Planning Memorandum

To: Sunfish Lake Mayor Dan O'Leary and City Council Members

From: Tom Ramler-Olson, AICP, City Planner

Date: July 27, 2021
City Council Meeting August 3, 2021

Re: 100 Windy Hill Road – Major Site Plan Review and Variance
WSB Project No. 017767-000

GENERAL INFORMATION

Applicant:	Tom Flint, Alexander Design Group
Property Owner:	Joseph and Madeline Mauer
Project Location:	100 Windy Hill Road – PID 380380006013
Existing Land Use / Zoning:	Single-Family Residential; Zoned R-1 within Shoreland Overlay District
Surrounding Land Use / Zoning:	North: Sunfish Lake East: Wetland South: Residential; Zoned Single-Family Residential District, R-1 with Shoreland Overlay West: Residential; Zoned Single-Family Residential District, R-1 with Shoreland Overlay
Comprehensive Plan:	The City of Sunfish Lake (2040) Comprehensive Plan guides this property for Rural Residential land use.

Deadline for Agency Action:	Application Date:	06-08-2021
	60 Days:	08-07-2021
	Extension Letter Mailed:	N/A
	120 Days:	10-06-2021

CONSIDERATIONS RELATED TO THE REQUEST

1. Overview.

Tom Flint, Alexander Design Group ("applicant"), has applied on behalf of Joseph and Madeline Mauer ("property owner") for a major site and building plan review and variance to facilitate construction of a single-family home at the property 100 Windy Hill Road ("subject property").

New structures require the review and approval of a major site and building plan. The applicant is also requesting a variance of three feet to the maximum height allowed for a

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principal structure on a residential lot, which would allow the home to have a height of 33 feet where the maximum is 30 feet.

Site and Building Plan Review and variance requests require a public hearing, and review and recommendation by the Planning Commission, followed by review and consideration by the City Council. The Planning Commission reviewed the requests and held a public hearing at their meeting on July 15, 2021. On a 4-0 vote, the Planning Commission passed a motion to recommend approval subject to the findings of fact and conditions of approval noted in the Planning Staff memorandum.

2. General Zoning Review

The proposed structure would be located in the north central portion of the subject site. The grade changes significantly from the private drive off Windy Hill Road to the edge of the wetland it abuts with the steeper portions closer to the wetland. The proposed is located to take advantage of the existing grading and flatter portions of the site; however, some grading is proposed to accommodate the residence, which includes a lower-level walkout design oriented towards Sunfish Lake. Stormwater management facilities are proposed at various locations around the home, including several infiltration basins located around the home and on both sides of the driveway entrance. The City Engineer has reviewed the stormwater management, erosion control, and site grading plan and found that said plans conform to ordinance requirements.

Below is a summary table of the dimensional requirements for lots and structures in the R-1 and Shoreland Overlay District.

	R-1 Minimum Requirement	Shoreland Overlay Requirement	Proposed
Buildable Area	2.5 ac	2.5 ac	11.11 ac gross More than 2.5 ac buildable
Lot Width at Building Setback	200 feet	200 feet	495 feet
Lot Width at OHWM		150 feet	>470 feet
Minimum Building Setback: Front	100 feet		198 feet
Minimum Building Setback: Side	50 feet		West: 95 ft. South: 73 ft.
Minimum Building Setback: Rear	50 feet		200 feet
Building setback from OHWM		200 feet	200 feet
Maximum Building Height	30 feet or 2.5 Stories		**33'-0"**
Maximum Building Area	10% of lot area		3.1%
Lot Coverage		30% maximum	6.4%
Septic setback from OHWM		150 feet	360 feet

***Variance requested to exceed the maximum for principal structures on residential lots*

Architectural Design / Building Materials. The design of the proposed structure features many traditional residential architectural elements, including gable ends along the front of the structure, front entry porch, hipped roofs, dormers, consistent window design, and walkout basement level along the rear side of the home. Building materials include cedar shakes for the siding and roof; stone veneer adorns the lower portion of the home's exterior. These materials are consistent with the surrounding residential context and are allowed by the

Zoning Ordinance. A pool house is located northeast of the home and is connected to it via an underground hallway. It also features the same design and materials as the home. Between the pool house and home is a swimming and patio.

Building Height. The applicant has provided elevation drawings of the proposed home, which indicate the average grade elevation of 953 feet and show the requested height of the home measured from that elevation. The home is proposed to have a height of 33 feet. According to the Ordinance, no building structure shall exceed two and a half stories or 30 feet in height above average existing grade. The applicant is requesting a variance to that maximum height. That request is evaluated later in this report.

Vehicular Access. A driveway comes off an access road beginning at the southeast corner of the parcel from Windy Hill Road to a proposed attached garage and a circular drive at the entry of the home. The driveway area will be graded such that slopes do not exceed 12 percent. A culvert is located under the driveway before approaching the circular drive. Areas will be graded at both ends of the culvert to retain and infiltrate stormwater.

Lighting. Exterior lighting of homes or property is allowed as necessary for safety purposes provided the impact on surrounding properties is minimized and complies with Section 1216.06 of the Zoning Ordinance. The applicant has plans showing exterior sconces at various locations attached to the side of the home and path lights lining walkways close to the home. These path lights are 2 feet in height and covered to cast light downward. The location of these path lights are shown in Sheet L2.1 of the Landscape Plan. According to the Ordinance, all lights which cast any light on residential property or over public water shall not exceed one-foot candle (meter reading) as measured from the edge of water abutting the subject property. Upon installation, all lighting shall adhere to this additional requirement.

Grading, Drainage, and Erosion Control. The home is being located in the center of the property. The lot has existing grades that from the center of the lot slope down to Sunfish Lake on the north part of the property, toward the wetland on the east, and south toward the south entry of the property. The project will require some modification of existing site grades.

Plans submitted by the applicant show a proposed impervious cover amount of 6.4 percent, which complies with the 30 percent maximum for lots within the Shoreland Overlay District.

The applicant has a stormwater pollution prevention plan intended to control potential erosion and sediment movement commonly associated with construction on sensitive sites. Proposed erosion mitigation measures include stabilization of all exposed soil areas, stabilization mats on steep slopes, silt perimeter erosion control, a temporary sediment basin, and an on-site stormwater management system consisting of infiltration basins and an underground infiltration pipe gallery.

The applicant is proposing to fill an on-site wetland and replace with banking credits. This review is part of a separate process through the Wetland Conservation Act (WCA). Construction will not be permitted to begin prior to final approval through WCA.

The City Engineer has reviewed plans submitted by the applicant and provided comments in the memos dated June 30, 2021, and July 6, 2021. As a condition of major site plan approval, the applicant must adhere to any follow up recommendations from the City Engineer.

Landscaping and Tree Preservation. The applicant has provided an existing tree inventory as well as a landscaping plan. The total number of trees on site is 594. Of that amount, the applicant has identified 493 that will be saved. A number of those saved trees will be

surrounded a 4-foot-high protective barrier during construction. Plans also show the removal of 83 trees in the area of the proposed building, driveway and septic area, as well as other areas of the parcel. Each removed tree will be replaced 1:1 and the locations of those replacements are provided on the Landscape Plan. The schedule of replacement trees is provided on Sheet L3.2. Shrubs and perennials are also included in the proposed landscaping on the property. The City Forester has reviewed the proposed plans and tree inventory and approves of what is shown.

Screening. The property is well screened from houses to the east and west. As shown on the landscape plan, extra plantings are proposed in those directions to provide additional screening. Shrubs and perennials are planned along long stretches of the home's exterior, which will soften the home's appearance on the landscape.

Well and Septic. Well and septic locations are identified on the development plans. Primary and secondary septic locations are shown, each located on one side of the driveway in the area of the parcel. A well location is shown northeast of the proposed home. No comment on the plans were provided by the City's septic inspector. Prior to issuance of a building permit, the applicant must demonstrate to the City that a septic permit has been attained for the system that staff has reviewed and recommended for approval.

Fire Safety. The Fire Chief was provided a set of site and building plans and did not offer any comments or concerns.

DNR Approval. Minnesota DNR area Hydrologist Taylor Huinker was notified of the proposed request. The Hydrologist did not offer any further comments or express concerns.

3. Ordinance Authority

SECTION 1206.2 PROCEDURES provides the process for review of a variance request which requires public notice and notification, a public hearing, and review and recommendation by the Planning Commission, followed by review and consideration by the City Council.

SECTION 1208.03.B. MAJOR SITE PLAN APPROVAL PROCEDURES provides the process for review of a major site and building plan which requires public notice and notification, a public hearing, and review and recommendation by the Planning Commission, followed by review and consideration by the City Council.

4. Variance

The Planning Commission, as its basis of recommendation, and the City Council, as its basis for decision on land use matters, shall evaluate requests for deviations from the literal provisions of the Zoning Ordinance in instances where compliance with the requirements of this Ordinance would cause practical difficulties because of circumstances unique to the individual property under consideration. Criteria used to evaluate variance requests are described in Section 1206.01.C. Requests must satisfy each criterion in order to receive Staff's recommendation of approval. Those criteria are listed below with staff's comments provided in *italics*.

The applicant believes the project meets the criteria as the variance request will not:

a. Impair an adequate supply of light and air to adjacent property.

The applicant has located the proposed home so that no light or air is blocked from any adjacent property.

b. Unreasonably increase the congestion in the public street.

The proposed height will not increase traffic in the area.

c. Have the effect of allowing any district uses prohibited therein, permit a lesser degree of flood protection than the flood protection elevation for the particular area, or permit standards which are lower than those required by State law.

The proposed use is permitted within the R-1 district and Shoreland Overlay. The home has been sited and designed to comply with the required floor protection elevation for the area. It will not permit standards which are lower than those required by State law.

d. Increase the danger of fire or endanger the public safety.

The proposed height will not increase the danger of fire or endanger public safety.

e. Unreasonably diminish or impair established property values within the neighborhood, or in any way be contrary to the intent of this Title.

The project is expected to increase the property value of the subject parcel and will conform to the quality of development within the neighborhood.

f. Violate the intent and purpose of the Comprehensive Plan.

The Comprehensive Plan supports low-impact residential projects such what the applicant has proposed. The project is not expected to violate the intent or purpose of the Comprehensive Plan.

A variance from the terms of this Ordinance shall not be granted unless it can be demonstrated that:

a. Practical difficulties will result if the variance is denied due to the existence of special conditions and circumstances which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures or buildings in the same district.

1) Special conditions may include exceptional topographic or water conditions or, in the case of an existing lot or parcel of record, narrowness, shallowness, insufficient area or shape of the property.

2) Practical difficulties caused by the special conditions and circumstances may not be solely economic in nature, if a reasonable use of the property exists under the terms of this Title.

3) Special conditions and circumstances causing practical difficulties shall not be a result of lot size or building location when the lot qualifies as a buildable parcel.

While the size of the lot and the location of the proposed home meet ordinance requirements, there is some topographic change within the buildable part of the lot that would require excessive grading and removal of trees from a heavily forested lot for the proposed home to meet the height restrictions for a principal structure. By pulling the

building three feet higher above the average grade elevation, less grading will be necessary and approximately 21 trees will be saved. These saved trees will not only maintain the natural features of the site, but also preserve the natural buffer they offer as they are located between the proposed improvements and neighboring properties.

b. Compliance with the requirements of the provisions of this Ordinance would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Ordinance or deny the applicant the ability to put the property in question to a reasonable use and the proposed variance permits the owner to use the property in a reasonable manner.

   The applicant is proposing a height that reduces disturbances from grading and removal of trees, which is imposed by the topography of the lot. The variance allows the property owners to use the property in a similar manner as other properties that exhibit similar topographic changes, which is a common condition for lakeshore properties and others around the City. The preservation of trees and reducing the risks to the quality of water bodies is a goal of the City and is encouraged by its policies.

c. The special conditions and circumstances causing the practical difficulties do not result from the actions of the applicant.

   The existing natural conditions on the property coupled with maintaining the required setbacks from the ordinary high water mark and property lines are circumstances causing the practical difficulties. The variance allows the proposal to maintain those setbacks and preserve natural features for the benefit and enjoyment of both the property owners and their neighbors.

d. Granting the variance request will not confer on the applicant any special privilege that is denied by this Ordinance to other lands, structures or buildings in the same district under the same conditions.

   The proposed project is to allow a 3-foot deviation in height to reduce grading and saving trees on a heavily forested lot. Preservation practices like this are encouraged by the City through its policies and development standards that all projects are evaluated against. The variance does not grant any special privileges.

e. The request is not a use variance.

   The request is a height variance, not a use variance.

f. The variance requested is the minimum variance necessary to accomplish the intended purpose of the applicant.

   The variance is to allow an additional 3 feet of height above the average grade to allow the applicant to construct a home that works with the existing topography that reduces the amount of disturbance to the landscape and saves trees that would otherwise be removed by complying with the height restriction.

g. The request does not create an inconvenience to neighboring properties and uses.

   The variance is not expected to inconvenience neighboring properties and disrupt those owners' use of their property.

h. The variance requested is in harmony with the purpose and intent of the Ordinance.

The restriction on building heights is one standard intended to establish a residential district with low-density single family detached residential dwelling units and directly related, complementary uses. The request does not conflict with this purpose.

i. The variance requested is consistent with the Comprehensive Plan.

The request complies with the guided land use described in the City's Comprehensive Plan and also advances goals related to environmental preservation.

j. The variance requested will not alter the essential character of the locality.

The variance will maintain the established low-density residential character in the immediate area.

5. Site Plan Review Criteria

The Planning Commission, as its basis of recommendation, and the City Council, as its basis for decision on major projects, shall evaluate the effects of the proposed site and building plans. This review shall include, but is not limited to the following, with staff's comments provided in *italics*:

A. Whether the proposed improvements are compatible and in harmony with the existing structures in the surrounding community.

The project proposes the construction of a detached single-family structure. The architectural design and placement of the structure is compatible with surrounding residences. The improvements comply with the applicable setback, yard, and lot coverage requirements. Should the variance for height be approved, the improvements will also meet that building standard.

B. Whether the proposed improvements preserve the character and nature of the surrounding community, including the natural landscape and woodland characteristics of the community.

The entire property is heavily wooded, and the improvements have been designed and sited to preserve many trees around the areas to be disturbed. The trees that are planned for removal will be replaced, one-for-one. A tree inventory of this site was submitted and reviewed by the City Forester. Also, the proposal preserves some of the lot's natural grading to create a home that is compatible with design featured in other nearby homes.

C. Whether the proposed improvements are not constructed of unsightly, improper or unsuitable materials.

Building materials are include cedar shakes for the siding and roof and stone veneer along the lower portion of the home's exterior. The design also includes stone lintels along lower-level windows.

D. Whether the proposed improvements will not materially adversely affect any natural resources in the community, except when there is no feasible and prudent alternative to the proposed location of the improvements. For purposes of this clause, "natural

resources" shall include, but not be limited to, all mineral, animal, botanical, air, water, land, timber, soil, quietude, recreational, historical, scenic and aesthetic resources.

The project is not expected to adversely impact any of the above noted natural resources.

E. Whether the proposed site and improvements shall have an appearance that will not have an adverse effect upon adjacent residential properties.

The architecture of the proposed residence is traditional with entry porch, hipped roof, gable ends, and ribbon windows. The building complies with the applicable exterior material and setback requirements. Accordingly, the appearance is not likely to have an adverse effect on adjacent properties.

F. Whether the proposed site improvement complies with drainage requirements, as provided in Section 1216.04 of this Ordinance.

Drainage plans were reviewed by the City Engineer. The proposed improvements would comply with requirements regarding engineering, stormwater management, and site grading.

G. Whether the proposed site and improvements are consistent with the purposes of this Ordinance and the Property Owner Reference & Development Guide Manual, as established by City Council resolution.

The proposed improvements comply with the general provisions of the R-1 District, Shoreland Overlay District, and other applicable design and performance standards.

RECOMMENDATION

Based on the foregoing considerations and applicable ordinances, staff recommends conditional approval of the site and building plan and variance subject to the following findings of fact and conditions of approval:

Findings of Fact:

1. The location of the subject property is as follows:

   100 WINDY HILL ROAD
   SUNFISH LAKE, MN 55077

2. The planning report dated July 8, 2021, prepared by WSB is incorporated herein by reference.

3. The Applicant submitted applications for a major site and building plan review and a variance request.

4. Requests for major site and building plan review and variances require Planning Commission review and City Council approval.

5. Notices for public hearings regarding requests on lots within the Shoreland Overlay district must be sent to the Department of Natural Resources.

6. The Sunfish Lake Planning Commission reviewed the applicant's request for major site and building plan and variance approval at the July 15, 2021, Planning Commission meeting.

7. Upon review of the planning report and application information, the Planning Commission found that the proposed site and building plan and variance meet Ordinance requirements. The following findings support the Planning Commission's recommendation for approval:

   Principal Structure Height Variance:

   a. Practical difficulties result from unique topography within the building area and restrictions imposed by setbacks from the ordinary high water mark and lot lines. The applicants have sited and design the home to work as much as possible with existing grades, which would be compromised with lower building height. Additional difficulties arise from preserving trees around the site of the improvements that would need to be removed because of damage that would come from more excavation than what is proposed.

   b. The applicants propose to use the parcel in a reasonable manner. They are proposing a permitted single-family residential use and wish to construct a home that will be of the same quality as other homes in the area, yet reflective of the scale of the parcel. The proposed height will reasonably site the building so it does not risk needing more grading than what is proposed and removing trees that add screening between the proposed structure and its neighbors.

   c. The applicant's request is consistent with the intent of the City's Comprehensive Plan and Zoning Ordinance by proposing a home which, with the exception of the building height, meets design and performance requirements of the City.

   d. Given the approval of the variance, the home is not anticipated to impact the character of the locality. While the proposed home is designed to be larger than most, its site is also very large and the site design maintains existing landscape features and vegetation to mitigate the size of improvements as viewed from outside the parcel. Also, the home has been designed and sited in such so as to reduce the grading and removal of trees than otherwise necessary.

Major Site and Building Plans:

a. The proposed improvements meet R-1 and Shoreland Overlay District requirements and standards.

b. The proposed development addresses Ordinance requirements pertaining to grading, drainage and stormwater management, landscaping, and screening.

c. The proposed home meets Ordinance requirements pertaining to building size, and material use (with the exception of the height which the applicant is seeking a variance from City Council).

d. The development meets other applicable Zoning Ordinance criteria.

Conditions of Approval:

1. Construction shall occur in substantial conformance with the plans presented at the July 15, 2021, Planning Commission meeting.
2. Compliance with the City Engineer's memos dated June 30, 2021, and July 6, 2021.
3. Exterior lighting shall not exceed one (1) foot candle (meter reading) as measured at the property line.
4. The applicant must obtain a septic permit prior to issuance of building permits.
5. The applicant must obtain all other permits as may be required.
6. The applicant shall comply with all applicable federal, state, and local laws, rules and ordinances.
7. The applicant must adhere to and remain in compliance with the requirements of the Resolution approving their requests, applicable performance standards, and such other requirements as may apply.
8. All conditions of the site plan review and variance must be complied with, shall run with the land, and shall not in any way be affected by the subsequent sale, lease or other change from current ownership of the Property.
9. The Resolution approving the applicant's requests is subject to the condition that all representations, written and oral, made by the applicant and its agents and representatives to the City contained in and concerning the applicant's application for the site plan review and variance must have been true, complete and accurate at the time they were made, and that they remain true and accurate for the duration of the development.
10. By undertaking the activities approved by the requests, the applicant agrees to all conditions.

Subject Site

Memorandum

To: Tom Ramler-Olson, AICP – City Planner

From: Jeff Sandberg, PE – City Engineer
Lydia Ener, PE – Project Engineer
Kendra Fallon, PE – Project Engineer

Date: June 30, 2021

Re: 100 Windy Hill Road – Major Site Plan Review and Variance
City of Sunfish Lake, MN
WSB Project No. 017767-000

Project Background

The Applicant is proposing to construct a new house along with the necessary grading and stormwater management improvements on a parcel of land that currently has a home and a garage that are proposed to be demolished. The following review is only for the engineering, stormwater management, and site grading issues. The building compliance will be handled by the City planners and building officials. Comments are based on the submittal received from the applicant on June 8, 2021 containing plans of the same date.

The following requirements and comments need to be addressed as the project moves forward:

General Notes

1. All retaining walls will need engineered drawings submitted for review by the City of Sunfish Lake Building Official.
2. A NPDES permit will need to be obtained prior to construction and a copy of the permit must be submitted to the City when obtained.

Stormwater Management and Storm Sewer Design

1. Applicant should include information on the sizing of the box culvert proposed below the driveway as this was not included in the HydroCAD modeling.
2. Both infiltration basins should have a defined spillway emergency overflow included with the location and elevation shown on the plans. It appears the eastern basin does not currently have this.
3. The datum used on the plans should be noted. Applicant should confirm the OHWL is listed in the datum the plans are drawn in (current elevation is listed in NAVD29 datum).
4. The 947 contour is shown to bisect the proposed building near the west infiltration basin. Applicant should confirm the low floor elevation of the building is a 948.8.
5. It is recommended the applicant add an additional structure just east of the underground infiltration system and drop the invert of the pipe so that the proposed storm sewer doesn't have a slope of over 10%.

Rate Control

1. The site is currently shown to be meeting rate control, however the applicant must confirm rate control is still met once the modeling updates noted in this memo are made.
2. The existing conditions drainage area map and HydroCAD models should be updated to include delineating to the existing wetland onsite and including that wetland as a ponding

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node in the existing conditions. The wetland outlet should be routed to the runoff reach in the existing conditions model.

3. Applicant should confirm that a 2x multiplier should be applied to the 12" horizontal orifice in the proposed conditions outlet for the West Infiltration Basin. If the multiplier is correct, the applicant should note what this is modeling.
4. Since an impermeable liner is proposed around the sides of the west infiltration basin, exfiltration in the proposed conditions model for the west infiltration basin should only be being applied to the basin bottom surface area (at 944.5).

Volume Control

1. Volume control requirements are currently being met by the two infiltration basins and one underground infiltration system. The applicant must confirm infiltration is feasible in the locations noted (see next comment). If infiltration is not shown to be feasible in those locations, the applicant may need to alter the design in order to meet volume control.
2. The second geotechnical report included (completed by Soil Investigation and Design) shows soil borings 3 and 4 within the proposed west infiltration basin and soil boring 6 located near the proposed east infiltration basin. It should be clarified if the infiltration rates noted on the soil borings are based on in field testing or other data.
    a. Soil borings three, four and six show a layer of clay loam soils (CL-ML) at the depth of the proposed infiltration basins, which is classified as a HSG C soil. MN Stormwater Manual recommends an exfiltration rate of 0.2 in/hr for HSG C soils.
    b. The first geotechnical report shows B soils are present onsite however based on the map provided it appears these soil borings were completed around the existing dwelling which is not near the proposed infiltration basins.

Water Quality

1. The applicant is currently meeting the volume control standard and per the City's Engineering Guidelines the water quality control standard shall be considered satisfied if the volume control standard has been met.
2. The total site impervious noted in the water quality volume table is not equal to sum of the impervious noted in the table and does not match what is called out on the plans. The total site impervious in the water quality volume table should be updated.

Erosion Control and Restoration

1. Note the proposed location of temporary soil or dirt stockpiles on the plan, and the stabilization methods for the stockpiles.

Wetlands

The applicant is proposing to fill an on-site wetland and replace with banking credits. This review is part of a separate process through the Wetland Conservation Act. Construction will not be permitted to begin prior to final approval through WCA.

Conclusions and Recommendations

Based upon our review of the engineering, stormwater management and site grading for this proposed development, we have determined that the proposed site and grading plans submitted on June 8, 2021 require revisions per the above-noted items in this memorandum. Therefore, we hereby find the proposed plans not to be in accordance with City requirements and recommend denial from an engineering standpoint for this project until these items are addressed.

We are requesting a new set of plans addressing these comments and new drainage calculations be resubmitted to our office prior to approval. We request that the Applicant restate each comment from this memorandum and detail how each comment was addressed.

PIERCE PINI & ASSOCIATES, INC.
9298 Central Avenue NE, Suite 312, Blaine MN 55434
Phone: 763.537.1311 rhonda@piercepini.com

Memorandum

To:	Jeff Sandberg, WSB
From:	Rhonda Pierce, Pierce Pini & Associates, Inc. (PPA)
cc:	Tom Flint, Alexander Design Group
	File
Date:	07.06.2021
Subject:	100 Windy Hill Road – Major Site Plan Review and Variance
	City of Sunfish Lake, MN
	WSB Project No. 017767-000

The following are our responses to the items outlined in the Comments on the submittal received from the applicant on June 8, 2021, containing plans of the same date. Plans and calculations have been revised to address these comments as shown below. PPA responses are shown in ***bold italics***.

General Notes

1. All retaining walls will need engineered drawings submitted for review by the City of Sunfish Lake Building Official. ***PPA Response: The retaining wall design is by the Landscape Architect and engineered drawings will be provided for permit.***

2. A NPDES permit will need to be obtained prior to construction and a copy of the permit must be submitted to the City when obtained. ***PPA Response: The General Contractor will submit a copy of the NPDES permit to the city.***

Stormwater Management and Storm Sewer Design

3. Applicant should include information on the sizing of the box culvert proposed below the driveway as this was not included in the HydoCAD modeling. ***PPA Response: The box culvert has been replaced with a 36" reinforced concrete pipe, see C4.0 Storm Sewer Plan. Pipe sizing calculations are included in the stormwater report. The pipe is purposely oversized to alleviate blockage as this serves as an overland overflow point for the west infiltration basin.***

4. Both infiltration basins should have a defined spillway emergency overflow included with the location and elevation shown on the plans. It appears the eastern basin does not currently have this. ***PPA Response: See sheet C2.1 for emergency overflow route for each basin.***

5. The datum used on the plans should be noted. Applicant should confirm the OHWL is listed in the datum the plans are drawn in (current elevation is listed in NAVD29 datum). ***PPA Response: The datum is indicated on the site survey by Advance Survey and Engineering. See General Note #48 on C0.0.***

6. The 947 contour is shown to bisect the proposed building near the west infiltration basin. Applicant should confirm the low floor elevation of the building is a 948.8. ***PPA Response: There is a portion of the lower level of the house that is above ground. This was shown dashed previously but it indicated by a solid line on the revised plans. The lowest level egress floor elevation is 948.8. See C3.0 for grading.***

7. It is recommended the applicant add an additional structure just east of the underground infiltration system and drop the invert of the pipe so that the proposed storm sewer doesn't have a slope of over 10%. ***PPA Response: Added additional structure Manhole 26. See sheet C4.0 Storm Sewer Plan.***

Rate Control

8. The site is currently shown to be meeting rate control, however the applicant must confirm rate control is still met once the modeling updates noted in this memo are made. ***PPA Response: The modeling updates have been made and rate control is met.***

9. The existing conditions drainage area map and HydroCAD models should be updated to include delineating to the existing wetland onsite and including that wetland as a ponding node in the existing conditions model. ***PPA Response: The Existing Drainage Map and Existing Conditions HydroCAD model have been updated. Both are included in the revised Stormwater Report.***

10. Applicant should confirm that a 2x multiplier should be applied to the 12" horizontal orifice in the proposed conditions outlet for the West Infiltration Basin. If the multiplier is correct, the applicant should note what this is modeling. ***Response: PPA Removed 2X multiplier and noted horizontal orifice as overflow AD 23. See stormwater report and sheet C4.0.***

11. Since an impermeable liner is proposed around the sides of the west infiltration basin, exfiltration in the proposed conditions model for the west infiltration basin should only be being applied to the basin bottom surface area (at 944.5). ***PPA Response: Revised the infiltration as the basin bottom contour. See 3.0 Grading Plan and revised Stormwater Report.***

Volume Control

12. Volume control requirements are currently being met by the two infiltration basins and one underground infiltration system. The applicant must confirm infiltration is feasible in the location noted (see next comment). If infiltration is not shown to be feasible in those locations, the applicant may need to alter the design in order to meet volume control. ***PPA Response: The stormwater system areas have been revised to note that subgrade soils from the bottom of the system to the OHWL will be removed and imported sand backfill installed so areas will infiltrate. The infiltration rate is 0.80 inches/hour for A-type soils. See 4.1 Stormwater Management Plan and revised Stormwater Report.***

13. The second geotechnical report included (completed by Soil Investigation and Design) shows soil borings 3 and 4 within the proposed west infiltration basin and soil boring 6 located near the proposed east infiltration basin. It should be clarified if the infiltration rates noted on the soil borings are based on in field testing or other data. ***PPA Response: See response #12.***

    a. Soil borings three, four and six show a layer of clay loam soils (CL-ML) at the depth of the proposed infiltration basin, which is classified as a HSG C soil. MN Stormwater Manual recommends an exfiltration rate of 0.2 in/hr for HSG C soils. ***PPA Response: See response #12.***

    b. The first geotechnical report shows B soils are present onsite however based on the map provided it appears these soil borings were completed around the existing dwelling which is not near the proposed infiltration basins. ***PPA Response: See response #12.***

Water Quality

14. The applicant is currently meeting the volume control standard and per the City's Engineering Guidelines the water quality control standard shall be considered satisfied if the volume control standard has been met. ***PPA Response: The volume control and water quality standards have been met. See revised Stormwater Report.***

15. The total site impervious noted in the water quality volume table is not equal to sum of the impervious noted in the table and does not match what is called out on the plans. The total site impervious in the water quality volume table should be updated. ***PPA Response: Area calculations have been revised and coordinated.***

Erosion Control and Restoration

16. Note the proposed location of temporary soil or dirt stockpiles on the plan, and the stabilization methods for the stockpiles. ***PPA Response: This is a contractor means and methods item but a temporary stockpile area has been shown on the plans with the proper erosion and sediment controls. See C2.1 Erosion and Sediment Control – Site Layout.***

Wetlands

17. The applicant is proposing to fill an on-site wetland and replace with banking credits. This review is part of a separate process through the Wetland Conservation Act. Construction will not be permitted to begin prior to final approval. ***PPA Response: Noted.***

Conclusions and Recommendations

18. Based upon our review of the engineering, stormwater management and site grading for this proposed development, we have determined that the proposed site and grading plans submitted on June 8, 2021 require revisions per the above-noted items in this memorandum. Therefore, we hereby find the prosed plans not to be in accordance with City requirements and recommend denial from an engineering standpoint for this project until these items are addressed. ***PP Response: Drawings and Stormwater Report have been revised to address comments.***

19. We are requesting a new set of plans addressing these comments and new drainage calculations be resubmitted to our office prior to approval. We request that the Applicant restate each comment from this memorandum and detail how each comment was addressed. ***PPA Response: See Response #18 above.***

Emailed Comment sent 07/01/2021 from Jeff Sandberg to Tom Flint

20. Please have a detailed planting and restoration plan added to the Civil plan for each of the stormwater basins. The plan now states "see the landscape plan", and that plan does not adequately identify plantings in accordance with the detail in the Civil plans. We've had issues recently where the landscaper sods over the infiltration basins, and that is not consistent with MPCA guidelines for infiltration basins. ***PPA Response: This has been revised on Landscape Plan, See L3.0.***

End of Memorandum

Memorandum

To: Tom Ramler-Olson, AICP – City Planner

From: Jeff Sandberg, PE – City Engineer
Lydia Ener, PE – Project Engineer
Kendra Fallon, PE – Project Engineer

Date: July 6, 2021

Re: 100 Windy Hill Road – Major Site Plan Review and Variance
City of Sunfish Lake, MN
WSB Project No. 017767-000

Project Background

The Applicant is proposing to construct a new house along with the necessary grading and stormwater management improvements on a parcel of land that currently has a home and a garage that are proposed to be demolished. The following review is only for the engineering, stormwater management, and site grading issues. The building compliance will be handled by the City planners and building officials. Comments are based on the submittal received from the applicant on July 6, 2021.

