Town of Paradise Valley

6401 E Lincoln Dr
Paradise Valley, AZ 85253

Meeting Notice and Agenda

Board of Adjustment

Chair Hope Ozer
Boardmember Robert Brown
Boardmember Priti Kaur
Boardmember Eric Leibsohn
Boardmember Jon Newman
Boardmember Rohan Sahani
Boardmember Quinn Williams

Wednesday, January 4, 2023 **5:30 PM** **Council Chambers**

1. CALL TO ORDER

2. ROLL CALL

Notice is hereby given that members of the Public Body will attend either in person or by telephone conference call, pursuant to A.R.S. §38-431(4).

3. EXECUTIVE SESSION

The Public Body may convene into an executive session at one or more times during the meeting as needed to confer with the Town Attorney for legal advice regarding any of the items listed on the agenda as authorized by A.R.S. §38-431.03.A.3.

4. STUDY SESSION ITEMS

Work/Study is open to the public however the following items are scheduled for discussion only. The Public Body will be briefed by staff and other Town representatives. There will be no votes and no final action taken on discussion items. The Public Body may give direction to staff and request that items be scheduled for consideration and final action at a later date. The order of discussion items and the estimated time scheduled to hear each item is subject to change.

5. PUBLIC HEARINGS

The Public Body may take action on this item.

A. **23-001** **Thiara Fence Wall Variance**
Variance to allow 6-foot-tall fence wall to encroach into the setback
Case No. BA-22-10. 5608 E. Horseshoe Road (APN 168-43-004)

Attachments:
A. Staff Report
C. Vicinity Map & Aerial Photo
D. Narrative & Plans
E. Notification Materials

6. ACTION ITEMS

The Public Body may take action on this item.

7. CONSENT AGENDA

All items on the Consent Agenda are considered by the Public Body to be routine and will be enacted by a single motion. There will be no separate discussion of these items. If a Commissioner or member of the public desires discussion on any item it will be removed from the Consent Agenda and considered separately.

A. **23-003** **Approval of the October 19, 2022 Board of Adjustment Meeting Minutes**

Attachments: BoA MN Draft 10.19.22

B. **23-004** **Approval of the November 2, 2022 Board of Adjustment Meeting Minutes**

Attachments: 11.02.22 Draft Minutes

8. STAFF REPORTS

9. PUBLIC BODY REPORTS

10. FUTURE AGENDA ITEMS

11. ADJOURNMENT

AGENDA IS SUBJECT TO CHANGE

**Notice is hereby given that pursuant to A.R.S. §1-602.A.9, subject to certain specified statutory exceptions, parents have a right to consent before the State or any of its political subdivisions make a video or audio recording of a minor child. Meetings of the Planning Commission are audio and/or video recorded, and, as a result, proceedings in which children are present may be subject to such recording. Parents in order to exercise their rights may either file written consent with the Town Clerk to such recording, or take personal action to ensure that their child or children are not present when a recording may be made. If a child is present at the time a recording is made, the Town will assume that the rights afforded parents pursuant to A.R.S. §1-602.A.9 have been waived.*

The Town of Paradise Valley endeavors to make all public meetings accessible to persons with disabilities. With 72 hours advance notice, special assistance can also be provided for disabled persons at public meetings. Please call 480-948-7411 (voice) or 480-483-1811 (TDD) to request accommodation to participate in the Planning Commission meeting.

Action Report

File #: 23-001

AGENDA TITLE:
Thiara Fence Wall Variance
Variance to allow 6-foot-tall fence wall to encroach into the setback
Case No. BA-22-10. 5608 E. Horseshoe Road (APN 168-43-004)

STAFF CONTACT:

TOWN
Of
PARADISE VALLEY

STAFF REPORT

TO: **Chair and Board of Adjustment**

FROM: **Lisa Collins, Community Development Director**
Paul Michaud, Planning Manager
George Burton, Senior Planner

DATE: **January 4, 2023**

DEPARTMENT: Community Development Department/Planning Division
George Burton, 480-348-3525

AGENDA TITLE:
Thiara Fence Wall Variance
Variance to allow 6-foot-tall fence wall to encroach into the setback
Case No. BA-22-10. 5608 E. Horseshoe Road (APN 168-43-004)

This application is a variance request to allow a new 6-foot-tall fence wall to encroach into the rear yard setback.

RECOMMENDATION
Motion For Denial
It is recommended that the Board of Adjustment **[deny]** Case No. BA-22-10, a request by property owners Sukhvider & Daljit Thiara; for a variance from Article XXIV, Walls and Fences, to allow a new fence wall to encroach into the rear yard setback.

Reasons For Denial:
Staff finds that there are no property hardships that warrant the request for setback encroachment and staff believes that the request does not meet all three variance criteria.

BACKGROUND/DISCUSSION
Scope of Request
The applicant is requesting a variance for setback encroachment. Section 2404 of the Zoning Ordinance allows a 6-foot-tall wall at a 20-foot setback from a rear and side property line which adjoins a street/right-of-way. The applicant is requesting a variance to allow a 6-foot-tall masonry fence wall at a 0-foot setback from the rear property line (adjoining Doubletree Ranch Road).

Approximately 163 lineal feet of fence wall will be placed in the rear yard setback. The fence wall will have a stucco and paint finish and will also comply with the Town sight visibility/triangle requirements. Below is a comparison of the Zoning Ordinance requirements and proposed fence.

Zoning Ordinance	Proposed Fence
40' Front Yard Setback	80' (+)
20' Side Setback with Street	20'
0' Side Setback with Neighbor	0'
20' Rear Setback with Street	0'
6' Maximum Height	6'

Lot History

The subject property is Lot 1 of the "Double Tree Ranchos" subdivision. This subdivision was approved by the Town in 1968. In 2020, the applicant received permits to redevelop the lot with a new home, new pool & spa, and new fence walls and began construction of the new home. Later, the applicant met with the Building Official to discuss potential modifications to the side yard wall that was not under construction. During that discussion, the Building Official noticed an error on the plans for the rear wall that was shown encroaching into the rear yard setback that was also not under construction. The following is a chronological history of the property:

November 22, 1968	Building permit for a single-family residence
July 22, 2020	Demo permit to remove house and septic
July 22, 2020	Building permit for new single-family residence
July 22, 2020	Building permit for fence
July 22, 2020	Building permit for fountain
June 21, 2021	Building permit for pool and spa

Lot Conditions

The property is zoned R-43 and is 43,617 square feet in size (1.00 acres). The property is square in shape and is surrounded by three streets (Horseshoe Road at the front/south, 56th Street on the west side, and Doubletree Ranch Road at the rear/north). Horseshoe Road is classified as a local street, 56th Street is classified as a collector street, and Doubletree Ranch Road is classified as a minor arterial street.

DISCUSSION ITEMS

Variance Criteria:

Town Code and Arizona Revised Statutes set criteria an applicant must meet before a Board of Adjustment may grant a variance request. If the Board finds an applicant meets all of these criteria, the Board may grant the variance. However, if the Board finds the applicant does not meet all of the criteria, the Board may not grant the variance. The following are staff's analysis with regard to the variance criteria:

1. *"That there are special circumstances applicable to the property, which may include circumstances related to the property's size, shape, topography, location, or surroundings; and"* (Town Code Section 2-5-3(C)4).

   Staff Analysis:
   There are no property hardships that warrant the request for setback encroachment. The property is not undersized, oddly shaped, or burdened with an adverse topographical feature that prohibits compliance. Although not ideal, the applicant has code compliant alternatives. The applicant can place a view fence at a 10-foot setback or reconfigure the retention basin to accommodate a masonry wall at a 15-foot meandering setback or a straight wall at a 20-foot setback.

2. *"That the special circumstances applicable to the property were not self-imposed or created by the property owner; and"* (Town Code Section 2-5-3(C)4).

   Staff Analysis:
   The request for setback encroachment is self-imposed since the applicant can construct a code compliant wall. There are no property hardships that prevent compliance. Also, despite the property being surrounded by three streets, the Zoning Ordinance requires a setback for fence walls adjoining every classification of street (except for pre-existing subdivision walls).

3. "*That the strict application of the Zoning Ordinance will deprive the property of privileges enjoyed by other property of the same classification in the same zoning district"* (Town Code Section 2-5-3(C)4).

   Staff Analysis:
   The Zoning Ordinance requires a setback for all new fence walls (except for pre-existing subdivision walls). There are no property hardships that warrant the variance and the neighboring properties must meet setback requirements when constructing new fence walls and/or must bring non-conforming fence walls into compliance when building a new home or remodeling more than half of an existing home.

REQUIRED ACTION
The Board of Adjustment must consider the facts and determine if the variance request meets all three variance criteria. The Board of Adjustment may take the following action:

1. Deny the variance request.

2. Approve the variance request, subject to the following stipulations:
   a. The improvement shall be in compliance with the submitted plans and documents:
      i. Sheet 1, prepared by Mark F. Hoerner & Associates Inc and dated November 2022.
   b. The applicant must obtain the required building permits and inspections from the Building Department.

3. Continue the application for further review.

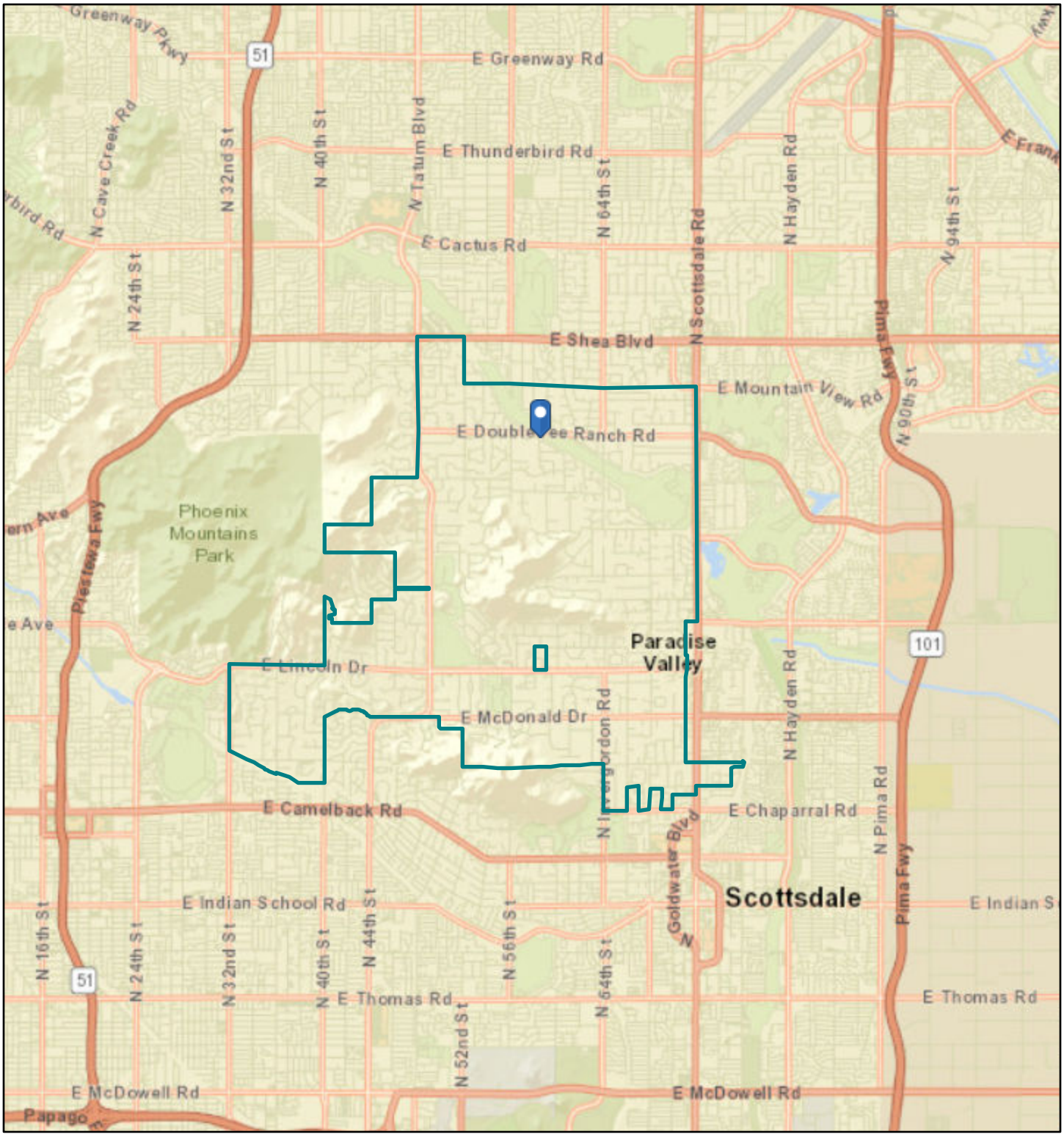
COMMENTS
Staff has not received any comments or inquiries regarding this variance request.

COMMUNITY IMPACT: None.

CODE VIOLATION: None.

ATTACHMENTS
A. Staff Report
B. Application
C. Vicinity Map & Aerial Photo
D. Narrative & Plans
E. Notification Materials

Vicinity Map
5608 E. Horseshoe Road



10/11/2022, 9:25:48 AM

Municipal Boundary

1:114,827

0 0.75 1.5 3 mi

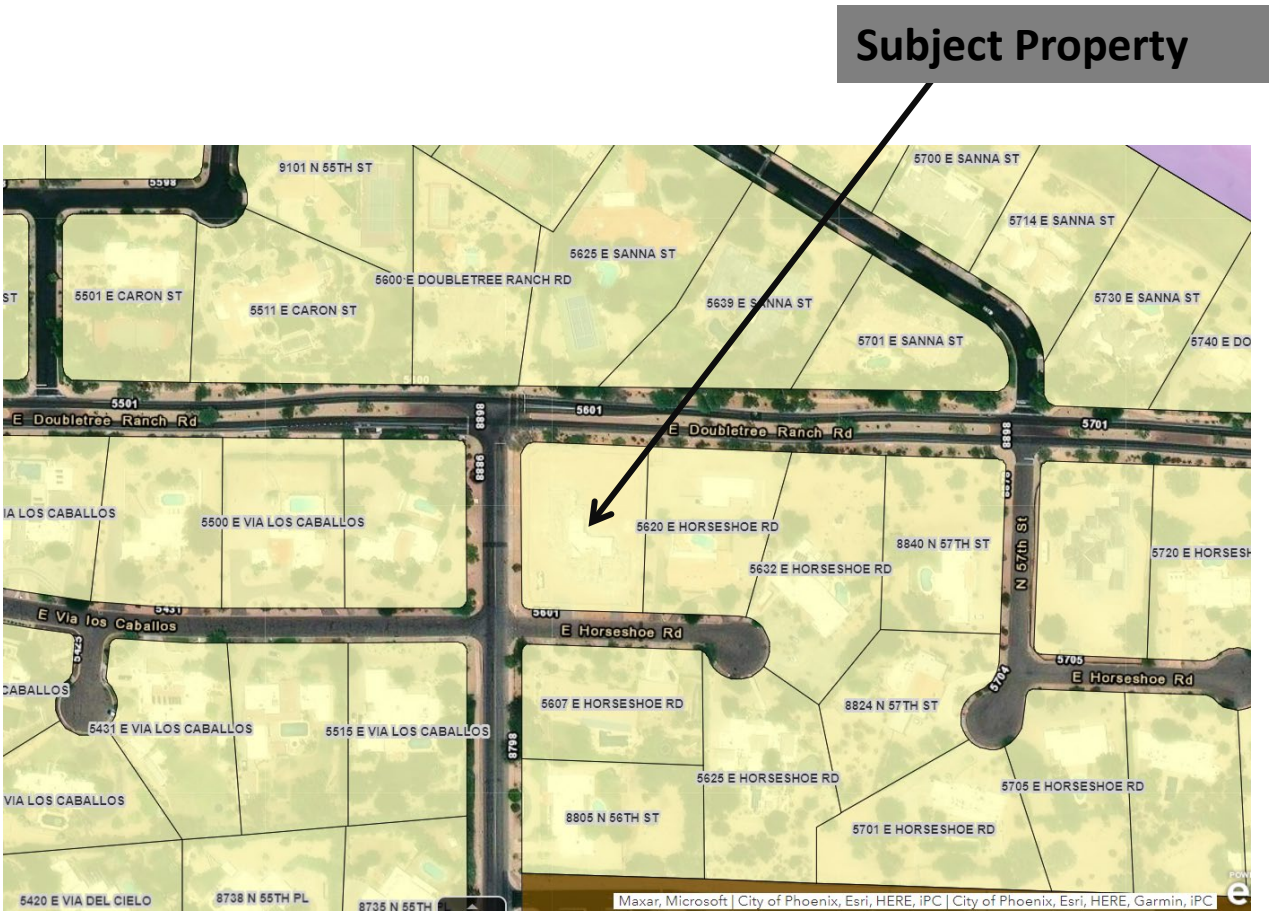
0 1.25 2.5 5 km

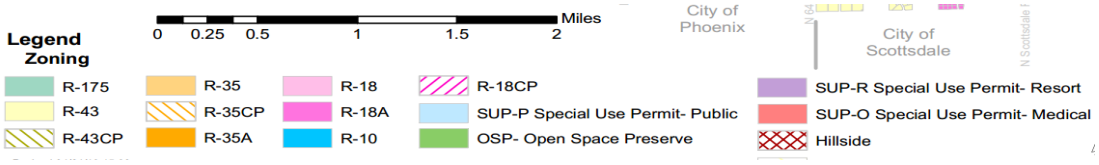
City of Phoenix, Bureau of Land Management, Esri, HERE, Garmin, NGA, USGS, NPS

Aerial Photo

5608 E Horseshoe Road

ZONING





5608 E Horseshoe Road

ANDREW MILLER
DIRECT LINE: 602.234.8793
E-MAIL: amiller@bcattorneys.com

December 2, 2022

Board of Adjustment
Town of Paradise Valley
6401 E. Lincoln Drive
Paradise Valley, Arizona 85253

RE: Application Narrative in Support of Variance Request for 5608 E Horseshoe Rd., Paradise Valley AZ 85253 ("Home Site"); Setback for a Solid Wall at 0' Setback on the Northern Property Line Adjoining Doubletree Ranch Road; Assessor Parcel #168-43-004

Dear Members of the Board of Adjustment:

Sam and Daljit Thiara (the "Thiaras") have submitted an application for a variance request for their Home Site. This Narrative is submitted to provide the facts that support the granting of a variance for a 0' setback for a 6' tall solid wall for the rear yard of the Home Site, that is, a wall located on the northern property line adjacent to Doubletree Ranch Road. Zoning Ordinance § 2404.b.2 requires a 20' setback for a 6' tall solid rear yard wall adjacent to a minor arterial. In this particular case, due to inadvertence, the wall has already been built and its location, as compared to the 20' setback line, is shown on **Attachment A, Site Plan**—and an "as-built" model of the preferred wall size, location, and finish texture can be viewed at the Home Site. The requested variance meets the criteria established by the Town Code and state law as follows:

Town of Paradise Valley Variance Criteria Satisfied

1. "That there are special circumstances applicable to the property, which may include circumstances related to the property's size, shape, topography, location, or surroundings; and" (Town Code Section 2-5-3(C)4).

Special Circumstances – The Thiara Home Site qualifies under these criteria due to its location and surroundings. The list of these location and surrounding factors are:

1. Triple Frontage Lot. The Home Site has street frontage on 3 sides, which is a somewhat rare and undesirable lot arrangement due to the requirements for having 40' setbacks for the primary home structure on all three street frontage sides.
2. Rear Yard Immediately Adjacent to a Busy, Noisy Three-Way Stop Intersection. However, what makes this lot even more unique is that its location at the SEC of Doubletree Ranch Road makes it directly adjacent to a controlled stop three-way intersection, with two of the three adjoining streets being subjected to significant traffic volumes at most times of the day. The constant stopping and starting of the motor

vehicles, work trucks, and motorcycles results in this lot subject the Home Site to significantly more noise than many other lots in the Town, and certainly more than most of the other three frontage lots in the Town (see **Attachment B1, Site Aerial**).

3. Public School Just 400' North of Home Site. The lot surroundings are further compounded by the fact that the Home Site is less than 400' north of the Cherokee School Property, which results in even more than the typical traffic volumes on 56th Street during days when school is in session as well as lots of foot and bicycle traffic on 56th Street as well (see **Attachment B2, Expanded Site Aerial**) .
4. PV Staff Advised that Front Yard Must be on Horseshoe Drive. The Thiaras were advised by PV staff, prior to purchasing the Home Site, that the home could not place its front yard on Doubletree Ranch Road because it was a minor arterial street (see **Attachment C1 – Property Development Timeline**, the "Timeline"). Also, due to 56th Street being a busier than typical collector street due to the proximity to Cherokee School, including significant foot and bicycle traffic on 56th Street, the only logical and permissible (see Paradise Valley Zoning Ordinance § 1002.A and 1002.B) location for the home frontage is at its prior historical frontage on Horseshoe Rd. The use of the Horseshoe Road frontage is in keeping with the frontage of most of the homes in this section of the Doubletree Ranchos subdivision and is the most sympathetic arrangement to the neighboring properties on Horseshoe. This orientation then results in the back yard area of the home being located adjacent to the busy and noisy 3-way stop intersection of Doubletree Ranch Road and 56th Street. It is also worth noting that Lot 5 of Double Tree Ranchos has also recently redeveloped with a new home and has relocated its front yard from Horseshoe Road to Doubletree Ranch Road.
5. Replacing 3' Wall and Fence on North Property Line with 6' Wall. The Thiaras, like all Paradise Valley residents, plan to spend significant time in their back yard and enjoy the wonderful outdoor weather in Paradise Valley. And based on what they had been advised by the Paradise Valley staff when the inquired about purchasing the lot, they assumed that they could shield the back yard area from the noise impacts created by the adjoining streets by having a 6' tall solid rear yard wall located on the north property line that would replace the former 3' tall wall/fence at that location (see **Attachments D1 - Historical Photos of Prior Wall and Fence** and **D2 – Topo Survey with pre-existing walls and view fence location**). Given the former wall/fence that existed on the property since at least 1976 (see **Attachment E, 1976 Aerial Photo of 5608 E Horseshoe**) that apparently was believed to be a subdivision wall/fence that could be altered or added to pursuant to Zoning Ordinance § 2415.a.4, the assumption that the 3' wall/fence could be changed to a 6' tall solid wall was not an unreasonable assumption for either PV staff or the Thiaras.
6. 6' Tall Wall at Location Close to Noise Source Needed for Noise Attenuation. The most effective means of shielding the back yard, and the bedrooms that face onto the back yard, from the busy and noisy 3-way stop intersection of Doubletree Ranch Road and 56th Street would be to place the 6' tall solid wall as close to the source of the noise as allowable. This is a common engineering approach for attenuation noise impacts from

vehicular traffic (see **Attachment F, HUD Noise Guidebook, Noise Attenuation Barriers**). The House plans have all 3 of the bedrooms fronting into the back yard area so as to provide convenient access to the yard and the pool In particular, the master bedroom has double doors that open onto the pool and back yard area, and this design was based on the noise attenuation that comes from having the North wall on the property line and close to the intersection (see **Attachment G - Bedroom Locations** - from Residence Plans).

7. Goals of Wall/Fence Ordinance Still Met should Variance Be Granted. The Walls and Fences provisions in the PV Zoning Ordinance encourage "visual openness and the preservation of the natural environment" (Section 2401), along with providing some level of attractive landscaping in the space between the walls/fences and the town streets (Section 2406). These goals will not be hindered by permitting the Thiara wall to remain at a 0' setback along its Doubletree Ranch Road frontage as the right-of-way cross-section for Doubletree north of the new wall is fairly large. Further, Doubletree Ranch Road is curvilinear, with sidewalks to be placed on only one side of the street. In the section adjacent to the Thiara property, Doubletree has a meander that places more of the road improvements on the north side of Doubletree, along the sidewalk, on the north half of Doubletree, thus leaving a significant landscaped open space area averaging at least 18' in width for the entire northern boundary of the Thiara property (approximately 185') (see **Attachment H, Exterior Wall Photos**). If desired by the PV staff or the Board of Adjustment, the Thiaras are open to a condition of approval of the variance that would require them to add more landscaping to this 18' x 185' Doubletree Ranch Road right-of-way area, thus further beautifying this area enhancing the natural environment.
8. Home Location and Design Based on Staff Advise and Approvals. Although not the primary justification for the granting of the requested variance, it should be noted that the prior staff advice on being able to replace the former 3' tall wall/fence located on the north property line with a 6' tall solid rear yard wall, and the multiple staff approvals of the new residence plans and the masonry wall plans (see **Timeline**), resulted in a particular design of the home, rear yard area, and walls. If the northern property line wall is required to be relocated 20' to the south, this change to the approved set of plans will create a number of significant impacts on the use and enjoyability of the Thiara's home. These impacts were identified by the Thiara's landscape architect, and include:
    a. The wall location would now be down in the middle of the rear yard retention basin. These retention basins were established and graded at the outset of the project. Building the wall down in the retention basin would lower the top of wall elevation to where people could look over the wall from the outside of the wall, thus affecting the Thiara's privacy and security. This would also place a portion of the retention basin on the outside of the wall (to the North) which would look very odd as, visually, it would be look like it is part of the Town's Right-of-Way area along Doubletree Ranch Rd.
    b. The rear yard landscaping would be compromised as the planned area for a putting green (close to the North property line) would have to shift 20' to the

South, thus putting it too close to the swimming pool (which would also need to shift to the South). The swimming pool has already been constructed and cannot be moved without a huge expense (see **Attachment I, Landscape Plan, and Backyard Active Open Space Area Reduction**).

c. In addition, the active open space area designed in the rear yard between the North wall and the swimming pool (approximately 60' in depth) would be shrunk by 20', lessening the active open space area by approximately 33.3 % (see **Attachment I - Landscape Plan, and Backyard Active Open Space Area Reduction**). This grass area is crucial to the overall rear yard landscaping design and enjoyability as it was designed to be a place for the kids (and future grandkids) to run and play as well as allowing for a rear yard walking path for the Thiaras.
d. The swimming pool design and location were predicated on the North wall being built on the North property line per the approved plans. If the North wall was to be built 20' further into the rear yard, it would have dictated a different pool design, probably shifting the pool from its current North-South orientation to an East-West orientation. As noted, the pool has already been constructed so moving it at this point would be impossible without a huge expense to the Thiaras.
e. The entire footprint of the home and its orientation on the lot, especially which side of the home the garages were located on (West vs. East sides), were all designed with the North wall location being on the property line. Had the Town told the Thiaras during initial plan review that this wall was not allowed to be located on the North property line, it potentially would have changed the overall footprint design of the home and its orientation on the lot. Since the home had been over 90% constructed before the Town staff identified its error and asked for the Northern wall to be relocated 20' to the south, these alternate design options were not permissible to consider.
f. As matters currently sit, the Thiaras have left the final landscaping and hardscaping of the active open space area of their yard incomplete while waiting for a resolution of their variance request (see **Attachment J – Interior Photos of Yard and North Wall**).

2. "That the special circumstances applicable to the property were not self-imposed or created by the property owner; and" (Town Code Section 2-5-3(C)4).

Not Self-Imposed - As noted above, the special circumstances confronting that creates their hardship is that their lot location and surroundings at the SEC of Doubletree Ranch Road and 56th Street, directly adjacent to a controlled stop three-way intersection, with two of the three streets fronting their property being subjected to significant traffic volumes at most times of the day, resulting in the constant stopping and starting of the motor vehicles, work trucks, and motorcycles (see **Attachment K - Traffic Conditions Photos**). This is further compounded by having a public school about 400' south of the property that generates an additional vehicular,

pedestrian and bicycle impact. The Thiaras did not create these location and surrounding impacts. Thus, their hardship is not self-imposed, it is a result of the conditions created by the property's fairly unique location and surroundings, which subject this lot to significantly more noise than most other lots in the Town, and certainly more than most of the other three frontage lots in the Town.

A Wall/Fence Existed Since 1960s. Because there was already an existing wall/fence on the North property line (see Timeline and Code Interpretation Application), the Thiaras' belief that such wall/fence could be altered and have a structural addition was a reasonable assumption (see Town Zoning Ordinance § 2415.a.4), confirmed by the advice initially received from the PV staff, which is another factor that indicates that their hardship was not self-imposed.

Adjoining Lots in Same Subdivision Already had 6' Walls. Finally, because the two neighboring properties in the Double Tree Ranchos subdivision just to the east of the Thiaras, 5620 and 5632 E Horseshoe Road, already had 6' tall masonry walls located at their northern property lines and at a 0' setback (see **Attachment L - Walls Directly East of Thiara**), it was reasonable for the Thiaras to assume that they too could alter and modify their wall/fence on the Northern subdivision line to match the walls of the nearest properties in their same subdivision. The hardship affecting the Thiaras was not self-imposed.

3. "That the strict application of the Zoning Ordinance will deprive the property of privileges enjoyed by other property of the same classification in the same zoning district" (Town Code Section 2-5-3(C)4).

Depriving the Home Site of Privileges other Properties Enjoy - The Thiaras should be granted a variance that will allow them to place a 6' tall masonry wall on their northern property line so as to create the same type of sound-buffering that other properties in Paradise Valley that are located near sources of excessive traffic noise also enjoy, such as the 2 properties that are directly to the east of the Thiara property, 5620 and 5632 E Horseshoe Road, that already have 6' tall masonry walls located at their northern property lines and at a 0' setback (see **Attachment L**) so as to shield the rear yards of these properties from the same noise that affects the Thiara property, albeit the Thiaras are even more impacted due to their having a lot with frontage on 3 sides that is directly adjacent to the 3-way stop at Doubletree Ranch Road and 56th Street.

Many PV Residences Affected by Noise Impacts are Permitted to Have Higher Walls or 0' Setbacks. There are plenty of other examples of lots adjoining noise-generating streets that have noise attenuation walls that are setback at 0' and/or have a height over 6' so as to mitigate the impacts of traffic noise. In fact, the Town Codes permit all homes that are on major arterials to have walls that are 8' above the natural grade (and at a lesser setback in the front yard area) (see Zoning Ordinance Section 2404.a.3) and residential homes that abut non-residential properties (such as special use permit properties) to have 8' walls (and at a 0' setback to the non-residential property) (See Zoning Ordinance § 2404.a.4). These Zoning Ordinance provisions evidence the

sensitivity that the Town ordinances have when particular residential properties are subjected to the excessive types of noise, similar to the noise impacts the Thiaras property is subjected to; and the Town has policies in place that are designed to help mitigate and attenuate similar traffic noise impacts.

Walls Along Scottsdale Road. An additional example is that the Town, when deannexing a portion of Scottsdale Road in the early 2000s, arranged for the City of Scottsdale to construct an 8' tall sound attenuation wall one-foot within the Scottsdale right-of-way so that all of the Paradise Valley property owners living along Scottsdale Road would enjoy the sound attenuation benefits of these 8' tall masonry walls built as close as possible to the source of the traffic noise on Scottsdale Road, said 8' walls extending from just north of Berneil to the Northern Avenue alignment (see **Attachment M, 8' Walls on Scottsdale Road**). By having these walls within the City of Scottsdale ROW, many homes along Scottsdale Road can effectively retain an 8' wall at a zero setback, even when such homes are completely remodeled, including 8' tall walls within the front yard area of vacant lots at the intersection of Double Tree Ranch Road and Scottsdale Road.

No Special Privilege. Granting a variance to the Thiaras will not be a special privilege but will instead permit their Home Site to have the same privileges enjoyed by other R-43 lots that are significantly impacted by traffic noise.

The Board of Adjustment cannot grant variances that will make any changes in the uses permitted in any zoning classification or zoning district or that will constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zoning district in which such property is located (Town Code Section 2-5-3(C)4).

The variance requested will not change any uses permitted in the R-43 zoning district and, for the reasons already stated above, will not grant a special privilege to the Thiara property that is inconsistent with the limitations placed upon other properties in the vicinity or the R-43 zoning district. In fact, the granting of a variance to permit the Thiaras to maintain a sound attenuation wall is consistent with Town ordinances, policies, and past practices of permitting sound attenuation walls where appropriate.

Conclusion

In summary, the Thiaras location and surroundings directly adjacent to a controlled stop three-way intersection, with two of the three adjoining streets being subjected to significant traffic volumes at most times of the day, along with a traffic-generating public school less than 400' to the south, create significant noise impacts for their Home Site that justify the granting of a variance for 6' noise attenuation wall at a location as close to the noise source as practicable. The 3-way stop and the school traffic were not self-imposed by the Thiaras; and having a noise attenuation wall is consistent with the privileges enjoyed by other R-43 lots that are significantly impacted by traffic noise, as well as being consistent with the goals of the Town's Wall/Fence Ordinance due to the extensive existing ROW on Doubletree Ranch Road. We humbly ask that the Board of Adjustment grant the variance request.

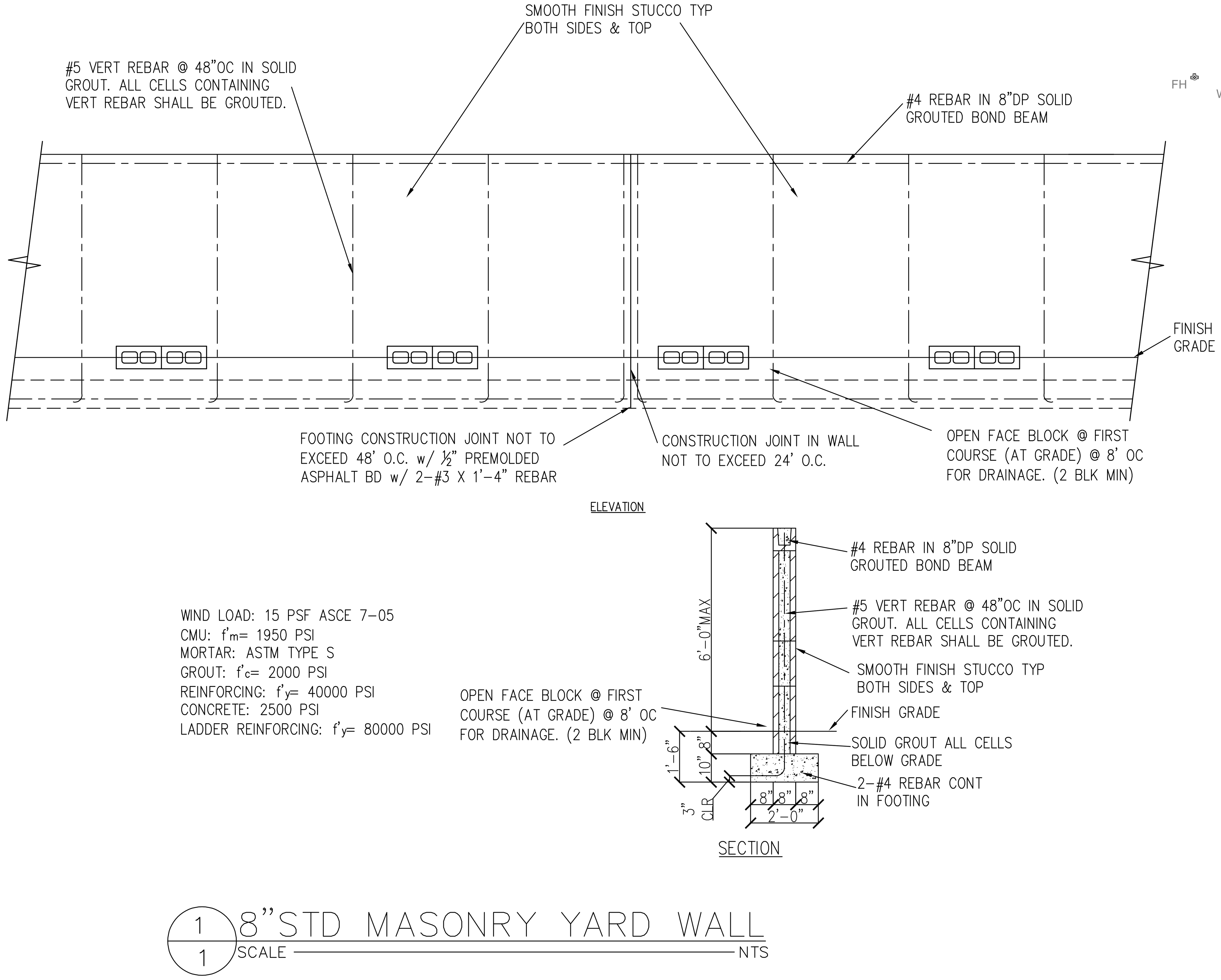
Very truly yours,
BURCH & CRACCHIOLO, P.A.

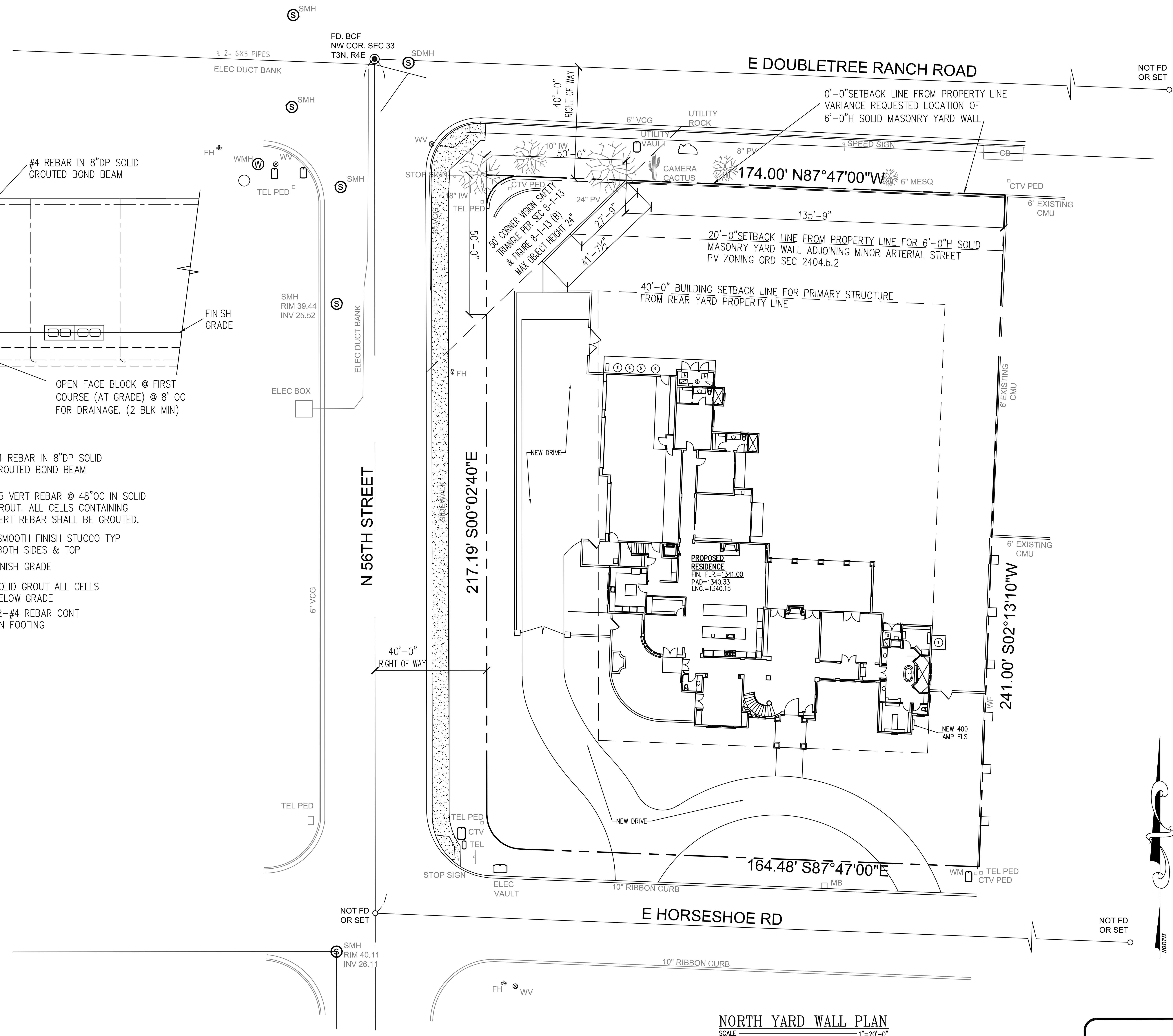
Andrew Miller
For the Firm

Enclosures: Attachments A-M

AMM:am

ATTACHMENT A





REVISIONS	BY

PROJECT:
A CUSTOM RESIDENCE FOR:
Sam & Daljit Thiara
Lot 1 Doubletree Ranchos
5608 E. Horseshoe Rd Paradise Valley, AZ 85253

MARK F. HOERNER & Associates, Inc.
Custom Residential Design & Engineering
(480) 968-6994
428 S. Gilbert Rd #112
Gilbert, Az. 85296
Mark F. Hoerner PE, A.I.B.D.

