

From: Dan Grove <dan@grove.cx>
Sent: Wednesday, October 5, 2022 10:25 PM
To: Molly McGuire
Subject: Comment Letter for Proposed Redevelopment of 6950 SE Maker Street, Permit 2207-019
Attachments: Dan's Letter for Submission (4).pdf

Dear Ms. McGuire:

Enclosed, please find my comment letter for the Proposed Redevelopment of 6950 SE Maker Street, Permit 2207-019.

Thank you,
Dan Grove
3515 72nd Ave SE, Mercer Island, WA 98040
650-200-0326

Molly McGuire
Assistant Planner
Community Planning & Development
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
Molly.McGuire@mercerisland.gov

Comment Letter for Proposed Redevelopment of 6950 SE Maker Street, Permit 2207-019

Dear Ms. McGuire:

My name is Dan Grove and I live at 3515 72nd Ave SE. I'm writing as a concerned neighbor who shares a property boundary with the proposed development (submission documents [here](#)) at 6950 Maker Street ("The Project", owned by The Strand Trust). As a long-time member of the Mercer Island community, I was surprised and dismayed to see a proposal for a house much larger than permitted by code, a house built to a height of 34+' on top of an artificially elevated lot, a house that would be built on a lot with a history of rockery problems and a house whose development was enabled by significantly damaging an exceptional tree. That this proposal was submitted without any discussion with neighbors of the property makes it even more troubling.

While Ms. Strand should be permitted to develop her property, that development must not be permitted where the proposal runs afoul of local law. Doing so would be unfair to the owners of the neighboring properties and potentially damaging to the area.

In this letter, I will lay out a set of issues with The Project. I believe the applicant's representation contains significant factual errors and contravenes several local rules and regulations, which amount to multiple violations of the Mercer Island City Code ("MICC"). A letter from my attorney, Zachary Davison, will detail the specific code violations arising in connection with these issues.

First, the proposal does not recognize the history of its building site, and in doing so, it calculates building height in ways that are incompatible with the MICC. As a result, The Project is larger and higher than allowed.

Second, The Project represents multiple safety risks; its proposal fails to comply with the constraints of its own geotechnical survey and ignores risks of building on a Critical Area during the wettest, riskiest time of the year.

In sum, The Project's plans improperly and unfairly propose building a structure that ignores the MICC and poses risks of significant danger to surrounding properties, in contravention of the reasonable expectations of the affected neighbors.

1. The Proposal Ignores the History of its Building Site

The applicant's development proposal fails to comply with the MICC due to multiple and compounding errors which, if unaddressed, would improperly expand Ms. Strand's ability to build and negatively impact those around her.

A. The Proposal Incorrectly Computes Existing Grade

As an initial matter, the applicant's plans are all premised on faulty computation of the Existing Grade. The property is built atop an artificial grade created by "human-induced action" which "impact[ed] the existing condition of the area" and thus constitutes "Alteration" as defined in [MICC 19.16](#).¹ Using the current condition of 6950 erroneously provides a much higher elevation than its code-defined Existing Grade.

¹ Per definitions set out under [MICC 19.16](#). I discuss these definitions in further detail below.



Figure 1: Retaining Wall between 6950 SE Maker Street and SE Maker Street

Fig. 1 drives this point home: it shows a photo of the current house at 6950 Maker, relative to the SE Maker Street roadway, with elevations indicated. The road sits at 223' at this point (as shown), while the current house is at 231.3'. The Project's plans incorrectly substitute the current grade for the code-defined Existing Grade, which results in an impermissible net gain of approximately 8'.

Second, there is incontrovertible evidence that the Existing Grade has undergone Alteration. This evidence includes, and is not limited to, (i) the applicant's own geotech survey and (ii) the rockeries built along a majority of the property's perimeters to contain the extensive fill used throughout the property. The geotech survey attests to fill in all three of the boreholes tested on the property. Indeed, the southwest borehole contained 12', thus artificially elevating the lot by 12' at that point. The borehole data overall make it inarguable that the current grade on the property is artificially elevated.

The rockeries create a uniform level across their highest point. Their lowest point varies across the property and provides accurate visual evidence of changes in the Existing Grade. In some areas, the rockeries are up to 15' high. Additional survey data confirm

that their height is relative to the Existing Grade. According to prior residents, the rockeries have been here since the house was constructed in the 1950s.

Third, an analysis of cross sections taken through and around The Project shows the degree of artificial elevation. Figure 2A shows 4 east-west cross sections through The Project whose elevation we can measure based on either the known Existing Grade at the lot's boundaries or based on data from The Project's proposal. The colors of each line match the colors in Figure 2B, which shows the elevation as one travels along each line, east to west.

