	SEE DETAIL I
	APPROVED	PVC SCH. 40 LATERAL LINE; SEE PLAN FOR SIZE	SEE DETAIL I,
	APPROVED	PVC SCH.40 MAINLINE SLEEVE; 2 AT EACH LOCATION 2X THE DIA. OF PIPE TO BE SLEEVED	SEE NOTES 1, 2
	APPROVED	MAINLINE. USE TYPE 100 COPPER FOR SIZES 1-1/2" AND SMALLER UNDER CONCRETE DECK (IN GARAGE) AND AT DECK PENETRATIONS, AND BETWEEN WATER MAIN AND BACKFLOW. SIZE SLOVED	SEE DETAIL I

SYMBOL	DESCRIPTION
CST	COOL SEASON TURF
WST	WARM SEASON TURF
HWUS	HIGH WATER USING SHRUB/TREE
MWUS	MEDIUM WATER USING SHRUB/TREE
LWUS	LOW WATER USING SHRUB/TREE
VLWUS	VERY LOW WATER USING SHRUB/TREE



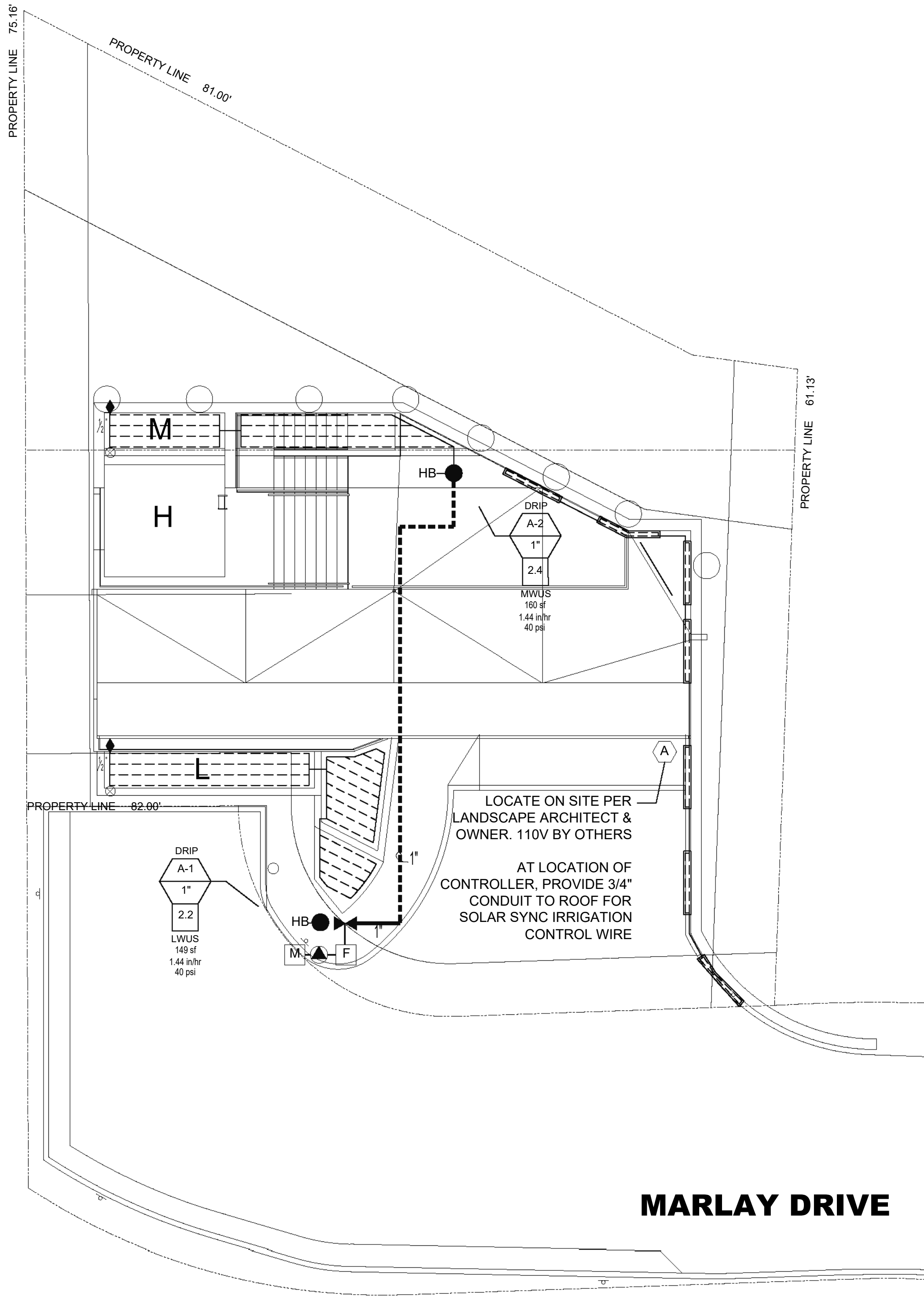
Enter value in Pale Blue Cells		
Tan Cells Show Results		
Messages and Warnings		
Click on the blue cell on right to Pick City Name	Los Angeles	Name of City
ET _c of City from Appendix A	50.10	ET _c (inches/year)
Enter total landscape including SLA	430.00	LA (ft ²)
Enter Special Landscape Area	0.00	SLA (ft ²)
Results:		
MAWA = (ET _c) x (0.62) x [(0.7 x LA)-(0.3 x SLA)]	9,349.06	Gallons
	1,249.79	Cubic Feet
	12.50	HCF
	0.03	Acre-feet
	0.01	Millions of Gallons

Results:		
MAWA=(ET _o - Eppt) x (0.62) x [(0.7 x LA)+(0.3 x SLA)]		- Gallons
		- Cubic Feet
		- HCF
		- Acre-feet
		- Millions of Gallons

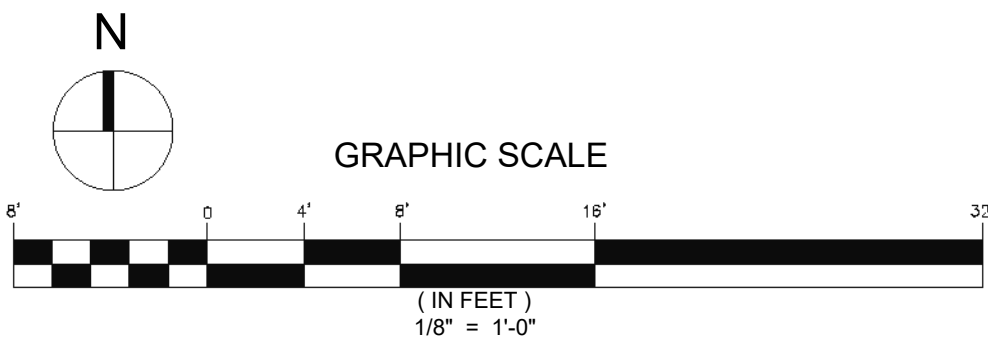
Enter Irrigation Efficiency (equal to or greater than 0.71)	0.80	
Irrigation Efficiency Default Value	0.71	

	Plant Water Use Type (s) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (H ²)	PF x HA (ft ³)
Hydrozone		0.20	148	30
2	M	0.40	160	64
3	H	1.00	121	121
				0
				0
				0
				0
				0
				0
				0
				0
				215
	SLA		0	0
		Sum	430	

MAWA =	9,349	ETWU=	8,340	Gallons	ETWU complies with MAWA
			1,115	Cubic Feet	
			11	HCF	
			0.03	Acre-feet	
			0.01	Millions of Gallons	



SITE PLAN
SCALE: 1/8" = 1'-0"



A DRIP REMOTE CONTROL VALVE	B NOT USED	C BALL VALVE	D WALL MOUNT CONTROLLER
E REDUCED PRESSURE BACKFLOW	F BASKET STRAINER	G FLUSH & AIR/VACUUM RELIEF VALVE	H DRIP TUBING INSTALLATION
I PIPING & WIRING			