The following requirements and comments need to be addressed as the project moves forward:

General Notes

1. All comments have been addressed. Engineering drawings for retaining walls will be required for building permit. A copy of the NPDES permit and wetland permit must be provided by the applicant prior to any earthwork commencing.

Stormwater Management and Storm Sewer Design

1. All previous comments have been addressed and there are no additional comments on the stormwater management or storm sewer design.

Rate Control

1. The site is shown to be meeting rate control with the current design. All previous comments have been addressed and there are no additional comments.

Volume Control

1. Volume control requirements are being met by the two infiltration basins and one underground infiltration system. All previous comments have been addressed.
2. Applicant must notify the City if infiltration rates found in the field do not meet or exceed the design infiltration rate of 0.8 inches per hour.

Water Quality

1. The applicant is currently meeting the volume control standard and per the City's Engineering Guidelines the water quality control standard shall be considered satisfied if the volume control standard has been met.

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

Erosion Control and Restoration

1. All comments have been addressed.

Wetlands

The applicant is proposing to fill an on-site wetland and replace with banking credits. This review is part of a separate process through the Wetland Conservation Act. Construction will not be permitted to begin prior to final approval through WCA.

Variance Request for Building Height

Staff has reviewed the submitted materials related to the height variance for the building. Staff can confirm that overall grading limits will be reduced and the distance of site disturbance to the lake will be increased with the current grading plan (with the variance). Additionally, a number of mature trees will be protected and saved with the plan as currently proposed. For these reasons, from an engineering standpoint, staff supports the variance request.

Conclusions and Recommendations

Based upon our review of the engineering, stormwater management and site grading for this proposed development, we have determined that the proposed site and grading plans submitted on July 6, 2021 are found to be in accordance with City requirements and we recommend approval from an engineering standpoint for this project.

CITY OF SUNFISH LAKE
DAKOTA COUNTY, MINNESOTA

RESOLUTION NO. 21-XX

RESOLUTION APPROVING A MAJOR SITE AND BUILDING PLAN REVIEW FOR A NEW HOME AND VARIANCE FOR A PRINCIPAL STRUCTURE HEIGHT OF 33 FEET AT 100 WINDY HILL ROAD, SUNFISH LAKE, DAKOTA COUNTY, MINNESOTA.

WHEREAS, Tom Flint, on behalf of Joseph and Madeline Mauer, submitted an application for a major site and building plan review for a new home and variance for a principal structure height of 33 feet on the property located at 2154 Charlton Road, legally described as:

> LEGAL DESCRIPTION PARCEL TWO:
> Lot 5, AUDITOR'S SUBDIVISION NO. 41 Dakota County, Minnesota together with that part of Lot 6, said AUDITORS SUBDIVISION NO. 41 lying West of the following described line: Commencing at the Southwest comer of Lot 2, Block 1, WINDY HILL, Dakota County, Minnesota; thence South 88 degrees 58 minutes 15 seconds East, assumed bearing, along the South line of said Lot 2, a distance of 15.00 feet to the point of beginning of the line to be described; thence South 52 degrees 14 minutes 31 seconds East a distance of 182.41 feet and there terminating.
>
> LEGAL DESCRIPTION PARCEL FIVE:
> That part of WHITE OAKS ADDITION, Dakota County, Minnesota, according to the recorded plat thereof, lying Westerly of the following described line: Commencing at the Southeast comer of WINDY HILL (which was formerly described as the Southeast comer of and shown on the plat of WINDY HILL), which point is indicated by and iron monument; thence West along the South boundary of WINDY HILL (which was formerly described as the South boundary of "CODERE ADDITION TO WHITE OAKS" and shown on the plat of WINDY HILL) 80 feet more or less to the Southeast comer of WHITE OAKS as shown on the plat of WINDY HILL (which was formerly described as the Southwest comer of "CODERE ADDITION TO WHITE OAKS"), which point is indicated by an iron monument; thence approximately 340 feet along the South boundary of WINDY HILL (which was formerly described as the South boundary of "WHITE OAKS") to the point of beginning of the line to be described; thence North 4 degrees 22 minutes 02 seconds West a distance of 168.75 feet, thence North 12 degrees 06 minutes 51 seconds East a distance of 191.03 feet, thence North 33 degrees 33 minutes 54 seconds West a distance of 352.86 feet, thence North 56 degrees 07 minutes 50 seconds West a distance of 45.73 feet, thence North 00 degrees 00 minutes East and parallel to the West line of "WHITE OAKS" a distance of 308 feet more or less to the North line of "WHITE OAKS" and there terminating, located in Section 31, Township 28, Range 22, Dakota County, Minnesota; and

WHEREAS, a request for a major site and building plan review and conditional use permit each requires Planning Commission review and City Council approval; and

WHEREAS, City staff reviewed the application and outlined their review comments in a planning report dated July 8, 2021 prepared by WSB; and

WHEREAS, the Sunfish Lake Planning Commission held a public hearing at their July 15, 2021 meeting and reviewed the conditional use permit application, along with the referenced staff report; and

WHEREAS, upon hearing the staff presentations, applicant testimony, and public testimony, the Planning Commission closed the public hearing and recommend to the City Council approval of the conditional use permit on a vote of 4-0; and

WHEREAS, the following findings support the Planning Commission recommendation for approval:

1. The address of the subject property is as follows:

   100 WINDY HILL ROAD
   SUNFISH LAKE, MN 55077

2. The planning report dated July 8, 2021, prepared by WSB is incorporated herein by reference.

3. The Applicant submitted applications for a major site and building plan review and a variance request.

4. Requests for major site and building plan review and variances require Planning Commission review and City Council approval.

5. Notices for public hearings regarding requests on lots within the Shoreland Overlay district must be sent to the Department of Natural Resources.

6. The Sunfish Lake Planning Commission reviewed the applicant's request for major site and building plan and variance approval at the July 15, 2021, Planning Commission meeting.

7. Upon review of the planning report and application information, the Planning Commission found that the proposed site and building plan and variance meet Ordinance requirements. The following findings support the Planning Commission's recommendation for approval:

   Principal Structure Height Variance:

   a. Practical difficulties result from unique topography within the building area and restrictions imposed by setbacks from the ordinary high water mark and lot lines. The applicants have sited and design the home to work as much as possible with existing grades, which would be compromised with lower building height. Additional difficulties arise from preserving trees around the site of the improvements that would

need to be removed because of damage that would come from more excavation than what is proposed.

b. The applicants propose to use the parcel in a reasonable manner. They are proposing a permitted single-family residential use and wish to construct a home that will be of the same quality as other homes in the area, yet reflective of the scale of the parcel. The proposed height will reasonably site the building so it does not risk needing more grading than what is proposed and removing trees that add screening between the proposed structure and its neighbors.

c. The applicant's request is consistent with the intent of the City's Comprehensive Plan and Zoning Ordinance by proposing a home which, with the exception of the building height, meets design and performance requirements of the City.

d. Given the approval of the variance, the home is not anticipated to impact the character of the locality. While the proposed home is designed to be larger than most, its site is also very large and the site design maintains existing landscape features and vegetation to mitigate the size of improvements as viewed from outside the parcel. Also, the home has been designed and sited in such so as to reduce the grading and removal of trees than otherwise necessary.

Major Site and Building Plans:

a. The proposed improvements meet R-1 and Shoreland Overlay District requirements and standards.

b. The proposed development addresses Ordinance requirements pertaining to grading, drainage and stormwater management, landscaping, and screening.

c. The proposed home meets Ordinance requirements pertaining to building size, and material use (with the exception of the height which the applicant is seeking a variance from City Council).

d. The development meets other applicable Zoning Ordinance criteria.

WHEREAS, the Sunfish Lake City Council considered the application for the conditional use permit at their meeting on August 3, 2021 and agrees with the findings of the Planning Commission.

NOW THEREFORE BE IT RESOLVED THAT the City Council of the City of Sunfish Lake hereby approves the major site and building plan review and conditional use permit for 100 Windy Hill Road with the following conditions:

1. Construction shall occur in substantial conformance with the plans presented at the July 15, 2021, Planning Commission meeting.
2. Compliance with the City Engineer's memos dated June 30, 2021, and July 6, 2021.
3. Exterior lighting shall not exceed one (1) foot candle (meter reading) as measured at the property line.

4. The applicant must obtain a septic permit prior to issuance of building permits.
5. The applicant must obtain all other permits as may be required.
6. The applicant shall comply with all applicable federal, state, and local laws, rules and ordinances.
7. The applicant must adhere to and remain in compliance with the requirements of the Resolution approving their requests, applicable performance standards, and such other requirements as may apply.
8. All conditions of the site plan review and variance must be complied with, shall run with the land, and shall not in any way be affected by the subsequent sale, lease or other change from current ownership of the Property.
9. The Resolution approving the applicant's requests is subject to the condition that all representations, written and oral, made by the applicant and its agents and representatives to the City contained in and concerning the applicant's application for the site plan review and variance must have been true, complete and accurate at the time they were made, and that they remain true and accurate for the duration of the development.
10. By undertaking the activities approved by the requests, the applicant agrees to all conditions.

This resolution is adopted by the City Council of the City of Sunfish Lake this 3rd day of August 2021.

_____
Dan O'Leary, Mayor

Attest:

_____
Catherine Iago, City Clerk

I state and affirm that I agree with and accept the terms and conditions of the foregoing reviews of the major site and building plan and conditional use permit. I acknowledge that violation of any of these terms and conditions will be cause to revoke my approval. Additionally, violation of any of these terms and conditions subjects me to the sanctions of Sunfish Lake Ordinance 1210 to include, but not be limited to, misdemeanor charges.

Dated: _____ _____
Name:

Summary of Project

The homeowners at 100 Windy Hill Road bought the property with the intention of continuing to raise their family in Sunfish Lake. They have several family members in and around the community and felt this was the best location for their future. Having been residences of the community for several years they have grown to appreciate living in such a small, tight knit, community.

We are proposing a single-family home on the property, located in the northwestern corner of the parcel, leaving a majority of the 40-acre property un-touched. We have worked with the city engineer, forester, inspector and planner to place the house in a location to minimize the impact on the site and surrounding properties. The house was designed to meet the zoning requirements of the city (setbacks, building coverage, building height, etc.). However, following a meeting with the city planner, city engineer and mayor we discussed raising the house out of the ground by three feet in order to reduce the amount of grading and tree removal needed for the house to be built. Discussing this with the city officials, we made the determination that it would be a greater benefit to the neighboring properties and the lake if the home were allowed to be pulled out of the ground by three feet. The structure did not get any taller, we simply lifted it up out of the ground by three feet in order to create positive drainage around the house and save 21 mature trees, mostly located between the house and the lake. To the neighboring properties and anyone viewing the house from the lake the house will not appear any larger or taller if we are granted the variance we are requesting. The entire mass of the house remains identical whether we place the house within the building height requirements or if we are granted the variance of lifting the house three feet. The only change to the surrounding properties is that the area of grading and number of trees will be reduced if we are granted the building height variance.

Practical Difficulties

1. **Practical difficulties of existing site:**

   The existing site is heavily forested and has a lot of topographic undulation. In the 7.85 acre site where the house is proposed there are 594 trees and the grade changes vertically by 16 feet (within the building setbacks) and 23 feet between the highest point and the level of the lake. Since building height is calculated by using the existing grades on the site, it forces the house down into the ground and requires extensive grading and earthwork to be performed.

   The property owners bought this property with the expectation of being able to build a large home (since this is one of the largest properties in the city). We were able to design a home that fit within the parameters of the city code but it required a fair amount of grading and tree removal. By allowing the house to be pulled out of the ground three feet we are able to minimize the amount of grading needed as well as save 21mature trees.

2. **Compliance with the requirements of the provisions of this Ordinance would deprive the applicant of rights commonly enjoyed by other properties in the same district under the terms of this Ordinance or deny the applicant the ability to put the property in question to a reasonable use and the proposed variance permits the owner to use the property in a reasonable manner:**
   The property owners want to maintain as much of the natural aspects of the site as is possible. They are looking to minimize the disturbance and disruption to the site as possible while also building a house that suits the lot size and value. By bringing the house out of the ground by three feet we limit the amount of grading work needed as well as saving 21 trees (mostly between the house and lake). This also maintains more of the natural buffer between the house and the lake (reducing the visibility of the house from the lake).

3. **The special conditions and circumstances causing the practical difficulties do not result from the actions of the applicant.**
   The property has seen zero development for at least 40 years. It is a heavily forested site as well as being very hilly. This is the state of the property that applicants purchased with the intention of building a new single-family home.

4. **Granting the variance requested will not confer on the applicant any special privilege that is denied by this Ordinance to other lands, structures or buildings in the same district under the same conditions:**
   Due to the variation in topography placing any new structure on the site will result in the loss of trees as well as substantial regrading. The property owners are requesting a variance to the building height in order to minimize the impact on the site and to better conform to the overall aesthetic and doctrine of Sunfish Lake.

5. **The request is not a use variance:**
   The request is not for a use variance. The property is an existing single-family home and will continue to be a single-family home

6. **The variance requested is the minimum variance necessary to accomplish the intended purpose of the applicant:**
   The property owners are attempting to minimize the amount of disruption to an existing site. By requesting the variance to the building height, we minimize the amount of disturbance and save 21 trees. To the neighboring properties the building height will appear nearly identical while a larger buffer will be maintained between the house and the neighbors. However, if the variance is not granted, the perceived building height will not be much different, yet, the impact to the surrounding trees and landscape will be much more invasive.

7. **The request does not create an inconvenience to neighboring properties and uses**:

By granting this variance request, the impact on the neighboring properties would be less extensive than if we complied with the building height. The building simply fits better on the site by raising it out of the ground.

8. **The variance requested is in harmony with the purpose and intent of the Ordinance:**
   The intent of the ordinance is to provide privacy and visual space between structures. It is also to maintain as much of the natural environment as possible. By granting this variance we accomplish both, trees and natural vegetation are left un-touched maintaining a visual buffer between neighboring properties as well as maintaining a larger visual buffer between the lake and the proposed home.

9. **The variance requested is consistent with the Comprehensive Plan:**
   The variance is consistent with the comprehensive plan.

10. **The variance requested will not alter the essential character of the locality:**
    By granting this variance, we maintain a greater amount of the essential character of the locality.

LEGAL DESCRIPTION PARCEL TWO:

Lot 5, AUDITOR'S SUBDIVISION NO. 41 Dakota County, Minnesota together with that part of Lot 6, said AUDITORS SUBDIVISION NO. 41 lying West of the following described line: Commencing at the Southwest corner of Lot 2, Block 1, WINDY HILL, Dakota County, Minnesota; thence South 88 degrees 58 minutes 15 seconds East, assumed bearing, along the South line of said Lot 2, a distance of 15.00 feet to the point of beginning of the line to be described; thence South 52 degrees 14 minutes 31 seconds East a distance of 182.41 feet and there terminating.

LEGAL DESCRIPTION PARCEL FIVE:

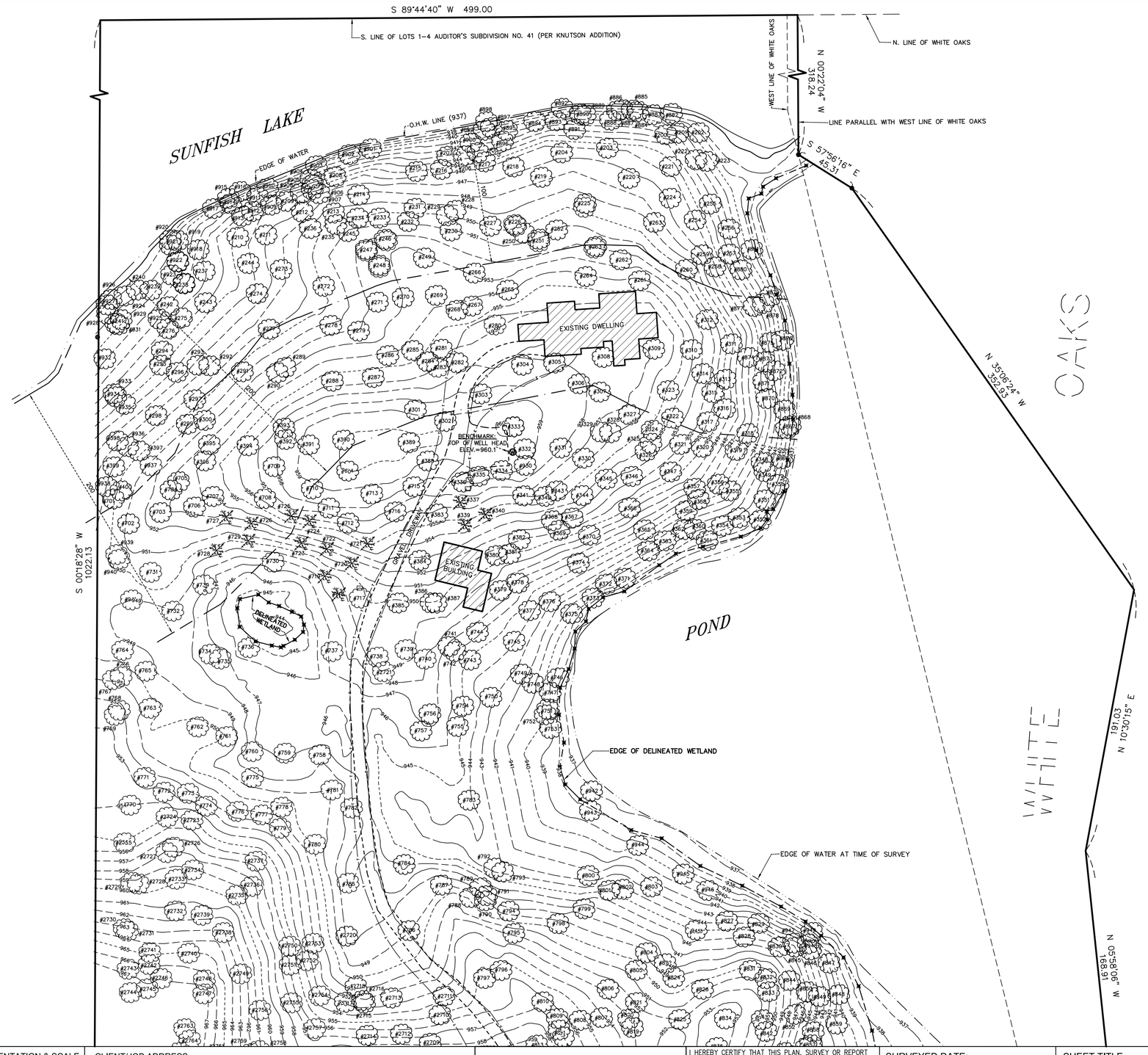
That part of WHITE OAKS ADDITION, Dakota County, Minnesota, according to the recorded plat thereof, lying Westerly of the following described line: Commencing at the Southeast corner of WINDY HILL (which was formerly described as the Southeast corner of and shown on the plat of WINDY HILL), which point is indicated by and iron monument; thence West along the South boundary of WINDY HILL (which was formerly described as the South boundary of "CODERE ADDITION TO WHITE OAKS" and shown on the plat of WINDY HILL) 80 feet more or less to the Southeast corner of WHITE OAKS as shown on the plat of WINDY HILL (which was formerly described as the Southwest corner of "CODERE ADDITION TO WHITE OAKS"), which pointis indicated by an iron monument; thence approximately 340 feet along the South boundary of WINDY HILL (which was formerly described as the South boundary of "WHITE OAKS") to the point of beginning of the line to be described; thence North 4 degrees 22 minutes 02 seconds West a distance of 168.75 feet, thence North 12 degrees 06 minutes 51 seconds East a distance of 191.03 feet, thence North 33 degrees 33 minutes 54 seconds West a distance of 352.86 feet, thence North 56 degrees 07 minutes 50 seconds West a distance of 45.73 feet, thence North 00 degrees 00 minutes East and parallel to the West line of "WHITE OAKS" a distance of 308 feet more or less to the North line of "WHITE OAKS" and there terminating, located in Section 31, Township 28, Range 22, Dakota County, Minnesota.

SCOPE OF WORK & LIMITATIONS:

1. Showing the length and direction of boundary lines of the legal description listed above. The scope of our services does not include determining what you own, which is a legal matter. Please check the legal description with your records or consult with competent legal counsel, if necessary, to make sure that it is correct and that any matters of record, such as easements, that you wish to be included on the survey have been shown.
2. Showing the location of observed existing improvements we deem necessary for the survey.
3. Setting survey markers or verifying existing survey markers to establish the corners of the property.
4. Existing building dimensions and setbacks measured to outside of siding or stucco.
5. Showing elevations on the site at selected locations to give some indication of the topography of the site. We have also provided a benchmark for your use in determining elevations for construction on this site. The elevations shown relate only to the benchmark provided on this survey. Use that benchmark and check at least one other feature shown on the survey when determining other elevations for use on this site or before beginning construction.
6. This survey has been completed without the benefit of a current title commitment. There may be existing easements or other encumbrances that would be revealed by a current title commitment. Therefore, this survey does not purport to show any easements or encumbrances other than the ones shown hereon.
7. Tree tag numbers refer to tree inventory provided by Savana Designs, Inc.

STANDARD SYMBOLS & CONVENTIONS:

"●" Denotes iron survey marker, found, unless otherwise noted.



DATE	REVISION DESCRIPTION

DRAWING ORIENTATION & SCALE

0 20' 40'

CLIENT/JOB ADDRESS

ALEXANDER DESIGN GROUP INC.

100 WINDY HILL ROAD
SUNFISH LAKE, MN

Advance
Surveying & Engineering, Co.

17917 Highway No. 7
Minnetonka, Minnesota 55345
Phone (952) 474-7964
Web: www.advsur.com

I HEREBY CERTIFY THAT THIS PLAN, SURVEY OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

Wayne W. Preuss
#43503
LICENSE NO.
MARCH 24, 2021
DATE

SURVEYED DATE:
MARCH 18, 2021

DRAFTED DATE:
MARCH 24, 2021

SHEET TITLE
EXISTING SURVEY

SHEET SIZE: 22 X 34

DRAWING NUMBER
210184 WP

SHEET NO.
S1

EXISTING DWELLING

EXISTING BUILDING

DELINEATED WETLAND

BENCHMARK:
TOP OF WELL HEAD
ELEV.=960.1'

POND

EDGE OF DELINEATED WETLAND

EDGE OF WATER AT TIME OF SURVEY

GRAVEL DRIVEWAY

S 00°18'28" W
1022.13

792.89
S 89°44'59" W

N 35°06'24" W
392.93

N 00°58'06" W
168.91

191.03'
N 10°30'15" E

SW COR. OF LOT 2, BLOCK 1, WINDY HILL

N 89°23'06" E
15.23

N 53°58'04" W
182.46

S 87°48'47" E
60.00

N 62°39'03" E
64.00

N 40°26'01" E
61.94

SE COR. OF WHITE OAKS

36.47
N 00°15'01" W

S 89°44'59" W
20.30

GRAVEL DRIVEWAY

DATE	REVISION DESCRIPTION

DRAWING ORIENTATION & SCALE

0 20' 40'

CLIENT/JOB ADDRESS

ALEXANDER DESIGN

100 WINDY HILL ROAD
SUNFISH LAKE, MN

Advance
Surveying & Engineering, Co.

17917 Highway No. 7
Minnetonka, Minnesota 55345
Phone (952) 474-7964
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I HEREBY CERTIFY THAT THIS PLAN, SURVEY OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

Wayne W. Preuss
#43503
LICENSE NO.
MARCH 24, 2021
DATE

SURVEYED DATE:
MARCH 18, 2021

DRAFTED DATE:
MARCH 24, 2021

SHEET TITLE
EXISTING SURVEY

SHEET SIZE: 22 X 34

DRAWING NUMBER
210184 WP

SHEET NO.
S2

100 WINDY HILL ROAD

SUNFISH LAKE, MINNESOTA

LEGAL DESCRIPTION:

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"THE BOUNDARY AND TOPOGRAPHIC WORK ON THIS PROJECT WAS CONDUCTED BY ADVANCE LAND SURVEYING AND ENGINEERING AND DEPICTED ON A CERTIFICATE OF SURVEY DATED MARCH 24, 2021. CORNERSTONE LAND SURVEYING HAS VERIFIED THE BOUNDARY SHOWN HEREON IN THE FIELD, BUT THE DEVELOPMENT DRAWINGS ARE BASED ON THE WORK PREVIOUSLY COMPLETED BY ADVANCED LAND SURVEYING AND ENGINEER.

AREA:

PARCEL AREA TO OHWL OF SUNFISH LAKE = 483906 SQ. FT. / 11.11 ACRES

ZONING:

ZONING: SINGLE FAMILY RESIDENTIAL
SETBACKS:
STREET: 100 FT.
SIDEYARD: 50 FT.
REAR: 50 FT.

PROPOSED IMPROVED AREAS:

HOUSE	12451 SF	
NEW DRIVEWAY	7679 SF	
EX. GRAVEL DRIVE	4040 SF	
FRONT WALKS/ENTRY	674 SF	*AREAS LISTED IN SQUARE FEET
POOLHOUSE	2715 SF	
POOL DECK	2762 SF	
REAR STEPS	163 SF	
REAR PATIO	399 SF	
FIRE PIT WALL/PATIO	302 SF	
STEPS TO WETLAND	60 SF	
POOLHOUSE FLAGSTONE	309 SF	
BLOCK WALLS	272 SF	
ROCK WALLS	1781 SF	
TOTAL	31171 SF	
IMPERVIOUS	6.4%	

BENCHMARKS

ELEVATIONS BASED ON INFORMATION SHOWN ON THE SURVEY BY ADVANCE LAND SURVEYING AND ENGINEERING. TOP OF EXISTING WELL = 960.11

FLOOD INFORMATION:

THIS PROPERTY LIES WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON NON-PRINTED FEMA FLOOD INSURANCE RATE MAP NUMBER 27037C0105E HAVING AN EFFECTIVE DATE OF 12/02/2011.

UNDERGROUND UTILITIES NOTES:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THIS SURVEY HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ADDITIONAL UTILITIES OF WHICH WE ARE UNAWARE MAY EXIST.

CALL BEFORE YOU DIG!
Gopher State One Call
TWIN CITY AREA: 651-454-0002
TOLL FREE: 1-800-252-1166

SURVEY NOTES:

1. ALL BOUNDARY AND TOPOGRAPHIC INFORMATION PER SURVEY BY ADVANCE LAND SURVEYING AND ENGINEERING DATED MARCH 24, 2021.
2. ARCHITECTURE INFORMATION FROM ELECTRONIC PLANS BY ALEXANDER DESIGN GROUP JUNE 8, 2021.
3. ENGINEERING PLANS PER ELECTRONIC PLANS BY PIERCE PINI AND ASSOCIATES DATED JUNE 8, 2021.
4. LANDSCAPE/SITE PLANS PER SAVANNA DESIGN PLANS.

LEGEND:

- FOUND MONUMENT
- SET 1/2" IRON PIPE MARKED RLS NO. 25718
- CABLE TV PEDESTAL
- AIR CONDITIONER
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC PEDESTAL
- ELECTRIC TRANSFORMER
- LIGHT POLE
- GUY WIRE
- POWER POLE
- GAS MANHOLE
- GAS METER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- SANITARY CLEANOUT
- SANITARY MANHOLE
- CATCH BASIN
- STORM DRAIN
- FLARED END SECTION
- STORM MANHOLE
- FIRE DEPT. CONNECTION
- HYDRANT
- CURB STOP
- WATER WELL
- WATER MANHOLE
- WATER METER
- POST INDICATOR VALVE
- WATER VALVE
- BOLLARD
- FLAG POLE
- MAIL BOX
- TRAFFIC SIGN
- UNKNOWN MANHOLE
- SOIL BORING
- SPOT ELEVATION
- TRAFFIC SIGNAL
- CONIFEROUS TREE
- DECIDUOUS TREE
- UE — UNDERGROUND ELECTRIC
- UTV — UNDERGROUND CABLE TV
- UF — UNDERGROUND FIBER OPTIC
- UT — UNDERGROUND TELEPHONE
- OE — OVERHEAD UTILITY
- UG — UNDERGROUND GAS
- S — SANITARY SEWER
- SS — STORM SEWER
- W — WATERMAIN
- x — FENCE
- CURB [TYPICAL]
- 950 — CONTOURS
- 100 — PROPOSED CONTOUR
- X 100.0 — PROPOSED SPOT ELEVATION
- 1% — PROPOSED DRAINAGE WITH PERCENT GRADE

REVISIONS:

DATE	REVISION
06-08-2021	INITIAL ISSUE
07-02-2021	ADD TEMP PARKING

CERTIFICATION:

I hereby certify that this plan was prepared by me, or under my direct supervision, and that I am a duly Licensed Land Surveyor under the laws of the state of Minnesota.

Daniel L. Thurnes Registration Number: 25718

Date: 06-08-2021

CONTACT:

JOHN BISANZ
Email: john.bisanz@gmail.com

COUNTY/CITY:
DAKOTA COUNTY
CITY OF SUNFISH LAKE

PROJECT LOCATION:

100 WINDY HILL ROAD
PID#38-03800-06-013

Suite #200
1970 Northwestern Ave.
Stillwater, MN 55082
Phone 651.275.8969
dan@pcssurvey.net

CORNERSTONE
LAND SURVEYING, INC.