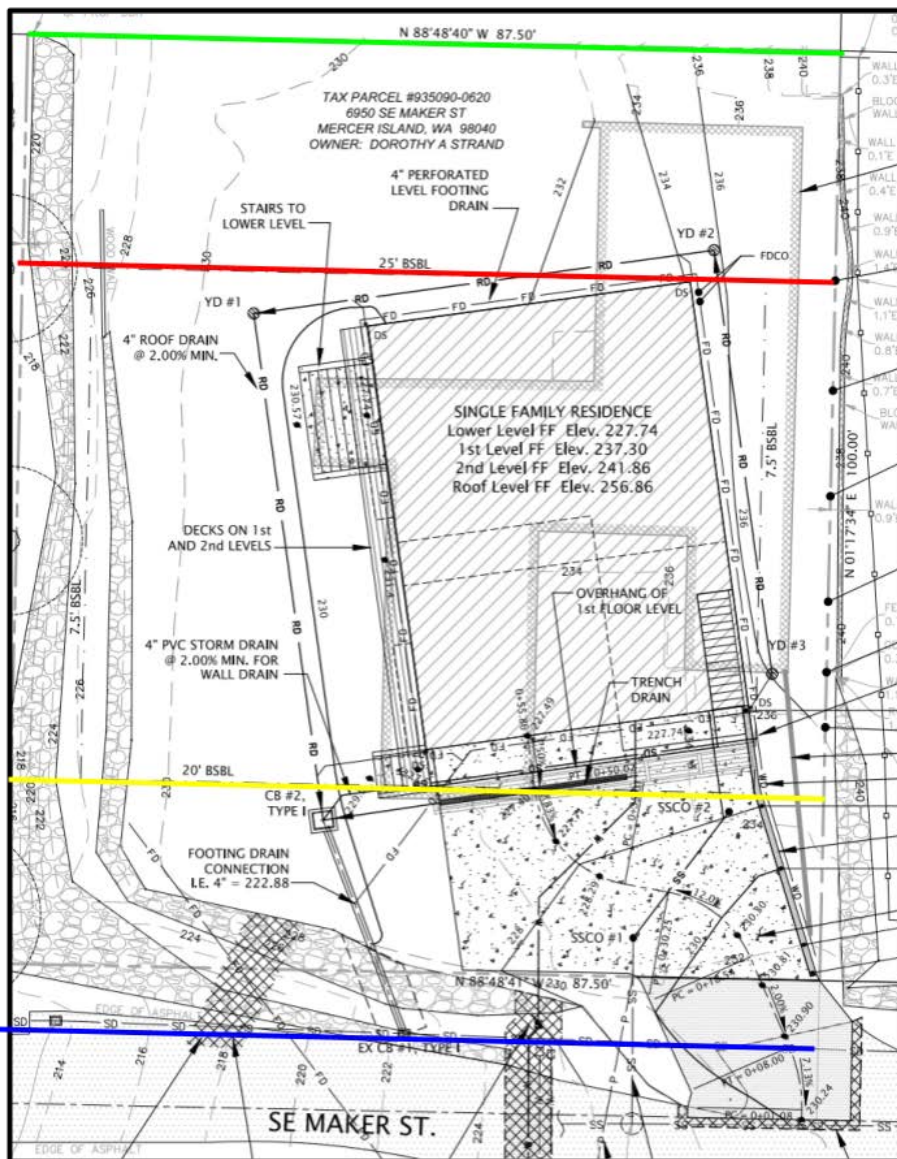


Figure 2A: Locations of the contour slices in Figure 2B

S Boundary, N House Cross Section, S House Cross Section and N Boundary Elevations

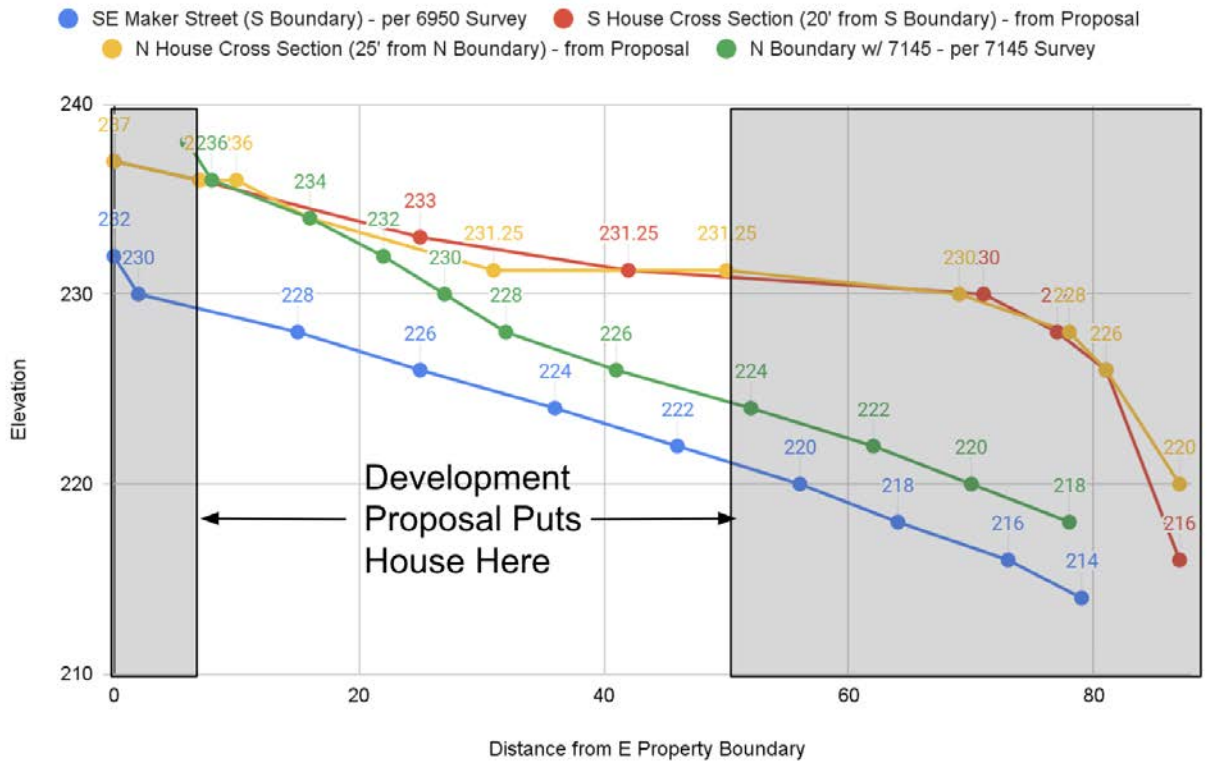


Figure 2B: Current Elevations from East Property Boundary to West Boundary

Figure 2B shows that the cross sections corresponding to The Project’s building location (in yellow and red) have been significantly artificially elevated (by as much as 10’). The photo in Figure 1 matches the lines in blue (showing the SE Maker Existing Grade) and yellow (showing the proposed Existing Grade on an east-west line 20’ from SE Maker) in Figure 2B at 42’ from the E property boundary. Please see Dr. Elisabeth Green’s comments on the elevation data from a professional geologist’s perspective (submitted independently).

The MICC and Mercer Island’s Administrative Interpretations are clear on how to determine a property’s Existing Grade. “Existing Grade” is a legally defined term in the MICC and must be understood apart from “Alteration” (another legally defined term) that may have affected the present condition of the property. Per MICC, a property’s Existing Grade may not be changed through Alteration. This is clear from these Definitions in [MICC 19.16](#):

Existing grade: The surface level at any point on the lot prior to alteration of the ground surface.

Alteration: Any human-induced action which impacts the existing condition of the area, including but not limited to grading, filling, dredging, draining, channeling and paving (including construction and application of gravel). "Alteration" does not include walking, passive recreation, fishing, or similar activities.

A development proposal may not use graded, filled, or paved elevations as Existing Grade. Yet this development proposal attempts to do just that.

Consequently, the applicant incorrectly computes the Average Building Elevation² ("ABE") as 233.06.' My data offers multiple forms of evidence that the correct ABE is approximately 226.7'.