L2.1

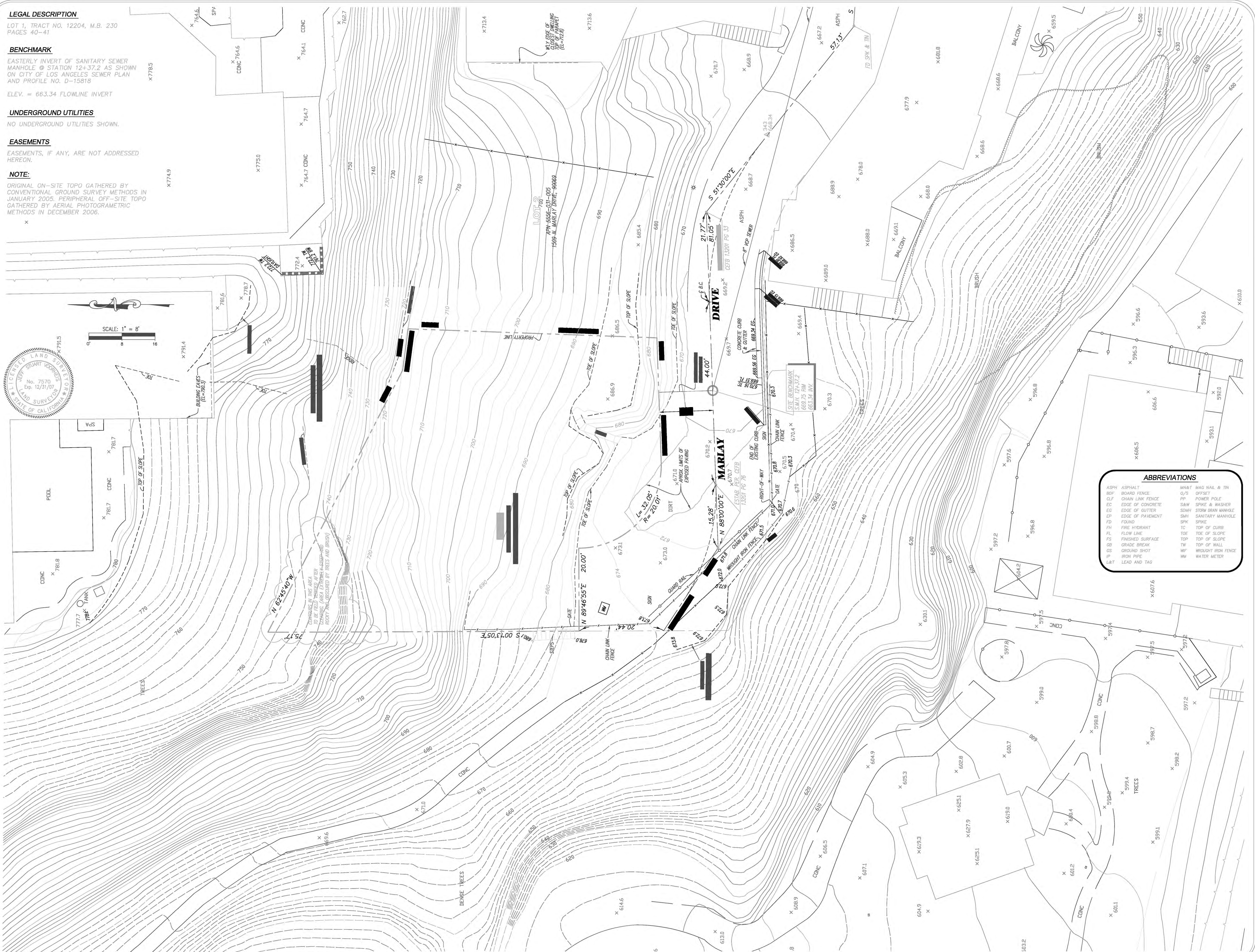
LOT 1, TRACT NO. 12204, M.B. 230
PAGES 40-41

EASTERLY INVERT OF SANITARY SEWER
MANHOLE @ STATION 12+37.2 AS SHOWN
ON CITY OF LOS ANGELES SEWER PLAN
AND PROFILE NO. D-15818

UNDERGROUND UTILITIES

EASEMENTS, IF ANY, ARE NOT ADDRESSED
HEREON.

ORIGINAL ON-SITE TOPO GATHERED BY
CONVENTIONAL GROUND SURVEY METHODS IN
JANUARY 2005. PERIPHERAL OFF-SITE TOPO
GATHERED BY AERIAL PHOTOGRAMETRIC
METHODS IN DECEMBER 2006.



<u>ABBREVIATIONS</u>			
ASPH	ASPHALT	MN&T	MAG NAIL & TIN
BDF	BOARD FENCE	O/S	OFFSET
CLF	CHAIN LINK FENCE	PT	POST
EC	EDGE OF CONCRETE	SAW	SAW & WASH
EG	EDGE OF GUTTER	SDMH	SPRINK DRIVEN MANHOLE
EP	EDGE OF PAVEMENT	SMH	SANITARY MANHOLE
FD	FOUND	SPK	SPRINK
FL	FIRE HYDRANT	TC	TOP OF CURB
FL	FLOW LINE	TOE	TOE OF SLOPE
FS	FINISHED SURFACE	TOP	TOP OF SLOPE
GB	GRADE BREAK	TW	TOP OF WALL
GS	GROUND SHOT	WF	WROUGHT IRON FENCE
IR	IRON PIPE	WM	WATER METER
L&T	LEAD AND TAG		

Client:

BOB STECHER

100 SOUTH POINT DRIVE

Phone/Fax: (305) 531-6151

TOPOGRAPHIC SURVEY

1501 NORTH MARLAY DRIVE

1501 NORTH MARLAY DRIVE

DATE: 12/13/06 JOB NO. 0501D

VOORHEIS & VOORHEIS, INC.
Professional Land Surveyors Since 1974

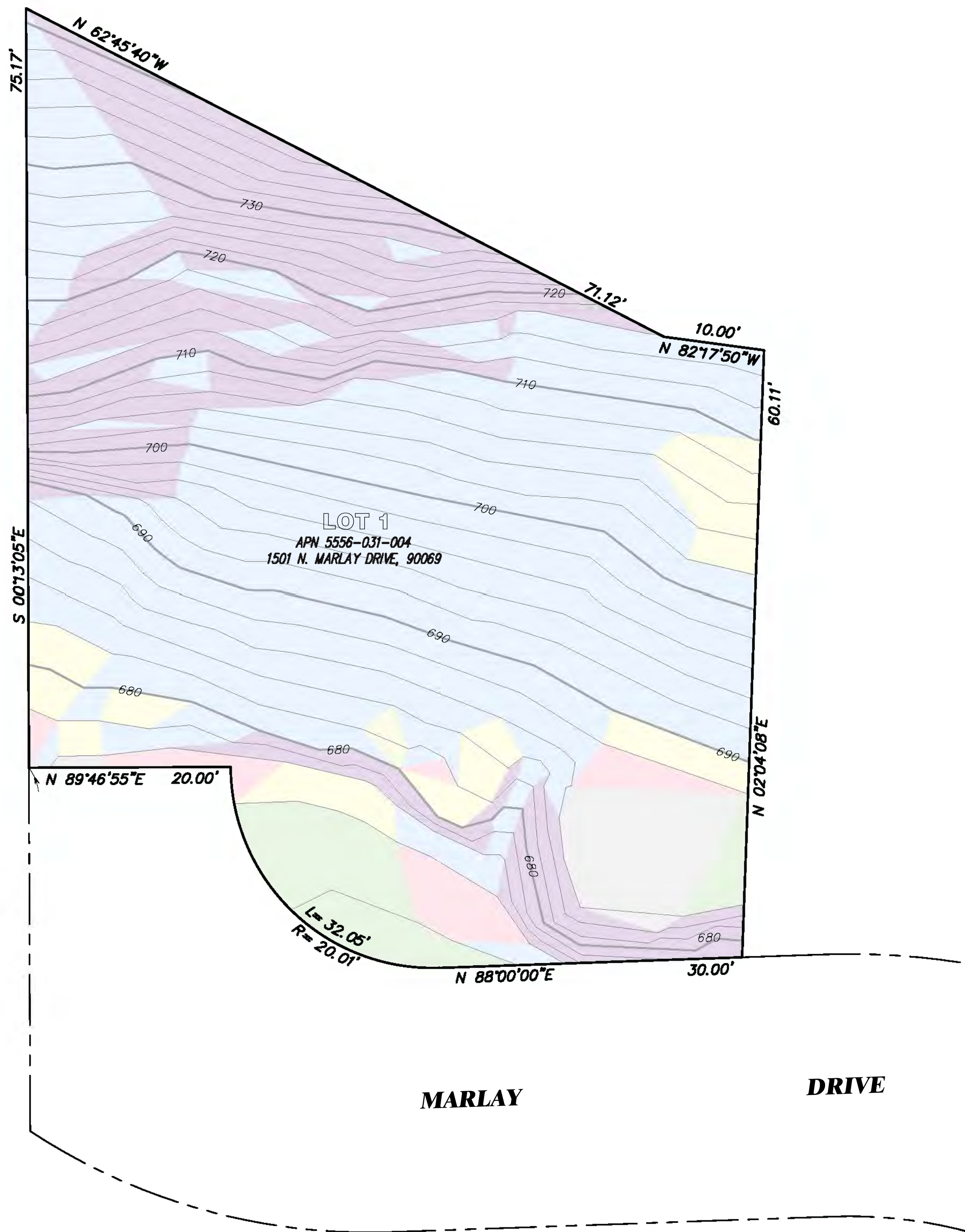
Professional Land Surveyors Since 1974

Phone: (818)-993-5611 Fax: (818)-993-7038

mail@voorheisandvoorheis.com

SHEET
OF

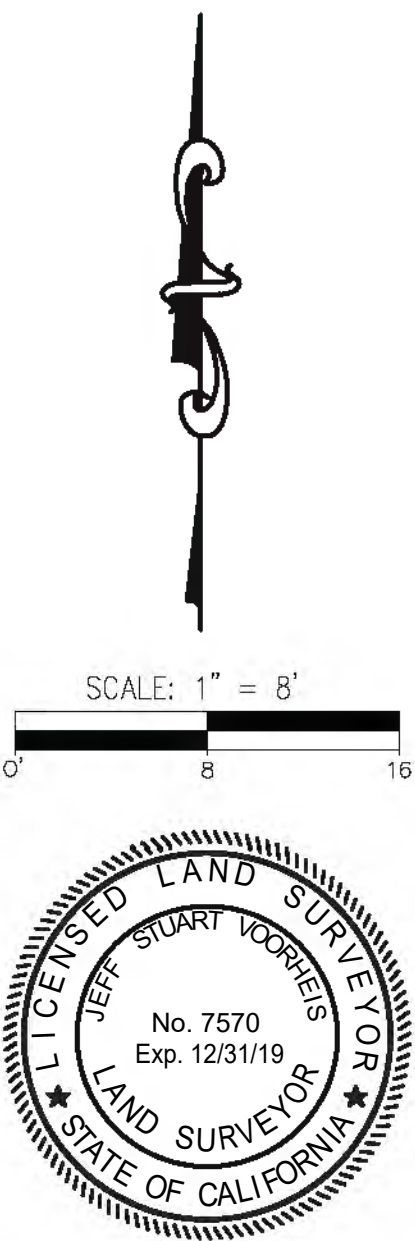
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Worksheet 1. Hillside Area Maximum Residential Floor Area Formula					
COLOR	(A) Slope Bands (%)	(B) Lot Area within each slope band (sq-ft). From survey/contour map.	(C) FAR from the Zone circled in Table 1 or 2		(D) _{WV} Max. Residential Floor Area allowed within each slope band
	0-14.99	197	X 0.45	=	88.7
	15-29.99	240	X 0.45	=	108.0
	30-44.99	151	X 0.40	=	60.4
	45-59.99	361	X 0.35	=	126.4
	60-99.99	2742	X 0.30	=	822.6
	100 +	1317	X 0.00	=	0.0
	Maximum Residential Floor Area =				1,206.1

Table 1 Single - Family Zone Hillside Area Residential Floor Area Ratios (RFAR)								
Slope Bands (%)	R1	RS	RE9	RE11	RE15	RE20	RE40	RA
0-14.99	0.45	0.45	0.40	0.40	0.35	0.35	0.35	0.25
15-29.99	0.45	0.40	0.35	0.35	0.30	0.30	0.30	0.20
30-44.99	0.40	0.35	0.30	0.30	0.25	0.25	0.25	0.15
45-59.99	0.35	0.30	0.25	0.25	0.20	0.20	0.20	0.10
60-99.99	0.30	0.25	0.20	0.20	0.15	0.15	0.15	0.05
100 +	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 2 Single - Family Zone Hillside Area Residential Floor Area Ratios (RFAR)				
Slope Bands (%)	R1H1	R1H2	R1H3	R1H4
0-14.99	0.65	0.55	0.45	0.40
15-29.99	0.60	0.50	0.45	0.35
30-44.99	0.55	0.45	0.40	0.30
45-59.99	0.50	0.40	0.35	0.25
60-99.99	0.45	0.35	0.30	0.20
100 +	0.00	0.00	0.00	0.00



LEGAL DESCRIPTION

LOT 1
TRACT NO. 12204
M.B. 230 PAGES 40-41

APN 5556-031-004

ZONING

R1-1 (LOW II RESIDENTIAL)
(HILLSIDE AREA)

AREA

5,008 SQ. FT.
0.115 ACRES

REVISIONS:		DESCRIPTION
DATE	BY	
3/28/18	M.E.	REVISED SLOPE BAND PER ZI NO.2462 3/17/17 (NO FIELD OBSERVATION WAS PERFORMED)

Client:
ROBERT STECHER
C/O SARA SCHUSTEROW
9220 KINGLET DRIVE
LOS ANGELES, CA 90069
Phone:

SLOPE ANALYSIS MAP
1501 NORTH MARLAY DRIVE
WEST HOLLYWOOD, CA 90069
DATE: 05/09/13 JOB NO. 0501D

VOORHEIS & VOORHEIS, INC.
PROFESSIONAL LAND SURVEYORS SINCE 1974
17049 Sunburst Street, Northridge, CA 91325
Phone: (818) 993-5611
mail@SurveyLA.com

Attachment B.
Structural Focus Report (April 22, 2025)



April 22, 2025

Jonathan Riker, Esq.
Venable LLP
2049 Century Park East, Suite 2300
Los Angeles, CA 90067

**Reference: ASSESSMENT REPORT & MITIGATION RECOMMENDATIONS
POTENTIAL PHYSICAL IMPACTS TO STAHL HOUSE DURING CONSTRUCTION
1501 MARLAY DRIVE
LOS ANGELES, CALIFORNIA
[SF PROJECT NO. 24377]**

Dear Jonathan,

Structural Focus has completed our review of potential physical impacts to the Stahl House, an architectural icon and nationally recognized historic resource, caused by the construction of the proposed single family home at 1501 Marlay Drive in Los Angeles, California. The purpose of this letter report is to convey our understanding of the risk of structural damage to the Stahl House from the proposed adjacent construction project, with particular respect to ground vibrations generated during the construction process, and to provide recommendations for updates to the design and construction methods to help mitigate those risks.

