

Professional Certification: I hereby certify that these documents were prepared or approved by me, and I am a dully licensed professional engineer under the laws of State of the Maryland, License No, 16290, Expiration date 2026-12-11



Sheet #	Sheet Name
	Cover Page
Sheet S1	Full Site Plan 1'=100'
Sheet S2	Partial Site Plan 1"=20'
Sheet S3	Partial Site Plan 1"=10'

THE BUILDING PERMIT AND ONE SET OF APPROVED DRAWINGS MUST BE MADE AVAILABLE AT THE SITE FOR THE REQUIRED INSPECTION.

## 1. BUILDING DESIGN

- |      |  |                           |
|------|--|---------------------------|
| a.   | Frost Line Depth                             | 30"                       |
| b.   | Floor Live Loads                             |                           |
| i.   | Living Rooms                                 | 40# PSF add 10# dead load |
| ii.  | Sleeping Areas & Attic Storage w/stairs      | 30# PSF add 10# dead load |
| iii. | Attic Storage Area (light storage-no stairs) | 20# PSF add 10# dead load |
| iv.  | Decks  | 40# PSF                   |
| c.   | Roof Loads                                   |                           |
| i.   | 10# PSF ground chord dead load               |                           |
| ii.  | 40# PSF ground snow load                     |                           |
| d.   | Wind Speed Design                            | 115 MPH ultimate          |
- ### FOOTING
- a. Minimum depth finished grade to bottom of all footings – 30" or extended to solid bearing, whichever is greater.
  - b. Size – must be 8" thick and extend a minimum of 4" beyond wall on each side.
  - c. Chimney footings – must be 12" thick and extend 6" beyond wall on all sides.
  - d. Column footing pad – 24" x 24" x 12" single story bearing, 30" x 30" x 15" for a two story bearing, or 36" x 36" x 18" for a three story bearing; when carrying roof load, increase to next column footing pad size; or have designed to carry the required load.
  - e. Top surface to be level, bottom surface not greater than 1 in 10 slope.
  - f. Step footings – top run shall overlap preceding run and tie together.
  - g. Monolithic Pour – footers, wall, and slab poured at same time – can be used with minimum of 12" wide 30" deep and a 3 1/2" slab

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### 3. FOUNDATION WALLS

- a. Top course of block shall be a solid unit or filled solid.
  - b. Top of wall at least 6" above grade.
  - c. Wall thickness according to depth of backfill. Maximum backfill for 8" hollow block 4', for 10" block 5', for 12" block 6'. The Code Official, when soil conditions warrant, may decrease the amount of backfill allowed or ask for an engineer's report.
  - d. Plate anchors – approved straps shall be spaced and installed per manufacturer's instruction.  $\frac{1}{2}$ " bolts at maximum 6' on center, 7" into masonry and a maximum 12" from corners.
  - e. Where walls of masonry hollow units or masonry bonded hollow walls are decreased in thickness, a course of solid masonry shall be constructed between wall below and the thinner wall above.
  - f. Masonry stem wall construction shall be installed in accordance with code.
- FOUNDATION DRAINAGE, WATER PROOFING**
- a. Drain tile perforated = 3" minimum diameter or approved drainage system with ICC ES report. Installed on the exterior perimeter of walls where interior grade is below exterior grade.
  - b. The surrounding by 4" gravel and covered with approved filter material.
  - c. Drain tile shall discharge to a sealed sump pit, which contains a pump or provides gravity flow to grade, discharging a minimum of 10' from house and 10' from property line.
  - d. Away from drain tied to sealed sump pit or positive gravity flow with 2" pipe with minimum  $\frac{1}{8}$ " – 1" slope or 3" pipe with minimum  $\frac{1}{8}$ " – 1" slope.
  - e. The exterior of masonry walls enclosing basements below grade to be parged with  $\frac{1}{8}$ " portland cement covered at bottom and covered with an approved waterproofing.
  - f. Poured concrete walls enclosing areas below grade must have wall ties broken off flush with face and covered with an approved waterproofing.

## 5. HOUSE SUPPORT COLUMNS

- a. All support post or columns shall be anchored top and bottom.
  - b. Adjustable columns – screw down anchored in concrete to prevent lateral displacement.
  - c. All surfaces of steel columns shall be given a shop coat of rust inhibitive paint.
  - d. Column spacing – reference Beam Spans.
- Column footings See Section 2 d.