B. Approximate Topographic Elevations Can Be Used to Determine Existing Grade

Identifying the Existing Grade is difficult on an artificially elevated property like this one. In order to identify 6950 Maker's Existing Grade, it must be computed independently of Alteration. Ideally, Existing Grade is computed via a survey of the property prior to any Alteration. Administrative rulings show that Mercer Island may relax this requirement in cases in which it isn't possible to determine the surface level of the points on the lot prior to Alteration of the ground surface.

However, this is not the case here; it *is* possible to determine the surface level of the points on the lot prior to Alteration. While it is true that 6950 SE Maker Street was developed in the 1950's, and there are no pre-development topographic surveys of the lot, an alternative method is permitted. In cases in which the property lacks pre-development topographic surveys, local rulings permit interpolation of "approximate

² Per definitions set out under [MICC 19.16](#)

Average building elevation: The reference point on the surface topography of a lot from which building height is measured. The elevation in the R-8.4, R-9.6, R-12, and R-15 zoning designations is established by averaging the elevation at existing grade or finished grade, whichever is lower.

Formula: Average Building Elevation = (Weighted Sum of the Mid-point Elevations) ÷ (Total Length of Wall Segments)

Where:

Weighted Sum of the Mid-point Elevations = The sum of: ((Mid-point Elevation of Each Individual Wall Segment) × (Length of Each Individual Wall Segment))

topographic elevations” as a proxy. Mercer Island Administrative Ruling [12-04](#) discusses this scenario in Finding 6:

[Finding] 6. Portions of a property typically remain undeveloped during single family residential construction, and therefore, are likely to retain the contour present before the most recent development. While it may be impossible to establish grade prior to all lot alterations, it is feasible to interpolate the approximate topographic elevations of the lot previous to the most recent development.

Through careful research, we were able to develop clear topographic information about the Existing Grade of the north and south boundaries of The Project. This information, drawn from the sources enumerated below, makes it possible to “interpolate the approximate topographic elevations of the lot previous to the most recent development” (as per Administrative Ruling 12-04). These sources are:

1. **A pre-development survey** (found [here](#)) dated May 1989, of 7145 SE 35th Street, which is the property immediately to the north of 6950 Maker.
2. **The Project’s own Survey**, which shows the grade of SE Maker Street, immediately south of 6950; and
3. **Contemporary and historic survey data**, which show that the grade of SE Maker Street has not changed since 6950 was initially developed.

Presenting each of these in turn:

1. **The pre-development survey of 7145 SE 35th Street (the “7145 Survey”)** provides detailed and compelling evidence of the original lot conditions immediately north of the 6950 house. This survey includes the basement of 6950, and the Existing Grade immediately adjacent to the present 6950 house. The survey shows several large trees across the 7145 property, and close to the site of the current 6950 house. These mature trees help to date the topography of 7145 to earlier than the development of 6950 (the photo in Appendix B offers further proof), and offer contour lines for establishing approximate topographic elevations. In addition, the [7145 SE 35th Geotech Study](#) (also carried out in 1989) provides specific insights into three boreholes north of 6950 (see the bottom of page 3 of the geotech study). These boreholes show a natural forest floor with no fill underneath. **In conclusion: triangulating these data points helps establish the correct “approximate topographic elevations” of the north side of 6950.**

2. **The Project's own survey** enables further triangulation of the 7145 Survey data. The 6950 basement's Finished Floor ("FF") is represented in both surveys and provides a common point of reference. The [Project's survey](#) from 2022 (page 2) represents the elevation of 6950 basement's FF at **228.7'**. The 7145 Survey from 1989 lists the FF at **227.6'** (as shown in Figure 3. The fairly small difference in the two elevations can be attributed to changed techniques for measuring elevation in the intervening years). **In conclusion: using the 6950 basement as a common reference point makes it possible to establish the original contours on the north side of 6950 relative to the basement.**

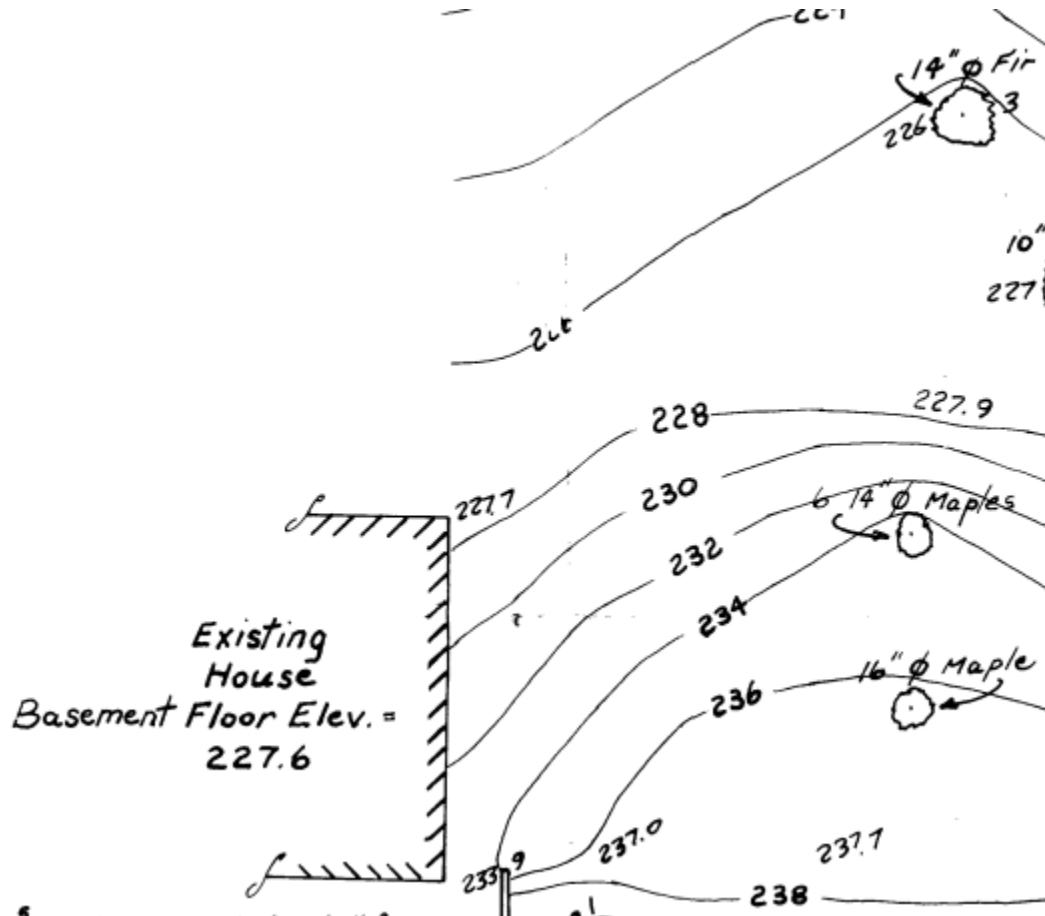


Figure 3: Image from Survey of 7145 SE 35th. 6950 Basement is on the left, North is to the right. Note that the contours go all the way to the house walls of 6950.