DO NOT SCALE DRAWINGS.

DRAWN	MFH
DATE	11/2022 REV
JOB NO.	2019-13
SHEET	1 OF SHEETS

ATTACHMENT B1

Map

10/7/2022 1:11:31 PM

ATTACHMENT B2

Map

12/2/2022 11:47:10 AM

ATTACHMENT C1

Thiara Home Site Development Timeline:

July 2016-
Laney Brandt (real estate agent) and Sam Thiara visited Town Hall and spoke to Sharon Bennett. They asked questions regarding the site. They told her the Thiara family was looking to purchase and then tear down the house at some point and wanted to know the Town redevelopment rules. Sharon stated that with the site being on Doubletree Ranch Road and 56th Street they would need to leave a 40' house setback on 3 sides and 20' on the east side. She stated the home can't exceed 24ft in height. Sam asked about Doubletree Ranch Road and Sharon stated that they could not have that as the home frontage. They asked about property walls and were advised that the rear wall at Doubletree Ranch Road (a 3' tall wall and wooden fence in 2016) could be replaced with a 6' tall masonry wall. They asked whether there were any other development restrictions. Sharon advised them that they could only build on 25% of the lot area and what the building envelope would be based on a frontage on Horseshoe Road. Based on what Sam Thiara was told by the Paradise Valley staff, the Thiara family decided to purchase the home because a new wall on Doubletree would provide the noise barrier and security they wanted. They also determined the lot would work for their desired home plans because having a 6' wall at the 0' line on the north side of the lot would allow them to effectively shield the bedrooms in their new home from the traffic noise on Doubletree and 56th Street.

August 2016-
Based on all this information the Thiaras knew that they could build the home they had always wanted with enough backyard space for a pool, pergola, garden and an active open space grass area to compliment the design of the house. They also knew that the rear wall on Doubletree Ranch Rd would be able to effectively block some of the noise from Doubletree and from the 3-way intersection with 56th Street. They knew that his intersection experiences heavy vehicle traffic, especially during school arrival and leave times. Having the rear wall close to the intersection would effectively block the vehicle noise and make their yard and future home plans enjoyable. They were told that the rear fence can change to a block wall in its current place and not exceed 6 feet. This would be far enough from the pool, patio and bedrooms to provide some privacy and lessen the noise level. They had reservations in the beginning about purchasing this lot due to heavy traffic on Doubletree Ranch Road and 56th Street, especially when motorcycles and sports cars accelerate at the 3-way stop and the muffler noise is unbearable. However, based on what they learned from the Town staff they felt better moving forward and appreciated the information upfront.

April 9, 2020-
The Thiaras submitted grading & drainage plan and new residence plans combined for initial plan review. The walls on the East and North property lines were shown at zero setback, just as the prior walls and fences had been at a 0' setback (see **Attachment C2, Prel G & D Plan**).

April 26, 2020-
Received back from Town the redline comments on G & D plan which had attached a letter from Chris Martinez and a 5-page attachment which identified all the necessary corrections required. The 5-page attachment from Chris Martinez identified all the items/details that the Town required to be changed on the G & D plans. Page 4 of this attachment, second item down from

the top of the page, shows that all walls were clearly identified on the plan as evidenced by a red check mark. (see **Attachment C3, Engineering Letter and 5-page Checklist**).

July 10, 2020-
All plans, including Masonry Wall, residence, and fountain plans and the associated permits are approved by Town of PV. A 6' tall masonry wall is shown at zero setback on both the North and East property lines on the approved plans. (See **Attachment C4, Masonry Wall Plan and Permit Approval**).

July 22, 2020-
Building permits are issued per approved plans, including wall plans. Separate permits issued for the house and the walls/fences, as well as a separate permit issued for the demolition of the house/septic and a permit for the courtyard fountain. Four permits total. (see **Attachment C5, Separate Permits for the Walls and the New Residence**).

July 29, 2020-
First project inspection (SWPPP) performed by Chris Martinez, passed.

August, 5, 2020-
Second project inspection (Demolition) performed by Town, passed.

August 26, 2020-
Third project inspection (House Footings) performed by Town, passed.

[Multiple, additional inspections performed by the Town through duration of construction.]

July 9, 2021-
Sam, Daljit, and their builder, Todd Curtis, met with Bob Lee to ask about adding a 3' wrought iron element to the 3' tall wall on the west side of the property to further discourage anyone walking down 56th Street from hopping the wall and trespassing on their property. Mr. Lee advised regarding adding 3' of wrought iron to the western wall and then advised that the north property wall could not be built per the approved Masonry Wall Plans. Mr. Lee stated that the not only was the North wall encroaching into the required 20' setback but the wall may also be within the "Site View Triangle" for the intersection of Doubletree & 56th St. The Thiaras determined to add the Site View Triangle as requested, but Sam asked to speak with Lisa Collins about the staff mistakes and how the family could deal with the devastating news regarding the North property line wall.

Mid-July, 2021-
Lisa Collins contacted Sam by phone. The Thiara family was in San Francisco driving around when Sam spoke with Lisa Collins, stating that he and others had come to the Town Hall regarding the 3 foot perimeter wall on the west side and whether they could add a view fence on the top of the 3' wall. He explained that Bob Lee met with them at that time and for the first time PV staff had advised that a 6' tall wall (that had been approved and permitted on the North property line) was approved in error and that the Thiaras should move the North property wall 20' to the south. Sam Thiara stated to Lisa that the design of the home and yard was based on

the perimeter walls being in the locations shown on the approved plans; and he noted that they already had been issued an approved wall permit. Ms. Collins stated that the Town made mistakes, that some people will be reprimanded, and that she would like to work with the Thiaras in resolving the issue. She said that one option is to go for a variance. Then she stated, "when you have a wall permit, then why even come in to ask about the walls, why not just build the walls as already permitted." Mr. Thiara agreed with that analysis and thought Ms. Collins was indicating that the Thiaras could just rely on the previously issued wall permit and build the North wall based on that already issued wall permit and the approved plans. Based on this conversation Mr. Thiara, mistakenly, believed that the family had, based on the already-issued permit, the permission needed to move forward with constructing the perimeter walls based on the already approved permit and the plans that accompanied the wall permit. The Thiaras later proceeded to construct the northern wall at the 6' height shown on the approved plans. He continued to believe this was permitted as the building inspectors approved the footings, the 4 foot wall inspection, and then the final 6 foot wall.

August 23, 2021-
Started building the walls

August 24, 2021-
Footing inspection performed by Town for all walls, passed.

August 27, 2021-
First wall grout (1st 4' lift) inspection performed by Town, passed.

September 1, 2021-
Final wall grout (bond beam) inspection performed by Town, passed.

(All walls were completed within the next 2-3 weeks from this last inspection.)

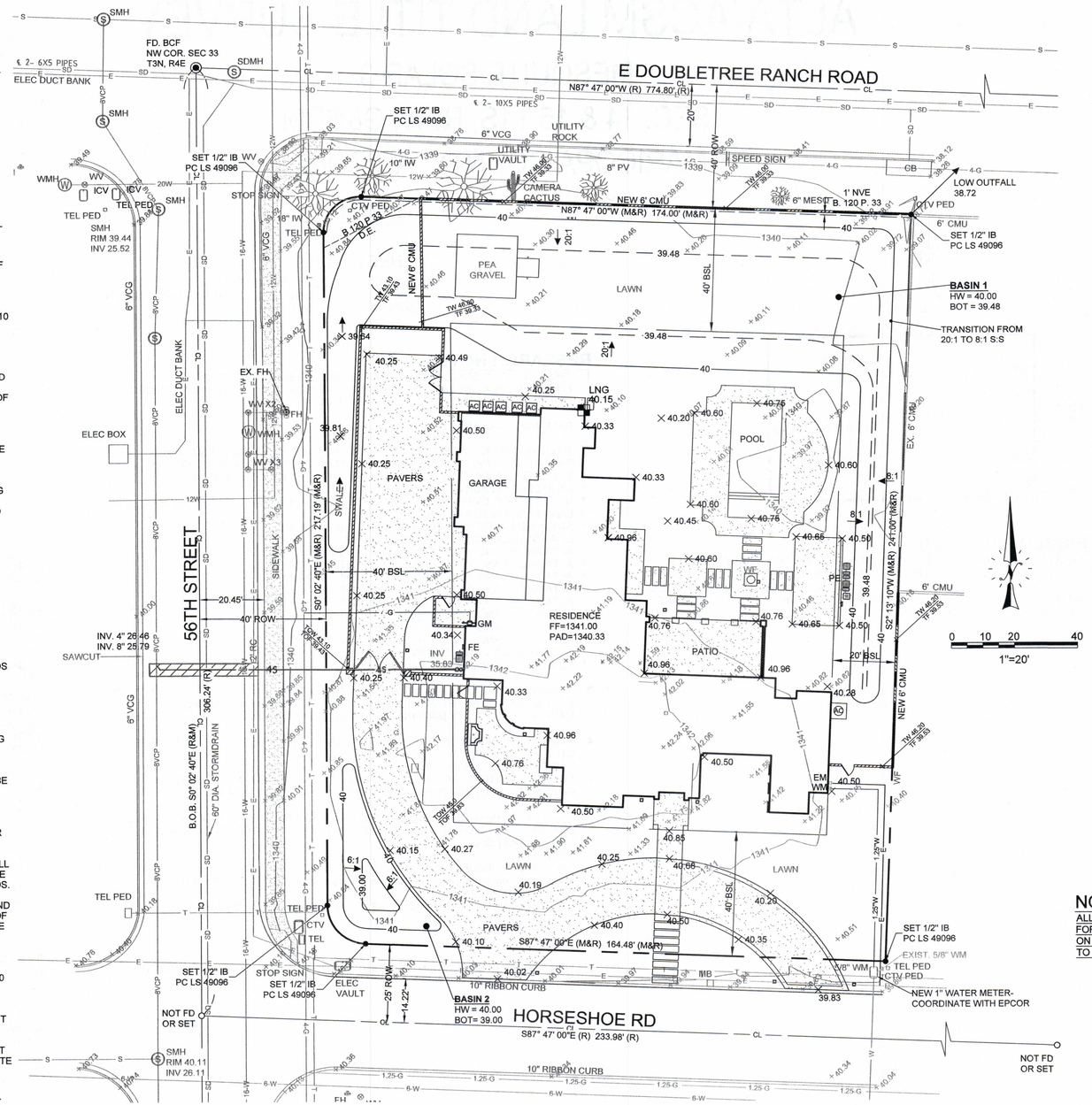
September 29, 2021-
Thiaras received email from Bob Lee to remove and relocate the North property wall to an approvable location or else the Thiaras would not be able to receive a Certificate of Occupancy for the home.

December 17, 2021
The Thiaras posted an assurance for the costs of having to relocate the Northern Property line wall and were granted a temporary CofO, with the understanding that they could seek a zoning interpretation request for a pre-existing subdivision wall exception and/or a variance.

June – July 2022
The Thiaras then filed an application requesting an interpretation of Section 2415.a.4 regarding being able to make structural additions and alterations to a subdivision wall (see **Attachment C6 – Code Interpretation Application**). The Interpretation the Thiaras requested was "denied" such that the Thiaras would not be permitted to modify or add to the pre-existing 3' tall wall and view fence on the North property line (see **Attachment C7 – Interpretation Response**), thus leading the Thiaras to request a variance for the Northern property line wall.

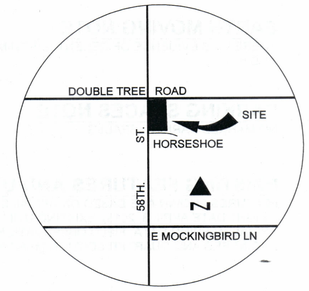
ATTACHMENT C2

1. PRIOR TO THE FIRST INSPECTION OF STRUCTURES WITHIN 3 FEET OF A SETBACK LINE, THE PROPERTY PINS SHALL BE PLACED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR OF THE STATE OF ARIZONA, AND THE PROPERTY LINE(S) IDENTIFIED.
2. WHERE EXCAVATION IS TO OCCUR THE TOP 4" OF EXCAVATED NATIVE SOIL SHALL REMAIN ON THE SITE AND SHALL BE REUSED IN A MANNER THAT TAKES ADVANTAGE OF THE NATURAL SOIL SEED BANK IT CONTAINS.
3. ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION COVERED BY THIS PLAN SHALL BE IN ACCORDANCE WITH THE MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) STANDARD SPECIFICATIONS AND DETAILS AND CURRENT SUPPLEMENTS THEREOF PER THE LOCAL MUNICIPALITY UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR IS TO COMPLY WITH ALL LOCAL STATE, AND FEDERAL LAWS AND REGULATIONS APPLICABLE TO THE CONSTRUCTION COVERED BY THIS PLAN.
5. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMITS REQUIRED TO COMPLETE ALL WORK COVERED BY THIS PLAN.
6. ALL EXTERIOR SITE LIGHTING SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR TYPE, LOCATION, HEIGHT, WATTAGE, AND LUMEN BASED UPON THE FIXTURES INSTALLED PURSUANT TO SECTION 1023 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCE FOR NON-HILLSIDE PROPERTIES, SECTION 2208 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCE FOR HILLSIDE PROPERTIES, OR AS SPECIFIED IN THE SPECIAL USE PERMIT FOR SPECIAL USE PERMIT PROPERTIES.
7. A DUST CONTROL PLAN AND PERMIT MEETING THE REQUIREMENTS OF RULE 310 OF THE MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS, AS AMENDED, IS REQUIRED
8. A SEPARATE RIGHT-OF-WAY PERMIT IS NECESSARY FOR ANY OFF-SITE CONSTRUCTION.
9. AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
10. EAVE PROJECTIONS INTO REQUIRED SETBACKS ARE LIMITED TO A MAXIMUM OF 24" PURSUANT TO SECTION 1008 OF THE TOWN OF PARADISE VALLEY ZONING ORDINANCES.
11. ALL STRUCTURES AND LANDSCAPING WITHIN THE SIGHT VISIBILITY TRIANGLE SHALL HAVE A 2 FOOT MAXIMUM HEIGHT.
12. ALL NEW AND EXISTING ELECTRICAL SERVICE LINES SHALL BE BURIED PER THE TOWN OF PARADISE VALLEY REQUIREMENTS.
13. IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE TO ARRANGE FOR THE RELOCATION AND RELOCATION COSTS OF ALL UTILITIES, AND TO SUBMIT A UTILITY RELOCATION SCHEDULE PRIOR TO THE ISSUANCE OF AN ENGINEERING CONSTRUCTION PERMIT.
14. EXISTING AND/OR NEW UTILITY CABINETS AND PEDESTALS SHALL BE LOCATED A MINIMUM OF 4' BEHIND ULTIMATE BACK OF CURB LOCATION.
15. POOL, SPA, BARBECUE AND ANY PROPOSED STRUCTURES OVER 8" ABOVE GRADE REQUIRE SEPARATE PERMIT APPLICATIONS.
16. POOLS SHALL BE CONSTRUCTED BY SEPARATE PERMIT AND SECURED FROM UNWANTED ACCESS PER TOWN CODE, ARTICLE 5-2.
17. ALL FILL MATERIAL UNDER SLABS AND WALKS SHALL BE COMPACTED TO NOT LESS THAN 95%.
18. SETBACK CERTIFICATION IS REQUIRED AND SHALL BE PROVIDED TO TOWN INSPECTOR PRIOR TO STEM WALL INSPECTION.
19. FOR BUILDING PADS THAT HAVE 1' OR MORE OF FILL MATERIAL, SOILS COMPACTION TEST RESULTS ARE REQUIRED AND SHALL BE PROVIDED TO TOWN INSPECTOR PRIOR TO PRE-SLAB INSPECTION.
20. FINISHED FLOOR ELEVATION CERTIFICATION IS REQUIRED AND SHALL BE PROVIDED TO TOWN INSPECTOR PRIOR TO FRAMING INSPECTION.
21. MAIL BOXES SHALL COMPLY WITH THE TOWN OF PARADISE VALLEY STANDARDS FOR MAIL BOXES IN THE RIGHTOF-WAY FOR HEIGHT, WIDTH AND BREAK AWAY FEATURES.
22. ALL PATIOS, WALKS, AND DRIVES TO SLOPE AWAY FROM BUILDING AND GARAGES AT A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS SPECIFIED OTHERWISE.
23. TRENCH BEDDING AND SHADING SHALL BE FREE OF ROCKS AND DEBRIS.
24. THE TOWN ONLY APPROVES THE SCOPE OF WORK AND NOT THE ENGINEERING DESIGN. ANY CONSTRUCTION QUANTITIES SHOWN ARE NOT VERIFIED BY THE TOWN.
25. THE APPROVAL OF THE PLANS IS VALID FOR 180 DAYS. IF A PERMIT FOR CONSTRUCTION HAS NOT BEEN ISSUED WITHIN 180 DAYS, THE PERMIT MUST BE RENEWED.
26. A TOWN INSPECTOR WILL INSPECT ALL WORK WITHIN THE TOWN'S RIGHTS-OF-WAY. NOTIFY TOWN INSPECTION SERVICES TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO STARTING CONSTRUCTION.
27. WHENEVER EXCAVATION IS NECESSARY, CALL ARIZONA811 BY DIALING 811 OR 602-263-1100, TWO (2) WORKING DAYS BEFORE EXCAVATION BEGINS.
28. EXCAVATIONS SHALL COMPLY WITH REQUIREMENTS OF OSHA EXCAVATION STANDARDS (29 CFR, PART 1926, SUBPART P). UNDER NO CIRCUMSTANCES WILL THE CONTRACTORS BE ALLOWED TO WORK IN A TRENCH LOCATED WITHIN THE TOWN'S RIGHT-OF-WAY WITHOUT PROPER SHORING OR EXCAVATION METHODS.
29. PERMIT HOLDER SHALL POST A 6 SQUARE FOOT (2'X3') IDENTIFICATION SIGN, MADE OF DURABLE MATERIAL, IN THE FRONT YARD OF SUBJECT PROPERTY AND NOT IN THE TOWN'S RIGHT-OF-WAY. THE SIGN MAY NOT EXCEED A MAXIMUM OF 6 FEET IN HEIGHT FROM GRADE TO TOP OF THE SIGN. THE SIGN MUST INCLUDE THE PERMITTEE OR COMPANY NAME, PHONE NUMBER, TYPE OF WORK, ADDRESS OF PROJECT AND TOWN CONTACT NUMBER, 480-348-3556.
30. WHEN DEEMED NECESSARY, A 6-FOOT HIGH CHAIN LINK FENCE MUST BE INSTALLED AROUND THE CONSTRUCTION AREA TO PREVENT ANY POTENTIAL SAFETY HAZARD FOR THE PUBLIC. THE FENCE SHALL BE SETBACK ST LEAST 10 FEET FROM ALL RIGHT-OF-WAY AND HAVE A 50 FOOT STREET CORNER SITE TRIANGLE WHERE APPLICABLE.
31. CLEAR ACCESS FOR NEIGHBORING PROPERTIES AND EMERGENCY VEHICLES MUST BE MAINTAINED AT ALL TIMES. CONSTRUCTION RELATED VEHICLES MUST BE LEGALLY PARKED ONLY ON ONE SIDE OF THE STREET OR JOB SITE PROPERTY.
32. ALL CONSTRUCTION DEBRIS AND EQUIPMENT MUST BE CONTAINED ON SITE AT ALL TIMES. CONTRACTOR AND PROPERTY OWNER MUST MAINTAIN THE JOB SITE FREE OF LITTER AND UNSIGHTLY MATERIALS AT ALL TIMES. CONSTRUCTION MATERIALS ARE PROHIBITED IN THE TOWN'S RIGHT-OF-WAY.
33. CONSTRUCTION ACTIVITIES ARE PERMITTED BETWEEN THE HOURS OF 7 AM AND 5 PM MONDAY THROUGH FRIDAY. CONSTRUCTION ACTIVITIES MAY START ONE (1) HOUR EARLIER DURING THE SUMMER (MAY 1ST THROUGH SEPTEMBER 30TH).
34. THE USE AND OPERATION OF FUEL-FIRED GENERATORS IS PROHIBITED UNLESS DUE TO A HARDSHIP. TOWN APPROVAL SHALL BE REQUIRED.
35. THE CONTRACTOR AND PROPERTY OWNER SHALL BE LIABLE FOR ANY DAMAGE DONE TO ANY PUBLIC PROPERTY AS A RESULT OF ANY CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES. NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL AFFECTED RIGHTS-OF-WAY ARE CLEANED AND/OR REPAIRED TO THEIR ORIGINAL CONDITION AND UNTIL ANY AND ALL DAMAGES TO AFFECTED PROPERTIES ARE RESTORED TO ORIGINAL CONDITION.
36. A KEYED SWITCH SHALL BE REQUIRED ON ALL NEW AND EXISTING ELECTRIC ENTRY GATES. THE KEYED SWITCH SHALL BE INSTALLED IN A LOCATION THAT IS READILY VISIBLE AND ACCESSIBLE. KNOX BOX ORDER FORMS ARE AVAILABLE AT THE TOWNS BUILDING SAFETY DEPARTMENT.
37. PROPERTY OWNER, BUILDER, OR GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR CONTROLLING DUST FROM THE SITE AT ALL TIMES. ALL MEANS NECESSARY SHALL BE USED BY THE BUILDER OR GENERAL CONTRACTOR TO CONTROL THE EXISTENCE OF DUST CAUSED BY ANY EARTHWORK, SPRAY APPLICATION OF MATERIALS, OR OTHER DUST-CAUSING PRACTICES REQUIRED BY THE CONSTRUCTION PROCESS.
38. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE TOWN FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.
39. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTION DITCHES, PIPES PROTECTIVE BERMS, CONCRETE CHANNELS OR OTHER MEASURES DESIGNED TO PROTECT PROPOSED AND EXISTING IMPROVEMENTS FROM RUNOFF OR DAMAGE FROM STORM WATER, MUST BE CONSTRUCTED PRIOR TO THE CONSTRUCTION OF ANY IMPROVEMENTS.



LEGEND

1341	EXISTING CONTOUR
40.02	EXISTING GRADE
25	PROPOSED CONTOUR
x 25.43	PROPOSED GRADE
AC	AIR CONDITIONER
BSL	BUILDING SETBACK LINE
CTV PED	CABLE RISER
CB	CATCH BASIN
CMU	CONCRETE MASONRY UNIT
	DIRECTION OF DRAINAGE
D.E.	DRAINAGE EASEMENT
EM	ELECTRIC METER
FF	FINISHED FLOOR
	FIRE HYDRANT
FE	FOUNTAIN EQUIPMENT
G	GAS
GM	GAS METER
	GAS VALVE
ICV	IRRIGATION VALVE
IW	IRONWOOD
LNG	LOWEST NATURAL GRADE
MB	MAIL BOX
	MANHOLE
MESQ	MESQUITE
NVE	NON-VEHICULAR EASEMENT
PV	PALO VERDE
PE	POOL EQUIPMENT
R/W	RIGHT OF WAY
TF	TOP OF FOOTING
TW	TOP OF WALL
	SAGUARO
CO	SEWER CLEAN OUT
8VP	SEWERLINE
	SIGN
8VP	STORMDRAIN
TEL	TELEPHONE RISER
E	UNDERGROUND ELECTRIC
VCG	VERTICAL CURB & GUTTER
W	WATER
WF	WATER FEATURE
WM	WATER METER
	WATER VALVE



VICINITY MAP
N.T.S.

OWNER
SAM AND DALJIT THIARA
5517 E. LAS PIEDRAS WAY
CAVE CREEK, AZ 85331

ARCHITECT
MARK F. HOERNER & ASSOCIATES, INC.
428 S. GILBERT ROAD, #112
GILBERT, AZ 85296
480-968-6994
MFHInc@gmail.com

SITE ADDRESS
5608 E. HORSESHOE ROAD
PARADISE VALLEY, 85253

LEGAL DESCRIPTION
LOT 1, DOUBLETREE RANCHOS, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE MARICOPA COUNTY RECORDER IN BOOK 120 OF MAPS, PAGE 33.

LOT AREA
43617.53 S.F. OR 1.00 AC. ±

CONSTRUCTION YEAR
1960 (DEMO. HOUSE)

DISTURBED AREA
43617 S.F. OR 1.00 AC.±

ZONING
R-43

A.P.N.
168-43-004

PROJECT DESCRIPTION
THIS IS A NEW RESIDENCE WITH NEW PATIOS AND DRIVEWAY. NEW LANDSCAPING AND RETENTION BASINS WILL BE CONSTRUCTED.

BENCHMARK
BRASS CAP FLUSH AT INTERSECTION OF DOUBLETREE RANCH ROAD AND 56TH STREET, GDACS POINT NO. 26090-1, ELEV. = 1339.448 FT., NAVD 88 DATUM.

FINISHED FLOOR CERTIFICATION
THE FINISHED FLOOR ELEVATION SHOWN ON THIS PLAN OF 1341.00 FEET FOR THE NEW RESIDENCE IS A MINIMUM OF 12" ABOVE THE 100 YR STORM ELEVATION OF 1340.00 FEET.

DRAINAGE STATEMENT
THE LOWEST FINISHED FLOOR ELEVATION OF 1341.00 FEET IS 2.28 FEET ABOVE THE ULTIMATE LOW OUTFALL OF 1338.72 FEET AT THE NORTHEAST CORNER OF THE PROPERTY.

THE LOWEST FINISHED FLOOR ELEVATION OF 1341.00 FEET IS SAFE FROM INUNDATION DURING A 100-YEAR PEAK RUN-OFF EVENT IF CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS.

RETENTION IS PROVIDED FOR THE 100 YEAR 2 HOUR STORM WATER DRAINAGE DESIGN MANUAL.

THE PROPOSED DEVELOPMENT DOES NOT IMPACT DRAINAGE CONDITIONS OF ADJOINING LOTS.

EDWARD GOOKIN P.E. — DATE

AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED, AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR — DATE

REGISTRATION NUMBER

APPROVED: _____
TOWN OF PARADISE VALLEY TOWN ENGINEER — DATE

THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH THE TOWN OF PARADISE VALLEY REQUIREMENTS PRIOR TO THE ISSUE OF PERMIT. THE TOWN NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. THE COMPLIANCE APPROVAL SHALL NOT PREVENT THE TOWN ENGINEER FROM REQUIRING CORRECTIONS OF ERRORS OR OMISSIONS IN THE PLANS TO BE FOUND IN VIOLATION OF LAWS OR ORDINANCES.

Q.S. 26-41

NOTE
ALL MASONRY WALLS SHALL HAVE WEEP HOLES FOR DRAINAGE - MINIMUM TWO BLOCKS ROTATED ON EDGE EVERY 13' AT GRADE LEVEL ACCORDING TO THE TOPV 8" MASONRY DETAIL.

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

GENERAL NOTES
1. CONTRACTOR TO VERIFY LOCATION OF UTILITIES BY CONTACTING BLUE STAKE PRIOR TO CONSTRUCTION.
2. NEW CMU WALLS SHALL HAVE 2 OPEN FACE BLOCK (AT GRADE) FOR DRAINAGE FOR EVERY 13 FOOT SECTION OF WALL PER TOWN OF PARADISE VALLEY STANDARD DETAIL. NEW CMU WALLS ARE TO BE FINISHED ON BOTH SIDES PER SECTION 2043 OF THE TOWN'S ZONING ORDINANCE.
3. EXISTING AND PROPOSED UTILITIES ARE UNDERGROUND. WHERE UTILITY LINES CROSS RETENTION AREA, A MINIMUM 30" COVER SHALL BE MAINTAINED OVER UTILITY LINES. ALL UTILITIES SHALL COMPLY WITH TOWN OF PARADISE VALLEY UNDERGROUNDING OF UTILITY REQUIREMENTS.
4. THIS IS NOT A BOUNDARY SURVEY. ALL BENCHMARK INFORMATION, DISTANCE-BEARING, BOUNDARY, AND TOPOGRAPHIC INFORMATION SHOWN ON THIS DRAWING OBTAINED FROM A SURVEY BY GOOKIN ENGINEERS DATED 7-11-2019.
5. ALL STEM WALLS/ HOUSE WALLS TO BE WATERPROOFED A MINIMUM OF 1' ABOVE FINISHED GRADE PER DETAILS ON ARCHITECTURAL PLANS.
6. PER STRUCTURAL DETAILS TOP OF FOOTING FOR SITE WALLS IS MINIMUM OF 8" BELOW FINISHED GRADE.
7. PROVIDE FALL PROTECTION ALONG RETAINING WALLS WITH DROP IN EXCESS OF 30".
8. NO WORK OF ANY KIND MAY COMMENCE UNTIL ALL STORM WATER POLLUTION PREVENTION BMP's ARE INSTALLED, INSPECTED AND APPROVED BY THE TOWN.

RETENTION CALCULATIONS
Vr= C(R/12)A
Vr= 0.45(2.2"/12) 43617.53 = 3598 CF
A= 43617.53 SQUARE FEET
R= 2.2" (100 YEAR/2 HOUR)
C= 0.45

RETENTION VOLUME REQUIRED: **3598** CUBIC FEET

VOLUME PROVIDED: BASIN 1 3352 CUBIC FEET
BASIN 2 365 CUBIC FEET
TOTAL **3717** CUBIC FEET

UTILITY PROVIDERS
WATER: EPCOR
SEWER: PARADISE VALLEY SEWER SYSTEM
ELECTRIC: APS
TELEPHONE: CENTURY LINK
GAS: SOUTHWEST GAS
CABLE TV: COX TV

NATIVE PLANT INVENTORY
ALL NATIVE PLANTS IMPACTED BY CONSTRUCTION SHALL BE RELOCATED ONSITE. SEE LANDSCAPE PLAN AND NATIVE PLANT INVENTORY AND SALVAGE PLAN.

EARTHWORK QUANTITIES*
CUT=985.47 C.Y. FILL=127.21 C.Y. NET=858.26 C.Y. (CUT)

NOTE: THE CUT AND FILL NUMBERS ARE TO FINISHED GRADE AND DO NOT ACCOUNT FOR THICKNESS OF SLABS OR IMPORTED BASE COURSE.

* EARTHWORK QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY AND DO NOT INCLUDE POOL/SPA AREAS OR ADJUSTMENTS FOR SHRINK OR SWELL.

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASIN FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
040049	1775 10-16-13	"L"	10-16-2013	"X"	N/A

Two working days before you dig
CALL FOR THE BLUE STAKES
Within Maricopa County
602-263-1100
Within Maricopa County
1-800-782-5348
BLUE STAKE CENTER

GRADING & DRAINAGE PLAN
THIARA RESIDENCE
5608 E. HORSESHOE ROAD
PARADISE VALLEY, ARIZONA 85253

Scale 1"=20'	SHEET 1 of 1 SHEETS
Date 02/11/2020	JOB NO. 2610
Rev	
Designed SC	
Drawn AJ	
File: 2610 THIARA_03.11.2020.dwg	

GOOKIN ENGINEERS
ENGINEERS • HYDROLOGISTS • PLANNERS • SURVEYORS
4203 NORTH BROWN AVENUE
SCOTTSDALE, ARIZONA 85251
480-947-3741
Civil@Gookin.biz

ATTACHMENT C3

April 26, 2020

Chris Martinez
Senior Engineering Technician
Town of Paradise Valley
6401 E Lincoln Drive
Paradise Valley, AZ 85253

Edward Gookin

Re: 5608 E Horseshoe Rd –Building Permit BD20-42978 – 1st review comment

Dear Edward

The Improvement Plans were reviewed for the building permit and generated the following comment:

1. Sheet 1:
   - i.) Provide Maricopa County Dust Control Permit prior to permit issuance
   - ii.) ADEQ NOI prior to permit issuance
   - iii.) Provide recording document information for all easements on property
   - iv.) 0.45 "C" value is lower than typically provided for Town of PV redevelopment. Provide a weighted runoff coefficient table to support .45 value including all area types and size of different areas with coefficient value for each area.
   - v.) Label where wall openings are required to allow water to pass to designated basin. Such as along the northwest corner where the swale is conveying flows to the basin, but no drainage openings are called out. Typical for entire site.
   - vi.) Provide more design in the south half of the site. **A)** Driveway needs slopes or more grades shown to prove water will get to the basin in the southeast corner and not runout into the right of way. **B)** The Area between the south line of the house and the north driveway line is unclear, is rain water going to retain in this location? Or should it convey to the north basin?
   - vii.) Add note for sewer tie in "Per separate Right of Way Permit"
   - viii.) The Town of PV is in preliminary Design phase of a right turn lane along 56th St. northbound turning east at Doubletree. Coordinate with me (Chris Martinez) if this Town CIP project impacts you sites design or if you would like to review any of the records for this project.

2. SWPPP: Approved

Please provide an electronic copy (in PDF format) of the updated plans and documents for staff review. Once the Engineering plan is approved by the Engineering dept. the plan will be routed back to the building safety department and inserted in the submittal package to be processed back to the applicant. If you have any questions, please contact me at 480-348-3527.

Sincerely,

Chris Martinez
Senior Engineering Technician

~~6705~~ 5608 E HORSESHOE ~~LN~~ RD

BD20-4297~~35~~ 78

1ST REVIEW 4-~~6~~ 28-20

TOWN OF PARADISE VALLEY

REQUIREMENTS FOR ALL SINGLE-FAMILY RESIDENCES, SPECIAL USE PERMITS (REGARDLESS OF VALUE), PROJECTS OF $500,000 VALUE OR GREATER, AND 1000 SQ. FT. OF ADDITIONAL IMPERVIOUS SURFACE*. SFR

*Newly proposed impervious surfaces of 300 sq. ft. or greater may be subject to these requirements pending Engineering Department review.

1) **Completed checklist shall be submitted with each submittal.**

2) ✓ No development shall be permitted which causes an increased flow of surface water discharge from the subject site. On-site storm water retention shall be adequate to contain the volume of water required by the Town's Storm Drainage Design Manual (SDDM), current edition. (TC 5-10-8, B)

Storm Drainage Design Manual: - MAY NEED TO UPDATE 'C' VALUE

http://www.paradisevalleyaz.gov/DocumentCenter/View/5630/Storm-Drainage-Design-Manual-2018

3) No development of property shall take place unless or until the developer or owner constructs either before, or simultaneously with development, sanitary sewer lines and a connection to private wastewater treatment or Town/City of Phoenix sanitary sewer in accordance with Town/City of Phoenix and Maricopa County Health Department standards - if the cost to extend the sanitary sewer main is 10% or less the value of the total improvements. (TC 5-10-8, C). For developments that require a sewer extension, an issued right-of-way permit including Town and County approved sewer main extension plans, Maricopa County Approval to Construct (ATC), and naming a licensed and insured contractor on the right-of-way permit to perform the sewer line work must be obtained prior to receiving an issued building permit.

TIEING INTO TOWN SEWER *NO BUYBACK REQ

4) ✓ Fire hydrant must be installed if an existing hydrant is not located within 400' of property line. (TC 5-10-8, D) ACCROSS STREET OF SW CORNER & ALONG WEST PL

5) ✓ No development of property shall take place until the electrical and electronic wires are undergrounded from the property line to the electrical service panel. (TC 5-10-8, E)

6) ✓ No permit shall be issued until the developer grants half-street right-of-way to the Town in conformance with the Town's General Plan (if required). (TC 5-10-7, B) 25', 25', (40' D.TREE)

7) N/A No permit shall be issued until the developer grants a drainage easement and maintenance agreement for all watercourses on the property to the Town (if required). (TC 5-10-7, C)

8) ✓ No development of property shall take place unless or until the developer or owner constructs either before, or simultaneously with development, half-street improvements (if required). (TC 5-10-8, F)

9) ? Provide Drainage Report per Storm Drainage Design Manual. (SDDM, Section 6) - NO OFFSITE FLOWS IMPACT SITE ACCORDING TO ENGINEER'S STATEMENT

10) Permits. Provide the following documentation:

N/A Provide proof of US Army Corps 404 Permit and/or complete Town of Paradise Valley 404 Certification form signed by the Owner or Engineer of Record.

N/A Provide proof of ADEQ 401 Permit

REQUIRED → Provide copy of ADEQ NOI and maintain SWPPP onsite.

→ Provide Maricopa County Dust Control Permit

11) Grading & Drainage Plan Cover Sheet must contain the following information:

- ✓ All sheets must be signed and sealed by a Registered Civil Engineer in the State of Arizona.
- ✓ Vicinity Map
- ✓ Owner Information
- ✓ Civil Engineer Information
- ✓ Town of Paradise Valley General Notes
- ✓ Engineer's Notes (as applicable)
- ✓ Legend
- ✓ Abbreviations
- ✓ Utility Providers (including but not limited to)
  a. Water
  b. Sanitary Sewer
  c. Electric
  d. Telephone
  e. Natural Gas
  f. Cable TV
- ✓ Blue Stake Contact Information
- ✓ Earthwork Quantities (Cut, Fill & Net Cut/Fill)
- ✓ Native Plants Statement. Provide statement stating that "All native plants impacted by construction shall be relocated on site. See Landscape Plan and Native Plant Inventory & Salvage Plan."
- ✓ Drainage Statement (Civil Engineer shall confirm and provide the following)
  a. Ultimate storm water outfall locations and elevations
  b. Proposed development does not impact drainage conditions of adjoining lots
  c. Retention is provided for the 100-year, 2-hour storm event per the Storm Water Drainage Design Manual
  d. The lowest finish floor elevation of XXXX.XX is safe from inundation during a 100-year peak run-off event if constructed in accordance with the approved plans.
- ✓ Flood Insurance Rate Map (FIRM) Data
- ✓ Finished Floor Certification. Engineer shall certify that the finished floor elevation shown on the plan of XXXX.XX is a minimum of 12" above the 100-year storm elevation of XXXX.XX.
- ✓ Site Data
  a. Parcel Number (APN)
  b. Property Address
  c. Zoning Classification
  d. Lot Area (S.F. & A.C.)
  e. Construction Year
- ✓ Legal Description
- ✓ Benchmark Data (NAVD 88 DATUM)
- ✓ Project Description (provide brief description of project)
- N/A Sheet Index

✓ As-built Certification Signature Block

✓ Town of Paradise Valley Approval Signature Block Including Language Below:

This set of plans has been reviewed for compliance with Town of Paradise Valley requirements prior to issuance of permit. The Town neither accepts nor assumes any liability for errors or omissions. This compliance approval shall not prevent the Town Engineer from requiring corrections of errors or omissions in the plans to be found in violation of laws and ordinances.