## 6. PROTECTION AGAINST DECAY

- a. Pressure treated sill plates less than 8" from finished grade.
  - b. All wood in contact with earth or in contact with concrete must be pressure treated.
  - c. Wood beams pocketed in masonry wall —  $\frac{1}{2}$ " clearance, sides and end. Beam bottom shall not be in direct contact with masonry.
  - d. Wood joists or bottom of wood structural floor when closer than 18" or wood girders when closer than 12" to exposed ground must be pressure treated.
  - e. Sills and sleepers on a concrete or masonry slab in direct contact with ground must be pressure treated, unless separated from such slab by an impervious moisture barrier.
  - f. Siding, sheathing, wall framing on exterior less than 6" from ground shall be pressure treated wood, or protected in an approved manner.
  - g. Wood framing strips or other wood framing members attached directly to the interior of the exterior masonry walls or concrete wall below grade except where an approved vapor retardant is applied between the wall and the framing strips or framing members.
  - h. All wood in contact with the ground and supports, permanent structures shall be treated lumber.
  - i. All fasteners for pressure treated wood shall be hot-dipped, zinc-coated, galvanized, stainless steel, silicon bronze, or copper.
- CRAWL SPACE**
- a. Access to all under-floor spaces. Opening through the floor shall be a minimum of 18" x 24"; openings through a perimeter wall shall be not less than 16" x 24".
  - b. Ventilation of crawl space 1 sq. ft. of area per 150 sq. ft. One opening within 3' of each corner.
  - c. Provide drain the when the grade under the floor is lower than the outside finished grade.
  - d. A radon system shall be installed in accordance with Appendix F of the International Residential Code and labeled with a continuous orange paint line throughout the structure.
- The exterior of masonry walls enclosing basements below grade to be parged with  $\frac{1}{2}$ " portland cement covered at bottom and covered with an approved waterproofing.
- Poured concrete walls enclosing areas below grade must have wall ties broken off flush with face and covered with an approved waterproofing.
- WALL CONSTRUCTION**
- a. Bearing walls — interior and exterior. Double top plate. Exception: Single top plate may be installed in bearing and exterior walls, provided the plate is adequately tied at joints, corners, and intersecting walls by at least the equivalent of 3" by 6" by 0.9050" thick galvanized steel that is nailed to rack wall or segment of wall by three 8d nails or equivalent, provided the nails or joists are centered over the studs with a tolerance of no more than 1".

## 8. WALL CONSTRUCTION

- b. Interior load-bearing partitions shall be constructed and fire stopped as exterior walls.
- c. Interior non-bearing partitions may be constructed with 2" x 3" studs spaced 16" on center or 2" x 4" studs spaced 24" on center, where not needed as a braced wall line.
- d. Firststop all concealed spaces of stud wall partitions to cut off all concealed draft opening and to form an effective fire barrier between stories and roof.
- e. Buildings shall be braced in accordance with the code or engineered design.
- f. Studs shall be continuous from floor/foundation to ceiling or roof assembly.
- g. All header and beam spans shall be installed in accordance with the code or designed in accordance with accepted engineering practices.

## 9. GENERAL MASONRY CONSTRUCTION

- a. Minimum thickness of masonry bearing wall more than one story shall be 8".
  - b. **SOLID** masonry walls of one story dwellings and garages shall not be less than 6" in thickness when not greater than 9' in height.
  - c. Where walls of masonry hollow units or masonry bonded hollow walls are decreased in thickness, a course of solid masonry shall be constructed between wall below and the thinner wall above.
  - d. Hollow piers shall be capped with 4" of solid masonry or concrete or shall have cavities of the top course filled with concrete grout.
  - e. Masonry over openings shall be supported by steel lintels, reinforced concrete or masonry lintels or masonry arches designed to support load imposed.
  - f. Beams, girders, or other concentrated loads supported by a wall or column shall have a bearing of at least 3" in length upon solid masonry not less than 4" in thickness, or upon a metal bearing plate of adequate design.
- Masonry stem walls with a height and length of 48" or less shall be reinforced.

## 10. WALL COVERINGS/FLASHING REQUIREMENTS

- a. Siding, soffit, ceiling or approved type for exterior use.
  - i. Water resistive barrier required behind vinyl siding.
- b. Masonry veneer
  - i. 1" air space or 1" mortared space to framing.
  - ii. Masonry veneer shall not support any vertical load other than the dead load of the veneer above.
  - iii. Attached to the supporting wall with corrosion-resistant metal ties.