3. Contemporary and history survey data

To verify the relationship of the two surveys above, I located a pre-1961 survey ("1961 Survey") which includes both the Existing Grade of the 7145 property north of 6950 and of SE Maker Street as it stood prior to 1961. As shown in

Appendix B, there is compelling evidence that the Existing Grade when 6950 was initially developed in the mid-1950's matches the grade of the street as surveyed in 2021. All 3 surveys (7145, 1961, and the current project survey) provide nearly identical views of the Existing Grade of the north and south boundaries of The Project. **In conclusion: with this data in hand, it is possible to interpolate the approximate topographic elevations of 6950 prior to development, as shown in Figure 4.**

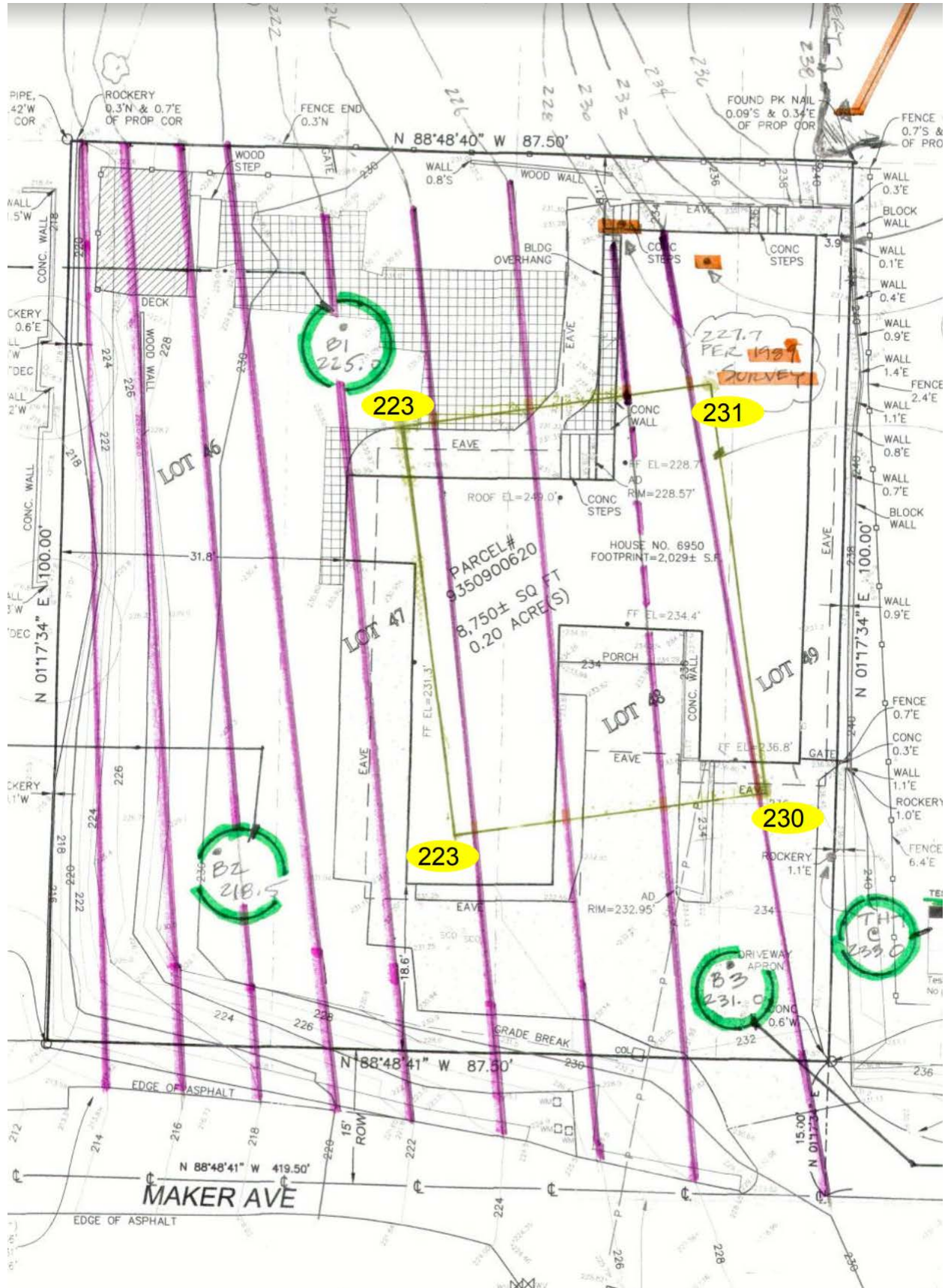


Figure 4 - Interpolating Approximate Topographic Elevations of the Project based on the 7145 Survey for the Northern Boundary and the current 6950 survey for SE Maker Street. Details on how Jim Mattison and I created this can be found in Appendix C.

In Figure 4 above, The Project's outline is shown in yellow, and interpolated elevations are shown in yellow ovals at each corner.

The interpolated grades make sense in the context of the lot's surroundings. It is clear to the eye that the slope around The Project drops primarily from East to West, and secondarily from North to South. We would expect to see contours dropping in elevation as one moves from NE to SW, which is exactly the scenario in these interpolated contours.

In order to try to verify this set of findings, I interpolated contours from the edges of the 6950 property onto the 1961 Survey, as shown in Figure 5 (these contours are at 5' intervals because that was the resolution of the 1961 Survey). I then placed The Project over these interpolated contours. The result is shown below, including The Project and the Existing Elevations of its corners in yellow.

