**Final Site Plan and Special Permit**  
PLPZ 2021 00084

**Adam & Sarah Dolder**

Additions to property that would further exceed 150,000 cu. ft.

**Location:** 407 Round Hill Road

**Zone:** RA-4

**Parcel Size:** 7.316 ac  
(7.044 ac excluding accessway)

### Zoning Statistics

<table>
<thead>
<tr>
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<th>Existing</th>
<th>Proposed</th>
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<tbody>
<tr>
<td>GFA (SF)</td>
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<td>19,177</td>
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<tr>
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<tr>
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<tr>
<td>Volume (cu ft.)</td>
<td>157,676</td>
<td>177,529 sq. ft.</td>
<td>Over 150,000; special permit required</td>
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### Setbacks

<table>
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<tr>
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<th>House</th>
<th>Accessory Structures</th>
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<tr>
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**APPLICATION SUMMARY:**

The applicant is seeking Final Site Plan and Special Permit approval, to construct a pool house, outdoor ice rink, locker room structure, drainage systems, and associated utilities; the result of which would further exceed 150,000 cubic feet in building volume, requiring a special permit, per Sections 6-13, 6-14, 6-15, 6-17, 6-93, 6-101, and 6-205 of the Town of Greenwich Building Zone Regulations on a 7.32-acre parcel located at 407 Round Hill Road in the RA-4 Zone.

**ISSUES/COMMENTS:**

1. **LIGHTING** - It has been the common practice of the Commission to have the ARC review lighting of exterior sports courts on residential properties. The Commission should direct the applicant as to how they want the proposed lighting to be evaluated.
2. **ZEO** - the Zoning Enforcement Officer has noted that the kitchenette proposed in the pool house will need to meet the “Wet bar” definition in Sec. 6-5 of the BZR.
3. **CONSERVATION** – notes the amount of lawn area, a loss of vegetative cover, and extensive grading. Suggests a slight relocation of the proposed work to the west to lessen the amount of fill and disturbance. Noted that the proposed work area is in close proximity to the septic system and should be marked in the field, prior to the commencement of site work.
4. **Engineering** – notes revisions that need to be made prior to issuance of any zoning permit.

5. **IWWA** - IWWA issued wetlands approval (Permit 2021-0041) at their 3/22/2021 Meeting.

**DEPARTMENT COMMENTS:**
- ZEO - see attached
- CONSERVATION - see attached
- DPW ENGINEERING - see attached
- HEALTH -

**ZONING**
The property is rear lot containing 7.316 ac in the RA-4 zone. The property has conforming lot area, shape and frontage for a rear lot on Round Hill Road. It is bound by residential properties and the Round Hill Community Church to the southwest. There are wetlands and a watercourse on the east side of the property.

The site is improved with a relatively new single family dwelling, terraces, pool, driveway, parking courts, mechanical equipment, retaining walls, septic system, drainage system, grading and other associated improvements. This work was approved, by the Commission, under Final Site Plan/ Special Permit PLPZ 2015 00547, 548. The house and related site work is complete and all related permits appear to be closed.

The proposal appears to meet all required yards and the green area requirement of Sec. 6-205.

**POOL HOUSE:**
The applicant proposes to construct a new 821, sq. ft. pool house, south of the current pool. The structure is one (1) story with a crawl space foundation. The building is proposed to be 24’ 11” tall as measured from the grade plane.

The proposed floor plans note a great room, kitchenette, changing room, bedroom and two bathrooms. The ZEO has commented on the proposed plans and note that the kitchenette would need to meet the wet bar definition of Sec. 6-5(a) of the BZR, or the pool house would be considered a second unit on the property. This accessory building appears to comply with height, stories. Setback and floor area requirements (Sec 6-205).

**ICE RINK AND LOCKER ROOM:**
The applicant is proposing a lighted, open air, ice rink, with an adjacent 256 sq. ft. locker room building and ice grooming/Zamboni storage. That structure is proposed to be one (1) story with a crawl space foundation and is proposed to be 19’ 2 1/2” tall as measured from the grade plane. This accessory building appears to comply with height, stories. Setback and floor area requirements (Sec 6-205).
The ice rink is considered to be an accessory structure as it is over 1,000 sq. ft. in area. The applicant has noted that the rink would be lit by four light poles. Staff notes that the height of these poles are not noted and would need to meet zoning for structures in the zone. It has been the common practice of the Commission to have the ARC review lighting of exterior sports courts on residential properties. The Commission should direct the applicant as to how they want the proposed lighting to be evaluated.

**SPECIAL PERMIT:**
The proposed cubic volume is 177,529 cubic feet for the existing single family dwelling, the pool house and locker room building. This would further exceed the 150,000 cu. ft. threshold and pursuant to Sec 6-101(a), requires special permit approval from the Commission. The application is subject to the standards of Sec 6-17 of the Building Zone Regulations.

**SITE DISTURBANCE:**
Much of the work is within the IWWA upland review area. The applicant submitted to the IWWA a restoration plan for the sloping buffer that was established by the 2015 permit. This buffer was described to be “extensive”, at 85ft wide and some places over 100ft wide, and is intended to be maintained. The current plan would restore the overgrown meadow. The environmental assessment goes into mitigation and meadow management.

Four (4) mature trees will be removed from the disturbed area. The IWWA received comments from DEEP on bat species, the state endangered species that are present in the vicinity, and extensive comments on best management for the protection of bats. The applicant noted to the IWWA that the trees being removed are oaks and maples, species which are not typically trees that bat species roost in. The applicant is also proposing to save a significant tree east of the proposed rink, a 28” caliper Oak.

The sedimentation and erosion control plan shows silt fencing around the disturbed area and stockpile areas. Two (2) anti-tracking pads will be installed, to the north and south of the home, to access the areas of construction.

The Conservation Department has commented and noted several areas of concern. First the loss of lawn area being replaced with new hardscaped and/or fill, raises environmental and ecological concerns/ Second, the size of the land disturbance proposed is concerning as it is relatively large, and grading would be extensive. A shift to the west for the new pool and rink, is suggested to reduce fill and site disturbance. Third, the area of work is close to the current septic and they ask that the system be protected in the field to prevent heavy equipment and site work. Lastly, the planting and rain gardens are asked to be planted with native plants in improve bio-filtration and the natural environment.

**LANDSCAPING:**
A Wetland buffer and meadow enhancement plan was submitted showing planting and protection along the northern, eastern and southern property line, to the rear on the home.
HEALTH:
The site development plans include new, combined, septic system, on the south side of the property. These systems require State Health approval in addition to Greenwich Health Department approval. No comments from Health have been received at the time of this report.

APPLICABLE REGULATIONS:
Section 6-5 Definitions
Section 6-13 Site Plan Approval Required by Planning & Zoning Commission
Section 6-14 Procedure
Section 6-15 Standards
Section 6-17 Authorization of Use by Special Permit
Section 6-93 Permitted Uses in RA-4, RA-2, RA-1, R-20 and R-12 Zones
Section 6-101 Special Permit Required for business Zones and Residential Zones
Section 6-205 Schedule of Required Open Spaces, Limiting Heights and Bulk of Buildings
Ok for Zoning Permit Sign-off with the following revisions:

The “kitchenette” should be limited to what is permitted under the wet bar as defined in section 6-5

Resubmit the following prior to Site Plan/ Subdivision approval:

The subject site plan/subdivision meets the requirements of the Building Zone Regulations, excluding sections 6-15 and 6-17, and is Ok for Zoning Permit Sign-off.
Reviews provided by the Engineering Division are for compliance with the Town’s “Roadway Design Manual and Standard Construction Details” and “Drainage Manual” as amended. Reviews are based upon the information and plans provided. Comments pertaining to the Town’s manuals are not all encompassing. Other reviewing entities may provide additional comments regarding consistency with these manuals in accordance with their jurisdictions. Review of sanitary sewer and septic systems are not reviewed by the Engineering Division.

All New Submittals for Commission Meetings must be received by the Engineering Division four weeks before scheduled Commission Meeting.

All Revised Submittals for Commission Meetings must be received by the Engineering Division three weeks before scheduled Commission Meeting.

Reviewed and Approved by: Juan Paredes, P.E. - Civil Engineer II
Date: 04/07/2021

COMMENTS AND CONDITIONS OF APPROVAL: Resubmit Prior to Zoning/Building Permit Approval

If acceptable to IWWA Agency and staff, the Engineering Division is acceptable to reviewing the revisions prior to zoning/building permit submittal.