12) Grading & Drainage Plan Sheets must contain the following information:

✓ All sheets must be signed and sealed by a Registered Civil Engineer in the State of Arizona.

✓ North Arrow and Scale (1" =20')

✓ Property and right-of-way lines

✓ Existing spot elevations and/or contours (based on NAVD 88 Datum; no assumed elevations)

✓ Proposed elevations and/or contours (based on NAVD 88 Datum; no assumed elevations)

✓ Show Lowest Natural Grade (LNG) under the footprint of all structures

✓ Finish Floor Elevation and Building Pad Elevation

a. The building pad shall not exceed two (2) feet in height above lowest natural grade (LNG) except where required to protect the building against flooding, in which case the pad shall be one (1) foot above the water surface elevation of the 100-year event.

N/A Show washes in an undisturbed state except for modifications approved by the Town Engineer that are required to accommodate storm water. (SDDM, Section 3-6, A, 2)

NO HISTORIC WASHES OBSERVED - ENGINEER STATES NO OFFSITE FLOWS REACH SITE.

N/A Provide five (5) cross sections of washes equally spaced through the property. (SDDM, Section 3-6, A, 2)

N/A Washes shall not be realigned except as approved by the Town Engineer and Community Development Director when necessary to accommodate storm water or to restore a disturbed wash to a more natural state. (SDDM, Section 3-6, A, 2)

N/A A Drainage Easement and Maintenance Agreement shall be provided for all washes. (TC 5-10-7, C)

✓ Building setback lines for all structures, sport courts, etc.

✓ All existing and proposed improvements including buildings, ramada, pool, guest house, sport courts, driveways, etc.

___ Existing easements with recorded document information. ← PROVIDE PUE, DRAINAGE, & ALL OTH ESMT RECORDING INFO.

___ On-site retention with retention basins and calculations. (SDDM, Section 3)

N/A 100-year peak discharge rate (CFS) at all entry and exit locations, and flow concentration points as identified in drainage report.

• 45 C VALUE TO BE JUSTIFIED WITH WEIGHTED RUNOFF COEFFICIENT TABLE

___ Proposed on-site storm water retention infrastructure, including storage facilities, design criteria/calculations, volume required, volume provided, and basin locations. Retention storage facilities shall be located to intercept flows generated for each on-site tributary area within the developed property to the maximum extent possible. (SDDM, Section 3) - MORE INFO

TOWN CAPITAL IMPROVEMENT PROJECT IS IN PRELIMINARY DESIGN TO ADD RT. TURN LN ON 56TH ST. ONTO DOUBLETREE RANCH RD. COORDINATE W/PV IF THIS AFFECTS Y/C SITE.

✓ Show method of pool/spa backwash or specify type of filter (cartridge) that does not require backwashing.

✓ Clearly identify all existing and proposed walls including top of wall, bottom of wall and adjacent grade elevations.

PROVIDE → Clearly identify all drainage openings in walls.

✓ Existing and proposed street width from the monument line, including any proposed saw cuts, asphalt, curbing, etc. If existing street is not centered on monument line, show full street width.

✓ Location of all existing dry utilities, cabinets, pedestals, etc.

a. Existing and/or new utility cabinets and pedestals shall be located a minimum of 4' behind ultimate back of curb location.

✓ Location of nearest fire hydrant and new fire hydrant. (if required)

PER SEPARATE ROW PERMIT → Location of nearest sanitary sewer and/or new sewer plans. If new sewer is required, the sewer shall be approved by the Town and MCESD AOC shall be provided prior to final grading approval and/or Certificate of Occupancy.

a. Contact City of Phoenix for sewer main extension and reimbursement agreement requirements within their jurisdiction.

13) One (1) CD in Adobe Reader/PDF Format of the grading & drainage plan shall be submitted prior to permit being issued.

14) Native Plant Inventory Plan (including Palo Verdes, Saguaros, mesquites, ocotillos, barrel cacti, Christmas Tree cacti, Organ Pipe cacti, and Ironwoods) and Native Salvage Plan

15) Provide Grading and Drainage Stormwater Pollution Prevention Plan (SWPPP) providing the location and details of the following (SDDM Section 5-2):

✓ Area of Disturbance
__ ADEQ NOI Certificate # (provide hard copy of ADEQ NOI) } REQUIRED PRIOR TO ISSUANCE OF PERMIT
__ MCESD Dust Control Permit # (provide hard copy of permit)
✓ Grading & Drainage Base Plan (show contours and flow arrows)
✓ Stabilized Construction Entrance
✓ Dust Control (include location of water source, meter, backflow prevention, etc.)
✓ Sedimentation Control
N/A Inlet Protection
✓ Concrete/Washout Vessel
✓ Dumpster/Trash Container
✓ Paint/Solvent Washout Vessel
✓ Hazardous Waste Containment Area
__ Other

✓ Provide General Note:

1. No work of any kind may commence until all Storm Water Pollution BMPs are installed, inspected, and approved by the Town.

16) Provide Demolition Only Stormwater Pollution Prevention Plan (SWPPP) providing the location and details of the following (SDDM Section 5-2):

__ Area of Disturbance (acres)

__ ADEQ NOI Certificate # (provide hard copy of ADEQ NOI)
__ MCESD Dust Control Permit # (provide hard copy of permit)
__ Grading & Drainage Base Plan (show contours, and flow arrows)
__ Stabilized Construction Entrance
__ Dust Control (include location of water source, meter, backflow prevention, etc.)
__ Sedimentation Control
__ Inlet Protection
__ Other

Provide General Note:

1. No work of any kind may commence until all Storm Water Pollution BMPs are installed, inspected, and approved by the Town.
2. Sedimentation control devices (silt barriers) shall remain in place after demolition is complete. Sedimentation control devices shall be inspected monthly, after each rain event and maintained as needed to be kept in proper working order by permit Applicant and/or Owner.
3. Sedimentation control device inspection log shall be maintained by Applicant and/or Owner and made available to the Town upon request.

17) All finished floor elevations must be certified by a Registered Civil Engineer in the State of Arizona, to be 12" above 100-year storm elevation

18) Effective January 5, 1991, Pool Enclosures shall comply with Section 5-11-1 of the Town Code of Ordinances.

19) Certain designated lots in the Town require a Fire Indemnity Agreement with the Town of Paradise Valley. Please call the Building Department at 480-348-3692 to verify if property is in designated area.

20) Items required prior to Final Grading Inspection approval:

__ All landscaping shall be installed prior to final grading inspection regardless if it is installed by contractor or owner.

__ Finished Floor Elevation Certificate
__ Recorded Storm Drainage Facilities Agreement
__ One (1) CD in Adobe Reader/PDF Format of the grading & drainage as-built plans

Water and Sanitary Sewer Service Providers

Please contact the appropriate water and sanitary sewer service provider for specific requirements related to service extensions, connections, fire hydrant installations, septic tanks, etc.

Utility Services Website: http://paradisevalleyaz.gov/510/Utility-Services

SEWER APPLICATION/INFORMATION SHEET

Date 4-28-20

Address 5608 E HORSESHOE RD

Lot No./Subdivision 1 - DOUBLETREE RANCHOS

Contact Name ~~TODD CURTIS~~ MARK HOEFNER

Phone No. 480-968-6994

Building Permit No. (if applicable) BD20-42978

Water Meter Size 1"

No Sewer Available _____

Phoenix Sewer System _____

PV
~~Scottsdale~~ Sewer System ✓

_____ Zone A (91st Ave. WWTF)

_____ Zone B (Scottsdale Water Campus)

Sewer Tap Available ✓ NO

_____ YES

Sewer Buyback Required: ✓ NO

_____ YES $_____ TOWN

$_____ RESIDENT _____
(Name)

Right-of-Way Permit Reqd _____ NO

✓ YES

Plumbing Permit Required _____ NO

_____ YES

COMMENTS:

REVIEWED BY C.M.

ATTACHMENT C4

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS TABLE R602.3(1)

DESCRIPTION OF BUILDING ELEMENTS	NUMBER & TYPE OF FASTENER (a,b,c)	SPACING OF FASTENERS
ROOF		
BLOCKING BETWEEN CEILING JOISTS OR RAFTERS TO TOP PLATE	4–8d BOX (2½"X 0.113") OR 3–8d COMMON (2½"X 0.131") OR 3–10d BOX (3"X 0.128") OR 3–3" X 0.131" NAILS	TOE NAIL
CEILING JOISTS TO TOP PLATE	4–8d BOX (2½"X 0.113") OR 3–8d COMMON (2½"X 0.131") OR 3–10d BOX (3"X 0.128") OR 3–3" X 0.131" NAILS	PER JOIST, TOE NAIL
CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS	4–10d BOX (3"X 0.128") OR 3–16d COMMON (3½"X 0.162") OR 4–3" X 0.131" NAILS	FACE NAIL
CEILING JOISTS ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	TABLE R802.5.1(9)	FACE NAIL
COLLAR TIE TO RAFTER, FACE NAIL OR 1¼"X 20GA RIDGE STRAP RAFTER	4–10d BOX (3"X 0.128") OR 3–10d COMMON (3"X 0.148") OR 4–3" X 0.131" NAILS	FACE NAIL EACH RAFTER
RAFTER OR ROOF TRUSS TO PLATE	3–16d BOX NAILS (3½"X 0.135") OR 3–10d COMMON NAILS (3"X 0.148") OR 4–10d BOX (3"X 0.128") OR 4–3" X 0.131" NAILS	2 TOE NAILS ON ONE SIDE AND 1 TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS[1]
ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS OR ROOF RAFTER TO MINIMUM 2" RIDGE BEAM	4–16d (3½"X 0.135") OR 3–10d COMMON NAILS (3"X 0.148") OR 4–10d BOX (3"X 0.128") OR 4–3" X 0.131" NAILS	TOE NAIL
	3–16d BOX (3½"X 0.135") OR 2–16d COMMON (3½"X 0.162") OR 3–10d BOX (3"X 0.128") OR 3–3" X 0.131" NAILS	END NAIL
WALL		
STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON (3½"X 0.162")	24"OC FACE NAIL
	10d BOX (3"X 0.128") OR 3" X 0.131" NAILS	16"OC FACE NAIL
STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d BOX (3½"X 0.135") OR 3" X 0.131" NAILS	12"OC FACE NAIL
	16d COMMON (3½"X 0.162")	16"OC FACE NAIL
BUILT-UP HEADER (2" TO 2" HEADER WITH ½" SPACER)	16d COMMON (3½"X 0.162")	16"OC EACH EDGE FACE NAIL
	16d BOX (3½"X 0.135")	12"OC EACH EDGE FACE NAIL
CONTINUOUS HEADER TO STUD	5–8d BOX (2½"X 0.113") OR 4–8d COMMON (2½"X 0.113") OR 4–10d BOX (3"X 0.128")	TOE NAIL
TOP PLATE TO TOP PLATE	16d COMMON (3½"X 0.162")	16"OC FACE NAIL
	10d BOX (3"X 0.128") OR 3" X 0.131" NAILS	12"OC FACE NAIL
DOUBLE TOP PLATE SPLICE FOR SDC'S A–D_2 WITH SEISMIC BRACED WALL LINE SPACING <25'	8–16d COMMON (3½"X 0.162") OR 12–16d BOX (3"X 0.135") OR 12–10d BOX (3"X 0.128") OR 12–3" X 0.131" NAILS	FACE NAIL ON EACH SIDE OF END JOINT (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
DOUBLE TOP PLATE SPLICE SDC'S D_0, D_1, OR D_2 AND BRACED WALL SPACING >25'	12–16d (3½"X 0.135")	
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (3½"X 0.162")	16"OC FACE NAIL
	16d BOX (3½"X 0.135") OR 3" X 0.131" NAILS	12"OC FACE NAIL
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (AT BRACED WALL PANEL)	3–16d BOX (3½"X 0.135") OR 2–16d COMMON (3½"X 0.162") OR 4–3" X 0.131" NAILS	3 EACH 16"OC FACE NAIL 2 EACH 16"OC FACE NAIL 4 EACH 16"OC FACE NAIL
TOP OR BOTTOM PLATE TO STUD	4–8d BOX (2½"X 0.113") OR 3–16d BOX (3½"X 0.135") OR 4–8d COMMON (2½"X 0.131") OR 4–10d BOX (3"X 0.128") OR 4–3" X 0.131" NAILS	TOE NAIL
	3–16d BOX (3½"X 0.135") OR 2–16d COMMON (3½"X 0.162") OR 3–10d BOX (3"X 0.128") OR 3–3" X 0.131" NAILS	END NAIL
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	3–10d BOX (3"X 0.128") OR 2–16d COMMON (3½"X 0.162") OR 3–3" X 0.131" NAILS	FACE NAIL
1" BRACE TO EACH STUD AND PLATE	3–8d BOX (2½"X 0.113") OR 2–8d COMMON (2½"X 0.131") OR 2–10d BOX (3"X 0.128") OR 2 STAPLES 1¾"	FACE NAIL
1"X 6" SHEATHING TO EACH BEARING	3–8d BOX (2½"X 0.113") OR 2–8d COMMON (2½"X 0.131") OR 2–10d BOX (3"X 0.128") OR 2 STAPLES, 1" CROWN, 16 GA, 1¾" LONG	FACE NAIL
1"X 8" AND WIDER SHEATHING TO EACH BEARING	3–8d BOX (2½"X 0.113") OR 3–8d COMMON (2½"X 0.131") OR 2–10d BOX (3"X 0.128") OR 3 STAPLES, 1" CROWN, 16 GA, 1¾" LONG	FACE NAIL
	WIDER THAN 1"X 8" 4–8d BOX (2½"X 0.113") OR 3–8d COMMON (2½"X 0.131") OR 3–10d BOX (3"X 0.128") OR 4 STAPLES, 1" CROWN, 16 GA, 1¾" LONG	FACE NAIL
FLOOR		
JOIST TO SILL, TOP PLATE OR GIRDER	4–8d BOX (2½"X 0.113") OR 3–8d COMMON (2½"X 0.131") OR 3–10d BOX (3"X 0.128") OR 3–3" X 0.131" NAILS	TOE NAIL
RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF APPLICATIONS ALSO)	8d BOX (2½"X 0.113")	4" OC TOE NAIL
	8d COMMON (2½"X 0.131") OR 10d BOX (3"X 0.128") OR 3" X 0.131" NAILS	6" OC TOE NAIL
1"X 6" SUBFLOOR OR LESS TO EACH JOIST	3–8d BOX (2½"X 0.113") OR 2–8d COMMON (2½"X 0.131") OR 3–10d BOX (3"X 0.128") OR 2 STAPLES, 1" CROWN, 16 GA, 1¾" LONG	FACE NAIL
2" SUBFLOOR TO JOIST OR GIRDER	3–16d BOX (3½"X 0.135") OR 2–16d COMMON (3½"X 0.162")	BLIND OR FACE NAIL
2" PLANKS (PLANK & BEAM–FLOOR & ROOF)	3–16d BOX (3½"X 0.135") OR 2–16d COMMON (3½"X 0.162")	AT EACH BEARING, FACE NAIL
BAND OR RIM JOIST TO JOIST	3–16d COMMON (3½"X 0.162") OR 4–10d BOX (3"X 0.128") OR 3–3" X 0.131" NAILS OR 4– 3" X 14GA STAPLES, 7⁄16" CROWN	END NAIL
BUILT-UP GIRDERS AND BEAMS, 2-INCH LUMBER LAYERS	20d COMMON (4"X 0.192") OR	NAIL EACH LAYER AS FOLLOWS: 32"OC AT TOP AND BOTTOM AND STAGGERED.
	10d BOX (3"X 0.128") OR 3" X 0.131" NAILS	24"OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND: 2–20d COMMON (4"X 0.192") OR 3–10d BOX (3"X 0.128") OR 3–3" X 0.131" NAILS	FACE NAIL AT ENDS AND AT EACH SPLICE
LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	4–16d BOX (3½"X 0.135") OR 3–16d COMMON (3½"X 0.162") OR 4–10d BOX (3"X 0.128") OR 4–3" X 0.131" NAILS	AT EACH JOIST OR RAFTER, FACE NAIL
BRIDGING TO JOIST	2–10d (3"X 0.128")	EACH END, TOE NAIL

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER (a,b,c)	SPACING OF FASTENERS	
		EDGES (INCHES)(h)	INTERMEDIATE SUPPORTS(c,e) (INCHES)
WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLE BOARD WALL SHEATHING TO FRAMING (SEE TABLE R602.3(3) FOR WOOD STRUCTURAL PANEL EXTERIOR WALL SHEATHING TO WALL FRAMING)			
⅜" – ½"	6d COMMON (2"X 0.113") NAIL (SUBFLOOR WALL) (j) 8d COMMON (2½"X 0.131") NAIL (ROOF)	6	12 (f)
19⁄32" – 1"	8d COMMON NAIL (2½"X 0.131")	6	12 (f)
1⅛" – 1¼"	10d COMMON (3"X 0.148") NAIL OR 8d (2½"X 0.131") DEFORMED NAIL	6	12
OTHER WALL SHEATHING (g)			
½" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1½" GALVANIZED ROOFING NAIL, 7⁄16" HEAD DIAMETER OR 1" CROWN STAPLE 16 GA., 1¼"LONG	3	6
25⁄32" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1¾" GALVANIZED ROOFING NAIL, 7⁄16" HEAD DIAMETER OR 1" CROWN STAPLE 16 GA., 1½"LONG	3	6
½" GYPSUM SHEATHING (d)	1½" GALVANIZED ROOFING NAIL, STAPLE GALVANIZED, 1½" LONG; 1¼" SCREWS, TYPE W OR S	7	7
⅝" GYPSUM SHEATHING (d)	1¾" GALVANIZED ROOFING NAIL, STAPLE GALVANIZED, 1⅝" LONG; 1⅝" SCREWS, TYPE W OR S	7	7
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
¾" AND LESS	6d DEFORMED (2"X 0.120") NAIL OR 8d COMMON (2½"X 0.131") NAIL	6	12
⅞" – 1"	8d COMMON (2½"X 0.131") NAIL OR 8d DEFORMED (2½"X 0.120") NAIL	6	12
1⅛" – 1¼"	10d COMMON (3"X 0.148") NAIL OR 8d DEFORMED (2½"X 0.120") NAIL	6	12

NAILING SCHEDULE NOTES :

FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM, 1 MILE PER HOUR = 0.447 M/S; 1 KSI = 6.895 MPa.

- a. ALL NAILS ARE SMOOTH-COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED. NAILS USED FOR FRAMING AND SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE BENDING YIELD STRENGTHS AS SHOWN; 80ksi FOR SHANK DIAMETER OF 0.192 INCH (20d COMMON NAIL), 90ksi FOR SHANK DIAMETERS LARGER THAN 0.142 INCH BUT NOT LARGER THAN 0.177 INCH, AND 100 ksi FOR SHANK DIAMETERS OF 0.142 INCH OR LESS.
- b. STAPLES ARE 16 GAGE WIRE AND HAVE A MINIMUM 7⁄16-INCH ON DIAMETER CROWN WIDTH.
- c. NAILS SHALL BE SPACED AT NOT MORE THAN 6 INCHES ON CENTER AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR GREATER.
- d. FOUR-FOOT BY 8-FOOT OR 4-FOOT BY 9-FOOT PANELS SHALL BE APPLIED VERTICALLY.
- e. SPACING OF FASTENERS NOT INCLUDED IN THIS TABLE SHALL BE BASED ON TABLE R602.3(2).
- f. WHERE THE ULTIMATE DESIGN WIND SPEED IS 130 MPH OR LESS, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FRAMING SHALL BE SPACED 6 INCHES ON CENTER. WHERE THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 MPH, NAILS FOR ATTACHING PANEL ROOF SHEATHING TO INTERMEDIATE SUPPORTS SHALL BE SPACED 6 INCHES ON CENTER FOR MINIMUM 48-INCH DISTANCE FROM RIDGES, EAVES AND GABLE END WALLS; AND 4 INCHES ON CENTER TO GABLE END WALL FRAMING.
- g. GYPSUM SHEATHING SHALL CONFORM TO ASTM C 1396 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO ASTM C 208.
- h. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING AND AT ALL FLOOR PERIMETERS ONLY. SPACING OF FASTENERS ON ROOF SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND REQUIRED BLOCKING. BLOCKING OF ROOF OR FLOOR SHEATHING PANEL EDGES PERPENDICULAR TO THE FRAMING MEMBERS NEED NOT BE PROVIDED EXCEPT AS REQUIRED BY OTHER PROVISIONS OF THIS CODE. FLOOR PERIMETER SHALL BE SUPPORTED BY FRAMING MEMBERS OR SOLID BLOCKING.
- i. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE, PROVIDE TWO TOE NAILS ON ONE SIDE OF THE RAFTER AND TOE NAILS FROM THE CEILING JOIST TO TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE. THE TOE NAIL ON THE OPPOSITE SIDE OF THE RAFTER SHALL NOT BE REQUIRED.

STRUCTURAL GENERAL NOTES

1. ALL WORK IS TO BE PERFORMED IN A THOROUGH WORKMANSHIP LIKE MANNER BY SKILLED WORKMEN IN CONFORMANCE WITH THE BEST STANDARDS OR PRACTICES IN THE TRADE.
2. ALL WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, COUNTY, AND STATE AND FEDERAL CODES, ORDINANCES, RULES, AND REGULATIONS INCLUDING ALL CURRENT ADDENDA AND ERRATA.
3. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE BUILING DESIGNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
4. THE CONTRACTOR SHALL DETERMINE LOCATIONS OF UTILITY SERVICES IN ALL AREAS TO BE EXCAVATED PRIOR TO EXCAVATION.
5. ALL FOOTINGS SHALL BEAR ON NATIVE UNDISTURBED SOIL OR APPROVED ENGINEERED FILL. ASSUMED MIN PRESSURE 1500 PSF.
6. CONCRETE SHALL HAVE THE FOLLOWING COMPRESSIVE STRENGTH AT 28-DAYS: 2500 PSI-FLAT SLABS AND FOOTINGS.
7. MINIMUM CLEAR DISTANCE FROM THE REINFORCING STEEL TO FACE OF CONCRETE SHALL BE:
   3" WHEN CONCRETE IS PLACED AGAINST EARTH
   2" WHEN CONCRETE IS FORMED AND PLACED AGAINST EARTH
   1-1/2" WHERE CONCRETE IS FORMED
8. PLACE NO CONCRETE UNTIL REINFORCING, SLEEVES, BUCKS, HANGERS, PIPES, CONDUITS, BOLTS, ETC., HAVE BEEN PLACED AND FORMS ARE PLUMBED, ALIGNED, SECURED, AND ALL FACTORS ARE IN COMPLETE READINESS TO RECEIVE CONCRETE.
9. REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO A.S.T.M. A-615-40 BARS.
10. SPLICES IN REINFORCING STEEL SHALL LAP 40 BAR DIAMETERS OR 18", WHICHEVER IS GREATER IN ALL CONCRETE WORK.
11. HORIZONTAL FRAMING LUMBER SHALL BE SPRUCE-PINE-FIR (SPF) SOUTH, No. 2 GRADE MIN. UNLESS NOTED OTHERWISE ON PLANS. N.D.S. 2012 EDITION

REPETITIVE MEMBER	F_b (PSI)	F_v (PSI)	E (PSI)	F_c (PSI)	$F_{c\perp}$ (PSI)
2 X 4	1336 (REP)	135	1,100,000	1,150	1,000
2 X 6	1158 (REP)	135	1,100,000	1,100	1,000
2 X 8	1069 (REP)	135	1,100,000	1,050	1,000
2 X 10	980 (REP)	135	1,100,000	1,000	1,000
2 X 12	891 (REP)	135	1,100,000	1,000	1,000
SINGLE MEMBER					
2 X 4	1162	135	1,100,000	1,150	1,000
2 X 6	1007	135	1,100,000	1,100	1,000
2 X 8	930	135	1,100,000	1,050	1,000
2 X 10	852	135	1,100,000	1,000	1,000
2 X 12	775	135	1,100,000	1,000	1,000

12. VERTICAL LUMBER SHALL BE HEM-FIR No. 2 GRADE MIN. N.D.S. 2012 EDITION UNLESS NOTED OTHERWISE ON PLANS.

REPETITIVE MEMBER	F_b (PSI)	F_v (PSI)	E (PSI)	F_c (PSI)
2 X 4	1466 (REP)	150	1,300,000	1,495
2 X 6	1270 (REP)	150	1,300,000	1,430
2 X 8	1173 (REP)	150	1,300,000	1,365
SINGLE MEMBER				
2 X 4	1275	150	1,300,000	1,495
2 X 6	1105	150	1,300,000	1,430
2 X 8	1020	150	1,300,000	1,365

13. GLUE LAMINATED BEAMS (GLULAMS) :
    WEST SPECIES 24F-1.8E WS ARCHITECTURAL GRADE
    F_b = 2400 PSI F_v = 265 PSI F_c = 650 PSI E = 1,800,000 PSI
14. PLYWOOD ROOF SHEATHING SHALL BE STANDARD GRADE WITH EXTERIOR GLUE (32/16) INDEX STRUCTURAL II. NAIL PLYWOOD DIAPHRAGM WITH 8d AT 6" O.C. ALONG EDGE AND 8d AT 12" O.C. IN FIELD.
15. NAILING NOT NOTED SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE OR INTERNATIONAL RESIDENTIAL CODE.
16. ALL STRUCTURAL LUMBER AND PLYWOOD TO BEAR THE STAMP OF AN APPROVED LUMBER TESTING AGENCY.
17. CONCRETE MASONRY UNITS SHALL BE GRADE "A" LIGHTWEIGHT UNITS IN ACCORDANCE WITH A.S.T.M. (90-59), Fm = 1,350 PSI.
18. MORTAR SHALL BE TYPE "S" CONFORMING TO THE INTERNATIONAL BUILDING CODE, (MIN. 1,800 PSI. AT 28 DAYS).
19. GROUT SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT, 3 PARTS SAND, 2 PARTS PEA GRAVEL, MIN. 2,000 PSI AT 28 DAYS.
20. HORIZONTAL REINFORCING STEEL IN MASONRY SHALL BE #9 GA DURO-WIRE TRUSS TYPE AT 16" O.C.
21. SPLICES IN REINFORCING BARS SHALL BE A MIN. OF 40 DIAMETERS OR 18", WHICHEVER IS GREATER IN ALL MASONRY WORK.
22. PLYWOOD FLOOR SHEATHING SHALL BE STANDARD GRADE EXTERIOR GLUE TONGUE AND GROOVE STRUCTURAL II, NAIL PLYWOOD DIAPHRAGM WITH 10d AT 6" O.C. ALONG EDGE AND 10d AT 12" O.C. IN FIELD.
23. STEEL WIDE FLANGE BEAMS TO BE A992-50 STEEL. PROVIDE WEB STIFFENERS AS CALLED FOR ON DETAILS.
    STEEL COLUMNS TO BE HSS ASTM A500-GR. B-46

RECOMMENDED NOISE ATTENUATION MEASURES FOR STIPULATED SUBDIVISIONS TO BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE HOMES TO ACHIEVE A NOISE LEVEL REDUCTION OF 25db.

24. PROVIDE EXTERIOR WALL INSULATION EQUAL TO A VALUE OF MIN. R-20 WHERE ADJACENT TO LIVABLE AREAS.
25. PROVIDE CEILING INSULATION EQUAL TO A VALUE OF MIN. R-38 OVER LIVABLE, GARAGE AND PATIO/ PORCHES AREAS.
26. SPECIFY THAT THE EXTERIOR DOORS EXITING FROM LIVABLE AREAS SHALL BE SOLID CORE OR INSULATED, WITH WEATHER TIGHT GASKETS AND THRESHOLDS OR GASKETED GLASS.
27. SPECIFY THAT ALL EXTERIOR WINDOWS ADJACENT TO LIVABLE AREAS SHALL BE DOUBLE GLAZED (DUAL PANE)
28. SPECIFY THAT SOLE PLATES OF EXTERIOR WALLS ADJACENT TO LIVABLE AREAS SHALL BE CAULKED OR SEALED AT THE FLOOR LINE.

NOTES TO ALL SUBCONTRACTORS

29. SUBCONTRACTORS ARE TO PLACE ALL DEBRIS FROM THEIR TRADE IN THE DUMPSTER PROVIDED BY THE GENERAL CONTRACTOR. SUBCONTRACTORS WILL BE BILLED ACCORDINGLY IF GENERAL CONTRACTOR IS TO PLACE DEBRIS IN DUMPSTER.
30. NO VEHICLES SHALL BE ALLOWED TO TRESPASS ON ADJOINING PROPERTIES. ANY DAMAGE DONE WILL BE CHARGED ACCORDINGLY.

SECURITY SPECIFICATIONS

APPROPRIATE GENERAL NOTES MAY BE USED IN PART OR IN TOTAL TO INSURE COMPLIANCE WITH THE SECURITY PROVISIONS.

1. SWINGING DOORS
   A. WOOD FLUSH-TYPE DOOR 1-3/4" THICK MINIMUM.
   B. WOOD PANEL-TYPE DOOR 1-3/4 THICK MINIMUM WITH ALL PANELS FABRICATED FROM MATERIALS NOT LESS THAN 1/4"THICK.
   C. FERROUS METAL DOORS OF SOLID OR HOLLOW CORE CONSTRUCTION WITH THE SURFACES NOT LESS THAN 24 GAUGE IN THICKNESS.
   D. METAL DOORS WITH SURFACE NOT THAN THE EQUIVALENT OF 16 GAUGE SHEET METAL (0.05") IN THICKNESS.
2. HINGES
   A. ALL PIN-TYPE HINGES WHICH ARE ACCESSIBLE FROM OUTSIDE THE SECURED AREA WHEN THE DOOR IS CLOSED SHALL HAVE NON-REMOVABLE PINS.
   B. HINGES ARE SHAPED TO PREVENT REMOVAL OF THE DOOR.
   C. TOP AND BOTTOM HINGES HAVE STEEL JAMB STUDS WHICH PROTECT A MINIMUM OF 1/4".
3. DEAD BOLTS
   A. DEAD BOLTS ARE HARDENED OR CONTAIN HARDENED INSERTS
   B. STRAIGHT DEAD BOLTS SHALL HAVE A MINIMUM THROW OF 1" AND HAVE A EMBEDMENT OF NOT LESS THAN 5/8".
   C. A HOOK-SHAPED OR AN EXPANDING – LUG DEAD BOLT SHALL HAVE A MINIMUM THROW OF 3/4".
4. CYLINDER GUARDS SHALL BE INSTALLED ON ALL THE CYLINDER LOCKS WHENEVER THE CYLINDER PROJECTS BEYOND THE FACE OF THE DOOR OR IS OTHERWISE ACCESSIBLE TO GRIPPING TOOLS.
5. SLIDING DOORS AND WINDOWS SHALL BE PROVIDED WITH A LOCKING DEVICE. AND SHALL BE CONSTRUCTED AND INSTALLED OR EQUIPPED WITH A DEVICE SO AS TO PROHIBIT THE RAISING AND REMOVING OF THE MOVING PANEL FROM THE TRACK WHILE IN THE CLOSED POSITION.
6. STRIKE PLATES SHALL BE SECURED TO THE JAMB WITH A MINIMUM OF TWO SCREWS NO LESS THAN 1-1/2" IN LENGTH.
7. UPWARD ACTING DOORS AND SLIDING DOORS OTHER THAN GLASS SHALL BE SECURED WITH A CYLINDER LOCK, PADLOCK WITH A HARDENED STEEL SHACKLE AND HARDENED HASP, METAL SLIDE BAR, BOLT OR EQUIVALENT DEVICE, UNLESS SECURED BY ELECTRIC POWER OPERATION.
8. WINDOW OPENINGS ARE PROHIBITED WITHIN 24" OF A DOOR IN THE CLOSED POSITION, WHEN THE DOOR IS OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, 40" SEPARATION IS NOT REQUIRED IF IMPACT RESISTANT GLAZING IS USED.

FIRE BLOCKING NOTES:

- A. AT CONCEALED SPACES OF STUD WALLS AN PARTITIONS. INCLUDING FURRED SPACES. AT THE CEILING AND FLOOR LEVELS AND AT MAX 10'-0" INTERVALS BOTH VERTICAL AND HORIZONTAL.
- B. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS SOFFITS, DROPPED CEILINGS, COVE CEILINGS, AND TOPS OF FRAMED COLUMNS.
- C. IN CONCEALED SPACES BETWEEN STAIR STRINGERS, AT THE TOP AND BOTTOM OF RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS, IF THE WALLS UNDER THE STAIRS ARE UNFINISHED.
- D. IN OPENINGS AROUND PIPES, DUCTS, VENTS CHIMNEYS FIREPLACES AND SIMILAR OPENINGS WHICH AFFORD A PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS. USE NON-COMBUSTIBLE MATERIALS (SUCH AS UNFACED FIREGLASS INSULATION).
- E. AT OPENINGS BETWEEN ATTIC SPACES AND CHIMNEY CHASES FOR FACTORY BUILT CHIMNEYS.
- F. WALLS HAVING PARALLEL OR STAGGERED STUDS FOR SOUND CONTROL SHALL HAVE FIRE BLOCKS OF MINERAL FIBER OR GLASS FIBER OR OTHER APPROVED NON-RIDGED MATERIAL.
- G. THE INTEGRITY OF ALL FIRE BLOCKING AND DRAFT STOPS SHALL BE MAINTAINED.