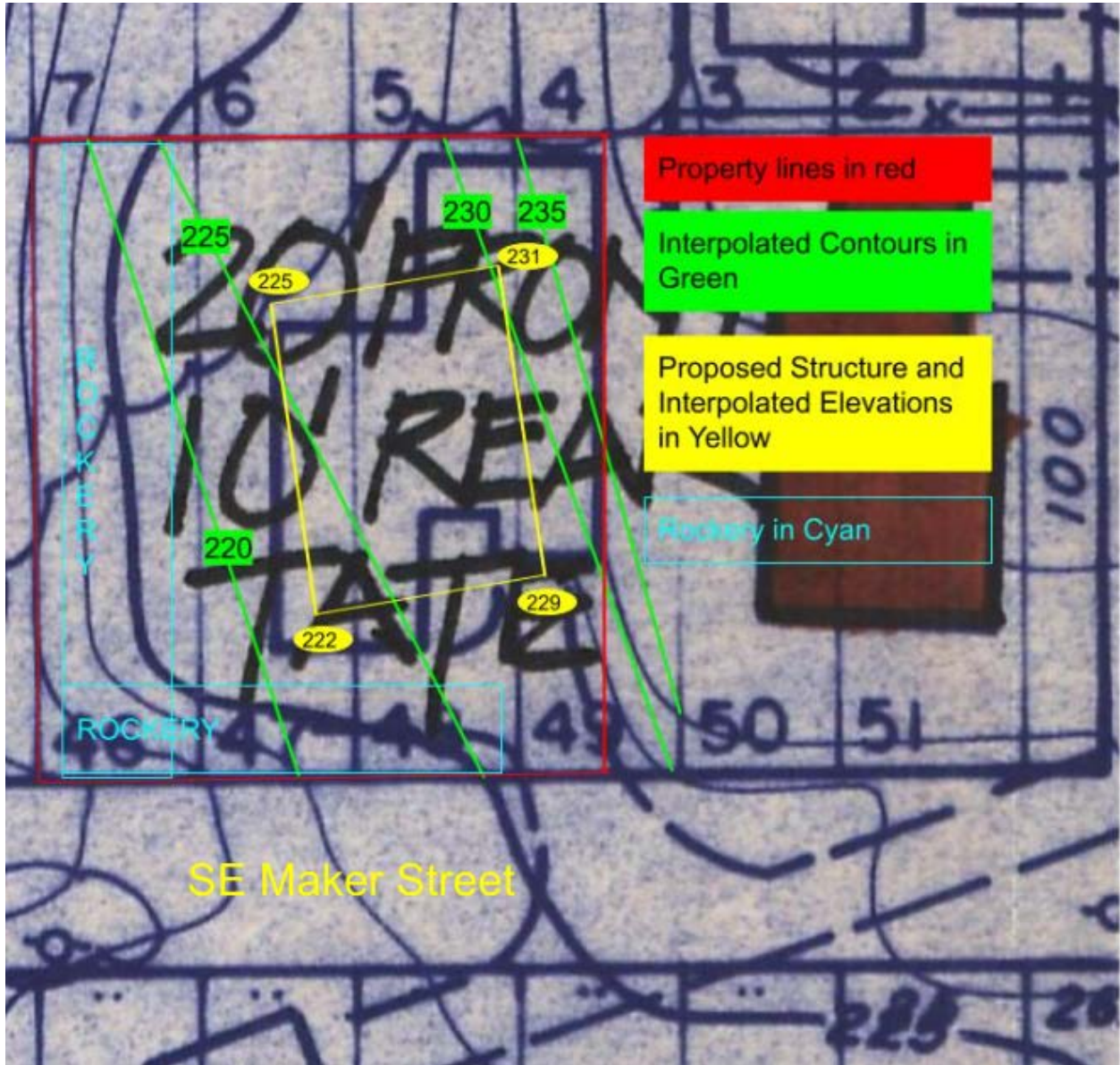


Figure 5: Interpolating Approximate Topographic Elevations of The Project based on the 1961 Survey

A comparison of The Project's building corners when overlaid onto these two interpolated contours (from the 7145 Survey and the 1961 Survey) shows remarkable consistency. In turn, this consistency attests to the alignment of these two surveys—independently conducted, decades apart, by different parties—and thus underscores the reliability of both surveys.

Corner of The Project	7145 Survey	1961 Survey	Difference between surveys for this corner
NW	223'	225'	-2.0'
NE	231'	231'	0.0'
SE	230'	229'	+1.0'
SW	223'	222	+1.0'

With this data, I computed the average original elevation of The Project:

- The 1961 Survey shows the average original elevation as 226.6'
- The 7145 Survey shows the average original elevation as 226.75'

Average original elevations computed from these two surveys differ by just 0.15'. In other words, two totally independent surveys yield building elevations that are almost identical.

Combining the 7145 Survey and the 6950 Survey offers more reliable evidence for determining Existing Grade than the 1961 survey alone because they both possess significantly higher resolution than the 1961 Survey. After careful study, I believe that a combination of the 7145 Survey and the 6950 Survey offers the most reliable basis for computing elevations for The Project going forward.

By using current grade as a shortcut, rather than correctly computed Existing Grade, The Project's proposal reflects a series of violations of MICC. My attorney, Zachary Davison, describes these in detail in his letter:

- Because Average Building Elevation is computed incorrectly, The Project exceeds the maximum building height by more than 4'.
- Because Existing Grade is computed incorrectly, The Project exceeds the Maximum Building Height on a Downhill Slope by more than 8'.
- Because The Project's Gross Floor Area ("GFA") incorrectly excludes the entire basement (indeed, the entire lower level), The Project exceeds its maximum GFA by more than 1200 square feet (beyond the 3500 square feet allowed).

2. The Critical Slope on 6950's Lot Is Not Safely Addressed by The Project

In addition to the significant errors with respect to the existing elevation and allowed square footage, the Development Proposal contains potentially significant safety risks.

The Applicant's [geotech report](#) is premised on construction that remains within the footprint of the existing house.

“Buffers and Mitigation: Under MICC 19.07.160(C), a prescriptive buffer of 25 feet is indicated from all sides of a shallow landslide-hazard area. The recommendations presented in this report are intended to protect the planned construction, which will be located **within the footprint of the existing house** (*emphasis added*), which is set back approximately 20 feet from the top of the rockery that defines the top of the steep slope along the western perimeter of the property.”

Despite this clear limitation, The Project is **not** located within the footprint of the existing house. At least 10 percent of its area (roughly 150 square feet of the northwest portion of the proposed structure) sits outside the footprint of the current structure.