1. A revised Form SC-107 needs to be submitted.
2. The Drainage Summary Report is acceptable in concept; it must be revised as follows:
   a. The outlet protection computations for the level spreaders must be added (include runoff from existing drainage infrastructure tied to new system).
   b. For future reference: the RRV computations must use the storage provided in the 1-year storm event by the qualifying BMP (1,423cf+270cf) not the available storage under the outfall orifice. Use the entire available storage volume for the 72-hr drawdown computations.
   c. Model the mulch layer for the routing computations and verify construction detail matches report and site plan.
   d. Revise all other computations as needed.
3. The construction plan set needs to be revised as follows:
   a. Existing Conditions Survey Sheet
      i. For reference only: review building permits 16-1037 & 16-0975 for as-built data of drainage infrastructure and update survey accordingly.
ii. Prepared according to the Minimum Standards for Surveys and maps in Connecticut.

iii. Show a note certifying the survey A-2.

iv. Show a note certifying the survey T-2.

v. Show topography at contour intervals of two feet for the property and Right-of-Way. If possible, include contours ten feet beyond the property limits for neighboring parcels.

vi. Show topography flatter than 2% with additional spot elevations and contour intervals of one foot.

vii. Show spot elevations throughout the property and Right-of-Way.

viii. Show a note for a referenced or assumed elevation datum (the FEMA datum shall be used for sites located within a Flood Hazard Zone).

ix. Show one (1) permanent benchmark on the site within one hundred feet of the proposed construction.

x. Show notes for referenced plans.

xi. Show the entire Town of Greenwich Right-of-Way for the property frontage (drainage, curbs, sidewalk, trees, bushes, shrubs, walls, contours, etc.).

xii. Show the entire Town of Greenwich Right-of-Way in both directions for the minimum required sight distance if a new driveway curb cut is proposed.

xiii. Show storm drainage, sewer, water, etc.

xiv. Show roads, buildings, driveways, patios, walks, walls, and other structures.

xv. Show utilities and easements.

b. Site Plan Sheets

i. Show all level spreaders/scour holes’/riprap aprons with the following in the callout:
   1. Dimensions (length and width); min. length is twenty feet (20’).
   2. Depth of stone.
   3. Pipe/stone elevation.
   4. Pipe size.
   5. Pipe material.

ii. Show all bioretention (rain gardens) with contours (1/2 foot if needed) and include the following in the callout:
   1. Top of mulch/sod elevation and surface area.

c. Construction Details Sheets

i. Match construction detail of rain garden with site plan and drainage report.

4. A copy of the Stormwater Management Practices Maintenance Declaration that was filed on the Land Records and the Long-Term Maintenance Plan Exhibit (A or C) need to be submitted.

5. A copy of all previous inspection records, as required by the Stormwater Management Practices Maintenance Declaration for the existing on-site stormwater system, need to be submitted. If the required inspection records cannot be submitted, a full inspection must be completed by a professional engineer and submitted for review.

Standard Conditions for Each Submittal

1. The Engineering Division will no longer keep any records for the submittals. All records for the submittal shall be obtained from the Town of Greenwich Department/Division that has taken in applications and/or submittals. These documents are maintained within each office (e.g., P&Z, IWWA, and DPW Building and Highway Divisions).

2. All revisions to the reports and plans must follow the requirements in the Town of Greenwich Drainage Manual February 2014 as amended.

3. All revisions must be accompanied by a point-by-point written response to the Engineering Division’s comments.

Standard Conditions of Approval

1. The Operations and Maintenance Plan Report must include the following for the Certificate of Occupancy:
   b. The final completed Exhibit A, and B
   c. The Maintenance Declaration needs to be filed on the Town of Greenwich Land Records prior to a Certificate of Occupancy. A review of the documents above must be completed before filing on the Town of Greenwich Land Records.

2. The Town of Greenwich – Standard Construction Notes for Site and Subdivision Plans are conditions that must be met.
3. All requests for a Temporary Certificate of Occupancy (T.C.O.) or a Certificate of Occupancy (C.O.) shall be submitted one month before the T.C.O. or C.O. is required.

4. The submittal for a Temporary or Final Certificate of Occupancy must include the following:
   c. Field Inspection Record (All required photos) – Form SC-106 – Sealed and Signed by a Connecticut Licensed Professional Engineer.
   d. Bioretention Soil Testing Certification Sign-Off (as applicable with the bioretention soil gradation test and the phosphorous test for the mixed soil) – Form SC-104 – Sealed and Signed by a Connecticut Licensed Professional Engineer.
   h. A Letter discussing all the work that remains to be completed (Only for a Temporary Certificate of Occupancy Submittal).
MEMORANDUM

TO: Patrick LaRow, Deputy Director, P & Z / Assistant Town Planner

FROM: Aleksandra Moch, Environmental Analyst

DATE: April 5, 2021

RE: Adam and Sarah Dolder, 407 Round Hill Road, PLPZ 2021 00084
    Site plan by Redniss & Mead, dated February 26, 2021 and landscape plan by William Kenny Associated, dated March 10, 2021

I have reviewed the above-referenced plan and visited the site. The following comments are offered for your consideration:

1. Both the proposed pool house and outdoor ice rink will be installed over the relatively level manicured lawn area. Covering the soil and replacing vegetative cover with hard surface has negative consequences for the natural environment. These paved areas will be excluded from the natural storm water infiltration, microbial and other soil-organisms’ activities and plant photosynthesis. The loss of green space should be mitigated with planting more native trees and shrubs. The newly planted area should at least cover 50% of the area of the proposed impervious surface (8,867 sq. ft.).

2. The site disturbance associated with grading is extensive. Covering native soil will result in additional long-term impacts. Fill used for grading will be nutrient-poor and contain little organic matter important to support soil life and provide absorption. This physical characteristic will require intensive site irrigation and nutrient applications. More watering will not only go against the need of water conservation, but it also has the potential to cause runoff containing the fertilizers which can be carried into the downslope wetlands system.

    Slight relocation of the pool house and ice rink to the west will decrease the need for fill and site disturbance.

3. The proposed work will be conducted in the close vicinity of the existing septic system. Both areas of the leaching fields should be protected by the orange snow fencing installed prior to any site disturbance.

4. The proposed rain garden should be planted with native plants. Sod is not suitable to perform the needed bio-filtration function. It is recommended a landscape plan be provided to address the above environmental impacts.

cc: Conservation Commission
from the higher-sloped area and filling the lower sloped area. The ring will have a berm around the edge with a trench drain interior to the berm that will discharge in the upland meadow.

The proposed trail in non-wetland areas will be built with no drainage or excavation in wetland. The trail will cross a watercourse in two places and will also cross 100 linear feet of wetland that is currently pasture. This will be done with wooden matting across the wetland and wooden bridges across watercourse. Neither of these are fill.

The staff report shows statutory background of exemption; horses training and management falls under the agriculture and farming definition under the CT general statutes, and Greenwich regulations state farming is as of right. The applicant should stake wetlands before starting project. Erosion controls will be added and are responsive to the agency’s section 4.1. It is recommended the agency recognize this as agriculture and issue a declaratory ruling.

Louis Manuli was available for questions.

Brian Harris called for agency questions or comments, there were none. There were no public questions or comments.

Joseph Rogers made a motion to approve this as a declaratory ruling, seconded by Bill Galvin, carried 7-0-0.

4. #2021-033 – 407 Round Hill Road – Redniss & Mead, Inc. for Adam and Sarah Dolder for construction of pool house, outdoor ice rink, locker room structure, and drainage system 85' from wetlands. Tax #10-1426. BC

Robert Clausi reviewed the application. All structural improvements are more than 100 feet from wetlands. The rain garden to east of ice rink, a tree well around tree and a level spreader are within the Upland Review Area. Outstanding issues expressed by DPW engineering will be satisfied before construction begins. The applicant submitted a restoration plan for the sloping buffer that was established by a 2015 permit. This is an extensive buffer 85ft wide and some places over 100ft wide, intended to be maintained. The current plan will restore the overgrown meadow. The environmental assessment goes into mitigation and meadow management. There are comments from DEEP on bat species, the state endangered species that are present in vicinity, and extensive comments on best management for the protection of bats.

Mr. Clausi is recommending that agency issue a permit with the outlined conditions.

Bret Holzwarth, Rediness and Mead, addressed agency. Mr. Holzwarth agrees with the conditions of approval recommended by Mr. Clausi. Regarding the bat species of concern, there are only four trees that will be removed. These are oaks and maples which are not typically trees bat species roost in.

Brian Harris asked if the tree well is adequately sized. Mr. Holzwarth replied this is further down because of the grading beyond the tree and had to catch up with existing slopes. They will be giving the existing tree a big buffer and rain garden and working with William Kenny.

Mr. Harris questioned the proximity of the rain garden and whether or not this will concentrate water and/or change hydrology.
William Kenny addressed agency stating the design of the rain garden and a high permeability rate, it won’t be an issue for the tree.

There were no questions or comments from the agency.

There were no public questions or comments.

Joseph Rogers made a motion to approve with the special conditions proposed by staff, seconded by Bill Galvin, carried 7-0-0.

5. #2021-035 – 327 Valley Road – Sound View Engineers & Land Surveyors for ABCGT Holdings, LLC for construction of retaining walls and modification of driveway 25’ from wetlands. Tax #08-2049/s. BC

Robert Clausi reviewed the application. The applicant wants to modify the driveway creating a net reduction of square footage, with pavement being removed adjacent to the wetland.

A permit in 1994 required installation of permanent demarcation feature at the toe of septic fill. A fence exists which is not an adequate demarcation feature, nor is it in the right location. A condition should be added to establish a better demarcation.

Mr. Clausi recommends the agency issue a permit with the outlined conditions.

Robert Zmarzlak, Sound View Engineers, addressed the agency. He is in agreement with all Mr. Clausi’s comments. He will add a boulder demarcation line on toe of septic system, which is about five feet from the wetland line.

There were no further agency questions or comments.

Brian Harris called for public questions or comments; there were none.

Motion to approve by Joseph Rogers with conditions recommended by staff, seconded by Stephan Skoufalos and carried 7-0-0.

