

# SUBDIVISION PLAN NEHANTIC HIGHLANDS SUBDIVISION

APPLICANT:

KRISTEN CLARKE PE  
& SHELLY HARNEY  
HOLMES ROAD &  
UPPER WALNUT HILL ROAD  
EAST LYME, CONNECTICUT

FEBRUARY 7, 2023

APPROVED BY THE EAST LYME  
PLANNING COMMISSION

CHAIRMAN/SECRETARY \_\_\_\_\_  
APPROVAL DATE \_\_\_\_\_  
FILING DATE \_\_\_\_\_  
EXPIRATION DATE \_\_\_\_\_

EROSION AND SEDIMENT CONTROL PLAN CERTIFIED BY  
VOTE OF EAST LYME PLANNING COMMISSION ON

DATE \_\_\_\_\_  
CHAIRMAN/SECRETARY \_\_\_\_\_

NOTES:

1. THIS PLAN AND THE SURVEY IT IS BASED ON HAVE BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300B MINIMUM STANDARDS OF ACCURACY, CONTENT AND CERTIFICATION FOR SURVEYS AND MAPS. THE TYPE OF SURVEY IS A SUBDIVISION PLAN. THE PERIMETER BOUNDARY DETERMINATION CATEGORY IS A RESURVEY. THE SUBDIVISION LOT LAYOUT IS A FIRST SURVEY AND THE HORIZONTAL ACCURACY CONFORMS TO CLASS 4-2. TOPOGRAPHIC SURVEY IS COMPILED FROM 2016 STATE OF CONNECTICUT LIDAR DATA.

NO DECLARATION IS EXPRESSED OR IMPLIED BY THIS MAP OR COPIES THEREOF UNLESS THE PRINT BEARS THE IMPRESSION TYPE SEAL AND ORIGINAL LINE SIGNATURE OF THE SURVEYOR WHOSE NAME AND REGISTRATION NUMBER APPEAR BELOW OR THEREON.

2. REFERENCE IS MADE TO EAST LYME LAND RECORDS VOLUME 1078 AT PAGE 160 FOR A WARRANTY DEED-STATUTORY FORM DATED MARCH 25, 2022 REGARDING RECORD TITLE TO THE SUBJECT PROPERTY.

3. THE SUBJECT PROPERTY IS SHOWN ON THE EAST LYME TAX ASSESSOR MAP 52.0 AS LOT 3 AND MAP 57.0 AS LOT 30 AND HAS A ASSIGNED STREET ADDRESSES OF HOLMES ROAD AND GRASSY HILL ROAD.

4. THE SUBJECT PROPERTY IS LOCATED ENTIRELY WITHIN THE RU-80 ZONE DISTRICT.

5. BEARINGS AND COORDINATES NOTED HEREON ARE REFERENCED TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (NAD 83) EPOCH 2011 (EPOCH). ELEVATIONS CITED HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) TRANSFORMED FROM ELLIPSOID HEIGHT TO ORTHOMETRIC HEIGHT UTILIZING INSIGNIA GEOID AS DETERMINED BY GLOBAL POSITIONING SYSTEM (GPS) OBSERVATIONS UTILIZING THE STATE OF CONNECTICUT'S ADVANCED CONTINUOUSLY OPERATING REFERENCE NETWORK (ACORN) BASE STATION: CTGR, HAVING THE FOLLOWING VALUES:

LATITUDE = N41° 20' 07.3551"  
LONGITUDE = W72° 02' 10.8830"  
ELLIPSOID HEIGHT = -18.943 METERS

6. THIS PLAN REPRESENTS THE LOCATION OF THE BOUNDS AND SITE CONDITIONS DETERMINED BY FIELD SURVEY IN MAY & JUNE 2021.

7. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO JAMES BERNARDO LAND SURVEYING, LLC. THE EXISTENCE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

8. THE INLAND WETLANDS SHOWN HEREON WERE DELINEATED IN THE FIELD BY JOSEPH THEROUX, CERTIFIED SOIL SCIENTIST AND FIELD LOCATED BY JAMES BERNARDO, L.S.

MAP REFERENCES:

1. ALTA SURVEY PREPARED FOR NET FIVE AT PALM POINT, LLC LOCATION: WALNUT HILL ROAD & HOLMES ROAD - EAST LYME & MONTVILLE, CONNECTICUT DATE: OCTOBER 26, 2010 BY J. ROBERT PFANNER & ASSOCIATES, P.C.

2. LOT LINE REVISION WALNUT HILL COUNTRY CLUB 38 HOLMES ROAD EAST LYME, CONNECTICUT DATE: 7-9-03 BY J. ROBERT PFANNER & ASSOCIATES, P.C.

3. SUBDIVISION PLAN PROPERTY OF BARBARA J. FIALKOSKY KAREN M. FRELE & ROBERT J. JANOVIC GRASSY HILL ROAD EAST LYME, CONN. DATED JANUARY 11, 1998 REVISED THRU 8-12-98 SCALE 1"=100' BY J. ROBERT PFANNER & ASSOCIATES, P.C.

4. BOUNDARY SURVEY PROPERTY OF LOUIS KATZ UPPER WALNUT HILL ROAD AND HOLMES ROAD EAST LYME & MONTVILLE, CONNECTICUT SCALE: 1"=200' DATED: JUNE 2, 1990 BY J. ROBERT PFANNER & ASSOCIATES, P.C.

5. HILLTOP ESTATES, INC. HOLMES ROAD EAST LYME & MONTVILLE, CONN. SECT 1 - MONTVILLE LOTS 1 TO 28 - SCALE: 1"=100' REV. MAY 10, 1960 BY C. BANNING.