The Project does not heed the geotechnical survey's guidance.

While it is possible to reduce Mercer Island's 25' prescriptive buffer, doing so always requires care. The Project is set back only 20' from the top of the western rockery. The geotech report says that this can be mitigated. However, there is a history of problems with this very large and far from code-compliant rockery (see Figure 6 below). The house at 7030 SE Maker Street is immediately below the rockery (less than six feet away), and is at risk from changes proposed by The Project. In light of these circumstances, The Project's failure to work within the scope of the geotech's recommendations and report is deeply troubling.

CITY OF MERCER ISLAND
 3505 88TH AVE SE
 MERCER ISL, WA. 98040



Oct 14, 1981
 RECEIVED
 OCT 16 1981

Attn: Mr. Edward Wilczak
 Subject: Trees remaining on building site
 on Maker Street.

Gentlemen:

As you know, the week of Oct. 5, 1981 we experienced a torrential downpour. This fact, compounded by subject excavation caused a portion of my rocky retaining wall to wash out. The excavation is adjacent to and due West of my house. The builder, Bill Zelund and I came to a mutual understanding for the repair of my rockery.

The problem that generated this letter, however, is not the rock wall but rather the huge maple trees remaining on the Bill Zelund lot. They pose a serious problem, i.e., they endanger the safety of my family and my house. In a severe wind we sometimes find large limbs broken off and lying in our yard. Now, with the excavation of

the soil adjacent to the roots of these immense maple trees the hazard is substantially increased. Bill Island has advised me the City of Mercer Island will not permit removal of these trees I appase this position and wish you to reconsider — to re-evaluate this situation. I respectfully request that you grant permission to Bill Island to remove the trees before his house is erected at which time any tree removal expense would be substantially increased.

Sincerely,
Douglas Allen

DOUGLAS G. ALLEN
6950 SE MAKER ST.
MERCER ISL, WA. 98040

PHONE: HOME 232-5445
BUS. 237-3470

RECEIVED
OCT 16 1981

Figure 6: Letter (dated 1981) describing the 6950 rocky washing out under heavy rain

In addition, the geotech survey expresses concerns about disturbing the rock wall between 6950 and my house, 3515 72nd Ave SE. Per the geotech survey:

“[T]o prevent the excavation for the proposed residence from **undermining the neighboring retaining wall and rockery**, no un-shoring excavation should extend below the existing grade along the east side of the site. It may be feasible to use the existing eastern basement foundation wall for temporary shoring; however, we anticipate the existing wall will require structural bracing. This will need to be evaluated and designed by the project structural engineer. Alternatively, temporary shoring in the form of cantilevered soldier piles will be required along the eastern perimeter of the proposed excavation” (my emphasis).

Yet, the Applicant presents no mitigation plan to address these concerns. As the affected owner of “the neighboring retaining wall and rockery” mentioned in the report quoted above, I have significant concerns about the risks posed by the proposed development.

I request that the City of Mercer Island require an approved shoring plan for the eastern side of this project prior to any demolition of the existing structure. In addition, given the risks outlined, the Applicant should be required to hire a geotech engineer for a new survey tailored to her actual building aspirations (beyond the current house’s existing footprint) as well as for regular inspections of the eastern side of the site.

As I understand it, the applicant proposes to begin demolition, excavation, and construction starting in mid-November 2022. It is not news that this is the start of a very rainy 6-8 months in Seattle. Given the numerous code violations and safety risks, I hope The Project will not launch during this riskiest time of the year for construction. If this is permitted to go forward in that time frame, the City should require both indemnification and a performance bond, as allowed under MICC 19.07.160(F)2.b.

In addition, I request that the city perform an independent geotechnical evaluation of the site prior to any work taking place.

Overall, both the geotech study and prior data show that The Project is taking place in a risky location with large amounts of landfill and evidence of problems in the past. The Project does not adhere to the geotech report from 2022, and it poses foreseeable risks of damage and danger to the properties around it. Under these circumstances, the Applicant’s apparent choice to ignore the history of the site raises significant concerns.

3. The Project was Enabled by Damaging and Endangering an Exceptional Tree

As the letter from Mr. Davison shows, this project was enabled by unpermitted cutting of the Exceptional Tree that grows in my backyard. The presence of this Exceptional Tree would have limited the scope of The Project, because its branches and trunks would have prevented the construction of an excessively high building, such as The Project. MICC would not allow the removal of an Exceptional Tree unless the tree's presence limited the constructable gross floor area to less than 85% of the maximum GFA allowed. MICC 19.02. Had Ms. Strand followed the proper procedures, she would have been unable to both build 100% of the GFA and engage in cutting an Exceptional Tree. The Applicant should not benefit from Ms. Strand's having engaged in prohibited tree removal activities. It would seem only fair, in consequence, to limit The Project to 85% of the maximum GFA permitted (85% of 3500 square feet is 2975 square feet).

Figure 7A below shows how this Exceptional Tree would have limited the construction of The Project as proposed.



Figures 7A and 7B: Exceptional Tree before and after unpermitted cutting

Conclusion

I have approached this comment period with an engineer's sensibilities and the concerns of a good neighbor. I have lived on Mercer Island with my family for 17 years and feel deep reverence for and dedication to the community, including for its beautiful landscaping and mature trees. In addition, when I purchased this home, I did so fully aware that the MICC imposed certain reasonable restrictions on maximum building height and tree removal. I urge the Mercer Island Community Planning and Development Department to honor these reliance interests and to protect the spirit and the letter of the laws which help to maintain a sense of uniqueness and tranquility on the Island.

Thank you for your attention to all of these challenging and important issues. Should you have any questions, please feel free to contact me at dan@grove.cx.