FILE NAME SURVSFL05
PROJECT NO. SFL21005

BOUNDARY/TOPOGRAPHIC
PROPOSED IMPROVEMENTS
SURVEY

GENERAL CONSTRUCTION NOTES

1. ALL EXISTING INFORMATION TAKEN FROM SURVEY BY ADVANCE SURVEYING AND ENGINEERING CO. DATED MARCH 24, 2021.
2. A GEOTECHNICAL EXPLORATION REPORT WAS COMPLETED FOR THIS SITE BY HAUGO GEOTECHNICAL SERVICES, PROJECT NO. 20-0891 DATED OCTOBER 29, 2020.
3. A SOIL INFILTRATION INVESTIGATION REPORT WAS COMPLETED FOR THIS SITE BY SOIL INVESTIGATION & DESIGN INC. DATED MAY 4, 2021.
4. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING LOCATIONS OF EXISTING UTILITIES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
5. ALL AREAS DISTURBED BY CONSTRUCTION WHICH ARE OUTSIDE THE LIMITS OF PAVING ARE TO BE RESTORED AND REVEGETATED.
6. EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES WHICH MAY INCLUDE BUT IS NOT LIMITED TO: ELECTRIC, TELEPHONE, GAS, CABLE TV, COMPUTER CABLE, FIBER OPTIC CABLE, SANITARY SEWER, STORM SEWER, STEAM, CONDENSATE, ELECTRICAL DUCT BANK AND WATER MAIN. CONTRACTOR TO CONTACT GOPHER ONE-CALL BEFORE EXCAVATING.
7. ALL EXISTING UTILITIES AND OTHER IMPROVEMENTS ARE TO REMAIN UNLESS NOTED OTHERWISE.
8. CONTRACTOR TO PROTECT FROM DAMAGE ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES THAT ARE TO REMAIN. CONTRACTOR TO REPAIR ANY DAMAGE AT OWN EXPENSE.
9. ALL WORK TO CONFORM WITH CITY OF SUNFISH LAKE AND STATE OF MINNESOTA STANDARDS AND REGULATIONS.
10. ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P "EXCAVATIONS AND TRENCHES". THIS DOCUMENT STATES THAT EXCAVATION SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. CATCH BASINS AND MANHOLES ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. COORDINATE LOCATION OF MANHOLE COVER AND CASTING SO THAT IT IS PROPERLY CENTERED IN THE AREA AS SHOWN ON THE PLAN FOR THE AREA DRAINS AND MANHOLE COVERS.
12. SITE UTILITY CONTRACTOR TO FURNISH AND INSTALL ALL STORM SEWER FACILITIES AND APPURTENANCES TO WITHIN TWO FEET OUTSIDE THE BUILDING. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION AND DEPTH OF CONNECTION WITHIN BUILDING.
13. CONTRACTOR SHALL COORDINATE WITH ARCHITECT'S DRAWINGS TO VERIFY LOCATION, SIZE AND QUANTITY OF ALL ROOF DRAINS AND UTILITY CONNECTIONS. LIMITS OF PROPOSED SITE PLUMBING FACILITIES SHALL BE TWO FEET FROM EDGE OF BUILDING UNLESS OTHERWISE NOTED.
14. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO STARTING CONSTRUCTION.
15. SEE LANDSCAPE PLANS FOR LANDSCAPING, TREE REMOVAL, TREE PROTECTION, STONE RETAINING WALLS, STONE STEPS AND WALKWAYS, SPECIAL PAVING AND LANDSCAPE ELEMENTS.
16. ALL WORK TO CONFORM TO CITY OF SUNFISH LAKE STANDARDS. ALL COMPLETED WORK IS SUBJECT TO INSPECTION BY THE CITY OF SUNFISH LAKE SEWER AT A REASONABLE TIME BEFORE BACKFILLING.
17. ALL MATERIALS FOR PROPOSED CONSTRUCTION OR REPAIR OF EXISTING FACILITIES SHALL BE NEW PRODUCTS DIRECT FROM THE FACTORY AND FREE FROM DEFECTS.
18. WHEN WORKING AROUND EXISTING UTILITIES THAT BECOME EXPOSED, THE CONTRACTOR SHALL PROVIDE SUFFICIENT SUPPORT TO PREVENT EXCESSIVE STRESS ON THE PIPING. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.
19. WASTE MATERIALS INCLUDING PAVEMENT REMOVED DURING CONSTRUCTION, WASTE PIPING AND SUPPLIES, CONSTRUCTION DEBRIS AND EXCESS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR.
20. CONTRACTOR SHALL NOT BLOCK DRAINAGE FROM OR DIRECT EXCESS DRAINAGE ONTO ADJACENT PROPERTY.
21. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
22. ALL STUMPS FROM TREES REMOVED WITHIN PROJECT LIMITS SHALL BE GROUND AND REMOVED IN THEIR ENTIRETY.
23. DRAWINGS DO NOT INDICATE AREAS OF TEMPORARY SUPPORT SYSTEMS. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS AND WILL HAVE TOTAL CONTROL OVER THE TYPES AND DESIGN OF ALL SHORING, SHEETING, BRACING, ANCHORAGES, EXCAVATION SUPPORT WALLS, DIRECTIONAL BORING, AUGER JACKING, SOIL STABILIZATION AND OTHER METHODS OF PROTECTING EXISTING IMPROVEMENTS. SEE SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS.
24. CONTRACTOR TO RECORD EXISTING CONDITIONS AS NEEDED (PHOTOGRAPHS, VIDEO PHOTOGRAPHY, FIELD SURVEYING, ETC.) TO ENABLE RECONSTRUCTION TO MATCH EXISTING CONDITIONS AS REQUIRED. CONTRACTOR TO DOCUMENT EXISTING CONDITIONS SO THAT RECONSTRUCTED AREAS WILL HAVE POSITIVE DRAINAGE SIMILAR TO EXISTING.
25. CARE MUST BE TAKEN DURING CONSTRUCTION AND EXCAVATION TO PROTECT ANY SURVEY MONUMENTS AND/OR PROPERTY IRONS.
26. ALL CONSTRUCTION WORK SHALL BE COMPLETED WITHIN CITY OF SUNFISH LAKE APPROVED WORKING HOURS.
27. A GOPHER STATE ONE CALL IS REQUIRED BEFORE ANY EXCAVATION WORK CAN COMMENCE.
28. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS INCLUDING, BUT NOT LIMITED TO, THE NPDES PERMIT (SEE SHEET C2.0) AND CITY OF SUNFISH LAKE PERMITS. ALL PERMITS MUST BE OBTAINED PRIOR TO CONSTRUCTION.
29. CONTRACTOR SHALL ADHERE TO ALL AXLE LOAD LIMITS WHEN DELIVERING MATERIALS TO SITE.
30. ANY DAMAGE TO WINDY HILL ROAD AND CITY RIGHT-OF-WAY SHALL BE REPAIRED TO THE SATISFACTION OF THE CITY AND AT THE CONTRACTOR'S EXPENSE PRIOR TO THE CERTIFICATE OF OCCUPANCY BEING ISSUED. CONTRACTOR SHALL PHOTOGRAPH AND DOCUMENT ALL EXISTING ROADWAY CONDITIONS PRIOR TO CONSTRUCTION.
31. THE PROPOSED WELL MUST BE SPECIFIED AND INSTALLED BY A LICENSED WELL DRILLER IN ACCORDANCE WITH MINNESOTA DEPARTMENT OF HEALTH RULES AND REGULATIONS.
32. MAINTAIN 3 FEET VERTICAL SEPARATION BETWEEN WATER AND SEWER PIPES OR A 12-INCH SEPARATION WITH 4-INCH HIGH DENSITY INSULATION.
33. PROVIDE THE FOLLOWING MINIMUM COVER OVER THE TOP OF PIPE AS FOLLOWS:
    A. 2' OVER STORM SEWER
    B. 3' OVER STORMWATER MANAGEMENT PIPING SYSTEM
    C. 2' OVER DRAINTILE
34. GRADE ALONG FACE OF BUILDING SHALL HAVE POSITIVE SLOPE AWAY FROM THE BUILDING.
35. CONTRACTOR IS RESPONSIBLE FOR PROPER REMOVAL AND DISPOSAL OF ALL DEBRIS, EXCESS FILL AND OTHER UNUSED MATERIALS GENERATED BY PROJECT AND DONE IN FULL COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS. THE SITE SHALL BE KEPT CLEAN AND FREE FROM ALL WASTE MATERIALS.
36. ALL WORK WILL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS OR SPECIFICATIONS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
37. THE DRAWINGS REPRESENT TO FINISHED SITE, NOT THE METHOD OF CONSTRUCTION. CONTOURS, ELEVATIONS AND GRADING REPRESENT TO THE FINISHED SITE AND DO NOT NOTE HOLD-DOWNS OR SUBGRADE ELEVATIONS.
38. THE ENGINEER IS NOT RESPONSIBLE FOR CONTRACTOR'S MEANS AND METHODS, SEQUENCING OF CONSTRUCTION OR SAFETY PROGRAM. OBSERVATION VISITS TO THE SITE BY THE ENGINEER WILL NOT INVOLVE REVIEW OF THESE ITEMS.
39. WHERE DISCREPANCIES OCCUR BETWEEN GENERAL NOTES, PLANS, DETAILS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN, UNLESS OTHERWISE VERIFIED BY THE ENGINEER OR OWNER IN WRITING.
40. THESE DOCUMENTS SHALL NOT BE CONSTRUED AS STAND-ALONE DOCUMENTS. CONTRACTOR SHALL COORDINATE WITH ALL OTHER DISCIPLINES' DOCUMENTS.
41. CONTRACTOR SHALL COORDINATE WITH SURVEYOR TO PROVIDE A RECORD OF CONSTRUCTION OF ALL BELOW-GRADE WORK. CONTRACTOR SHALL NOT BACKFILL UNTIL SURVEYOR HAS COMPLETED NECESSARY AS-BUILT SURVEYING. CONTRACTOR TO HIRE AND COORDINATE SURVEYOR.
42. ANY REDESIGN OF DEMOLISHED STRUCTURAL ELEMENTS WILL NEED TO BE DESIGNED AND CERTIFIED BY A REGISTERED ENGINEER.
43. CAD FILES OF THE SITE LAYOUT PLAN WILL BE PROVIDED TO THE CONTRACTOR AT THE TIME OF CONSTRUCTION FOR STAKING PURPOSES. DIMENSIONS SHOWN HEREIN ARE FOR GENERAL REFERENCES TO TYPICAL LAYOUT OF THE SITE. NOT ALL SITE ELEMENTS ARE DIMENSIONED.
44. STORM SEWER PIPE TO BE HIGH DENSITY POLYETHYLENE DUAL WALL SMOOTH INTERIOR PIPE OR POLYVINYL CHLORIDE (PVC) SDR 26 MINIMUM COMPLYING WITH ASTM D3034 AND F679 WITH SOLVENT CEMENT OR FLEXIBLE WATERTIGHT JOINTS AS NOTED ON THE DRAWINGS AND PER SPECIFICATIONS.
45. FOR WATERMAIN AND SERVICES LOCATED NEAR GRAVITY SEWER PIPES, CLEANOUTS, MANHOLES, DRAINAGE STRUCTURES OR STORMWATER MANAGEMENT SYSTEMS, A MINIMUM OF TEN FEET MEASURED HORIZONTALLY BETWEEN THE OUTER SURFACE OF THE PIPE TO THE OUTER SURFACE OF THE ASSOCIATED SEWER ELEMENT IS REQUIRED. IN LOCATIONS WHERE CONDITIONS PREVENT REQUIRED HORIZONTAL SEPARATION, WATERMAIN IS TO BE LAID 18" ABOVE THE TOP OF THE SEWER IN A SEPARATE SHELF.
46. FOR WATERMAIN AND SERVICES CROSSING GRAVITY SANITARY AND STORM SEWERS, A MINIMUM VERTICAL SEPARATION OF 18" MUST BE PROVIDED BETWEEN THE OUTER SURFACES OF THE PIPES, WITH PREFERENCE THAT THE WATERMAIN CROSS ABOVE THE SEWER WHEREVER POSSIBLE. ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE
47. ALL RETAINING WALLS WILL NEED CERTIFIED ENGINEERING DRAWINGS REVIEWED AND APPROVED BY THE CITY OF SUNFISH LAKE BUILDING OFFICIAL PRIOR TO STARTING CONSTRUCTION. SEE LANDSCAPE PLANS FOR ALL WALLS AND DETAILS. 1
48. THE OHWL ELEVATION SHOWN ON CIVIL PLANS IS FROM THE BASE SURVEY FILES PREPARED BY ADVANCE SURVEYING. DATUM INFORMATION IS NOTED ON SURVEY.

EROSION CONTROL NOTES

1. INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO BEGINNING CONSTRUCTION. (HAY BALES ARE NOT AN ACCEPTABLE PERIMETER CONTROL)
2. BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE. USE 2 INCH OR GREATER DIAMETER ROCK IN A LAYER AT LEAST 12 INCHES THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 50 FEET INTO THE CONSTRUCTION ZONE. USE A GEOTEXTILE FABRIC BENEATH THE AGGREGATE IN ORDER TO PREVENT MIGRATION OF SOIL INTO THE ROCK FROM BELOW. SEE DETAIL ON SHEET C2.2.
3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS. SWEEPING MAY BE ORDERED BY AT ANY TIME IF CONDITIONS WARRANT. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
4. INSTALL INLET PROTECTION AT ALL PUBLIC AND PRIVATE CATCH BASIN INLETS WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CATCH BASIN INSERTS ARE REQUIRED IN UNDISTURBED AREAS THAT RECEIVE RUNOFF FROM DISTURBED AREAS. NOTE: HAY BALES OR FILTER FABRIC WRAPPING THE GRATES ARE NOT EFFECTIVE OR AN ACCEPTABLE FORM OF INLET PROTECTION.
5. LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN TWO FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
6. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
7. TEMPORARILY OR PERMANENTLY STABILIZE ALL CONSTRUCTION AREAS WHICH HAVE BEEN FINISH GRADED, AND ALL AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER WITHIN 7 DAYS. USE SEEDING AND MULCHING, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED IS RECOMMENDED FOR MINIMIZING EROSION POTENTIAL.
8. REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION AND PERMANENT VEGETATION HAS BEEN ESTABLISHED, MINIMUM VEGETATION ESTABLISHMENT IS 70% COVER. MAINTAIN ALL TEMPORARY EROSION CONTROL DEVICES UNTIL 70% ESTABLISHED COVER IS ACHIEVED.
9. READY MIXED CONCRETE AND CONCRETE BATCH PLANTS PROHIBITED WITHIN THE PUBLIC RIGHT-OF-WAY. UNDER NO CIRCUMSTANCES MAY WASHOUT WATER DRAIN ONTO THE PUBLIC RIGHT-OF-WAY OR INTO THE STORM SEWER. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DESIGNATED CONCRETE WASHOUT AREA THAT COMPLIES WITH MPCA REQUIREMENT.
10. ALL EROSION CONTROL ELEMENTS ARE TEMPORARY. CONTRACTOR TO INSTALL EROSION CONTROL ELEMENTS PRIOR TO START OF LAND DISTURBING ACTIVITIES, MAINTAIN IN GOOD CONDITION DURING CONSTRUCTION AND REMOVE FROM THE SITE UPON COMPLETION OF FINAL PAVING AND TURF ESTABLISHMENT.
11. EROSION CONTROL SHALL BE PLACED ALONG THE PERIMETER OF THE SITE EXCAVATION. EROSION CONTROL SHALL BE PLACED SO IT DOES NOT DISTURB THE EXISTING PAVEMENT OR DRIVEWAY THAT ARE TO REMAIN. MANY METHODS OF EROSION CONTROL WILL WORK AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL THE MEASURE MOST APPROPRIATE TO THE SITE CONDITIONS AND THAT WHICH MEETS THE CITY OF SUNFISH LAKE AND MPCA STANDARDS. GRAPHICALLY SHOWN ON THE PLANS FOR CLARITY BUT SHALL BE PLACED IN THE MOST APPROPRIATE LOCATIONS NOT TO DAMAGE EXISTING PAVEMENT AND/OR TREES TO REMAIN. DAMAGED PAVEMENT AND/OR TREES SHALL BE PAID FOR SOLELY BY THE CONTRACTOR. SEE DETAILS AND SPECIFICATIONS.
12. CONTRACTOR TO PROVIDE TEMPORARY SEED AND MULCH ON ALL NON-PAVED AREAS WITHIN 7 DAYS AFTER ROUGH GRADING IS COMPLETED. SEED WITH ANNUAL RYE SEED AT 60 LBS PER ACRE AND WOOD MULCH FIBER AT 45 LBS PER 1,000 SF.
13. CONTRACTOR TO PREVENT DIRT AND/OR DEBRIS FROM ENTERING STORM SEWER OR BEING TRANSPORTED OFF-SITE IN AN UNCONTROLLED MANNER. CONTRACTOR TO VERIFY AT PROJECT CLOSEOUT THAT STORM SEWER SYSTEM IS CLEAR OF SEDIMENT AND/OR DEBRIS AND IS FULLY FUNCTIONAL.
14. STRAWBALES ARE NOT ALLOWED ON SITE IN ANY CAPACITY.
15. SEE TP1.0 TREE REMOVAL AND PROTECTION PLAN FOR TREE PROTECTION DETAIL AND LOCATIONS.
16. SEE EROSION AND SEDIMENT CONTROL PLANS C2.0-C2.2 FOR ADDITIONAL EROSION AND SEDIMENT CONTROL INFORMATION, PROCEDURES AND DETAILS.
17. AN NPDES PERMIT IS REQUIRED FOR THIS PROJECT. SEE PLANS C2.0-C2.2 FOR FURTHER INFORMATION. PROVIDE A COPY OF THE PERMIT TO THE CITY AFTER RECEIPT BEFORE CONSTRUCTION BEGINS. 1

CONSTRUCTION SEQUENCING AND INSPECTION OF EROSION AND SEDIMENT CONTROL PRACTICES FOR STORMWATER MANAGEMENT SYSTEMS

A. OBTAIN PERMITS FOR SITE WORK FROM CITY OF SUNFISH LAKE AND ALL GOVERNING AUTHORITIES WITH JURISDICTION IN THIS CONSTRUCTION AREA.

B. INSTALL EROSION CONTROL AND TREE PROTECTION ALONG PERIMETER OF SITE. INSTALL EROSION CONTROL INSERTS AT ALL CATCHBASINS AND MANHOLES AND CONSTRUCT ROCK CONSTRUCTION ENTRANCE. SEE EROSION CONTROL NOTES FOR FURTHER INSTRUCTION.

C. PROCEED WITH SITE DEMOLITION, GRADING AND CONSTRUCTION.

D. MAINTAIN EROSION CONTROL BMP'S AND CONTROL RUNOFF REQUIREMENTS AS OUTLINED ON DRAWING AND SPECIFICATIONS.

E. ALL SITE WORK SHOULD BE COMPLETE PRIOR TO WORK ON THE STORMWATER AREAS BEING STARTED TO THE EXTENT POSSIBLE. IF CONSTRUCTION OF THESE AREAS NEEDS TO OCCUR PRIOR TO FINAL SITE STABILIZATION, THEN THE CONSTRUCTED AREA MUST BE PROTECTED AND CONTRIBUTING FLOWS NEED TO BE FILTERED TO PREVENT SEDIMENT ACCUMULATION. THE STORMWATER MANAGEMENT SYSTEMS NEED TO BE PROTECTED FROM EROSION AND SEDIMENT. A FENCE WILL BE REQUIRED AROUND ITS PERIMETER TO KEEP THE AREA OF THE POND PROTECTED.

F. NOTIFY CIVIL ENGINEER AND CITY OF SUNFISH LAKE OF WORK BEING DONE ON STORMWATER SYSTEMS AND THE SCHEDULE FOR CONSTRUCTION. ALLOW A MINIMUM OF FIVE WORKING DAYS FOR NOTIFICATION, SO ENGINEER CAN CONDUCT SITE MEETING TO DISCUSS THE INTENT OF THE SYSTEMS AND SO CONSTRUCTION OBSERVATION CAN BE SCHEDULED ACCORDINGLY. SITE MEETING TO REVIEW THE INTENT OF THE DESIGN AND THE CONSTRUCTION OF THE STORMWATER SYSTEM NEEDS TO OCCUR PRIOR TO STARTING CONSTRUCTION ON THE SYSTEM.

G. MAINTAIN EROSION AND SEDIMENT CONTROL ON CONTRIBUTING AREAS TO AVOID SEDIMENTATION OF SYSTEM.

H. CONSTRUCT STORMWATER SYSTEMS PER DRAWINGS AND SPECIFICATIONS.

I. COMPLETE CONSTRUCTION OF DRIVEWAY AFTER STORMWATER SYSTEM IS INSTALLED. AFTER PAVEMENT IS INSTALLED, VERIFY THAT STORMWATER SYSTEMS ARE CLEAR AND FULLY FUNCTIONAL. EXCAVATE, DREDGE, OR CLEAN AS NEEDED SO THEY ARE FULLY FUNCTIONAL AT PROJECT CLOSEOUT.

J. INSTALL LANDSCAPING AND PLANTING MATERIALS PER LANDSCAPE DRAWINGS AND SPECIFICATIONS.

K. REMOVE ALL TEMPORARY EROSION CONTROL BMP'S AFTER PAVING AND STORMWATER AREAS ARE COMPLETE AND AFTER TURF HAS BEEN ESTABLISHED.

L. CONTRACTOR SHALL TAKE PHOTOGRAPHS AND MEASUREMENTS OF ALL STORMWATER MANAGEMENT SYSTEMS THROUGHOUT CONSTRUCTION. DOCUMENTATION OF CONSTRUCTION SHALL BE SUBMITTED TO THE CIVIL ENGINEER AT THE CLOSEOUT OF THE PROJECT. CLOSEOUT DOCUMENTATION SHALL INCLUDE PHOTOGRAPHS AND MEASUREMENTS OF SYSTEM DURING CONSTRUCTION, TESTING REPORTS AND OBSERVATIONS AND REDLINE DRAWINGS OF ANY FIELD MODIFICATIONS MADE DURING CONSTRUCTION.

M. A LETTER WRITTEN ON COMPANY LETTERHEAD THAT THE STORMWATER MANAGEMENT PRACTICES HAVE BEEN BUILT PER THE CIVIL PLANS, OR PER REDLINE FIELD DRAWINGS, SHALL BE SUBMITTED TO THE CIVIL ENGINEER AT THE CLOSEOUT OF THE PROJECT.

N. THE CONTRACTOR SHALL SUBMIT AN AS-BUILT SURVEY OF THE COMPLETED SITE PREPARED AND SIGNED BY A LICENSED SURVEYOR TO THE CIVIL ENGINEER AT THE END OF THE PROJECT. AS-BUILT SURVEY SHALL INCLUDE ENOUGH INFORMATION TO VERIFY THE CONSTRUCTED TOPOGRAPHY, UTILITY AND SITE ELEMENTS. TOPOGRAPHY OF THE PONDS SHALL BE INCLUDED IN THE AS-BUILT SURVEY. COORDINATE WITH OWNER AND CIVIL ENGINEER FOR SCHEDULE FOR WHEN THIS SHALL BE COMPLETED.

O. REMOVE ALL TEMPORARY EROSION CONTROL BMP'S AFTER PAVING AND STORMWATER AREAS ARE COMPLETE AND AFTER TURF HAS BEEN ESTABLISHED. SEE STORMWATER POLLUTION PREVENTION PLANS ON SHEETS C2.0-C2.2

LEGEND

- EXISTING TREE
- EXISTING WATER WELL
- E — EXISTING UNDERGROUND ELECTRIC LINE
- G — EXISTING UNDERGROUND GAS LINE
- T — EXISTING TELECOMMUNICATION LINES
- 896 — EXISTING CONTOUR
- × 836.21 — EXISTING SPOT ELEVATIONS
- 954 — PROPOSED CONTOUR
- + 934.5 — PROPOSED SPOT ELEVATION
- DENOTES SURFACE DRAINAGE
- PROPOSED LIMITS OF DISTURBANCE
- B-2 — APPROXIMATE SOIL BORING LOCATION
- STM> — PROPOSED STORM SEWER
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED AREA DRAIN
- SILT FENCE
- EROSION CONTROL AT CB/MH
- EXISTING BITUMINOUS PAVEMENT TO BE REMOVED
- PROPOSED BITUMINOUS PAVEMENT, SEE DETAIL 1/C6.0

CONTACT INFORMATION

CIVIL ENGINEER
PIERCE PINI & ASSOCIATES, INC.
9298 CENTRAL AVENUE NE, SUITE 312
BLAINE, MN 55434
CONTACT: RHONDA PIERCE, P.E.
763.537.1311 OFFICE / 763.242.9039 CELL
RHONDA@PIERCEPINI.COM

CIVIL DRAWING INDEX

C0.0 CIVIL NOTES AND LEGEND
C1.0 SITE DEMOLITION PLAN
C2.0 EROSION AND SEDIMENT CONTROL-GENERAL INFORMATION AND NARRATIVE
C2.1 EROSION AND SEDIMENT CONTROL-SITE LAYOUT
C2.2 EROSION AND SEDIMENT CONTROL-DETAILS
C3.0 GRADING AND DRAINAGE PLAN
C3.1 SECTIONS PLAN AND PROFILES
C4.0 STORM SEWER PLAN
C4.1 STORMWATER MANAGEMENT PLAN
C5.0 DRIVEWAY PAVING PLAN
C6.0 CIVIL DETAILS

PIERCE PINI & ASSOCIATES
CONSULTING CIVIL ENGINEERS
9298 CENTRAL AVENUE NE, SUITE 312
BLAINE, MN 55434
TEL 763.537.1311
rhonda@piercepini.com

WINDY HILL
100 WINDY HILL ROAD
SUNFISH LAKE, MN

I hereby certify that this plan or drawing was prepared by me or under my direct supervision and that I am a duly licensed ENGINEER under the laws of the State of Minnesota.
For PIERCE PINI & ASSOCIATES, INC.
By Rhonda S. Pierce
Name RHONDA S. PIERCE
Date 06/08/2021 Reg. No. 41333

Issued for	Date
0 ISSUED FOR PERMIT	06/08/2021
1 CITY COMMENTS	07/06/2021

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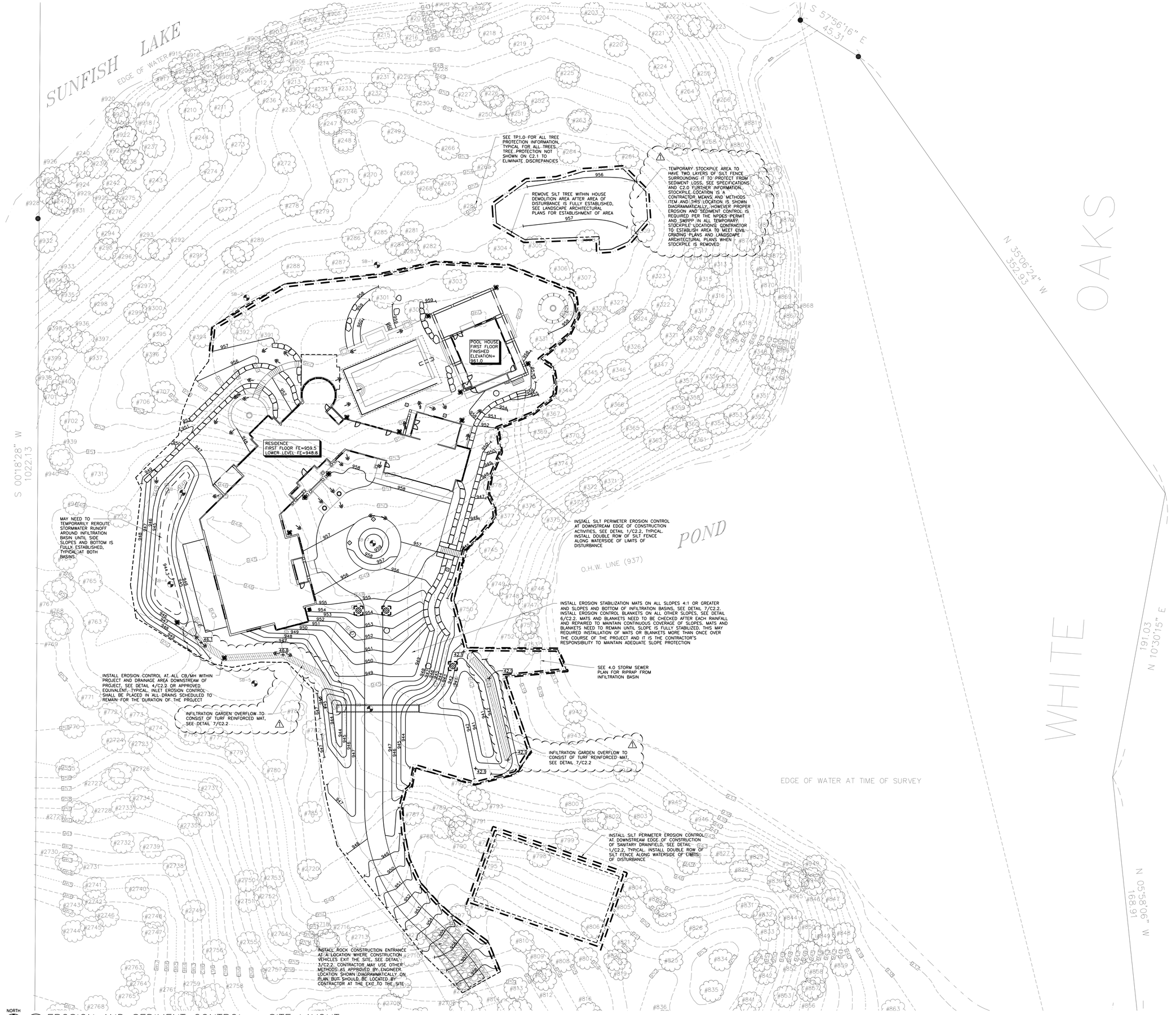
Comm. No.	21-008
Drawn	DPM
Checked	RSP
Date	06/08/2021

PERMIT SET

Drawing Title
CIVIL NOTES AND LEGEND

C0.00



NORTH

1 C2.1 EROSION AND SEDIMENT CONTROL – SITE LAYOUT

0 20' 40' 60'

1"=20'

PIERCE PINI & ASSOCIATES
CONSULTING CIVIL ENGINEERS
9298 CENTRAL AVENUE NE, SUITE 312
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TEL 763.537.1311
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WINDY HILL
100 WINDY HILL ROAD
SUNFISH LAKE, MN

I hereby certify that this plan or drawing was prepared by me or under my direct supervision and that I am a duly licensed ENGINEER under the laws of the State of Minnesota.

For PIERCE PINI & ASSOCIATES, INC.