6. SUBDIVISION PLAN "DAISY HILL SUBDIVISION" PREPARED FOR ROGER L. & LINDA PHILLIPS, CONNECTICUT ROUTE NO. 85 MONTVILLE, CONNECTICUT - DATED: JANUARY 1992 REVISED: 10-22-82 BY ROLAND J. HARRIS & ASSOC. INC.

7. PLAN OF PROPERTY OF EDWIN D. PERRY, SR. AND FRANCIS W. PERRY, SR. GRASSY HILL ROAD EAST LYME, CONN. SCALE 1"=100' DATED: MAY 1978 BY EDMUND SITT, L.S.

8. BOUNDARY SURVEY SHOWING LAND TO BE CONVEYED TO JONATHAN KATZ FROM EDWIN D. SR. AND FRANCIS W. PERRY EAST LYME, CONNECTICUT DATED: AUGUST 21, 2002 BY J. ROBERT PFANNER & ASSOCIATES P.C.

9. LOCATION OF RIGHT OF WAY OF THE CONNECTICUT LIGHT & POWER COMPANY ACROSS THE PROPERTIES OF ESTHER GIBSON AND OTHERS TOWNS OF MONTVILLE & EAST LYME; COUNTY OF NEW LONDON; STATE OF CONNECTICUT SCALE 1"=200' AUGUST 1988 SHEET 1 & 2 OF 2.

10. LIMITED PROPERTY SURVEY SHOWING A PORTION OF THE PROPERTY OF EDWIN D. PERRY AND BARBARA A. PERRY TRUSTEES OF THE EDWIN D. AND BARBARA A. PERRY REVOCABLE TRUST DATED SEPTEMBER 11, 1998 FOR PROPERTY LOCATED AT GRASSY HILL ROAD EAST LYME & MONTVILLE - COUNTY OF NEW LONDON - CONNECTICUT SCALE: 1"=40' DATE: JULY 1, 2010 BY JAMES BERNARDO LAND SURVEYING, LLC REVISED: 1-11-2016.

11. LOT LINE REVISION PLAN PREPARED FOR JONATHAN KATZ LOCATION: EAST LYME AND MONTVILLE, CONNECTICUT SHEET NUMBER 1 OF 1 SCALE: 1"=100' DATE: APRIL 15, 2003 BY J. ROBERT PFANNER & ASSOCIATES, P.C.

12. COMPILATION PLAN TOWN OF MONTVILLE MAP SHOWING LAND ACQUIRED FROM DAVID BRIGHAM BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION ROUTE 11 DRAINWAY OPEN SPACE LAND PURCHASE JULY 2007 TOWN NO. 088 PROJECT NO. 120-083 SERIAL NO. 6.

13. NEHANTIC NATURE PRESERVE EAST LYME LAND TRUST, INC. & STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION OSWA #576 DATE: SEPTEMBER 2, 2021 REVISED 1-28-2022 BY JAMES BERNARDO LAND SURVEYING, LLC.

14. LOT LINE MODIFICATIONS PROPERTY OF DUVAL PARTNERS LLC HOLMES ROAD, GRASSY HILL ROAD & UPPER WALNUT HILL ROAD EAST LYME, CONNECTICUT SEPTEMBER 2, 2021 REVISED: NOVEMBER 15, 2021 BY JAMES BERNARDO LAND SURVEYING, LLC.

## INDEX TO SHEETS

1	COVER SHEET
2	OVERALL BOUNDARY
3	LOT LAYOUT
4	SITE DEVELOPMENT
5	TEST HOLE DATA
6	SITE DEVELOPMENT & STORMWATER DRAINAGE FLOW PATHS
7	EROSION CONTROL AND GRADING LOTS 1-4
8	EROSION CONTROL AND GRADING LOT 5
9	SIGHT LINE VERIFICATION LOTS 1-4 HOLMES ROAD
10	SIGHT LINE VERIFICATION LOTS 5 UPPER WALNUT HILL ROAD

LEGEND

THE FOLLOWING SYMBOLS/ABBREVIATIONS MAY APPEAR ON THIS DRAWING

AC	ACRES	HTB	HIGH TIDE BUSH
BF	BASEMENT FLOOR	SP	SPARTINA PATENS
BT	BITUMINOUS	SA	SPARTINA ALTERNIFLORA
BCLC	BITUMINOUS CONCRETE LIP CURBING	TBR	TO BE REMOVED
CONC	CONCRETE	TYP	TYPICAL
DIA	DIAMETER	P-5	SOIL PERC TEST LOCATION
DB	DISTRIBUTION BOX	THB	SOIL DEEP TEST LOCATION
EOP	EDGE OF PAVEMENT	W	WELL
ELEV	ELEVATION	HYD	HYDRANT
FF	FINISHED FIRST FLOOR	TREE	TREE
LF	LINEAR FOOT	BSL	BUILDING SETBACK LINE
(MIN)	MINIMUM	CLL	CLEARING LIMIT LINE
M/L	MORE OR LESS	EXL	EXISTING IREELINE
N/F	NOW OR FORMERLY	EXC	EXISTING CONTOUR
PVC	POLY VINYL CHLORIDE	NEW	NEW CONTOUR
SCH40	SCHEDULE 40	SFENCE	SEDIMENT FENCE
S.4x	SPOT ELEVATION	SDP	STORM DRAIN PIPE
SF	SQUARE FEET	SW	STONE WALL
TR	TO REMAIN	S	SANITARY SEWER
		W	WATER

OWNER: PORT SIDE HOLDINGS INC. & ENGLISH HARBOUR CAPITAL PARTNERS LLC, TENANTS IN COMMON  
207 CLARENDON AVE  
SOUTHPORT, NC 28461  
860-227-1301