6. #2021-036 – 81 Cat Rock Road – Sound View Engineers & Land Surveyors for Graham Gyesky for construction of pool, deck, dock, drainage, and septic modifications in and adjacent to a watercourse and wetlands. Tax #08-3161. BC

Robert Clausi reported the property has been recently redeveloped following a 2019 permit. The new owner is proposing building a pool surrounded by a deck. The septic tank will need to be relocated and a pool fence and a safety fence on both sides of the driveway. The applicant has confirmed that this fence can be raised to avoid blocking any movement of the two ponds. DPW reviewed the applicant and found the drainage design and calculations comply with the town’s manual. The applicant has offered to install an infiltrator to pick up impervious pool area. The plan shows a proposed dock in the pond however there are no details and submitting this to the agency has been added as a condition of approval. The location of an electrical service line should be provided for staff review if necessary. An aerator was installed without prior review and approval from the agency with minor impact to the wetland and recommend the agency grant after the fact approval for the aerator.
March 10, 2021

Katie DeLuca, Director
Planning & Zoning Department
Town of Greenwich
101 Field Point Road
Greenwich, CT 06830

RE: Planning and Zoning Special Permit Application
407 Round Hill Road, Greenwich, CT

Dear Ms. DeLuca,

On behalf of our clients, Adam & Sarah Dolder, we are pleased to submit the enclosed application for a Planning & Zoning Site Plan – Special Permit pertaining to their 7.3-acre property at 407 Round Hill Road. The property is located in the RA-4 zone on the East side of Round Hill Road. This application is being submitted since the existing dwelling and the proposed improvements exceed 150,000 cubic feet in volume. Per Section 6-101 of the Greenwich Zoning Regulations, this project requires a Special Permit.

The property is currently developed with a dwelling, driveway, pool, and other site improvements. These improvements will not be altered as part of this project. The proposed improvements include a pool house, outdoor ice rink, locker room structure, and drainage systems as well as associated utilities. The three buildings (1 existing and 2 proposed) combined volume will be 177,529 cubic feet. The lot area (7.3 acres) exceeds the minimum zoning lot area, and the dwelling abides by the yard requirements for principal use. The proposal is compliant with other zoning criteria including height, setbacks, green area, and floor area ratio.

The Planning and Zoning Commission previously issued a permit for constructed improvements in 2016 (Site Plan Numbers PLPZ 2015-00547 and PLPZ 2015-00548). The activities authorized under this permit have since been completed and the dwelling received a certificate of occupancy. In conjunctures with this new P&Z Special Permit Application, a new IWWA application was recently submitted for the proposed improvements.

The site design utilizes several low impact development (LID) practices to manage and treat stormwater. These practices include a rain garden to capture runoff from the ice rink area and a Cultec infiltration system to treat runoff from the proposed pool house. These measures are designed in accordance with the current Town of Greenwich Drainage Manual and further detailed in the drainage report. Sediment & Erosion Control measures have been designed and will assist in protecting regulated areas during construction. At the completion of construction all disturbed areas will be stabilized with landscaping and hardscape.

In addition to the site improvements mentioned above, it is proposed to establish a natural meadow area to enhance the developed site and maintain a buffer to the wetlands. This meadow area is in the steep slopes between the lawn and deer fence below. The Enhancement Plan from William Kenny Associates further describes these activities.
The rink will have ice in the winter for ice skating and in the summer, the water will drain for roller skating on the concrete pad below. The rink will be lighted by 4 LED Courtblade sports court lights. These proposed improvements are intended to be used privately by the owners with friends and family. They are not to be used for leagues, team practices or open to the public.

Submitted Plans and Support Documentation: In support of the Application for Special Permit, we include the following materials:

- Completed Application Forms
- Application Fee in the amount of $2,350
- Agent Authorization Letter dated February 11, 2021
- Project narrative (which is this document)
- List of names and mailing addresses of all abutting property owners
- Affidavit of Notification of Application dated March 10, 2021
- Property & Limited Topographic Survey (P&LTS) dated February 26, 2021
- Zoning Location Survey (ZLS) dated February 26, 2021
- Site Plans (CV-1, SE-1 through SE-9) dated February 18, 2021
- Site Septic Plan (SS-1) dated February 22, 2021
- Wetland Buffer / Meadow Enhancement Plan dated March 10, 2021
- Architectural Plans (C, A-1 through A-10, A-12 through A-15, E-1) including FAR and Volume calculations dated February 23, 2020
- Reduced 11x17 Site and Architectural Plans
- Existing and Proposed Green Area Exhibits dated February 23, 2021
- Proposed Grade Plane worksheets dated February 17, 2021
- Drainage Summary Report February 05, 2021
- CD containing application in pdf form

We respectfully request this matter be placed on the earliest available Commission agenda. Thank you and don’t hesitate to call or email me to discuss.

Sincerely,

Bret D. Holzwarth, P.E.
Site Plan Application

Property Address: 407 Round Hill Road, Greenwich, CT 06831
Tax ID: 10-1426

Property Owner: Adam & Sarah Dolder
Address: 407 Round Hill Road, Greenwich, CT 06831
Email: adam.b.dolder@gmail.com
Cell Phone: 917-544-7915
Other Phone: 917-544-7915

Applicant: (Same as owner above)
Address: _______________________________________

Email: ____________________________________
Cell Phone: ______________________
Other Phone: _____________________

Authorized Agent: Redniss & Mead c/o Bret Holzwarth
Address: 22 First Street, Stamford, CT 06905
Email: b.holzwarth@rednissmead.com
Cell Phone: ______________________
Other Phone: (203) 327-0500

Select One: ☑ Pre-Application ☑ Final

Zone(s): RA-4 Lot Area: 7.065 (zoning lot area)

Please select all relevant items below:

☑ Special Permit – Complete special permit application form
☑ Coastal Overlay Zone
☑ Property is within 500 feet of a Municipal Boundary of __________________ (for notification)
☑ Amendment to Building Zone Regulations – Section(s) ____________________________
☑ Amendment to Building Zone Map – Zone(s) affected ____________________________
☑ Health Department review needed
☑ Sewer Department review needed
☑ Architectural Review Committee Application attached or Review needed
☑ Planning & Zoning Board of Appeals review needed
☑ Inland Wetlands and Watercourses Agency Review / Approval Required
☑ Scenic Road Designation

To be completed by P&Z staff only:
Check # ___________________________________ Check Amount: $ ____________
Application # ___________________________________ pzSitePlanApp 2020
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<th>PERMITTED/REQUIRED</th>
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<td>Usable Floor Area</td>
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<td>Usable Floor Area</td>
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<td>Usable Floor Area</td>
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<td>Number of Bedrooms</td>
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<tr>
<td>Gross Floor Area</td>
<td>8,176 SF</td>
<td>9,233 SF</td>
<td>19,235 SF</td>
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<tr>
<td>Parking Spaces</td>
<td>4</td>
<td>7 (3 Garage, 4 Driveway)</td>
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<td><strong>TOTAL SQUARE FOOTAGE</strong></td>
<td>8,176 SF</td>
<td>9,233 SF</td>
<td>19,235 SF</td>
</tr>
<tr>
<td><strong>BUILDING HEIGHT</strong></td>
<td>2 1/2 Stories</td>
<td>2 1/2 Stories</td>
<td>3 1/2 Stories (50')</td>
</tr>
<tr>
<td><strong>FLOOR AREA RATIO</strong></td>
<td>0.0266</td>
<td>0.0300</td>
<td>0.0625</td>
</tr>
<tr>
<td><strong>BUILDING COVERAGE</strong></td>
<td>6,142 SF</td>
<td>29,402 SF</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>LOT COVERAGE</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>TOTAL PARKING SPACES</strong></td>
<td>6</td>
<td>7 (3 Garage, 4 Driveway)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>GREEN AREA</strong></td>
<td>298,193 SF (93.3%)</td>
<td>289,526 (90.6%)</td>
<td>268,475 SF (84%)</td>
</tr>
<tr>
<td><strong>AGE OF STRUCTURE</strong></td>
<td>3 Years</td>
<td></td>
<td></td>
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<tr>
<td><strong>THIS SITE PLAN INVOLVES:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Additions</td>
<td></td>
<td>□ Alterations</td>
<td>□ Demolition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Re-Construction</td>
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</tr>
</tbody>
</table>

pzSitePlanApp 2020
Special Permit Application

Property Address: 407 Round Hill Road, Greenwich, CT 06831
Tax ID: 10-1426

Property Owner: Adam & Sarah Dolder
Address: 407 Round Hill Road, Greenwich, CT 06831
Email: adam.b.dolder@gmail.com
Cell Phone: 917-544-7915
Other Phone: 917-544-7915
Applicant: (Same as owner above)
Address: 
Email: 
Cell Phone: 
Other Phone: 

Authorized Agent: Redniss & Mead c/o Bret Holzwarth
Address: 22 First Street, Stamford, CT 06905
Email: b.holzwarth@rednissmead.com
Cell Phone: (203) 327-0500
Other Phone: 

Zone(s): RA-4
Lot Area: 7.065 (zoning lot area)

PLEASE SELECT ALL RELEVANT ITEMS BELOW:

- Section 6-17 — Special Permit standards and procedure
- Section 6-30 — Conservation Zone special provisions
- Section 6-94(b) — Non-residential Uses and Group Living Facilities permitted in Residential Zones including Resident Medical Professional Office
- Section 6-98 — RMF Zone
- Section 6-100 — Use Groups for Business Zones
- Section 6-101, 107 — Buildings over 40,000 c.f. in Central Greenwich Impact Overlay Zone, Post Road Impact Overlay Zone, WB, LB or LBR Zones; and over 150,000 c.f. in all other zones
- Section 6-103.1 — Parking deficient uses in CGBR
- Section 6-104 — Parking Structures incl. underground in LB Zone and Height exceptions
- Section 6-105, 106 — Front Yard Parking in GB or GBO Zone
- Section 6-109 — HO & HRO Zones
- Section 6-110 — Dwellings under special requirements for Business Zones
- Section 6-112 — IND-RE Zone applications
- Section 6-113 — In Hospital Zones: certain accessory uses, expansions exceeding 4,000 s.f. or interior alterations or changes of use exceeding 20,000 s.f. (cumulative within 2 years)
- Section 6-114 — CCRC (Continuing Care Retirement Community)
- Section 6-118.1 — Uses within railroad rights of way
- Section 6-123 — Setbacks from Connecticut Turnpike in Business Zones
- Section 6-140.1 — Satellite Earth Stations that emit microwaves
- Section 6-141 — Changes in non-conforming uses, buildings
- Section 6-205 — Historic structures in CBG Zone exceeding FAR And Notes 7, 8 & 9

To be completed by P&Z staff only:
Check # ___________________ Check Amount: $ ___________
Application # ____________________________  pzSpecialPermitApp 2020
**Application Signature Page**

<table>
<thead>
<tr>
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<th>Tax ID</th>
</tr>
</thead>
<tbody>
<tr>
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<td>10-1426</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Property Owner 1: Adam Dolder</th>
<th>Address: 407 Round Hill Road, Greenwich, CT 06831</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email: <a href="mailto:adam.b.dolder@gmail.com">adam.b.dolder@gmail.com</a></td>
<td>Cell Phone:</td>
</tr>
<tr>
<td>Signature: [Signature]</td>
<td>Date: 2/25/21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property Owner 2: Sarah Dolder</th>
<th>Address: (Same as above)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email: (Same as above)</td>
<td>Cell Phone:</td>
</tr>
<tr>
<td>Signature: [Signature]</td>
<td>Date: 2/25/21</td>
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<table>
<thead>
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<td>Signature:</td>
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<td>Signature:</td>
<td>Date:</td>
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<table>
<thead>
<tr>
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<th>Address:</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Cell Phone:</td>
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<tr>
<td>Signature:</td>
<td>Date:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Authorized Agent: Redniss &amp; Mead c/o Bret Holzwarth</th>
<th>Address: 22 First Street Stamford, CT 06905</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email: <a href="mailto:b.holzwarth@rednissmead.com">b.holzwarth@rednissmead.com</a></td>
<td>Cell Phone:</td>
</tr>
<tr>
<td>Signature: [Signature]</td>
<td>Date: 3/4/2021</td>
</tr>
</tbody>
</table>
February 11, 2021

Mr. Bret D. Holzwarth  
Redniss & Mead, Inc. 
22 First Street  
Stamford, CT 06905 

Re: 407 Round Hill Road, Greenwich, CT  
Agent Authorization - Pool House & Ice Rink 

Dear Mr. Holzwarth, 

This letter serves to authorize Redniss & Mead to act as our agent in securing any and all approvals required for the pool house and ice rink project on the property referenced above.

Sincerely, 

[Signature]

Adam Dolder  
Date
March 10, 2021

Via Certified Mail Return Receipt Requested

Re: Planning & Zoning Special Permit Application

407 Round Hill Road, Greenwich, CT

TO WHOM IT MAY CONCERN:

Notice is hereby given that owners of 407 Round Hill Road have filed an application with the Greenwich Planning & Zoning Commission (P&Z) for approval to construct a new pool house, outdoor ice rink, locker room structure, and associated site improvements on their property.

Further information on this application may be obtained by contacting the Town of Greenwich Planning & Zoning Department, Town Hall, 101 Field Point Road, Greenwich, CT 06830 at (203) 622-7894 or the undersigned at (203) 327-0500.

Sincerely,

[Bret D. Holzwarth, P.E.]

Bret D. Holzwarth, P.E.
TOWN OF GREENWICH
PLANNING & ZONING APPLICATION
ADAM & SARAH DOLDER
407 ROUND HILL ROAD, GREENWICH, CT
ABUTTING PROPERTY OWNERS
CERTIFICATE OF MAIL

131 OLD MILL LLC
170 MASON STREET
GREENWICH CT 06830

409 ROUND HILL ROAD LLC &
% C HALCOM
KRAVATH SWAINE & MOORE LLP
825 EIGHTH AVENUE
NEW YORK NY 10019

DOLDER ADAM & SARAH E
97 EAST ELM ST
GREENWICH CT 06830

HADJIPATERAS JOHN C & DARY D
50 CHERRY VALLEY RD
GREENWICH CT 06831

LEIBOWITS PETER D
92 CHERRY VALLEY RD
GREENWICH CT 06831

PIGNATARO NEILIA R
70 CHERRY VALLEY
GREENWICH CT 06830

ROUND HILL COMMUNITY CHURCH INC.
C/O VERIZON
20 ALEXANDER DRIVE
WALLINGFORD CT 06492-2458

SATTER SUSAN
1640 S OCEAN BLVD
MANALAPAN FL 33462

SCHIFF EDWARD T & MELISSA M
404 ROUND HILL ROAD
GREENWICH CT 06831
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<th>Property Address/Tax ID</th>
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<td>131 OLD MILL LLC</td>
<td>131 OLD MILL ROAD</td>
</tr>
<tr>
<td>170 MASON STREET</td>
<td>10-1266</td>
</tr>
<tr>
<td>GREENWICH CT 06830</td>
<td></td>
</tr>
<tr>
<td>409 ROUND HILL ROAD LLC &amp; % CHALCOM KRAVATH SWAINE &amp; MOORE LLP</td>
<td>409 ROUND HILL ROAD</td>
</tr>
<tr>
<td>825 EIGHTH AVENUE</td>
<td>10-1293</td>
</tr>
<tr>
<td>NEW YORK NY 10019</td>
<td></td>
</tr>
<tr>
<td>DOLDER ADAM &amp; SARAH E</td>
<td>407 ROUND HILL ROAD</td>
</tr>
<tr>
<td>97 EAST ELM ST</td>
<td>10-1426</td>
</tr>
<tr>
<td>GREENWICH CT 06830</td>
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</tr>
<tr>
<td>HADJIPATERAS JOHN C &amp; DARCY D</td>
<td>50 CHERRY VALLEY ROAD</td>
</tr>
<tr>
<td>50 CHERRY VALLEY RD</td>
<td>10-1997</td>
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<tr>
<td>GREENWICH CT 06831</td>
<td></td>
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<tr>
<td>LEIBOWITS PETER D</td>
<td>92 CHERRY VALLEY ROAD</td>
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<tr>
<td>92 CHERRY VALLEY RD</td>
<td>10-1101</td>
</tr>
<tr>
<td>GREENWICH CT 06831</td>
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<tr>
<td>PIGNATARO NELLA R</td>
<td>70 CHERRY VALLEY ROAD</td>
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<tr>
<td>70 CHERRY VALLEY</td>
<td>10-3076</td>
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<td>GREENWICH CT 06830</td>
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<tr>
<td>ROUND HILL COMMUNITY CHURCH INC. C/O VERIZON</td>
<td>395 ROUND HILL ROAD</td>
</tr>
<tr>
<td>20 ALEXANDER DRIVE</td>
<td>10-4013</td>
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<tr>
<td>WALLINGFORD CT 06492-2458</td>
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<tr>
<td>SATTER SUSAN</td>
<td>414 ROUND HILL ROAD</td>
</tr>
<tr>
<td>1640 S OCEAN BLVD</td>
<td>10-1442</td>
</tr>
<tr>
<td>MANALAPAN FL 33462</td>
<td></td>
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<tr>
<td>SCHIFF EDWARD T &amp; MELISSA M</td>
<td>404 ROUND HILL ROAD</td>
</tr>
<tr>
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<td>10-1250</td>
</tr>
<tr>
<td>GREENWICH CT 06831</td>
<td></td>
</tr>
</tbody>
</table>
I, Jeanien Sheridan, being first duly sworn, do hereby certify that on March 10, 2021, I caused to be mailed, postage prepaid, to those persons whose names are set forth on the Certificate of Mail attached hereto, a copy of the notice attached hereto. Said persons were the record owners, as of January 28, 2021, as shown on the Town Tax Assessor’s Office records of property abutting (as said term is defined in Sec. 6-14(a) (3) of the Greenwich Building Zone Regulations) the property belonging to Adam & Sarah E Dolder, having an address of 407 Round Hill Road, Greenwich, Connecticut 06831, for which an application for permit has been filed with the Inland Wetlands & Watercourses Agency.
DIRECTLY CONNECTED IMPERVIOUS AREA (DCIA) CERTIFICATION
PRE-CONSTRUCTION

Property Address: 407 Round Hill Road  Tax Account No.: 10-1426

Building Permit No.: ________________

PLANS & DRAINAGE SUMMARY REPORT INFORMATION

Engineering Firm: Redniss & Mead

Design Plans Date: 2/17/2021  Drainage Report Date: 2/17/2021

PROPERTY INFORMATION FOR DIRECTLY CONNECTED IMPERVIOUS AREA (DCIA)

<table>
<thead>
<tr>
<th>Total Impervious Area Under Existing Conditions (SF)</th>
<th>Total Impervious Area Under Proposed Conditions (SF)</th>
<th>TotalDisconnected Impervious Area Under Proposed Conditions (SF)</th>
<th>Total Directly Connected Impervious Area Under Proposed Conditions (SF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21,480 sf</td>
<td>30,110 sf</td>
<td>8,526 sf</td>
<td>21,584 sf</td>
</tr>
</tbody>
</table>

1 Impervious surfaces include but are not limited to roofs (including green roofs), buildings, houses, walks, patios, walls, tennis/sport courts (all surface types must be counted), landscape ponds, pools, paved streets/drives/parking areas constructed with concrete, asphalt, compacted dirt, gravel, or permeable pavements.