Dan Grove
3515 72nd Ave SE

Appendix A - Data Sources (In reverse chronological order)

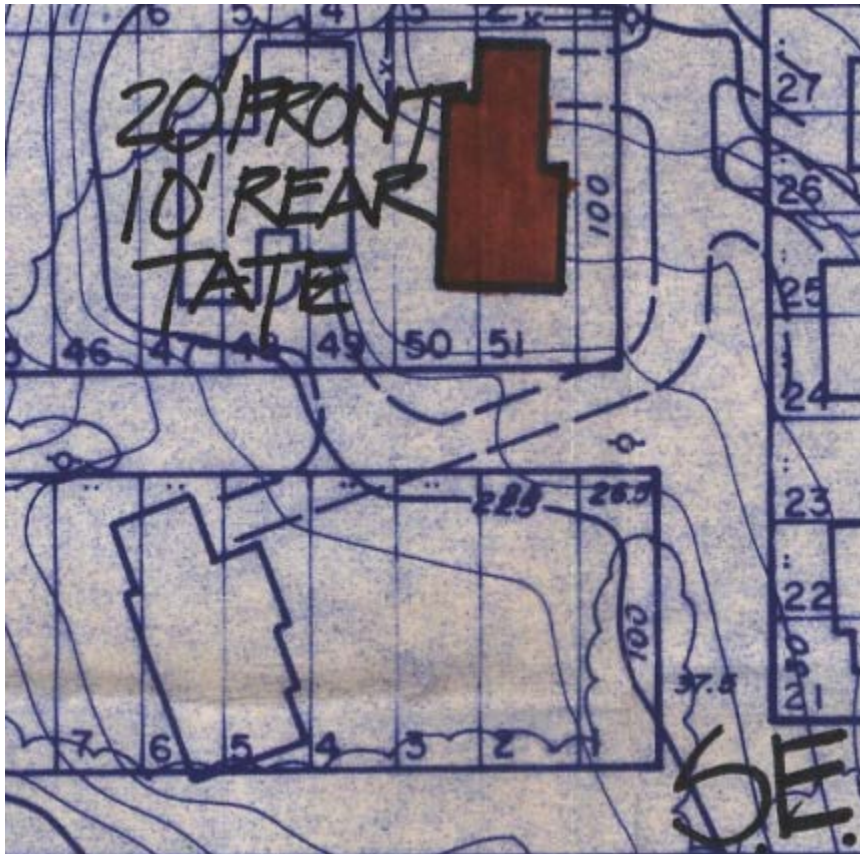
- [6950 Geotechnical Survey](#) - dated 2022.
- [6950 Survey](#) - dated 2021. On page 2, provides Existing Grade of SE Maker St.
- [6933 SE 35th Street Survey](#) - dated 2001, correlates Existing Grade of 7030 and 7145. 6933 is immediately north of 7030 SE Maker, and immediately west of 7145.
- [7145 Survey](#) - dated 1989, provides Existing Grade north of 6950.
- [7145 Geotechnical Survey](#) - dated 1989.
- [Letter about failure of 6950 western rockery](#) - dated 1981.
- [7030 SE Maker Street Survey](#) - dated 1981, provides Existing Grade immediately west of 6950.
- [1961 Survey](#) - predates July 1961 (date based on this July 1961 [service request](#) for a house which is not present in the survey).

Appendix B - Evidence that the 2021 survey of SE Maker Street represents the Existing Grade of Maker Street when 6950 was initially developed

An old (undated, but almost certainly 1946 based on the letter below) aerial photo was submitted as part of a vacation application for a portion of SE Maker Street. It proves that the SE Maker gravel road predates the development of 6950.

The [photo source](#) is Mercer Island GIS documents for 7020 SE Maker Street.

[Mercer Island Resolution 237](#) in 1965 allowed the extension of the asphalt roadway on SE Maker west past Lot 5. This matches exactly the survey in 1961, which shows a driveway going from Lot 5 to the East.



When the boundary lines of the properties from the current GIS are laid onto photo (possible because the 7020 [labeled “Wilson”] property matches 7020’s lot lines today. The West Mercer Way roadway in the photo matches its current GIS data), two things

become immediately clear:

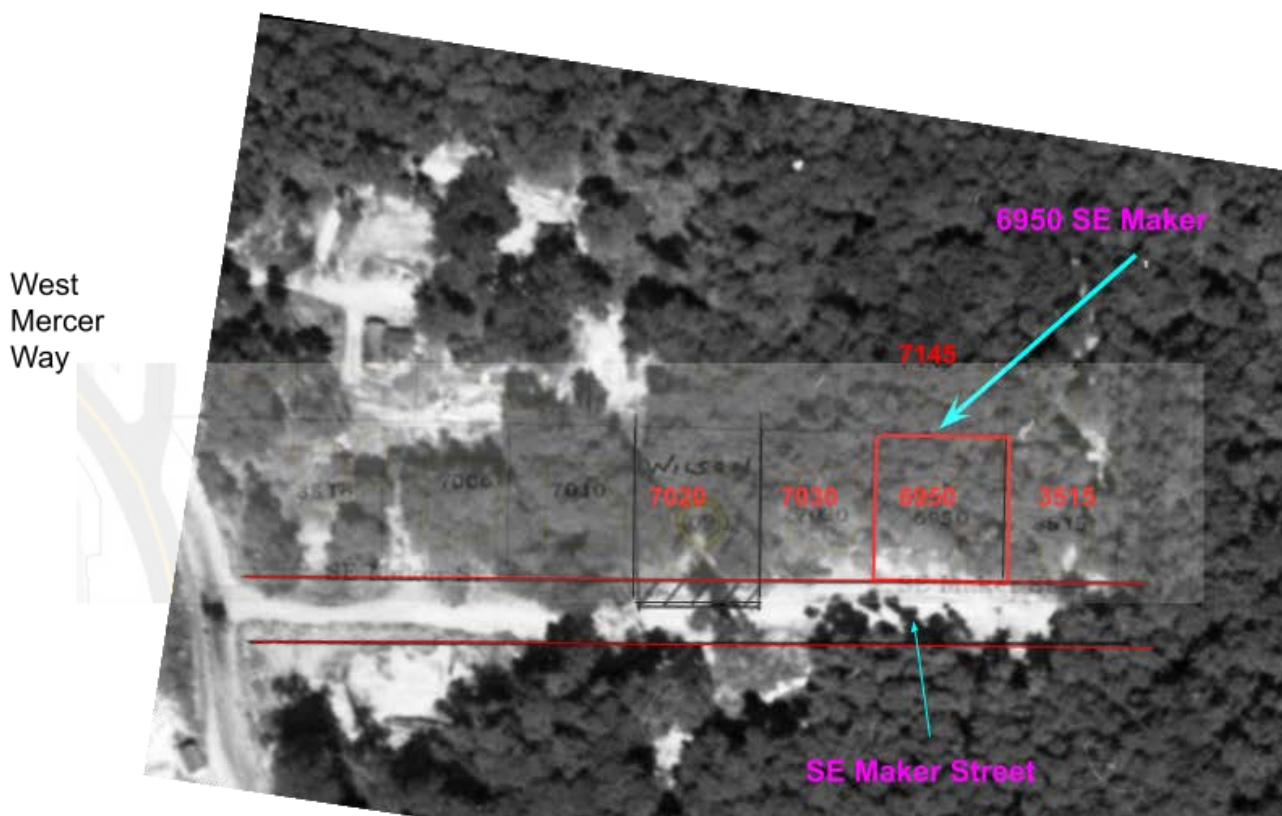


Figure 7: Photographic evidence that the gravel road shown in the 1961 survey was present prior to development of 6950.