SURVEYOR: JAMES BERNARDO LAND SURVEYING, LLC  
JAMES BERNARDO, L.S.  
102A SPITHEAD ROAD  
WATERFORD, CT 06385  
860-447-0236

APPLICANT: KRISTEN CLARKE, PE & SHELLY HARNEY  
207 CLARENDON AVE  
SOUTHPORT, NC 28461  
860-227-1301

ENGINEER: MAY ENGINEERING  
TIM MAY, PE  
1297 RT 163  
OAKDALE, CT 06370  
860-884-9671

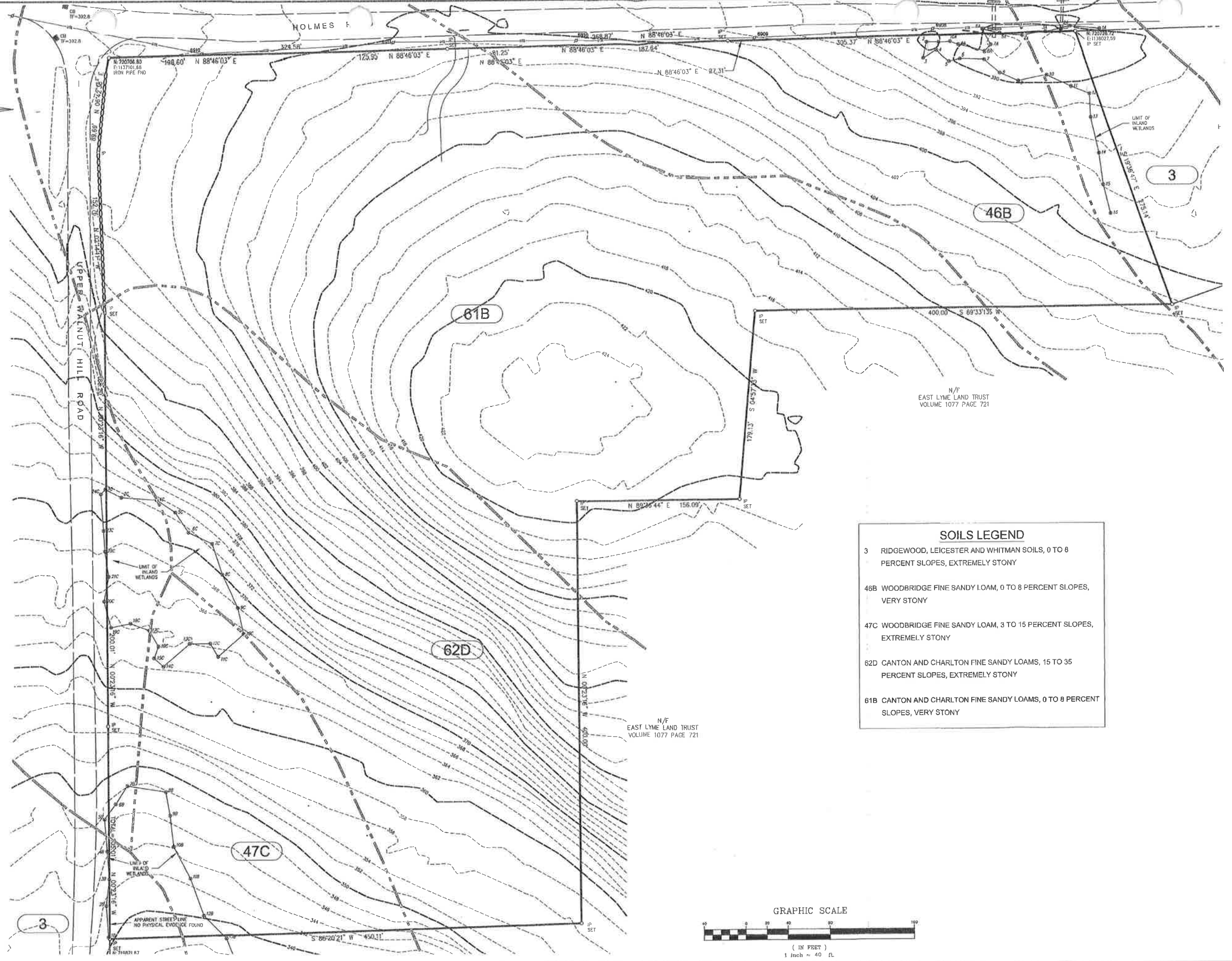
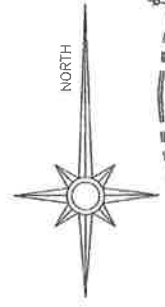
ATTORNEY: GERAGHTY & BONNANO LLC  
ATTY. PAUL GERAGHTY  
38 GRANITE STREET  
NEW LONDON, CT 06320  
860-447-8077

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS SHOWN HEREON.

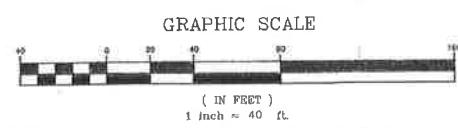
*James Bernardo*  
JAMES BERNARDO  
DATE: 5-1-2023

THE TERM "CERTIFIED" HEREON IS AN EXPRESSION OF PROFESSIONAL OPINION AND IS NEITHER A WARRANTY OR GUARANTEE.