- Approved corrosion-resistant flashing shall be installed in accordance with code to prevent entry of water at all windows, doors, chimneys, roofs, masonry, deck and exterior wall finishes.
- iv. Metal wall ties shall be spaced no more than 24" on center horizontally and shall support not more than 2.67 sq. ft. of wall area.
- v. Felt paper free from holes and breaks or other approved weather-resistant material shall be applied over all exterior walls.
- vi. Flashing for masonry veneer shall be located beneath the first course of masonry above finished ground level above the foundation wall or slab.
- vii. Weep holes shall be provided in the outside wythe of masonry walls at a maximum spacing of 33" on center, not less than  $1/16"$  in diameter.
- viii. Flashing shall be used around windows and doors, under and at the ends of masonry, above all projecting, wood trim, over porches, decks, or stairs attached to a wall or floor assembly, all wall and roof intersection.

## 11. FLOOR SYSTEMS

- a. Joist minimum bearing on wood –  $1\frac{1}{2}$ " , masonry – 3".
- b. Joist hangers or lapped minimum 3" over beam.

## 12. RAFTERS OR TRUSSES

- a. Roof and ceiling construction shall be capable of accommodating all loads imposed according to load requirements and of transmitting the resulting loads to the supporting structural elements.
  - b. Trusses shall be braced to prevent rotation and provide lateral stability in accordance with requirements specified in the construction documents or BCS1-1-03 requirements. All construction documents shall be on site.
  - c. Roof sheathing:
    - i. Plywood -  $\frac{1}{2}$ " 24" on center no clips,  $\frac{1}{8}$ " 24" on center use clips or blocking
    - ii. OSB Plywood -  $\frac{1}{2}$ " 24" on center no clips,  $\frac{7}{16}$ " 24" on center no clips,  $\frac{1}{8}$ " 16" on center use clips or blocking.
- ENT, ATTIC ACCESS**
- a. Soffit and ridge vent, or gable vent, net free ventilation 1 sq. ft. for every 150 sq. ft. of the area space ventilated.
  - b. Provide readily accessible 22"x 30" access panel.
  - c. Provide ventilation to concealed attics spaces.
  - d. Provide a pull down stair with a 2' wide walkway to the 30" x 30" HVAC service platform when a unit is installed in the attic.

### 13. VENT, ATTIC ACCESS

- Softlin and ridge vent, or gable vent, net free ventilation 1 sq. ft. for every 150 sq. ft. of the area of space ventilated.
- Provide readily accessible 22" x 30" access panel.
- Provide ventilation to concealed rafter spaces.
- Provide a pull down stair with a 2' wide walkway to the 30" x 30" HVAC service platform when a unit is installed in the attic.

### Scope of work:

Seeking approval for a variance of setback to 3'-6" to avoid relocating the sewer system and maintain the house's symmetrical geometry.





DEVELOPER'S CERTIFICATE

1. I, the undersigned, hereby certify that the information furnished herein is true and correct to the best of my knowledge and belief, and that I am the owner or authorized agent of the owner of the property described herein.