We have based this report on our review of the following documents:

- Architectural drawings, Hillside Residence, 1501 Marlay Drive, Planning Submittal, prepared by Paul Coleman, Architect, dated March 29, 2019;
- Historic Resources Assessment Report, 1501 N. Marlay Drive, prepared for EcoTierra Consulting by South Environmental LLC, dated November, 2022;
- Initial Study (redline), 1501 Marlay Drive Project, prepared for the City of Los Angeles Department of City Planning by EcoTierra Consulting, dated 2023;
- Geologic and Soils Engineering Exploration, 1501 Marlay Drive, prepared for Mr. Coleman by Schick Geotechnical, Inc., dated April 4, 2014;
- Addendum Geologic and Soils Engineering Exploration, 1501 Marlay Drive, prepared by Schick Geotechnical, Inc., dated December 17, 2018;
- Addendum Geologic and Soils Engineering Exploration, Revised Retaining Wall Analyses and Kinematic Analysis, 1501 Marlay Drive, prepared by Schick Geotechnical, Inc., dated June 19, 2020;
- Various Geology and Soils Report Approval Letters sent to Sara Schusterow, signed by Edmond Lee and Ying Liu, Los Angeles Department of Building and Safety, dated June 17, 2016, September 13, 2016, April 24, 2019, and July 22, 2020.

This report is also based on our discussions with Wayne Schick, Certified Engineering Geologist in the State of California, and Robert Nigbor, PhD., a licensed Professional Civil Engineer in the State of California. Mr. Schick is the author of the geologic and soils engineering reports for the project, and Dr. Nigbor is a consulting earthquake engineer specializing in vibration monitoring and applied geophysics and is a retired Research Engineer at the University of California Los Angeles Samueli School of Engineering.

Proposed 1501 Marlay Drive Project

The proposed single-family home at 1501 Marlay Drive is located on a steep hillside in the Hollywood Hills West neighborhood of Los Angeles. The single-story plus basement and sub-basement home encompasses 3,100 square feet and is approximately 57 feet 6 inches by 33 feet in plan, and approximately 28 feet in above-grade height. The home has a subtle, modern design that responds to the physical characteristics and constraints of

its site and neighbors. As the design is in the planning phase, a structural design has not been fully developed. The design concept in the architectural planning submittal depicts a glass-fronted, low-profile, reinforced concrete slab and shear wall structure embedded into the hillside, supported on conventional shallow foundations. The home is set in front of a tall, reinforced concrete retaining wall designed to be integral with the structure of the home. The retaining wall wraps around the sides of the home, achieving a maximum height of 57 feet 10 inches from the lowest point on the site, and is supported on a series of reinforced concrete soldier piles extending a minimum of 10 feet into bedrock below the lowest point of the future excavation, as required by the geologic and soils reports for the project. A structural engineer will need to design a building structure and retaining wall system consistent with the recommended criteria in the approved geologic and soils reports for the project.

The Stahl House

Located directly north of the Marlay property at 1635 Woods Drive, the Stahl House is widely recognized as a superior example of the International Style of architecture and is among the most iconic residences in Southern California. Designed by architect Pierre Konig and built between 1959 and 1960 as part of *Arts & Architecture* magazine's Case Study House Program, the Stahl House gained status as a Los Angeles Historic-Cultural Monument in 1999. In 2013, the Stahl House was listed on the National Register of Historic Places.

The Stahl House is a single-story, steel-frame structure set on an L-shaped concrete pad with a flat roof and floor-to-ceiling glass walls, shaded by the overhanging roof deck at the rear of the home. A swimming pool and patio are situated at the rear of the home in the space bounded by the orthogonal wings to the north and east. The building foundation consists of a set of reinforced concrete piles into bedrock connected at the top by reinforced concrete grade beams that support the reinforced concrete slab floor. Each concrete pile location supports a steel column, which in turn provide support for the wide flange steel beams at the roof level. The roof is constructed of steel decking spanning between the steel beams.

The Stahl House is positioned at the edge of a sharply descending south-facing slope, composed of moderately weathered granite bedrock as described in the Schick report. 1501 Marlay is at the base of the slope. The slope ranges in vertical height from 10 to 25 feet and has a gradient from 1:1 to 0.8:1.

Potential Impacts of Construction Vibration

Ground vibrations are generated during in-ground construction activities such as drilling, excavation, and compaction, as well as by equipment traveling on the ground surface. Traveling generally as surface waves, ground vibrations attenuate, or lose intensity, as they move through the earth away from the source. Varying types of soil and rock attenuate vibrations at different rates. Vibration can be a nuisance to occupants, and may potentially cause damage to structures, their finishes, or their contents.

Potential Direct Vibration Impacts

Vibration has two primary characteristics – the frequency and the amplitude. Amplitude is typically defined by peak particle velocity (PPV) and is measured in inches per second (in/sec). Frequency is measured in Hz, or cycles per second. Ground vibrations excite structures, and the structure typically amplifies the ground vibration, generating higher accelerations, velocities and displacements within the structure than those measured at ground level. The movement may deform the structure as the roof and floors potentially move at different rates, or even in different directions, relative to each other and to the ground. This deformation generates internal structural stresses which may exceed the strength of the material the structure is made of, causing, for example, stretching, twisting, and warping of steel or cracking or spalling of concrete. At high enough stress, the material, and hence the structure, will not be able to return to its initial position or shape, and the damage is permanent. This may cause a structure to no longer meet functional or aesthetic requirements. Movement and deformation can also cause a structure to become unstable, presenting an immediate hazard to occupants.

Generally, the greater the amplitude and the lower the frequency, the greater the potential for damage to the structure. Fortunately, construction vibrations are generally lower in amplitude and higher in frequency than those vibrations prone to cause damage to buildings.

In 2006, the Federal Transit Administration published common values of PPV for common construction activities at a distance of 25 feet away from the source. Selected activities and associated amplitude values are presented in Table 1, below.

Table 1. PPV Levels at 25 ft Caused by Common Construction Activities

Activity	PPV @ 25 ft (in/sec)
Hammer Pile Driving	1.518
Vibratory Compaction	.210
Large Bulldozer	.089
Caisson / Auger / Core Drilling	.089
Jackhammer	.035
Loaded Trucks	.076

Information from Vibration Source Levels for Construction Equipment, Federal Transit Administration. 2006, Transit noise and vibration impact assessment. FTA-VA-90-1003-06. Office of Planning and Environment, Washington, D.C., Prepared by Harris Miller & Hanson, Inc., Burlington, MA.

The frequency of construction vibrations are generally higher than 15 Hz. Structures are most susceptible to frequencies between 4 and 12 Hz, the zone of natural horizontal resonance of most structures. Damage has been observed in structures that were exposed to vibration amplitudes above 1.3 in/sec when frequencies were 2 to 5 Hz, and above 4 in/sec when frequencies were 60 to 450 Hz. Some examples of typical frequency ranges for various construction activities are shown in the Table 1.

Table 2. Typical Frequency Ranges of Common Construction Activities

Activity	Frequency Range
Demolition	15-30 Hz
Hammer Pile Driving	20-40 Hz
Vibratory Compaction	25-45 Hz
Bulldozer	5 – 30 Hz
Auger / Core Drilling	20 – 200 Hz (Dominant Freq. = 31.5 Hz)

The most common type of damage from vibrations related to construction, and the first type initiated, is cracking of rigid, non-structural wall finishes like drywall, plaster or stucco that form during shaking of the structure. This kind of direct damage is generally not a safety concern or a threat to the integrity of the structure, and most structures will reliably return to their original position.

Vibration generated by the proposed downslope construction will travel into the deep foundations of the Stahl House and up into the superstructure, where the energy will dissipate. The steel frame of the building is relatively flexible, with a relatively low natural frequency for a residential structure. Large enough vibrations at lower frequency could generate inertial acceleration of the roof mass, and related movement will cause stress concentrations to develop near the welded beam-column connections. Realistically, if incoming vibrations from construction are well-controlled at the source, the induced vibrations will not generate acceleration and structural displacement on the order required to exceed the elastic response of steel or cause structural damage.

Of non-structural concern are the rigid, plate glass panels bounded by the steel frame. Vibration and displacement of the frame has the potential to create corresponding vibration in the plate glass, as well as stresses in the glass that could lead to cracking. The details of this system and the magnitude of movement of the structure will dictate the ability of the system to accommodate any vibration without incident. It is important to note that the steel frame/plate glass system is evidently able to withstand vibrations caused by high wind events, as well as expansion and contraction of the steel roof and frame under the day/night heat cycle, suggesting the assembly will be able to accommodate vibrations from nearby construction. Nevertheless, it is always wise to limit the amplitude of vibrations in glass, and it may be appropriate to install convenient, temporary adhesive attachments that dampen vibration and protect the glass from damage or consider other protective solutions.