Ex "D"



SOILS LEGEND	
3	RIDGEWOOD, LEICESTER AND WHITMAN SOILS, 0 TO 8 PERCENT SLOPES, EXTREMELY STONY
46B	WOODBIDGE FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES, VERY STONY
47C	WOODBIDGE FINE SANDY LOAM, 3 TO 15 PERCENT SLOPES, EXTREMELY STONY
62D	CANTON AND CHARLTON FINE SANDY LOAMS, 15 TO 35 PERCENT SLOPES, EXTREMELY STONY
61B	CANTON AND CHARLTON FINE SANDY LOAMS, 0 TO 8 PERCENT SLOPES, VERY STONY



JAMES BERNARDO  
 LAND SURVEYING, LLC  
 102A SPITHEAD ROAD  
 WATERFORD, CONNECTICUT 06385  
 (860) 447-0236  
 WWW.JBSURVEY.COM

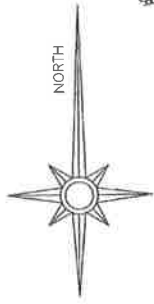


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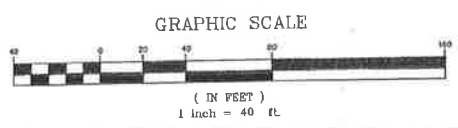
LTR	DESCRIPTION	DATE
REVISIONS		

**OVERALL BOUNDARY SURVEY**  
**NEHANTIC HIGHLAND SUBDIVISION**  
 APPLICANT  
**KRISTEN CLARKE P.E. &**  
**SHELLY HARNEY**  
 FOR PROPERTY LOCATED AT  
**HOLMES ROAD & UPPER WALNUT HILL ROAD**  
 TOWN OF EAST LYME - COUNTY OF NEW LONDON - CONNECTICUT

Sheet No.  
**S-02**  
 SHEET 2 OF 10  
 Scale:  
 1" = 40'  
 Date  
**FEBRUARY 7, 2023**  
 Project No.  
**21040-4**



UPPER WALNUT HILL ROAD



**JAMES BERNARDO**  
 LAND SURVEYING, LLC  
 102A SPITHEAD ROAD  
 WATERFORD, CONNECTICUT 06385  
 (860) 447-0236  
 WWW.JBSURVEY.COM

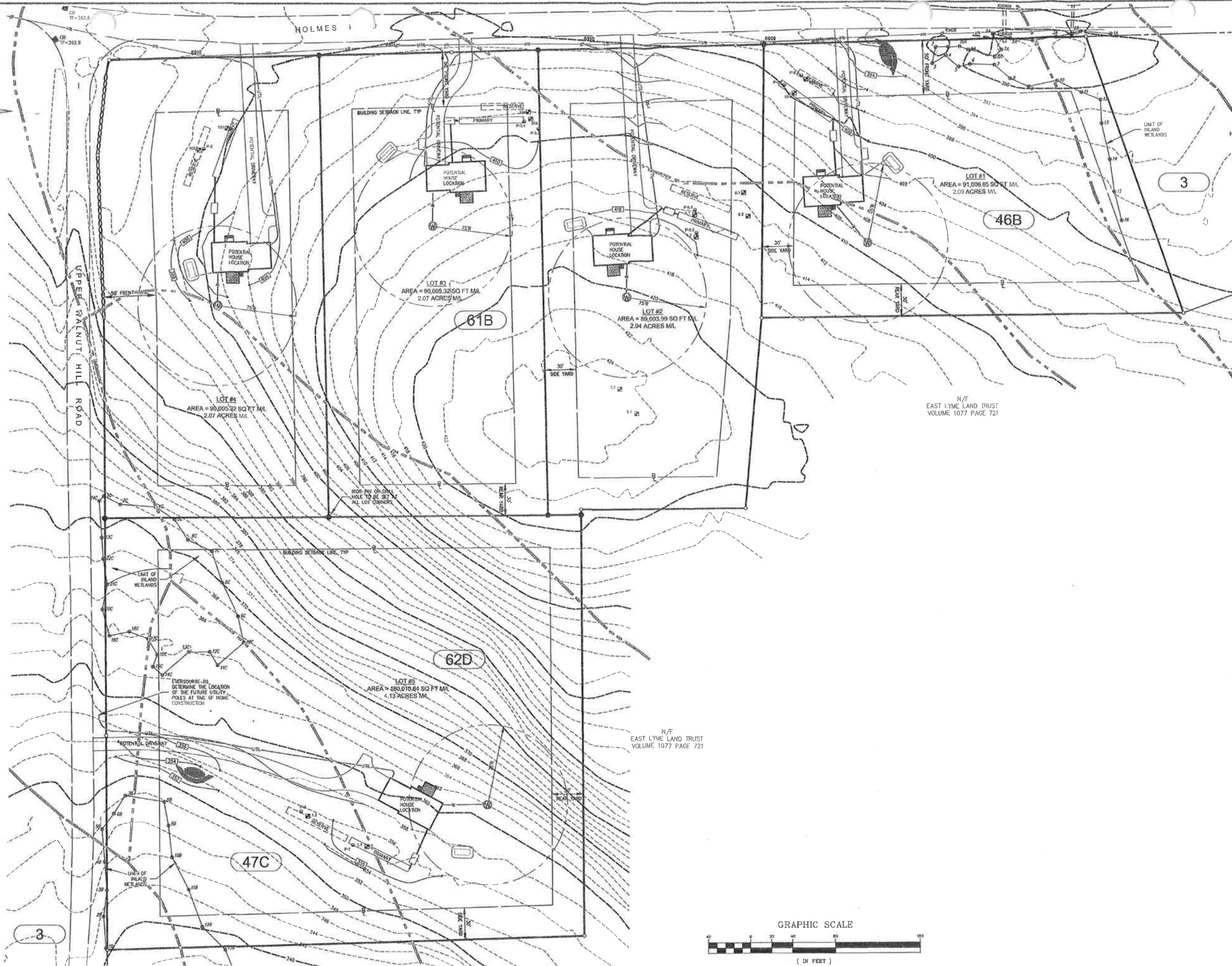
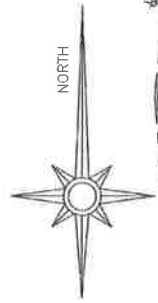