Thiara Residence

2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL RESIDENTIAL CODE
2015 INTERNATIONAL FIRE CODE

1. ALL PRODUCTS LISTED BY AN EVALUATION SERVICE REPORT (ESR) SHALL BE INSTALLED PER THE REPORT AND THE MANUFACTURES WRITTEN INSTRUCTIONS. PRODUCT SUBSTITUTIONS SHALL ALSO BE LISTED BY AN ESR.
2. PROVIDE FIRE SPRINKLER SYSTEM PER PARADISE VALLEY FIRE CODE (IRC R313 AMENDED)
3. SEPARATE PERMITS REQUIRED: POOLS, SPAS, FENCES, SITE WALLS, RETAINING WALLS, AND GAS STORAGE TANKS.
4. FOUNDATION & FOOTING DEPTH SHALL BE A MINIMUM OF 18 INCHES BELOW GRADE (OR PER PROPERTY SOIL REPORT), PROVIDE A MINIMUM OF 3 INCH CLEARANCE BETWEEN REBAR AND SOIL. (R403.1 AMENDED)
5. DOORS BETWEEN THE GARAGE AND RESIDENCE SHALL BE SELF-CLOSING MINIMUM 1 3/8"THICK SOLID CORE OR 20 MINUTE FIRE RATED. (R302.5.1)
6. EXTERIOR WALL PENETRATIONS BY PIPES, DUCTS OR CONDUITS SHALL BE SEALED. (R703.1)
7. WOOD SILL PLATES SHALL BE PRESSURE TREATED OR DECAY RESISTANT. EXTERIOR SILL PLATES SHALL BEAR A MINIMUM OF 6 INCHES ABOVE FINISH GRADE. (R317.1)
8. GYPSUM BOARD APPLIED TO A CEILING SHALL BE 1/2"WHEN FRAMING MEMBERS ARE 16"O.C. OR 5/8"WHEN FRAMING MEMBERS ARE 24"O.C. OR USE LABELED 1/2"SAG-RESISTANT GYPSUM CEILING BOARD. (TABLE R702.3.5 (D))
9. SHOWERS AND TUB-SHOWER COMBINATIONS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE. (P2708.4)
10. SHOWER AREA WALLS SHALL BE FINISHED WITH A SMOOTH, HARD NON-ABSORBENT SURFACE, SUCH AS CERAMIC TILE, TO A HEIGHT OF NOT LESS THAN 72 INCHES ABOVE THE DRAIN INLET. CEMENT, FIBER-CEMENT OR GLASS MAT GYPSUM BACKERS INSTALLED IN ACCORDANCE WITH MANUFACTURERS'RECOMMENDATIONS SHALL BE USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS. (R702.4.2)
11. △1 PLUMBING FIXTURES SHALL COMPLY WITH THE FOLLOWING CONSERVATION REQUIREMENTS: WATER CLOSETS-TANK TYPE 1.6 GAL. /FLUSH. SHOWER HEADS- 2.5 GPM. SINKS- 2.2 GPM. LAVATORY-2.2 GPM (TABLE P2903.2 AMENDED)
12. STORAGE-TANK TYPE WATER HEATERS SHALL BE INSTALLED WITH A DRAIN PAN AND DRAIN LINE. (P2801.6)
13. A DEMAND-CONTROLLED HOT WATER CIRCULATION SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH AMENDED SECTIONS N1103.5.1.1 AND N1103.5.1.2.
14. PROVIDE ROOF/ATTIC VENTILATION UNLESS INSULATION IS APPLIED DIRECTLY TO UNDERSIDE OF ROOF SHEATHING OR THE DIMENSION IS 24 INCHES OR LESS BETWEEN THE CEILING AND BOTTOM OF ROOF SHEATHING. (R806.1 AMENDED)
15. THE BUILDING THERMAL ENVELOPE SHALL COMPLY WITH CLIMATE ZONE 2. ENERGY COMPLIANCE SHALL BE DEMONSTRATED BY UA TRADE-OFF (RESCHECK) OR PERFORMANCE (REM/RATE) COMPLIANCE PATH OR BY THE FOLLOWING PRESCRIPTIVE VALUES (TABLE N1102.1.2):
    I. PRESCRIPTIVE MINIMUM R-VALUES : <CEILING=R-38> / < WALLS=R-13>
    II. PRESCRIPTIVE MAXIMUM WINDOW FENESTRATION VALUES: <U-FACTOR=0.40> / <SHGC=0.25>
16. PROVIDE MINIMUM R-3 INSULATION ON HOT WATER PIPES. (N1103.5.3)
17. SUPPLY AND RETURN DUCTS IN ATTICS SHALL BE INSULATED TO A MINIMUM R-8. DUCTS IN OTHER PORTIONS OF THE BUILDING SHALL BE INSULATED TO MINIMUM R-6. DUCTS AND AIR HANDLERS LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE ARE EXEMPT. (N1103.3.1).
18. REGISTERS, DIFFUSERS AND GRILLES SHALL BE MECHANICALLY FASTENED TO RIGID SUPPORTS OR STRUCTURAL MEMBERS ON AT LEAST TWO OPPOSITE SIDES.
19. EXHAUST AIR FROM BATHROOMS, KITCHENS AND TOILET ROOMS SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS, NOT RECIRCULATED OR DISCHARGED INDOORS. (M1507.2 AMENDED)
20. EXHAUST FANS IN BATHROOMS WITH A SHOWER OR TUB SHALL BE PROVIDED WITH A DELAY TIMER OR HUMIDITY/CONDENSATION CONTROL SENSOR. EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEMS. (R303.3)
21. PROVIDE A WALL MOUNTED GFCI PROTECTED RECEPTACLE OUTLET WITHIN 36"OF A BATHROOM OR POWDER ROOM LAVATORY. (E3901.6)
22. RECEPTACLES SERVING KITCHEN COUNTERTOPS INSTALLED IN BATHROOMS, GARAGES, UNFINISHED ACCESSORY BUILDINGS, OUTDOORS AND LOCATED WITHIN 6 FEET OF SINKS SHALL HAVE GFCI PROTECTION FOR PERSONNEL. (E3902)
23. ALL BRANCH CIRCUITS THAT SUPPLY 15- AND 20-AMPERE OUTLETS INSTALLED IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATIONS ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A COMBINATION TYPE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. (E3902.12)
24. GENERAL PURPOSE 15- AND 20-AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT. (E4002.14)
25. PROVIDE SMOKE ALARMS IN NEW AND EXISTING AREAS OF HOME. (R314)
26. APPROVED CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS WITHIN WHICH FUEL-FIRED APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. (R315)
27. A MINIMUM OF 90 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS. (N1104.1 AMENDED)
28. RECESSED LUMINAIRES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE IC-RATED AND LABELED AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM. ALL RECESSED LUMINAIRES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING. (N1102.4.5).
29. PROVIDE ILLUMINATION WITH WALL SWITCHES FOR STAIRWAYS WHEN THERE ARE 6 OR MORE RISERS. (R303.7)
30. RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET, MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE 2 FEET OR MORE IN WIDTH. (E3901.2)
31. PROVIDE A MINIMUM OF TWO 20-AMP SMALL APPLIANCE BRANCH CIRCUITS FOR THE KITCHEN/DINING/BREAKFAST. (E3703.2)
32. BOTH METAL PIPING SYSTEMS AND GROUNDED METAL PARTS IN CONTACT WITH THE CIRCULATING WATER ASSOCIATED WITH A HYDRO MASSAGE TUB SHALL BE BONDED TOGETHER USING AN INSULATED, COVERED, OR BARE SOLID COPPER BONDING JUMPER NOT SMALLER THAN 8 AWG. (E4209)
33. PROVIDE OUTSIDE COMBUSTION AIR TO ALL INDOOR FIREPLACES WITH AIR INTAKE LOCATED NOT HIGHER THAN THE FIREBOX. (R1006.1)
34. AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM. (N1103.1)
    THE FOLLOWING THREE NOTES ARE APPLICABLE TO NEW CONSTRUCTION ONLY (BPI CERTIFIED PROFESSIONALS ARE APPROVED FOR TESTING AIR LEAKAGE IN EXISTING BUILDINGS, OTHERWISE RESNET PROFESSIONALS ARE APPROVED FOR NEW AND EXISTING):
35. THE BUILDING SHALL BE PROVIDED WITH A WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM THAT MEETS THE REQUIREMENTS OF SECTION M1507. OUTDOOR AIR INTAKES AND EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN THE VENTILATION SYSTEM IS NOT OPERATING. (N1103.6)
36. THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE NOT EXCEEDING FIVE AIR CHANGES PER HOUR FOR DETACHED DWELLING UNITS AND SEVEN AIR CHANGES PER HOUR FOR ATTACHED DWELLING UNITS. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM E 779 OR ASTM E 1827 AND REPORTED AT A PRESSURE OF 0.2 INCH W.G. (50 PASCALS). TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY (RESNET CERTIFIED). A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL. TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE. (N1102.4.1.2 AMENDED)
37. DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED IN ACCORDANCE WITH N1103.3.2. JOINTS AND SEAMS SHALL COMPLY WITH SECTION M1601.4.1. DUCTS SHALL BE PRESSURE TESTED TO DETERMINE LEAKAGE BY ONE OF THE FOLLOWING METHODS (N1103.3.3):
    1. ROUGH-IN TEST: TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCHES W.G. (25 PA) ACROSS THE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE IF INSTALLED AT THE TIME OF THE TEST. ALL REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.
    2. POST-CONSTRUCTION TEST: TOTAL LEAKAGE SHALL BE MEASURED WITH A PRESSURE DIFFERENTIAL OF 0.1 INCHES W.G. (25 PA) ACROSS THE SYSTEM, INCLUDING THE MANUFACTURER'S AIR HANDLER ENCLOSURE. REGISTERS SHALL BE TAPED OR OTHERWISE SEALED DURING THE TEST.
    EXCEPTION: A DUCT LEAKAGE TEST SHALL NOT BE REQUIRED WHERE THE DUCTS AND AIR HANDLERS ARE LOCATED ENTIRELY WITHIN THE BUILDING THERMAL ENVELOPE.
    A WRITTEN REPORT OF THE RESULTS SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL PRIOR TO THE BUILDING FINAL.

SPECIAL NOTES

1. REQUESTS FOR CONSTRUCTION STAKING SHOULD BE MADE AT LEAST TWO WORKING DAYS PRIOR BY AN AUTHORIZED REPRESENTATIVE OF THE OWNER.
2. THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS THE APPROVAL BLOCK HAS BEEN SIGNED BY APPROPRIATE AGENCIES.
3. THE EXISTING TOPOGRAPHY AND BOUNDARY REFLECTED HEREWITH ARE BASED ON A SURVEY SUPPLIED BY GOOKIN ENGINEERING. ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY INACCURACIES DUE TO THE SURVEY INFORMATION PROVIDED ON THIS PLAN.
4. PROVIDE A COPY OF THE COUNTY DUST CONTROL PERMIT TO THE INSPECTOR.

NOTES TO THE GRADING CONTRACTOR

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL STRUCTURES, UNDERGROUND PIPELINES, ELECTRIC AND TELEPHONE CONDUITS, EITHER SHOWN OR NOT SHOWN ON THE PLANS PRIOR TO ANY CONSTRUCTION, AND TO OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO THESE FACILITIES. THE ENGINEER AND/OR DEVELOPER WILL NOT GUARANTEE ANY ELEVATIONS OR LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLANS.
2. IT SHALL BE THE RESPONSIBILITY OF THE BIDDER TO VERIFY ALL QUANTITIES, INCLUDING EXCAVATION BORROW, EMBANKMENT, SHRINK OR SWELL, GROUND COMPACTION, HAUL AND ANY OTHER ITEMS AFFECTING HIS BID TO COMPLETE THE GRADING TO THE ELEVATIONS SHOWN ON THE PLANS AND TO BASE HIS BID SOLELY UPON HIS OWN VERIFIED QUANTITIES, IRRESPECTIVE OF THE INFORMATION FURNISHED AS NOTED ON THE NOTE ABOVE. (IT SHALL BE THE BIDDERS' RESPONSIBILITY TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY MAJOR DISCREPANCIES BETWEEN HIS ESTIMATED EARTH-WORK QUANTITIES AND THOSE SHOWN ON THE PLANS).
3. IF STRIPPING OR SOME TOPSOIL IS DEEMED UNSUITABLE BY THE SOILS ENGINEER FOR USE AS COMPACTED FILL, THE UNSUITABLE MATERIAL SHALL BE STOCKPILED PRIOR TO GRADING AND USED TO FINISH SUITABLE AREAS AT COMPLETION OF ROUGH GRADE.
4. ALL STAKING CONTROLS SHALL BE UNDISTURBED. THE CONTRACTOR SHALL CALL THE SURVEYOR TO REFERENCE AND RESET ANY CONTROL POINTS THAT HAVE TO BE DISTURBED. THE CONTRACTOR WILL BE CHARGED FOR RESTAKING IF ANY CONTROL POINTS ARE DESTROYED.
5. DUST SHALL BE CONTROLLED BY WATERING PER AIR POLLUTION CONTROL DISTRICT OF MARICOPA COUNTY. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS.
6. ALL WORK AND MATERIALS WHICH DO NOT CONFORM TO THESE PLANS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE.
7. ALL CONSTRUCTION WATER AND POWER SHALL BE OBTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE. THE CONTRACTOR MUST MAKE HIS OWN ARRANGEMENTS TO PRODUCE AND TRANSPORT WATER TO THE CONSTRUCTION SITE. ALL TEMPORARY FACILITIES SHALL BE REMOVED PRIOR TO FINAL ACCEPTANCE BY THE DEVELOPER.
8. ANY QUESTIONS RAISED RELATIVE TO THE ACCURACY OF IMPROVEMENT INSTALLATIONS SHALL NOT BE RAISED SUBSEQUENT TO COMPLETION OF THE WORK UNLESS ALL SURVEY STAKES ARE MAINTAINED INTACT. SHOULD SUCH STAKES NOT BE PRESENT AND VERIFIED AS TO THEIR ORIGIN, NO CLAIM FOR ADDITIONAL COMPENSATION FOR CORRECTION SHALL BE PRESENTED TO ANY PARTY AND SUCH WORK SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.

GRADING GENERAL NOTES

1. A GRADING PERMIT IS REQUIRED PER THE TOWN OF PARADISE VALLEY ORDINANCES.
2. HAUL PERMITS, WHEN REQUIRED, MUST BE OBTAINED PRIOR TO OR CONCURRENTLY WITH THE GRADING AND DRAINAGE PERMIT.
3. EXCAVATING CONTRACTOR MUST GIVE LOCATION FOR WASTING EXCESS EXCAVATION AND A LETTER FROM OWNER GIVING PERMISSION FOR DUMPING PRIOR TO STARTING ONSITE CONSTRUCTION. IF EXCESS EXCAVATION EXCEEDS 100 CUBIC YARDS, THE DISPOSAL SITE WILL ALSO REQUIRE A GRADING AND DRAINAGE PERMIT.
4. MINIMUM FINISH FLOOR ELEVATIONS SHOWN ARE 12" ABOVE THE 100 YEAR FLOOD ELEVATION FOR THIS SITE.
5. STAKING FINISH FLOOR ELEVATIONS IS THE RESPONSIBILITY OF THE OWNER AND HIS ENGINEER. THE OWNER'S ENGINEER SHALL SUBMIT ONE SEAL COPY OF THE GRADING AND DRAINAGE PLAN DESIGNATED AS "RECORD DRAWING" (BEARING AN ORIGINAL SIGNATURE) PRIOR TO THE REQUEST FOR FINAL INSPECTION.
6. A SEPARATE PERMIT IS NECESSARY FOR ANY OFFSITE CONSTRUCTION.
7. AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN.
8. GRADING AND DRAINAGE PLAN APPROVAL INCLUDES THE CONSTRUCTION OF ALL SURFACE IMPROVEMENTS SHOWN ON THE APPROVED PLAN, INCLUDING, BUT NOT LIMITED TO RETENTION AREAS, SEDIMENTATION BASINS, AND /OR OTHER DRAINAGE FACILITIES, DRAINAGE PATTERNS, WALLS, CURBS, ASPHALT PAVEMENT, AND BUILDING FLOOR ELEVATIONS.
9. WHEN RETENTION BASINS ARE REQUIRED OR SHOWN, THE CONTRACTOR SHALL PROVIDE LEVEL BOTTOMS IN ALL RETENTION BASINS AT ELEVATIONS SHOWN ON THE PLANS. SLOPE PROTECTION SHALL BE APPLIED TO PREVENT EROSION.
10. GRADES SHOWN IN RETENTION BASINS ARE DESIGN FINISHED GRADES. SHOULD THE CONTRACTOR OR ANY SUBCONTRACTOR PLAN TO PLACE SPOIL DIRT FROM FOOTINGS, UTILITY TRENCHES, LANDSCAPING, SWIMMING POOLS, ETC. IN THE BASINS, THEN THE BASINS SHOULD BE OVER-EXCAVATED DURING THE ROUGH GRADING OPERATION TO ALLOW FOR THE PLACEMENT OF THE FILL OR LANDSCAPING MATERIAL.
11. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND CONFIRMING DEPTHS OF ALL THE EXISTING UTILITY LINES. INCLUDING WITHIN THE PROPOSED RETENTION BASIN AREAS. IF THE BASIN CANNOT BE CONSTRUCTED PER PLAN BECAUSE OF CONFLICTS, THE CONTRACTOR SHALL DISCUSS MODIFICATION OF RETENTION BASIN CONFIGURATION WITH THE TOWN INSPECTOR TO DETERMINE IF A PLAN REVISION OR FIELD CHANGE IS REQUIRED.
12. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTOR DITCHES, PIPES, PROTECTIVE BERMS, BARRIER WALLS, CONCRETE CHANNELS OR OTHER MEASURES DESIGNED TO PROTECT ADJACENT BUILDINGS OR PROPERTY FROM RUNOFF MUST BE COMPLETED PRIOR TO BUILDING CONSTRUCTION.
13. RETENTION BASIN SIDE SLOPES SHALL BE A MAXIMUM OF 4:1 UNLESS APPROVAL IS RECEIVED FROM THE PLAN REVIEWER FOR STEEPER SLOPE.
14. CONSTRUCTION MUST BE PHASED SO ANY NEWLY ALIGNED CHANNEL IS FULLY OPERATIONAL BEFORE THE EXISTING DRAINAGE CHANNEL IS FILLED. FLOOD WATER CONVEYANCE MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
15. ALL KNOWN EXISTING UNDERGROUND UTILITIES WITHIN PROPOSED RETENTION AREAS HAVE BEEN DESIGNED TO MAINTAIN A MINIMUM 15" OF COVER OVER COUNTY/ CITY OWNED UTILITY LINES AND THE MINIMUM SPECIFIED BY OTHER UTILITY OWNERS.
16. REQUIRED RETAINING WALLS SHOWN ON THE GRADING AND DRAINAGE PLANS ARE TO BE REVIEWED, PERMITTED, AND INSPECTED BY THE BUILDING SAFETY BRANCH OF THE PLANNING & DEVELOPMENT DEPARTMENT.
17. CERTIFICATE OF OCCUPANCY (C. OF O.) AND/OR FINAL ELECTRICAL CLEARANCE FOR ANY BUILDING IS DENIED UNTIL ALL GRADING AND DRAINAGE IMPROVEMENTS ARE COMPLETED.
18. DAMAGED AND/OR DISPLACED CONCRETE CURB, GUTTER, SIDEWALK, OR DRIVEWAY SLAB THAT IS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED BEFORE FINAL INSPECTION.
19. THE ENGINEERING DESIGN AND THESE PLANS ARE ONLY APPROVED BY THE TOWN IN SCOPE AND NOT IN DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE TOWN. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE TOWN FROM REQUIRING CORRECTIONS OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.
20. CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS AND THE LATEST CITY OF SCOTTSDALE SUPPLEMENTAL TO THE MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS.
21. COMPACTION SHALL COMPLY WITH M.A.G. SECTION 601.
22. OBSTRUCTIONS TO PROPOSED IMPROVEMENTS IN THE RIGHT-OF-WAY SHALL BE REMOVED OR RELOCATED BEFORE BEGINNING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
23. THE ACTUAL POINT OF PAVEMENT MATCHING, AND/OR TERMINATION, SHALL BE DETERMINED IN THE FIELD BY THE CITY OF SCOTTSDALE DEVELOPMENT SERVICES DEPARTMENT FIELD INSPECTOR.
24. TREES AND SHRUBBERY IN THE RIGHT-OF-WAY THAT CONFLICT WITH PROPOSED IMPROVEMENTS SHALL NOT BE REMOVED WITHOUT APPROVAL OF THE COUNTY LANDSCAPE ARCHITECT OR HIS ASSIGNEES. THE PERMITTEE SHALL BE RESPONSIBLE FOR OBTAINING AUTHORIZATION TO REMOVE AND/OR RELOCATE SAID TREES OR SHRUBBERY.
25. PROVIDE A 5% MINIMUM SLOPE AWAY FROM ALL BUILDINGS FOR A MINIMUM OF 10 FEET UNLESS NOTED OTHERWISE.
26. NO WALLS OR FENCES OVER 3 FEET HIGH ABOVE FINISHED GRADE WITHIN 10 FEET OF FRONT PROPERTY LINE.
27. ALL PROPERTY LINES TO BE IDENTIFIED BY AN ARIZONA REGISTERED LAND SURVEYOR PRIOR TO FIRST FOOTING INSPECTION.

WATER METER SIZE FOR INDIVIDUAL SINGLE FAMILY RESIDENCES

1. TOTAL DEVELOPED LENGTH OF THE WATER LINE; FROM THE WATER METER TO THE FURTHEST WATER-USING OUTLET 248.0 FEET.
2. TOTAL NUMBER OF FIXTURE UNITS OF ALL WATER-USING FIXTURES, APPLIANCES, AND WATER-USING OUTLETS. (SEE CHAPTER 29 AND APPENDIX P TABLES AP201.1 OF THE INTERNATIONAL RESIDENTIAL CODE, CURRENT EDITION.)

TYPE OF FIXTURE	FIXTURE UNIT VALUE		NO. OF FIXTURES OR GROUPS		TOTAL FIXTURE UNITS
BIDET	2.0	X	0	=	0.0
BATHTUB (WITH/WITHOUT OVERHEAD SHOWER HEAD)	1.4	X	1	=	1.4
CLOTHES WASHER	1.4	X	2	=	2.8
DISHWASHER	1.4	X	1	=	1.4
FULL-BATH GROUP w/BATHTUB (WITH/WITHOUT SHOWER HEAD) OR SHOWER STALL	3.6	X	5	=	18.0
HALF-BATH GROUP (WATER CLOSET AND LAVATORY)	2.6	X	2	=	5.2
HOSE BIBB (SILLCOCK)	2.5	X	2	=	5.0
KITCHEN GROUP (DISHWASHER AND SINK WITH/WITHOUT GARBAGE GRINDER)	2.5	X	1	=	2.5
KITCHEN SINK	1.4	X	0	=	0.0
LAUNDRY GROUP (CLOTHES WASHER STANDPIPE AND LAUNDRY TUB)	2.5	X	1	=	2.5
LAUNDRY TUB OR UTILITY SINK	1.4	X	0	=	0.0
LAVATORY	0.7	X	1	=	0.7
SHOWER STALL (PER HEAD)	1.4	X	1	=	1.4
WATER CLOSET (TANK TYPE)	2.2	X	0	=	0.0
SINK	1.4	X	1	=	1.4
BAR SINK	0.7	X	1	=	0.7
			TOTAL		43.0

WATER SUPPLY OUTLETS FOR ITEMS NOT SHOWN ABOVE SHALL BE COMPUTED AT THEIR MAXIMUM DEMAND OR ACCORDING TO THE SIZE OF THE SUPPLY PIPE AS LISTED BELOW (WHICHEVER IS GREATER), AND ENTERED IN THE SPACE LABELED "OTHER".

PIPE SIZE	FIXTURE UNIT VALUE
3/8"	1
1/2"	2
3/4"	3
1"	6

3. LOCAL WATER SERVICE PRESSURE IS 60 POUNDS PER SQUARE INCH.
   EQUIVALENT WATER SERVICE PRESSURE IS 40-49 POUNDS PER SQUARE INCH.
   SEE SHEET P2 FOR SIZE REDUCTIONS
   1" WATER METER
   1 1/2" SUPPLY (COPPER)

NOTE:

△1 FIRE SPRINKLER SYSTEM TO BE PROVIDED TO AND IN RESIDENCE AND SEPARATE STRUCTURES. FIRE SPRINKLERS REQUIRED NFPA13D SYSTEM FIRE SPRINKLER SYSTEM WILL BE BY SEPARATE PERMIT.

FIRE SPRINKLER SYSTEM REQUIRED IN THIS BUILDING BEFORE APPROVAL BY TOWN OF PARADISE VALLEY FIRE DEPARTMENT.

2015 IECC COMPONENT MIN EFFICIENCY (ZONE 2)
REQUIREMENTS PER REScheck REPORT

COMPONENT	MIN R- VALUE	MAX U-FACTOR	MAX SHGC
WALLS	R-13 CAVITY R-2 CONTINUOUS (FOAM BASE FOR STUCCO SYSTEM)	0.053 COMBINED –	– –
CEILINGS	R-38 CAVITY	0.030	–
WINDOWS	–	0.40	0.25
DOORS w/ GLASS	–	0.40	0.25
SOLID DOORS	–	0.20	–

Permit: BD20-42978
Scope: single family residence
Address: 5608 E. Horseshoe
No other work is authorized
Approval Date: 07-10-2020
Approved by: rlouman
Job Site Copy
If any questions call (480)348-3692

Permit: BD20-42979
Scope: fountain
Address: 5608 E. horseshoe
No other work is authorized
Approval Date: 07-10-2020
Approved by: rlouman
Job Site Copy
If any questions call (480)348-3692

Permit: BD20-42980
Scope: masonry walls
Address: 5608 E. Horseshoe
No other work is authorized
Approval Date: 07-10-2020
Approved by: rlouman
Job Site Copy
If any questions call (480)348-3692

Checked items are required
- ☐ Hillside Compliance
- ☑ SWPPP Pre Construction
- ☑ Fire Sprinklers
- ☑ Setback Certificate
- ☑ Height Certificate
- ☑ Stucco Certificate
- ☑ Water Meter Size

TOWN OF PARADISE VALLEY
COMMUNITY DEVELOMENT DEPT

These plans have been reviewed and approved. They must be available at the construction site For each inspection. Approval does not waive compliance with any codes or ordinances

Pursuant to Town Code Section 5-1-3

CALL TWO WORKING DAYS BEFORE YOU DIG
(602) 263-1100
INSIDE MARICOPA COUNTY

GOVERNING BUILDING CODES:

ALL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND AMENDMENTS PER THEIR ADOPTING ORDINANCES:
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL RESIDENTIAL CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL FIRE CODE
2014 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL PLUMBING CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE
2015 INTERNATIONAL FUEL GAS CODE
2015 INTERNATIONAL PROPERTY MAINTENANCE CODE

SHEET INDEX

REVISIONS	BY
△1 TOWN COMMENTS	MFH 6/20

PROJECT:
A CUSTOM
RESIDENCE FOR:
Sam & Daljit Thiara
Lot 1 Doubletree Ranchos
5608 E. Horseshoe Rd Paradise Valley, AZ 85253

A|BD AMERICAN INSTITUTE of BUILDING DESIGN

MARK F. HOERNER
& Associates, Inc.
Custom Residential
Design & Engineering
(480) 968-6994
428 S. Gilbert Rd Suite 112
Gilbert, Az. 85296
Mark F. Hoerner PE, CPBD, A.I.B.D.

48191
MARK F. HOERNER
Date Signed 6/23/2020

DO NOT SCALE DRAWINGS.

DRAWN MFH
DATE 3/2020
JOB NO. 2019-13
SHEET A0.0
OF 22 SHEETS

ATTACHMENT C5

TOWN

Of

PARADISE VALLEY

6401 E Lincoln Dr

Paradise Valley, AZ 85253

(480) 948-7411

Residential New

BD20-42978

Approved: 07/22/2020

Issued:

Address: 5608 E HORSESHOE RD
DOUBLE TREE RANCHOS
1

Parcel: 16843004
R-43

Owner: THIARA SUKHVINDER S/DALJIT
5608 E HORSESHOE RD
PARADISE VALLEY, AZ 85253

Contractor: TODD CURTIS CUSTOM HOMES LTD
4917 E Libby St
Scottsdale, AZ 85254-7520

Valuation: $1,830,775.00

Description: Single Family Residence

Remarks:

Fees:

Building Permit	$6,633.04
Engineering Review	$48.00
Excavation Haul Permit	$760.00
Grading Permit	$1,187.00
Haul New Materials	$596.97
Plan Review	$4,311.48
Sewer Development Fee	$7,847.00

The Town is released from all liability which may arise from the issuance of this permit. The owner and contractor are responsible for full compliance with the Town of Paradise Valley Town Code, Zoning Ordinance, the most recently-adopted applicable building code and related specialty codes, and any applicable Special Use Permits. Should the Town or authorized agent find work being done contrary to these codes, work shall be stopped immediately upon the issuance of a Stop Work Order.

If this Building Permit is issued to an owner/builder, it is done solely with the condition that construction is for the owner's personal use.

Notices

Pursuant to Town Code §5-1-2, construction for which this permit is issued must commence by scheduling and passing an inspection within one hundred eighty (180) days of the issuance date, and continue by scheduling and passing an inspection every 180 days thereafter. All new utilities shall be installed underground.

This Building Permit fee is ***non-refundable***, and is issued with the following stipulations:

1. Builder must construct according to the approved plans for which this permit is issued.
2. Builder has verified lot size, and construction is within setbacks required.
3. Construction of fences may not begin until the fees for the permit for the main building are paid and the permit is active.

Owner Signature Date

Printed Name

Contractor Signature 7-22-20 Date

Todd Curtis

Printed Name

TOWN

Of

PARADISE VALLEY

6401 E Lincoln Dr

Paradise Valley, AZ 85253

(480) 948-7411

Residential Wall-Fence

BD20-42979

Approved: 07/22/2020

Issued:

Address: 5608 E HORSESHOE RD
DOUBLE TREE RANCHOS
1

Parcel: 16843004
R-43

Owner: THIARA SUKHVINDER S/DALJIT
5608 E HORSESHOE RD
PARADISE VALLEY, AZ 85253

Contractor: TODD CURTIS CUSTOM HOMES LTD
4917 E Libby St
Scottsdale, AZ 85254-7520

Valuation: $19,920.00

Description: Fence

Remarks:

Fees:

Building Permit	$239.80
Plan Review	$155.87

The Town is released from all liability which may arise from the issuance of this permit. The owner and contractor are responsible for full compliance with the Town of Paradise Valley Town Code, Zoning Ordinance, the most recently-adopted applicable building code and related specialty codes, and any applicable Special Use Permits. Should the Town or authorized agent find work being done contrary to these codes, work shall be stopped immediately upon the issuance of a Stop Work Order.

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1. Builder must construct according to the approved plans for which this permit is issued.
2. Builder has verified lot size, and construction is within setbacks required.
3. Construction of fences may not begin until the fees for the permit for the main building are paid and the permit is active.

Owner Signature Date

Printed Name

7-22-20
Contractor Signature Date

Todd Curtis
Printed Name

ATTACHMENT C6

APPLICATION FOR ZONING INTERPREATION

DATE: June 28, 2002

SECTION OF TOWN ZONING ORDINANCE OR SPECIFIED ZONING DISTRICT:

Zoning Ordinance Section 2415

APPLICANT/ REPRESENTATIVE: Andrew Miller (PRINTED NAME) X _____ (SIGNATURE)

Burch & Cracchiolo, P.A., 1850 N. Central, Ste 1700, Phoenix, 85004
ADDRESS

602-234-8793 602-850-9793
PHONE # FAX #

aMiller@bcattorneys.com
EMAIL ADDRESS

THE ABOVE APPLICANT HEREBY APPLIES FOR A ZONING INTERPRETATION AS INDICATED BELOW IN ACCORDANCE WITH THE ZONING ORDINANCE AND SECTION 2-5-3.D OF THE TOWN OF PARADISE VALLEY TOWN CODE.

PROVIDE A BRIEF NARRATIVE DESCRIBING REQUEST AND STATE GROUNDS FOR THE ZONING INTERPRETATION. (PLEASE ATTACH ADDITIONAL SHEETS, OR PROVIDE A SEPARATE LETTER, AS NECESSARY).

See attached separate letter and Exhibits.

Section 2-5-3.D

BURCH & CRACCHIOLO
BCATTORNEYS.COM

ANDREW MILLER
DIRECT LINE: 602.234.8793
E-MAIL: amiller@bcattorneys.com

June 28, 2022

Lisa Collins
Community Development Director
Town of Paradise Valley
6401 E. Lincoln Drive
Paradise Valley, Arizona 85253

RE: Formal Request for Zoning Ordinance Interpretation for ZO Section 2415 (a); re Subdivision Wall/Fence at 5608 E Horseshoe Road, Paradise Valley AZ 85253 (the "Home Site")

Dear Ms. Collins:

On behalf of Sukhvinder and Daljit Thiara (the "Thiaras"), we are filing this request for a formal interpretation by the Zoning Administrator (under authority to Town Code Section 2-5-3.D) of Zoning Ordinance Section 2415.a regarding the exemption of "pre-existing subdivision walls and view fences" from being treated as a non-conforming wall and view fence. Our request is that Section 2415(a)'s interpretation be clarified such that: (1) "pre-existing subdivision walls and view fences" can remain when a new home permit is issued (per Section 2415.a.2); and (2) "pre-existing subdivision walls and view fences" can not only remain but be altered or added to (per Section 2415.a.4). We believe that the interpretation we request is the obvious and clear meaning of Section 2415 and the intent of those who drafted the changes to the Walls and Fences Section of the Zoning Ordinance in 2004 and 2005.

Pre-Existing Subdivision Walls and View Fences Can Remain **and** Be Added to and Altered

The text of the Zoning Ordinance Section at issue is as follows:

> Section 2415. Nonconformity.
>
> a. Wall and View Fence Height and Location.
> **With the exception of pre-existing subdivision walls and view fences**, as defined in Section 2408 (b), any wall or view fence that is **non-conforming** due to its height or location within a required setback area shall be made to conform to the requirements of this Article when:
>
> 1. Approvals are granted for lot splits and subdivisions;
>
> 2. Permits are issued for a new house; or
>
> 3. Permits are issued for structural additions, or remodels, alterations, or repairs of an existing house, covered by a single or multiple building permits within a thirty

six (36) month period that together involves structural addition of or demolition of more than fifty (50) percent of the original square footage of the main house.

4. Permits are issued for **alterations**, repair, or **additions** to such wall or view fence, covered by a single or multiple building permits…
(underlining/bold added)

Pursuant to PV ZO Section 2415.a.2 "pre-existing subdivision walls and view fences" are excepted from the requirements to bring walls and view fences into conformance with the setback and height requirements that might otherwise apply when a permit is issued for a new house. Essentially, pre-existing subdivision wall and view fences can remain when a new home permit is issued.

Similarly, the same exception language in subsection a (that is, "With the exception of pre-existing subdivision walls and view fences") applies when permits are issued for the alteration, repair, or addition to a pre-existing subdivision wall or view fence. As is clear from the "With the exception" language, pre-existing subdivision walls and view fences are not to be treated as a "non-conforming" wall or view fence. The conditions in PV ZO Section 2415 that might otherwise trigger the requirement to relocate a wall/fence to a new setback location simply do not apply to a pre-existing subdivision wall/fence.

Further support for this position can be found in Section 2408.a regarding "Subdivision Walls and Fences," which states:

"Section 2408. Subdivision Walls and View Fences.

a. **New** subdivision walls and view fences that are not pre-existing (as defined below) and are constructed after January 2004, **shall conform** to the provisions of this article."
(underlining and bold added)

The clear intent of Section 2408 (corresponding to Section 2415) is that pre-existing subdivision walls/fences did not become non-conforming and that only newer subdivision walls were required to conform to the new provisions in the Wall and Fence Code that were adopted in January 2004 (by Ordinance 534 and companion Resolution 1050) and clarified with respect to view fences in June 2005 (by Ordinance 559). The clear implication of new subdivision walls/fences being required to "conform" is that the pre-2004 subdivision walls/fences did not need to conform to the new setback/height rules adopted in January 2004. Pre-existing subdivision walls/fences such as the Thiara Home Site subdivision wall/fence (located on the rear side of their Home Site along the Doubletree Ranch Road frontage) were not required to conform and instead were permitted to remain as a pre-existing subdivision wall which could also be altered or added to (per Section 2415a.4).

Although the Thiaras pre-existing subdivision wall/fence was partially block and partially a wood view fence, view fences and walls are treated the same for purposes of the definition of pre-existing walls and fences, per subsection b of Section 2408:

> "Section 2408. Subdivision Walls and View Fences.
> b. Pre-existing subdivision **walls or view fences** are subdivision perimeter walls or view fences located within forty (40) feet of the exterior property line of a platted subdivision or lot split that may, **and typically do, run in general alignment with the property line along a public** or private **road** and that are **constructed before January 2004**. A pre-existing subdivision perimeter wall or view fence need not extend the entire length of the perimeter to be considered a perimeter wall or view fence."

The exceptional treatment for pre-existing subdivision walls/fences themselves carries through to other requirements in Section 2415 as well, including the "Wall Finish" requirements in Section 2415.b and that side or rear wall connections can remain for pre-existing subdivision walls/fences and that "pre-existing subdivision walls and view fences may be placed within the twenty (20) foot setback area" per Section 2415.c. (underlining added).

The clear implication of all of these sections combined is that pre-existing subdivision walls/fences did not become non-conforming, did not have to be relocated from the property line to a location 20' interior to the affected property, could be altered or added to, and were exempt from the new (as of 2004) wall finish regulations in Section 2403. A copy of Ordinance 559 with each of these key sections highlighted is attached for your reference (see **Exhibit A**).

Historically, at the time of the fairly radical changes were made to the wall and fence code over 18 years ago, streets such as Doubletree Ranch Road, Invergordon, and Mockingbird Lane had a number of established subdivisions where the rear yards of many homes (and some empty lots) had rear "subdivision" walls/fences running on the property lines separating those homes/lots from the rights-of-way for these streets. It seems fairly clear, as evidenced in the language of Section 2415, that the decision was made that these pre-existing subdivision walls should be allowed to remain and over time be altered to what was becoming the preferred and fairly common 6' tall masonry with painted stucco exterior subdivision walls. There are numerous subdivisions that are subject to the exception where subdivision walls are allowed to remain in place, and be altered or added to if desired so that they remain contemporary with current trends in preferred wall/fence appearance. Some of those subdivisions include Mockingbird Lane Estates 4, Camelback Country Estates Unit 4, Mockingbird Lane Estates 6, Doubletree Ranchos, Camelback County Club Estates Unit 5, El Maro, Merrill Cantatierra, Camelback County Club Estates, and Legendary Estates. It is for this reason that the pre-existing subdivision walls were called out as an "exception" to the otherwise non-conforming wall/fence treatment accorded to many of the other existing walls/fences in the Town in January 2004 when Ordinance No. 534 was adopted.

Regarding the question of whether the wall/fence located on the Thiara's northern rear yard qualifies as a pre-existing subdivision wall/fence under Section 2408 is, we believe, without dispute. However, in case you may have questions in that regard, we have attached a copy of the November 1, 2021 letter from Brian Greathouse that has photos and other supporting documentation on the wall in question being a pre-existing subdivision wall/fence (see **Exhibit B**). Additionally, we have also attached an email received from Sam Thiara on June 18, 2022 regarding added information on the wall on the north side of the Thiara Home Site having been built by the original builder at the time the subdivision was built in the 1960s (see **Exhibit C**).

This added information was not known when Mr. Greathouse wrote his letter of November 1, 2021.

It is our hope that you will agree with our requested interpretation of the PV Zoning Ordinance Section 2415 and that you will now be able to permit the Thiaras' Wall Permit (permit # BD20-42979) to be finalized and for a final CofO to be issued for the Thiara Home Site.

We appreciate your consideration of this matter and are happy to discuss with you further if needed.

Very truly yours,
BURCH & CRACCHIOLO, P.A.

Andrew Miller
For the Firm

Enclosures: Exhibits A - C

ATTACHMENT C7

ZONING ORDINANCE INTERPRETATION

6401 East Lincoln Drive • Paradise Valley, Arizona 85253 • Phone: (480) 348-3522 • Fax: (480) 443-3236

Subject of Interpretation:
Pre-Existing Subdivision Walls and View Fences

Zoning Ordinance References:
Article XXIV. Walls and Fences
Section 2408. Subdivision Walls and View Fences.
Section 2415. Nonconformity.

Cause of Interpretation:

Request for Interpretation of Town of Paradise Valley Zoning Ordinance (the "ZO") Section 2415(a), relating to a previously-existing split-rail fence at 5608 E. Horseshoe Road, and assertions by the applicant that such fence was a pre-existing subdivision wall/view fence that is not non-conforming and that may be added to or altered without restrictions or limitations, including replacing the view fence with a solid block wall.

Background:

ZO Section 2408 allows creates a category for pre-existing subdivision walls and view fences:

Section 2408. Subdivision Walls and View Fences.

a. New subdivision walls and view fences that are not pre-existing (as defined below) and are constructed after January 2004, shall conform to the provisions of this article.

b. Pre-existing subdivision walls or view fences are subdivision perimeter walls or view fences located within forty (40) feet of the exterior property line of a platted subdivision or lot split that may, and typically do, run in general alignment with the property line along a public or private road and that are constructed before January 2004. A pre-existing subdivision perimeter wall or view fence need not extend the entire length of the perimeter to be considered a perimeter wall or view fence.

c. The terms of Section 6-3-12 of the Paradise Valley Town Code shall apply in all areas.

d. Location, height, setback, and design of subdivision perimeter walls or view fences shall be part of the approved final plat.

ZO Section 2415 provides additional criteria defining the circumstances under which pre-existing subdivision walls are not required to be brought into conformity with the general wall/fence requirements:

Section 2415. Nonconformity:

a. Wall and View Fence Height and Location.

With the exception of pre-existing subdivision walls and view fences, as defined in Section 2408 (b), any wall or view fence that is non-conforming due to its height or location within a required setback area shall be made to conform to the requirements of this Article when:

1. Approvals are granted for lot splits and subdivisions;

2. Permits are issued for a new house; or

3. Permits are issued for structural additions, or remodels, alterations, or repairs of an existing house, covered by a single or multiple building permits within a thirty six (36) month period that together involves structural addition of or demolition of more than fifty (50) percent of the original square footage of the main house.

4. Permits are issued for alterations, repair, or additions to such wall or view fence, covered by a single or multiple building permits within a thirty six (36) month period that together involves structural addition of or demolition of more than fifty (50) percent of the lineal feet of the wall or view fence.

Interpretation:

A pre-existing subdivision wall that does not comply with the current code is nonconforming.

As stated in ZO Section 2415 (Nonconformity):

> a. Wall and View Fence Height and Location:
>
> With the exception of pre-existing subdivision walls and view fences, as defined in section 2408 (b), any wall or view fence that is non-conforming due to its height or location within a required setback areas shall be made to conform to the requirement of this Article…"

The applicant's request would require us to read the phrase "any other wall or view fence that is non-conforming" to mean that a pre-existing subdivision wall is not non-conforming; this interpretation is incorrect. The first clause of ZO Section 2415 simply means that, even though they are non-conforming, pre-existing subdivision walls may remain with their current height and in their current location and are not required to "be made to conform to the requirements of this Article"; ZO Section 2415 applies only to non-conforming walls and fences that are NOT pre-existing subdivision walls.

There is no language that suggests pre-existing subdivision walls and view fences may be added to or altered with no restrictions. The code only states that pre-existing subdivision walls and view fences, though non-conforming, may remain in their current state.

Additionally, walls and view fences located on the edge of a property are not necessarily by default considered pre-existing subdivision walls and fences as defined in ZO Section 2415. Like all subdivision walls, pre-existing subdivision walls and view fences are not exempt from the provisions of ZO Section 2408(d), which requires:

> d. Location, height, setback and design of subdivision perimeter walls or view fences shall be part of the approved final plat.