By Rhonda S. Pierce

Name RHONDA S. PIERCE

Date 06/08/2021 Reg. No. 41333

Issued for	Date
0 ISSUED FOR PERMIT	06/08/2021
1 CITY COMMENTS	07/06/2021

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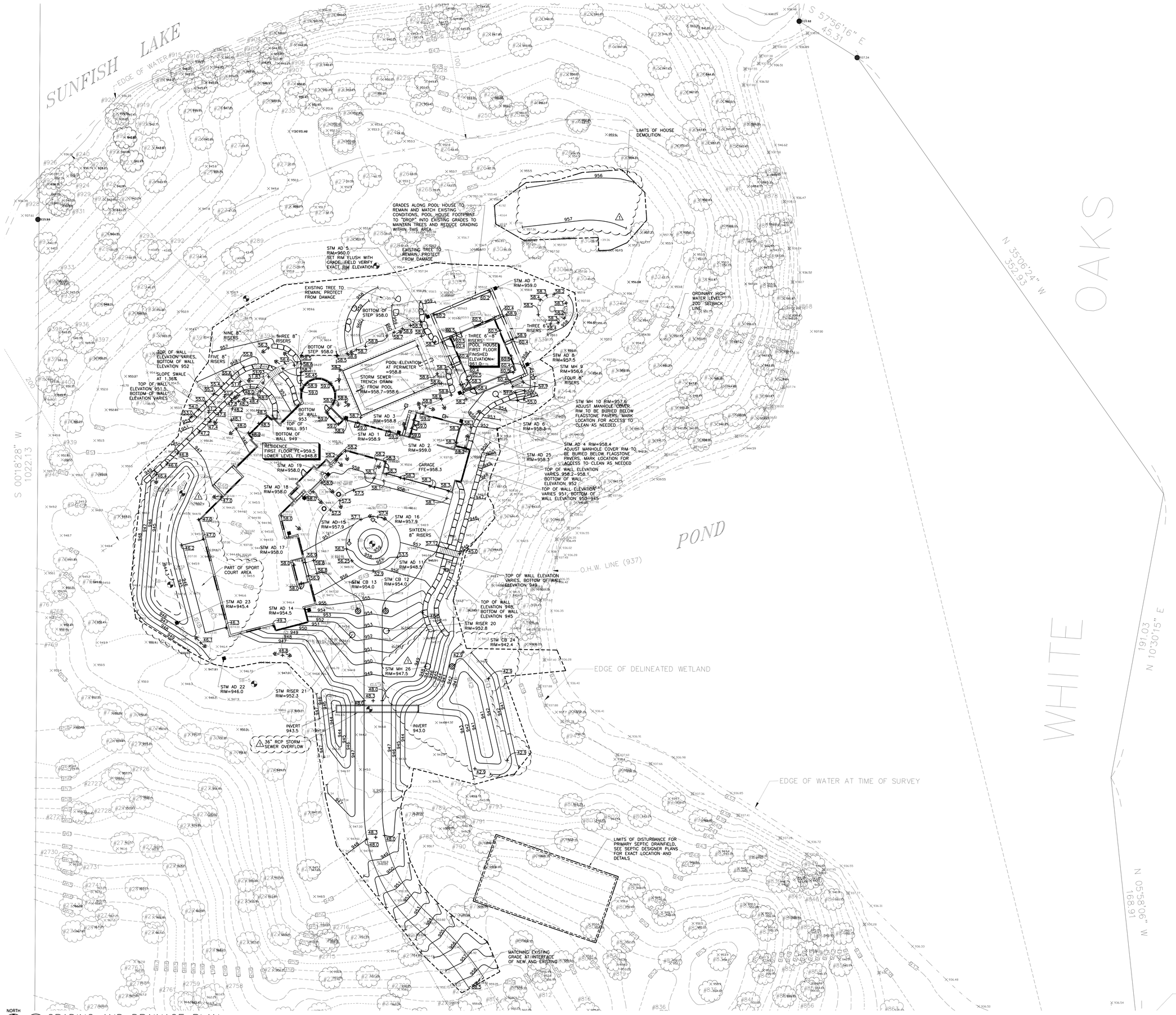
Comm. No.	21-008
Drawn	DPM
Checked	RSP
Date	06/08/2021

PERMIT SET

Drawing Title

EROSION AND SEDIMENT CONTROL – SITE LAYOUT

C2.1



NORTH

1 C3.0 GRADING AND DRAINAGE PLAN

0 20' 40' 60'

1"=20'

PIERCE PINI & ASSOCIATES

CONSULTING CIVIL ENGINEERS
9298 CENTRAL AVENUE NE, SUITE 312
BLAINE, MN 55434
TEL 763.537.1311
rhonda@piercepini.com

WINDY HILL

100 WINDY HILL ROAD
SUNFISH LAKE, MN

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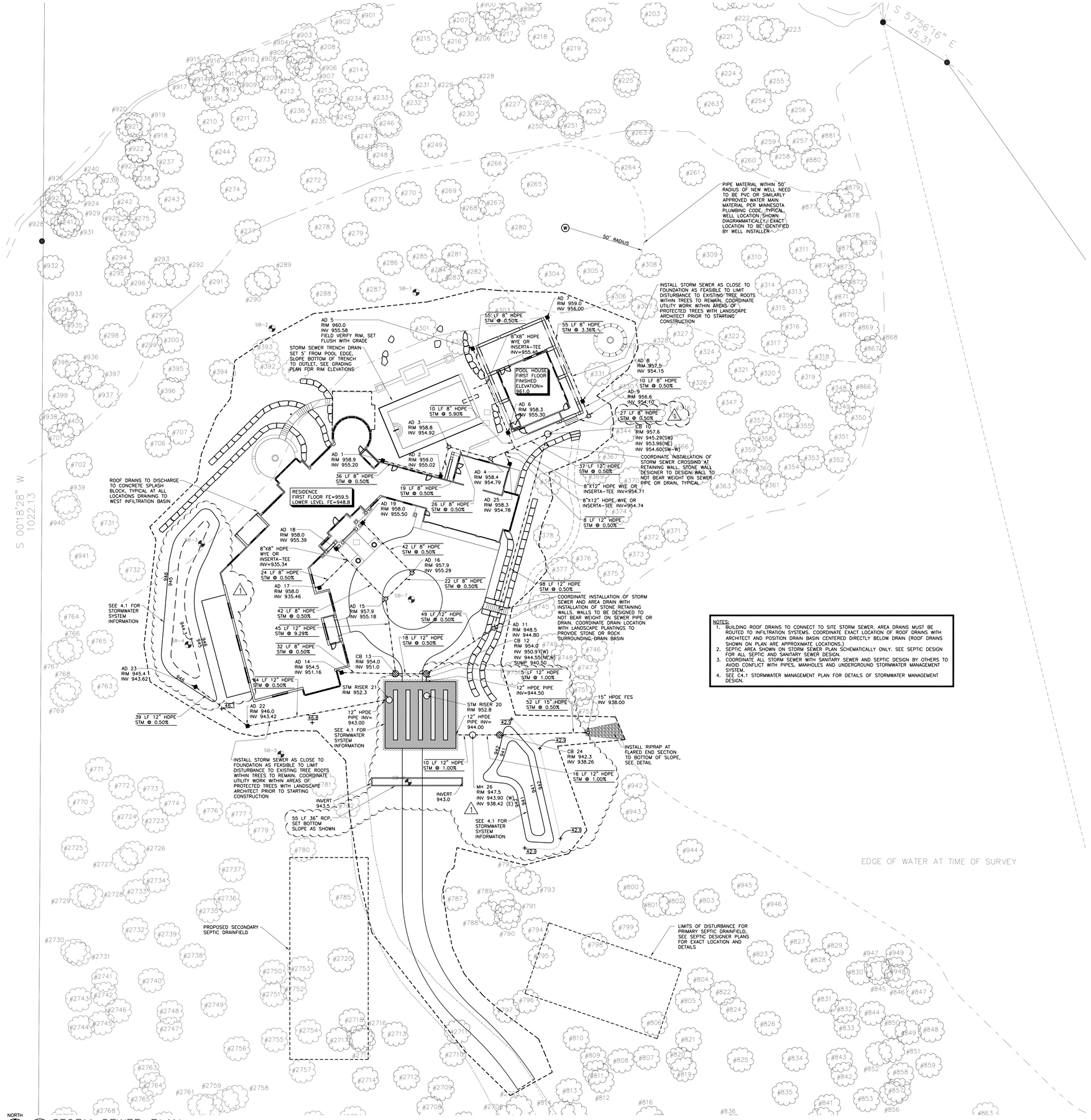
PERMIT SET

Drawing Title

GRADING AND DRAINAGE PLAN

C3.0



NOTES:
1. BUILDING ROOF DRAINS TO CONNECT TO SITE STORM SEWER. AREA DRAINS MUST BE ROUTED TO INFILTRATION SYSTEMS. COORDINATE EXACT LOCATION OF ROOF DRAINS WITH ARCHITECT AND POSITION DRAIN BASIN CENTERED DIRECTLY BELOW DRAIN (ROOF DRAINS SHOWN ON PLAN ARE APPROXIMATE LOCATIONS.)
2. SEPTIC AREA SHOWN ON STORM SEWER PLAN SCHEMATICALLY ONLY. SEE SEPTIC DESIGN FOR ALL SEPTIC AND SANITARY SEWER DESIGN.
3. COORDINATE ALL STORM SEWER WITH SANITARY SEWER AND SEPTIC DESIGN BY OTHERS TO AVOID CONFLICT WITH PIPES, MANHOLES AND UNDERGROUND STORMWATER MANAGEMENT SYSTEM.
4. SEE C4.1 STORMWATER MANAGEMENT PLAN FOR DETAILS OF STORMWATER MANAGEMENT DESIGN.

NORTH

1 / C4.0 STORM SEWER PLAN

0 20' 40' 60'

1"=20'

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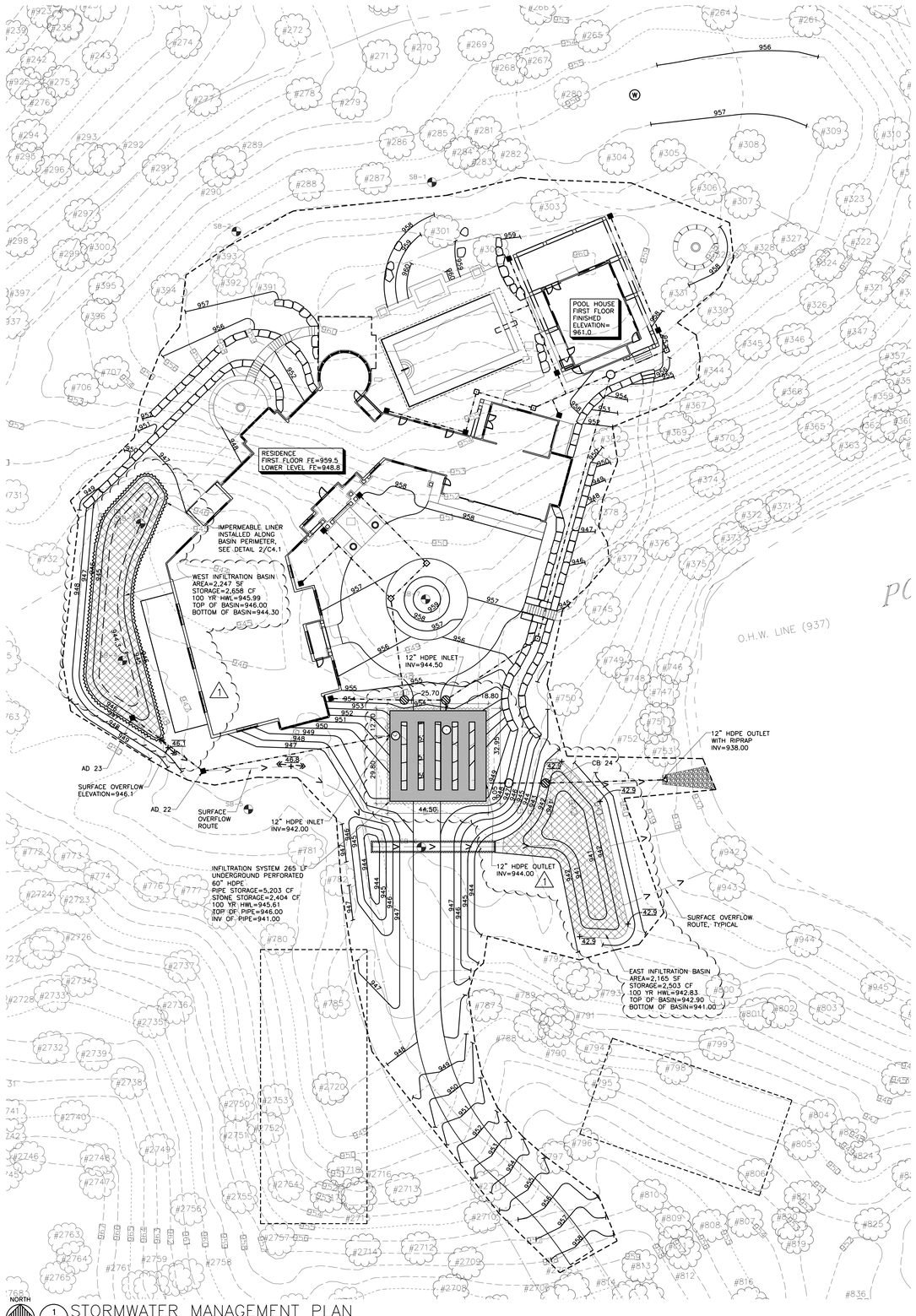
Date	06/08/2021

PERMIT SET

Drawing Title

STORM SEWER PLAN

C4.0

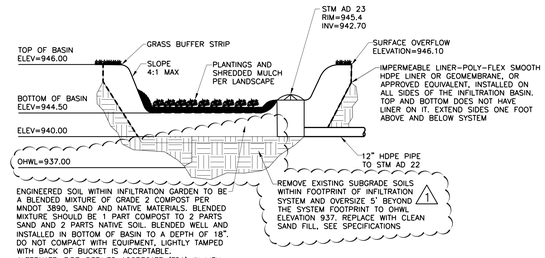


NORTH

1 C4.1 STORMWATER MANAGEMENT PLAN

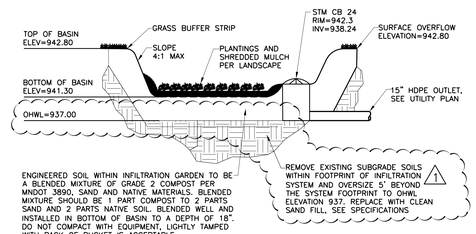
0 20' 40' 60'

1"=20'



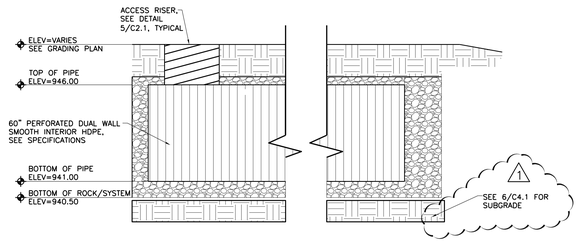
2 C4.1 WEST INFILTRATION BASIN

NO SCALE



3 C4.1 EAST INFILTRATION BASIN

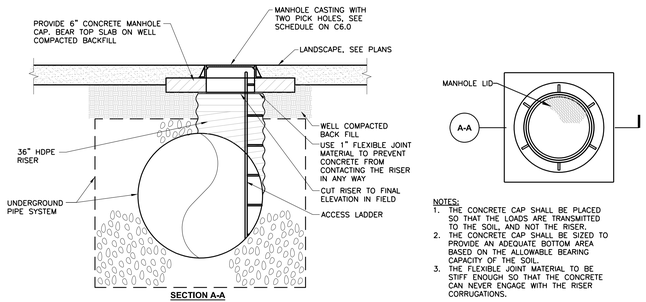
NO SCALE



4 C4.1 STORMWATER INFILTRATION SYSTEM SECTION

NOTE: RISERS, INLET AND OUTLET PIPES ARE SHOWN IN PROFILE VIEW FOR REFERENCE ONLY. SEE PLAN VIEW FOR ACTUAL LOCATIONS AND NUMBER OF RISERS AND PIPES.

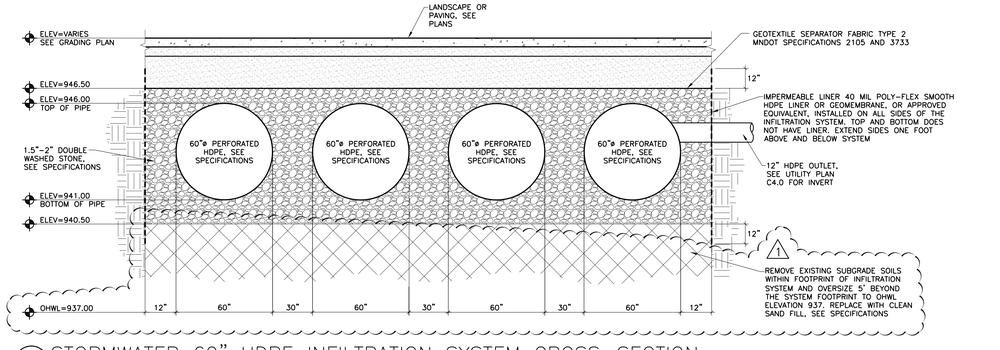
NO SCALE



NOTES:
1. THE CONCRETE CAP SHALL BE PLACED SO THAT THE LOADS ARE TRANSMITTED TO THE SOIL, AND NOT THE RISER.
2. THE CONCRETE CAP SHALL BE SIZED TO PROVIDE AN ADEQUATE BOTTOM AREA BASED ON THE ALLOWABLE BEARING CAPACITY OF THE SOIL.
3. THE FLEXIBLE JOINT MATERIAL TO BE STIFF ENOUGH SO THAT THE CONCRETE CAN NEVER ENGAGE WITH THE RISER CORRUGATIONS.

5 C4.1 RISER DETAIL

NO SCALE



6 C4.1 STORMWATER 60" HDPE INFILTRATION SYSTEM CROSS-SECTION

NO SCALE

PIERCE PINI & ASSOCIATES
CONSULTING CIVIL ENGINEERS
9298 CENTRAL AVENUE NE, SUITE 312
BLAINE, MN 55434
TEL 763.537.1311
rhonda@piercepini.com

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SUNFISH LAKE, MN

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For PIERCE PINI & ASSOCIATES, INC.

By Rhonda S. Pierce

Name RHONDA S. PIERCE

Date 06/08/2021 Reg. No. 41333

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Date	06/08/2021

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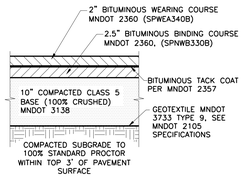
Drawing Title

STORMWATER MANAGEMENT PLAN

C4.1



1 C6.0 BITUMINOUS PAVEMENT DETAIL

NO SCALE

NOTES:
1. SPECIFICATIONS PER MNDOT 3733 AND 2105.
2. PROVIDE A WOVEN GEOTEXTILE WITH THE ATTRIBUTES SHOWN IN THE TABLE AND ADD THE FOLLOWING TO MNDOT SPECIFICATION 3733.2 REQUIREMENTS.
3. COMPLY WITH THE SEAM BREAKING STRENGTH REQUIREMENT FOR TYPE 5 IN MNDOT SPECIFICATION 3733.
4. GEOTEXTILE FABRIC SPECIAL TYPE 9 FOR STABILIZATION OF SUBGRADE BELOW CLASS V PAVEMENT BASE.

PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE	
			MD	CD
TENSILE STRENGTH AT ULTIMATE	ASTM D4595	LBS/FT	3500	3200

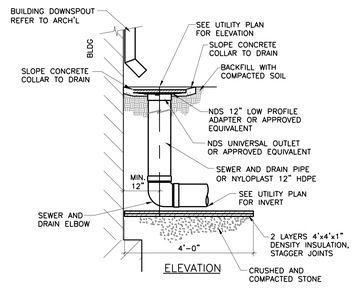
PROPERTIES	TEST METHOD	UNIT	MAXIMUM OPENING SIZE
APPARENT OPENING SIZE (AOS)	ASTM D4751	U.S. SIEVE	30

PROPERTIES	TEST METHOD	UNIT	MAXIMUM OPENING SIZE
PERMITTIVITY	ASTM D4491	SEC^{-1}	0.8
FLOW RATE	ASTM D4491	GAL/MIN/FT^2	60

PROPERTIES	TEST METHOD	UNIT	MAXIMUM OPENING SIZE
UV RESISTANCE (AT 500 HOURS)	ASTM D4355	% STRENGTH RETAINED	70

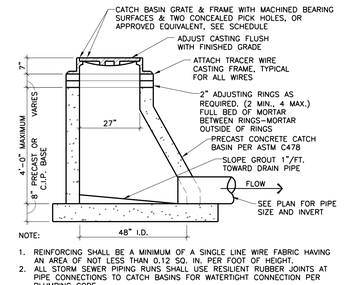
2 C6.0 GEOTEXTILE TYPE 9

NO SCALE



3 C6.0 AREA DRAIN AT DOWNSPOUT

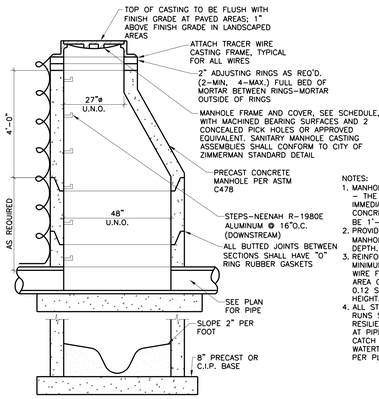
NO SCALE



NOTE:
1. REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT OF HEIGHT.
2. ALL STORM SEWER PIPING RUNS SHALL USE RESILIENT RUBBER JOINTS AT PIPE CONNECTIONS TO CATCH BASINS FOR WATERTIGHT CONNECTION PER PLUMBING CODE.

5 C6.0 SHALLOW CATCH BASIN

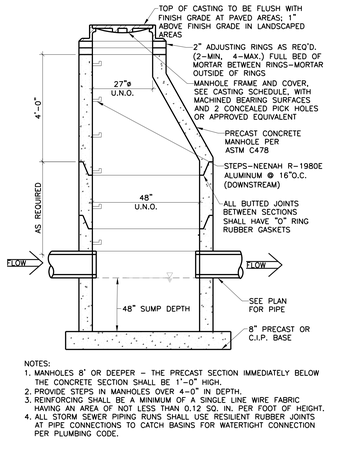
NO SCALE



NOTES:
1. MANHOLES 8' OR DEEPER – THE PRECAST SECTION IMMEDIATELY BELOW THE CONCRETE SECTION SHALL BE 1'-0" HIGH.
2. PROVIDE STEPS IN MANHOLES OVER 4-0" IN DEPTH.
3. REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT OF HEIGHT.
4. ALL STORM SEWER PIPING RUNS SHALL USE RESILIENT RUBBER JOINTS AT PIPE CONNECTIONS TO CATCH BASINS FOR WATERTIGHT CONNECTION PER PLUMBING CODE.

6 C6.0 STANDARD SEWER MANHOLE

NO SCALE



NOTES:
1. MANHOLES 8' OR DEEPER – THE PRECAST SECTION IMMEDIATELY BELOW THE CONCRETE SECTION SHALL BE 1'-0" HIGH.
2. PROVIDE STEPS IN MANHOLES OVER 4-0" IN DEPTH.
3. REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT OF HEIGHT.
4. ALL STORM SEWER PIPING RUNS SHALL USE RESILIENT RUBBER JOINTS AT PIPE CONNECTIONS TO CATCH BASINS FOR WATERTIGHT CONNECTION PER PLUMBING CODE.

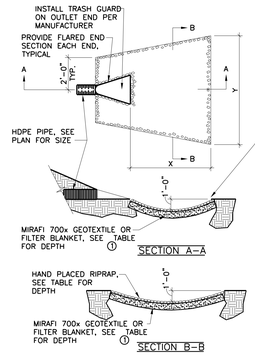
7 C6.0 MANHOLE WITH SUMP

NO SCALE

STRUCTURE SCHEDULE			
STRUCTURE TYPE	STRUCTURE TYPE/DETAIL	GRATE TYPE (NDS/NEENAH)	REMARKS
STM AD 1	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 2	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 3	NYLOPLAST INLINE	NDS #1210	12X12 SOLID COVER
STM AD 4	NYLOPLAST INLINE	NDS #1210	12X12 SOLID COVER
STM AD 5	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 6	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 7	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 8	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 9	NYLOPLAST INLINE	NDS #1210	12X12 SOLID COVER
STM MH 10	DETAIL 6/C6.0	R-1642-A	MANHOLE
STM AD 11	NYLOPLAST INLINE	NDS #1210	12X12 SOLID COVER
STM CB 12	DETAIL 7/C6.0	R-2560-E1	CB BEEHIVE
STM CB 13	DETAIL 5/C6.0	R-2560-E1	CB BEEHIVE
STM AD 14	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 15	NYLOPLAST INLINE	NDS #1210	12X12 SOLID COVER
STM AD 16	NYLOPLAST INLINE	NDS #1210	12X12 SOLID COVER
STM AD 17	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 18	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 19	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
RISER MH 20	DETAIL 5/C4.1	R-1642-A	MANHOLE
RISER MH 21	DETAIL 5/C4.1	R-1642-A	MANHOLE
STM AD 22	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM AD 23	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM CB 24	DETAIL 6/C6.0	R-2560-E1	CB BEEHIVE
STM AD 25	NYLOPLAST INLINE	NDS #1210	12X12 SQUARE GRATE
STM MH 26	DETAIL 6/C6.0	R-1642-A	MANHOLE

8 C6.0 STORM SEWER SCHEDULE

NO SCALE

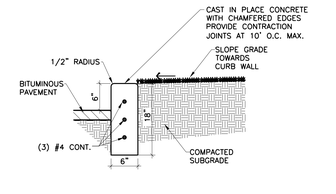


NOTES:
① THE CONTRACTOR, MAY SUBSTITUTE A GEOTEXTILE FABRIC PER MN DOT SPEC. SECTION 3601, FOR THE GRANULAR FILTER BLANKET U.N.O. THE FABRIC SHOULD COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FT.

PROVIDE RIPRAP & GRANULAR FILTER (PER MNDOT 2511) AS FOLLOWS					
				CLASS III	
PIPE DIA.	X	Y		18" DEPTH RIPRAP (CY)	9" DEPTH GRAN FILTER (CY)
12"	8'	11'		4.7	2.4
15"	8'	11'8"		5.2	2.6

9 C6.0 RIPRAP AT HDPE OUTLET

NO SCALE



10 C6.0 6" HIGH CURB WALL

NO SCALE

PIERCE PINI & ASSOCIATES
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9298 CENTRAL AVENUE NE, SUITE 312
BLAINE, MN 55434
TEL 763.537.1311
rhonda@piercepini.com

WINDY HILL
100 WINDY HILL ROAD
SUNFISH LAKE, MN

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By Rhonda S. Pierce
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Issued for	Date
0 ISSUED FOR PERMIT	06/08/2021
1 CITY COMMENTS	07/06/2021

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Comm. No.	21-008
Drawn	DPM
Checked	RSP
Date	06/08/2021

PERMIT SET

Drawing Title

CIVIL DETAILS

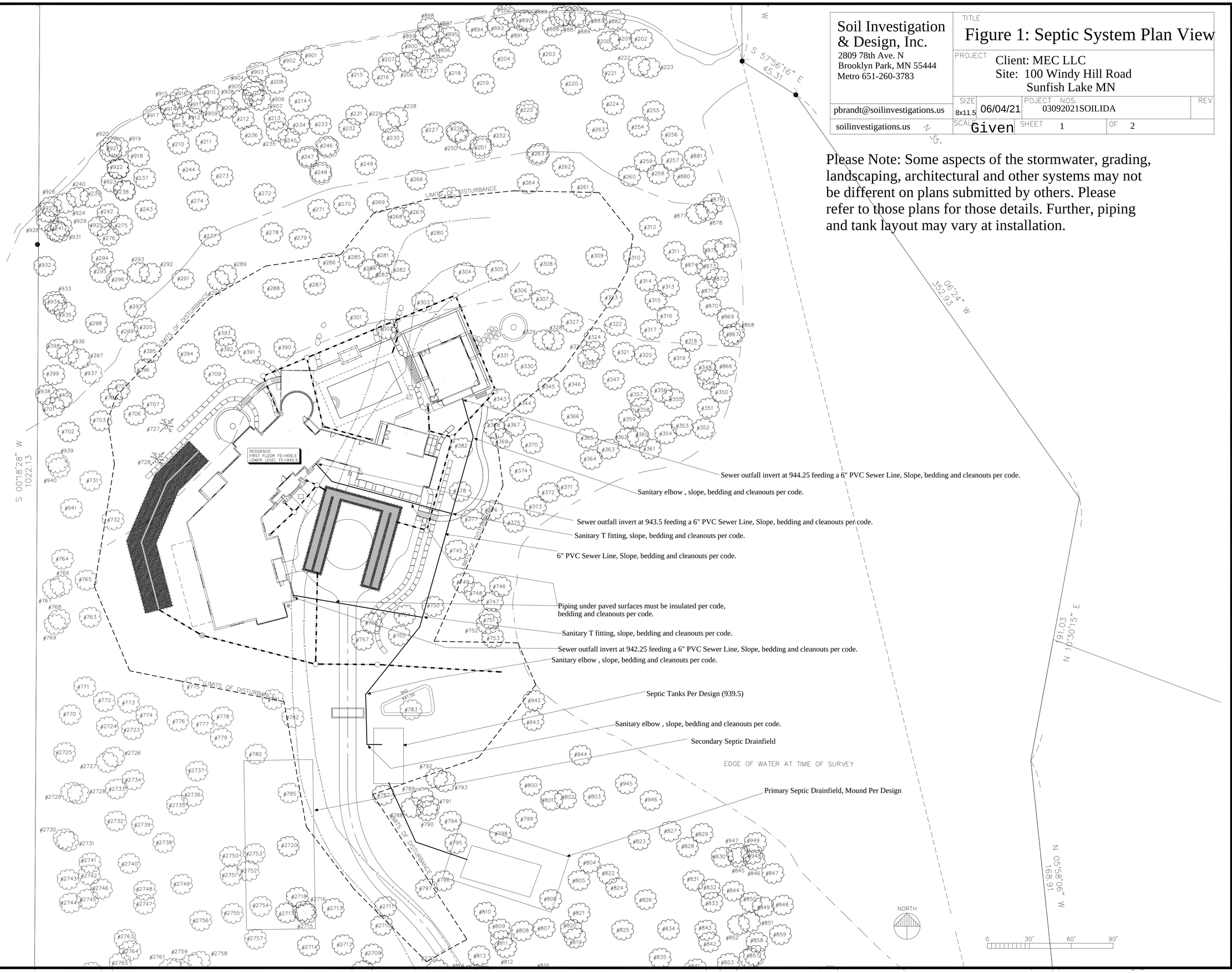
C6.0

100 Windy Hill Road
017767-000

The applicant provided a stormwater report and septic design document for the proposal at 100 Windy Hill Road. Those two files are over 150 pages. They are available at the following locations for download:

Stormwater Report - https://wsbeng.sharefile.com/d-s5fa04f2e46844210ac37d4ba7842837e

Septic Design - https://wsbeng.sharefile.com/d-s46d15bc256d2457fa2ecd80a93c180e1



Sewer outfall invert at 944.25 feeding a 6" PVC Sewer Line, Slope, bedding and cleanouts per code.

Sanitary elbow , slope, bedding and cleanouts per code.

Sewer outfall invert at 943.5 feeding a 6" PVC Sewer Line, Slope, bedding and cleanouts per code.

Sanitary T fitting, slope, bedding and cleanouts per code.

6" PVC Sewer Line, Slope, bedding and cleanouts per code.

Piping under paved surfaces must be insulated per code, bedding and cleanouts per code.

Sanitary T fitting, slope, bedding and cleanouts per code.

Sewer outfall invert at 942.25 feeding a 6" PVC Sewer Line, Slope, bedding and cleanouts per code.

Sanitary elbow , slope, bedding and cleanouts per code.

Septic Tanks Per Design (939.5)

Sanitary elbow , slope, bedding and cleanouts per code.