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LTR	DESCRIPTION	DATE

**LOT LAYOUT**  
**NEHANTIC HIGHLAND SUBDIVISION**  
 APPLICANT  
**KRISTEN CLARKE P.E. & SHELLEY HARNEY**  
 FOR PROPERTY LOCATED AT  
**HOLMES ROAD & UPPER WALNUT HILL ROAD**  
 TOWN OF EAST LYME - COUNTY OF NEW LONDON - CONNECTICUT

Sheet No.  
**S-03**  
 SHEET 3 OF 10  
 Scale: 1" = 40'  
 Date  
**FEBRUARY 7, 2023**  
 Project No.  
**21040-4**



JAMES BERNARDO  
 LAND SURVEYING, LLC  
 102A SPITHEAD ROAD  
 WATERFORD, CONNECTICUT 06385  
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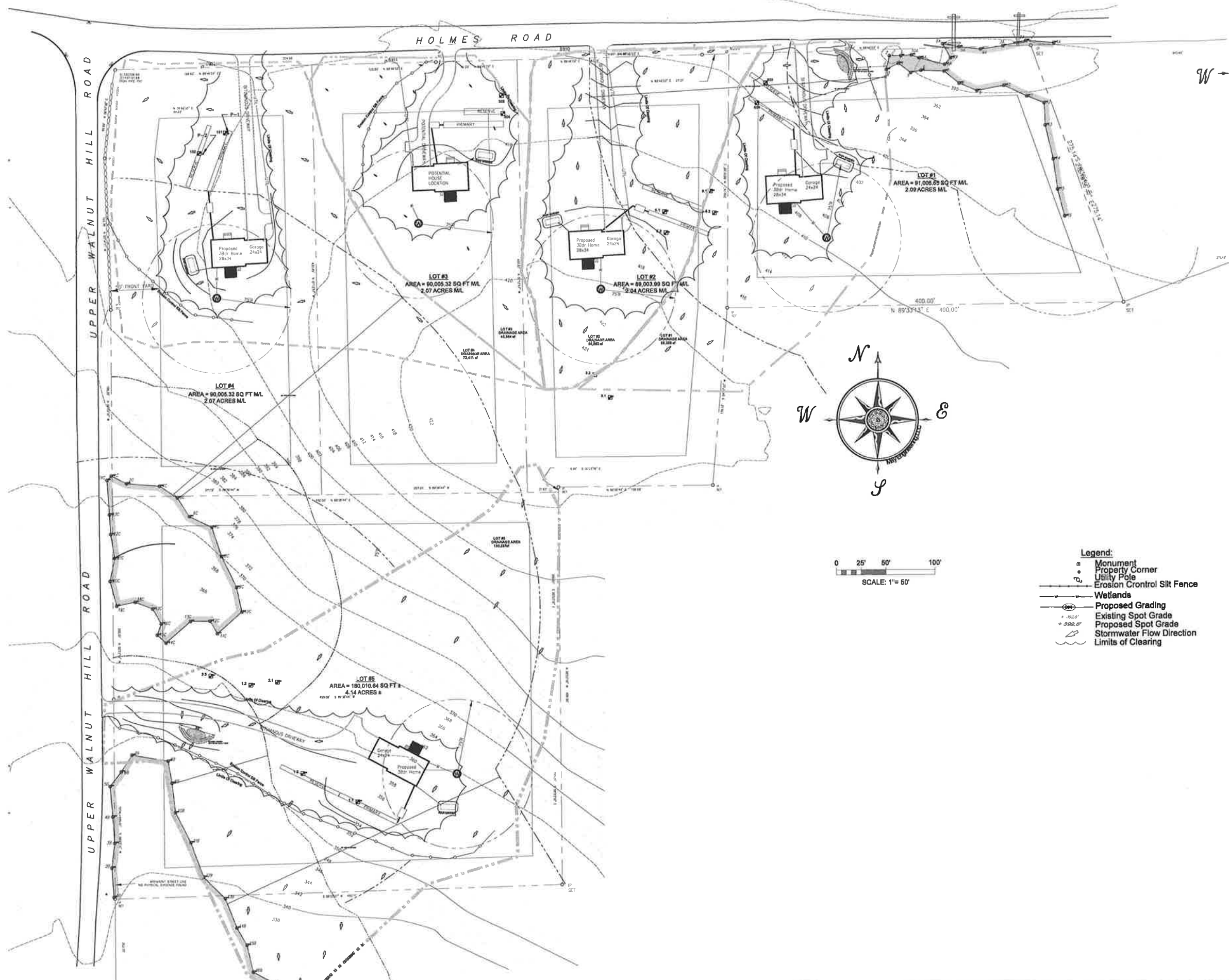
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LTR	DESCRIPTION	DATE
	REVISIONS	

**LOT DEVELOPMENT PLAN**  
**NEHANTIC HIGHLAND SUBDIVISION**  
 APPLICANT  
**KRISTEN CLARKE P.E. & SHELLY HARNEY**  
 FOR PROPERTY LOCATED AT  
**HOLMES ROAD & UPPER WALNUT HILL ROAD**  
 TOWN OF EAST LYME - COUNTY OF NEW LONDON - CONNECTICUT

Sheet No.  
**S-04**  
 SHEET 4 OF 10  
 Scale:  
 1" = 40'  
 Date  
 FEBRUARY 7, 2023  
 Project No.  
 21040-4