The most significant direct source of vibration from the proposed construction at 1501 Marlay will be the drilling of the soldier piles supporting the excavation and retaining/impact wall at the rear of the property. The method and speed of drilling affects the amplitude and frequency of vibration, as does the nature of the underlying material. (The granite bedrock forming the hillside that separates the Stahl House from 1501 Marlay will readily transmit vibration energy, as hard rock generally exhibits low vibration attenuation and maintains the higher frequency content.)

Potential Indirect Vibration Impacts

Serious, indirect damage can develop when construction vibration induces settling of soils, possibly leading to uneven displacement of foundations or slabs, generating stress and deformation in the structural framing system above. This type of damage may compromise the structure and require repair.

Per the geologic engineer, the massive, moderately hard to hard underlying bedrock at the site is not susceptible to settlement due to construction vibration. Since the Stahl House foundations are piles extending into this bedrock and connected by grade beams, differential settlement of the foundation system caused by construction vibration is improbable, as are any related adverse impacts to the superstructure.

Slope Instability

Significant hillside excavations present the obvious concern of overall slope stability during and after construction. Slope instability has potentially catastrophic consequences to structures above, on, or below the slope.

The geologic and soils reports for this project have determined various factors of safety against slope failure for different failure mechanisms, and the updated Kinematic analysis shown in the 2020 Addendum by SGI demonstrates that the ascending cut slope is kinematically stable when properly shored and after construction of the new retaining wall. Per Shick, the new reinforced concrete retaining wall and pile foundation will ultimately improve the overall stability of the slope, as the slope in its current condition exhibits factors of safety below 1.0.

The reports for the project provide parameters for the soldier pile system to accommodate the gradual excavation as well as recommendations for lagging design to appropriately resist earth pressure prior to placement of the concrete wall. This is a standard method of excavation in order to install new retaining walls, and performed correctly will provide adequate stability to the slope during construction.

Settlement Due to Retaining Wall Deflection

Cantilevered retaining walls are designed to deflect at the top up to 1% of the total height upon loading. Substantial deflection can lead to settlement of soil and structures above the retaining wall. The geologic and soils report for the project recommends that the structural engineer design the retaining wall and its foundation in a way that prevents or minimizes any deflection. This would entail designing strong and stiff systems with near zero deflection.

Published Vibration Limits

The California Environmental Quality Act (CEQA) documents have relied on the Federal Transit Authority (FTA) guidance for noise and vibrations generated by construction. FTA guidance is to limit peak particle velocity (PPV, in/sec) in order to prevent adverse structural impacts. The limits on nearby construction activities for various building types are listed below.

- Project construction activities leading to ground-borne vibration levels exceeding 0.5 PPV at the nearest off-site reinforced concrete, steel, or timber building.
- Project construction activities leading to ground-borne vibration levels exceeding 0.3 PPV at the nearest off-site engineered concrete and masonry building.
- Project construction activities leading to ground-borne vibration levels exceeding 0.2 PPV at the nearest off-site non-engineered timber and masonry building.
- Project construction activities leading to ground-borne vibration levels exceeding 0.12 PPV at buildings extremely susceptible to vibration damage, such as historic buildings.

Buildings extremely susceptible to vibration damage include unreinforced masonry buildings, unretrofitted tilt-up concrete wall buildings, wood-frame multi-story buildings with soft, weak, or open front walls, and non-ductile concrete buildings.

The above standards could be interpreted to mean that vibration caused by construction activities would be limited to 0.12 in/sec for all historic buildings, including the Stahl House. This stringent limit on vibrations is appropriate for fragile buildings. In that context, it should be recognized that while the Stahl House is a recognized historic resource, it is a modern steel frame building and simply does not have the same structural vulnerabilities to vibration as buildings otherwise categorized as “extremely susceptible” to vibration. The 0.12 in/sec vibration limit is arguably overly conservative.

In August of 2024, the City of Los Angeles Department of City Planning released a document titled *Construction Noise and Vibration: Updates to Thresholds and Methodology*. This document was developed with input from a Technical Advisory Committee of experts in acoustics and environmental science, with the intent of implementing reasonable standards consistent with other local jurisdictions. For construction noise and vibration, the document shifts from the FTA recommendations to align instead with Caltrans’ standard *Transportation and Construction Guidance Manual*, updating thresholds the Planning Department uses to evaluate a project’s environmental impacts in accordance with the (CEQA). To prevent damage to nearby buildings, Caltrans limits Peak Particle Velocity (PPV) generated by construction activities for different building classifications as follows:

Classification	Maximum PPV (inches per second)
Fragile Buildings	0.1
Historic Buildings	0.25
Older Residential Structures	0.3
New Residential Structures	0.5
Modern Industrial / Commercial Buildings	0.5

(Note, there is no limit established by Los Angeles for preventing human annoyance from construction vibration during daytime hours on weekdays.)

Research conducted by Mark Svinkin presented at the 19th International Conference on Soil Mechanics and Geotechnical Engineering and provided in his corresponding publication titled “A choice of proper criteria for soil and structural vibrations from construction and industrial sources” reviews several standards for vibration limits. Through this survey, Svinkin is able to establish a frequency-independent safe vibration limit for structures of 2.0 in/sec PPV. Vibrations below this level are generally incapable of causing even cosmetic damage to most structures, including steel buildings. Svinkin notes that a 2.0 in/sec is the maximum vibration generated by human activity such as walking, jumping, slamming doors, etc. in residential structures. The PPV values recommended by the Planning Department are well below Svinkin’s limit.

Recommendations for Vibration Mitigation

1. Require Construction Methods to Limit Vibration – Core Drilling in Lieu of Impact Drilling

Our primary and most important recommendation is to prohibit percussive, impact, or hammer drilling and allow only auger or core drilling for this project. Impact drilling is commonly used when drilling through hard rock like granite. However, this method generates significant ground-borne vibrations as the drill combines

repeated weight-driven impacts to break up the rock with rotary motion. When vibrations are an important consideration, the widely accepted solution is to employ core drilling instead. We recommended requiring a core-drilling method with diamond or tungsten carbide drill bits for all drilling operations on this project. Core drilling is a safer and less disruptive method for drilling through hard rock than percussion drilling and produces significantly lower vibrations than other drilling methods.

From the FTA research, we can see that the observed PPV at 25 ft of .089 in/sec generated by core drilling is comfortably lower than both the widely accepted damage threshold for residential structures of 2.0 in/sec published by Svinkin, and the vibration receptor limit of 0.25 in/sec provided by the LA Department of City Planning. Knowing that the direct vibration travel distance through the soil is greater than 75 feet to the Stahl House, we can see that utilizing core drilling will significantly contribute to the prevention of damage to the Stahl House caused by construction at the 1501 Marlay site.

2. Establish Vibration Limit & Vibration Monitoring Program

We recommend establishing a vibration limit aligned with the 2024 updates provided by the Los Angeles Department of City Planning, and reflecting the historic nature of the Stahl House. The limit should be set at a PPV of 0.25 in/sec. While it is not anticipated that sensors can be positioned directly at the Stahl House, a sensor should be placed upslope, near the property line at the north boundary of the property. The sensor will detect any vibration exceeding the vibration limit.

The implementation of an automated system that will remotely alert key personnel via their mobile device if the limit is exceeded will be useful. The recipients of the alert will then direct the construction crew to cease operations, determine the source of the vibration, and use alternate methods to reduce vibration. This may involve reducing drill speeds, reducing jackhammer force, staggering activities, or placing vibration damping mats under machinery to absorb vibrations.