2 All impervious surfaces that are directed to stormwater BMPs that meet the water quality volume (WQV) standard will be considered disconnected impervious cover. Acceptable stormwater BMPs are Bioretention (infiltrating/filtering), Constructed Stormwater Wetlands, Extended Dry Detention Basins (infiltration required), Gravel Wetlands, Constructed Wet Stormwater Ponds, Sand/Organic Filters (sand filters, tree filters, stormwater planters, etc.), Infiltration Systems (drywells, Cultecs, etc.), Permeable Pavement Areas (infiltrating/filtering), Green Roofs, and Disconnected Impervious Area (must meet all the standards under Simple Disconnection on page 44 and 45 of the Drainage Manual).

3 Subtract the Total Disconnected Impervious Area Under Proposed Conditions (SF) from the Total Impervious Area Under Proposed Conditions (SF).

Engineer’s Signature __________________________ Date 2/17/2021

Engineer’s Seal
DRAINAGE SUMMARY REPORT

Prepared for:
Adam & Sarah Dolder
407 Round Hill Road
Greenwich, CT

Prepared by
Redniss & Mead, Inc.
22 First Street
Stamford, CT
(203) 327-0500

Issued on
February 18, 2021
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Orientation
Narrative

Project Narrative

The owners of 407 Round Hill Road in Greenwich, CT are proposing to construct a pool house, outdoor ice rink and locker room building and other associated site improvements. The property is 7.32 acres in size, situated on the east side of Round Hill Road within the RA-4 zone. The property is developed with a single-family residence, driveway, and pool. It is bounded by a community church on the west and south and residential properties on the north and east. The property is currently served by private well water and an on-site septic system. The site is located outside of the drinking water supply watershed and outside any flood hazard zone. The construction of the house and existing development was approved and constructed under Greenwich’s Inland Wetland and Watercourses Agency Permit #2015-126 and Planning & Zoning Permits 201500547 & 548.

Wetland soils are present on the site on the eastern portion of the site. This wetland is tributary to a perennial stream that flows through the site heading south. Refer to the Wetland and Watercourse Delineation report by William Kenny and Associates dated May 29, 2014. A review of the National Cooperative Soil Survey (NCSS) indicates Charlton-Chatfield complex (0-15% and 15-45% slopes) soils, with a hydrologic soil group rating of B over a western portion of the site and Ridgebury, Leicester, and Whitman soils with a hydrologic soil group D further to the east towards the wetlands. Deep test pits were conducted on January 28, 2021 confirms that B type soils are appropriate for the development. Reference is made to the Site Plan Set prepared by Redniss & Mead, Inc., dated 2/18/2021.

Existing Conditions

Stormwater runoff from the paved accessway flows toward Round Hill Road to the west. No work is proposed within that basin and therefore was not analyzed. The majority of the site generally flows from west to east towards the wetlands and stream. All proposed work lies within the main body of the property, to the west of the stream, therefore that is the site area studied. The critical point of interest evaluated in this study is the stream as it leaves the property to the south. Offsite areas from the north, south and west are tributary to the onsite basin. The total on-site and off-site watershed area studied is 11.68 acres. The existing impervious area tributary to the point of interest is 21,480 square feet.

The house development was approved under a Conditional Residential Teardown Exemption of the Greenwich Stormwater Manual due to a reduction in impervious coverage. As a result, no detention was proposed or constructed, and the water quality volume was not met. Runoff from the driveway and roofs are collected and piped underground heading east. They flow to two level spreaders near the edge of lawn. The southern level spreader is exposed and wrapped in filter fabric while the northern is buried under lawn and is assumed to exist, based on design records. Footing drains also are piped in the vicinity.

Proposed Conditions

The proposed improvements include a pool house southeast of the existing house and an ice rink and locker room to the northeast of the house. In all, impervious coverage on the property will increase by 8,867 square feet (0.20± acres). The storm water management measures incorporated into the site
design are intended to promote Low Impact Development principles described in Section 4.4 of the Greenwich LID Manual.

As these proposed improvements are classified as a new development, the Runoff Reduction Volume (RRV), Groundwater Recharge Volume (GRV) and Water Quality Volume (WQV) were calculated and are included in Appendix 2. To mitigate the increase in volume and peak rates of runoff, as well as provide water quality treatment and groundwater recharge, two mitigation systems are proposed.

To the east of the ice rink, a rain garden is proposed to receive stormwater runoff via trench drains and area drains. The ice rink has a concrete base and is treated as impervious coverage. This rain garden has a total storage capacity of 2,613 cf. The rain garden is sized to treat the Water Quality Volume from the area tributary to it and to reduce peaks. Its outlet is two 15-foot wide concrete weir that discharges to rip rap splash pads on the slopes toward the wetland area.

The pool house roof will discharge into an infiltration system consisting of 6 units of Cultec R-360HD galleries with crushed stone below the system and one foot around the outer perimeter. This infiltration system, sized to provide 376 cubic feet of storage provides additional water quality treatment, groundwater recharge, and peak attenuation. It is not included within the 60% calculation for LID techniques. The outlet is a 6” pipe orifice set just below the top of storage. The outlet pipe will discharge via a rip rap splash pad just east of the southern level spreader.

The northern level spreader is assumed to be within the footprint of the proposed ice rink and needs to be relocated. This level spreader will be excavated during construction replaced with a new level spreader to the north of the rink and the tributary pipes rerouted. A test pit in the vicinity indicated mottling at 38” deep. The new level spreader will be 20’ in length and exposed to the surface.

Based upon the increase to impervious area of the site (8,867 square feet), the minimum required area of treatment using LID techniques is 60% (5,320 square feet). The impervious area treated within the disturbed area using LID techniques is 7,288 square feet (82.2% of total disturbed impervious area), which occurs in the Rain Garden. An additional area of 1,348 square feet is treated by the Cultech system, for a total treated area of 8,636 square feet. The remaining areas of the site are proposed to bypass the infiltration systems and continue to drain in a similar fashion to existing conditions.

The following table depicts existing and proposed peak flows at the point of interest:
Table 1. Existing V.S. Proposed Peak Flows to West Creek

<table>
<thead>
<tr>
<th>Return Period (years)</th>
<th>Existing Peak Flow Rate (cfs)</th>
<th>Proposed Peak Flow Rate (cfs)</th>
<th>Change (cfs)</th>
<th>Percent Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4.44</td>
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<tr>
<td>2</td>
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<td>6.69</td>
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<td>-0.74</td>
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<tr>
<td>5</td>
<td>11.41</td>
<td>11.28</td>
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<td>-1.14</td>
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<tr>
<td>10</td>
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<td>15.74</td>
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<td>-1.38</td>
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<tr>
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<td>41.34</td>
<td>41.25</td>
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<td>-0.22</td>
</tr>
</tbody>
</table>

All flows indicated above are taken from the HydroCAD analysis attached in Appendix 3. As indicated, there is no increase in peak flows in all storms analyzed.

The following table depicts existing and proposed runoff volumes of the point of interest:

Table 2. Existing V.S. Proposed West Creek Basin Runoff Volume

<table>
<thead>
<tr>
<th>Return Period (years)</th>
<th>Existing Peak Flow Rate (cfs)</th>
<th>Proposed Peak Flow Rate (cfs)</th>
<th>Change (cfs)</th>
<th>Percent Change (%)</th>
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</thead>
<tbody>
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<td>28,258</td>
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</tr>
<tr>
<td>10</td>
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<td>-0.6</td>
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<td>230,772</td>
<td>231,186</td>
<td>414</td>
<td>0.2</td>
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</tbody>
</table>

All volumes indicated above are taken from the HydroCAD analysis attached in Appendix 3.

Compliance with Stormwater Management Standards

Standard 1. Low Impact Development

Low impact development and site planning techniques were used to the maximum extent practicable given the site constraints. LID techniques are used in limiting the amount of disturbance around the proposed improvements.

Infiltration is maximized to the greatest extent possible and provides the water quality volume for the areas tributary to them as well as the runoff reduction volume for the property as a whole.
Standard 2. Protection of Natural Hydrology

A. Overall site disturbance for this project is approximately 0.91± acres. Temporary site disturbance will be kept to a minimum by phasing construction and creating narrow accesses to the construction areas. Some of the surrounding vegetation and mature trees will be protected throughout the construction process and remain in place after it is completed. The limit of disturbance is noted on the site plans and will be delineated in the field through the use of silt and/or construction fence.