- Legend:**
- Monument
  - Property Corner
  - Utility Pole
  - Erosion Control Silt Fence
  - Wetlands
  - Proposed Grading
  - Existing Spot Grade
  - Proposed Spot Grade
  - Stormwater Flow Direction
  - Limits of Clearing



**May Engineering LLC**  
 Civil Engineering and Site Planning  
 1297 RT 163 Oakdale, CT 06370  
 860 884-8671

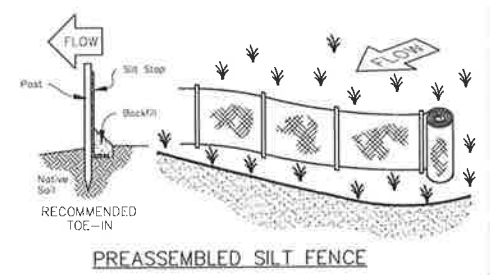
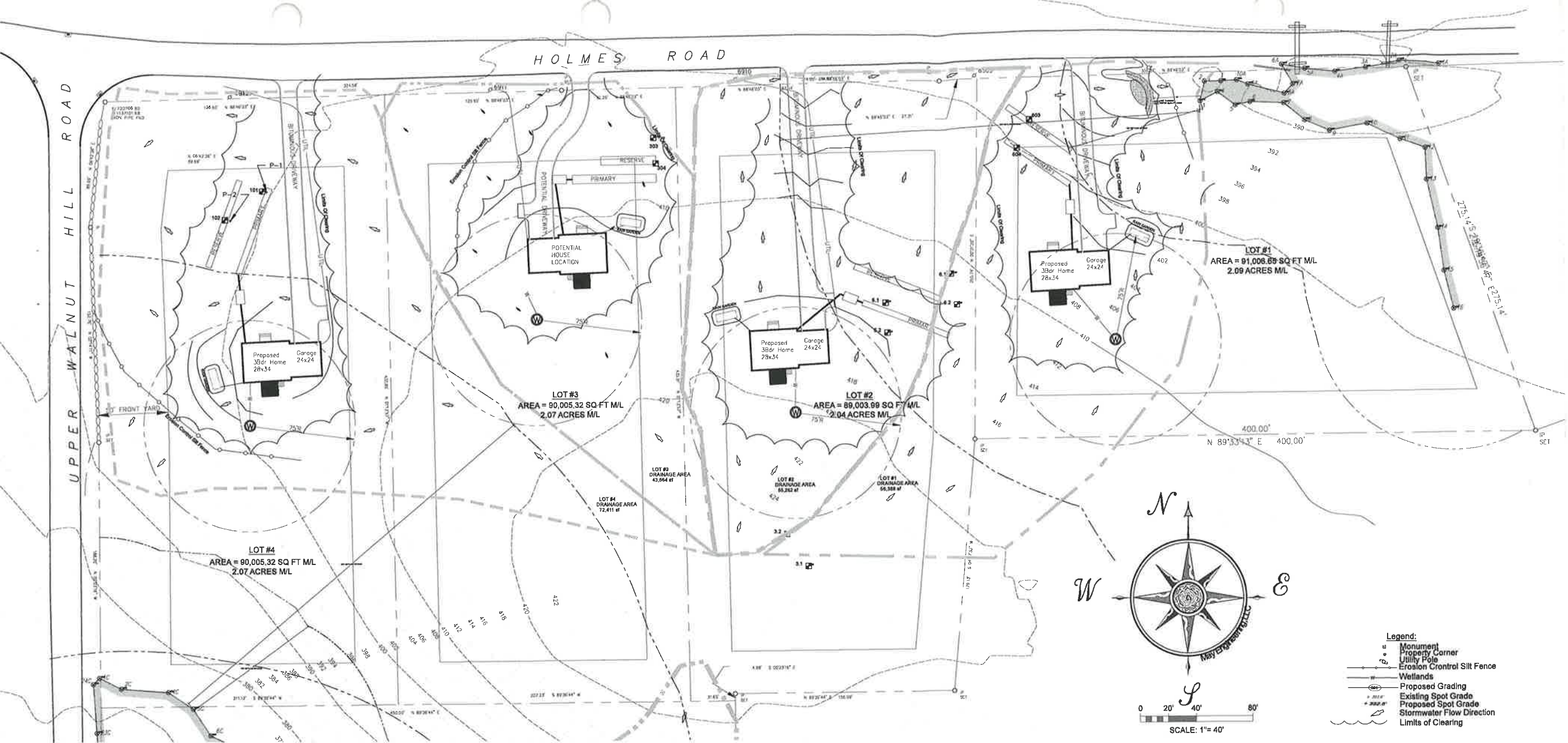
Applicant:  
 Nehantic Highlands Subdivision  
 Kristen Clarke P.E. & Shelly Harney

Owner:  
 Port Side Holdings Inc. &  
 English Harbour Capital Partners LLC  
 Tenants in Common  
 207 Clarendon Ave  
 Southport, NC 28461

**HOLMES ROAD**  
 EAST LYME, CT

SCALE: 1"=50'  
 DATE: 28 April 2023

JOB NUMBER	SHEET
21040	6 of 10



**SOIL EROSION & SEDIMENTATION CONTROL NOTES**

E & S plan is based on Connecticut Guidelines for Soil Erosion and Sediment Control

Install Erosion Control silt fence as depicted on this plan  
 All disturbed areas shall have erosion control installed down gradient to stop soil migration. After each rainfall event erosion control shall be inspected and repairs to insure silt fence integrity to stop silt migration off site.