3. Monitor Slope & Retaining Wall for Movement

We strongly recommend implementing a system to detect any slope movement or retaining wall displacement during construction. This kind of monitoring program will provide added assurance that the slope remains stable, and provide an opportunity to implement appropriate preventative measures should movement be detected.

4. Conduct Continuous Data Collection

Maintaining continuous data collection of PPV values generated during construction is good practice. This functionality of the monitoring device will provide a record demonstrating that established vibration limits were not exceeded.

5. Preconstruction Survey

We recommend conducting a pre-construction survey of the Stahl House prior to construction, if possible. It is important to document the existing condition of the home with photographs prior to any work being done. Doing so ensures the nature of any impact that may occur during construction is well-understood and helps facilitate any displacement analysis that may occur subsequent to the project.

Conclusion

The hillside construction of 1501 Marlay Drive necessitates thoughtful strategies to prevent any adverse physical impacts to the neighboring Stahl House. While certain design aspects of both homes, as well as properties of the site, work in favor of that goal, it is recommended that the project implement the drilling methodology described as an active measure to limit vibration to non-damaging levels, and consider implementing the more passive strategies in the remaining recommendations. We believe this approach will allow the project to proceed consistent with the principles of historic preservation of the Stahl House.

Should you have any questions related to this report, please do not hesitate to contact Structural Focus.

Sincerely,
STRUCTURAL FOCUS

A handwritten signature in black ink, appearing to be 'S. Mengelkoch', with a large, stylized 'S' and a long horizontal stroke extending to the right.

Samuel Mengelkoch, S.E.

Attachment C.

Historical Resource Monitoring and Protection Plan (August 2025)

Historical Resource Monitoring and Protection Plan

1501 N. Marlay Drive, Los Angeles, California

Prepared For:

EcoTierra Consulting
633 W 5th Street, 26th Floor
Los Angeles, California 90071

Prepared By:

2061 N. Los Robles Avenue, Ste. 205
Pasadena, California 91104

August 2025

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1. Introduction

South Environmental was retained to prepare a Historical Resource Monitoring and Protection Plan (Plan) for an undeveloped property located at 1501 North Marlay Drive in the City of Los Angeles, California (project site). The project proposes construction of a 3,100 square foot single-family residence on what is currently an undeveloped hillside lot. The new development will consist of a one-story single-family residence with a basement, garage, sub-basement, and roof-top pool. A large concrete retaining wall would also be constructed into the hillside. All proposed project components are adjacent to/directly below the Stahl House – Case Study House #22, a significant historical resource that is designated as Los Angeles Historic-Cultural Monument (HCM) No. 670, and listed in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR).

Because the project proposes construction immediately adjacent to/below such an important historical resource, this Plan was prepared to ensure that the proposed project will not impact any character-defining features of the Stahl House. Although the project does not propose any physical changes to the Stahl House, it is necessary to ensure that preventative measures are in place to protect it from both direct and indirect impacts resulting from vibration and slope instability.

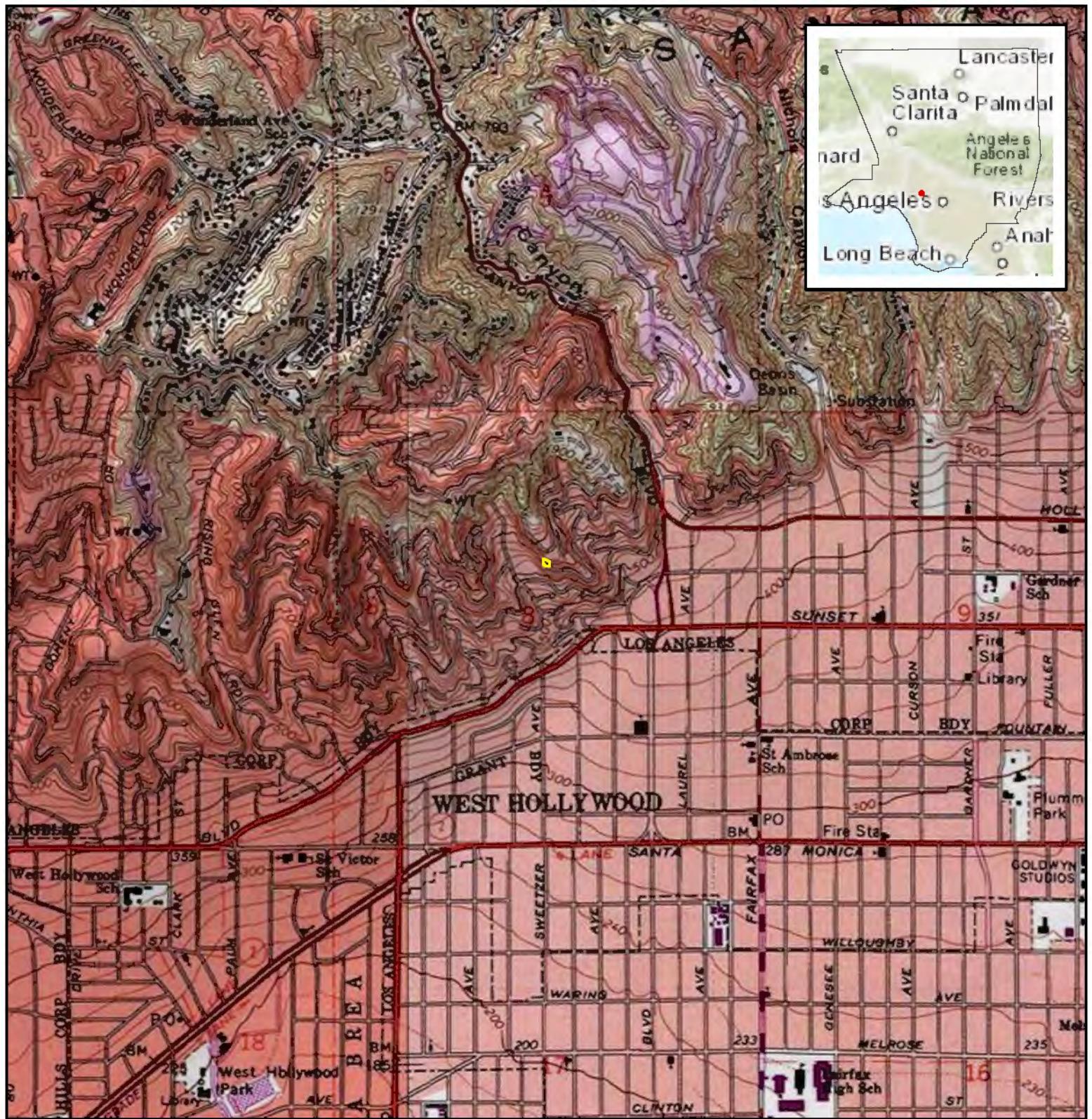
This Plan was prepared by Principal Architectural Sarah Corder, MFA and Cultural Resources Director Samantha Murray, MA, who meet the Secretary of the Interior's Professional Qualification Standards for Architectural History (36 CFR Part 61).

Project Location

The proposed project site is an undeveloped hillside lot located at 1501 North Marlay Drive on Assessor's Parcel Number (APN) 5556-031-004 (Figure 1, Project Location). The project site is located at the terminus of a cul-de-sac on the north side of the street. The Stahl House is located directly above the project site at 1635 Woods Drive (Figure 2, Project Site Detail).

Project Description

The project proposes construction of a 3,100 square foot single-family residence on what is currently an undeveloped hillside lot. The new development will consist of a one-story single-family residence with a basement, garage, sub-basement, and roof-top pool. A large concrete retaining wall would also be constructed into the hillside.