The recorded plat for the property has no indication of the location, height, setback and design of a

ZONING ORDINANCE INTERPRETATION

6401 East Lincoln Drive • Paradise Valley, Arizona 85253 • Phone: (480) 348-3522 • Fax: (480) 443-3236

subdivision perimeter wall or fence associated with the subdivision. Additionally, the applicant has not provided any information showing how the split-rail fence along the edge of its property is or was determined to be a subdivision perimeter wall or view fence.

Finally, even if the prior-existing split rail fence could be determined to be an existing subdivision view fence, the applicant has not provided support for its position that such view fence (defined in ZO 2402 as a structure where the openings between materials used for construction of the fence represent at least 70 percent of the total fence area) can be replaced with a solid block wall.

Interpretation by:

Lisa Collins
Zoning Administrator

7/7/2022
Date

ATTACHMENT D1

Thiara Property

3' tall subdivision wall and split rail fence at intersection of 56th St. & Doubletree

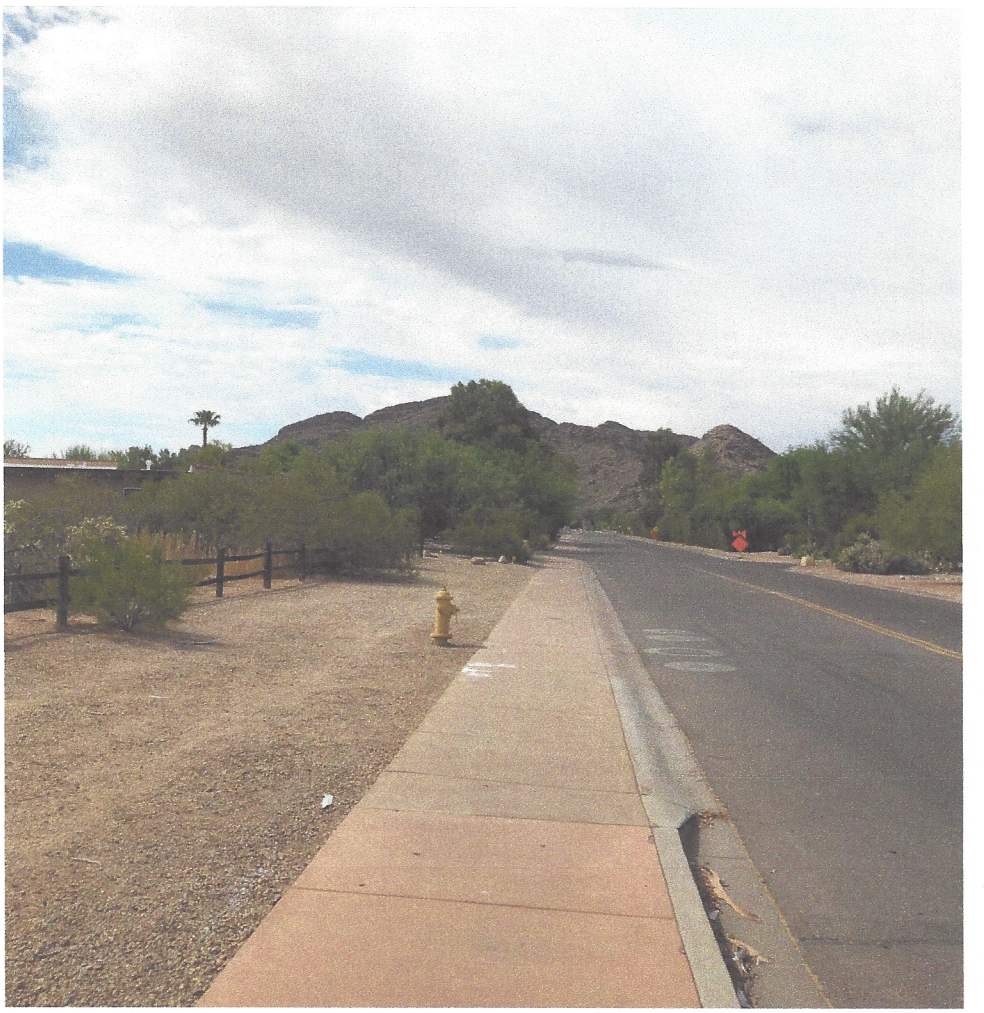
Thiara Property

Looking North at intersection of 56th St. & Doubletree

Thiara Property

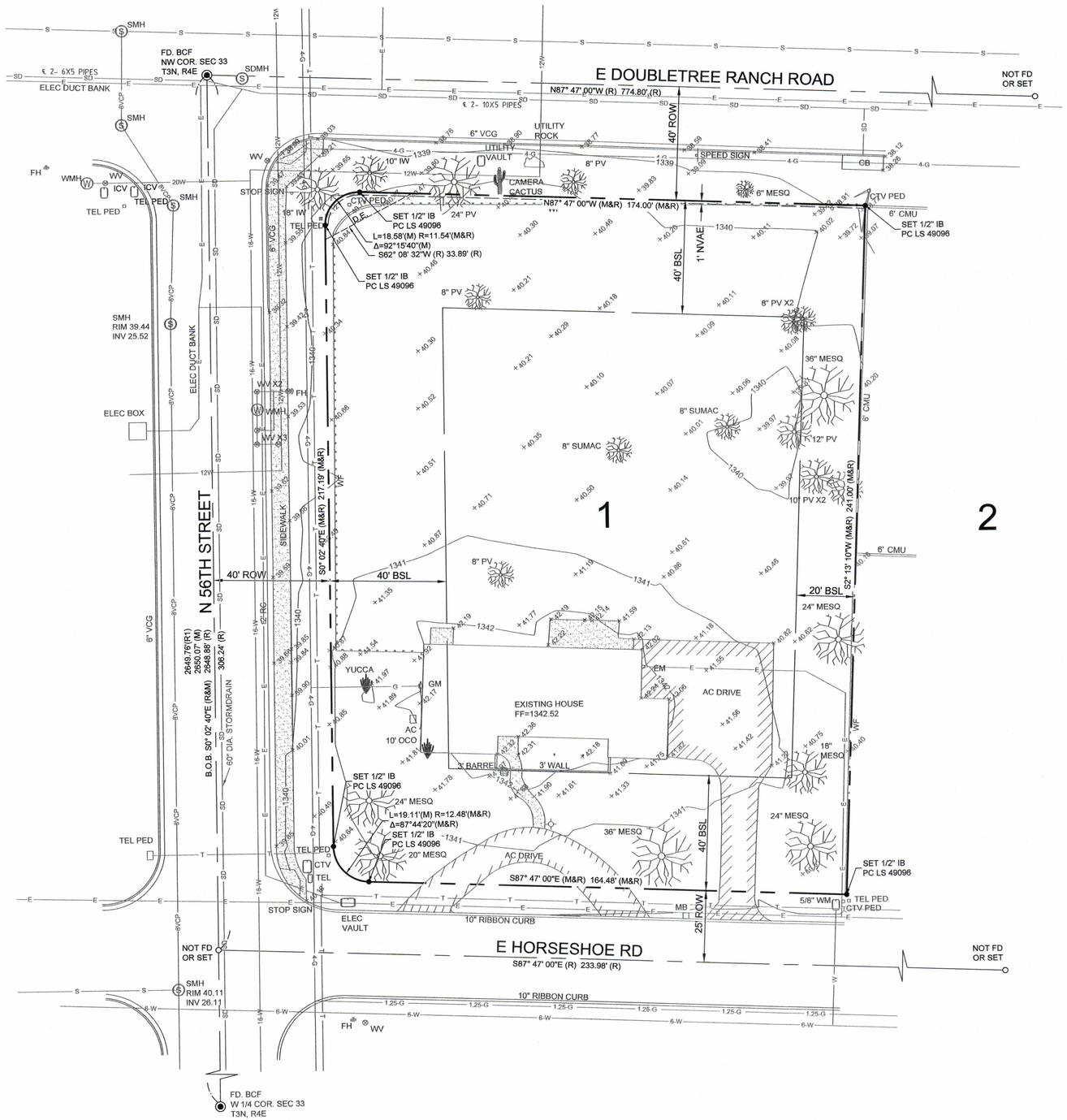
Looking East down Doubletree Rd.,
standing at intersection of
56th St. & Doubletree
Split rail fence is visible

Thiara Property



Looking South down 56th St., standing at intersection of 56th St & Doubletree

ATTACHMENT D2



LEGEND

—1300—	EXISTING CONTOUR
x 99.05	EXISTING GRADE
BAR	BARREL CACTUS
BCF	BRASS CAP FLUSH
B.O.B.	BASIS OF BEARING
BSL	BUILDING SETBACK LINE
CAP	PLASTIC CAP
CTV	CABLE T.V.
D.E.	DRAINAGE EASEMENT
EM	ELECTRIC METER
FD	FOUND
FF	FINISHED FLOOR
F.H.	FIRE HYDRANT
GM	GAS METER
IB/IP	IRON BAR/IRON PIPE
ICV	IRRIG. CONTROL VALVE
IW	IRONWOOD
MH (S)	MANHOLE (SEWER)
SDMH (S)	STORMDRAIN MANHOLE
MB	MAILBOX
○	NOT FD. MONUMENT
●	SET MONUMENT
◉	BRASS OR ALUMINUM CAP AS NOTED
	TREE
MESQ	MESQUITE
NVAE	NON-VEHICULAR ACCESS EASEMENT
OCO	OCOTILLO
PC	PLASTIC CAP
PL	PROPERTY LINE
PV	PALO VERDE
RC	ROLL CURB
ROW	RIGHT OF WAY
TAG	BRASS TAG
TC	TOP OF CURB
VC&G	VERTICAL CURB & GUTTER
WM	WATER METER
WV⊗	WATER VALVE
—W—	WATERLINE
—S—	SEWERLINE
—UGE—	UNDERGROUND ELECTRIC
—UGT—	UNDERGROUND TELCO
—G—	GASLINE
	WOOD FENCE
—SD—	STORMDRAIN

RESEARCH NOTES

1. **THIS IS NOT AN A.L.T.A. SURVEY**. A COMPLETE TITLE REPORT WAS NOT PROVIDED TO THE SURVEYOR FOR THIS SURVEY.
2. BOUNDARY INFORMATION COLLECTED FROM RECORDED PLAT AND FOUND MONUMENTS.
3. PROPERTY BOUNDARIES OBTAINED FROM THE FOLLOWING PLAT OF RECORD:

(R) DOUBLE TREE RANCHOS, BOOK 120 OF MAPS, PAGE 33, M.C.R..

(R1) GDACS, BOOK 763 OF MAPS PG 3811, M.C.R..

WARRANTY DEED NO 20160546065 DATED JULY 26, 2016.

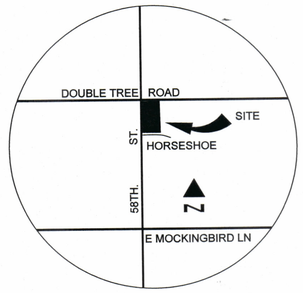
4. UTILITY LOCATIONS OBTAINED FROM ABOVE GROUND MEASUREMENTS IN THE FIELD AND/OR FROM QUARTER SECTION MAPS PROVIDED BY SERVING UTILITY.
5. NO OTHER SURVEYS WERE LOCATED FROM AN INTERNET SEARCH.
6. THIS SURVEY IS LOCATED IN THE NW QUARTER OF SECTION 33, T.3N., R.4E. G&SRM, MARICOPA COUNTY, ARIZONA.

GENERAL NOTES

1. ADD 1300 FEET TO ALL SPOT GRADES
2. TREE LOCATIONS ARE APPROXIMATE. CLIENT TO CONTACT SURVEYOR IF MORE PRECISE LOCATIONS ARE REQUIRED.
3. SETBACKS SHOWN ARE PER SECTION 1001 OF ARTICLE 10 OF THE TOWN CODE. THE EAST SIDEYARD SETBACK IS 30 FEET ON THE DOUBLETREE RANCHOS PLAT RECORDED IN BOOK 120, PAGE 33, M.C.R..

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

COMMUNITY NUMBER	PANEL NUMBER (PANEL DATE)	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE	BASIN FLOOD ELEVATION (IN AO ZONE, USE DEPTH)
040049	1755 10-13-16	"L"	10-16-2013	"X"	< 1 FOOT



VICINITY MAP
N.T.S.

OWNER

SAM AND DALJIT THIARA
5517 E. LAS PIEDRAS WAY
CAVE CREEK, AZ 85331

SITE ADDRESS

5608 E. HORSESHOE ROAD
PARADISE VALLEY, 85253

ARCHITECT

MARK F. HOERNER & ASSOCIATES, INC.
428 S. GILBERT ROAD, #112
GILBERT, AZ 85296
480-968-6994
MFHInc@gmail.com

LEGAL DESCRIPTION

LOT 1, DOUBLETREE RANCHOS, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE MARICOPA COUNTY RECORDER IN BOOK 120 OF MAPS, PAGE 33.

AREA

43617.53 S.F. OR 1.00 AC. ±

ZONING

R-43

A.P.N.

168-43-004

BASIS OF BEARING

THE CENTERLINE OF 56TH STREET WITH A BEARING OF N 00° 02' 40" w ACCORDING TO DOUBLE TREE RANCOS PLAT AS RECORDED IN BOOK 120, PAGE 33, M.C.R.

BENCHMARK

BRASS CAP FLUSH AT INTERSECTION OF DOUBLETREE RANCH ROAD AND 56TH STREET, GDACS POINT NO. 26090-1, ELEV. = 1339.448 FT., NAVD 88 DATUM.

0 10 20 40
1"=20'

Two working days before you dig
CALL FOR THE BLUE STAKES
Within Maricopa County
602-263-1100
Within Maricopa County
1-800-782-5348
BLUE STAKE CENTER

REGISTERED LAND SURVEYOR
49096
EDWARD GOOKIN
DATE SIGNED 7-9-19
ARIZONA U.S.A.

SITE & TOPOGRAPHIC SURVEY
THIARA RESIDENCE
5608 E. HORSESHOE ROAD
PARADISE VALLEY, ARIZONA 85253

Scale 1"=20'	SHEET 1 of # SHEETS
Date 07/01/19	JOB NO. 2610
Rev ———	
Designed SC	
Drawn MJF	
File: 2610 thiara_6-28-19.dwg	

GOOKIN ENGINEERS
ENGINEERS • HYDROLOGISTS • PLANNERS • SURVEYORS
4203 NORTH BROWN AVENUE
SCOTTSDALE, ARIZONA 85251
480-947-3741
Civil@Gookin.biz

ATTACHMENT E

Historical Aerial Photography

10/27/2021, 3:50:34 PM

Maricopa County

Local

Arterial

Image
High : 255

Low : 0

Image
Low : 0

High : 255

1:1,128

0 0.01 0.01 0.03 mi

0 0.01 0.03 0.05 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),

Office of Enterprise Technology/GIS

ATTACHMENT F

Chapter 4

Noise Attenuation

Introducton

HUD's noise policy (24 CFR 51B) clearly requires that noise attenuation measures be provided when proposed projects are to be located in high noise areas. The requirements set out in Section 51.104(a) are designed to insure that interior levels do not exceed the 45 L_{dn} level established as a goal in Section 51.101(a)(9). Thus, in effect, if the exterior noise level is 65 L_{dn} to 70 L_{dn}, 25 db of noise attenuation must be provided; if the exterior noise level is between 70 and 75 L_{dn}, then 30 db of attenuation is required. Likewise, for projects proposed for areas where noise levels exceed 75 L_{dn}, sufficient attenuaton must be provided to bring interior levels down to 45 L_{dn} or below.

There are three basic ways to provide the noise attenuation required:

1. the use of barriers or berms
2. site design
3. acoustical construction

Of these, only the first two provide any improvement in the exterior environment. Because HUD considers a quiet exterior environment to be important, we prefer the use of those measures that reduce exterior levels as well as interior levels. The use of acoustical construction by itself is, therefore, the least preferred alternative since it only affects the interior levels. While we recognize that in many cases barriers or site design cannot provide all the attenuation necessary, you should combine them with acoustical construction whenever possible.

Your responsibility as a HUD staff member is to:

- make sure the project sponsor or developer is aware of the attenuation requirements for the project.
- make the sponsor aware of the options available

and

- review attenuation proposals to make sure they are adequate.

While it is not your responsibility to provide detailed design assistance to the sponsor or developer, you should know enough about the attenuation options to give him or her a basic understanding of what must be done. In many cases, you may be able to reassure the sponsor or developer that the necessary attenuation can be achieved through the use of common construction techniques or materials. Or you may be able to point out how a simple site design change can achieve the desired result without additional cost.

The following sections are designed to provide you with the information you will need to fulfill your responsibilities. Each attenuation approach is discussed both in terms of basic concepts and in terms of what to look for in reviewing attenuation proposals. The discussion does assume that you have a working knowledge of the *Noise Assessment Gujidelines*. If you have not worked with the *Guidelines* before or not recently you may want to go back and review them, particularly the section on calculating the effects of barriers.

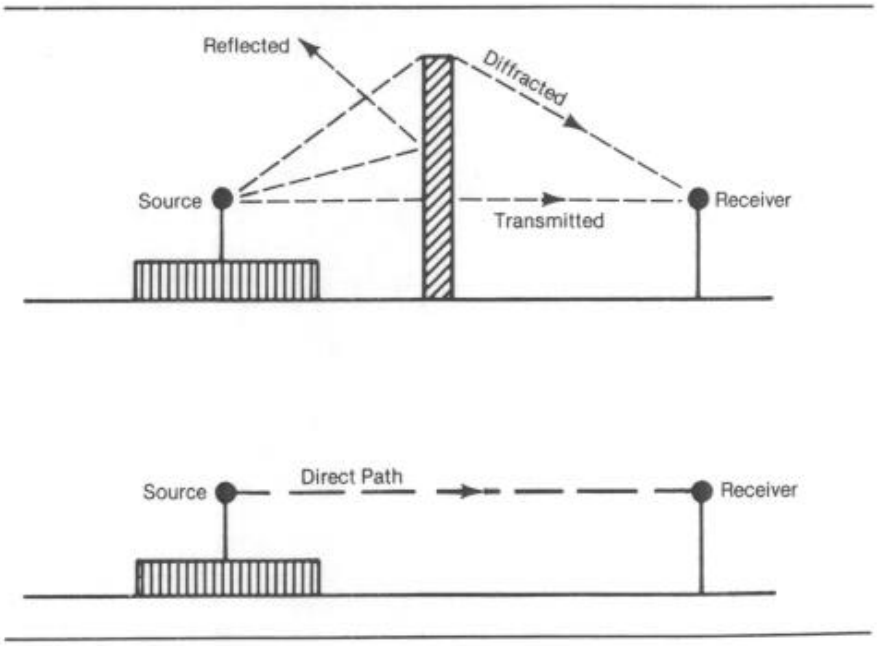
Barrier Noise Reduction Concepts

(The following, with some editing and with some additional graphics, is taken from the Federal Highway Administration's *Noise Barrier Design Handbook*.[1])

When no obstacles are present between [a source] and adjoining areas, sound travels by a **direct** path from the "sources"... to [the] "receivers"..., as shown in Figure 1. Introduction of a barrier between the source and receiver redistributes the sound energy into several [indirect] paths: a **diffracted** path, over the top of the barrier; a **transmitted** path, through the barrier; and a **reflected** path, directed away from the receiver. These paths are also illustrated in Figure 1.

[1] *Noise Barrier Design Handbook* US Department of Transportation, Federal Highway Administration, February 1976. (FHWA-RD-76-58).

Figure 1
Alteration of Noise Paths by a Barrier



Barrier Diffraction and Attenuation

Consider an infinitely long, infinitely massive noise barrier placed between a highway and the receiver. Figure 2 illustrates a cross-section through such a configuration. [In] this example, the only way that sound can reach the receiver is by bending over the top of the barrier; as shown in the figure. The bending of sound waves in this manner over an obstacle is known as diffraction. The area in which diffraction occurs behind the barrier is known as the "shadow zone." The straight path from the source over the top of the barrier forms the boundary of this zone.

All receivers located in the shadow zone will experience some sound attenuation; the amount of attenuation is directly related to the magnitude of the diffraction angle ϕ. As ϕ increases, the barrier attenuation increases. The angle ϕ will increase if the barrier height increases, or if the source or receiver are placed closer to the barrier. Clearly then the barrier attenuation is a function of the geometrical relationship between the source, receiver, and barrier. One way of relating these parameters to the barrier attenuation is to define the path-length difference as shown in Figure 3. This parameter is the difference in distance that the sound must travel in diffracting over the top of the barrier rather than passing directly through it.

In the preceding discussion it was assumed that the barrier was "infinite"; i.e., long enough to shield the receiver from all sound sources up and down the highway. For short barriers, the attenuation can be seriously limited by the sound from sections of highway beyond the barrier's ends, which are unshielded from the receiver, as shown in Figure 4. Similarly, when there are large gaps in the barrier (to permit access, for example), sound from the unshielded section of highway adjacent to the gap can greatly compromise barrier attenuation, especially for those receivers close to the opening.

Figure 2
Barrier Diffraction

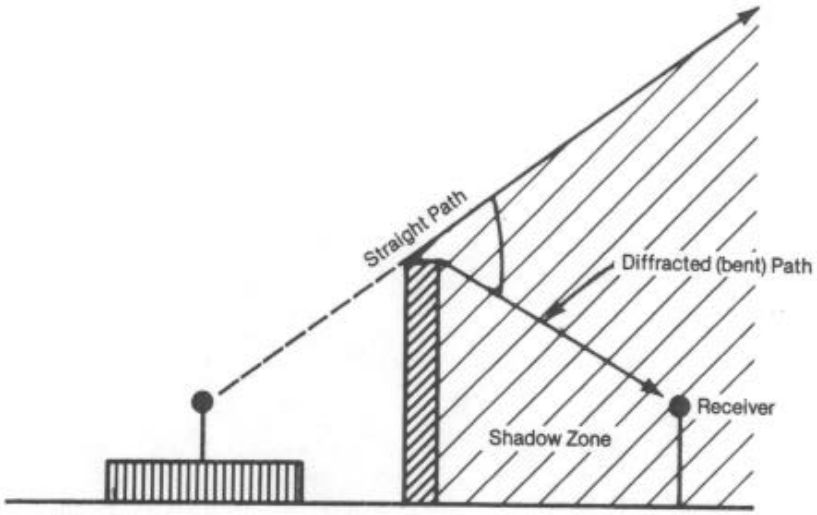


Figure 3
Path Length Difference $\delta = A + B - d$

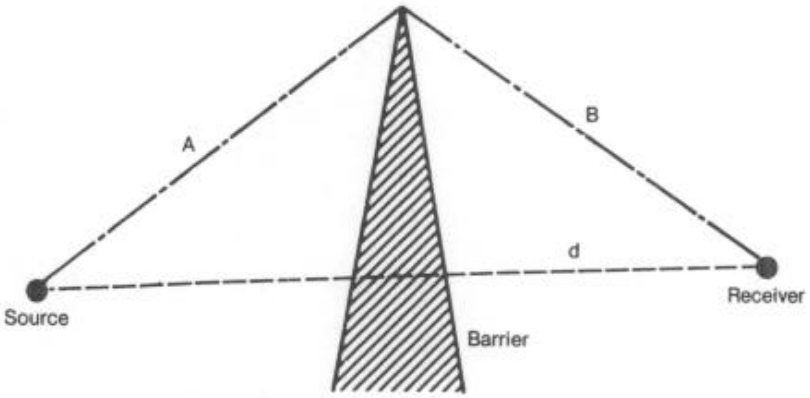
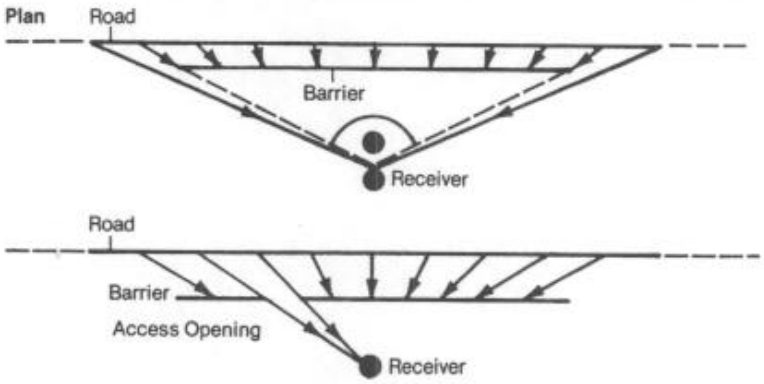


Figure 4
Short-circuit of Barrier Around Ends and Through Openings



Barrier Transmission

In addition to the sound that travels over the top of the barrier to reach the receiver, sound can travel through the barrier itself. The amount of sound "transmission" through the barrier depends upon factors relating to the barrier material (such as its weight and stiffness), the angle of incidence of the sound, and the frequency spectrum of the sound. One way of rating a material's ability to transmit noise is by the use of a quantity known as the transmission loss, TL. The TL is related to the ratio of the incident noise energy to the transmitted noise energy. Transmission loss values are normally expressed in decibels and represent the amount noise levels will be reduced when the sound waves pass through the material. The higher the TL value the less noise transmitted through the material. Typically, the TL value improves with increasing surface weight of the material.

The noise reduction provided by a barrier can be severely compromised if the TL value of the material permits too much noise to pass through the barrier. This is due to the fact that when attenuation is a function of two or more factors, the noise level at the measurement point is actually the combination of the reduced noise levels resulting from each attenuation factor. For example, with a typical barrier the noise levels are reduced by (1) sound waves being diffracted over the barrier and (2) sound waves passing through the barrier. The noise level at the receiver point is the combination of the attenuated levels resulting from each attenuation step. If the starting noise level is 65 db and the noise level is reduced 10 db when the sound waves pass through the barrier then the attenuated level reaching the receiver is 55 db. If the attenuation provided by the sound waves being diffracted over the barrier is also 10 db then the attenuated level reaching the receiver along that path is 55 db as well. Using the table in the *Noise Assessment Guidelines* to combine the two individual attenuated levels, one finds that the combined attenuated level is actually 58 db. Thus even though the attenuation value of each attenuation step was 10 db, the actual reduction for the receiver is only 7 db. It is, however, a function of the way noise levels combine that if the difference between levels is greater than 10 db it does not affect the levels. As a general rule, therefore, if the TL value is at least 10 dB above the attenuation value resulting from diffraction over the top of the barrier, the barrier noise reduction will not be significantly affected by transmission through the barrier (decreased by less than 0.5 dB). For many common materials used in barrier construction, such as concrete and masonry blocks, TL values are usually more than adequate. For less massive materials such as steel, aluminum and wood, TL values may not be adequate, particularly for those cases where large attenuations are required. (See Table 1 for a list of typical TL values.)

Even if a barrier material is massive enough to prevent significant sound transmission, the barrier noise reduction can be severely compromised if there are holes or openings in the barrier. For large openings, sound energy incident on the barrier will be directly transmitted through the opening to the receiver. When the opening is small an additional phenomenon occurs: upon striking the barrier wall the sound pressure will **increase**, resulting in an amplification of the transmitted sound to the receiver. Thus, the presence of openings or holes may seriously degrade the noise reduction provided by otherwise effective barriers.

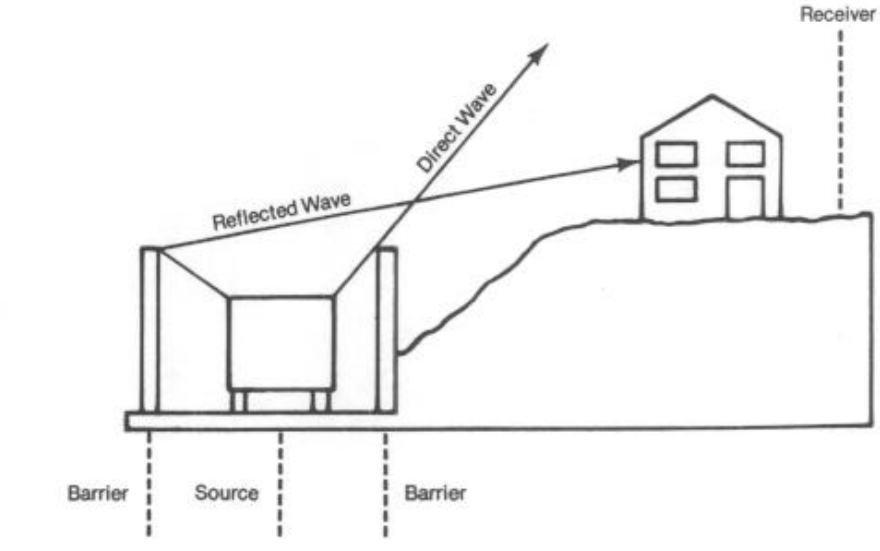
Barrier Reflections

As shown in Figure 1, sound energy can be reflected by a barrier wall. For the configuration shown in that figure, the reflected energy does not affect the receiver, but may affect receivers located to the left of the highway. However the increase in noise level for these receivers would be less than 3 dB, because this single reflection can at most double the sound energy. (Remember how you combine noise levels? The most you add is 3 db when levels are the same.)

The situation is entirely different, however, when a double barrier situation is involved (refer to Figure 5). In addition to the energy that reaches the receiver by diffraction over the top of the barrier, if the barrier walls are reflective, additional sound energy can reach the receiver by a reflection from the left wall as illustrated in the figure. The same principles apply when there is a vertical retaining wall opposite a noise barrier; similarly, in a deep vertical cut the opposite walls will create multiple reflections.

If the barrier walls are not perfectly reflecting but absorb some of the sound energy, the contributon of each reflection is decreased by an amount that depends upon the absorptive characteristics of the barrier. For very hard, reflective surfaces, the absorption characteristics are very poor. Although a serious degradation in barrier performance may result for the double barrier situation, use of materials with good absorption values will usually recover all of the lost noise reduction.

Figure 5
Reflections from an Opposing Barrier



It should be mentioned that the use of barrier walls with sloped sides (forming angles of grater than 10–15 degrees from the vertical) will also generally eliminate multiple reflections. Use of earth berms is particularly appropriate to accomplish this. Sloped barrier walls will require more material to achieve a desired height than a vertical wall, while berms will require greater right-of-way than a thin wall.

Ground Effects

Consider again the direct path of sound from the source to receiver as illustrated in Figure 1 in the absence of any obstacles. For sources and receivers located close to the ground, in addition to this direct path sound energy may reach the receiver by reflecting off the ground. When the terrain is relatively hard and flat, such a reflection will add to the noise from the direct path to increase the level at the receiver. However, when the ground is soft, there may be a phase reversal upon reflection such that the noise from the ground reflection path will destructively interfere with the noise from the direct path resulting in a significant reduction in noise levels at the receiver.

This reduction in level, known as ground-effect attenuation, is in excess of the 3 dB per doubling of distance propagation loss for a line source of noise and occurs only above soft absorptive ground (such as normal earth and most ground with vegetation). Over hard ground (such as concrete, stone and very hard-packed earth) these effects do not occur. These effects are most apparent for receivers on the ground floor, and decrease rapidly as receiver height above ground increases.

While ground absorption effects are not completely understood, it is generally believed that these effects account for the 4.5 dB per doubling of distance propagation loss observed over soft ground, as compared to the 3 dB propagation loss observed over hard ground. The implication with regard to barrier design is that placement of a barrier over soft ground between source and receiver will re-direct the sound over the top of the barrier, thus destroying the ground reflection and the additional 1.5 dB per doubling of distance attenuation. Thus, the barrier must be designed to provide more reduction than would otherwise be necessary, to compensate for the lost ground effects over absorptive ground.

Summary
(From: *Design Guide*, National Bureau of Standards[1])

In summary, the following can be said about noise barriers.

- If a barrier does not block the line-of-sight between the source and receiver, the barrier will provide little or no attenuation.
- If a barrier is constructed of a material with a surface weight density greater than 4 lb/ft^2 and there are no openings through the barrier, transmitted sound will usually be negligible.
- If there are openings totaling over 10 percent or more of the barrier area, barrier attenuation will be negligible.
- Diffracted sound is usually the most important aspect in estimating barrier attenuation.
- Reflected sound can be important for receivers on the source side of a barrier, but it normally is not a factor for receivers on the side opposite from the source. Hence reflected sound is usually not important to your building and site.
- Transmission of sound around the ends of the barrier can be critical if the barrier included angle is less than 170°.
- Barrier attenuations greater than an A-weighted sound level difference of 10 dB are difficult to obtain.
- For two or more barriers "in series," consider only the "dominant" barrier.
- Assume no attenuation for a receiver located beyond the end of a barrier.

Reviewing Barrier Proposals

An effective barrier is one which reduces the noise level behind the barrier to 65 L_{dn} or lower. If a barrier can reduce the exterior noise level to 65 L_{dn}, then standard construction techniques should be sufficient to insure an interior level of 45 L_{dn} or below. Therefore, if you determine that a proposed barrier is adequate to reduce the exterior noise level to 65 L_{dn} then no additional attenuation measures should be necessary.

[1] *Design Guide for Reducing Transportation Noise in and Around Buildings*, US Department of Commerce, National Bureau of Standards, April 1978. (Building Science Series 84)

There are four things to check when determining the adequacy of a proposed barrier:

1. Is it high enough?
2. Is it long enough?
3. Is it made of the right materials?
4. Is it properly constructed?

Is it High Enough?

In order for a barrier to be effective it must be at least high enough to break the line of sight between the source and the receiver. In the *Noise Assessment Guidelines* you will find the procedure for determining how much attenuation is provided by a barrier of a given height.

In general, barriers and berms are most effective for one and two story buildings because a relatively low barrier can often provide the attenuation needed. The height that might be required to provide attenuation for much taller buildings is often not feasible for either cost or aesthetic reasons. However, even if a barrier can not be made high enough to attenuate the upper floors of a multistory building, it may still be able to provide some protection for outdoor recreational areas. Before discarding the barrier idea check for this possibility.

If you find that the barrier as proposed is too short to be effective but the sponsor or developer tells you that he or she can not make the barrier any higher, there are some alternatives you can suggest. There are ways to get more attenuation out of each foot of overall height.

As a general rule, barriers work better the closer they are to the source. Figure 6 shows a barrier that does not block the line of sight at all when it is located next to the receiver, yet is quite tall enough when located next to the source. Thus, if the sponsor or developer can not make the barrier any taller, perhaps he or she can move it closer to the source.

Another way to get more attenuation without increasing overall barrier height is to bend the top of the barrier towards the source. Figure 7 shows a case where a barrier built perfectly straight provides 8 dB of attenuation. A barrier with the same overall height but with a 45 degree bend towards the source provides 9.5 dB of attenuation. Thus if the project sponsor or developer wants to keep the overall height of the barrier down, he or she can still increase the attenuation provided simply by bending the top.

Figure 6
Effect of Moving the Barrier Closer to the Source

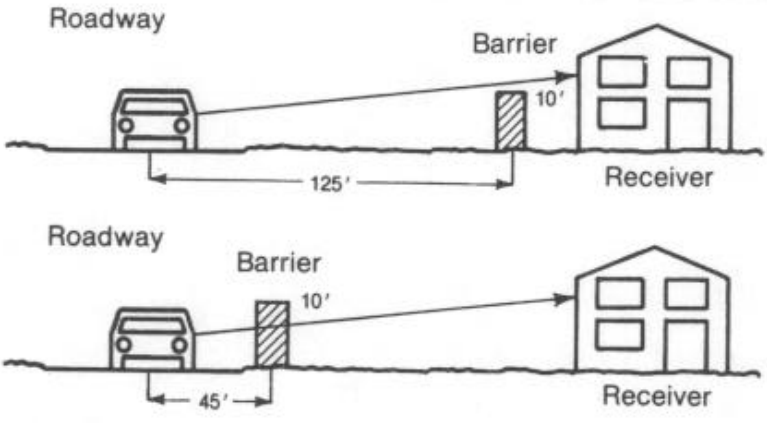
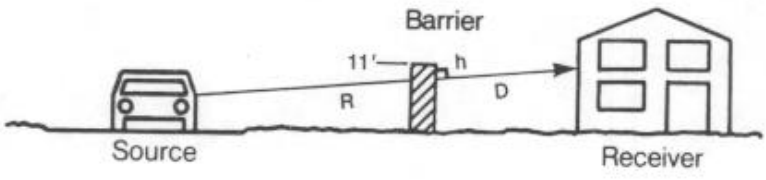
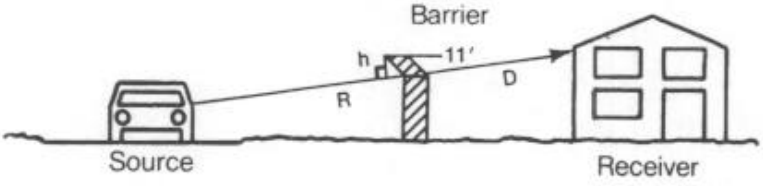


Figure 7
Effect of Bending the Top of the Barrier Towards the Source



Barrier Attenuation Value: 8db
h equals 3'
R equals 45.5'
D equals 40.0



Barrier Attenuation Value: 9.5db
h equals 4'
R equals 42.0'
D equals 43.5'

Thus, if your review of a proposed barrier shows it to be too short, but it can not be made any higher, suggest that the barrier be moved closer to the source or that it be bent at the top, or both.

Is It Long Enough?

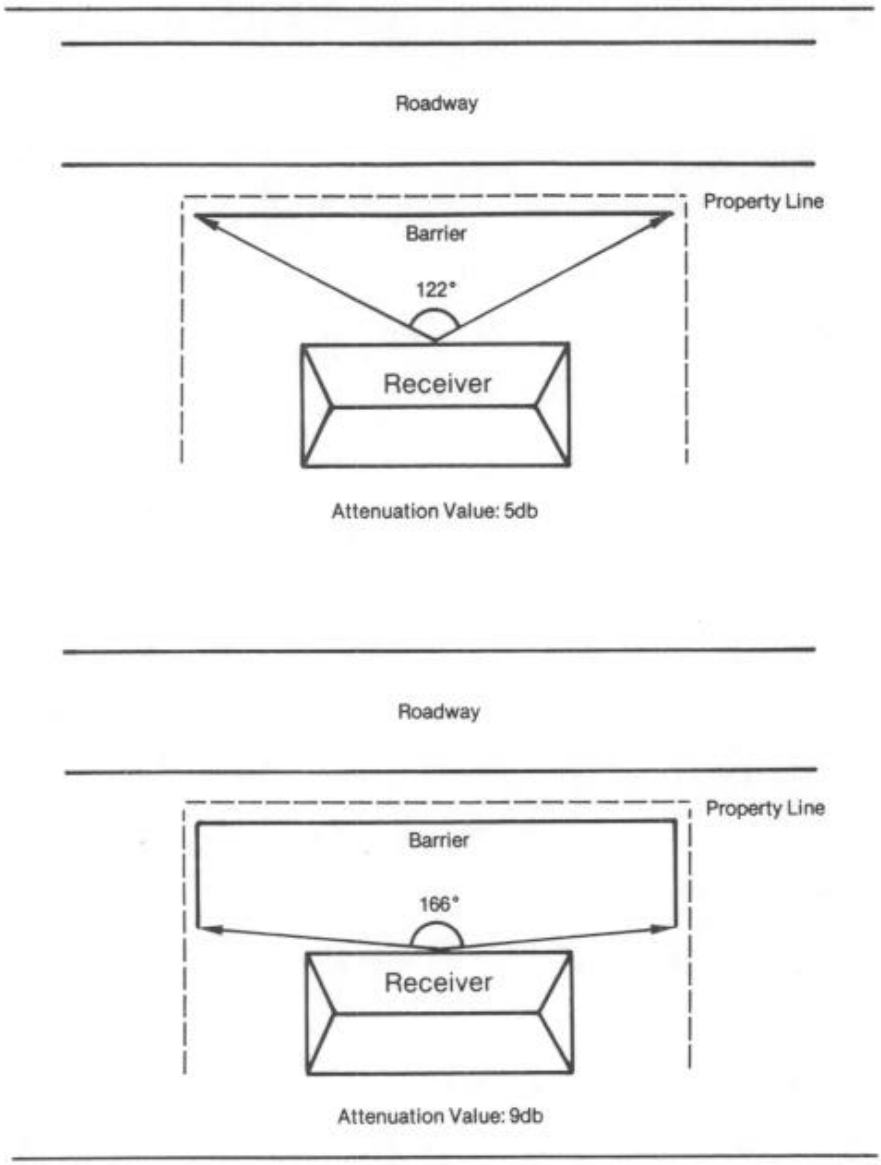
Once you have established how much attenuation the barrier provides due to its height, you must determine if the length of the barrier compromises that attenuation level. Again, *the Noise Assessment Guidelines* contain a procedure for calculating the effect of barrier length.