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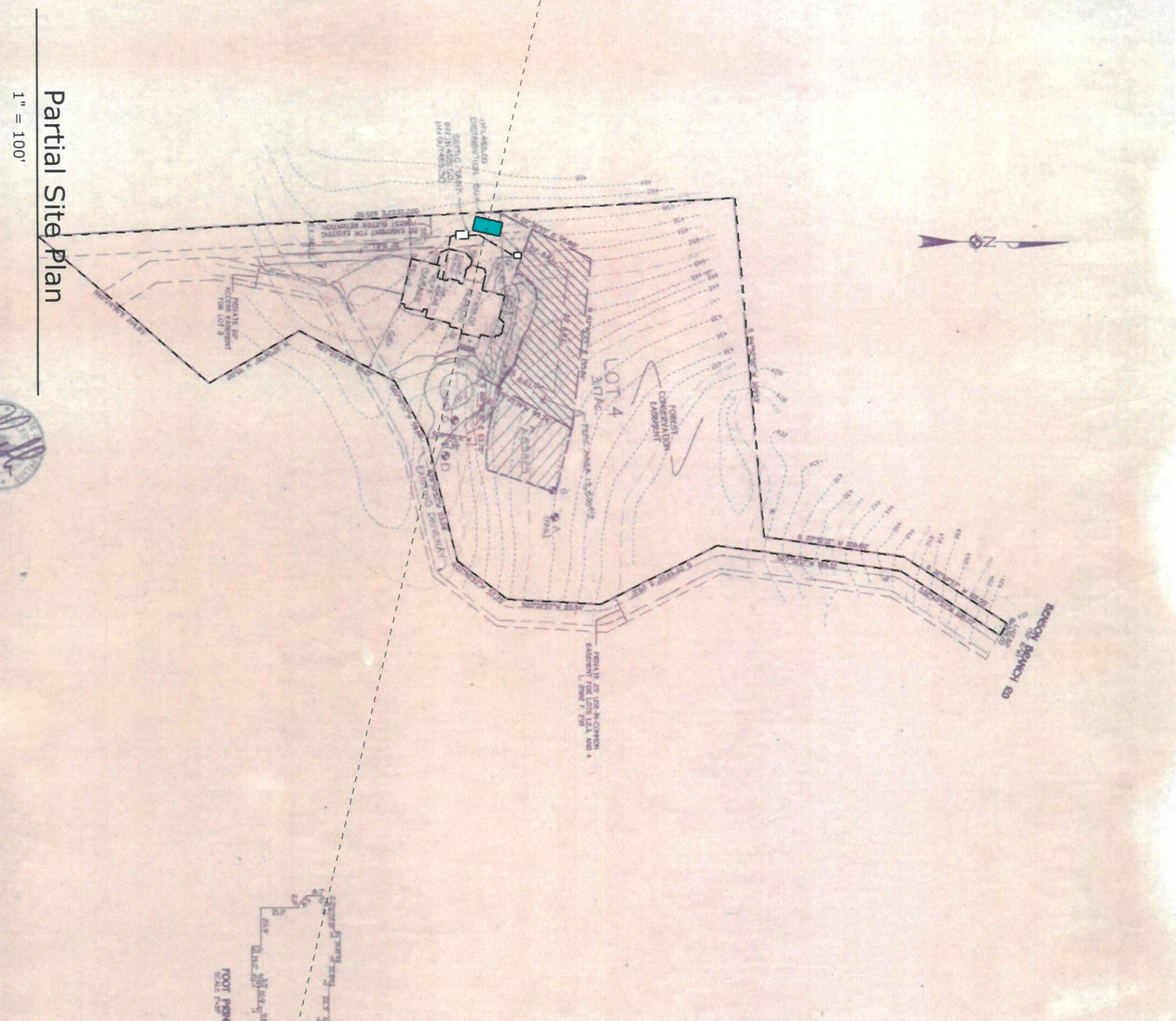
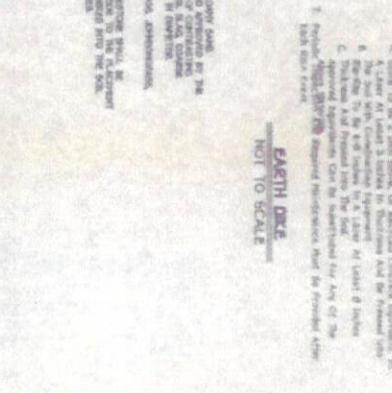
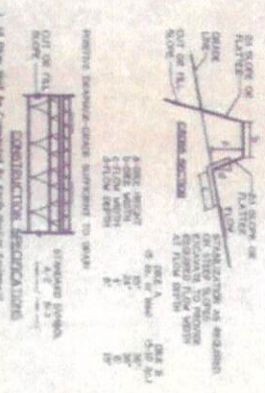
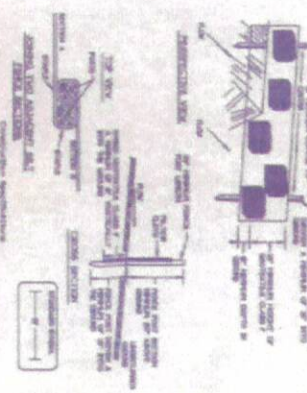
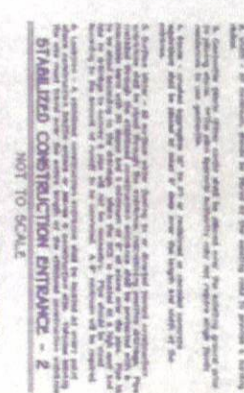
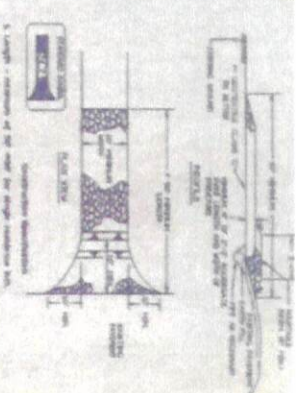