Source: ESRI USA Topo Maps and World Topo Map 2025

1501 Marlay Drive

Figure 1. Project Location Map

Project Site

Project Site is within the City of Los Angeles, California, in Los Angeles County on the USGS Hollywood 7.5-minute quadrangle map in Section 8 of Township 01 South and Range 14 West

Center Coordinate (Decimal Degrees):
Latitude: 34.1001496N Longitude: -118.3702322W



0 1,150 2,300 Feet
Scale: 1:24,000



SOUTH
ENVIRONMENTAL

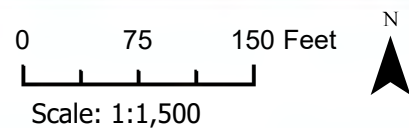


Source: ESRI Aerial Map 2025

1501 Marlay Drive

Figure 2. Project Site Detail

Project Site



Responsible Parties¹

Prior to the start of project construction, the following table shall be completed to identify the specific individuals who have been identified as a Responsible Party for the implementation of this Plan. These parties are referenced throughout the Plan where applicable. Contact information shall be provided for each party and shall be updated as needed throughout the project. No on-site project work may begin without the retention of a qualified Structural Engineer and a qualified Architectural Historian.

Responsible Party	Contact Information	Requirements
Project Manager	Name: Company: Email: Phone:	n/a
Structural Engineer	Name: Company: Email: Phone:	Individual must be licensed to practice as a "Structural Engineer" in the State of California and must have at minimum of ten (10) years of experience working with historic buildings in California
On-Site Construction Manager	Name: Company: Email: Phone:	n/a
Architectural Historian	Name: Company: Email: Phone:	The principal Architectural Historian must meet the Secretary of the Interior's Professional Qualification Standards for Architectural History or Historic Architecture (36 CFR Part 61).
City of Los Angeles	Name: Company: Email: Phone:	n/a

¹ These individuals shall be determined through coordination between EcoTierra Consulting, the Applicant, construction company, and the City of Los Angeles.

2. Identified Historical Resource

The Stahl House was constructed in 1960 and was declared a Los Angeles Historic-Cultural Monument (HCM No. 670) in 1999. It was listed for reflecting “the broad cultural, political, economic or social history of the nation, state, or community, and for its association with the Case Study House program (1945-1966), which profoundly influenced mid-twentieth century residential design.”²

In 2013, the Stahl House was listed on the National Register of Historic Places (NRHP) under Criterion A for its association with “experimental modern housing in the postwar years under the auspices of John Entenza’s *Arts & Architecture* magazine” and under Criterion C for embodying “the distinctive characteristics of residential architecture associated with the Case Study House Program,” and steel-frame dwelling subtype.³

The significant character-defining features of the Stahl House, designed in the International Style, include⁴:

- one-story, L-shaped plan
- large cantilevered concrete pad
- steel construction
- large expanses of non-load bearing, fixed and sliding glass
- flat roof with deep overhangs to shelter the interior spaces
- globe pendant lights
- rectangular swimming pool
- 240-degree unobstructed panoramic view of the city

² Historic Places LA: Los Angeles Historic Resources Inventory, Stahl House, Historic Resource Report August 13, 2014, <http://www.historicplacesla.org/reports/6af2f7e6-53f1-4d43-9a77-6f2d7a6bd5ca>

³ Seward, NRHP Form for Case Study House #22 (Stahl House).

⁴ Seward, NRHP Form for Case Study House #22 (Stahl House). Cultural Heritage Commission, Historic-Cultural Monument Application, Stahl House – Case Study House #22, March 12, 1999, <https://cityclerk.lacity.org/online/docs/1999/99-1681.pdf>

3. Required Protection

This section details the specific protection requirements that must be implemented to ensure the Stahl House is not adversely impacted during construction of the proposed project. While the project will not encroach on the Stahl House property, there is potential for both direct and indirect impacts to the Stahl House resulting from adjacent construction activities, including vibration and slope instability. Implementation of this Plan will ensure that all project-related impacts to the Stahl House are mitigated and remain less than significant.

General Requirements

The following requirements form the basis for implementation of this Plan and must be adhered to throughout all phases of the project.

1. **Communication.** On-site meetings at the beginning of the project, during the project, and at the completion of the project are a key component of the Plan. The goal of on-site meetings is to identify potential risks and issues related to vibration and slope instability that could impact historic materials and features of the Stahl House. These meetings must, at a minimum, include all Responsible Parties identified above in Section 1 and serve as an opportunity to discuss the feasibility of installing and removing protection measures throughout the project. Clear communication is essential to ensuring that the Stahl House is appropriately protected throughout the project and that any compliance issues or impact concerns are addressed immediately. No construction crew member or project team member is permitted to enter the project site without understanding all project communication protocols.
2. **Documentation.** The condition of the Stahl House will be documented by the Architectural Historian⁵ throughout the pre-construction, construction, and post-construction phases of the project. Any relevant documentation will be attached to the Plan and will be provided to the On-Site Construction Manager and Project Manager for distribution to construction crew members prior to the start of work on the site. The location of the Stahl House will be added to specifications and clearly shown on project site plans.
3. **Implementation.** Implementation of this Plan is critical to protecting the Stahl House during project construction. The purpose of this Plan is to provide essential, yet flexible protection measures that are feasible and can be maintained for the duration of construction activity. It is required that all construction crew members and project team members review the Plan, understand the thresholds for vibration and slope instability, and are well versed on stop work protocols should established thresholds be exceeded on the site.

⁵ Meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History (36 CFR Part 61)

4. **Restrictions:** Of primary concern are potential impacts to the Stahl House resulting from vibration during project construction. **This Plan strictly prohibits the use of percussive, impact, or hammer drilling which could generate significant ground-borne vibration. Only auger or core drilling with diamond or tungsten carbide drill bits is permitted for this project.** These drilling restrictions must be communicated to all construction crew members and managers prior to the start of any site work.⁶
5. **Monitoring:** Monitoring is required by the Structural Engineer and Architectural Historian as part of this Plan, including vibration monitoring, slope instability monitoring, and compliance monitoring. Each of these monitoring types are detailed below:
 - a. **Vibration Monitoring:** This Plan requires that a project vibration limit be established at Peak Particle Velocity (PPV) of 0.25 in/sec. To ensure that project construction activities do not exceed this limit, a minimum of two (2) sensors will be placed upslope, as close to the southern boundary of the Stahl House as possible to detect vibrations that exceed this threshold. Sensors may also be placed at other locations on the project site, to be determined in consultation with the Structural Engineer, to monitor vibration collectively on the site. The method of detection and notification is at the discretion of the Project Manager, On-Site Construction Manager, and Structural Engineer. At a minimum, an on-site detection system shall be used to alert workers that vibration PPV levels have exceeded 0.25 in/sec. It is recommended that a remote notification system also be implemented so that off-site Responsible Parties may also be notified and can respond to the issue immediately. Regardless of the detection system employed on the site, if sensors detect that the vibration PPV limit has been exceeded, all work at the project site must stop immediately until the source of vibration has been determined and alternative construction methods are established through consultation with the Structural Engineer.

The Architectural Historian and Structural Engineer will conduct regular on-site monitoring and review vibration data to ensure compliance with this Plan. If the owners of the Stahl House permit access to the property, sensors shall also be placed at the Stahl House property at the discretion of the Structural Engineer and Architectural Historian.

This Plan also requires the collection of continuous PPV values to provide a record that demonstrates vibration limits were not exceeded throughout the project. It is required that these records be maintained by the Structural Engineer throughout the course of the project and until final project inspections are completed by the City.

⁶ Structural Focus, Assessment Report and Mitigation Recommendations Potential Physical Impacts to Stahl House During Construction, 2025.

- b. **Slope Monitoring:** This Plan requires monitoring of slope instability at all phases of the project. Prior to the start of construction, the Structural Engineer will complete a pre-construction survey and assessment to determine the baseline stability of the slope and make recommendations for any preventative measures that must be implemented prior to the start of construction. The Structural Engineer will monitor slope instability for the duration of project construction with on-site visits and placement of sensors determined at their discretion based on the findings of the pre-construction assessment. If any slope movement is detected, all work at the project site must stop immediately (apart from emergency stabilization measures). The On-Site Construction Manager must then coordinate with the Structural Engineer and all other Responsible Parties to discuss stabilization methods. No work shall continue on the site until approval is received from all Responsible Parties.
- c. **Architectural Monitoring:** Monitoring by the Architectural Historian is required throughout the course of the project. In general, all work with the potential to impact the Stahl House (i.e., any slope work, construction of the retaining wall, on-site grading, and heavy equipment usage) will require on-site monitoring of construction activities at the discretion of the Architectural Historian in consultation with the Project Manager and On-Site Construction Manager. During monitoring, the Architectural Historian will be provided safe access to all areas of the project site to observe construction activities and verify that the Stahl House is being adequately protected/monitored. The Architectural Historian will also be provided with any requested documentation of vibration readings and measurements captured within the last week to ensure the project is in compliance with established vibration thresholds. Any changes to project plans must be discussed with both the Architectural Historian and Structural Engineer.