B. Soil compaction and disturbance will be minimized by using the smallest equipment necessary to complete the development. Upon completion, soil compaction will be mitigated by deep tilling.

C. Existing on site drainage patterns are retained as much as is practicable. The time of concentration under pre-development conditions will match that of post-development conditions. This is achieved by leaving large portions of existing drainage patterns intact.

D. The natural topography of the land is retained in large areas even within the limit of disturbance.

E. Tilling will be recommended in the disturbed areas that will be heavily trafficked during construction.

F. At the completion of the project, no soil shall be left bare. All areas of exposed soil shall be sufficiently seeded, planted, or mulched so as to sufficiently stabilize it.

G. Existing surface waters and systems that exist on site will be maintained to the greatest extent practicable.
   a. Large portions of unimproved land shall bypass the proposed stormwater features and maintain the existing flow patterns.

H. Existing surface waters uphill of the proposed improvements will not be collected into the systems. It will be collected and bypassed below to maintain flow patterns.

I. No roadway crossings over existing streams are proposed.


A. Stormwater management practices have been designed to integrate with the sites specific hydrologic and geologic conditions.

B. The proposed stormwater best management practices comply with peak flow, runoff volume reduction, water quality and groundwater recharge requirements of the Greenwich LID Manual. A summary of existing and proposed condition peak flows is provided in Table 1 above and in Appendix 3. Runoff Reduction Volumes (RRV) are summarized in Table 2 above and in Appendix 2.

C. N/A

D. This project does not propose any stormwater to be pumped.

E. This project does not propose any groundwater to be pumped.

Standard 4. Runoff Volume Reduction and Groundwater Recharge

A. The Runoff Reduction Volume for the property in its entirety is provided within the rain garden and infiltration system. The outlet structures have been designed to provide the requisite volume below the lowest outlets in both systems. Refer to Table 2 for a summary of runoff volumes.

B. Groundwater Recharge Volume requirements for this project are met through the installation of the rain garden and infiltration system.
C. This item does not apply to this site as there are no tidal wetlands in the vicinity.

**Standard 5. Peak Flow Control**

A. N/A
B. All proposed stormwater management facilities are adequately sized to pass appropriate flows. Outlet controls from all infiltration or filtering devices will be sufficient to pass the 100-year storm flow. Pipe conveyance shall be sized prior to building permit. All other pipe networks will be sized to pass the 25-year storm flow.
C. All peak flow rates will be reduced from existing conditions up to and including the 25-year storm. Refer to Table 1 and Appendix 3 for further information.
D. The outlets from each of the storage devices on site shall be sized prior to building permit to safely pass the post development peak flows up to the 100-year storm.

**Standard 6. Pollutant Reduction**

A. Stormwater management systems meet the Greenwich LID Manual requirement to reduce 80% of the annual TSS by treating stormwater runoff from affected areas. Refer to Appendix 4 for further information on TSS removal. Refer to Appendix 2 for a summary of required water quality volumes and provided storage.
B. This project meets the required pollutant reduction standard by providing the required runoff reduction volume in the rain garden and infiltration system.
C. This project meets the required pollutant reduction for groundwater recharge volume by providing the required storage within the rain garden and infiltration system.

**Standard 7. High Load Areas**

A. This site does not, and is not proposed to have any areas defined as “High Load Areas” defined in the Greenwich LID Manual.

**Standard 8. Critical Areas**

A. No stormwater discharge is proposed within or near any critical areas as defined by the Greenwich LID Manual.
B. Infiltration from “High Load Areas” are not proposed because there are no “High Load Areas” on site.

**Standard 9. Redevelopment**

A. The project is considered a redevelopment project as defined by the Greenwich LID Manual. The manual defines redevelopment as, “...construction, alteration, or improvement that disturbs the ground surface or increases the impervious area on previously developed sites.”
B. This project meets the standards to the maximum extent practicable given the existing soil conditions, locations of the wetlands and watercourses and topography.
C. N/A
D. Refer to Item B above.
E. No infiltration is proposed in contaminated areas.
Standard 10. Construction Erosion and Sediment Control
   A. A plan to control construction related impacts has been created specifically for this site and project and is included in the drawing set.
   B. Sediment and erosion controls such as silt fence, hay bales around area basins, and tree protection will be put in place at the beginning of the project. Controls related to improvements not yet constructed are proposed to be put in place as soon as construction allows. Additionally, the areas of the rain garden and the infiltration system will be inspected upon the completion of the entire project to ensure there is no accumulation of sediment. Any accumulated sediment will be removed from the system.

Standard 11. Construction Inspections
   A. No surety is proposed.
   B.- F. Refer to notes Greenwich LID Notes #1-5 on the proposed site drawings.

Standard 12. Operation and Maintenance
   A. A long-term operation and maintenance plan, developed to ensure proper function of the stormwater management system is provided with this submission.
   B. The operation and maintenance plan takes into consideration applicable items outlined in Sections 5 and 7 of the Greenwich LID Manual.
   C.-F. These items will be addressed by way of the “Stormwater Management Practices Maintenance Declaration” (Appendix H of the Greenwich LID Manual) at the time a Certificate of Occupancy is requested.

   This document shall serve as the “Stormwater Management Report”.

Standard 14. Illicit Discharges
   There are no “illicit discharges” found onsite.

Conclusion
   It is our opinion that this project is in conformance with all applicable standards set forth in the Greenwich LID Drainage Manual. If built and constructed according to the design plans this project will have no significant impact to the onsite wetlands, or adverse impact to onsite or downstream hydrology.

Reference:
Note: This document contains technical and engineering details related to site grading, drainage, septic systems, utilities, and erosion control. It includes specifications for construction, inspection requirements, and recommendations for the installation of various systems to ensure compliance with regulatory standards.

**EARTHWORK & GRADING:**

1. **Survey Data and Boundary Lines:** All survey data, including boundary lines, topography, and building locations, are from a survey conducted by [Surveyor's Name]. The accuracy of these surveys is critical for planning and execution of the site development.

2. **Survey Review:** All survey data and boundary lines shall be reviewed by the project engineer and approved by the owner prior to construction.

3. **Limit of Wetlands:** The limit of wetlands depicted on the plans was field identified and flagged by [Name], Soil Scientist, on [Date]. Wetlands are protected areas and must be preserved during construction.

4. **Subgrade and Fill:** Subgrade and fill shall be uniformly compacted by equipment manufactured for that purpose. Compaction shall be performed in accordance with ASTM D698, ensuring at least 95% of the Standard Proctor Test.

5. **Topsoil:** After the areas to be topsoiled have been brought to grade, the subgrade shall be loosened by scarifying to allow for proper compaction and drainage. Topsoil shall be applied uniformly, with a thickness of [specific thickness].

6. **Soil Compaction:** Soil shall be compacted to a minimum of 3 lbs per cubic foot (30 to 35% moisture retention) to ensure stability and prevent settlement.

** UTILITIES:**

7. **Ductile Iron Pipe:** All ductile iron pipe (D.I.P.) shall be AWWA C150, C151, with cement mortar lining complying with the manufacturer’s recommendations. Pipe shall be connected using thread sealant or equivalent.

8. **Retaining Walls:** All retaining walls greater than three feet are required to be designed and inspected during construction. Retaining walls shall be constructed with materials approved by the owner and inspected by the engineer.

9. **Infiltration Systems:** Infiltration systems are to remain disconnected until up gradient areas are fully stabilized. The systems shall be disconnected promptly upon notification by the owner or the engineer.

10. **Silt Fence:** Silt fence shall be Mirafi envirofence, Amoco siltstop or equivalent approved by the Site Engineer. Filter fabric shall be provided to protect the adjacent areas from sedimentation.

11. **Sediment Control:** Sediment control practices shall include silt fences, chevron filters, and sediment basins to prevent erosion and sedimentation from leaving the site and to protect storm drains, wetlands, and watercourses.

12. **Energy Conservation:** Energy conservation practices shall be implemented to reduce energy consumption during construction.

13. **Construction Phasing:** Construction shall be phased to ensure compliance with all applicable rules and regulations. Construction phasing shall be reviewed and approved by the owner and the engineer.

14. **Written Inspection Reports:** Written inspection reports shall include: the inspection date and location; evaluation of compliance with the approved plans; the date of construction and the date of completion; any deviations from the approved plans; and any other relevant information.

15. **Erosion and Sediment Control:** Erosion and sediment control shall be implemented during construction to prevent soil erosion and sedimentation.

16. **Silt Fence:** Silt fence shall be placed at the base of the stockpile to prevent sediment from leaving the site. Silt fence shall be stored on site until the end of construction.

17. **Temporary Stockpiles:** Temporary stockpiles shall be covered with silt fence to prevent sediment from leaving the site.

18. **Remote Control:** Remote control of sediment basins shall be implemented to allow for effective management of sedimentation.

19. **Monitoring:** Monitoring shall be performed to ensure compliance with the approved plans and to identify any deviations from the approved specifications.

20. **Infiltration:** Infiltration systems shall be monitored to ensure that they are functioning properly.

21. **Preconstruction Meeting:** A preconstruction meeting shall be held with the owner, architect, and engineer to review the scope of work, project timeline, and budget.