Secondary Septic Drainfield

Primary Septic Drainfield, Mound Per Design

Soil Investigation & Design, Inc.
2809 78th Ave. N
Brooklyn Park, MN 55444
Metro 651-260-3783

pbrandt@soilinvestigations.us

soilinvestigations.us

TITLE

Figure 1: Septic System Plan View

PROJECT

Client: MEC LLC
Site: 100 Windy Hill Road
Sunfish Lake MN

SIZE		POJECT NOS.	REV
8x11.5	06/04/21	03092021SOILIDA	
SCALE	Given	SHEET 1	OF 2

Please Note: Some aspects of the stormwater, grading, landscaping, architectural and other systems may not be different on plans submitted by others. Please refer to those plans for those details. Further, piping and tank layout may vary at installation.

SAVANNA DESIGNS
Environmentally Appropriate Landscape Design
3637 Trading Post Trail South
Afton, MN 55042
(651)436-6049 · info@savannadesigns.com

PIERCE PINI & ASSOCIATES
9298 CENTRAL AVENUE NE, SUITE 312
BLAINE, MN 55434
TEL 763.537.1311
rhonda@piercepini.com

PROJECT

Windy Hill

100 Windy Hill Road
Sunfish Lake, MN 55077

SHEET TITLE

Septic System Plan View

REVISION

NO.	DESCRIPTION	DATE

CERTIFICATION

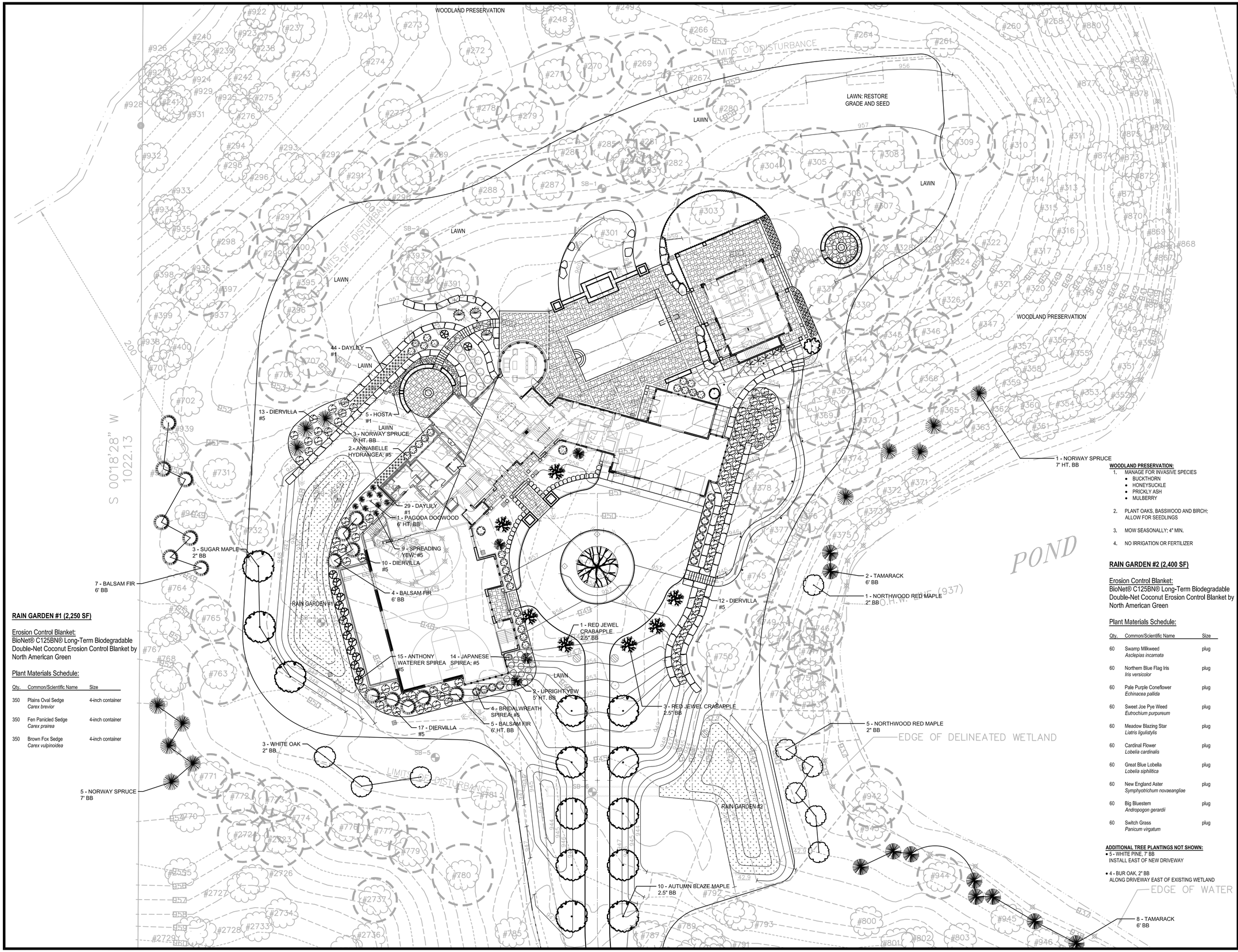
Septic System & Soils

I hereby certify that this plan, document, or report was prepared by me or under my direct supervision and that I am a Licensed Professional Soil Scientist under the Laws of the State of Minnesota.

Print Name: Paul J. Brandt PSS; License: 30007

Signature:

Date: June 7, 2021.



RAIN GARDEN #1 (2,250 SF)

Erosion Control Blanket:
BioNet® C125BN® Long-Term Biodegradable Double-Net Coconut Erosion Control Blanket by North American Green

Plant Materials Schedule:

Qty.	Common/Scientific Name	Size
350	Plains Oval Sedge *Carex brevior*	4-inch container
350	Fen Panicled Sedge *Carex prairea*	4-inch container
350	Brown Fox Sedge *Carex vulpinoidea*	4-inch container

WOODLAND PRESERVATION:

1. MANAGE FOR INVASIVE SPECIES
   - BUCKTHORN
   - HONEYSUCKLE
   - PRICKLY ASH
   - MULBERRY
2. PLANT OAKS, BASSWOOD AND BIRCH: ALLOW FOR SEEDLINGS
3. MOW SEASONALLY: 4" MIN.
4. NO IRRIGATION OR FERTILIZER

RAIN GARDEN #2 (2,400 SF)

Erosion Control Blanket:
BioNet® C125BN® Long-Term Biodegradable Double-Net Coconut Erosion Control Blanket by North American Green

Plant Materials Schedule:

Qty.	Common/Scientific Name	Size
60	Swamp Milkweed *Asclepias incarnata*	plug
60	Northern Blue Flag Iris *Iris versicolor*	plug
60	Pale Purple Coneflower *Echinacea pallida*	plug
60	Sweet Joe Pye Weed *Eutrochium purpureum*	plug
60	Meadow Blazing Star *Liatris ligulistylis*	plug
60	Cardinal Flower *Lobelia cardinalis*	plug
60	Great Blue Lobelia *Lobelia siphilitica*	plug
60	New England Aster *Symphyotrichum novaeangliae*	plug
60	Big Bluestem *Andropogon gerardii*	plug
60	Switch Grass *Panicum virgatum*	plug

ADDITIONAL TREE PLANTINGS NOT SHOWN:

- 5 - WHITE PINE, 7' BB
  INSTALL EAST OF NEW DRIVEWAY
- 4 - BUR OAK, 2" BB
  ALONG DRIVEWAY EAST OF EXISTING WETLAND

SAVANNA DESIGNS

Environmentally Appropriate Landscape Design

3637 Trading Post Trail South
Afton, MN 55042
(651)436-6049 · info@savannadesigns.com

PROJECT

Windy Hill

100 Windy Hill Road
Sunfish Lake, MN 55077

SHEET TITLE

Planting Plan

REVISION

NO.	DESCRIPTION	DATE
	Plantings	2021 05 03
	Revisions	2021 05 21
	Revisions	2021 06 04
	City Submittal	2021 06 08
	City Resubmittal	2021 07 01

CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: _____

SIGNATURE: _____

DATE: _____ LIC. NO. _____

NORTH

0 10 20 30 40

1" = 20'

SHEET NUMBER

L3.0 OF 6

Tree Inventory for Parcel 2 at 100 Windy Hill Road Sunfish Lake, MN

All trees over 6” trunk diameter were tagged and identified between February 26 – March 5, 2021. A total of 594 trees have been tagged. Clumps have a combined total of all sprouts and some are noted as doubles.

Advance Surveying & Engineering
17917 Highway 7
Minnetonka, MN 55345
(952) 474-7964

Savanna Designs, Inc.
3637 Trading Post Trail South
Afton, MN 55001
(651) 436-6049 – info@savannadesigns.com

Windy Hill Tree Inventory

revised 06/01/21

Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
		North of House	02/26/21				
200	26	Red Oak	Quercus rubra		1		
201	12	Mountain Ash	Sorborus decora	sick & rotten		1	
202	16	Red Oak	Quercus rubra	half dead		1	
203	25	White Oak	Quercus alba	exceptional specimen	1		
204	19	White Oak	Quercus alba	nice	1		
205	14	Red Oak	Quercus rubra		1		
206	7	Red Oak	Quercus rubra		1		
207	14	Red Oak	Quercus rubra		1		
208	15	Red Oak	Quercus rubra		1		
209	15	Red Oak	Quercus rubra		1		
210	27	Red Oak	Quercus rubra		1		
211	24	White Oak	Quercus alba	nice	1		
212	16	Basswood	Tilia americana		1		
213	19	White Oak	Quercus alba		1		
214	10	Red Oak	Quercus rubra	nice	1		
215	12	Red Oak	Quercus rubra		1		
216	7	White Oak	Quercus alba	nice	1		
217	13	Red Oak	Quercus rubra		1		
218	12	Red Oak	Quercus rubra		1		
219	21	White Oak	Quercus alba		1		
220	15	Red Oak	Quercus rubra		1		
221	12	Black Cherry	Prunus serotina	bad - remove		1	
222	29	Red Oak	Quercus rubra	split	1		
223	18	White Oak	Quercus alba	leaning	1		
224	14	Red Oak	Quercus rubra		1		
225	35	Red Oak	Quercus rubra	huge, beautiful	1		
226	15	Red Oak	Quercus rubra		1		
227	8	Sugar Maple	Acer saccharum	nice specimen	1		
228	16	White Oak	Quercus alba		1		
229	20	White Oak	Quercus alba		1		
230	14	White Oak	Quercus alba		1		
231	12	Black Cherry	Prunus serotina		1		
232	30	Red Oak	Quercus rubra		1		
233	25	Red Oak	Quercus rubra		1		
234	7	Red Oak	Quercus rubra		1		
235	11	Red Oak	Quercus rubra		1		
236	10	Black Cherry	Prunus serotina		1		
237	16	White Oak	Quercus alba		1		
238	7	Red Oak	Quercus rubra		1		
239	11	Quaking Aspen	Populus tremuloides		1		
240	17	Red Oak	Quercus rubra		1		
241	17	Red Oak	Quercus rubra	clump of 3	1		
242	11	Paper Birch	Betula papyrifera		1		

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
243	23	White Oak	Quercus alba	specimen	1		
244	8	Red Oak	Quercus rubra	nice	1		
245	9	Red Oak	Quercus rubra		1		
246	18	White Oak	Quercus alba	burl	1		
247	11	Red Oak	Quercus rubra		1		
248	12	Red Oak	Quercus rubra		1		
249	21	White Oak	Quercus alba	specimen	1		
250	8	Red Oak	Quercus rubra		1		
251	18	Red Oak	Quercus rubra		1		
252	11	Red Oak	Quercus rubra		1		
253	12	Red Oak	Quercus rubra		1		
254	22	White Oak	Quercus alba	nice	1		
255	24	White Oak	Quercus alba	nice	1		
256	13	Red Oak	Quercus rubra		1		
257	28	White Oak	Quercus alba		1		
258	14	White Oak	Quercus alba		1		
259	16	Red Oak	Quercus rubra		1		
260	18	White Oak	Quercus alba		1		
261	21	White Oak	Quercus alba	nearby house NW	1		
262	21	Green Ash	Fraxinus pennsylvanica	blonding - remove EAB		1	
263	17	White Oak	Quercus alba		1		
264	18	White Oak	Quercus alba	specimen by house	1		
265	31	White Oak	Quercus alba	nw, house	1		
266	20	White Oak	Quercus alba	specimen	1		
267	16	White Oak	Quercus alba		1		
268	18	White Oak	Quercus alba	damaged remove		1	
269	23	White Oak	Quercus alba	specimen	1		
270	21	White Oak	Quercus alba		1		
271	17	White Oak	Quercus alba	clump	1		
272	25	Basswood	Tilia americana		1		
273	23	White Oak	Quercus alba	clump	1		
274	25	White Oak	Quercus alba	clump	1		
275	6	Red Oak	Quercus rubra		1		
276	15	Red Oak	Quercus rubra		1		
277	25	White Oak	Quercus alba	nice	1		
278	8	White Oak	Quercus alba		1		
279	18	Red Oak	Quercus rubra		1		
280	11	Paper Birch	Betula papyrifera	leaning	1		
281	11	White Oak	Quercus alba		1		
282	25	White Oak	Quercus alba		1		
283	5	White Oak	Quercus alba		1		
284	10	White Oak	Quercus alba		1		
285	23	Red Oak	Quercus rubra		1		
286	7	Red Oak	Quercus rubra		1		

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
287	23	White Oak	Quercus alba		1		
288	24	Basswood	Tilia americana	tall	1		
289	18	White Oak	Quercus alba		1		
290	20	White Oak	Quercus alba		1		
291	19	White Oak	Quercus alba		1		
292	12	White Oak	Quercus alba		1		
293	25	White Oak	Quercus alba		1		
294	21	White Oak	Quercus alba		1		
295	29	Red Oak	Quercus rubra		1		
296	13	Basswood	Tilia americana		1		
297	24	White Oak	Quercus alba	specimen	1		
298	25	Red Oak	Quercus rubra		1		
299	23	White Oak	Quercus alba		1		
300	13	Red Oak	Quercus rubra		1		
301	26	White Oak	Quercus alba	large, specimen	1		
302	11	White Oak	Quercus alba				1
303	24	White Oak	Quercus alba	large, specimen	1		
304	9	Sugar Maple	Acer saccharum		1		
305	26	White Oak	Quercus alba		1		
306	24	White Oak	Quercus alba		1		
307	19	White Oak	Quercus alba		1		
308	19	White Oak	Quercus alba	by house	1		
309	28	White Oak	Quercus alba	by house	1		
310	25	White Oak	Quercus alba		1		
311	24	White Oak	Quercus alba	wood duck house	1		
312	7	Sugar Maple	Acer saccharum		1		
313	26	Red Oak	Quercus rubra		1		
314	15	Arborviate	Thuja occidentalis	clump	1		
315	18	Arborviate	Thuja occidentalis		1		
316	15	White Oak	Quercus alba		1		
317	28	White Oak	Quercus alba		1		
318	14	Arborviate	Thuja occidentalis	clump	1		
319	8	Arborvitae	Thuja occidentalis		1		
320	9	Red Oak	Quercus rubra		1		
321	10	Red Oak	Quercus rubra		1		
322	27	Red Oak	Quercus rubra		1		
323	23	White Oak	Quercus alba		1		
324	8	Red Oak	Quercus rubra		1		
325	16	Green Ash	Fraxinus pennsylvanica			1	
326	12	White Oak	Quercus alba		1		
327	22	White Oak	Quercus alba		1		
328	15	Red Oak	Quercus rubra		1		
329	18	Green Ash	Fraxinus pennsylvanica			1	
330	14	Red Oak	Quercus rubra		1		

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
331	23	White Oak	Quercus alba		1		
332	22	White Oak	Quercus alba				1
333	23	White Oak	Quercus alba				1
334	12	Black Cherry	Prunus serotina				1
335	9	Arborvitae	Thuja occidentalis				1
336	15	Arborviate clump	Thuja occidentalis				1
337	14	Balsam Fir	Abies balsamea				1
338	7	Balsam Fir	Abies balsamea				1
339	14	Balsam Fir	Abies balsamea				1
340	11	Balsam Fir	Abies balsamea				1
341	15	Bur Oak	Quercus macrocarpa	top gone, poor		1	
342	23	White Oak	Quercus alba	specimen			1
343	21	White Oak	Quercus alba				1
344	18	White Oak	Quercus alba		1		
345	9	White Oak	Quercus alba		1		
346	8	White Oak	Quercus alba		1		
347	21	White Oak	Quercus alba		1		
348	22	Red Oak	Quercus rubra		1		
349	25	White Oak	Quercus alba		1		
350	13	Red Oak	Quercus rubra		1		
351	36	White Oak clump	Quercus alba	clump	1		
352	16	Red Oak	Quercus rubra	pond edge	1		
353	7	White Oak	Quercus alba		1		
354	18	Red Oak	Quercus rubra		1		
355	8	Red Oak	Quercus rubra		1		
356	29	Red Oak	Quercus rubra	tall	1		
357	11	Red Oak	Quercus rubra		1		
358	10	Paper Birch	Betula papyrifera	clump	1		
359	13	Paper Birch	Betula papyrifera	clump	1		
360	8	Paper Birch	Betula papyrifera	clump	1		
361	7	Red Oak	Quercus rubra	pond edge	1		
362	32	Red Oak	Quercus rubra	specimen	1		
363	12	Red Oak	Quercus rubra		1		
364	26	Bur Oak	Quercus macrocarpa	declining	1		
365	10	Red Oak	Quercus rubra	specimen	1		
366	23	Red Oak	Quercus rubra		1		
367	11	Black Cherry	Prunus serotina		1		
368	6	Black Cherry	Prunus serotina	declining		1	
369	22	Red Oak	Quercus rubra		1		
370	22	Red Oak	Quercus rubra		1		
371	21	Red Oak	Quercus rubra		1		
372	26	White Oak	Quercus alba		1		
373	10	Red Oak	Quercus rubra	pond edge	1		
374	36	White Oak	Quercus alba	clump	1		

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
375	18	Red Oak	Quercus rubra	specimen	1		
376	12	Red Oak	Quercus rubra	specimen	1		
377	15	Red Oak	Quercus rubra		1		
378	12	White Oak	Quercus alba		1		
379	13	White Oak	Quercus alba				1
380	27	White Oak	Quercus alba	specimen			1
381	17	White Oak	Quercus alba				1
382	16	Bur Oak	Quercus macrocarpa		1		
383	13	White Oak	Quercus alba				1
384	15	Red Maple	Acer rubrum				1
385	13	Red Maple	Acer rubrum				1
386	18	White Oak	Quercus alba				1
387	14	White Oak	Quercus alba				1
388	17	Red Oak	Quercus rubra				1
389	8	Red Oak	Quercus rubra				1
390	26	White Oak	Quercus alba	specimen			1
391	29	White Oak	Quercus alba	leaning	1		
392	13	Bur Oak	Quercus macrocarpa		1		
393	12	Red Oak	Quercus rubra		1		
394	26	Big Tooth Aspen	Populus grandidentata	declining		1	
395	12	Red Oak	Quercus rubra	specimen	1		
396	7	Red Oak	Quercus rubra		1		
397	7	Red Oak	Quercus rubra		1		
398	9	Red Oak	Quercus rubra	specimen in birch grove	1		
399	12	Red Oak	Quercus rubra		1		
400	8	Red Oak	Quercus rubra	in birch grove	1		
701	10	Red Oak	Quercus rubra		1		
702	8	Red Oak	Quercus rubra		1		
703	26	Red Oak	Quercus rubra				1
704	45	Red Oak	Quercus rubra	huge			1
705	8	Red Oak	Quercus rubra				1
706	24	White Oak	Quercus alba		1		
707	17	White Oak	Quercus alba		1		
708	23	Red Oak	Quercus rubra				1
709	9	White Oak	Quercus alba	specimen			1
710	22	Bur Oak	Quercus macrocarpa				1
711	24	White Oak	Quercus alba				1
712	25	White Oak	Quercus alba				1
713	33	Red Oak	Quercus rubra	specimen, tall			1
714	12	Black Cherry	Prunus serotina				1
715	16	Bur Oak	Quercus macrocarpa				1
716	13	Sugar Maple	Acer saccharum				1
717	19	White Oak	Quercus alba	leaning			1
718	15	Balsam Fir	Abies balsamea				1

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
719	15	Balsam Fir	Abies balsamea				1
720	13	Balsam Fir	Abies balsamea				1
721	12	Balsam Fir	Abies balsamea				1
722	11	Balsam Fir	Abies balsamea	bad top			1
723	12	Balsam Fir	Abies balsamea	dead		1	
724	6	Balsam Fir	Abies balsamea				1
725	12	White Spruce	Picea glauca				1
726	7	Balsam Fir	Abies balsamea	dead		1	
727	12	Balsam Fir	Abies balsamea				1
728	11	Balsam Fir	Abies balsamea				1
729	11	Balsam Fir	Abies balsamea				1
730	15	Red Maple	Acer rubrum	upright			1
731	33	Red Oak	Quercus rubra	huge	1		
732	31	Red Oak	Quercus rubra		1		
733	26	Red Oak	Quercus rubra				1
734	27	Black Cherry	Prunus serotina				1
735	29	Bur Oak	Quercus macrocarpa	westside low area			1
736	8	Boxelder	Acer negundo	going up into Bur Oak			1
737	37	Red Oak	Quercus rubra	awesome			1
738	22	Bur Oak	Quercus macrocarpa				1
739	7	Green Ash	Fraxinus pennsylvanica			1	
740	21	Black Cherry	Prunus serotina				1
741	12	Black Cherry	Prunus serotina				1
742	9	Black Cherry	Prunus serotina				1
743	9	Black Cherry	Prunus serotina				1
744	12	Sugar Maple	Acer saccharum				1
745	7	Sugar Maple	Acer saccharum		1		
746	11	Red Oak	Quercus rubra	in decline	1		
747	12	Red Oak	Quercus rubra	lean over pond	1		
748	15	Red Oak	Quercus rubra	leaning	1		
749	10	Sugar Maple	Acer saccharum		1		
750	22	Chinese Chesnut	Castanea mollissima	specimen	1		
751	12	Red Oak	Quercus rubra		1		
752	16	Red Oak	Quercus rubra		1		
753	14	Red Oak	Quercus rubra		1		
754	18	Red Oak	Quercus rubra	damaged crown		1	
755	12	Black Cherry	Prunus serotina	some dead branches			1
756	23	Red Oak	Quercus rubra				1
757	22	Red Oak	Quercus rubra				1
758	14	Sugar Maple	Acer saccharum				1
759	10	Red Maple	Acer rubrum	signs of trunk damage			1
760	12	Black Cherry	Prunus serotina				1
761	24	White Oak	Quercus alba	interesting form			1
762	36	Red Oak	Quercus rubra	crown damage			1

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
763	26	Red Oak	Quercus rubra		1		
764	7	Red Oak	Quercus rubra		1		
765	9	Black Cherry	Prunus serotina		1		
766	15	Paper Birch	Betula papyrifera	clump	1		
767	6	Red Oak	Quercus rubra		1		
768	8	Red Oak	Quercus rubra		1		
769	12	Red Oak	Quercus rubra		1		
770	20	Black Cherry	Prunus serotina		1		
771	12	Boxelder	Acer negundo		1		
772	13	Boxelder	Acer negundo		1		
773	11	Boxelder	Acer negundo		1		
774	44	Basswood	Tilia americana	multi-stem clump	1		
775	18	Boxelder	Acer negundo	clump, mostly dead	1		
776	9	Boxelder	Acer negundo			1	
777	23	Boxelder	Acer negundo	clump, dead		1	
778	11	Boxelder	Acer negundo				1
779	11	Boxelder	Acer negundo	dead crown		1	
780	27	Hackberry	Celtis occidentalis	clump	1		
781	27	Red Oak	Quercus rubra	save, nice	1		
782	14	Black Cherry	Prunus serotina				1
783	8	Apple	Malus	some dieback, pond		1	
784	26	Red Oak	Quercus rubra	driveway			1
785	14	Apple	Malus		1		
786	18	Red Oak	Quercus rubra		1		
787	22	Red Oak	Quercus rubra				1
788	6	Black Cherry	Prunus serotina		1		
789	8	Sugar Maple	Acer saccharum		1		
790	10	Black Cherry	Prunus serotina		1		
791	12	White Oak	Quercus alba		1		
792	10	Black Cherry	Prunus serotina		1		
793	22	White Oak	Quercus alba		1		
794	17	White Oak	Quercus alba	specimen	1		
795	24	White Oak	Quercus alba	specimen	1		
796	9	Black Cherry	Prunus serotina				1
797	9	Black Cherry	Prunus serotina				1
798	22	White Oak	Quercus alba	specimen, DF edge	1		
799	24	White Oak	Quercus alba	specimen	1		
800	10	Black Cherry	Prunus serotina		1		
801	22	White Oak	Quercus alba		1		
802	11	Black Cherry	Prunus serotina		1		
803	8	White Oak	Quercus alba		1		
804	22	Red Oak	Quercus rubra		1		
805	13	White Oak	Quercus alba		1		
806	24	White Oak	Quercus alba	specimen, drainfield			1

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
807	6	Black Cherry	Prunus serotina	drainfield			1
808	8	Black Cherry	Prunus serotina	drainfield			1
809	6	Black Cherry	Prunus serotina	drainfield			1
810	18	White Oak	Quercus alba	specimen	1		
811	18	White Oak	Quercus alba	specimen	1		
812	10	White Oak	Quercus alba		1		
813	11	Black Cherry	Prunus serotina	driveway			1
814	6	Red Oak	Quercus rubra	driveway			1
815	22	White Oak	Quercus alba	specimen, driveway			1
816	24	White Oak	Quercus alba	specimen	1		
817	26	White Oak	Quercus alba	specimen	1		
818	24	White Oak	Quercus alba	specimen	1		
819	24	White Oak	Quercus alba	drainfield			1
820	22	Red Oak	Quercus rubra	drainfield			1
821	16	White Oak	Quercus alba	drainfield			1
822	13	White Oak	Quercus alba	hollow stem	1		
823	24	Bur Oak	Quercus macrocarpa	specimen	1		
824	15	Bur Oak	Quercus macrocarpa		1		
825	7	Black Cherry	Prunus serotina		1		
826	23	White Oak	Quercus alba	specimen	1		
827	10	Red Oak	Quercus rubra		1		
828	9	Ohio Buckeye	Aesculus glabra		1		
829	25	Red Oak	Quercus rubra		1		
830	11	Red Oak	Quercus rubra		1		
831	6	Red Oak	Quercus rubra		1		
832	17	Bur Oak	Quercus macrocarpa		1		
833	7	Red Oak	Quercus rubra		1		
834	26	Red Oak	Quercus rubra	specimen	1		
835	9	Red Oak	Quercus rubra		1		
836	27	Red Oak	Quercus rubra		1		
837	24	White Oak	Quercus alba		1		
838	24	White Oak	Quercus alba		1		
839	19	White Oak	Quercus alba		1		
840	16	Red Oak	Quercus rubra		1		
841	16	Bur Oak	Quercus macrocarpa		1		
842	20	White Oak	Quercus alba	specimen	1		
843	21	Red Oak	Quercus rubra		1		
844	10	Red Oak	Quercus rubra		1		
845	7	Red Oak	Quercus rubra		1		
846	23	Bur Oak	Quercus macrocarpa	unique - over pond	1		
847	10	Red Oak	Quercus rubra		1		
848	19	Red Oak	Quercus rubra		1		
849	10	Red Oak	Quercus rubra		1		
850	19	Red Oak	Quercus rubra		1		

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
851	6	Bur Oak	Quercus macrocarpa		1		
852	6	Red Oak	Quercus rubra		1		
853	6	Red Oak	Quercus rubra		1		
854	12	Red Oak	Quercus rubra		1		
855	26	Red Oak	Quercus rubra	spec. huge, beautiful	1		
856	22	White Oak	Quercus alba		1		
857	14	White Oak	Quercus alba		1		
858	6	Quaking Aspen	Populus tremuloides		1		
859	9	Black Cherry	Prunus serotina		1		
860	6	Bur Oak	Quercus macrocarpa		1		
861	15	Red Oak	Quercus rubra		1		
862	15	Red Oak	Quercus rubra		1		
863	10	Quaking Aspen	Populus tremuloides		1		
864	12	Quaking Aspen	Populus tremuloides		1		
865	12	Quaking Aspen	Populus tremuloides		1		
		Lakeshore Trees	03/02/21				
866	9	Red Oak	Quercus rubra		1		
867	10	Paper Birch	Betula papyrifera		1		
868	13	Red Oak	Quercus rubra		1		
869	15	Red Oak	Quercus rubra		1		
870	12	Red Oak	Quercus rubra		1		
871	10	Red Oak	Quercus rubra		1		
872	26	Red Oak	Quercus rubra		1		
873	17	White Oak	Quercus alba		1		
874	7	Red Oak	Quercus rubra		1		
875	12	Red Oak	Quercus rubra		1		
876	15	Red Oak	Quercus rubra		1		
877	8	White Oak	Quercus alba		1		
878	18	Black Cherry	Prunus serotina		1		
879	6	Red Oak	Quercus rubra		1		
880	10	Red Oak	Quercus rubra		1		
881	13	Red Oak	Quercus rubra		1		
882	6	Paper Birch	Betula papyrifera		1		
883	7	Paper Birch	Betula papyrifera		1		
884	8	Paper Birch	Betula papyrifera		1		
885	14	Paper Birch	Betula papyrifera		1		
886	6	Paper Birch	Betula papyrifera		1		
887	7	Paper Birch	Betula papyrifera		1		
888	9	Red Oak	Quercus rubra		1		
889	9	Paper Birch	Betula papyrifera		1		
890	18	Cottonwood	Populus deltoides		1		
891	10	Paper Birch	Betula papyrifera		1		
892	13	Paper Birch	Betula papyrifera	clump	1		

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Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
893	25	Paper Birch	Betula papyrifera	clump	1		
894	15	Paper Birch	Betula papyrifera	clump	1		
895	8	Paper Birch	Betula papyrifera		1		
896	8	Paper Birch	Betula papyrifera		1		
896	6	Paper Birch	Betula papyrifera		1		
897	6	Paper Birch	Betula papyrifera		1		
898	9	Paper Birch	Betula papyrifera		1		
899	7	Paper Birch	Betula papyrifera		1		
900	11	Red Oak	Quercus rubra		1		
901	7	Paper Birch	Betula papyrifera	leaning over water	1		
902	9	Red Oak	Quercus rubra	water's edge	1		
903	8	Paper Birch	Betula papyrifera	leaning over water	1		
904	10	Paper Birch	Betula papyrifera	leaning over water	1		
905	6	Paper Birch	Betula papyrifera		1		
906	13	Paper Birch	Betula papyrifera	clump	1		
907	14	Paper Birch	Betula papyrifera		1		
908	9	Paper Birch	Betula papyrifera		1		
909	11	Paper Birch	Betula papyrifera	clump	1		
910	7	Red Oak	Quercus rubra		1		
911	16	Paper Birch	Betula papyrifera	clump	1		
912	7	Paper Birch	Betula papyrifera		1		
913	6	Paper Birch	Betula papyrifera		1		
914	7	Paper Birch	Betula papyrifera		1		
915	22	Bur Oak	Quercus macrocarpa		1		
916	11	Paper Birch	Betula papyrifera	leaning over water	1		
917	7	Red Oak	Quercus rubra		1		
918	7	Paper Birch	Betula papyrifera		1		
919	7	Red Oak	Quercus rubra		1		
920	14	Red Oak	Quercus rubra		1		
921	11	Red Oak	Quercus rubra		1		
922	9	Red Oak	Quercus rubra		1		
923	6	Red Oak	Quercus rubra		1		
924	7	Red Oak	Quercus rubra		1		
925	7	Red Oak	Quercus rubra		1		
926	9	Red Oak	Quercus rubra		1		
927	6	Red Oak	Quercus rubra		1		
928	12	Red Oak	Quercus rubra		1		
929	9	Red Oak	Quercus rubra		1		
930	12	Arborvitae	Thuja occidentalis	clump by driveway			1
931	9	Red Oak	Quercus rubra		1		
932	8	Paper Birch	Betula papyrifera		1		
933	8	Paper Birch	Betula papyrifera		1		
934	8	Paper Birch	Betula papyrifera		1		
935	12	Paper Birch	Betula papyrifera	clump	1		