The Architectural Historian and Structural Engineer must be provided with at least 48 hours' notice of any construction activities that will involve the use of drills, excavators, or any heavy equipment that has the potential to produce vibration.

Pre-construction Protection Requirements

The following pre-construction protection requirements shall be implemented by the Project Manager prior to the start of any construction activities:

- **Final Project Design Plan Review:** Both the Structural Engineer and Architectural Historian shall be provided with the final set of construction plans for review prior to the start of construction and prior to the pre-construction meeting. This Plan shall be appended to the final set of construction plans.

- **Notification:** Identify and notify all Responsible Parties who will have an important role in implementation of the Plan prior to initiation of construction activities. Once identified, all Responsible Party contact information must be distributed to the On-Site Construction Manager and crew members, as applicable.
- **Pre-construction Meeting:** Hold an on-site pre-construction meeting with all Responsible Parties to provide an overview of the project including the duration of work, the type of work that will be conducted, construction staging and laydown areas, and the type of equipment that will be used.
- **Historical Resource Sensitivity Training:** The Architectural Historian and Structural Engineer shall provide educational training for all construction crew members, informing them that they are working immediately adjacent to an important historical resource that requires avoidance and protection throughout the project in consideration of federal, state, and local environmental regulations. The training shall provide clear direction to all crew members working on the project site and include an overview of this Plan, Responsible Party contact information, the requirements for vibration and slope instability monitoring, and stop work protocols. The training will also clarify that the use of percussive, impact, or hammer drilling is strictly prohibited, and that only auger or core drilling with diamond or tungsten carbide drill bits is permitted. This training may occur at the pre-construction meeting or be scheduled as a separate meeting. All construction workers will be required to sign a form indicating that they have received the training. Any new crew members who were not present for the original training will be required to receive the training and sign the form before working on the site. Training logs shall be maintained by the Project Manager and appended to the final monitoring report.
- **Pre-construction Surveys:** Provide the Architectural Historian and Structural Engineer with at least 48 hours' notice for pre-construction surveys prior to the start of work. The Structural Engineer will complete a pre-construction survey and assessment to determine the baseline stability of the slope and make recommendations for any preventative measures that must be implemented prior to the start of construction. The Architectural Historian shall be provided with project site access to photograph the existing conditions of all visible character-defining features of the Stahl House with the potential to be impacted during the project prior to commencement of work. Photographs will be keyed to plans as necessary. If owner permission is granted, the Architectural Historian and Structural Engineer will also conduct a pre-construction survey of the Stahl House to document existing conditions. Any relevant documentation from the pre-construction surveys will be attached to the Plan and will be provided to the On-Site Construction Manager and Project Manager for distribution to construction crew members prior to the start of work on the site.

- **Placement of Protective Barriers, Signage, and Sensors:** Provide the Architectural Historian and Structural Engineer with 48 hours' notice for the initial placement of any physical barriers so that they, or a designee, may be present to monitor this work. The Structural Engineer will place on-site sensors for monitoring during construction. The On-Site Construction Manager shall also ensure that highly visible and reflective signage and/or flagging tape is utilized to clearly indicate historically sensitive boundaries and sensor locations throughout and adjacent to the project site. Under no circumstances shall temporary protection be directly attached to the Stahl House or any of its historic fabric.
- **Construction Plan Mark-Up:** Ensure that all project plans and specifications clearly identify the location of the Stahl House, property boundaries, and the location of required protective barriers, signage, and vibration sensors. This Plan must also be appended to the final set of construction plans.
- **Smoking is Prohibited:** Smoking on and within 100 feet of the project site or the Stahl House is strictly prohibited to avoid potential fire damage to the Stahl House.

Construction Protection Requirements

The following historical resource protection requirements shall be implemented by the On-Site Construction Manager in coordination with the Architectural Historian and the Structural Engineer for the duration of project construction:

- **Relocation of Protective Barriers, Signage, and Sensors:** Any physical barriers required by this Plan, such as flagging, fencing, and signage, shall remain in place for the duration of construction unless removal is approved by Architectural Historian and Structural Engineer. If these elements require relocation, the Architectural Historian and Structural Engineer must be provided with 48 hours' notice prior to relocation.
- **Construction Equipment/Methodology Approval:** All earthmoving and grading activities must be pre-approved by the Structural Engineer, Project Manager, and On-Site Manager. The type of equipment proposed to be used during construction must be approved by the Structural Engineer prior to use on the project site and must be in compliance with this Plan (i.e., under no circumstances shall percussive, impact, or hammer drilling be utilized).
- **Communication with Monitors:** The On-Site Construction Manager and Project Manager are responsible for communicating the project schedule with the Structural Engineer and Architectural Historian throughout project construction and for ensuring they receive adequate notice to mobilize and be on site. **The Structural Engineer and Architectural Historian must be provided with 48 hours' notice of any construction activities that involve the use of drills, excavators, or heavy equipment that has the potential to produce vibration.**

- **Monitoring During Construction:** The frequency and duration of vibration, slope, and architectural monitoring will be at the discretion of the Structural Engineer and Architectural Historian in coordination with the On-Site Construction Manager and Project Manager. Depending on the work that is being conducted and the type of equipment that is being used, the monitors may only need to be on site briefly to ensure that vibration and slope instability prevention measures are in compliance with this Plan. However, when heavy equipment is proposed to be used that produces vibration, or when construction into the hillside directly below the Stahl House is planned, monitoring may be required for the duration of the activity.
- **Stop Work Orders:** If vibration thresholds are exceeded or any slope movement is detected, all work at the project site must stop immediately (apart from emergency stabilization measures). The On-Site Construction Manager must then coordinate with the Structural Engineer and all other Responsible Parties to discuss stabilization methods. No work shall continue on the site until approval is received from all Responsible Parties.
- **Vibration Sensor Testing:** All vibration and slope monitoring sensors shall be tested weekly to ensure proper functionality. Testing shall be coordinated between the On-Site Construction Manager and the Structural Engineer.
- **Data Collection:** The Structural Engineer shall conduct continuous data collection of PPV values to provide a record that demonstrates that vibration limits were not exceeded during construction.
- **Smoking is Prohibited:** Smoking on and within 100 feet of the project site or the Stahl House is strictly prohibited to avoid potential fire damage to the Stahl House.

Post-construction Protection Requirements

The following protection requirements will be implemented by the On-Site Construction Manager, Structural Engineer, and Architectural Historian upon completion of all construction activities:

- **Removal of Protective Barriers, Signage, and Sensors:** The Architectural Historian and Structural Engineer will be given at least 48 hours' notice for removal of sensors, and physical barriers, inclusive of any structures, flagging, fencing, and signage, so that they, or a designee, may be present to monitor this work.
- **Post-construction Meeting:** Hold a post-construction meeting with all Responsible Parties so the post-construction condition of the project site, slope, Stahl House, and any final project issues are communicated for inclusion in the monitoring report.
- **Monitoring Report:** Within two weeks of completion of project construction, the Architectural Historian will prepare a monitoring report that will include a summary of the monitoring

methodology, a summary of all monitoring, monitoring forms, photographs of character-defining features of the Stahl House before and after construction, and a discussion of any deviations from the original plans or issues encountered during construction. The final monitoring plan shall be provided to the Project Manager, Lead Agency Contact, and the South Central Coastal Information Center.

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