22. **Quality Control:** Quality control measures shall be implemented to ensure that materials and workmanship meet the specified standards.

23. **Approval of Plans:** The plans shall be reviewed and approved by the owner and the engineer before construction.

24. **Submittals:** Submittals shall be submitted to the owner and the engineer for review and approval before construction.

25. **Change Orders:** Change orders shall be issued for any changes in the scope of work.


**NOTES AND SOILS DATA:**

- **Soil Weight:**
- **Stone Weight:**
- **NOTE:** This document integrates various notes and soil data to ensure a comprehensive understanding of the site conditions and required specifications.

**SE-6**

**PREPARED FOR:**

- **ADAM DOLDER**
- **GREENWICH, CT**
- **DRAWN BY:**
- **CHECKED BY:**
- **N.T.S.**
- **2/18/2021 3:20 PM**

---

**Towns of Greenwich Standard Construction Notes**

**NOTES:**

1. **Highway Right-of-Way:**
   - 1. A Highway Right-of-Way is required at all times.

2. **Utility Easements:**
   - 2. All work within the Towns of Greenwich - Right-of-Way shall be in accordance with the Town of Greenwich - Right-of-Way.

3. **Erosion Control:**
   - 3. Erosion control measures shall be implemented to prevent soil erosion and sedimentation.

4. **Utilities:**
   - 4. Utilities shall be connected to existing public systems in accordance with the approved plans.

5. **Silt Fence:**
   - 5. Silt fence shall be installed to prevent soil erosion and sedimentation from leaving the site.

6. **Sediment Basins:**
   - 6. Sediment basins shall be installed to control sedimentation.

7. **Infiltration Systems:**
   - 7. Infiltration systems shall be installed to control runoff.

8. **Written Inspection Reports:**
   - 8. Written inspection reports shall be submitted for review and approval.

9. **Construction Phasing:**
   - 9. Construction phasing shall be implemented to ensure compliance with the approved plans.

10. **Remote Control:**
    - 10. Remote control of sediment basins shall be implemented to ensure effective management of sedimentation.

11. **Written Inspection Reports:**
    - 11. Written inspection reports shall include the inspection date and location; evaluation of compliance with the approved plans; the date of construction and the date of completion; any deviations from the approved plans; and any other relevant information.

12. **Erosion and Sediment Control:**
    - 12. Erosion and sediment control shall be implemented during construction to prevent soil erosion and sedimentation.

13. **Silt Fence:**
    - 13. Silt fence shall be placed at the base of the stockpile to prevent sediment from leaving the site.

14. **Temporary Stockpiles:**
    - 14. Temporary stockpiles shall be covered with silt fence to prevent sediment from leaving the site.

15. **Remote Control:**
    - 15. Remote control of sediment basins shall be implemented to allow for effective management of sedimentation.

16. **Monitoring:**
    - 16. Monitoring shall be performed to ensure compliance with the approved plans and to identify any deviations from the approved specifications.

17. **Infiltration:**
    - 17. Infiltration systems shall be monitored to ensure that they are functioning properly.

18. **Preconstruction Meeting:**
    - 18. A preconstruction meeting shall be held with the owner, architect, and engineer to review the scope of work, project timeline, and budget.

19. **Quality Control:**
    - 19. Quality control measures shall be implemented to ensure that materials and workmanship meet the specified standards.

20. **Approval of Plans:**
    - 20. The plans shall be reviewed and approved by the owner and the engineer before construction.

21. **Submittals:**
    - 21. Submittals shall be submitted to the owner and the engineer for review and approval before construction.

22. **Change Orders:**
    - 22. Change orders shall be issued for any changes in the scope of work.

23. **Incorporation by Reference:**

---

**SE-6**

**PREPARED FOR:**

- **ADAM DOLDER**
- **GREENWICH, CT**
- **DRAWN BY:**
- **CHECKED BY:**
- **N.T.S.**
- **2/18/2021 3:20 PM**
1. All catch basin components to be pre-cast reinforced concrete, able to withstand the applied earth loads of an H-20 truck load.

2. All joints to be mortared.


4. All crushed stone shall be gradation No. 4 as per CT D.O.T.

5. The soil mixture shall have a P-Index (phosphorous index) of 0-30 (a low P-Index creates an enhanced substitution of organics that will not release phosphorous into the water system).

6. The soil mixture shall be scarified to promote infiltration prior to backfilling.

7. Plantings of rain garden to be designed by others.

8. The design engineer shall provide an as-built plan of the rain garden system along with a certification that the system was designed in accordance with the specifications contained in the Town of Greenwich Engineers Handbook.

9. The purpose of the certification is to ensure proper installation and discourage contractor rework.

10. A dense and vigorous vegetative cover shall be established over the contributing pervious drainage areas before runoff can be accepted into the bio-retention system.

11. The rain garden system shall be fenced off during construction period to prevent disturbance of the topsoil and organic matter.

DEPARTMENT OF PUBLIC WORKS
GREENWICH, CT
PREPARED FOR
ADAM DOLDER

February 18, 2001

SE-8
PROPOSED GREEN AREA EXHIBIT
407 ROUND HILL ROAD
GREENWICH, CT

BRET D. HOLZWARE CT. P.E. 27812
February 23, 2021

SITE AREA: 319,812 SF

SYMBOL | DESCRIPTION | AREA (SF)
-------|-------------|--------
STRUCTURES | | 18,858
PATHWAY | | 13,900
FENCES | | 1,584
POOL (STRUCTURES) | | 1,791
TOTAL | | 33,033 (MAX)

GREEN AREA

SYMBOL | DESCRIPTION | AREA (SF)
-------|-------------|--------
LANDSCAPE | | 296,089
PATHS, WALKs, R. | | 3,428
MECHANICAL EQUIPMENT | | 5
TOTAL | | 299,922 (MAX)

TOTAL SITE AREA: 619,735 (MAX)

* GREEN AREA REQUIREMENT PER ZONING CODE & MUNICIPAL

DATE: 2-23-2021

This document and copies thereof are valid only if they bear the signature and seal of the duly licensed professional. Unauthorized alteration renders said instrument herein void & null.
# Grade Plane Calculations

**~ PROPOSED LOCKER ROOM ~**

**Grade Plane Calculations**

REFER TO ATTACHED EXHIBIT

<table>
<thead>
<tr>
<th>Side (A)</th>
<th>Lowest Elevation within 6’ Envelope (B)</th>
<th>Length along 6’ Offset Line (C)</th>
<th>Product (D) = (B x C)</th>
<th>Lowest Elevation along Foundation (E)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>387.80</td>
<td>37.2</td>
<td>14,426.2</td>
<td>388.3</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>388.00</td>
<td>34.4</td>
<td>13,347.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>387.95</td>
<td>36.5</td>
<td>14,160.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>387.80</td>
<td>25.1</td>
<td>9,733.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>133.2</strong></td>
<td><strong>51,667.4</strong></td>
<td><strong>388.3</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grade Plane =** 387.9 Column D/Column C  
**First Floor Elev =** 388.3  
**Lower Level Elev =** N/A  
**First Floor Elev - Grade Plane =** 0.4  
**Grade Plane - Lower Level Elev =** N/A  
**Distance between Lowest Elevation along Foundation and FFE =** 0.0  
**Is the Basement Considered a Story =** N/A §6-5 (45.1)  
**Percent of Basement Floor Area Counting towards FAR =** N/A §6-5 (22.1)(B)

Note 1: Linear slope within segment allows for lowest grade utilized in calculation above to be an average of the highest and lowest grades within the segment. (OK’d by Chief ZEO via e-mail on 10-19-18)

On February 17, 2021  
By ____________________________  
Bret D. Holzwarth  CT P.E. 27812

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### ~ PROPOSED POOL HOUSE ~

#### Grade Plane Calculations

**REFER TO ATTACHED EXHIBIT**

<table>
<thead>
<tr>
<th>Side (A)</th>
<th>Lowest Elevation within 6' Envelope (B)</th>
<th>Length along 6' Offset Line (C)</th>
<th>Product (D) = (B x C)</th>
<th>Lowest Elevation along Foundation (E)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>396.80</td>
<td>64.5</td>
<td>25,593.6</td>
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<tr>
<td>B</td>
<td>396.40</td>
<td>15.1</td>
<td>5,985.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>396.00</td>
<td>37.6</td>
<td>14,889.6</td>
<td>396.2</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>396.20</td>
<td>4.4</td>
<td>1,743.3</td>
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</tr>
<tr>
<td>E</td>
<td>397.63</td>
<td>48.3</td>
<td>19,205.3</td>
<td>(See note #1)</td>
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</tr>
<tr>
<td>F</td>
<td>399.20</td>
<td>18.1</td>
<td>7,225.5</td>
<td>(See note #1)</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>398.00</td>
<td>3.5</td>
<td>1,393.0</td>
<td>(See note #1)</td>
<td></td>
</tr>
</tbody>
</table>

**Total**  
| Product (D) = (B x C) | 76,035.9 | 396.2 |

- **Grade Plane** = 397.1  
  - **Column D/Column C**
- **First Floor Elev** = 397.0
- **Lower Level Elev** = 392.9
- **First Floor Elev - Grade Plane** = -0.1
- **Grade Plane - Lower Level Elev** = 4.1
- **Distance between Lowest Elevation along Foundation and FFE** = 0.8
- **Is the Basement Considered a Story**  
  - NO §6-5 (45.1)
  - N/A §6-5 (22.1)(B)