If you find that the barrier is too short but that there are limitations on how long it can be made, there are, as there were with barrier heights, some recommendations you can make on how to improve the effectiveness of the barrier.

Again, if you bend the edges of the barrier, this time towards the **receiver** not the source, you will increase the effectiveness of the barrier. Figure 8 shows how much a barrier's effectiveness can be improved by bending the edges.

You can also improve the effectiveness of the barrier by moving it closer to the receiver. Figure 9 shows how much a barrier's effectiveness can be increased by moving it closer to the receiver. Now obviously, this creates a conflict with what we said earlier about moving the barrier closer to the source. Clearly each case will require a different compromise. If height is not a limiting factor but length is, you might recommend to the project sponsor or developer that the barrier be moved closer to receiver and the height increased as necessary. If the reverse is true, you would want to recommend the opposite. If both height and length are limited, then the sponsor or developer must find that optimum point where the effeciveness of both the barrier height and the barrier length is as high as possible.

Figure 8
Effect of Bending the Edges of Barrier Towards Receiver
(Both Barriers have Potential Value of 10db)



Is It Made of The Right Materials?

Even if a barrier is high enough and long enough, its effectiveness can be severely reduced if it is made up of lightweight materials that easily transmit sound waves. In the preceding section on barrier concepts we talked about how if the transmission loss value for the barrier material was not at least 10 db higher than the attenuation value of the barrier based on length and height there would be a significant reduction in the effectiveness of the barrier.

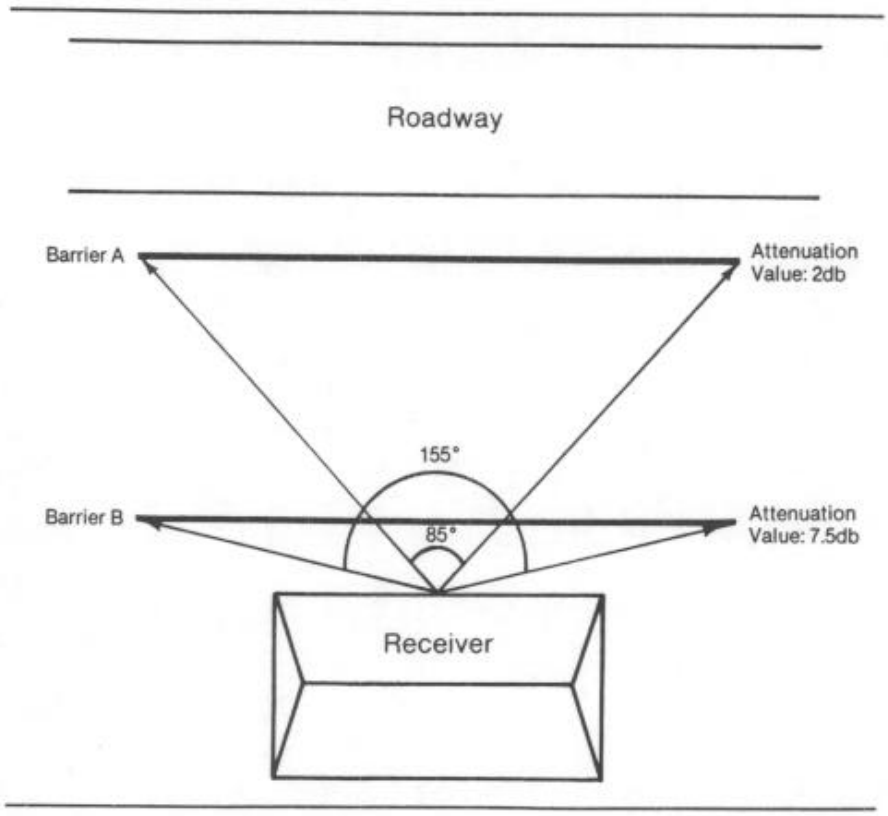
Therefore, once you have calculated the basic attenuation potential of the barrier, you must check to make sure the proper material is being used to build the barrier. Table 1 lists the transmission loss values for materials commonly used in barrier construction. Once you have found the transmission loss value for the material being used, go to Table 2. Read down the column with the transmission loss for the material at its top and across the line that has the attenuation potential for the barrier listed. Where the two intersect you will find the actual attenuation capability of the barrier.

If you find that the choice of material has severely reduced the effectiveness of the barrier, you should recommend that the sponsor or developer select another material.

Is It Properly Constructed?

Holes or openings can substantially reduce the effectiveness of a barrier. A barrier that has openings totaling 50% or more of its total area will provide no attenuation. A barrier that has openings totaling 10% of its total area has a maximum attenuation value of approximately 4db. That is 4db no matter how high, how long or how thick the barrier. So you can see that it is very important that the barrier is made of solid materials and that it is tightly constructed. In general the intended openings in a barrier should equal no more than 1% of total area and the construction specifications should require that all joints are tightly sealed.

Figure 9
Effect of Moving Barrier Closer to Receiver



A Final Note

One thing should have become clear to you as you have been reading this section, and that is that in order for you to adequately review a project sponsor or developer's proposed barrier you must be given fairly specific information about the exact dimensions of the proposed barrier, the type and thickness of the barrier material, and the exact design of the barrier including construction specifications. Without this information you will be unable to do any more than a cursory evaluation, an evaluation that could be far from accurate. Make sure you make it clear to the developer or sponsor what you need to have.

Table 1
Transmission Loss Value for Common Barrier Materials

Material	Thickness, (Inches)	Transmission Loss, dBA (1)
Woods		
Fir	1/2	17
	1	20
	2	24
Pine	1/2	16
	1	19
	2	23
Redwood	1/2	16
	1	19
	2	23
Cedar	1/2	15
	1	18
	2	22
Plywood	1/2	20
	1	23
Particle Board	1/2	20
Metals		
Aluminum	1/16	23
	1/8	25
	1/4	27
Steel	24 ga	18
	20 ga	22
	16 ga	15
Lead	1/16	28
Concrete, Masonry, etc.		
Light Concrete	4	36
	6	39
Dense Concrete	4	40
Concrete Block	4	32
	6	36
Cinder Block (Hollow Core)	6	28
Brick	4	33
Granite	4	40
Composites		
Aluminum Faced Plywood	3/4	21-23
Aluminum Faced Particle Board	3/4	21-23
Plastic Lamina on Plywood	3/4	21-23
Plastic Lamina on Particle Board	3/4	21-23
Miscellaneous		
Glass (Safety Glass)	1/8	22
	1/4	26
Plexiglass (Shatterproof)		22-25
Masonite	1/2	20
Fiberglass/ Resin	1/8	20
Stucco on Metal Lath	1	32
Polyester with Aggregate Surface	3	20-30

[1] A-weighted TL based on generalized truck spectrum. Source: *Noise Barrier Design Handbook*, FHWA

Table 2
Noise Reduction of a Barrier as a Function of Its Transmission Loss

Designed Attenuation, dB (from height) and length)	Tramission Loss, dB of Materials				
	10	15	20	25	30
5	3.8	4.6	4.9	5.0	5.0
6	4.5	5.5	5.8	6.0	6.0
7	5.2	6.4	6.8	6.9	7.0
8	5.9	7.2	7.7	7.9	8.0
9	6.5	8.0	8.7	8.9	9.0
10	7.0	8.8	9.6	9.9	10.0
11	7.5	9.5	10.5	10.8	11.0
12	7.9	10.2	11.4	11.8	11.9
13	8.2	10.9	12.2	12.7	12.9
14	8.5	11.5	13.0	13.7	13.9
15	8.8	12.0	13.8	14.6	14.9
16	9.0	12.5	14.5	15.5	15.8
17	9.2	12.9	15.2	16.7	16.8
18	9.4	13.2	15.9	17.2	17.7
19	9.5	13.5	16.5	18.0	18.7
20	9.6	13.8	17.0	18.8	19.6

Source: *Noise Barrier Design Handbook, FHWA*

Acoustical Site Planning Concepts

(This section, with some editing, is from *The Audible Landscape*, FHWA.[1])

The arrangement of buildings on a site can be used to minimize noise impacts. If incompatible land uses already exist, or if a noise sensitive activity is planned, acoustical site planning often provides a successful technique for noise impact reduction.

Many site planning techniques can be employed to shield a residential development from noise. These can include:

1. increasing the distance between the noise source and the receiver;
2. placing noise compatible land uses such as parking lots, maintenance facilities, and utility areas between the source and the receivers. Playgrounds and parks are not necessarily noise compatible activities.
3. locating barrier-type buildings parallel to the noise source or the highway; and
4. orienting the residences away from the noise.

The implementation of many of the above site planning techniques can be combined through the use of cluster and planned unit development techniques.

Distance

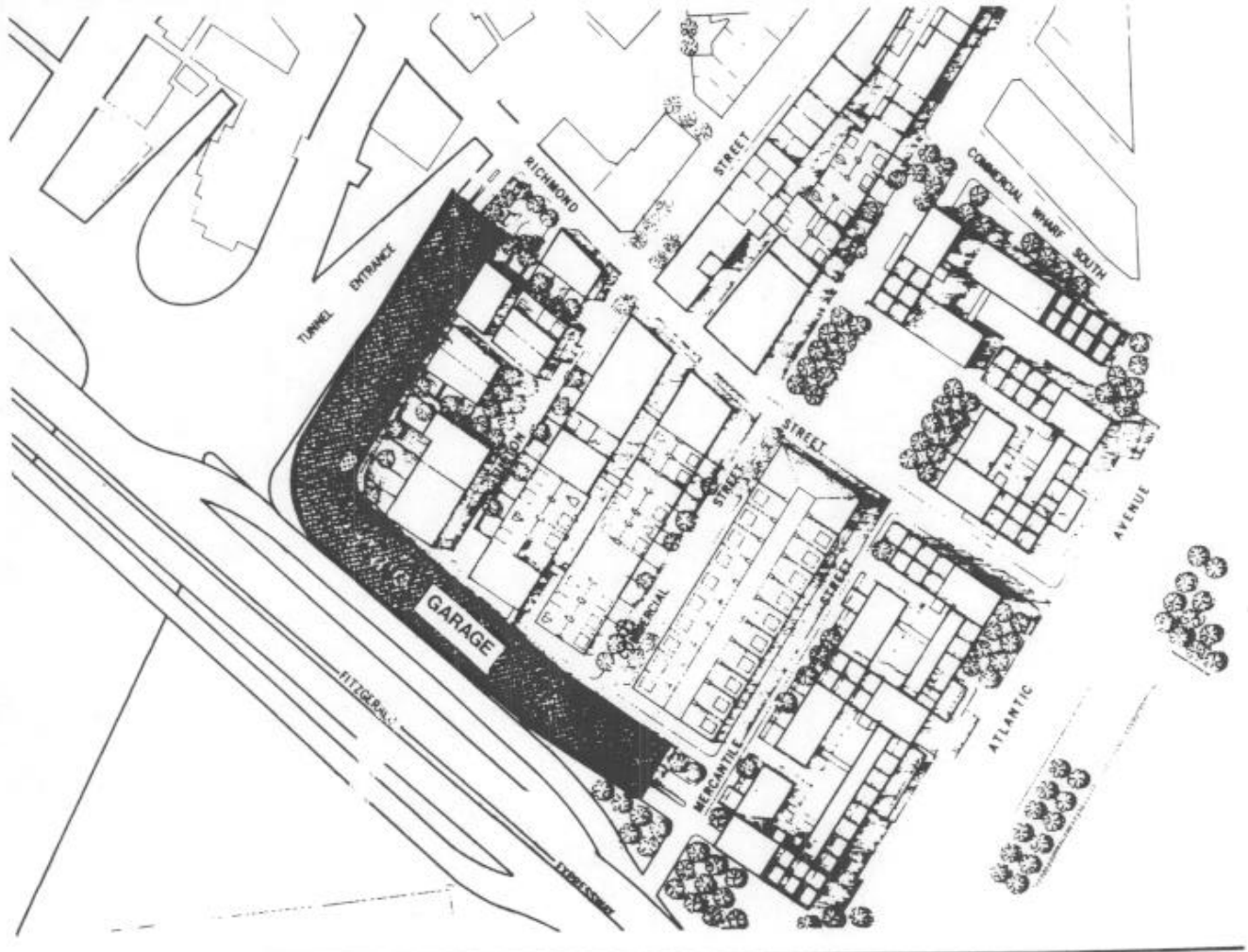
Noise can be effectively reduced by increasing the distance between a residential building and a highway. Distance itself reduces sound: doubling the distance from a noise source can reduce its intensity by as much as 3 dBA. In the case of highrise buildings, distance may be the only means, besides acoustical design and construction, of reducing noise impacts. This is because it is nearly impossible to provide physical shielding for the higher stories from adjacent noise.

Noise Compatible Land Uses as Buffers

Noise protection can be achieved by locating noise-compatible land uses between the highway and residential units. Whenever possible, compatible uses should be nearest the noise source. Figure 10 shows a proposed parking garage along two sides of a development in Boston. Both the

[1] *The Audible Landscape: A Manual for Highway Noise and Land Use*, US Department of Transportation, The Federal Highway Administration, November 1974. (GPO Stock Number: 5000-00079.)

Figure 10
Use of a Parking Garage to Shield a Residential Area



Fitzgerald Expressway and the entrance to the Callahan Tunnel which are shown on the site plan are major and noisy traffic routes. In addition to protecting the residential development from the noise and dirt of highway traffic, the parking garage provides needed facilities for the residents.

Buildings as Noise Shields

Additional noise protection can be achieved by arranging the site plan to use buildings as noise barriers. A long building, or a row of buildings parallel to a highway can shield other more distance structures or open areas from noise.

If the building being used as a barrier is sensitive to highway noise, the building itself must first be soundproofed. This technique was used in a housing project in England where a 3,900 foot long, 18 foot wide and 45–70 foot high wall (depending on the terrain) serves as both residence and a sound shield. The wall/building will contain 387 apartments in which the kitchens and bathrooms are placed towards the noise, and the bedrooms and living rooms face away from the highway. The wall facing the highway will be soundproofed and windows, when they exist, are sealed. Substantial noise reductions are expected.

Orientation

The orientation of buildings or activities on a site affects the impact of noise, and the building or activity area may be oriented in such a way as to reduce this impact.

Noise impacts can be severe for rooms facing the roadway since they are closest to the noise source. The noise impact may also be great for rooms perpendicular to the roadway because (a) the noise pattern can be more annoying in perpendicular rooms and (b) windows on perpendicular walls do not reduce noise as effectively as those on parallel walls because of the angle of the sound. Road noise can be more annoying in perpendicular rooms because it is more extreme when it suddenly comes in and out of earshot as the traffic passes around the side of the building, rather than rising and falling in a continuous sound, as it would if the room were parallel to passing vehicles.

Whether the noise impact is greater on the perpendicular or the parallel wall will depend on the specific individual conditions. Once the most severely impacted wall or walls are determined, noise impacts may be minimized by reducing or eliminating windows from these walls.

Buildings can also be oriented on a site in such a way as to exploit the site's natural features. With reference to noise, natural topography can be exploited and buildings placed in low noise pockets if they exist. If no natural noise pockets exist, it is possible to create them by excavating pockets for buildings and piling up earth mounds between them and the noise. Such a structure would obstruct the sound paths and reduce the noise impacts on the residences.

Cluster and Planned Unit Development

A cluster subdivision is one in which the densities prescribed by the zoning ordinance are adhered to but instead of applying to each individual parcel, they are aggregated over the entire site, and the land is developed as a single entity. A planned unit development, or P.U.D., is similar but changes in land use are included, such as apartments and commercial facilities in what would otherwise be a single-family district.

From Figure 11 it can be seen how the conventional grid subdivision affords no noise protection from the adjacent highway. The first row of houses bears the full impact of the noise. In contrast, the cluster and P.U.D. techniques enable open space and commercial uses respectively to serve as noise buffers. Examples of this are shown in Figures 12 and 13. A word of caution is necessary: in a cluster development, the required open space can be located near the highway to minimize noise to the residences. However, many recreation uses are noise sensitive, and when one takes advantage of the flexibility of cluster development to minimize noise, care must be taken not to use all of the available open space in

Figure 11
Conventional Grid Subdivision

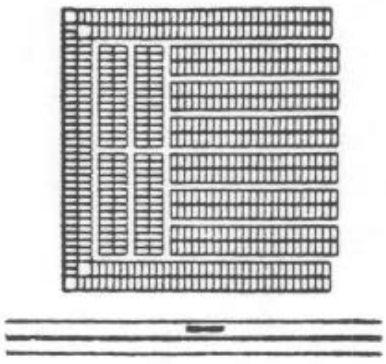
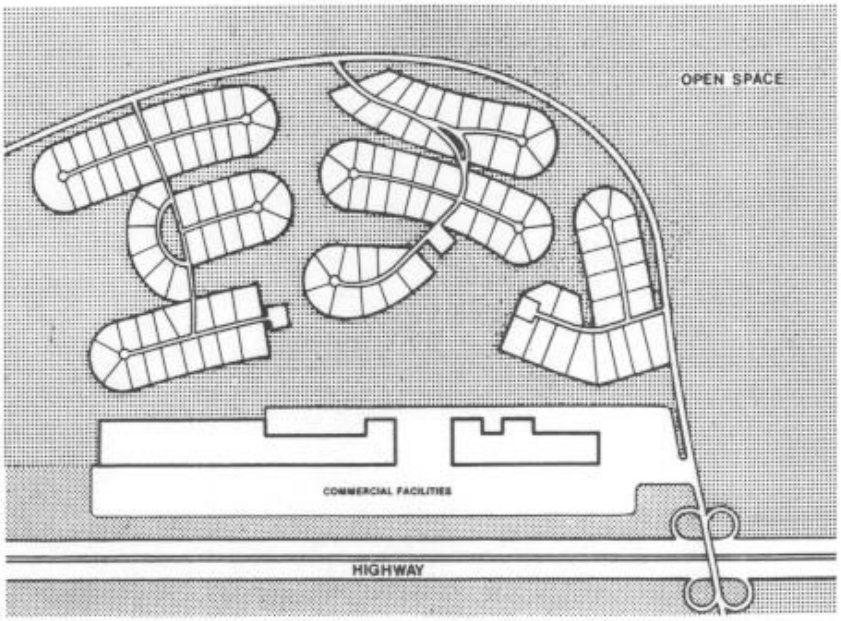


Figure 12
Placement of Noise Compatible Uses Near a Highway in a PUD



buffer strips, thus depriving the development of a significant open space area. Where high noise levels exist, a combination of buffer strips and other techniques (such as berms and acoustical sound proofing) can be employed.

The flexibility of the cluster and planned unit development techniques allows many of the above site planning techniques to be realized and effective noise reduction achieved.

Reviewing Site Plans

There are two main things to check when reviewing site plan changes to determine if the revised site plan provides adequate attenuation for the noise sensitive uses:

1. Is the separation between the source and the receiver great enough?
2. If noise-compatible buildings are being used as barriers for other buildings, are they adequate barriers, i.e., are they long enough and are they high enough? (And, if the buildings being used as barriers contain noise sensitive activities, have the buildings been properly soundproofed.)

In order to determine whether the proposed site plan changes will provide adequate separation between the source and the receiver, you simply go back to the *Noise Assessment Guidlines* procedures. You can use the *Guidelines* both to determine if the proposed separation distance is sufficient or to determine the necessary separation distance. You should at this point check to make sure that the uses being located in the "buffer zone" between the source and the receiver are indeed noise compatible uses. If parks or playgrounds are located in the buffer zone, make sure they are not the only ones associated with the project.

To determine whether the noise compatible buildings being proposed as barriers are adequate, you simply use the procedures outlined in the preceding section. Determine whether the building is high enough to properly break the line of sight between the receiver and the source. Then determine if the building is long enough. It is not necessary to check to make sure it is made of the proper materials or that it is properly constructed since the building will be inherently thick enough not to have any problems. Again, however, if the building being proposed as a barrier contains noise sensitive uses you must first verify that it is properly soundproofed. (See the next section for guidance on acoustical construction.) If the building is not properly soundproofed then it can not be used as a barrier for other buildings.

As you review the site plan check to see that the building locations will not aggravate noise problems. Figure 14 shows how building arrangement can make the noise problem worse.

Figure 13
Open Space Placed Near a Highway in a Cluster Development

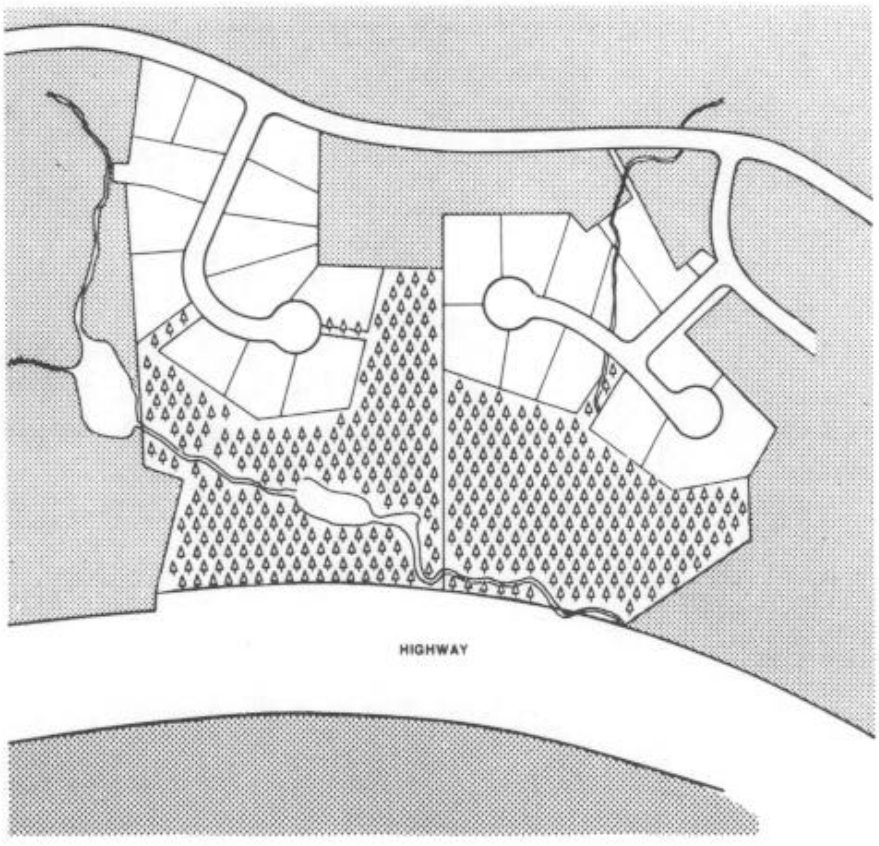
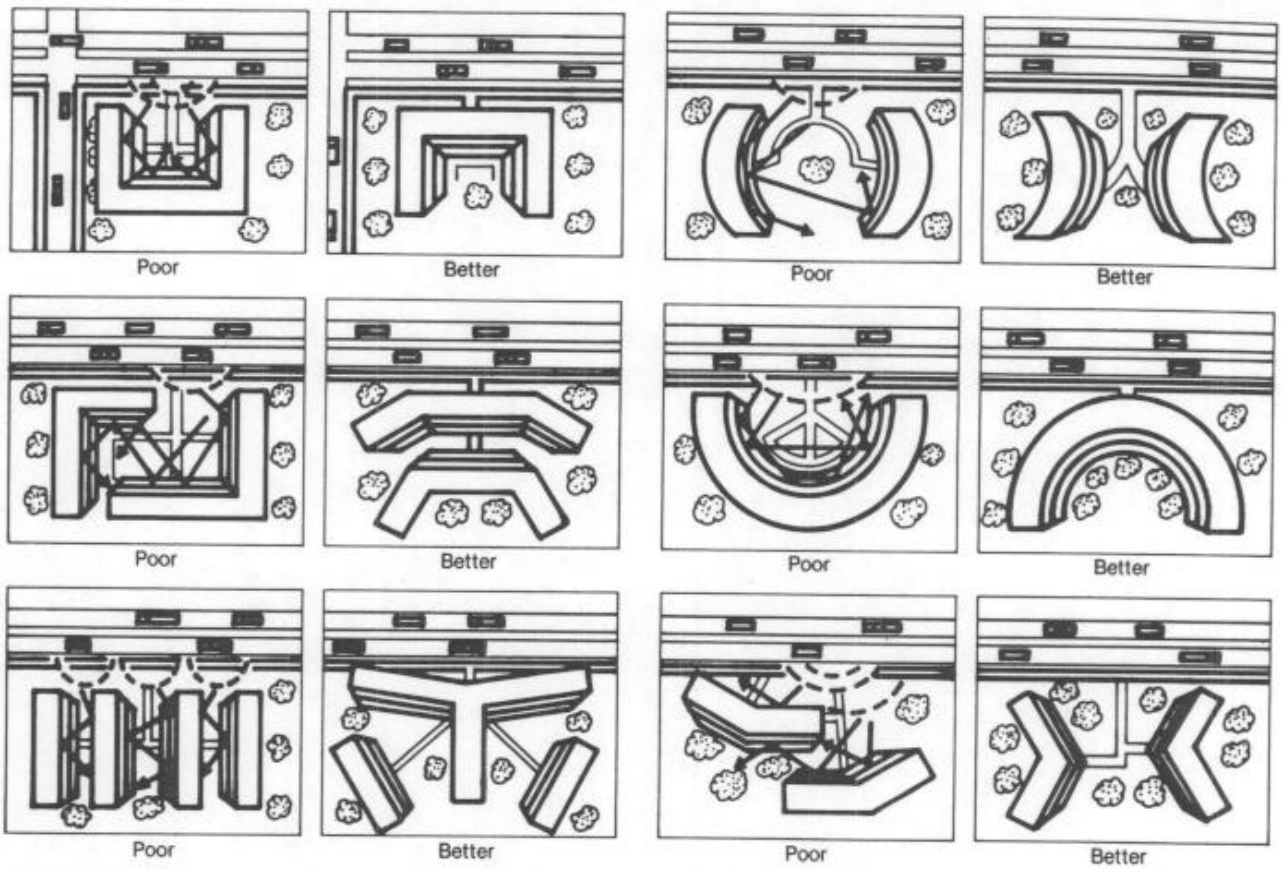


Figure 14
Orientation of Buildings on Sites



Acoustical Construction Concepts

(This section, with some editing is taken from the *Audible Landscape, FHWA.*[1])

Noise can be intercepted as it passes through the walls, floors, windows, ceilings, and doors of a building. Examples of noise reducing materials and construction techniques are described in the pages that follow.

To compare the insulation performance of alternative constructions, the Sound Transmission Class (STC) is used as a measure of a material's ability to reduce sound. Sound Transmission Class is equal to the number of decibels a sound is reduced as it passes through a material. Thus, a high STC rating indicates a good insulating material. It takes into account the influence of different frequencies on sound transmission, but essentially the STC is the difference between the sound levels on the side of the partition where the noise originates and the side where it is received. For example, if the external noise level is 85 dB and the desired internal level is 45 dB, a partition of 40 STC is required. The Sound Transmission Class rating is the official rating endorsed by the American Society of Testing and Measurement. It can be used as a guide in determining what type of construction is needed to reduce noise.

The use of the STC rating system for transportation noise is a subject of some debate. The STC rating was originally intended primarily for use with interior partitions and relates to the "subjective impressions of the sound insulation provided against the sounds of speech, radio, television, music, and similar sources of noise in offices and dwellings."[2] However, since it remains the only widely used noise reduction rating system for materials the STC system is very often used even with transportation noise. When STC ratings are used for transportation noise you should be aware that the STC ratings may be a few dB too high. For example, the STC rating for a standard frame 2 × 4 wall with exterior siding, and sheathing and interior sheetrock may be 37 dB.[3] If rated specifically for transportation noise the dB reduction rating might drop to 34 dB.[4] All this really means, however, is that you should use the STC ratings with a bit of caution and remain aware of the possible 2-3 dB overstating that you may get with the STC rating system. Throughout this text we will be talking in terms of STC ratings for materials and assemblies.

[1] *The Audible Landscape: A Manual for Highway Noise and Land Use*, US Department of Transportation, the Federal Highway Administration, November 1974. (GPO Stock #5000-00079).

[2] *Acoustical and Thermal Performance of Exterior Residential Walls, Doors, and Windows*, US Department of Commerce, National Bureau of Standards, November 1975. (NBS Building Science Series 77) page 21.

[3] Ibid., p. 29

[4] *Design Guide for Reducing Transportation Noise In and Around Buildings*, p. 137.

Walls

Walls provide building occupants with the most protection from exterior noise. Different wall materials and designs vary greatly in their sound insulating properties. Figure 15 provides a visual summary of some ways in which the acoustical properties can be improved:

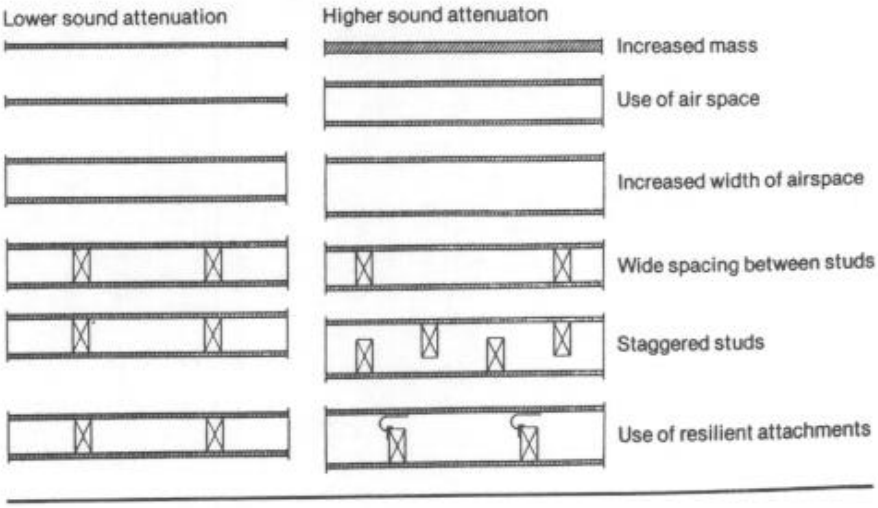
Increase the mass and stiffness of the wall. In general, the denser the wall material, the more it will reduce noise. Thus, concrete walls are better insulators than wood walls of equal thickness. Increasing the thickness of a wall is another way to increase mass and improve sound insulation. Doubling the thickness of a partition can result in as much as a 6 dB reduction in sound.[1] However, the costs of construction tend to limit the feasibility of large increases in wall mass.

The relative stiffness of the wall material can influence its sound attenuation value. Care must be taken to avoid wall constructions that can vibrate at audible frequencies and transmit exterior sounds.

[1] R. K. Cooke and P. Chrzanowski, "Transmission of Noise Through Walls and Floors," Cyril Harris, ed., Handbook of Noise Control, McGraw-Hill Book Company, Inc. (New York, 1957).

Figure 15
The Audible Landscape

Factors which influence sound attenuation of walls



Use cavity partitions. A cavity wall is composed of two or more layers separated by an airspace. The airspace makes the cavity wall a more effective sound insulator than a single wall of equal weight, leading to cost savings.

Increase the width of the airspace. A three inch airspace provides significant noise reduction, but increasing the spacing to six inches can reduce noise levels by an additional 5 dBA. Extremely wide airspaces are difficult to design.

Increase the spacing between studs. In a single stud wall, 24 inch stud spacing gives a 2-5 dB increase in STC over the common 16 inch spacing.[2]

Use staggered studs. Sound transmission can be reduced by attaching each stud to only one panel and alternating between the two panels.

[2]Leslie T. Doelle, Environmental Acoustics (New York, McGraw-Hill Book Company, 1972), pp. 232-233.

Use resilient materials to hold the studs and panels together. Nails severely reduce the wall's ability to reduce noise. Resilient layers such as fiber board and glass fiber board, resilient clips, and semi-resilient attachments are relatively inexpensive, simple to insert, and can raise the STC rating by 2-5 dB.[1]

Use dissimilar layers. If the layers are made of different materials and/or thickness, the sound reduction qualities of the wall are improved.[2]

Add acoustical blankets. Also known as isolation blankets, these can increase sound attenuation when placed in the airspace. Made from sound absorbing materials such as mineral or rock wool, fiberglass, hair felt or wood fibers, these can attenuate noise as much as 10 dB.[3] They are mainly effective in relatively lightweight construction.

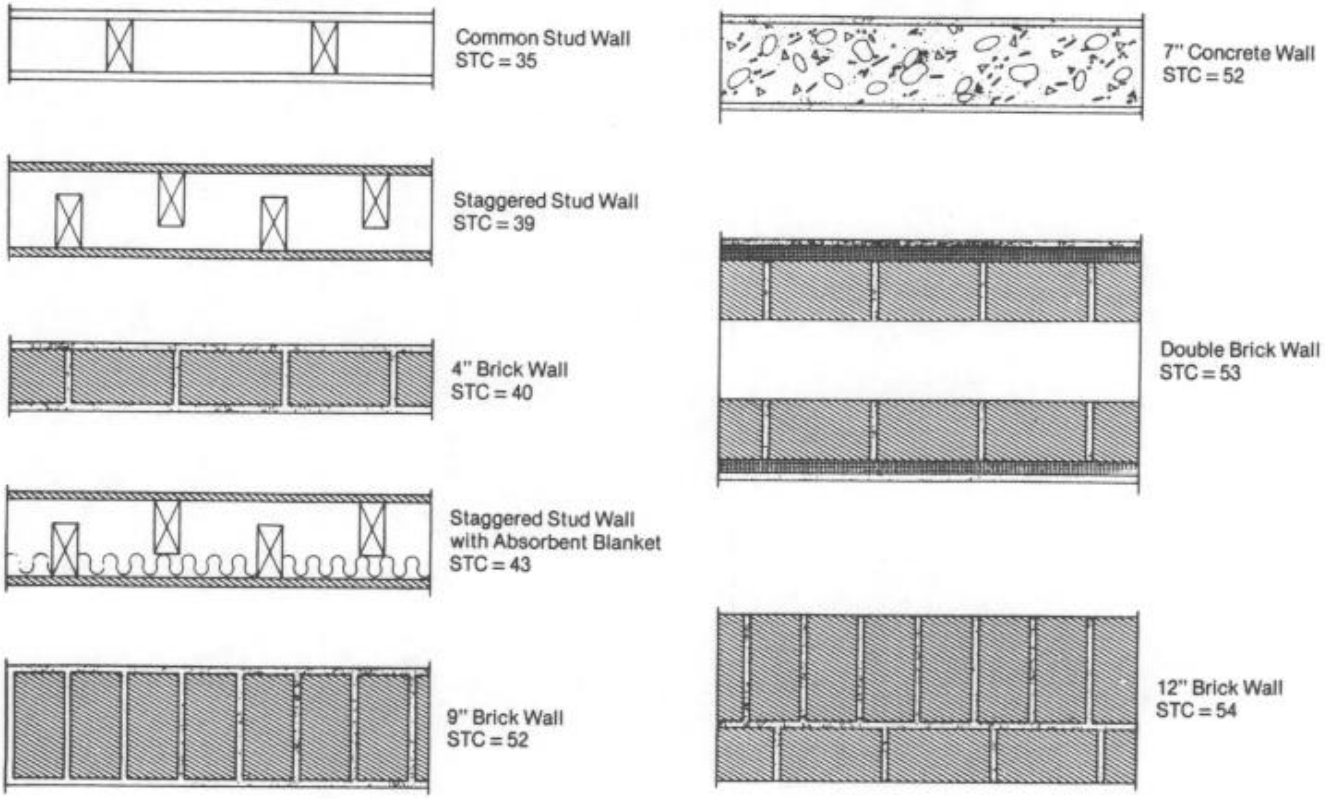
Seal cracks and edges. If the sound insulation of a high performance wall is ever to be realized, the wall must be well sealed at the perimeter. Small holes and cracks can be devastating to the insulation value of a wall. A one-inch square hole or a 1/16 inch crack 16 inches long will reduce a 50 STC wall to 40.[4]

Figure 16 shows a sample of wall types ranging from the lowest to the highest sound insulation values.

Remember that the effectiveness of best wall construction will be substantially reduced if you permit vents, mail slots or similar openings in the walls. If vents are permitted the ducts must be specially designed and insulated to make sure noise does not reach the inside. The best approach is simply to eliminate all such openings on impacted walls.