Windy Hill Tree Inventory

revised 06/01/21

Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
936	6	Paper Birch	Betula papyrifera		1		
937	9	Paper Birch	Betula papyrifera		1		
938	10	Paper Birch	Betula papyrifera		1		
939	10	Paper Birch	Betula papyrifera	in decline	1		
940	16	Paper Birch	Betula papyrifera	clump	1		
941	10	Paper Birch	Betula papyrifera	clump	1		
942	14	Green Ash	Fraxinus pennsylvanica	pond edge	1		
943	7	Paper Birch	Betula papyrifera		1		
944	12	Black Cherry	Prunus serotina		1		
945	11	White Oak	Quercus alba		1		
946	22	Red Oak	Quercus rubra		1		
947	6	Red Oak	Quercus rubra		1		
948	8	Red Oak	Quercus rubra		1		
949	11	Red Oak	Quercus rubra		1		
		Driveway - north side	03/03/21				
950	7	Black Cherry	Prunus serotina		1		
951	17	Cottonwood	Populus		1		
952	22	Cottonwood	Populus		1		
953	9	Black Cherry	Prunus serotina		1		
954	7	American Elm	Ulmus americana		1		
955	11	Quaking Aspen	Populus tremuloides		1		
956	11	American Elm	Ulmus americana		1		
957	6	Quaking Aspen	Populus tremuloides		1		
958	7	Red Oak	Quercus rubra		1		
959	9	Red Oak	Quercus rubra		1		
960	10	Black Cherry	Prunus serotina		1		
		Southside	03/03/21				
961	15	Red Pine	Pinus resinosa		1		
962	14	Red Pine	Pinus resinosa		1		
963	16	Red Pine	Pinus resinosa		1		
964	15	Red Pine	Pinus resinosa		1		
965	16	Red Pine	Pinus resinosa		1		
966	16	Red Pine	Pinus resinosa		1		
967	15	Red Pine	Pinus resinosa		1		
968	16	Red Pine	Pinus resinosa		1		
969	16	Red Pine	Pinus resinosa		1		
970	14	Quaking Aspen	Populus tremuloides		1		
971	14	Black Cherry	Prunus serotina		1		
972	12	Quaking Aspen	Populus tremuloides		1		
973	10	Quaking Aspen	Populus tremuloides		1		
974	12	Quaking Aspen	Populus tremuloides		1		
975	10	Quaking Aspen	Populus tremuloides		1		

Windy Hill Tree Inventory

revised 06/01/21

Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
976	9	Quaking Aspen	Populus tremuloides		1		
977	14	Red Oak	Quercus rubra		1		
978	21	Red Oak	Quercus rubra		1		
979	20	Red Oak	Quercus rubra		1		
980	12	Green Ash	Fraxinus pennsylvanica	blonding - remove	1		
981	14	Quaking Aspen	Prunus serotina		1		
982	13	Quaking Aspen	Prunus serotina		1		
983	9	Red Oak	Quercus rubra		1		
984	8	Red Oak	Quercus rubra		1		
985	28	Black Willow	Salix nigra		1		
986	20	Black Willow	Salix nigra		1		
987	13	Quaking Aspen	Prunus serotina		1		
988	15	Paper Birch	Betula papyrifera	clump	1		
989	15	Green Ash	Fraxinus pennsylvanica		1		
990	15	Quaking Aspen	Prunus serotina		1		
991	8	Red Oak	Quercus rubra		1		
992	11	Red Oak	Quercus rubra		1		
993	12	Red Oak	Quercus rubra		1		
994	17	Red Oak	Quercus rubra		1		
995	15	Red Oak	Quercus rubra		1		
996	13	Red Oak	Quercus rubra		1		
997	6	Red Oak	Quercus rubra		1		
998	7	Red Oak	Quercus rubra		1		
999	10	Red Oak	Quercus rubra		1		
1000	12	Red Oak	Quercus rubra		1		
2701	8	Red Oak	Quercus rubra		1		
2702	11	Red Oak	Quercus rubra		1		
2703	20	Red Oak	Quercus rubra		1		
2704	12	Red Oak	Quercus rubra		1		
2705	28	White Oak	Quercus alba		1		
2706	13	White Oak	Quercus alba		1		
2707	16	White Oak	Quercus alba		1		
2708	32	Red Oak	Quercus rubra		1		
2709	25	White Oak	Quercus alba	specimen	1		
2710	17	White Oak	Quercus alba		1		
2711	18	White Oak	Quercus alba	double	1		
		SW "Wild Area"	03/05/21				
2712	14	White Oak	Quercus alba	trunk damage	1		
2713	20	White Oak	Quercus alba		1		
2714	13	White Oak	Quercus alba		1		
2715	7	American Elm	Ulmus americana		1		
2716	15	Basswood	Tilia americana		1		

Windy Hill Tree Inventory

revised 06/01/21

Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
2717	34	White Oak	Quercus alba	large specimen	1		
2718	7	Black Cherry	Prunus serotina		1		
2719	6	Black Cherry	Prunus serotina		1		
2720	12	Black Cherry	Prunus serotina		1		
2721	7	Black Cherry	Prunus serotina	by garage	1		
2722	3.5	Pin Oak	Quercus palustris		1		
2723	21	White Oak	Quercus alba		1		
2724	13	Boxelder	Acer negundo		1		
2725	22	Black Cherry	Prunus serotina		1		
2726	24	Basswood	Ulmus americana		1		
2727	14	Boxelder	Acer negundo		1		
2728	6	Boxelder	Acer negundo		1		
2729	22	Black Cherry	Prunus serotina		1		
2730	15	Green Ash	Fraxinus pennsylvanica		1		
2731	9	Red Oak	Quercus rubra		1		
2732	22	Boxelder	Acer negundo	double	1		
2733	12	Black Cherry	Prunus serotina		1		
2734	14	Black Cherry	Prunus serotina		1		
2735	15	Black Cherry	Prunus serotina		1		
2736	22	White Oak	Quercus alba		1		
2737	6	Basswood	Ulmus americana		1		
2738	28	Red Oak	Quercus rubra	nice	1		
2739	11	Green Ash	Fraxinus pennsylvanica		1		
2740	14	Black Cherry	Prunus serotina		1		
2741	24	White Oak	Quercus alba	nice specimen	1		
2742	22	Red Oak	Quercus rubra		1		
2743	24	White Oak	Quercus alba		1		
2744	15	White Oak	Quercus alba		1		
2745	8	Black Cherry	Prunus serotina		1		
2746	20	White Oak	Quercus alba	nice	1		
2747	30	Red Oak	Quercus rubra	double	1		
2748	6	Black Cherry	Prunus serotina		1		
2749	21	White Oak	Quercus alba	nice	1		
2750	22	White Oak	Quercus alba		1		
2751	14	White Oak	Quercus alba		1		
2752	18	White Oak	Quercus alba		1		
2753	28	Red Oak	Quercus rubra		1		
2754	20	American Elm	Ulmus americana		1		
2755	25	White Oak	Quercus alba	specimen	1		
2756	11	Black Cherry	Prunus serotina		1		
2757	18	White Oak	Quercus alba		1		
2758	9	Black Cherry	Prunus serotina	tall	1		
2759	24	White Oak	Quercus alba	tall	1		
2760	8	Black Cherry	Prunus serotina		1		

Windy Hill Tree Inventory

revised 06/01/21

Tree Tag #	Size "dbh	Common Name	Scientific Name	Notes	save	diseased	remove
2761	6.5	Black Cherry	Prunus serotina		1		
2762	27	Red Oak	Quercus rubra		1		
2763	25	Red Oak	Quercus rubra		1		
2764	9	Black Cherry	Prunus serotina		1		
2765	8	Boxelder	Acer negundo		1		
2766	15	Green Ash	Fraxinus pennsylvanica		1		
2767	11	Red Oak	Quercus rubra		1		
2768	27	Red Oak	Quercus rubra		1		
2769	9	Red Oak	Quercus rubra		1		
2770	14	Red Oak	Quercus rubra		1		
2771	5	Red Oak	Quercus rubra		1		
2772	17	Red Oak	Quercus rubra		1		
2773	18	Red Oak	Quercus rubra	property corner	1		
2774	13	Red Oak	Quercus rubra		1		
2775	23	Red Oak	Quercus rubra		1		
2776	14	Red Oak	Quercus rubra		1		
2777	3	Red Oak	Quercus rubra		1		
2778	26	White Oak	Quercus alba	specimen	1		
2779	34	Red Oak	Quercus rubra	nice	1		
2780	22	White Oak	Quercus alba		1		
2781	10	White Oak	Quercus alba		1		
2782	10	White Oak	Quercus alba		1		
2783	22	White Oak	Quercus alba		1		
2784	22	Red Oak	Quercus rubra		1		
2785	11	Black Cherry	Prunus serotina		1		
2786	19	White Oak	Quercus alba	nice	1		
2787	18	Red Oak	Quercus rubra		1		
2788	18	Red Oak	Quercus rubra	south line	1		
2789	9	Black Cherry	Prunus serotina		1		
2790	8	Red Oak	Quercus rubra		1		
2791	6	Black Cherry	Prunus serotina		1		
2792	6	Paper Birch	Betula papyrifera	leaning	1		
				Totals	493	18	83

EXISTING DWELLING

EXISTING BUILDING

GRAVEL DRIVEWAY

DELINEATED WETLAND

Crown drip line or other limit of Tree Protection area. Refer to Tree Removal and Protection Plan for Tree Protective Barrier alignment.

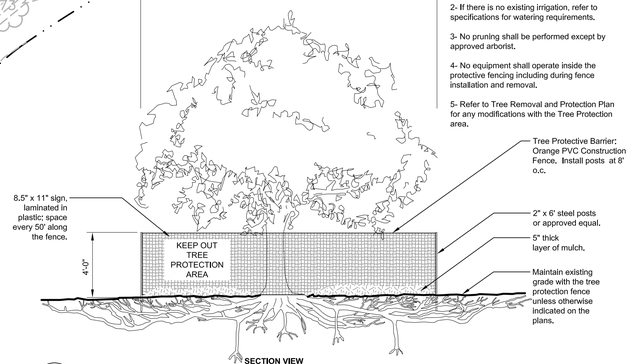
Notes:
1- Refer to specifications for additional tree protection requirements.

2- If there is no existing irrigation, refer to specifications for watering requirements.

3- No pruning shall be performed except by approved arborist.

4- No equipment shall operate inside the protective fencing including during fence installation and removal.

5- Refer to Tree Removal and Protection Plan for any modifications with the Tree Protection area.



SECTION VIEW

1 TREE PROTECTIVE BARRIER

LEGEND:

TREE PROTECTION; REFER TO DETAIL 1/TP1.0

TREE TO BE REMOVED

EDGE OF WATER

SAVANNA DESIGNS

Environmentally Appropriate Landscape Design

3637 Trading Post Trail South
Afton, MN 55042
(651)436-6049 · info@savannadesigns.com

PROJECT

Windy Hill

100 Windy Hill Road
Sunfish Lake, MN 55077

SHEET TITLE

Tree Removal and Protection Plan

REVISION

NO.	DESCRIPTION	DATE
	Tree Survey	2021 02 26
	Tree Survey	2021 03 05
	Removals House	2021 03 31
	Removals Drive; Drainfield	2021 04 28
	Protection	2021 04 29
	Revisions	2021 05 26
	City Submittal	2021 06 08

CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: _____

SIGNATURE: _____

DATE: _____ LIC. NO. _____

NORTH

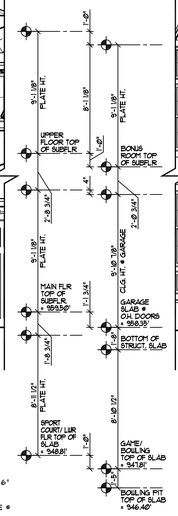
0 10 20 30 40

1" = 20'

SHEET NUMBER

TP1.0 OF 6

1 / 1 FRONT ELEVATION
SCALE: 1/4"=1'-0"



CEDAR SHAKE ROOF

6" CROWN ON 8" TRIM FRIEZE w/ 6" REVEAL

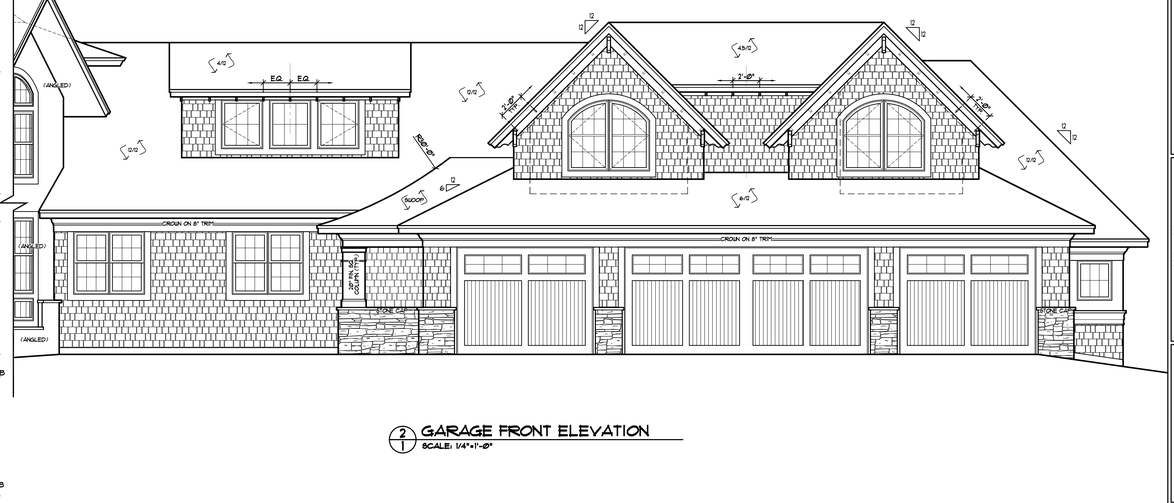
2x8 DECORATIVE RAFTER FRIEZE @ GABLES

CEDAR SHAKE SIDING PER ELEV.

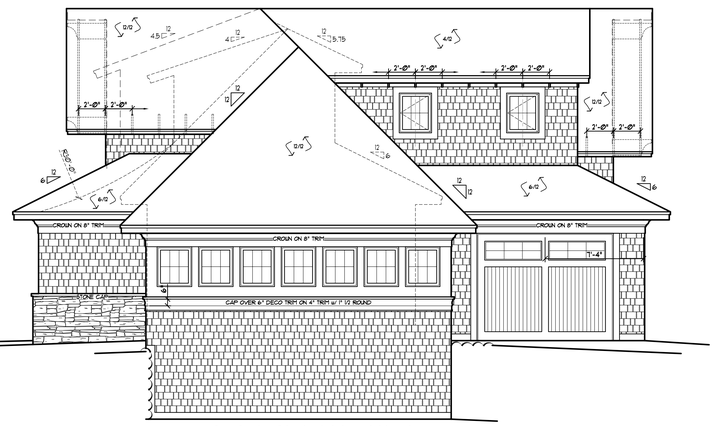
6" HARDIE WINDOW TRIM BOARDS

FULL STONE PER ELEVS.

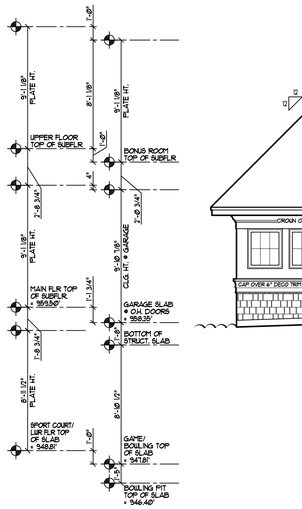
8" STONE LINTELS w/ 4" SILLS @ WINDOWS PER ELEV.

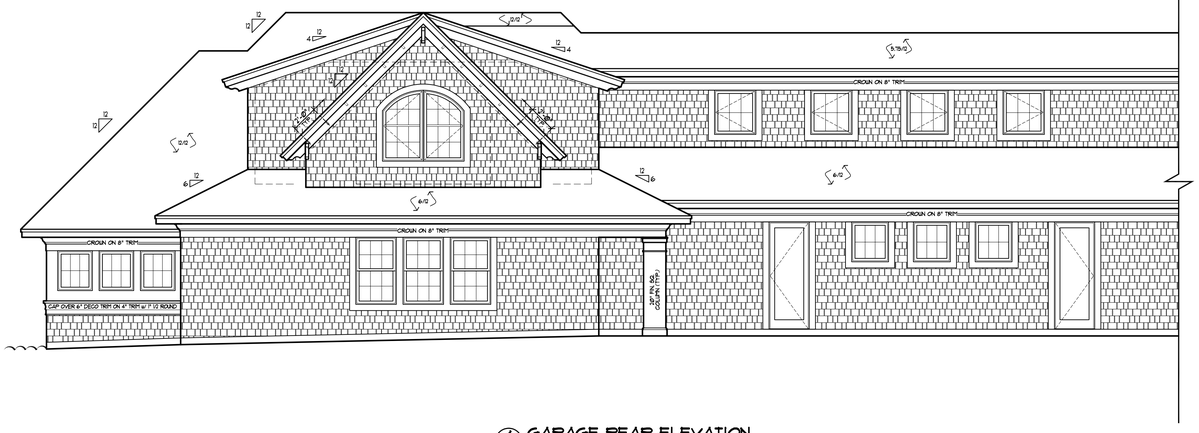


2 / 1 GARAGE FRONT ELEVATION
SCALE: 1/4"=1'-0"



3 / 1 GARAGE SIDE ELEVATION
SCALE: 1/4"=1'-0"





4 / 1 GARAGE REAR ELEVATION
SCALE: 1/4"=1'-0"

CEDAR SHAKE ROOF

6" CROWN ON 8" TRIM FRIEZE w/ 6" REVEAL

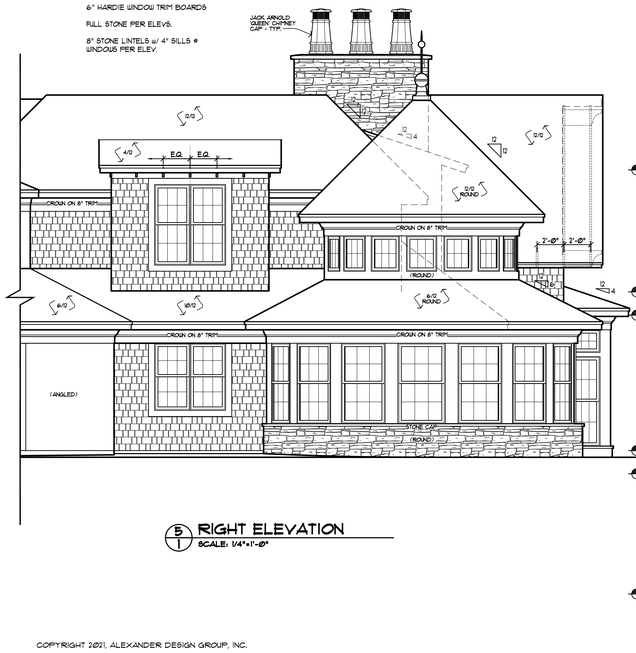
2x8 DECORATIVE RAFTER FRIEZE @ GABLES

CEDAR SHAKE SIDING PER ELEV.

6" HARDIE WINDOW TRIM BOARDS

FULL STONE PER ELEVS.

8" STONE LINTELS w/ 4" SILLS @ WINDOWS PER ELEV.



5 / 1 RIGHT ELEVATION
SCALE: 1/4"=1'-0"

6 / 1 REAR ELEVATION
SCALE: 1/4"=1'-0"

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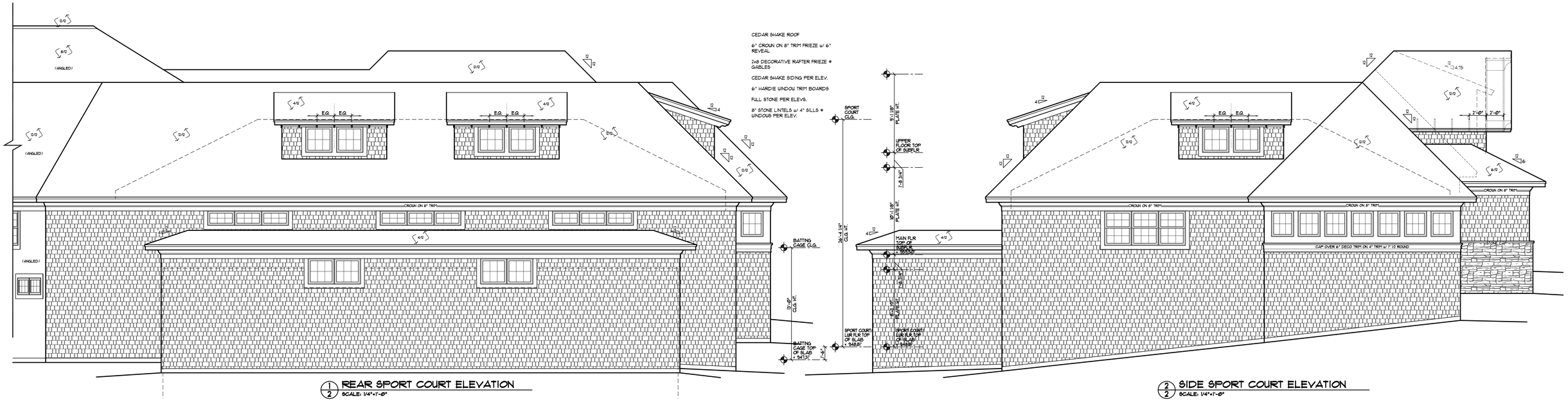
ALEXANDER DESIGN GROUP
275 LAKE STREET EAST
SUITE 102
WAYZATA, MN 55391
Phone: 952.473.8777
FAX: 952.473.8222

ISSUE DATE:
6 MAY 2021
PREVIOUS ISSUE DATES:

DRAWING DESCRIPTION:
SITE PLAN
REVIEW SET

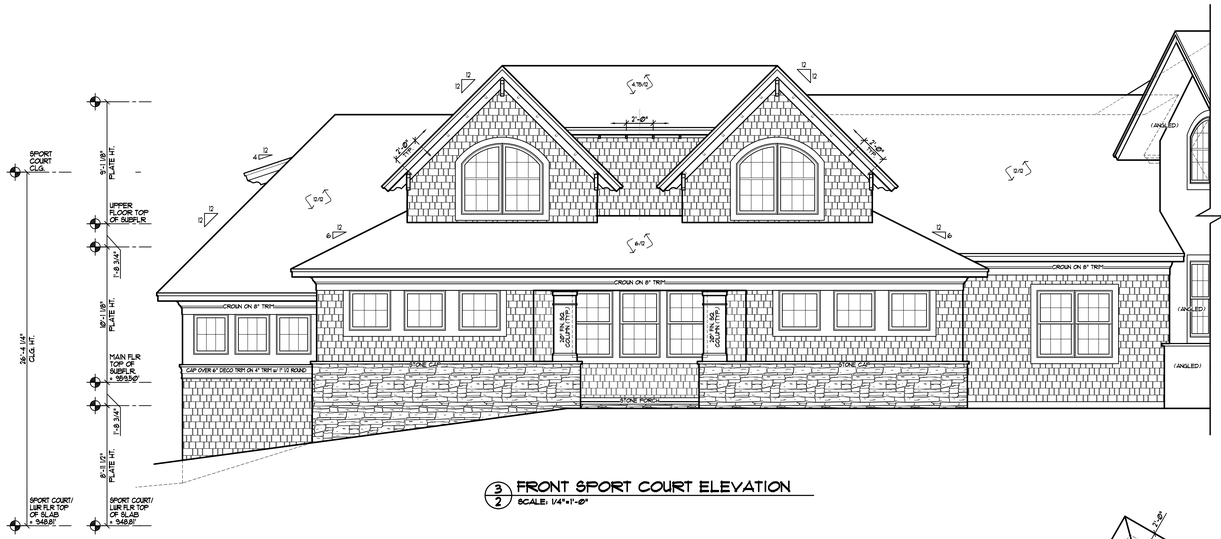
WINDY HILL ROAD RESIDENCE
100 WINDY HILL RD.
SUNFISH LAKE, MN
55077

1
1 OF 14

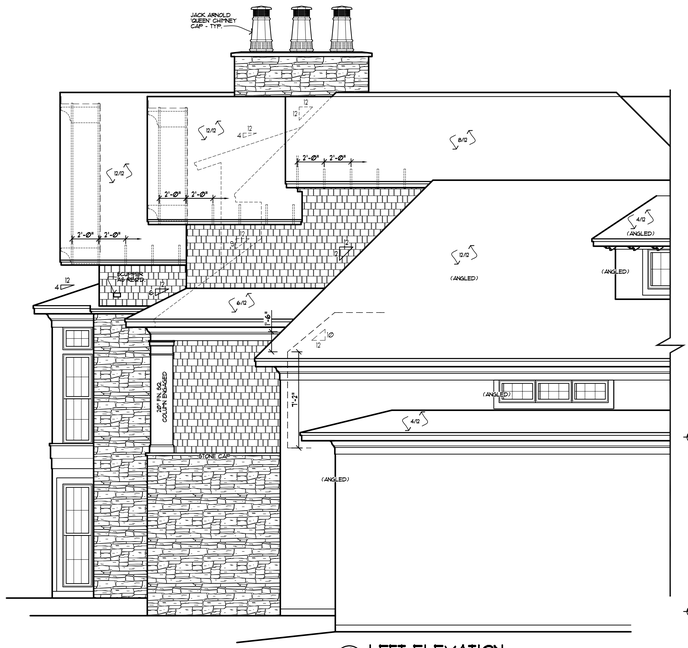


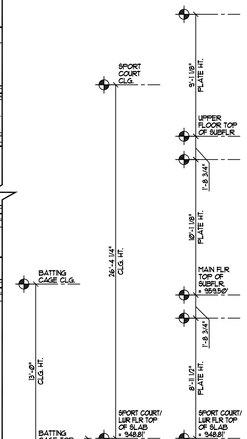
1/2 REAR SPORT COURT ELEVATION
SCALE: 1/4"=1'-0"

2/2 SIDE SPORT COURT ELEVATION
SCALE: 1/4"=1'-0"



3/2 FRONT SPORT COURT ELEVATION
SCALE: 1/4"=1'-0"





CEDAR SHAKE ROOF

6" CROWN ON 8" TRIM FRIEZE w/ 6" REVEAL

2x8 DECORATIVE RAFTER FRIEZE @ GABLES

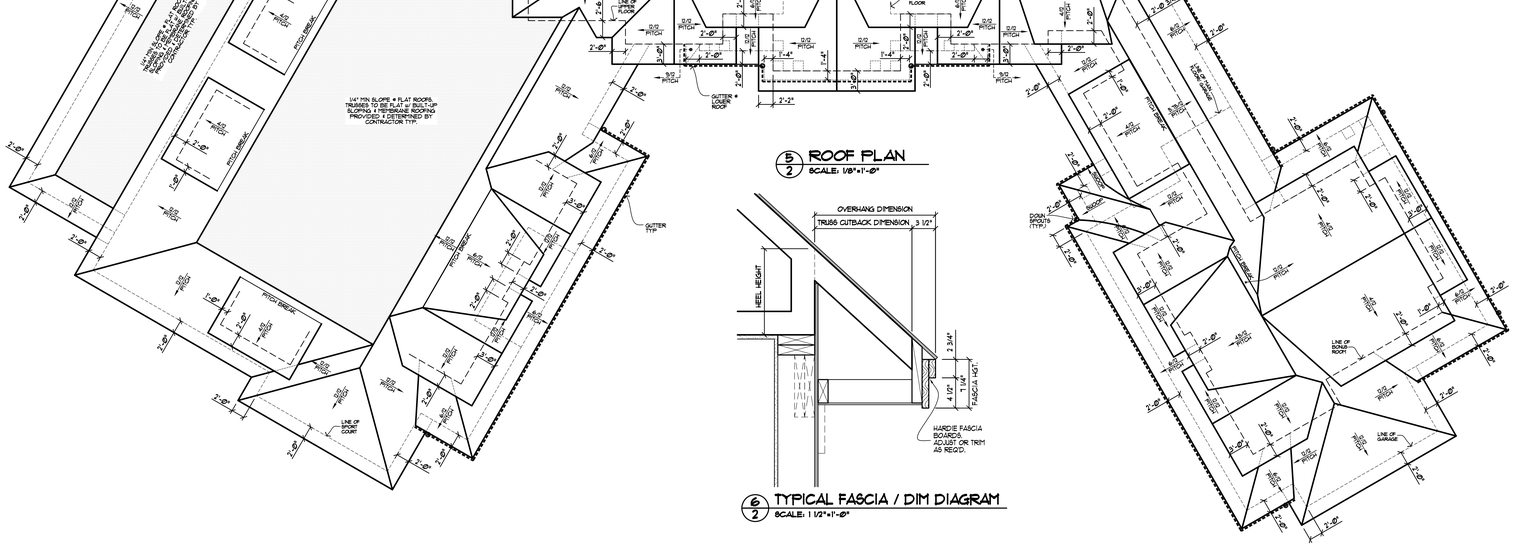
CEDAR SHAKE SIDING PER ELEV.

6" HARDIE WINDOW TRIM BOARDS

FULL STONE PER ELEVS.

8" STONE LINTELS w/ 4" SILLS @ WINDOWS PER ELEV.