Unnecessary clearing of any vegetation or ground cover will be avoided. Any disturbed area left unvegetated will be covered with a hay or straw mulch to minimize erosion material.

Following final grading, all disturbed areas will be covered with 6" loam and seeded as described below. If final grading occurs past October 15, disturbed areas will be seeded with winter rye-grass and mulched with hay or straw at a rate of 1.5 - 2 tons per acre.

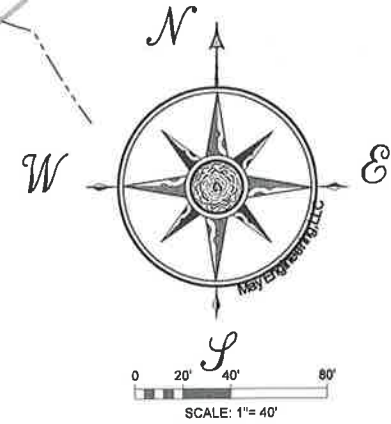
Seed Mixture Seeding Rate	% by Wt. Lbs./Ac.
Red Fescue	75-100
Colonial Bentgrass-Exeter	5
Perennial Ryegrass	5
Birdsfoot Trefoil-Empire	15

Any proposed vegetation which has not survived one growing season will be replaced.

All suitable material excavated for roadway construction to be used elsewhere on site. Unsuitable material will be removed from the site and deposited in a suitable location.

All construction activity to occur between March 15 and October 15 to avoid adverse impacts on down stream flows.

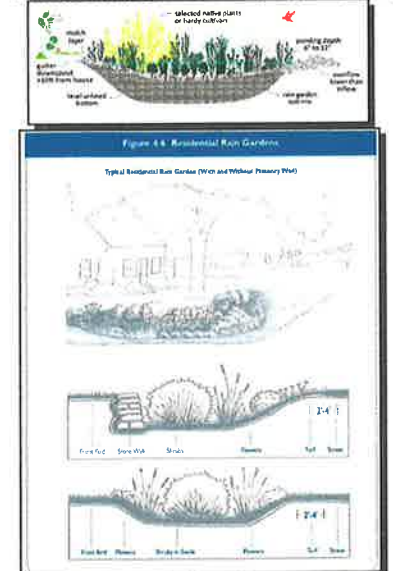
Less than 1/2 of an acre of disturbance is proposed for this site plan.



- Legend:**
- Monument
  - Property Corner
  - Utility Pole
  - Erosion Control Silt Fence
  - Wetlands
  - Proposed Grading
  - Existing Spot Grade
  - Proposed Spot Grade
  - Stormwater Flow Direction
  - Limits of Clearing

**Rain Gardens**  
 Water Quality Volume rainfall event 1" WQV rainfall

where:  
 $P$  = design precipitation, inches (1" for water quality storm)  
 $A$  = drainage area (acres) roof area 2,400 sq ft >> 0.055 ac  
 $V$  = runoff volume CF  
 $V = (1" / 12") \times 2400 \text{ sq ft} = 200 \text{ CF}$   
 Rain Gardens are 18 feet wide x 28 feet long x 1 foot deep = 200 CF  
**Actual roof area is 1,480 sq ft >> 123 CF Required (200 CF provided)**



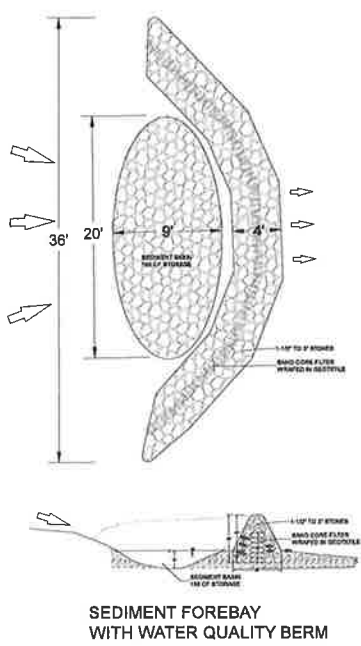
**SITE DESCRIPTION:**

The site is a 12.39 acre parcel located on the east side of Upper Walnut Hill Rd. and the south side of Holmes Rd in the Town of East Lyme, CT. The proposed site development is for 5 residential subdivision lots. The parcel was previously part of the Hathaway Farm property, and is an undeveloped wooded parcel with mature deciduous trees and dense undergrowth of brush, with slopes ranging from 3% to 10%. There are wetlands and water courses located on this parcel. The soil type is primarily a hydraulic soil group B consisting of Canton-Carlton fine sandy loams and Woodbridge fine sandy loam. The soil types were evaluated for their permeability and have a moderate infiltration rate throughout the site.

The existing stormwater drainage flow paths for proposed lots #1 & 2 flow across the parcels in a northeasterly direction to the existing drainage path along Holmes Rd. and then into the wetlands south side of Holmes Rd. Stormwater drainage flows for proposed lots #3 & 4 flow across the parcel in a northwestern direction into the existing drainage paths along Holmes Rd. and Upper Walnut Hill Rd. Stormwater drainage flows for proposed lot #5 flows south west across the parcel into wetland on the east side of Upper Walnut Hill Rd. The stormwater then flows onto the surrounding adjacent property as shallow concentrated flow dispersing into the woods or wetland areas. No evidence of channelized flows or ponding is observed.