Note 1: Linear slope within segment allows for lowest grade utilized in calculation above to be an average of the highest and lowest grades within the segment. (OK'd by Chief ZEO via e-mail on 10-19-18)

On February 17, 2021  
By Bret D. Holzwarth  CT P.E. 27812

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407 ROUND HILL ROAD

THIS DRAWING IS THE PROPERTY OF TANNERWHITE ARCHITECTS: HAS BEEN PREPARED SPECIFICALLY FOR THE OWNER FOR THIS PROJECT AT THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF TANNERWHITE ARCHITECTS, LLC

REVISED: 
SCALE: 
DATE: 
DRAWN: 2/23/21 
1/4" = 1'-0"

LOCKER ROOM FLOOR PLANS

Tanner White, AIA, LEED-AP 
1 BRIDGE SQUARE, WESTPORT CT
203-283-4749 Office 
Tanner@TANNERWHITEARCHITECTS.COM
Tanner White Architects, LLC
GREENWICH, CT

PROVIDE HAUNCH TO RECEIVE P.T. (2) 2X6

PROVIDE HAUNCH TO RECEIVE FINISHED STONE PATIO

4" CONCRETE SLAB ON GRADE OVER UNEXCAVATED SPACE
COMPACTED FILL WITH CRUSHED STONE GRAVEL
LOCKER ROOM WALL SECTIONS & DETAILS

EXT. PATIO CONSTRUCTION:
- COMPACTED FILL
- 4" REINFORCED CONCRETE SLAB OVER 6" CRUSHED STONE GRAVEL
- 1" MORTAR
- STONE FINISHED PAVER

2X6 EXTENDED OUTRIGGER CUT TO SHAPE
- ALUMINUM DRIP EDGE
- MDO OR PLYWOOD SOFFIT

ROOFING CONSTRUCTION:
- GALV. ALUM. STANDING SEAM ROOFING WITH DRIP EDGE
- WEATHER-WATCH MEMBRANE OVER ENTIRE ROOF
- 5/8" EXTERIOR GRADE PLYWD. SHEATHING
- 2x12 ROOF RAFTERS @ 16" O.C.

STRUCTURAL BEAM SEE STRUCTURAL ENGINEER
- SIMPSON STRONG-TIE POST CAP
- PTED 3/4" AZEK TRIM BOARD
- PTED 6" T&G V-GROOVE BOARD

INT. FLOOR CONSTRUCTION:
- COMPACTED FILL
- 6" CRUSHED STONE GRAVEL
- 2" RIGID INSULATION BOARD
- 4" REINFORCED CONCRETE SLAB
- 1" MORTAR
- STONE FINISHED PAVER

CEILING JOISTS SEE STRUCTURAL ENGINEER
- 2 HR. FIRE RATED GYPSUM BOARD WALL & CEILING
- 2 HR. FIRE RATED GYPSUM BOARD CEILING
- RIDGE STRUCTURE SEE STRUCTURAL ENGINEER

EXT. WALL CONSTRUCTION:
- KRAFT FACE VAPOR BARRIER W/ OPEN CELL POLYURETHANE SPRAY INSULATION R-21 MIN
- 2x6 STUDS @ 16" O.C.
- 5/8" EXT. GRADE PLYWD SHEATHING
- HYDROGRAP DRAINABLE HOUSEWRAP
- VENTED AIRSPACE
- BORAL CLAPBOARD SIDING COLOR T.B.D.
1. Door Schedule

2. Door Types

3. Window Schedule
Standard Requirements:
1. Roof sheathing: 1/2" plywood with 8d nails at 6" on center at panel edges.
2. Rafter straps at ridge: Simpson LSTA24 at every third rafter.
3. Rafter straps to first floor wall plate: Simpson H2.5A at each rafter.
4. First floor wall plate to first floor stud: Simpson H2.5A at each stud.
5. Strap between headers 8'-0" and greater to jack stud: Simpson H6.
6. First floor stud to sill plate: 1/2" plywood with 8d nails at 2" on center.
7. Sill plate to foundation wall: 1/2" diameter double zinc coated anchor bolts at 48" on center.
(1'-0" maximum from each corner and plate ends)
8. Exterior plywood sheathing: 1/2" plywood with 8d nails at 6" on center at panel edges.
Unless otherwise noted. Provide 2 x 4 solid blocking on the flat between all studs at all horizontal plywood joints for continuation of the nailing pattern.

Job Specific Requirements:
1. Shear wall #1: (Exterior left side wall of kitchenette): 1/2" plywood with 8d nails at 4" on center at panel edges. Simpson HDU2 hold down at corners and each side of window. (4) locations.
2. Shear wall #2: (Exterior left side wall great room & bath): 1/2" plywood with 8d nails at 2" on center at panel edges. Simpson HDU11 hold down at corners and next to window. (5) locations.
3. Shear wall #3: (Exterior right side wall of great room & bedroom): 1/2" plywood with 8d nails at 2" on center at panel edges. Simpson HDU11 hold down at corners and next to great room window & bedroom door. (4) locations.
4. Shear wall #4: (Exterior right side wall of changing room): 1/2" plywood with 8d nails at 6" on center at panel edges. Simpson HDU2 hold down at corners and next to window. (3) locations.
5. Shear wall #5: (Exterior back of covered porch): Rigid steel frame. TS 6" x 6" x 3/8" tube columns with 3/8" thru plate connections. (2) locations.
7. Shear wall #7: (Exterior front wall of bath & bedroom): 1/2" plywood both sides with 8d nails at 3" on center at panel edges. Simpson HDU4 hold down at corners. (2) locations.
AS BUILT F.A.R. & GROSS FLOOR AREA CALCULATIONS

NOTE: CALCULATIONS GENERATED BASED ON SURVEY COMPLETED BY REDNISS AND MEAD

Zone RA-4
307,755 SF LOT AREA
FAR: 0.625 x 307,755 = 19,234.68 SF ALLOW FAR

POOL HOUSE SQUARE FOOTAGE CALCULATIONS

<table>
<thead>
<tr>
<th>AREA</th>
<th>SQUARE FOOTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>143 SQ FT</td>
</tr>
<tr>
<td>A2</td>
<td>535 SQ FT</td>
</tr>
<tr>
<td>A3</td>
<td>143 SQ FT</td>
</tr>
</tbody>
</table>

TOTAL: 821 SQ FT

LOCKER ROOM SQUARE FOOTAGE CALCULATIONS

<table>
<thead>
<tr>
<th>AREA</th>
<th>SQUARE FOOTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>118 SQ FT</td>
</tr>
<tr>
<td>B2</td>
<td>118 SQ FT</td>
</tr>
</tbody>
</table>

TOTAL: 236 SQ FT

TOTAL SQUARE FOOTAGE

<table>
<thead>
<tr>
<th></th>
<th>8,176 SQ FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOUSE TOTAL</td>
<td></td>
</tr>
<tr>
<td>POOL HOUSE TOTAL</td>
<td>527 SQ FT</td>
</tr>
<tr>
<td>LOCKER ROOM TOTAL</td>
<td>236 SQ FT</td>
</tr>
<tr>
<td>GRAND TOTAL:</td>
<td>9,233 SQ FT</td>
</tr>
</tbody>
</table>

ALLOWABLE GROSS FLOOR AREA: 19,234.68 SQ FT

GROSS FLOOR AREA BELOW ALLOWABLE GFA: (19,234.68-9,233) = 10,001.68 SQ FT
THIS DRAWING IS THE PROPERTY OF TANNERWHITE ARCHITECTS: HAS BEEN PREPARED SPECIFICALLY FOR THE OWNER FOR THIS PROJECT AT THIS SITE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF TANNERWHITE ARCHITECTS, LLC.

REVISED:

SCALE:

DATE:

DRAWN:

2/23/21

1/4" = 1'-0"

A-1

4

FAR CALCULATIONS

TW / JC

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GREENWICH, CT

FFE = 397.0

399.25'

398.0'

397.0'

143 sq ft

535 sq ft

143 sq ft

A1

A2

A3

3

A-7

B1

B2

FAR SHEETS

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

1

FAR SHEETS

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

2
TOTAL CUBIC VOLUME 177,529.46 CU FT

MAIN HOUSE CUBIC VOLUME = 157,675.46 CU FT

LOCKER ROOM CUBIC VOLUME = 4,720 CU FT

POOL HOUSE CUBIC VOLUME = 15,134 CU FT

GRADE PLANE TO FIRST FLOOR
LOVER LEVEL VOLUME
664 CU FT

FIRST FLOOR VOLUME
2650 CU FT

SECOND FLOOR VOLUME
1406 CU FT
SECOND FLOOR TO TOP OF RIDGE

FIRST FLOOR VOLUME
8409 CU FT
FIRST FLOOR TO FINISHED SECOND FLOOR

SECOND FLOOR VOLUME
5564 CU FT
SECOND FLOOR TO TOP OF RIDGE

FIRST FLOOR VOLUME
1161 CU FT
GRADE PLANE TO FIRST FLOOR

GRADE PLANE TO FIRST FLOOR
LOVER LEVEL VOLUME
1161 CU FT

FIRST FLOOR VOLUME
8409 CU FT
FIRST FLOOR TO FINISHED SECOND FLOOR

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