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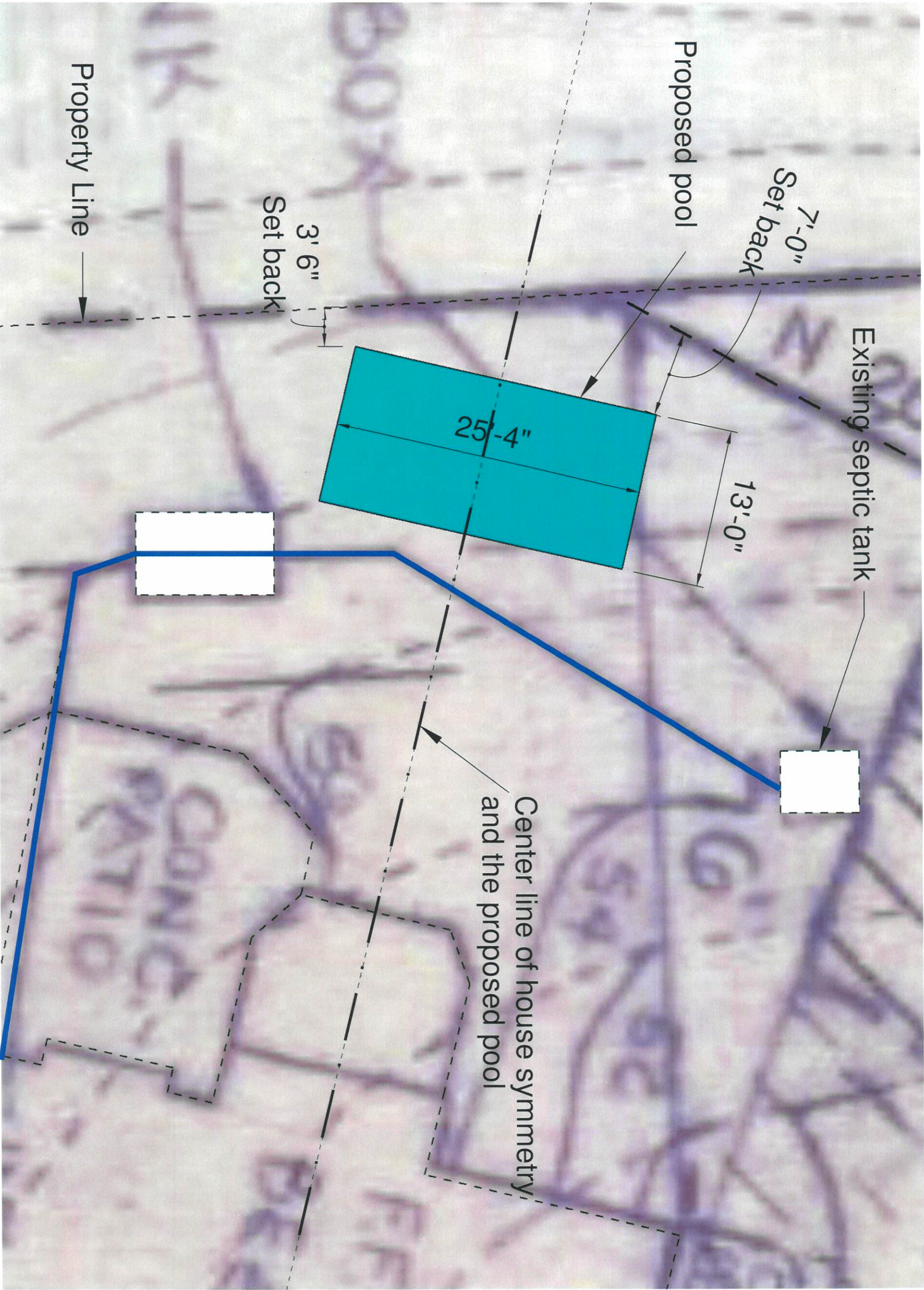


Partial Site Plan  
1" = 100'









3	S	DRAWN BY KM	SHEET DESCRIPTION Partial Site Plan 1"=10'	DATE: August 26, 2025	CLIENT Fiona Habibi 3704 Red Oak Ln	 SRU	<b>Structures R Us</b> 4346 Stonecrest Dr. Ellicott City MD 21043
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