[1]Ibid, p. 172
[2]Ibid, p. 162
[3]Doelle, p. 20
[4]United States Gypsum, Sound Control Construction, Principles and Performance (Chicago, 1972), p. 66

Figure 16
Walls



Windows

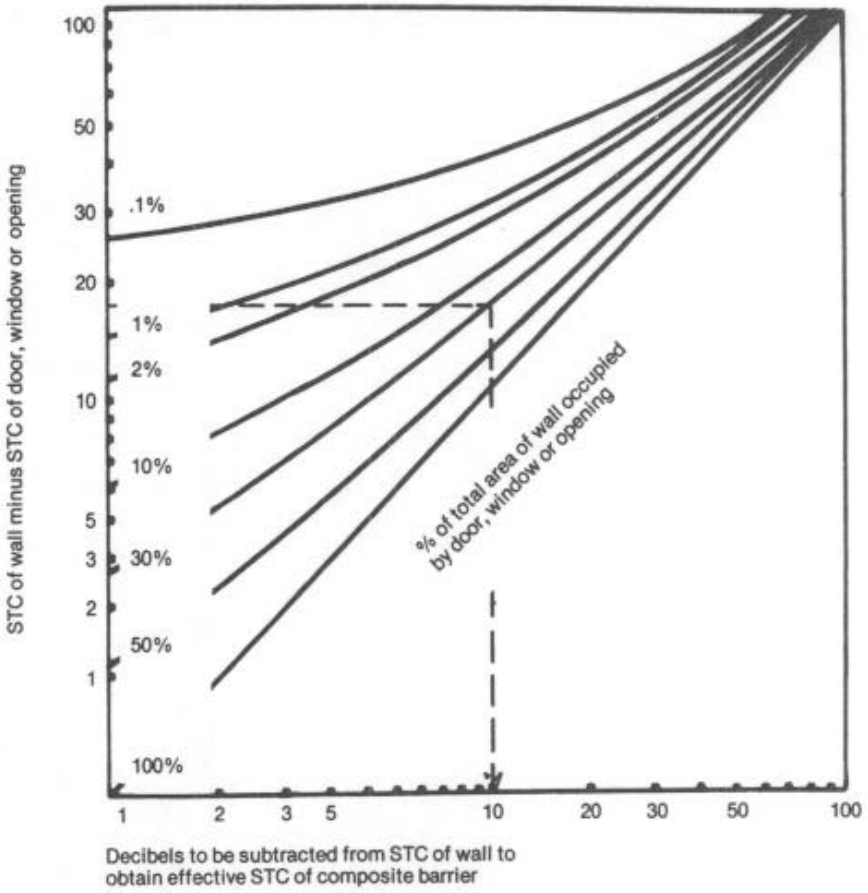
Sound enters a building through its acoustically weakest points, and windows are one of the weakest parts of a wall. An open or weak window will severely negate the effect of a very strong wall. Whenever windows are going to be a part of the building design, they should be given acoustical consideration. Figure 17 illustrates the effects of windows on the sound transmission of walls. For example, if a wall with an STC rating of 45 contains a window with an STC rating of 26 covering 30% of its area, the overall STC of the composite partition will be 35, a reduction of 10 dB.

The following is a discussion of techniques that can be used to reduce noise in a building by means of its windows. These techniques range from a blocking of the principal paths of noise entry to a blocking of the most indirect paths.

Close windows. The first step in reducing unwanted sound is to close and seal the windows. The greatest amount of sound insulation can be achieved if windows are permanently sealed. However, openable acoustical windows have been developed which are fairly effective in reducing sound.[1] Whether or not the sealing is permanent, keeping windows closed necessitates the installation of mechanical ventilation systems. If you are dealing with single family houses and some of the windows are facing away from all noise sources, a whole house fan may be better and cheaper than air conditioning. In multifamily housing or where all windows are exposed to the noise sources you will have to go with the air conditioning. If windows must be openable, special seals are available which allow windows to be opened.[2]

Reduce window size. The smaller the windows, the greater the transmission loss of the total partition of which the window is a part. Reducing the window size is a technique that is used because (a) it precludes the cost of expensive acoustical windows, and (b) it saves money by cutting down the use of glass. The problems with this technique are (a) it is not very effective in reducing noise; e.g., reducing the proportion of window to wall size from 50% to 20% reduces noise by only 3 decibels; and (b) many building codes require a minimum window to wall size ratio.

Figure 17
STC



Instructions on use of graph

1. Subtract the STC value of the door, window or opening from the STC value of the wall.
2. Enter the vertical axis of the graph at the point that matches the value from step 1.
3. Read across to the curve that represents the percentage of the total area of the wall that is taken up by the door, window, or opening.
4. Read down to the horizontal axis.
5. Subtract the value on the horizontal axis from the original STC value of the wall. The result is the composite STC value of the wall and the door, window or opening.

Increase glass thickness. If ordinary windows are insufficient in reducing noise impacts in spite of sealing techniques, then thicker glass can be installed. In addition, this glass can be laminated with a tough transparent plastic which is both noise and shatter resistant. Glass reduces noise by the mass principle; that is, the thicker the glass, the more noise resistant it will be. A 1/2-inch thick glass has a maximum STC rating of 35 dB compared to a 25 dB rating for ordinary 3/16 inch glass.

[1]U.S. Department of Housing and Urban Development, A Study of Techniques to increase the Sound Insulation of Building Elements, Report No. WR 73-5, Washington, D.C., June 1973.

[2]Los Angeles Department of Airports, *Guide to the Soundproofing of Existing Homes Against Exterior Noise*. Report No. WRC 70-2, March 1970, pp. 9-11, 22-30. In this report, the function and performance of a number of operable seals are described.

However, glass thicknesses are only practical up to a certain point, when STC increases become too insignificant to justify the cost. For example, a 1/2 inch thick glass can have an STC of 35; increasing the thickness to 3/4 inch only raises the STC to 37. However, a double glass acoustical window consisting of two 3/16 inch thick panes separated by an airspace will have an STC of 51 and can cost less than either solid window.

In addition to thickness, proper sealing is crucial to the success of the window. To prevent sound leaks, single windows can be mounted in resilient material such as rubber, cork, or felt.

Install Double-Glazed Windows. Double-glazed windows are paired panes separated by an airspace or hung in a special frame. Generally, the performance of the double-glazed window may be increased with:

- increased airspace width
- increased glass thickness
- proper use of sealings
- slightly dissimilar thicknesses of the panes
- slightly non-parallel panes

In general the airspace between the panes should not be less than 2–4 inches if an STC above 40 is desired. If this is not possible, a heavy single-glazed window can be used. The use of slightly non-parallel panes is a technique employed when extremely high sound insulation is required, such as in control rooms of television studios.

The thickness of double-glazed panes may vary from 1/8 to 1/4 inch or more per pane. Although thickness is important, the factors which most determine the noise resistance of the window is the use of sealant and the width of the airspace.

As in the case of all windows, proper sealing is extremely important. To achieve an STC above 43, double-glazed windows should be sealed permanently. If the windows must be openable, there are available special frames and sealers for openable windows which allow a maximum STC of 43.[1]

Permanently sealed double-glazed windows often require an air pressure control system to maintain a constant air pressure and minimal moisture in the airspace. Without this system, the panes may deflect, and, in extremely severe cases, pop out of the frames.

To further insure isolation of noise between double-glazed panes, the panes could be of different thicknesses, different weights, and slightly non-parallel to each other. This prevents acoustical coupling and resonance of sound waves.

Doors

Acoustically, doors are even weaker than windows, and more difficult to treat. Any door will reduce the insulation value of the surrounding wall. The common, hollow core wood door has an STC rating of 17 dB. Taking up about 20% of the wall, this door will reduce a 48 STC wall to 24 STC. To strengthen a door against noise, the hollow core door can be replaced by a heavier solid core wood door that is well sealed[1] and is relatively inexpensive. A solid core wood door with vinyl seal around the edges and carpeting on the floor will reduce the same 48 STC wall to only 33 dB.[2] An increased sound insulation value can be achieved if gasketed stops or drop bar threshold closers are installed at the bottom edge of the door. (See Figure 18)

The alternative solution to doors is to eliminate them whenever possible from the severely impacted walls and place them in more shielded walls.

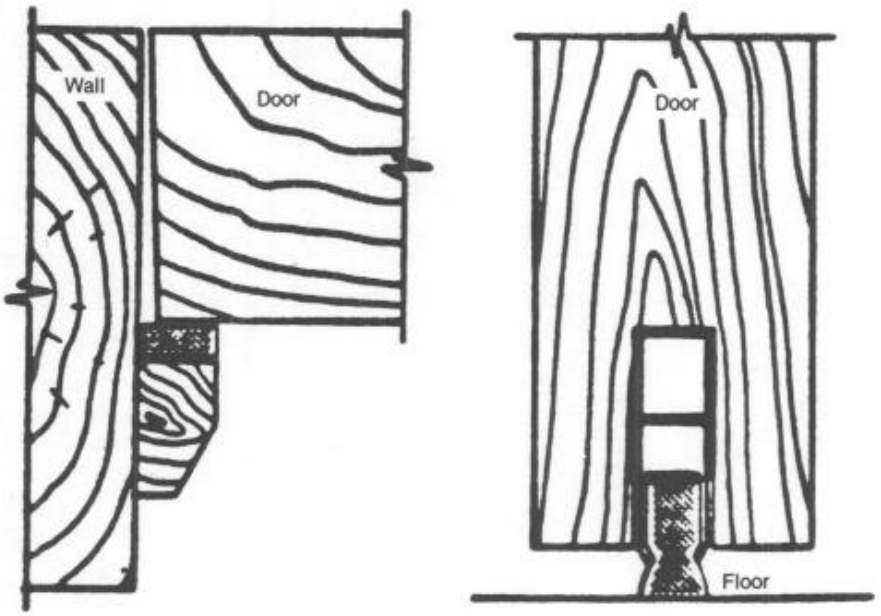
In any case no mail slots or similar openings should be allowed in exterior doors.

Roofs

Acoustical treatment of roofs is not usually necessary unless the noise is extremely severe or the noise source is passing over the building. The ordinary plaster ceiling should provide adequate sound insulation except in extremely severe cases. An acoustically weak roof which is likely to require treatment is the beamed ceiling.[3] Beamed ceilings may be modified by the addition of a layer of fiberglass or some other noise resistent material. Suspended ceilings are the most effective noise reducers but they are also the most expensive.

[1]D.E. Bishop and P.W. Hirtle, "Notes on the Sound Transmission Loss of Residential-Type Windows and Doors," Journal of the Acoustical Society of America, 43:4 (1968).
[2]U.S. Gypsum, Sound Control... p. 100.
[3]Ibid p. 15.

Figure 18



Gasketed door stop

Drop bar threshold closer

[1]Ibid.

Floors

In the case of highway noise, floors would only require acoustical treatment if the highway were passing under the building. In this case, flooring would have to provide protection against structural vibrations as well as airborne sound.

Two ways to insulate a floor from noise are to install a solid concrete slab at least 6 inches thick or install a floating floor. In general, the floating floor gives the greatest amount of sound and vibration insulation; however, it is extremely expensive. Basically, a floating floor consists of a wood or concrete slab placed over the structural slab, but separated by a resilient material. The resilient material isolates the surface slab from the structural slab and the surrounding walls.

What to Look for When Reviewing Plans

The number of possible combinations of the building materials that go into walls, ceilings, windows and doors, is, no doubt, considerably short of infinite. It is however still a very large number, large enough that it would be impossible to compile a list of all the possible combinations. Therefore, do not expect to find in this section, or anywhere else for that matter, a neat table showing the STC ratings for all the types of construction you may encounter. In fact, it is not really your responsibility to determine the precise STC ratings for the walls, ceilings, windows and doors in the projects you review. Your job is simply to review the attenuation levels claimed by the sponsor/developer and determine whether or not they are reasonable.

To enable you to perform the above described task, we have prepared a list of the most common types of construction for which we have STC ratings. By comparing the type of construction proposed to one of these "model" types you should be able to tell whether the claimed STC rating is reasonable. For example, the sponsor/developer submits a description of his building stating that a 2 × 6 stud wall with standard sheathing, insulation, wood siding, and 1/2" gypsum board achieves a STC rating of 48. You look at Table 3 and find that the closest "model" wall is a 2 × 4 stud wall with wood siding, sheathing, insulation, and 1/2" gypsum board. This wall has a STC rating of 39. An 9 dB difference is quite significant considering that the walls are really quite similar. You would probably want to go back to the developer/sponsor and ask for some supporting data that proves that the 2 × 6 wall he proposes will indeed provide 48 dB of noise attenuation.

In order to make it easier to review the attenuation levels provided by the proposed construction, we suggest that you ask the developer/sponsor to complete a form such as shown in Figure 19. Such a form will give you all the information you need in a properly organized format that will facilitate your review. You could fill in the first part and simply have the developer/sponsor fill out the second part and return it with the developer certification or other project documents.

As you will recall from the previous section, most walls provide pretty good attenuation by themselves. It is the presence of windows and doors and openings such as vents that reduces the attenuation capability of the wall. Thus, after you have determined whether the basic wall itself has a reasonable STC, you must review the impact of the windows and doors. You do this by using Figure 17. First you determine the difference between the STC ratings for the wall and the windows. You enter the vertical axis of Figure 17 with that number. You read across until you intersect the line that represents the percentage of the wall taken up by the windows. Then you read down to the horizontal axis where you wil find the value to be subtracted from the basic STC value of the wall. The resulting number is the combined STC value for the wall. If the wall also contains a door, repeat the same procedure, only start out with the modified STC rating for the wall. If the wall has doors only, then obviously you start with the basic wall STC rating. Finally you compare the number you have derived with that listed by the developer/sponsor. If they are fairly close, you need not pursue it further. If there is a substantial difference, you should ask for an explanation or documentation from the developer.

Once again, we caution you about borderline cases. If the attenuation required is 30 dB and the STC rating for the proposed construction is exactly 30 dB, you may want to ask the developer to provide even more attenuation. Remember that we discussed how the STC rating may overstate the actual attenuation provided by as much as 3 dB. If an additional 3 dB can be achieved at minimum cost, we would strongly urge that you seek it from the developer/sponsor.

Finally check to make sure the developer has provided some form of mechanical ventilation. If it's a single family house and a whole house fan is the means of ventilation being provided make sure that there are operable windows on walls which do not face the noise source(s) nor are perpendicular to the source(s). Otherwise the residents will have to open windows on the exposed wall, thus cancelling out much of the attenuation achieved.

Table 3
STC Ratings for Typical Building Components[1]

Building Component	Description	STC Rating
Frame Wall	a. 5/8" × 10" Redwood Siding b. 1/2" Insulation Board Sheathing c. 2 × 4 studs 16" o.c. d. Fiberglass Building Insulation e. 1/2" Gypsum Board attached directly to studs	39 dB
Stucco/Frame Wall	a. 7/8" Stucco b. No. 15 felt Building Paper and 1" Wire Mesh c. 2 × 4 Studs 16" o.c. d. Fiberglass Building Insulation e. 1/2" Gypsum Board attached directly to studs	46
Brick Veneer Wall	a. Face Brick b. 1/2" Airspace with metal ties c. 3/4" Insulation Board Sheathing d. 2 × 4 Studs 16" o.c. e. Fiberglass Building Insulation f. 1/2" Gypsum Board attached directly to studs	56
Masonry Wall	a. 1" Stucco b. 8" thick Hollow Concrete Block c. 1/2" Gypsum Board attached to furring strips	49 (estimated)
Windows	Wood double hung, closed but unlocked, single glazing	23
	Aluminum sliding, latched, single glazing	24
	Wood double hung, closed but unlocked, glazed with 7/16" insulating glass	22
	Aluminum single hung, closed, glazed with 7/16" insulating glass	25
	Wood, double hung, sealed, glazed with 7/16" insulating glass with single glazed storm sash–2 1/8" separation	35
	Aluminum sliding, closed, single glazed with single glazed storm sash, 1/8" separation	22
Exterior Doors	Wood, flush solid core, with brass weather stripping	27
	Wood, flush solid core, plastic weather stripping, aluminum storm door	34
	Wood, French door, brass weather stripping	26
	Steel, flush, with urethane foam core, with magnetic weather stripping	28
Roof	Shingle Roof with attic, 1/2" gypsum wall board ceiling framed independently of roof	43 (estimated)

[1]Except as noted, all STC ratings are from: *Acoustical and Thermal Performance of Exterior Residential Walls, Doors and Windows*, National Bureau of Standards.

Figure 19
Description of Noise Attenuation Measures
(Acoustical Construction)

Part I

Project Name _____

Location _____

Sponsor/Developer _____

Noise Level (From NAG) _____ Attenuation Required _____

Primary Noise Source(s) _____

Part II

1. For Walls (s) facing and parallel to the noise source(s) (or closest to parallel):
   a. Descripton of wall construction* _____

   _____

   b. STC rating for wall (rated for no windows or doors): _____

   c. Description of Windows: _____

   _____

   d. STC rating for window type _____

   e. Description of doors _____

   _____

   f. STC rating for doors _____

   g. Percentage of wall (per wall, per dwelling unit) composed of windows _____ and doors _____

   h. Combined STC rating for wall component _____

2. For walls perpendicular to noise source(s):
   a. Description of wall construction* _____

   _____

   b. STC rating for wall (rated for no windows or doors) _____

   c. Description of windows _____

   _____

   d. STC rating for windows _____

   e. Description of doors _____

   _____

f. STC rating for doors _____

g. Percentage of wall (per wall, per dwelling unit) composed of windows _____ and doors _____

h. Combined STC rating for wall component _____

3. Roofing component (if overhead attenuation is required due to aircraft noise):
   a. Description of roof construction _____

   _____

   b. STC rating (rated as if no skylights or other openings) _____

   c. Descripton of skylights or overhead windows _____

   _____

   d. STC rating for skylights or overhead windows _____

   e. Percentage of roof composed of skylights or windows (per dwelling unit) _____

   f. Percentage of roof composed of large uncapped openings such as chimneys _____

   g. Combined STC rating for roof component _____

4. Description of type of mechanical ventilation provided _____

   _____

Prepared by _____

Date: _____

*If walls contain vents or similar openings, attach a description of duct arrangement and insulation and a statement of how much the wall STC is reduced by the presence of the vent.

Figure 19
Description of Noise Attenuation Measures
(Acoustical Construction)

Part I

Project Name PARADISE HOMES

Location ANYTOWN

Sponsor/Developer JOAN DOE + ASSOC. INC.

Noise Level (From NAG) 73 Attenuation Required 30d6

Primary Noise Source(s) HIGHWAY

Part II

1. For Walls (s) facing and parallel to the noise source(s) (or closest to parallel):
   a. Descripton of wall construction* 3/8" FIR PLYWOOD SIDING, 2x4 STUDS 16"o.c. 3½" FIBERGLASS INSULATION
   b. STC rating for wall (rated for no windows or doors): 37
   c. Description of Windows: WOOD DOUBLE HUNG, INSULATING GLASS
   d. STC rating for window type 22
   e. Description of doors WOOD, FLUSH, SOLID CORE
   f. STC rating for doors 30
   g. Percentage of wall (per wall, per dwelling unit) composed of windows 10% and doors 5%
   h. Combined STC rating for wall component 30d6
2. For walls perpendicular to noise source(s):
   a. Description of wall construction* SAME AS ABOVE
   b. STC rating for wall (rated for no windows or doors) 37
   c. Description of windows SAME AS ABOVE
   d. STC rating for windows 22
   e. Description of doors NO DOORS

SAMPLE

f. STC rating for doors — —

g. Percentage of wall (per wall, per dwelling unit) composed of windows 10% and doors 0

h. Combined STC rating for wall component 30

3. Roofing component (if overhead attenuation is required due to aircraft noise):
   a. Description of roof construction N/A

   b. STC rating (rated as if no skylights or other openings) _____

   c. Descripton of skylights or overhead windows _____

   d. STC rating for skylights or overhead windows _____

   e. Percentage of roof composed of skylights or windows (per dwelling unit) _____

   f. Percentage of roof composed of large uncapped openings such as chimneys _____

   g. Combined STC rating for roof component _____

4. Description of type of mechanical ventilation provided CENTRAL AIR CONDITIONING

Prepared by _____

Date: _____

*If walls contain vents or similar openings, attach a description of duct arrangement and insulation and a statement of how much the wall STC is reduced by the presence of the vent.

Quiz on Noise Attenuation

Questions

1. What are the three basic ways to provide noise attenuation?
2. What are the responsibilities of HUD personnel regarding noise attenuation?
3. When a barrier is introduced between a source and a receiver the sound energy is redistributed along 3 indirect paths. What are these three paths?
4. What is "Path Length Difference" and how does it affect the attenuation level provided by a barrier?
5. What are "Transmission Loss Values?"
6. How does the transmission loss value of barrier material affect the attenuation capability of the barrier?
7. As a general rule, what transmission loss values should you look for?
8. If you have more than one barrier between the source and the receiver is the amount of attenuation increased substantially?
9. What are the four things to check when reviewing a proposed barrier?
10. List 3 ways to make a barrier more effective without increasing its overall height.
11. List 3 ways to make a barrier more effective without increasing its overall length.
12. What is the maximum percentage of the total area of a barrier that can be made up of openings without a significant loss in barrier effectiveness?
13. List 3 site planning techniques that are used to shield residential developments.
14. When are parks and playgrounds not noise compatible uses that can be employed as buffers?
15. What are the two main things to look for when reviewing site plan changes?
16. What are some of the building orientations which can aggravate noise problems?
17. What is the Sound Transmission Class (STC) rating?
18. Which is better a high STC or a low STC rating?
19. What kinds of conditions were STC ratings originally developed for?
20. What should you do when using STC ratings in a transportation noise situation?
21. List 5 ways to improve the attenuation capability of a wall.
22. Windows are one of the acoustically weakest components in a wall. List 3 ways to reduce the negative effects of windows.
23. What is the best way to reduce the effect of doors?

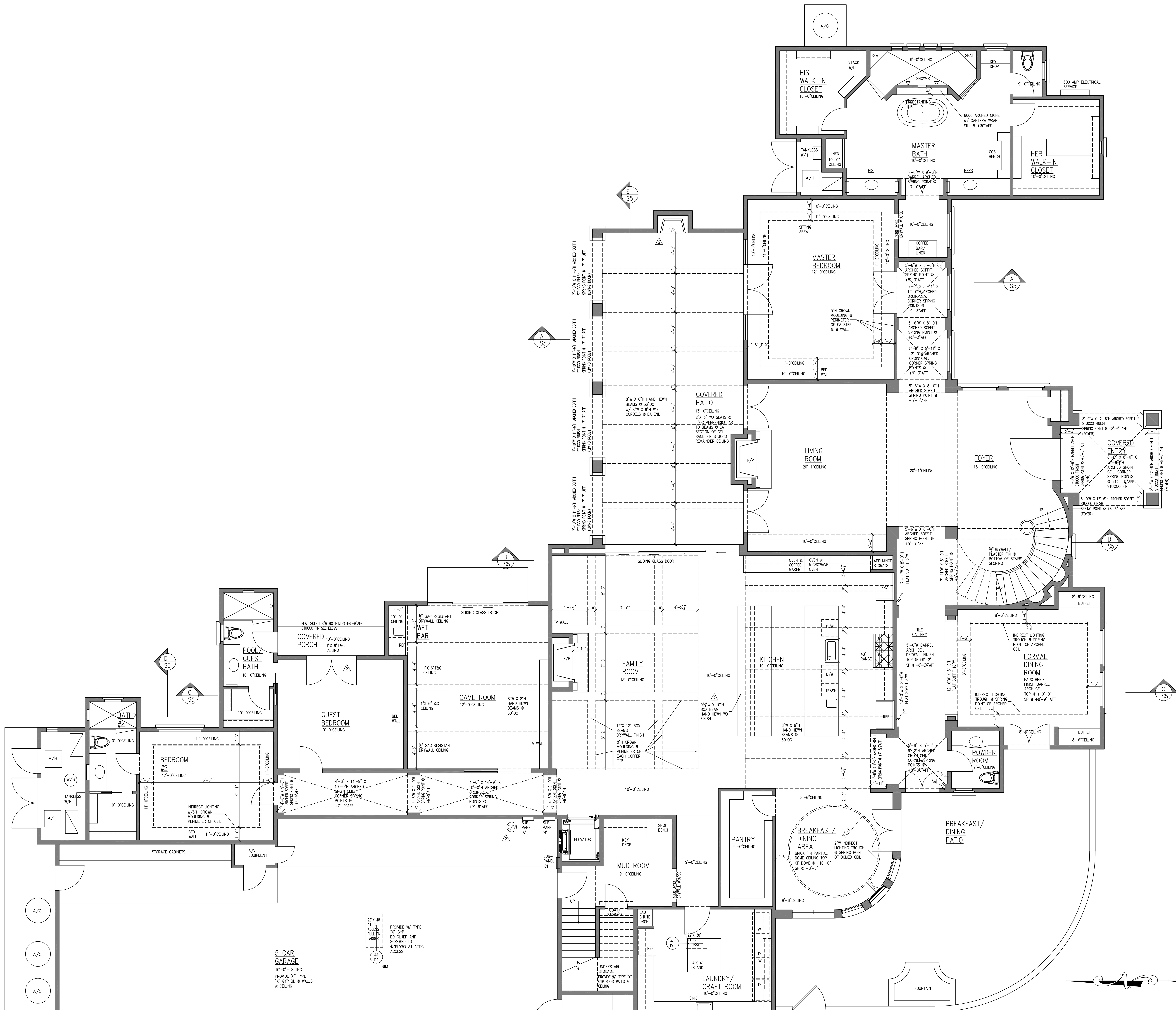
Quiz on Noise Attenuation

Answers

1. a. barriers or berms
   b. site design
   c. acoustical construction
2. a. to make sure the project sponsor/developer is aware of the attenuation requirements
   b. provide sponsor/developer with an overview of available options
   c. review attenuation proposals to make sure they are adequate
3. a. A **diffracted** path over the top of the barrier
   b. A **transmitted** path through the barrier
   c. A **reflected** path away from the receiver
4. "Path Length Difference" is the difference in distance that sound must travel diffracting over the barrier rather than passing directly through it. Since sound energy decreases over distance, the greater the path length distance the greater the attenuation.
5. "Transmission Loss Values" represent the amount noise levels will be reduced when the sound waves pass through a barrier.
6. Since the attenuation provided by a barrier is a function of both the sound energy that goes over the top **and** the energy that goes through the barrier, if the transmission loss value is low then the effectiveness of the barrier will be greatly reduced.
7. If the transmission loss value of the barrier material is at least 10dB greater than the attenuation level provided by diffraction (i.e. barrier height) there shouldn't be any problem.
8. No. The combined effect of multiple barriers does not normally provide significantly greater attenuation than a single barrier. For design purposes, the general procedure is to assume the attenuation of the most effective barrier.
9. a. Is it high enough?
   b. Is it long enough?
   c. Is it made of the right material?
   d. Is it properly constructed?
10. a. move the barrier closer to the source
    b. bend the top of the barrier towards the source
    c. do both
11. a. move it closer to the receiver
    b. bend the ends toward the receiver
    c. do both
12. 1 percent
13. Any 3 of the below:
    a. increasing the distance between the source and the receiver
    b. placing noise compatible land uses between the source and the receiver
    c. locating barrier type buildings parallel to the source
    d. orienting residences away from the noise
14. when they are the only ones associated with the project
15. a. is the separation between the source and receiver great enough
    b. If a noise compatible building is being used as a barrier is it tall and long enough?
16. Building orientations which trap noise and cause it to reverberate off building walls. This would include shapes where a court is open to the source or where a series of buildings are arranged perpendicular to the source.
17. The STC rating is equal to the number of decibels a sound is reduced as it passes through a material.
18. A high STC rating is better.
19. The STC ratings were originally intended primarily for use with interior partitions and for noise such as speech, radios, television.
20. Recognize that the STC rating may overstate the effectiveness of the materials by 2-3db.
21. Any of the 9 below:
    a. increase the mass and stiffness of the wall
    b. use cavity partitions
    c. increase the width of the airspace
    d. increase the spacing between studs
    e. use staggered studs
    f. use resilient materials to hold the studs and finish materials together
    g. use of dissimilar layers (leaves)
    h. add acoustical blankets
    i. seal cracks and edges
22. Any of the 4 below:
    a. close the windows and provide mechanical ventilation
    b. reduce window size
    c. increase glass thickness
    d. install double glazed windows
23. Eliminate them from severely impacted walls

ATTACHMENT G

REVISIONS	BY
OWNER REVISIONS	MFH 6/20



1st FLOOR REFLECTED CEILING PLAN

SCALE 1/4"=1'-0"

NOTE:

1. ALL DECORATIVE BEAMS TO EXTEND THROUGH SOFFITS INTO NEAREST VERTICAL WALL. PROVIDE PROPER BLOCKING AND BEAM POCKET AT WALL. MIN 3½" BEAM BEARING IN WALL.
2. ALL HEIGHTS ARE RELATIVE TO FINISH FLOOR OF THE MAIN HOUSE @ ±0'-0"

DO NOT SCALE DRAWINGS.

PROJECT:

A CUSTOM RESIDENCE FOR:
Sam & Daljit Thiara
Lot 1 Doubletree Ranchos
5608 E. Horseshoe Rd Paradise Valley, AZ 85253

AIBD AMERICAN INSTITUTE of BUILDING DESIGN

MARK F. HOERNER & Associates, Inc.
Custom Residential Design & Engineering
(480) 968-6994
428 S. Gilbert Rd Suite 112
Gilbert, Az. 85296
Mark F. Hoerner PE, CPBD, A.I.B.D.

Registered Professional Engineer (Civil) CERTIFICATE NO. 48191 MARK F. HOERNER Date Signed 6/23/2020 ARIZONA U.S.A.

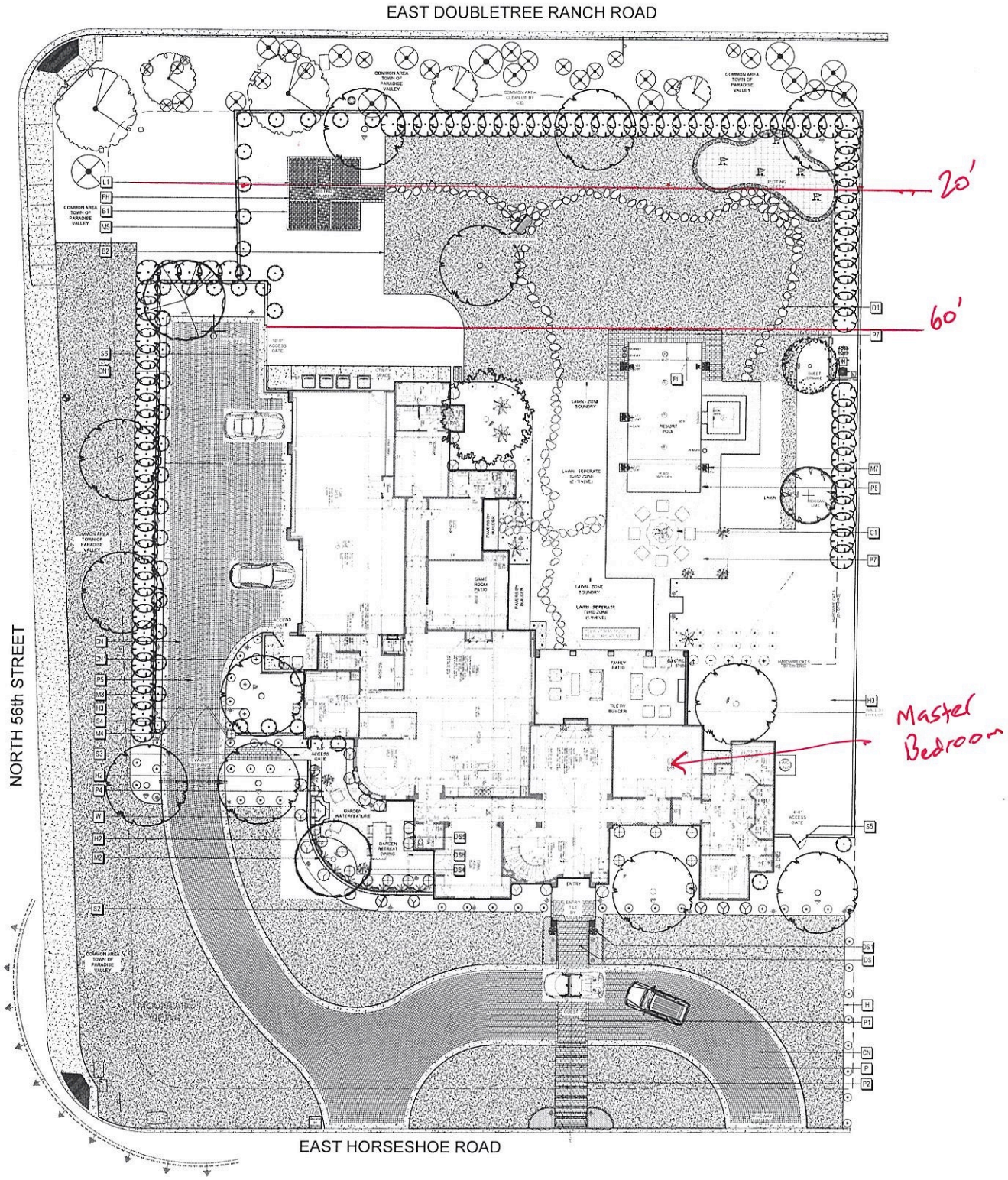
DRAWN	MFH
DATE	2/2020
JOB NO.	2019-13
SHEET	A3
OF	SHEETS

ATTACHMENT H


SPEED LIMIT
30


30

ATTACHMENT I


EAST DOUBLETREE RANCH ROAD
NORTH 56th STREET
EAST HORSESHOE ROAD
20'
60'
Master Bedroom

ATTACHMENT J


100

ATTACHMENT K

ATTACHMENT L

ATTACHMENT M

7170 Berneil Drive Bulit 2012

EAST WALL.

11/10/2021

COMMUNITY DEVELOPMENT DEPARTMENT
VARIANCE APPLICATION GUIDE

Town of Paradise Valley ● 6401 East Lincoln Drive ● Paradise Valley, Arizona 85253 ● Phone: (480) 348-3692

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN THAT THE TOWN OF PARADISE VALLEY BOARD OF ADJUSTMENT WILL HOLD A HEARING ON THE FOLLOWING PROPOSED PROJECT. IF YOU HAVE QUESTIONS ABOUT THIS APPLICATION, PLEASE CALL THE PLANNING DIVISION AT (480) 348-3692.

Applicant/Representative: Andrew Miller

Applicant's Company Name: Burch & Cracchiolo, P.A.

Phone Number: 602-234-8793

E-mail Address: amiller@bcattorneys.com

Project/Property Address: 5608 E. Horseshoe Rd, Paradise Valley, AZ 85253

Zoning: R-43 Acreage: 1.03

Project Narrative:

Consideration of a variance from the Zoning Ordinance, Article XXIV, Walls & Fences, to allow a fence wall to encroach into the setback.

Sam and Daljit Thiara are requesting a variance for a wall setback on their northern property line due to their property's location and surroundings being adjacent to a busy and very noisy controlled three-way intersection just north of their property line at Doubletree Ranch Road and 56th Street. Zoning Ordinance § 2404.b.2 requires a 20' setback for a 6' tall solid rear yard wall adjacent to a minor arterial. The variance requested is for a 0' setback for a 6' tall solid wall for the rear yard of their home site, that is, the northern property line adjacent to Doubletree Ranch Road. In this particular case, due to inadvertence, the wall has already been built and its as-built location is the location for which the variance is requested.

MEETING DATE/ TIME/PLACE

Meeting Date: Wednesday, January 4, 2023 Meeting Time: 5:30 pm

Meeting Place: Town of Paradise Valley Town Hall Building. 6401 E. Lincoln Drive. Paradise Valley, AZ 85253

*P*lanning Division: 480-348-3692

COMMUNITY DEVELOPMENT DEPARTMENT
AFFIDAVIT OF MAILING NOTIFICATION

Town of Paradise Valley • 6401 East Lincoln Drive • Paradise Valley, Arizona 85253 • Phone: (480) 348-3692

STATE OF ARIZONA)
) ss:
County of Maricopa)

In accordance with the requirements of the Town of Paradise Valley, the undersigned hereby certifies that all the property owners within 1,500 feet of the property, as obtained from the Maricopa County Assessor's Office on November 22, 2022, for the proposed variance has been mailed on the following date December 12, 20 22.

(This property list shall not be older than thirty (30) days at the time of filing of the application).