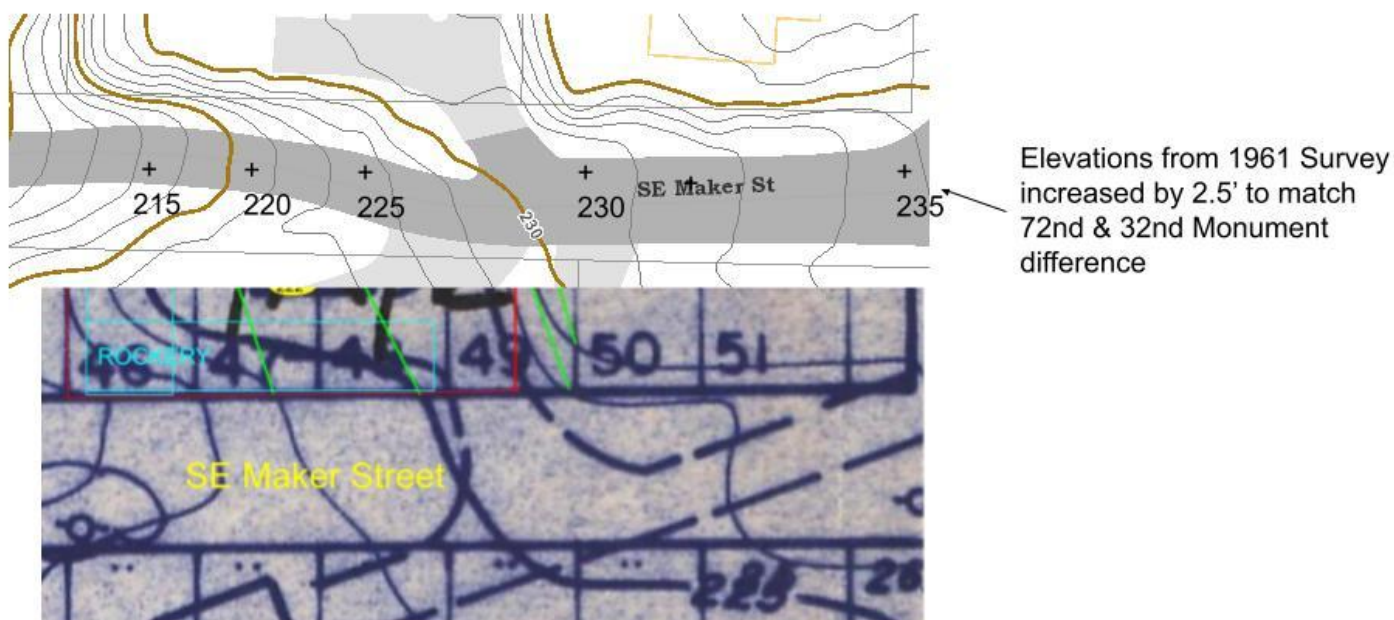
- The gravel SE Maker Street shown in the 1961 survey was present prior to development of 6950.
- The photo shows the original condition of the lot of 6950, which differs drastically from its condition today.

Additionally, [this letter](#) (also from the 7020 GIS documents) shows that SE Maker Street was in place between 69th Ave SE and 72nd Ave SE no later than 1946.

The 2021 survey of 6950 included SE Maker Street, and closely matches the Existing Grade of SE Maker Street prior to 6950's development. The evidence for this is as follows:

- SE Maker Street was a gravel road that was first paved no earlier than 1963, according to Mercer Island Public Works. Figure 7 shows this road.

- The 1961 survey is no newer than mid-1961, because it shows a vacant lot at 3421 72nd Ave SE. By mid-1961, there was a residence at this address (as shown by [sewer records](#)).
- Therefore, the road shown on the 1961 survey is the original gravel road (which is backed up by the survey showing the road going all the way to West Mercer Way). The paved road never extended to the west past the current 7030 SE Maker Street.
- This means that the gravel road was the Existing Grade at 6950's boundary at the time of development.
- We can then correlate the 1961 survey's elevations with elevations from Mercer Island's LIDAR data. The 1961 survey shows an elevation of 307.60' in the intersection of 32nd Street SE and 72nd Ave SE.
- Current Mercer Island LIDAR data from the Mercer Island GIS shows this intersection at approximately 310', or ~2-3 feet higher than the 1961 survey. This LIDAR data precisely matches the 2021 survey.
- If we shift the 1961 survey of SE Maker Street up 2.5' (as shown below), there is a nearly perfect match to the 2022 survey of SE Maker Street.
- The "+"s in the illustration below are the result of moving the 1961 survey's contours to match this elevation difference. As is clear, the grade of the gravel road is nearly identical to the grade of the roadway today. This provides compelling evidence that the current surface of SE Maker Street matches the existing grade of the street when 6950 was initially developed.



Appendix C - Creation of Interpolated Contour Lines in Figure 4

To create Figure 4, Jim Mattison and I used several pieces of data:

- Contours of SE Maker Street from the 6950 Survey. As we have shown, these contours represent the Existing Grade of SE Maker Street.
- Contours on the north boundary of 6950 from the 7145 Survey. As we have shown, these contours represent the Existing Grade of that boundary line.
- Bore- and Test-hole data from the 6950 Geotech study, showing us how deeply artificial fill was found at various points on the 6950 property.

In order to match the 6950 basement FF elevations between the 6950 Survey and the 7145 Survey, we shifted the 7145 contours by 1 vertical foot (in other words, a contour listed at 228' on the 7145 Survey was moved to 229' in Figure 4).

We also show test and borehole data in green circles in Figure 4 - these boreholes show the maximum elevations of non-fill found in each hole during 6950's geotech survey in 2022. This data matches the interpolated topographic elevations quite well.