4/2 LEFT ELEVATION
SCALE: 1/4"=1'-0"



5/2 ROOF PLAN
SCALE: 1/8"=1'-0"

6/2 TYPICAL FASCIA / DIM DIAGRAM
SCALE: 1 1/2"=1'-0"

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SUITE 102
WAYZATA, MN 55391
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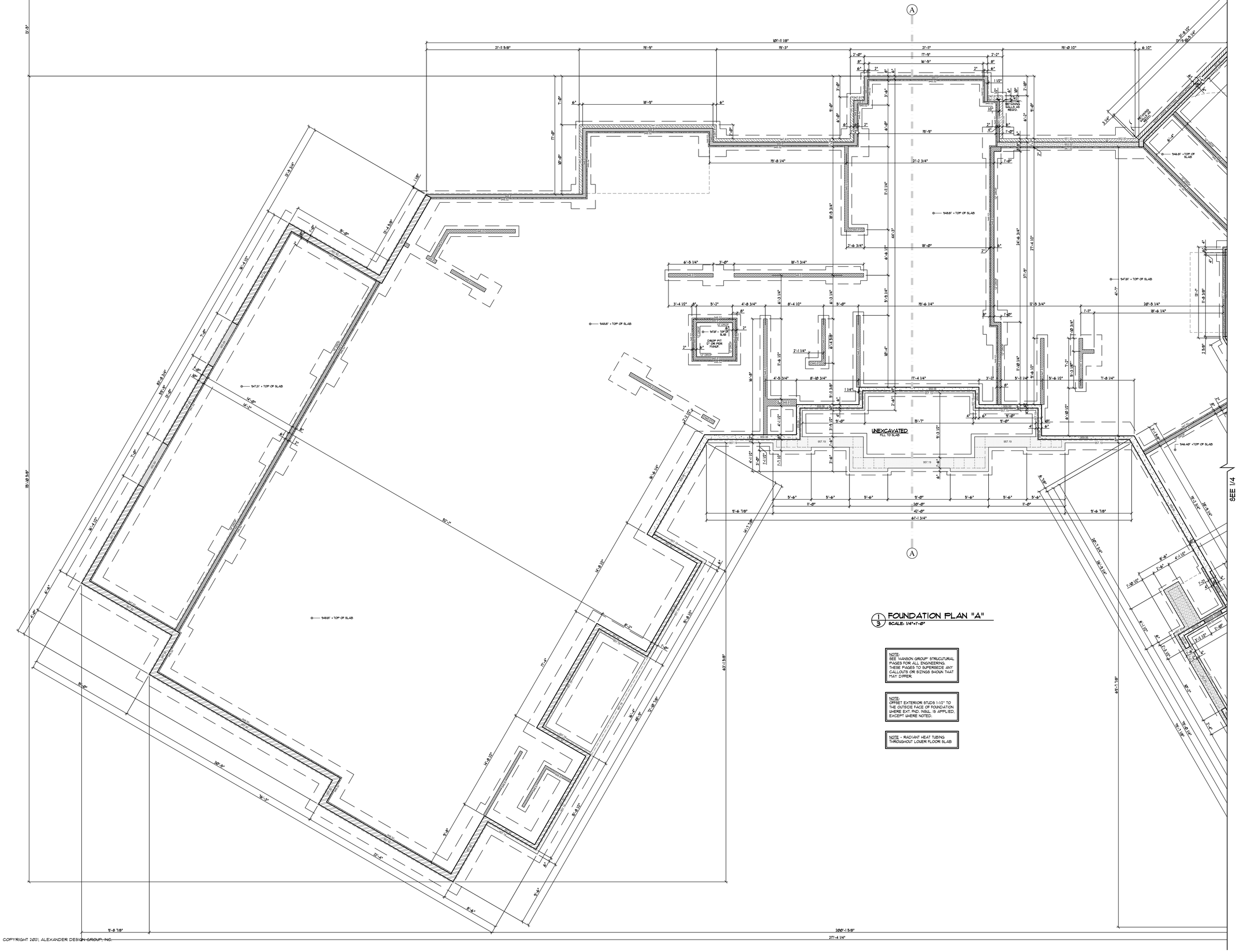
REVIEW SET

WINDY HILL ROAD RESIDENCE
100 WINDY HILL RD.
SUNFISH LAKE, MN
55077

2
2 OF 14



1/3 FOUNDATION PLAN "A"

SCALE: 1/4"=1'-0"

NOTE:
SEE 'HANSON GROUP' STRUCUTURAL PAGES FOR ALL ENGINEERING. THESE PAGES TO SUPERSEDE ANY CALLOUTS OR SIZINGS SHOWN THAT MAY DIFFER.

NOTE:
OFFSET EXTERIOR STUDS 1-1/2" TO THE OUTSIDE FACE OF FOUNDATION WHERE EXT. FND. INSUL. IS APPLIED, EXCEPT WHERE NOTED.

NOTE - RADIANT HEAT TUBING THROUGHOUT LOWER FLOOR SLAB

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ALEXANDER DESIGN GROUP
275 LAKE STREET EAST
SUITE 102
WAYZATA, MN 55391
Phone: 952.473.8777
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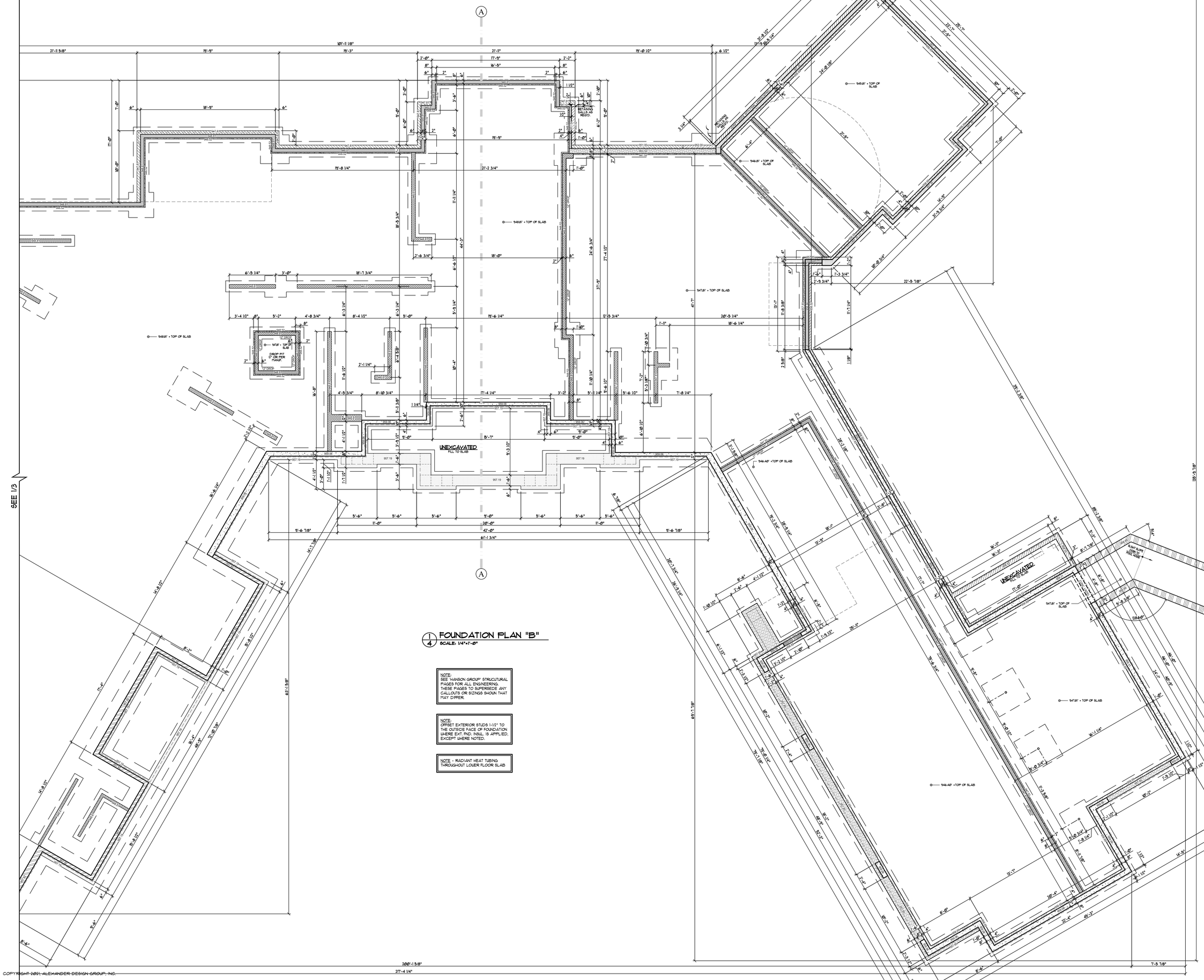
ISSUE DATE:
6 MAY 2021
PREVIOUS ISSUE DATES:

DRAWING DESCRIPTION:

SITE PLAN
REVIEW SET

WINDY HILL ROAD RESIDENCE
100 WINDY HILL RD.
SUNFISH LAKE, MN
55077

3
3 OF 14


SEE 1/3
SEE SHEET 14
UNEXCAVATED
FILL TO SLAB
948.81' +TOP OF SLAB
947.81' +TOP OF SLAB
946.40' +TOP OF SLAB
DROP PIT 12" CIR. PIER FOOTING
12" DECK
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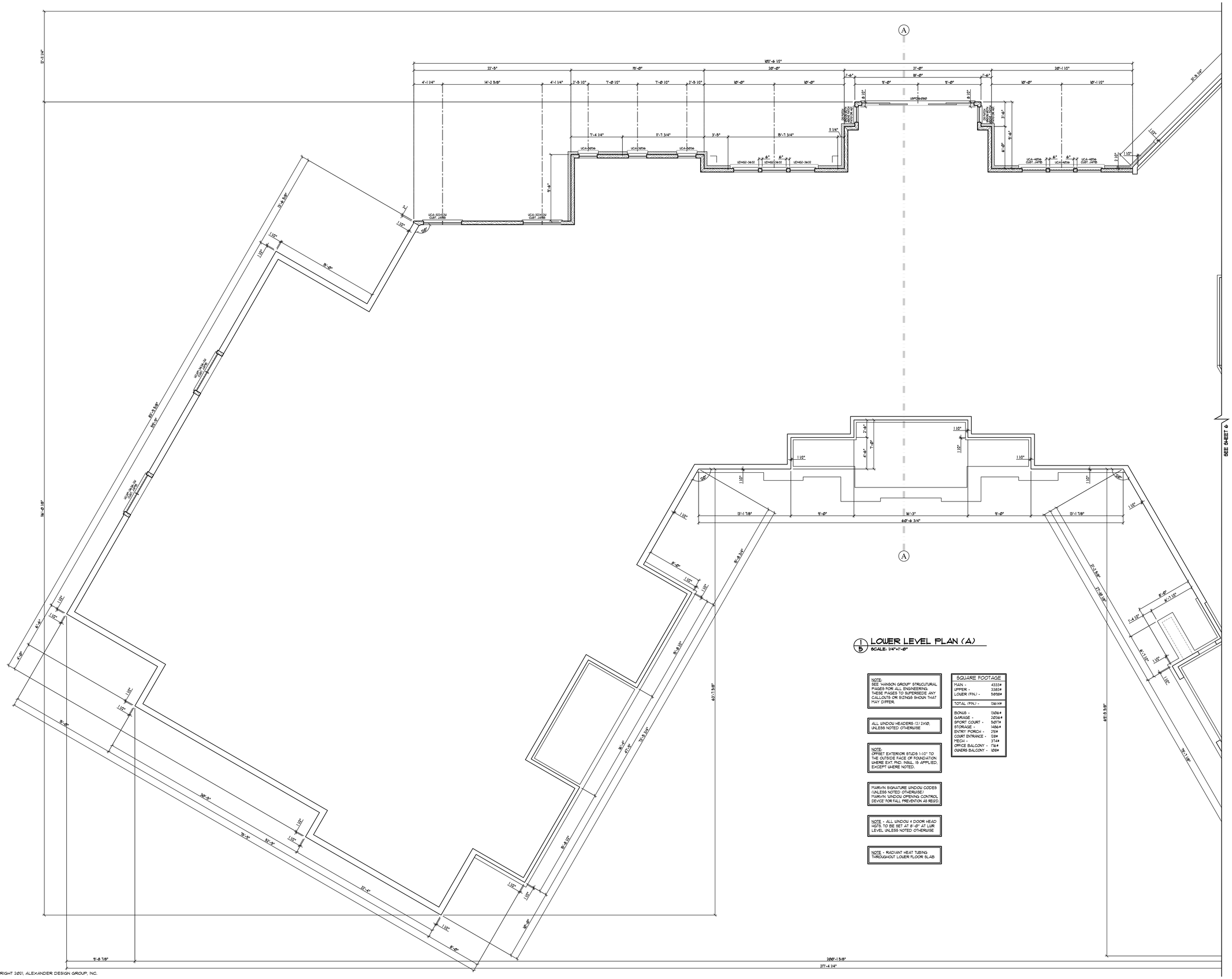
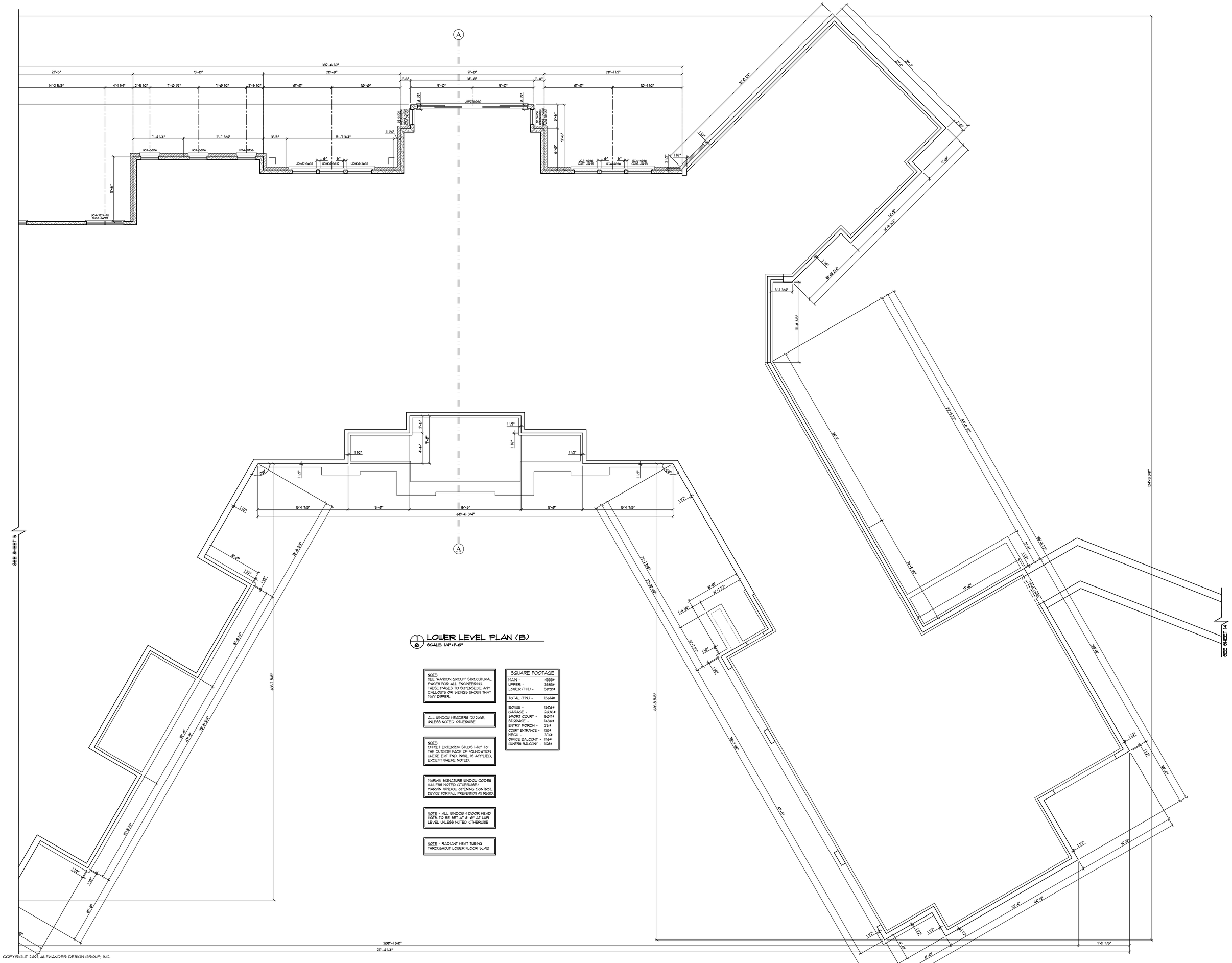

A
17'-2 1/4"
16'-9 7/8"
SEE SHEET 6
22'-5"
19'-0"
20'-0"
21'-0"
20'-1 1/2"
160'-6 1/2"
4'-1 1/4"
14'-2 5/8"
4'-1 1/4"
2'-5 1/2"
7'-0 1/2"
7'-0 1/2"
2'-5 1/2"
18'-0"
18'-0"
1'-6"
9'-0"
18'-0"
9'-0"
1'-6"
18'-0"
18'-0 1/2"
31'-3 1/4"
8 1/2"
8 1/2"
USPC34060
PATIO DOOR ROUGH OPENING 6'-0" WIDE BY 6'-8" HIGH
PATIO DOOR ROUGH OPENING 6'-0" WIDE BY 6'-8" HIGH
3'-6"
9'-6"
6'-0"
7'-4 1/4"
11'-7 3/4"
3'-5"
15'-7 3/4"
11 1/4"
UCA-4036
UCA-4036
UCA-4036
UCH402-3632
6"
6"
UCH402-3632
UCH402-3632
UCA-4036 CUST. JAMB
6"
6"
UCA-4036
UCA-4036 CUST. JAMB
1 1/2"
1 1/2"
UCA-3224LTU CUST. JAMB
UCA-3224LTU CUST. JAMB
9'-6"
7"
1 1/2"
90°
1 1/2"
1 1/2"
8'-6"
63'-3 5/8"
UCA-3624LTU CUST. JAMB
UCA-3624LTU CUST. JAMB
UCA-3624LTU CUST. JAMB
35'-3"
6'-3 5/8"
6'-6"
6'-0"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
1 1/2"
2'-6"
4'-6"
7'-0"
1 1/2"
1 1/2"
1 1/2"
90°
90°
13'-1 7/8"
9'-0"
16'-3"
9'-0"
13'-1 7/8"
60'-6 3/4"
8'-0"
1 1/2"
8'-8 3/4"
8'-8 3/4"
8'-8 3/4



1/6 LOWER LEVEL PLAN (B)

SCALE: 1/4"=1'-0"

NOTE:
SEE 'HANSON GROUP' STRUCTURAL PAGES FOR ALL ENGINEERING. THESE PAGES TO SUPERSEDE ANY CALLOUTS OR SIZINGS SHOWN THAT MAY DIFFER.

ALL WINDOW HEADERS (2) 2X10, UNLESS NOTED OTHERWISE

NOTE:
OFFSET EXTERIOR STUDS 1-1/2" TO THE OUTSIDE FACE OF FOUNDATION WHERE EXT. FND. INSUL. IS APPLIED, EXCEPT WHERE NOTED.

MARVIN SIGNATURE WINDOW CODES (UNLESS NOTED OTHERWISE)
MARVIN WINDOW OPENING CONTROL DEVICE FOR FALL PREVENTION AS REQ'D.

NOTE - ALL WINDOW & DOOR HEAD HGTS. TO BE SET AT 8'-0" AT LWR LEVEL UNLESS NOTED OTHERWISE

NOTE - RADIANT HEAT TUBING THROUGHOUT LOWER FLOOR SLAB

SQUARE FOOTAGE	
MAIN -	4333#
UPPER -	3383#
LOWER (FIN.) -	5898#
TOTAL (FIN.) -	13614#
BONUS -	1306#
GARAGE -	2036#
SPORT COURT -	9617#
STORAGE -	1486#
ENTRY PORCH -	291#
COURT ENTRANCE -	128#
MECH -	374#
OFFICE BALCONY -	176#
OWNERS BALCONY -	126#

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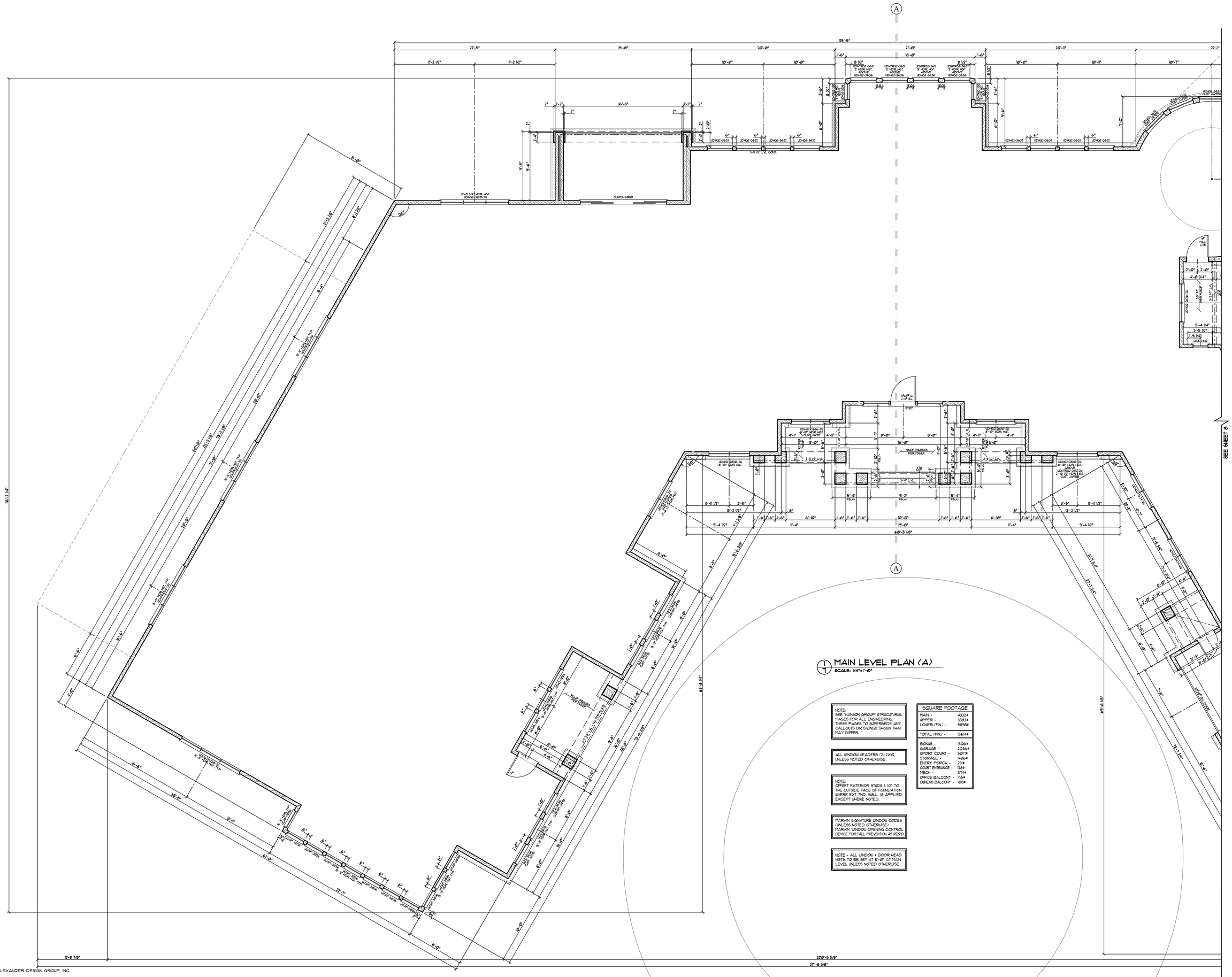
ALEXANDER DESIGN GROUP
275 LAKE STREET EAST
SUITE 102
WAYZATA, MN 55391
Phone: 952.473.8777
FAX: 952.473.8222

ISSUE DATE:
6 MAY 2021
PREVIOUS ISSUE DATES:

DRAWING DESCRIPTION:
SITE PLAN
REVIEW SET

WINDY HILL ROAD RESIDENCE
100 WINDY HILL RD.
SUNFISH LAKE, MN
55077

6
6 OF 14



1 MAIN LEVEL PLAN (A)
SCALE: 1/4"=1'-0"

NOTE:
SEE THANSON GROUP STRUCTURAL PAGES FOR ALL ENGINEERING. THESE PAGES TO SUPERSEDE ANY CALLOUTS OR SIZINGS SHOWN THAT MAY DIFFER.

ALL WINDOW HEADERS (2) 2X10, UNLESS NOTED OTHERWISE

NOTE:
OFFSET EXTERIOR STUDS 1-1/2" TO THE OUTSIDE FACE OF FOUNDATION WHERE EXT. IND. INSUL. IS APPLIED, EXCEPT WHERE NOTED.

MARVIN SIGNATURE WINDOW CODES (UNLESS NOTED OTHERWISE): MARVIN WINDOW OPENING CONTROL DEVICE FOR FALL PREVENTION AS REQ'D.

NOTE - ALL WINDOW & DOOR HEAD HGTS. TO BE SET AT 8'-0" AT MAIN LEVEL UNLESS NOTED OTHERWISE

SQUARE FOOTAGE	
MAIN -	4333#
UPPER -	3383#
LOWER (FIN.) -	5858#
TOTAL (FIN.) -	13614#
BONUS -	1306#
GARAGE -	2036#
SPORT COURT -	5071#
STORAGE -	1496#
ENTRY PORCH -	29#
COURT ENTRANCE -	128#
MECH -	374#
OFFICE BALCONY -	176#
OWNERS BALCONY -	108#

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275 LAKE STREET EAST
SUITE 102
WAYZATA, MN 55391
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ISSUE DATE:
6 MAY 2021
PREVIOUS ISSUE DATES:

DRAWING DESCRIPTION:
SITE PLAN
REVIEW SET

WINDY HILL ROAD RESIDENCE
100 WINDY HILL RD.
SUNFISH LAKE, MN
55077

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1/8 MAIN LEVEL PLAN (B)

SCALE: 1/4"=1'-0"

NOTE:
SEE "HANSON GROUP" STRUCUTRAL PAGES FOR ALL ENGINEERING. THESE PAGES TO SUPERSEDE ANY CALLOUTS OR SIZINGS SHOUN THAT MAY DIFFER.

ALL WINDOW HEADERS (2) 2X10, UNLESS NOTED OTHERWISE

NOTE:
OFFSET EXTERIOR STUDS 1-1/2" TO THE OUTSIDE FACE OF FOUNDATION WHERE EXT. FND. INSUL. IS APPLIED, EXCEPT WHERE NOTED.

MARVIN SIGNATURE WINDOW CODES (UNLESS NOTED OTHERWISE)
MARVIN WINDOW OPENING CONTROL DEVICE FOR FALL PREVENTION AS REQ'D.

NOTE - ALL WINDOW & DOOR HEAD HGTS. TO BE SET AT 8'-0" AT MAIN LEVEL UNLESS NOTED OTHERWISE

SQUARE FOOTAGE	
MAIN -	4333#
UPPER -	3383#
LOWER (FIN.) -	5898#
TOTAL (FIN.) -	13614#
BONUS -	1306#
GARAGE -	2036#
SPORT COURT -	5071#
STORAGE -	1486#
ENTRY PORCH -	29l#
COURT ENTRANCE -	128#
MECH -	374#
OFFICE BALCONY -	176#
OWNERS BALCONY -	108#

SEE SHEET 7

SEE SHEET 14

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SUITE 102
WAYZATA, MN 55391
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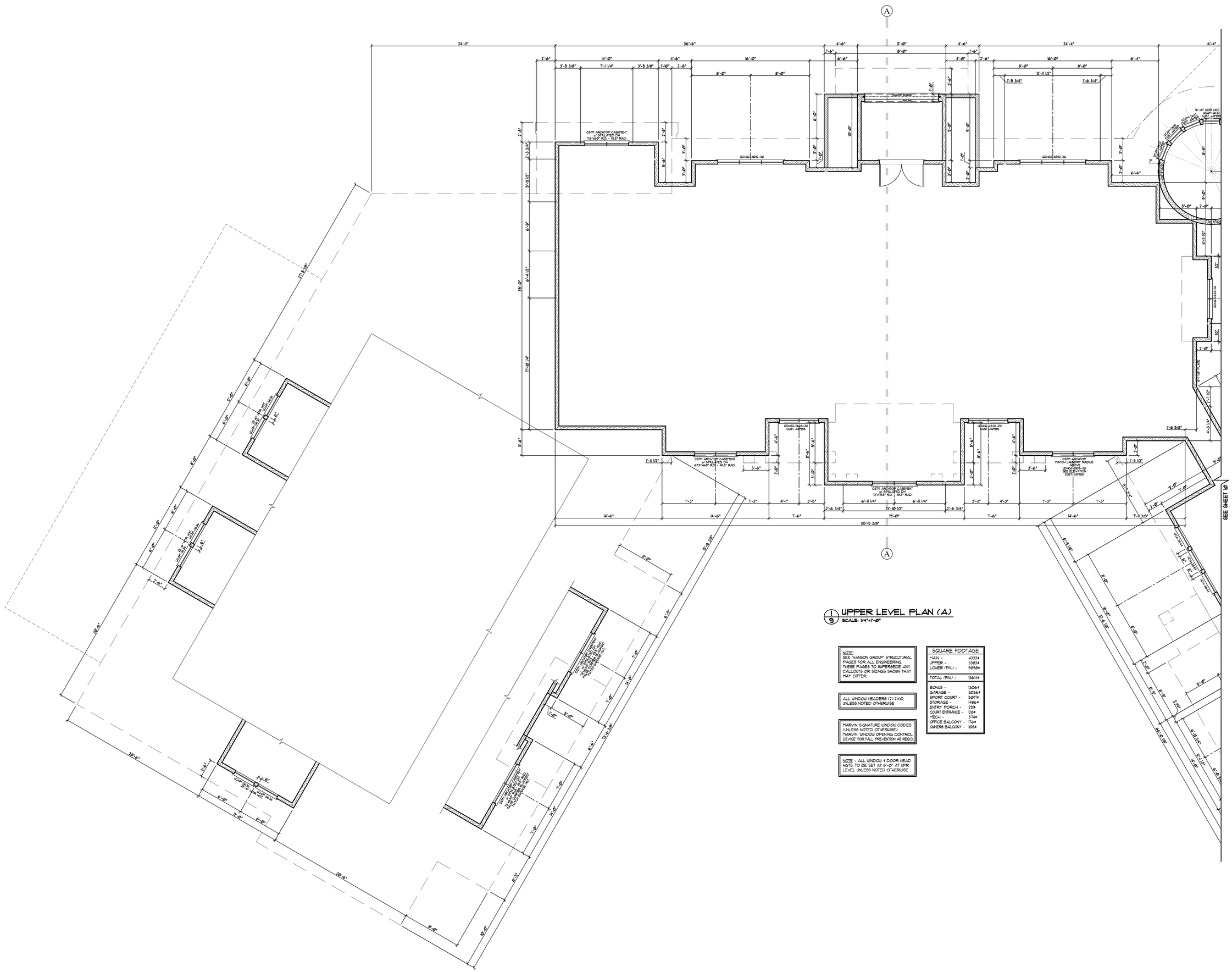
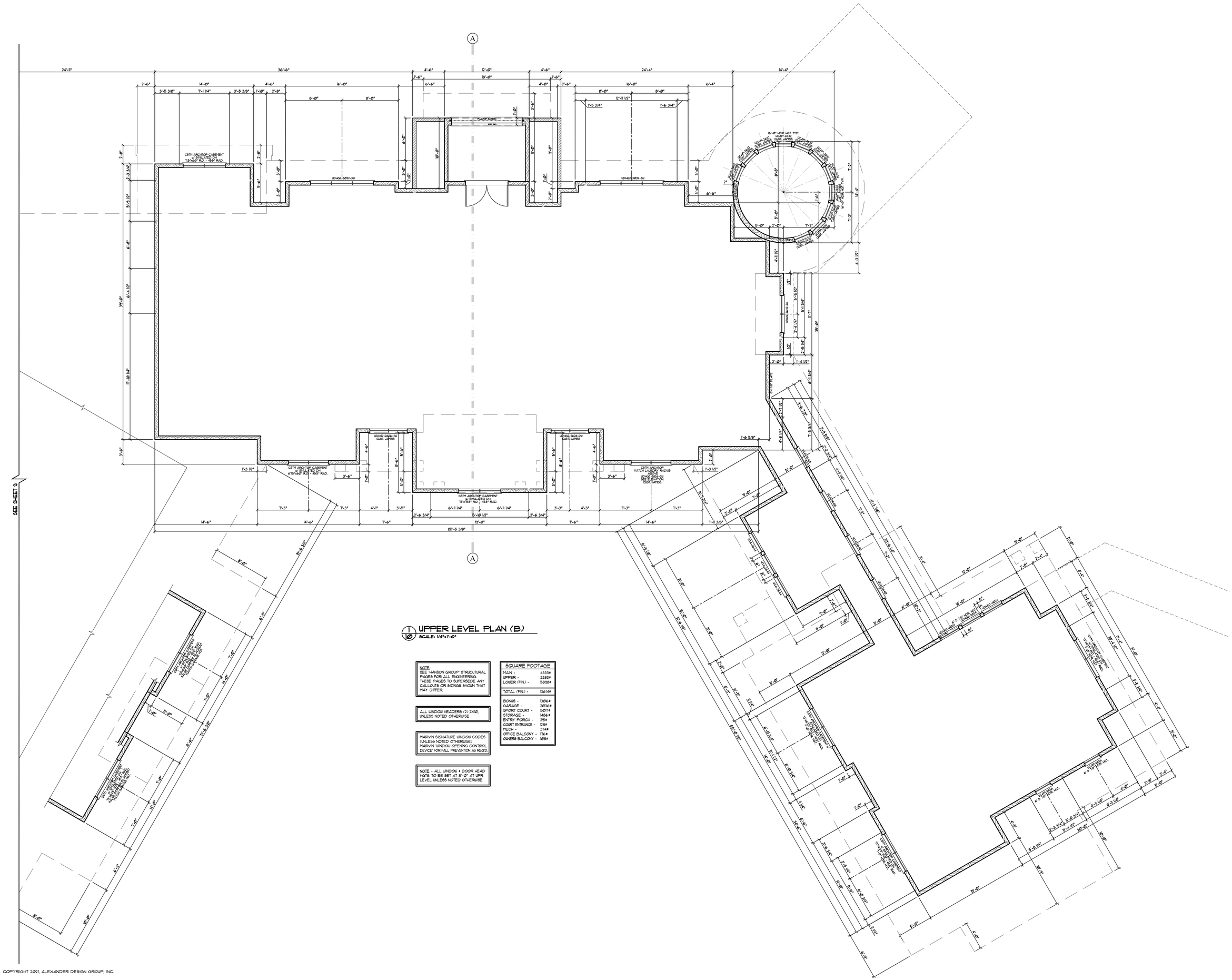
ISSUE DATE:
6 MAY 2021
PREVIOUS ISSUE DATES:

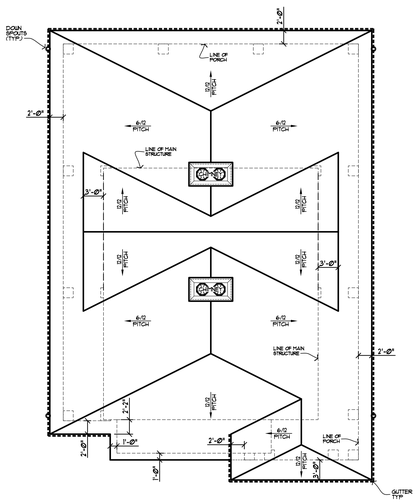
DRAWING DESCRIPTION:
SITE PLAN
REVIEW SET

WINDY HILL ROAD RESIDENCE
100 WINDY HILL RD.
SUNFISH LAKE, MN
55077

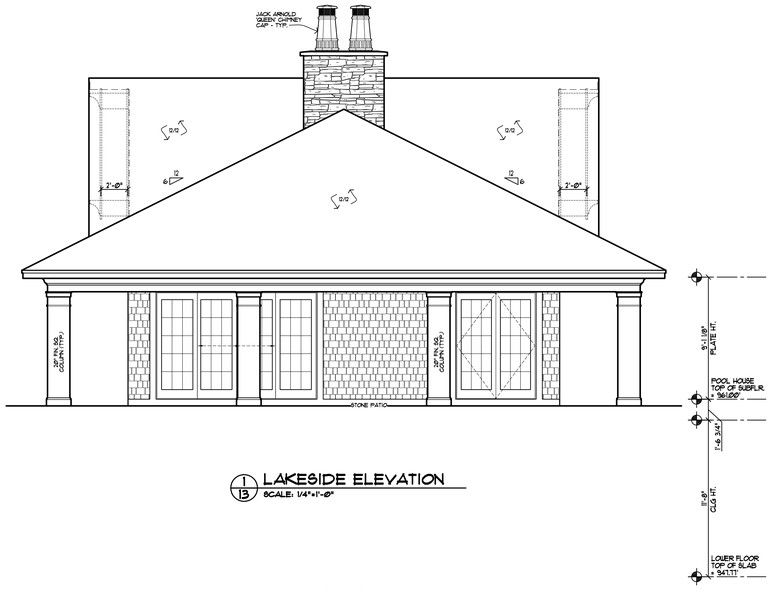
8
8 OF 14


A
24'-11"
36'-6"
4'-6"
12'-0"
4'-6"
24'-4"
14'-4"
2'-6"
14'-0"
4'-6"
16'-0"
4'-6"
18'-0"
4'-0"
2'-6"
16'-0"
6'-4"
3'-5 3/8"
7'-1 1/4"
3'-5 3/8"
1'-10"
2'-8"
8'-0"
8'-0"
6'-6"
8'-0"
8'-0"
12'-11 1/2"
7'-5 3/4"
7'-6 3/4"
C&TH ARCHITOP EASEMENT W/ SPELLATED DH 113'-9.60" RAD. - 49.5° RAD.
UCH402-3630-3U
UCH402-3630-2U CUST. LAMISS
16'-0" HDR. HGT. (C.A.P.-2630 CUST. LAMISS)
2'-8"
2'-3 3/4"
5'-3 1/2"
6'-8"
6'-4 1/2"
39'-0"
11'-8 1/4"
3'-6"
3'-6"
6'-6"
5'-0"
2'-0"
4'-3 1/2"
1/2"
2'-0"
6'-1 1/8" PLATE
2'-1 1/2"
7'-6 5/8"
4'-9 1/4"
5'-0"
1'-3 1/2"
C&TH ARCHITOP EASEMENT W/ SPELLATED DH 6'13'-9.60" RAD. - 49.5° RAD.
C&TH ARCHITOP EASEMENT W/ SPELLATED DH 13'-9.60" RAD. - 49.5° RAD.
C&TH ARCHITOP MATCH LAMONT RADIUS UCH402-2U SEE ELEVATION CUST.LAMISS
1'-3 1/2"
T'-3"
T'-3"
4'-1"
3'-5"
6'-11 1/4"
6'-11 1/4"
3'-3"
4'-3"
T'-3"
T'-3"
14'-6"
14'-6"
T'-6"
2'-6 3/4"
19'-10 1/2"
2'-6 3/4"
T'-6"
19'-0"
14'-6"
T'-11 3/8"
85'-5 3/8"
SEE SHEET 10
77'-5 1/8"
11'-0"
6'-0"
8'-0"
11'-0"
6'-0"
7'-6"
39'-6"
8'-0"
8'-0"
6'-3"
15'-5 3/8"
8'-0"
7'-0"
14'-0"
7'-0"
14'-0"
7'-0"
14

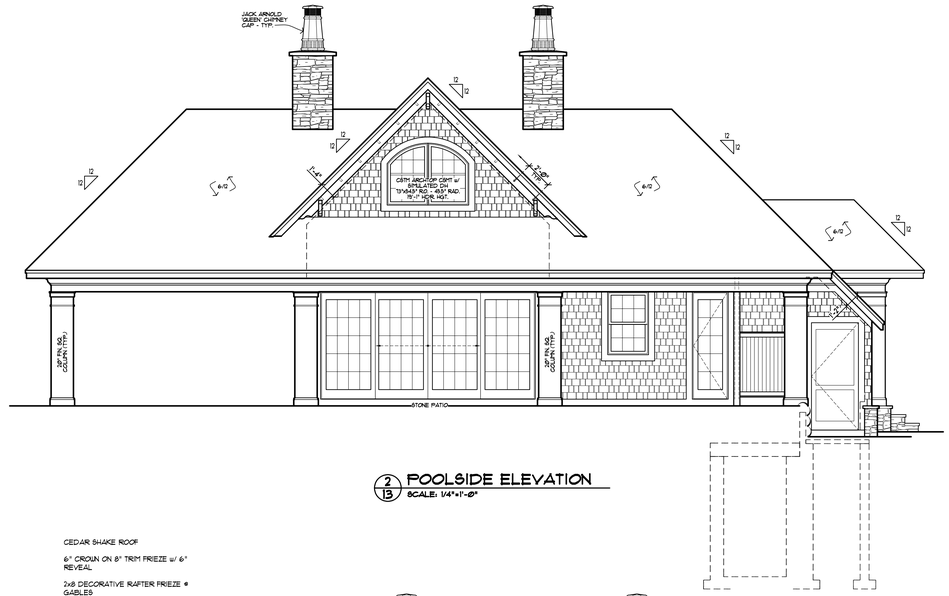

A
24'-11"
36'-6"
4'-6"
12'-0"
4'-6"
24'-4"
14'-4"
18'-0"
1'-6"
1'-6"
2'-6"
14'-0"
16'-0"
8'-0"
8'-0"
12'-11 1/2"
T-5 3/4"
T-6 3/4"
3'-5 3/8"
T-1 1/4"
3'-5 3/8"
1'-10"
2'-8"
2'-8"
3'-0"
3'-0"
6'-0"
18'-0"
9'-0"
7'-0"
2'-0"
3'-6"
1'-0"
39'-0"
11'-10 1/4"
6'-8"
6'-4 1/2"
2'-3 3/4"
5'-3 1/2"
CSTH ARCHITOP CASEMENT W/ SPRLATED DH 7.5"x66.0" RO, - 45.5° RAD.
UDH60 3652-3U
Fountain Screen
Axis No.
W/ 4'-0" HDR HGT. TYP.
UCHP-3630 CUST. JAMBS
UCHP-3630 CUST. JAMBS
UCHP-3630 CUST. JAMBS



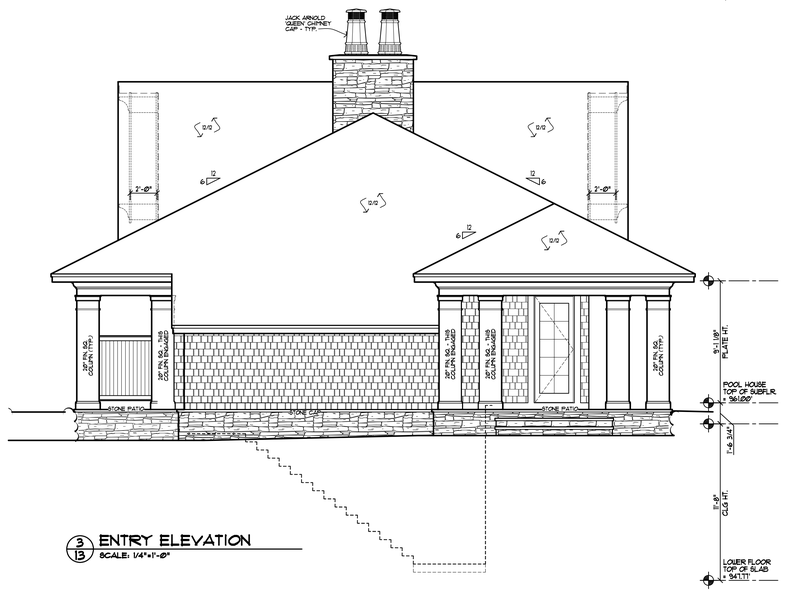
6/13 ROOF PLAN
SCALE: 1/8"=1'-0"



1/13 LAKESIDE ELEVATION
SCALE: 1/4"=1'-0"



2/13 POOLSIDE ELEVATION
SCALE: 1/4"=1'-0"



3/13 ENTRY ELEVATION
SCALE: 1/4"=1'-0"

CEDAR SHAKE ROOF

6" CROWN ON 8" TRIM FRIEZE w/ 6" REVEAL

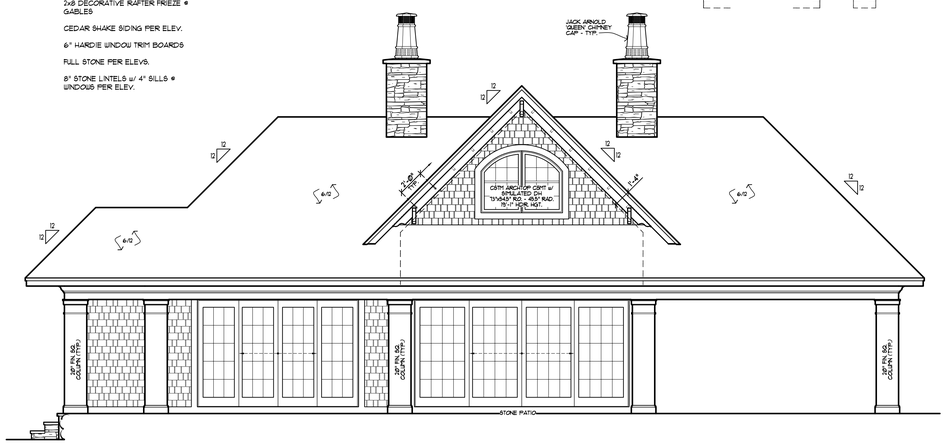
2x8 DECORATIVE RAFTER FRIEZE @ GABLES

CEDAR SHAKE SIDING PER ELEV.

6" HARDIE WINDOW TRIM BOARDS

FULL STONE PER ELEVS.

8" STONE LINTELS w/ 4" SILLS @ WINDOWS PER ELEV.



4/13 RINKSIDE ELEVATION
SCALE: 1/4"=1'-0"

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SUITE 102
WAYZATA, MN 55391
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ISSUE DATE:
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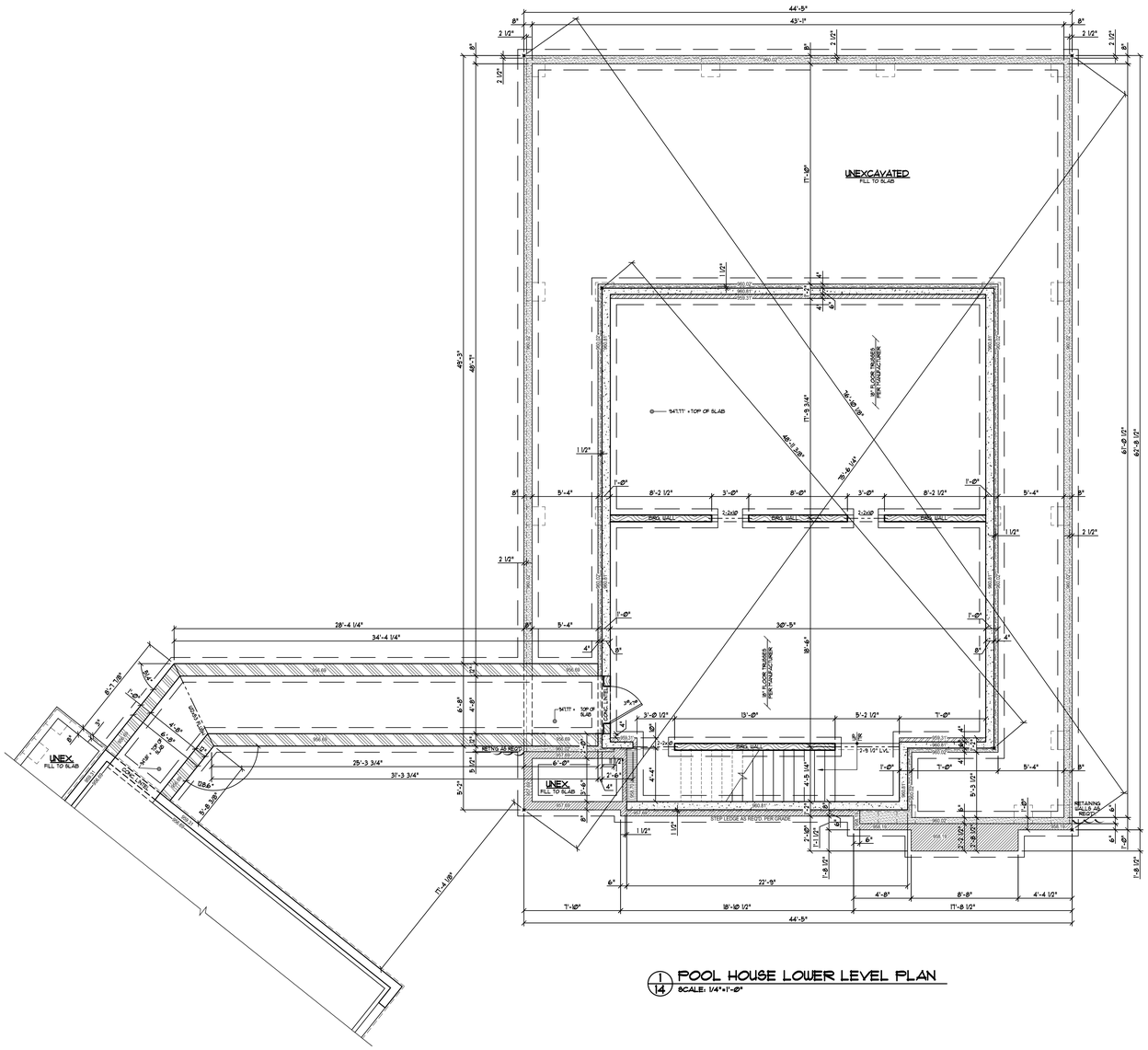
PREVIOUS ISSUE DATES:

DRAWING DESCRIPTION:

SITE PLAN
REVIEW SET

WINDY HILL ROAD RESIDENCE
120 WINDY HILL RD.
SUNFISH LAKE, MN
55077

13
13 OF 14


UNEXCAVATED
FILL TO SLAB
UNEX.
FILL TO SLAB
44'-5"
43'-1"
49'-3"
46'-1"
17'-9"
17'-3 3/4"
28'-4 1/4"
34'-4 1/4"
25'-3 3/4"
31'-3 3/4"
30'-5"
18'-4"
22'-9"
4'-8"
8'-8"
4'-4 1/2"
1'-10"
18'-10 1/2"
11'-8 1/2"
44'-5"
62'-8 1/2"
61'-8 1/2"
11'-4 1/8"
8'-1 7/8"
13'-0"
5'-2 1/2"
7'-0"
5'-4"
3'-0 1/2"
2'-6"
4'-5 1/4"
9'-3 1/2"
2'-9 1/2" LVL
6"
1'-8 1/2"
2'-3 3/8"
2'-10 1/2"
2'-1 1/2"
2'-8 3/8"
RETAINING WALL AS REQ'D
STEP LEDGE AS REQ'D PER GRADE
941.11' +TOP OF SLAB
941.77' +TOP OF SLAB
941.77' +TOP OF SLAB
941.77

CCR8410K

Chancellor Outdoor Lantern

Mystic Black

DETAILS

Material: Steel

Glass/Shade Description: Clear Glass

LAMPING

Light Source: Incandescent

Bulb Included: No

Bulb Type: Candelabra Base

Bulb Quantity: 3

Watts per Bulb: 60

ELECTRICAL

Dimmable: Yes

Voltage: 120v

Wire Length: 0.5'

DIMENSIONS

Dimensions: 10.00" W x 23.50" H x 11.00" D

Backplate Dimensions: 7.50"H x 5.50"W

HCWO: 11"

Weight: 9.00 lbs

INSTALLATION

Location Rating: Wet

Install Position: Down

Sloped Ceiling Compatible: No

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03/31/2013

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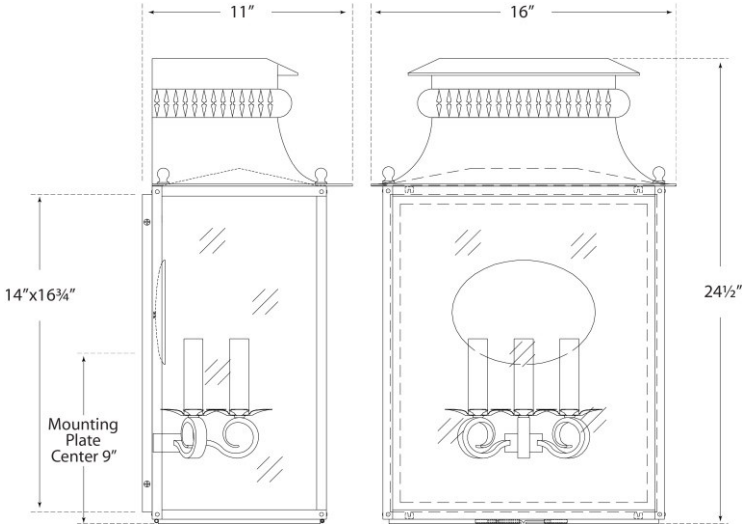
TEAR SHEET

Honore Large 3/4 Sconce
Item # SK 2327BC

Designer: Suzanne Kasler

Height: 24.5"
Width: 16"
Extension: 11"
Backplate: 14" x 16.75" Rectangle
Finishes: BC
Glass Options: CG
Socket: 3 - E12 Candelabra
Wattage: 3 - 60 C11
Weight: 23 Pounds



VISUAL COMFORT

auroralight™

TYPE:
CAT. #: HPL10-

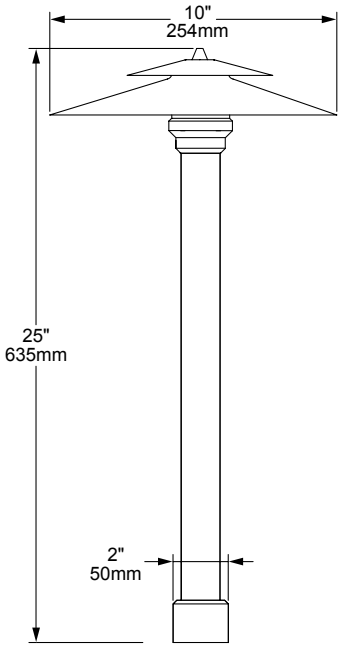
HPL10 BOREALIS

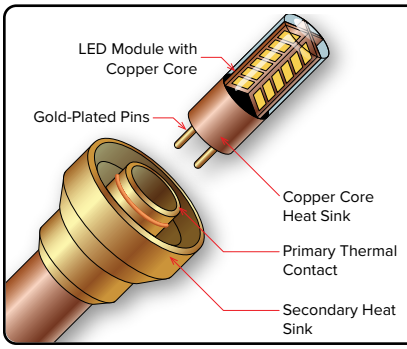
HPL10-NAT

The HPL10 graces the landscape with its regal profile and unparalleled craftsmanship. Scaled to suit architecture that requires a more substantial and bold look, this scale is well suited for illuminating grand driveways, walkways, and open areas requiring generous light spacing. Every HPL series path light includes a Thermally Integrated® Field Serviceable LED Module. Using Copper Core Technology®, the HPL LED module is precisely engineered to transfer heat away from the LED driver/circuit and dissipate throughout the luminaire, ensuring optimal performance, color consistency, and long life!

Features include:

- Interchangeable LED Module in 2.5, 3.5 or 5 Watts
- Up to 197 lumens at 5 Watts
- 2700 or 3000K (CRI 80 typ.)
- Thermally Integrated® Field Serviceable LED Module
- 12V Integral Driver, Dimmable to <10% typ.
- Compatible w/ 12V AC/DC ELV or MLV Transformers
- Solid Copper and Brass Construction
- Patent Pending





COPPER CORE TECHNOLOGY®

Copper Core® is a registered trademark of Auroralight. It is synonymous with the mark of quality and integrity. It means that our products are built upon a superior foundation of Solid Copper, ensuring every critical part functions seamlessly together Thermally integrated® one component to the next. Auroralight manufactured without compromise, engineered with passion, in the USA.

12V

THERMALLY INTEGRATED

SEE NEXT PAGE FOR ORDERING INFORMATION

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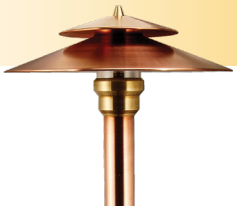
TYPE:
CAT. #: HPL10-

HPL10 BOREALIS



Prefix

ORDERING GUIDE: **HPL10** H (HIGH PERFORMANCE) PL (PATH LIGHT) 10 (INCHES)

INDICATES REQUIRED FIELD *INDICATES OPTIONAL FIELD* ✓ *INCLUDED* [_] *QUICK SPEC (See Below)*

QUICK SPEC SKU **HPL10-327-GS-NAT**

HPL10

Auroralight LED Module ✓
- **[227]** 2.5 Watts, 2700K
- **[230]** 2.5 Watts, 3000K
- **[327]** 3.5 Watts, 2700K
- **[330]** 3.5 Watts, 3000K
- **[527]** 5 Watts, 2700k
- **[530]** 5 Watts, 3000k

ACCESSORIES
(Select One)
- **[180]** 180˚ Directional Reflector™ *
- **[270]** 270˚ Directional Reflector™ *
- **[ID]** Internal Diffuser (Frosted)

* Visible light

MOUNT
- **[1/2]** 1/2" Male Thread
- **[2GS]** Ground Stake w 2" Cap ✓
- **[3GS]** Ground Stake w 3" Cap
- **[325GS]** Ground Stake w 3 1/4" Cap
- **[DS]** Deluxe Stake 9"
- **[TR-12]** 12" Trident Spike
- **[PB-S]** Power Box w/ Stake (Inc. 60W 120-12V transformer)
- **[PM-60]** 4" Pedestal Mount
- **[SM3]** 3 1/4" Surface Mount
- **[SM2]** 2 1/4" Surface Mount

FINISH
Standard:
- **[NAT]** Natural ✓

Plus ($):
- **[BLP]** Bronze Living Patina
- **[BLP-XD]** BLP Extra Dark

Premium ($$$):
- **[NI]** Nickel PVD
- **[PVD]** PVD Color (Contact Factory for Color Options)

ACCESSORIES

180 270 ID

MOUNTS

1/2 2GS 3GS 325GS DS TR PB-S PM SM2 SM3

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MADE IN THE USA

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auroralight™

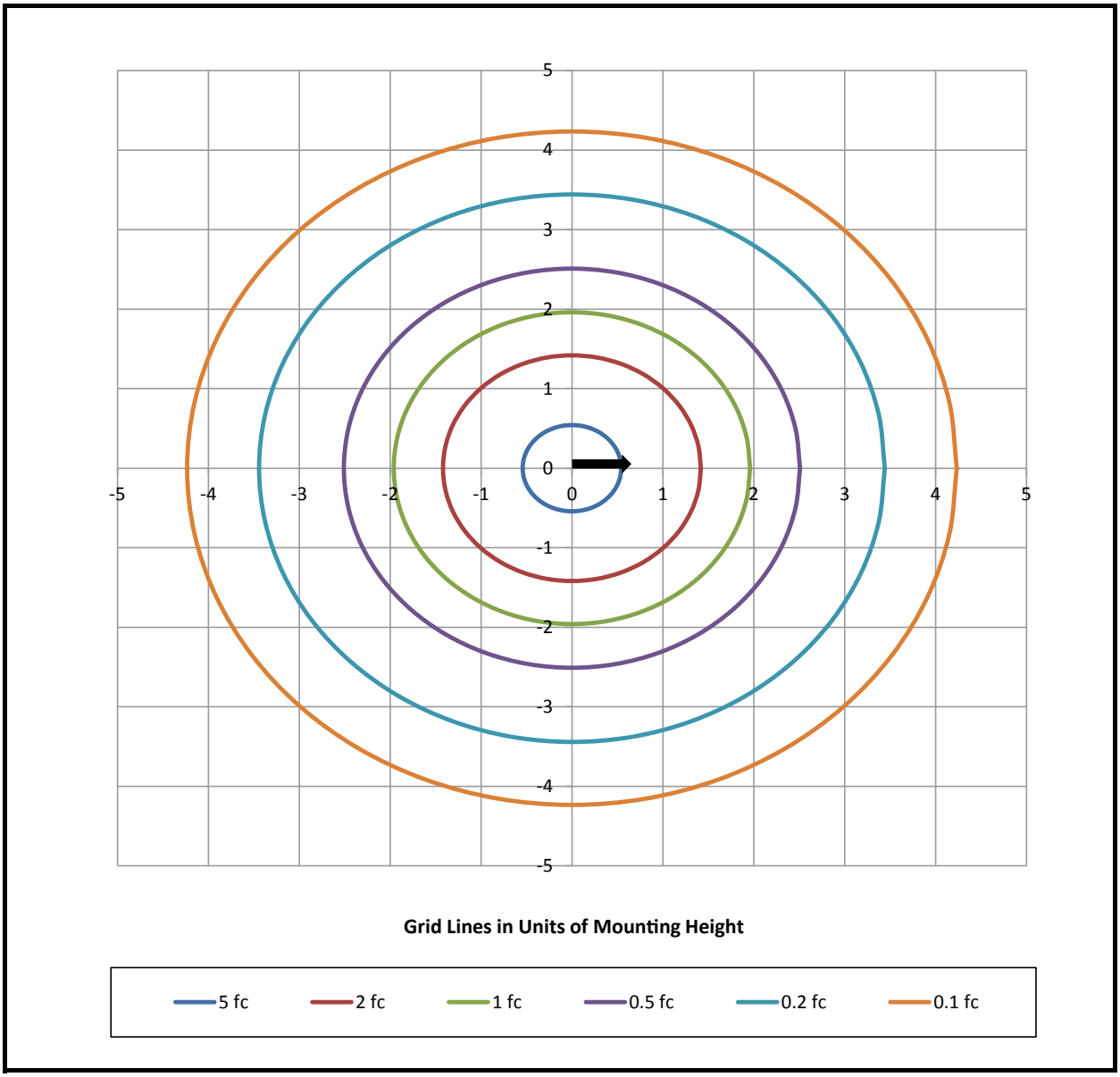
TYPE:
CAT. #: HPL10-

HPL10 BOREALIS

PHOTOMETRIC OVERVIEW

Information based on 5 Watts. To download more in-depth IES photometric data, visit auroralight.com/product/hpl10-borealis/

Mounting Height - 2 Feet



In a continuing product improvement program, Auroralight reserves the right to modify product specifications without notification. © 2020 Auroralight, Inc. REV~8.0 (2/2020)

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