Ricki Horowitz

The foregoing instrument was acknowledged by me this 14th day of December, 20 22, by Ricki Horowitz.
Name

SHAY EDISS
Notary Public - State of Arizona
MARICOPA COUNTY
Commission # 622140
Expires February 1, 2026

Shay Ediss
NOTARY PUBLIC

My commission expires:

February 1, 2026

1,500' Ownership List
Thiara, Sam & Dahljit
5608 E Horseshoe Rd

168-44-002
2004 CARNEY FAMILY REV TRUST
8701 N 55TH PL
PARADISE VALLEY, AZ 85253

168-43-014A
ABRAHAMS TYLER M/SHANA
5701 E HORSESHOE RD
PARADISE VALLEY, AZ 85253

168-57-010
ALLEN EDMUND T III TR
5640 E CABALLO DR
PARADISE VALLEY, AZ 85253

168-44-014
AVENIDA VENTURES LLC
8848 N AVENIDA DEL SOL
PARADISE VALLEY, AZ 85253

168-35-043
BAHADUR FAMILY TRUST
5701 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-033
BDESIGN LLC
10040 E HAPPY VALLEY RD UNIT 362
SCOTTSDALE, AZ 85255

168-25-031
BILIACK FAMILY REVOCABLE TRUST
7015 N 53RD AVE
GLENDALE, AZ 85301

168-35-030
BSN-AZ LLC
4342 E HIGHLANDS DR
PARADISE VALLEY, AZ 85253

168-37-026
CLEMENT LINDA A/KENNETH A
9200 N 58TH ST
PARADISE VALLEY, AZ 85253

168-35-024
4242 TRUST
5610 E SANNA ST
PARADISE VALLEY, AZ 85253

168-44-003
AEROBAT VENTURES LLC
8700 N 55TH PL
PARADISE VALLEY, AZ 85253

168-42-029
ANNE MARIE GARVEY LIVING TRUST
8900 N 58TH PL
PARADISE VALLEY, AZ 85253

168-56-011
BADER GORDON/MILDRED MARIE TR
8651 N 55TH PL
PARADISE VALLEY, AZ 85253

168-44-021
BANIKARIM DAVID/CHANTAY
5638 E CABALLO DR
PARADISE VALLEY, AZ 85253

168-56-028
BENNETT JOHN H/CECILIA I
8651 N AVENIDA DEL SOL
PARADISE VALLEY, AZ 85253

168-35-035
BRAMOWETH ALAN & ELLEN
5501 E CARON ST
PARADISE VALLEY, AZ 85253

168-43-011
BURT/CHRISTA CAMPBELL REV TR
5737 E HORSESHOW RD
PARADISE VALLEY, AZ 85253

168-35-038
CLIVE E CUSSLER RESIDENCE TRUST
5539 E SANNA ST
PARADISE VALLEY, AZ 85253

168-44-024
5432 VIA DEL CIELO LLC
4912 E CALLE DEL NORTE
PHOENIX, AZ 85018

168-35-039
ALLAN BRENT R/DEBORAH B
5547 E SANNA
PARADISE VALLEY, AZ 85253

168-35-003
ARMIK & LAURA AGAKANIAN 2008 FAM TR
5429 E CARON ST
PARADISE VALLEY, AZ 85253

168-57-005
BADR KHALED WALID/ZUGHBABA RULA
8633 N 56TH ST
PARADISE VALLEY, AZ 85253

168-35-040
BARTOLINO FAMILY TRUST
5601 E SANNA ST
PARADISE VALLEY, AZ 85253

168-44-010
BERGMAN LIVING TRUST
8718 AVENIDA DEL SOL
PARADISE VALLEY, AZ 85253

168-42-004
BROWN CURTIS W/CINDY
5840 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-45-016
CHENEY SCOTT M/MEGAN C
8721 N VIA LA SERENA
PARADISE VALLEY, AZ 85253

168-44-030
COHEN CRAIG R/SHARON K
5515 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-57-034
DAVID J FRANKLYN TRUST
5602 E VIA BUENA VISTA
PARADISE VALLEY, AZ 85253

168-35-005
DOBRUSIN DAVID/MARA
5444 E CARON ST
PARADISE VALLEY, AZ 85253

168-45-030
ERIC/BETHANY CONKLIN REV TR/HAZEL HOMES LLC
PO BOX 1448
NORTH PLAINS, OR 97133

168-37-029
EVANS CRAIG/LIZA
5701 E BAR Z LN
PARADISE VALLEY, AZ 85253

168-44-011
FITZPATRICK-WALKER FAM REV TR
8734 N AVENIDA DEL SOL RD
PARADISE VALLEY, AZ 85253

168-35-002
FRANKS TODD H/BODINET NANCY R
2111 E HIGHLAND NO 145
PHOENIX, AZ 85016

168-43-015
GEORGE F DEMBOW III FAMILY TRUST
8824 N 57TH ST
PARADISE VALLEY, AZ 85253

168-42-030
GUSTAFSON FAMILY TRUST
8901 N 58TH PL
PARADISE VALLEY, AZ 85253

168-26-010
HANLEY FAMILY TRUST
9403 N 55TH ST
PARADAISE VALLEY, AZ 85253

168-35-011
HEALY FAMILY TRUST
10177 N 96TH PL
SCOTTSDALE, AZ 85258

168-35-026
DESERT I LLC
5546 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-009
DONNELLY JANICE/KING JOHN TR
9041 N 54TH PL
PARADISE VALLEY, AZ 85253

168-43-007
ESFANDIAR & FERIAL PARSA FAM TR
5300 E ROYAL PALM RD
PARADISE VALLEY, AZ 85253

168-43-006
EVELYN GALLAGHER CREDIT SHELTER TR
4719 WARING ST
HOUSTON, TX 77027

168-35-015
FLYNN CHARLOTTE ANNE/BARRETT
5444 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-004
FRENCH JEANNA L
5445 E CARON ST
PARADISE VALLEY, AZ 85253

168-34-012
GIBSON MAX L TR
PO BOX 478
TERRA HAUTE, IN 47808

168-35-031
H ROGER & ALLISON HOPKINS LIV TR
5501 E SANNA ST
PARADISE VALLEY, AZ 85253

168-42-025
HARTING FAMILY LIVING TRUST
8714 N 58TH PL
PARADISE VALLEY, AZ 85253

168-37-024
HELLER FAMILY TRUST
5815 E SANNA ST
PARADISE VALLEY, AZ 85253

168-43-012
DIRTSTORM LLC
11626 E ASTER DR
SCOTTSDALE, AZ 85259

168-43-018
DOPP JOAN DAWSON
8805 N 56TH ST
PARADISE VALLEY, AZ 85253

168-35-019
EUGENE & LAURA PRANGER REV LIV TR
5730 E SANNA ST
PARADISE VALLEY, AZ 85253

168-56-030
FIORENTINO E MICHAEL/MYRELLA S TR
5451 E VIA BUENA VISTA
PARADISE VALLEY, AZ 85253

168-43-009
FOOTE SAMUEL HENRY/TRIPP TAMELA B TR
5720 E HORSESHOE RD
PARADISE VALLEY, AZ 85253

168-44-033
GARNEATA ADRIAN P
26799 N 90TH LN
PEORIA, AZ 85383

168-35-022
GILBERT MICHAEL G
16254 W 77TH LN
ARVADA, CO 80007

168-35-016
HAMILTON JOHN JR/MCLEOD TAMMY DEE REV TR
5428 E SANNA ST
PARADISE VALLEY, AZ 85253

168-56-027
HATAWAY JEFFERY J/MICHELLE D
5440 VIA BUENA VISTA
PARADISE VALLEY, AZ 85253

168-57-036
HF TRUST
5636 E VIA BUENA VIS
PARADISE VALLEY, AZ 85253

168-35-027
HILB CYNTHIA S/KELCE RUSSELL R
5532 E SANNA ST
PARADISE VALLEY, AZ 85253

168-44-028
J35 TRUST
10632 N SCOTTSDALE RD
SCOTTSDALE, AZ 85254

168-44-027
JOEL A AND SHERYL L SHERMAN TRUST
8735 N 55TH PL
PARADISE VALLEY, AZ 85253

168-45-015
KALYAN SINGH MAYO TRUST
8711 N VIA LA SERENA
PARADISE VALLEY, AZ 85253

168-44-026
KISNER FAMILY TRUST
8738 N 55TH PL
PARADISE VALLEY, AZ 85253

168-44-034
LANGDON COURTNEY/COLLEEN DOYLE
5426 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-35-023
LFK LLC
PO BOX 271
PRINCETON, NJ 08542

168-57-035
MARK E GRACE REVOCABLE TRUST
5624 E VIA BUENA VIS
PARADISE VALLEY, AZ 85253

168-56-013A
MARWAN AND NICOLE BAHU TRUST
8631 N 55TH PL
PARADISE VALLEY, AZ 85253

168-44-007
MDR DEVELOPMENT IV LLC
8390 E VIA DE VENTURA STE F142
SCOTTSDALE, AZ 85258

168-44-032
HOOPER ROBERT GEORGE & DANA D
5500 E VIA LOS CABALLOS
SCOTTSDALE, AZ 85253

168-44-018
JAMES H KANE JR FAMILY TRUST
8825 N AVENIDA DEL SOL
PARADISE VALLEY, AZ 85253

168-44-005
JOHNSEN FAMILY REVOCABLE TRUST
5830 E 2ND ST
CASPER, WY 82609

168-35-008
KELLY JOHN P/VERONICA A
9038 N 54TH PL
PARADISE VALLEY, AZ 85253

168-44-006
KOOCHEK-ROSENBAUM FAM LIV TR/P.ROSENBAUM REV TR/L ROSENBAUM REV TR
5401 E VIA DEL CIELO
PARADISE VALLEY, AZ 85253

168-35-034
LAUFER FAMILY TRUST-SCHEDULE B ASSET
9100 N 55TH ST
PARADISE VALLEY, AZ 85253

168-44-013
MACDONOUGH BRUCE E/DANA G TR
8832 N AVENIDA DEL SOL
PARADISE VALLEY, AZ 85253

168-43-008
MARK THOMAS TEAHEN TRUST
16211 N SCOTTSDALE RD STE A6A-417
SCOTTSDALE, AZ 85254

168-37-023
MARY GRACE PRESTON DECLARATION OF TRUST
5827 E SANNA ST
PARADISE VALLEY, AZ 85253

168-44-008
MICHAEL & MARTHA BURMEISTER REV LIV TR
8701 N AVENIDA DEL SOL
PARADISE VALLEY, AZ 85253

168-43-010
IANNACONE REVOCABLE TRUST
5783 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-56-032
JAMES RONALD SIKET/NANCY GEORGE SIKET LIV TR
5460 VIA BUENA VISTA
PARADISE VALLEY, AZ 85253

168-45-029
JOHNSON DERRICK J/BRYANT KATHRYN
8825 N VIA LA SERENA
PARADISE VALLEY, AZ 85253

168-44-004
KING BRIAN J/MAYOR CHRISTOPHER J
7397 E SAN JACINTO DR
SCOTTSDALE, AZ 85258

168-44-022
KOURNTEY LEE KEESLING TRUST
5431 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-56-012
LEFF EDMUND I/BARBARA A
8641 N 55TH PL
PARADISE VALLEY, AZ 85253

168-35-032
MARIO & BRANKA CIMMINO LIV TR
9128 N 55TH STREET
PARADISE VALLEY, AZ 85253

168-35-006
MARSTON CAROLYN L TR
5428 E CARON
PARADISE VALLEY, AZ 85253

168-44-020
MATTHEW J RAKOWSKI LIVING TRUST
5417 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-57-002B
MICHAEL DUSTIN DECARLO LIV TR
5702 E VIA BUENA VISTA
PARADISE VALLEY, AZ 85253

168-35-018
MIGLANI AMAR/SWANSON LEAH A
5740 E DOUBLETREE RANCH RD
PARADISE VALLEY, AZ 85253

168-36-001U&V
MUMMY MOUNTAIN DEV CO
1846 E CAMELBACK RD
PHOENIX, AZ 85016

168-37-028
NICHOLAS A
P O BOX 26424
SCOTTSDALE, AZ 85255

168-43-005
OWNER/OCCUPANT
5620 E HORSESHOE ROAD
PARADISE VALLEY, AZ 85253

168-34-019
PHOENIX CITY OF
251 W WASHINGTON ST 8TH FL
PHOENIX, AZ 85003

168-35-021
RICK AND JENNIFER JEWELL REV TR
5700 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-025
ROBERT J & DOROTHY H PUSKAR TRUST
5600 E SANNA ST
PARADISE VALLEY, AZ 85253

168-43-017
SCHNEIDER WILLIAM V
5607 E HORSESHOE RD
PARADISE VALLEY, AZ 85253

168-44-012
SERENA HOLDINGS LLC
8721 N VIA LA SERENA
PARADISE VALLEY, AZ 85253

168-35-013
SILVERMAN DANIEL/KIRKPATRICK JENNIFER
9118 N 54TH PL
PARADISE VALLEY, AZ 85253

168-42-027
MINARD STEVEN E/MARGARET L TR
8814 N 58TH PL
PARADISE VALLEY, AZ 85253

168-42-001A
MUMMY MOUNTAIN DEV CO
DEPT 938.01 UNIT 33-714
WASHTINGTON 20058

168-35-036
NOVAK STANLEY/ANN
5511 E CARON ST
PARADISE VALLEY, AZ 85253

168-34-021
PARADISE VALLEY PLACE LLC
9454 WILSHIRE BLVD STE 920
BEVERLY HILLS, CA 90212

168-57-009
RAMSOOK CHRIS /BANIKARIM CHANTAY TR
5638 E CABALLO DR
PARADISE VALLEY, AZ 85253

168-37-027
RIGHI FAMILY TRUST
5721 E BAR Z LN
PARADISE VALLEY, AZ 85253

168-25-015
SANJA MOSHER2 LLC
9440 N 57TH ST
PARADISE VALLEY, AZ 85253

168-43-003
SCOTTSDALE UNIFIED SCHOOL DISTRICT #48
3811 N 44TH ST
PHOENIX, AZ 85018

168-43-016A
SIBILLA MICHELLE L
5625 E HORSESHOE RD
PARADISE VALLEY, AZ 85253

168-43-013
SMITH DIANNE D
5705 E HORSESHOE RD
SCOTTSDALE, AZ 85253

168-25-001F/16826001L
MUMMY MOUNTAIN DEV CO
PO BOX 579
LOUISVILLE, TN 37777

168-35-001D/16837001G
MUMMY MOUNTAIN DEVELOPMENT CO
PO BOX 579
LOUISVILLE, TN 37777

168-42-003
OSOLNICK FRANK/CLAIRE
5822 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-37-025
PAULA M BOWMAN REVOCABLE TRUST
5801 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-047
RICE STEVEN KENNETH/BOSCH JOANNE ELIZABETH
5639 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-014
RITA D WEINSTEIN TRUST
5445 E SANA ST
PARADISE VALLEY, AZ 85253

168-34-020
SCHNEIDER REVOCABLE TRUST
9061 N 53RD PL
PARADISE VALLEY, AZ 85253

168-44-031
SEIVERD GEORGE R/MARYLINDA W
5514 VIA LOS CABALLOS
PHOENIX, AZ 85253

168-44-016
SIBILLA VICTOR/GERALDINE F
5410 E VIA LOS CABALLOS ST
PARADISE VALLEY, AZ 85253

168-42-028
STACIE A STEWART 2015 TRUST
5801 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-56-031A
STELMACH GEORGE E/ROSMARY A TR
5461 E VIA BUENA VISTA
PARADISE VALLEY, AZ 85253

168-44-023
SUSANNAH FAMILY TRUST
5420 VIA DEL CIELO
PARADISE VALLEY, AZ 85253

168-35-029
THOMAS LEWIS NEAL JR TR
3711 E ELM ST
PHOENIX, AZ 85018

168-35-045
TOMEH SALAHEDDINE & AFAF DABBAS
5600 E DOUBLETREE RANCH
PARADISE VALLEY, AZ 85254

168-44-019
UNKEFER ANDREW/AMY
5400 E VIA DEL CIELO
PARADISE VALLEY, AZ 85253

168-25-014
WHITE FAMILY TRUST
9390 N 57TH ST
PARADISE VALLEY, AZ 85253

168-57-002C
WISE FAMILY TRUST
7652 E ACOMA DR
SCOTTSDALE, AZ 85260

168-44-025
ZANGARA REVOCABLE TRUST
8716 N 55TH PL
PARADISE VALLEY, AZ 85253

168-45-019
NAAAV FAMILY TRUST
11912 N 120TH PL
SCOTTSDALE, AZ 85259

168-44-009
STERRETT ROBERT E JR/JEAN O TR
8700 N AVENIDO DEL SOL
PARADISE VALLEY, AZ 85253

168-37-022
TFT TRUST I
5839 E SANNA ST
PARADISE VALLEY, AZ 85253

168-42-026
TIMOTHY BIDWILL DECLARATION OF TRUST
8800 N 58TH PL
PARADISE VALLEY, AZ 85253

168-35-010
TOWNSEND GIANCARLA G
9109 N 54TH PL
PARADISE VALLEY, AZ 85253

168-44-017
URMAN RONALD/SIGAL
7900 E GREENWAY RD UNIT 207
SCOTTSDALE, AZ 85260

168-56-029
WILKINSON FAMILY TRUST
5256 E VIA BUENA VIS
PARADISE VALLEY, AZ 85253

168-35-028
WISE ROBERT R JR/DENISE E
5518 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-046
ZELLMAN GLENN L/HEKTOR DORIS
5625 E SANNA DR
PARADISE VALLEY, AZ 85253

168-42-031
NB TALLY REV LIV TR
8817 N 58TH PL
PARADISE VALLEY, AZ 85253

168-44-015
STRALMAN ANTON/JOHANNA
5400 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-43-004
THIARA SUKHVINDER S/DALJIT
5608 E HORSESHOE RD
PARADISE VALLEY, AZ 85253

168-44-029
TOCI CHRISTOPHER E/DIANE D TR
5501 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-35-020
TTMM TRUST
5714 E SANNA ST
PARADISE VALLEY, AZ 85253

168-35-037
WALSH BRIAN H/LISA A
9101 N 55TH ST
PARADISE VALLEY, AZ 85253

168-35-007
WILLIAM E MOLLOY FAMILY TRUST
9026 N 54TH PL
PARADISE VALLEY, AZ 85253

168-42-002
ZALKOW ANDREW
5800 E VIA LOS CABALLOS
PARADISE VALLEY, AZ 85253

168-42-024
2000 LARNERD FAMILY TRUST
8700 N 58TH PL
PARADISE VALLEY, AZ 85253

COMMUNITY DEVELOPMENT DEPARTMENT
AFFIDAVIT OF POSTING

Town of Paradise Valley ● 6401 East Lincoln Drive ● Paradise Valley, Arizona 85253 ● Phone: (480) 348-3692

STATE OF ARIZONA)
) ss:
County of Maricopa)

I, Meghan Liggett for Dynamite Signs depose and state that the attached notice, of proposed application N/A case # located at 5608 E. Horseshoe Rd. for the Board of Adjustment meeting date of Jan. 4, 2023, ~~20~~ is a true and correct copy of a notice which I cause to be posted by the following day of the week 12/14/22, and on the following date 12/14/22, ~~20~~ in the following location(s):

2 locations in yard

All in the Town of Paradise Valley, Arizona and County and State aforesaid, the same being public places in said County and in the following locations:

All to the Town of Paradise Valley, Arizona and County and State aforesaid.

DATED this 14th day of December, 20 22

MARYBETH CONRAD
Notary Public - Arizona
Maricopa County
Commission # 591461
My Comm. Expires Oct 25, 2024

Meghan Liggett
Signature

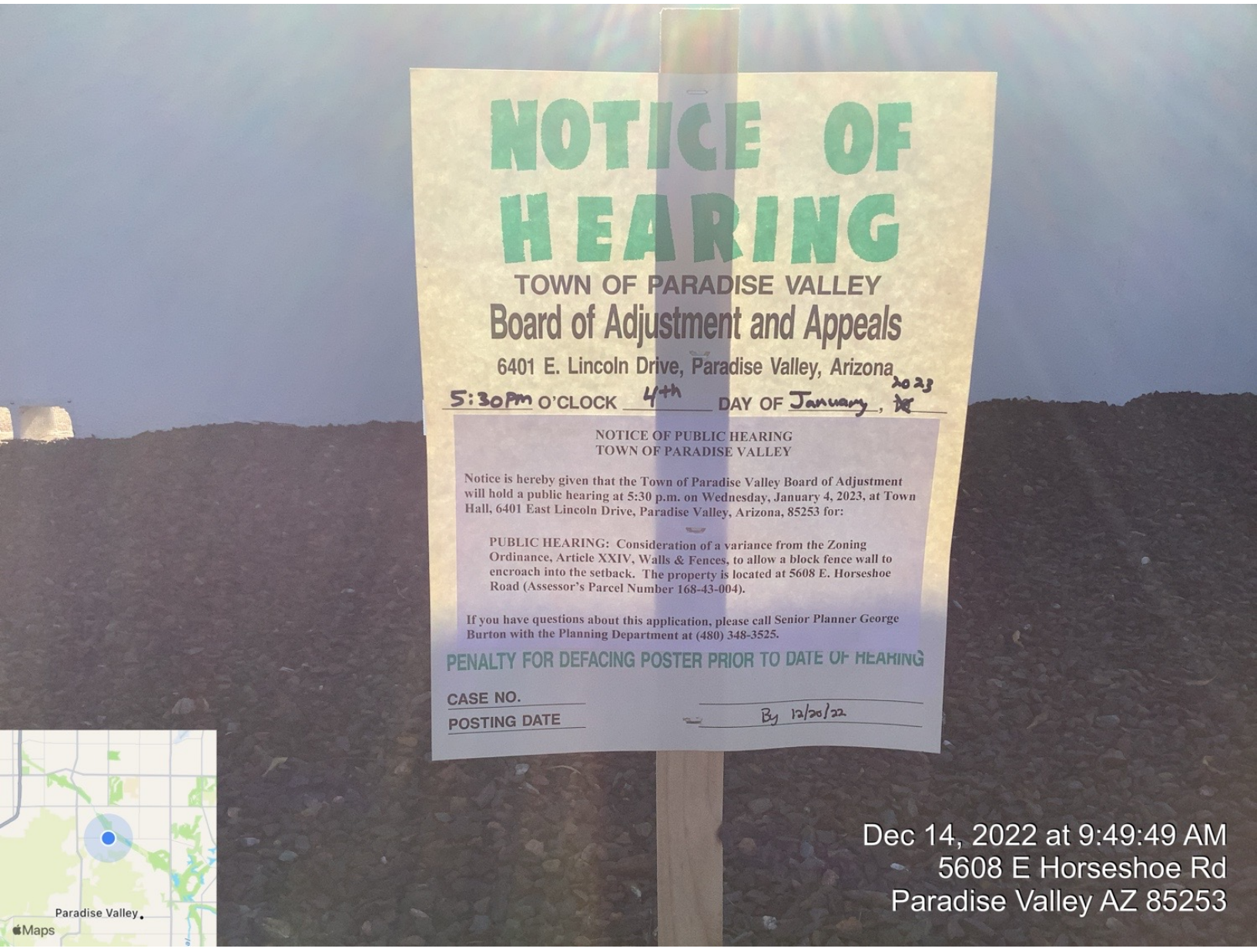
This affidavit was Subscribed and sworn to before me on this 14th day of December 20 22.

NOTARY PUBLIC

My commission expires:

10-25-24


NOTICE OF HEARING
TOWN OF PARADISE VALLEY
Board of Adjustment and Appeals
6401 E. Lincoln Drive, Paradise Valley, Arizona
5:30 PM O'CLOCK 4th DAY OF January, 2023
NOTICE OF PUBLIC HEARING
TOWN OF PARADISE VALLEY
Notice is hereby given that the Town of Paradise Valley Board of Adjustment will hold a public hearing at 5:30 p.m. on Wednesday, January 4, 2023, at Town Hall, 6401 East Lincoln Drive, Paradise Valley, Arizona, 85253 for:
PUBLIC HEARING: Consideration of a variance from the Zoning Ordinance, Article XXIV, Walls & Fences, to allow a block fence wall to encroach into the setback. The property is located at 5608 E. Horseshoe Road (Assessor's Parcel Number 168-43-004).
If you have questions about this application, please call Senior Planner George Burton with the Planning Department at (480) 348-3525.
PENALTY FOR DEFACING POSTER PRIOR TO DATE OF HEARING
CASE NO.
POSTING DATE By 12/20/22
Paradise Valley
Maps
Dec 14, 2022 at 9:52:28 AM
5608 E Horseshoe Rd
Paradise Valley AZ 85253


NOTICE OF HEARING
TOWN OF PARADISE VALLEY
Board of Adjustment and Appeals
6401 E. Lincoln Drive, Paradise Valley, Arizona
5:30PM O'CLOCK 4th DAY OF January, 2023
NOTICE OF PUBLIC HEARING
TOWN OF PARADISE VALLEY
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PUBLIC HEARING: Consideration of a variance from the Zoning Ordinance, Article XXIV, Walls & Fences, to allow a block fence wall to encroach into the setback. The property is located at 5608 E. Horseshoe Road (Assessor's Parcel Number 168-43-004).
If you have questions about this application, please call Senior Planner George Burton with the Planning Department at (480) 348-3525.
PENALTY FOR DEFACING POSTER PRIOR TO DATE OF HEARING
CASE NO.
POSTING DATE By 12/20/22
Paradise Valley
Maps
Dec 14, 2022 at 9:49:49 AM
5608 E Horseshoe Rd
Paradise Valley AZ 85253

Action Report

File #: 23-003

AGENDA TITLE:
Approval of the October 19, 2022 Board of Adjustment Meeting Minutes

STAFF CONTACT:

Town of Paradise Valley

6401 E Lincoln Dr
Paradise Valley, AZ 85253

Minutes - Draft

Board of Adjustment

Chair Hope Ozer
Boardmember Robert Brown
Boardmember Priti Kaur
Boardmember Eric Leibsohn
Boardmember Jon Newman
Boardmember Rohan Sahani
Boardmember Quinn Williams

Wednesday, October 19, 2022 **5:30 PM** **Council Chambers**

Special Meeting

1. CALL TO ORDER

Chair Ozer called the meeting to order at 5:35 p.m.

2. ROLL CALL

Present 5 - Boardmember Robert Brown
Boardmember Eric Leibsohn
Chairperson Hope Ozer
Boardmember Rohan Sahani
Boardmember Quinn Williams

Absent 2 - Boardmember Priti Kaur
Boardmember Jon Newman

3. EXECUTIVE SESSION

None

4. STUDY SESSION ITEMS

5. PUBLIC HEARINGS

A. 22-309 UR Project Variance - 7941 N 55th Street (APN 169-06-076B).
Request for Multiple Variances.
Case No. BA-22-06.

Hillside Planner Jose Mendez presented the request in accordance with the variance packet.

Mr. Mendez explained the eight variance requests and identified that staff recommended denial of the application.

The applicant's representative, Doug Jorden, spoke regarding the merits of the application.
Mr. Jorden identified that if the lot was platted today, it would need to be 8.4

acres instead of its current size of 1.01 acres

He presented alternative designs that would have negative impact on the mountain and changes to the rear pool area and mechanical area to include them as building footprint.

Property owner Rob Lowry spoke and noted the difficulties associated with the property and his goal was to find the best mix of variances that work best to fit with the hillside.

Andy Byrnes with the Construction Zone is the architect for the project. He stated that the intent of hillside code is to preserve as much natural hillside as possible. He reviewed the impact of alternate designs.

Public Comment:

- Heather Dukes represented the property owners at 5455 E Desert Jewel Dr, who area opposed to the variance request. She said the request exceeds the allowable disturbance by three times and the variance is self-imposed since it is a design hardship.

Michael Hogan is a nearby resident and is opposed to the variance request. He feels this is a design hardship and not a property hardship. He would like to see a new home on the lot but recommended a home with smaller height.

The public comment was closed at 6:40 pm.

Board Member Williams asked the applicant if they would like to continue the request or receive a denial.

Mr. Jorden requested a continuance to a date certain.

Community Development Director Lisa Collins recommended continuing the application to a date certain so all interested parties are aware of the next time the request will be reviewed by the Board of Adjustment.

A motion was made by Boardmember Williams, seconded by Boardmember Leibsohn, to continue the UR Project Variance located at 7941 N 55th Street to the regular meeting of December 7, 2022. The motion carried by the following vote:

Aye: 5 - Boardmember Brown, Boardmember Leibsohn, Chairperson Ozer, Boardmember Sahani and Boardmember Williams

Absent: 2 - Boardmember Kaur and Boardmember Newman

B. 22-308 O'Neil Variance - 7017 N Invergordon Rd (APN 169-36-036)
Variance to exceed overall 40-foot height
Case No. BA-22-08

Hillside Planner Jose Mendez presented the request in accordance with the variance packet. Mr. Mendez identified that the variance request to exceed the

overall 40' height limit and to allow a retaining wall to exceed the 6" limit above the material it retains.

He explained the overall height measurement changed with text amendment several years ago and staff recommends approval of this request

Doug Jorden, the property owner's representative, agreed with staff's assessment and briefly summarized the scope of the request and how it met the three variance criteria.

The architect, Chris Powers, also provided detail regarding the variance request.

Public comment: No one spoke in favor and no one spoke against this variance request.

A motion was made by Boardmember Williams, seconded by Boardmember Brown, to approve the O'Neil variance located at 7017 N Invergordon Road to remodel more than 50 percent of the existing home maintaining existing nonconforming portions of the residence that will exceed the overall height limit of 40' 0" to 45' 3" and add a required retaining wall that extends beyond the allowable 6-inch maximum height above the material it is retaining. This approval is subject to the following stipulations:

1. Obtain approval from the Hillside Building Committee

2. Obtain building permits and inspections from the Building Division; and

3. The variance request to maintain the modified nonconforming portions of the house shall be in compliance with following submitted plans & documents:

a. The Application and Narrative, prepared by Doug Jorden (Jorden Law Firm, P.C.) dated August 29, 2022.
b. Site Plan / Exterior Elevations prepared by Powers Hancock August 29, 2022.
c. Engineering documents provided by Desert Development Engineering, LLC, dated August 22, 2022.

The motion carried by the following vote:

Aye: 5 - Boardmember Brown, Boardmember Leibsohn, Chairperson Ozer, Boardmember Sahani and Boardmember Williams

Absent: 2 - Boardmember Kaur and Boardmember Newman

C. 22-306 Powers Variance - 6223 N 51st Place (APN 169-25-034)
Variance to exceed the maximum allowable floor area ratio (FAR) limit
Case No. BA-22-07

Senior Planner George Burton presented the request in accordance with the variance packet. The applicant is proposing to construct a new home and is requesting a variance to exceed the 25% floor area ratio (FAR) limit. The new home will have a FAR of 33.3%.

Mr. Burton identified that staff supports variance since to small lot size, the narrow lot width, and the wash are property hardships that warrant the variance request.

Mr. Burton identified that staff received public comment regarding this variance: three inquiries, ten letters or comments of support, and five letters or comments opposition.

The owner's architect, Daren Petrucci, spoke about the design of the house and how he tried to limit the amount of FAR encroachment. He noted the increased side yard setbacks to try to maintain neighboring views and sinking the garage to reduce the amount of encroachment.

Chair Hope Ozer noted that the livable square footage of most the adjoining/neighboring homes is smaller than the proposed livable square footage of this house. She also expressed concern about the finished floor of the house being 6' above grade.

Public Comment:

- Cathy Mock, Paradise Valley resident, is opposed to the request. She stated that the applicant should build a house that meets code.

- Heidi Hayden was opposed to the variance request and noted that it is a very large home that eliminates privacy in the adjacent yards.
- Two others were opposed to the request but did not whish to speak.

- Sean Perini is a resident that lives adjacent to subject property an is opposed to the request. He noted that the request does not meet all three variance criteria and that most of the lots in the subdivision are smaller than an acre. The house is too large and will block his views. Also, the Town should uphold its zoning requirements.

- Richard Hertzberg is a nearby resident is opposed to the variance. He said the neighbors will lose the views of head of the camel on Camelback Mountain. The garage is too large and the house is lifted 6' taller than everyone else house. It should be lowered 6' or 7'.

The property owner, Jeff Powers, said he's not a developer and this will be his second home. The house meets the Town's height limitations and houses today are larger than they were 50 years ago.

Public comment was closed at 8:00 pm.

Board Member Brown recapped the variance request and Chair Ozer stated she cannot support to variance since it does not meet all the variance criteria.

A motion was made by Chairperson Ozer, seconded by Boardmember Brown, to deny the Powers variance located at 6223 N 51st Place variance from Article X, Height and Area Regulations, of the Zoning Ordinance to allow a new single-family residence to exceed the maximum floor area ratio limit of 25

percent finding that all three variance criteria are not met.

The motion carried by the following vote:

Aye: 5 - Boardmember Brown, Boardmember Leibsohn, Chairperson Ozer, Boardmember Sahani and Boardmember Williams

Absent: 2 - Boardmember Kaur and Boardmember Newman

6. ACTION ITEMS

None

7. CONSENT AGENDA

A. 22-288 Approval of the September 7, 2022 Board of Adjustment Meeting Minutes

A motion was made by Boardmember Williams, seconded by Boardmember Leibsohn, to approve the September 7, 2022 Board minutes. The motion carried by the following vote:

Aye: 5 - Boardmember Brown, Boardmember Leibsohn, Chairperson Ozer, Boardmember Sahani and Boardmember Williams

Absent: 2 - Boardmember Kaur and Boardmember Newman

8. STAFF REPORTS

None

9. PUBLIC BODY REPORTS

None

10. FUTURE AGENDA ITEMS

Mr. Burton stated the next meeting will be on November 2, 2022 for one variance request.

11. ADJOURNMENT

A motion was made at 8:02 p.m. by Boardmember Williams, seconded by Boardmember Brown, to adjourn the meeting. The motion carried by the following vote:

Aye: 5 - Boardmember Brown, Boardmember Leibsohn, Chairperson Ozer, Boardmember Sahani and Boardmember Williams

Absent: 2 - Boardmember Kaur and Boardmember Newman

Town of Paradise Valley Board of Adjustment

By: _____
George Burton, Secretary

Action Report

File #: 23-004

AGENDA TITLE:
Approval of the November 2, 2022 Board of Adjustment Meeting Minutes

STAFF CONTACT:

Town of Paradise Valley

6401 E Lincoln Dr
Paradise Valley, AZ 85253

Minutes - Draft

Board of Adjustment

Chair Hope Ozer
Boardmember Robert Brown
Boardmember Priti Kaur
Boardmember Eric Leibsohn
Boardmember Jon Newman
Boardmember Rohan Sahani
Boardmember Quinn Williams

Wednesday, November 2, 2022 **5:30 PM** **Council Chambers**

1. CALL TO ORDER

Chairwoman Ozer called the meeting to order at 5:30 p.m.

STAFF MEMBERS PRESENT
Community Development Director Lisa Collins
Town Attorney Andrew McGuire
Planning Manager Paul Michaud
Senior Planner George Burton

2. ROLL CALL

Present 7 - Boardmember Robert Brown
Boardmember Priti Kaur (via Zoom)
Boardmember Eric Leibsohn
Boardmember Jon Newman
Chairperson Hope Ozer Boardmember
Rohan Sahani (via Zoom)
Boardmember Quinn Williams

3. EXECUTIVE SESSION

None

4. STUDY SESSION ITEMS

None

5. PUBLIC HEARINGS

A. 22-323 Casa Blanca Subdivision Wall Variance
Variance to Exceed 6' Fence Wall Height Limit - Case No. BA-22-09
5219 N. Casa Blanca Dr (APN 173-64-039)

Mr. Burton provided an overview of the agenda item, covering the background, scope of the request, analysis, and recommendation. He noted that the goal was to review and take action on this request. He noted that the subdivision wall was built in the 1960s, with an original height of about four feet six inches to five feet. The applicant was proposing to replace the entire subdivision wall with a new slump block wall at a height of seven feet instead of the allowable six feet. Mr. Burton continued that staff believed that the request was self-imposed and that there was no property hardship that warranted the variance request. Staff recommended a denial of the request.

Boardmember Williams asked if the applicant had a current seven-foot tall wall.

Mr. Burton replied that the wall varied in height from four feet six inches to eight 8 feet, depending on the location. Staff identified eight homes that have raised walls without approval. The action in this case would determine code compliance.

John Graham, the applicant, stated that he had been a resident of Casa Blanca Estates for about twenty years. He provided the background regarding the request. He noted that the existing wall is over sixty years old and that it was constructed without any footing or mortar. The request for building a new wall was filed over a year ago, and the Town Council decided that this should be a variance case presented to the Board of Adjustment. He talked to his neighbors, and upon their request had an acoustic study conducted to determine whether the noise of cars would bounce at a higher level if the wall were higher. The study found that the change would be negligible. He addressed issues with each of the three criteria related to the variance. He believed that there were some unusual things related to the property, such as being surrounded by three collector streets, special circumstances applicable to the property that were not self-imposed because the plat predated all current homeowners and the homeowners had nothing to do with the circumstances that they inherited, and the request is in line with privileges enjoyed by properties of the same classification since a large portion of the subdivision adjoins the City of Scottsdale, an area that allows walls at seven feet tall.

Finally, he noted that they wanted this variance rather than living with a current sixty-year-old wall.

Boardmember Brown noted that the Town would approve a six-foot wall and asked if that would be an option.

Mr. Graham replied that two-thirds of the people in the homeowner association voted that they didn't want an assessment for a six-foot tall wall except on Casa Blanca Drive, and they would agree to all other kinds of remediation efforts to make it look lower.

Chairperson Ozer stated that the wall looks like it doesn't reflect the quality of homes within Casa Blanca Estates.

Boardmember Leibsohn asked if Mr. Graham was proposing a seven-foot tall wall, including the cap block.

Mr. Graham concurred.

Boardmember Williams noted if he stated that the homeowners feel that they are deprived of the privilege of constructing a wall to replace the old wall.

Mr. Graham replied yes.

Chairperson Ozer opened the public hearing.

Andy Freitas, a resident of Paradise Valley, stated that his wife Lynn and he have been living in the Town for twenty-eight years. He stated that Ms. Freitas would read the talking points that they prepared.

Lynn Freitas, a resident of Paradise Valley, read the summary of their detailed comments provided in the agenda packet. She stated that the seven-foot tall wall is excessive compared to the original wall height, the request does not meet all three variance criteria, the request is a grant of special privilege, the proposed wall would change the character of the corridor and look like a fortress even with berms, and the request does not address the volume of traffic. She concluded that they request the Board of Adjustment deny the variance.

Andy Freitas added that the Town needs to address reducing the speed limit on Monte Vista Drive, to prohibit heavy trucks, and add traffic calming.

Chairperson Ozer clarified that the things that Mr. Freitas shared were not within the Board's purview. The Board is empowered to rule based on the three variance criteria.

Paul Mariani, a resident of Paradise Valley, stated that he and his family have lived in the Town for twenty-one years. He noted that currently, there was no seven-foot tall wall. He measured the wall, and it was not seven feet high. However, there were eight homes that raised their walls illegally. The wall was originally five feet high and was a part of the Town's character. Allowing seven-foot walls would harm the Town's open space character. The acoustic study that the applicant did showed that the level of sound would not be affected in any significant way. The seven-foot tall wall would look like a fortress.

Chairperson Ozer noted that the Board of Adjustment has received Mr. Mariani's information and that everyone has reviewed it.

Richard Driml, a resident of Paradise Valley, stated that he lives in one of the houses along Jackrabbit Road, and when he goes down 68th Street every morning, he sees a giant wall constructed along Jackrabbit Road. The wall looks like a fortress. A seven-foot tall wall would look very imposing. He believed

that a six-foot tall wall was appropriate in this case.

Chairperson Ozer stated that Karen Oden is opposed to the variance and did not wish to speak.

Boardmember Williams asked about the height of the current wall.

Mr. Burton replied that the block had been added to the original wall and that the height presently varies from four feet six inches to eight feet.

Boardmember Brown asked if the Town would file complaints to take down the wall if the variance doesn't pass.

Mr. Burton replied that the Town will pursue compliance for the affected properties.

Chairperson Ozer closed the public comment for this item.

Boardmember Williams stated that he was in favor of granting a variance to the extent that the variance is replacing an existing wall of the same height.

Chairperson Ozer stated that she was not in favor of granting the variance. She believed that the solution would be to bring the wall down to six feet in height and paint it to match the interior of the community. That way, it would look nice and not so shabby.

Boardmember Newman stated that he would not be inclined to vote for the variance. He didn't see that the criteria for the variance had been met.

A motion was made by Boardmember Leibsohn, seconded by Boardmember Newman, to deny the requested variance in that not all three variance criteria have been met. The motion carried by the following vote:

Aye: 6 - Boardmember Brown, Boardmember Kaur, Boardmember Leibsohn, Boardmember Newman, Chairperson Ozer and Boardmember Sahani

Nay: 1 - Boardmember Williams

B. 22-332 UR Project Variance - 7941 N 55th Street (APN 169-06-076B).
Request for Continuance.
Case No. BA-22-06.

Mr. Burton provided an overview of the agenda item. He explained that the applicant identified that they would not be able to make the December 7th or January 4th meetings, and request a continuance to a special meeting on January 11th. Mr. Burton stated that the Board of Adjustment could move the January 4th meeting to January 11th, hold two meetings in January, or continue the case to next regularly scheduled February 1st meeting.

Chairperson Ozer suggested that the Board of Adjustment address this item at the February 1st meeting.

Boardmember Williams asked if there will be a large docket for that meeting.

Mr. Burton replied that the agenda for the February 1st meeting was not large.

Several Boardmembers stated that they would not be in attendance at the January 4th meeting.

Chairperson Ozer stated that the January 4th meeting would be in person only.

A motion was made by Boardmember Williams, seconded by Boardmember Brown, to continue this variance request which was continued to December 7, 2022 to February 1, 2023 at the request of the applicant. The motion carried by the following vote:

Aye: 7 - Boardmember Brown, Boardmember Kaur, Boardmember Leibsohn, Boardmember Newman, Chairperson Ozer, Boardmember Sahani and Boardmember Williams

6. ACTION ITEMS

None

7. CONSENT AGENDA

None

8. STAFF REPORTS

None

9. PUBLIC BODY REPORTS

There was discussion on what Boardmembers will be present for the January 4, 2023 meeting. It was noted that there will be at least a quorum.

It was noted that the December 7th meeting will be canceled.

Chairperson Ozer asked Boardmembers to let staff know if they would or would not be attending the meeting within two days of receiving the agenda packet. Starting in 2023, all Boardmembers are required to be physically present at the meetings out of respect for the community.

10. FUTURE AGENDA ITEMS

Mr. Burton stated that there is one variance for a wall in January and a continuance in February.

11. ADJOURNMENT

A motion was made by Boardmember Williams at 6:30 p.m., seconded by Boardmember Newman, to adjourn the meeting. The motion carried by the following vote:

Aye: 7 - Boardmember Brown, Boardmember Kaur, Boardmember Leibsohn, Boardmember Newman, Chairperson Ozer, Boardmember Sahani and Boardmember Williams

Town of Paradise Valley Board of Adjustment

By: _____
George Burton, Secretary