The proposed 5 residential subdivision lots will have less than 1/4 ac of disturbance for each lot. Water quality volumes WQV will be implemented by the use of rain gardens to capture the roof runoff and will reduce the Water Quality Flow (WQF). Each parcel will have paved driveways and grassed lawns. Additional water quality measures are proposed to slow down stormwater velocities and reduce sediment loads prior to stormwater entering the wetlands. A sediment forebay along with a water quality berm is proposed to intercept stormwater flows from Lot #1 & #2 and another is proposed to intercept flows from Lot #5. The proposed sediment forebay along with water quality berm are designed using the Connecticut Stormwater Quality Manual. Each Sediment forebay is designed with a shallow basin, with 150 cf of storage that will slow stormwater to settle out sediments. The water quality berm is a mound of 1-1/2' to 3" stones with geotextile & sand core filter, that is designed to reduce stormwater velocities and improve water quality.

Stormwater will be managed during construction with a soil and erosion control plan using best management practices (BMP's) from the ConnDOT Drainage Manual and the Connecticut Stormwater Quality Manual. Stormwater will also be managed by treatment controls for stormwater discharges. These will include rain gardens for all roof discharges to mitigate water quality volumes (WQV) for the 1" rain fall. Designed devices such as sediment forebay and water quality berms designed to intercept stormwater, reduce sediment and slow velocities before entering into the wetlands.



**May Engineering LLC**  
 Civil Engineering and Site Planning  
 1297 RT 163 Oakdale, CT 06370  
 860 884-9671

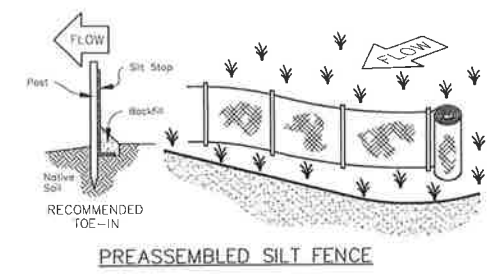
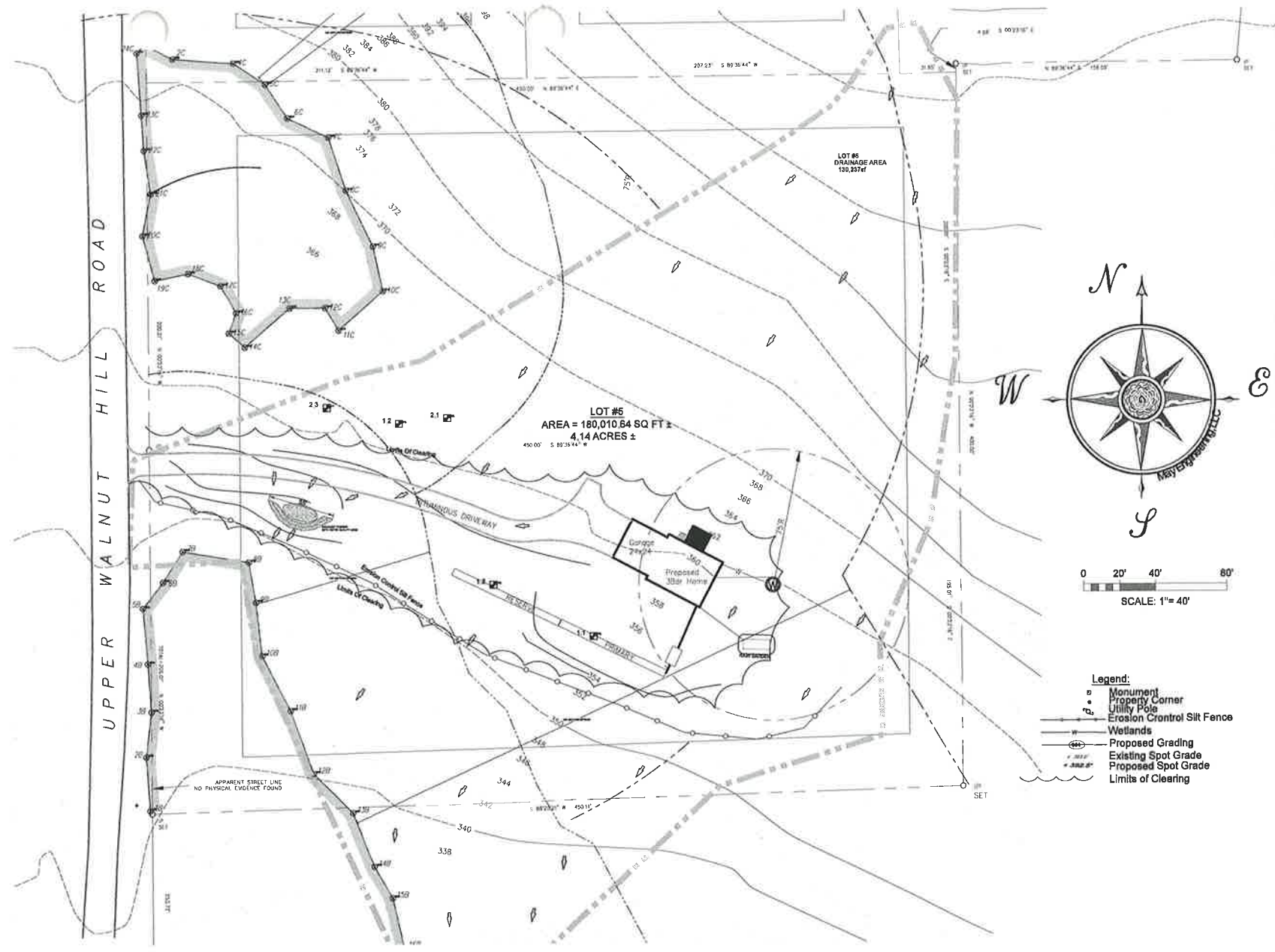
Applicant:  
**Nehantic Highlands Subdivision**  
 Kristen Clarke P.E. & Shelly Harney

Owner:  
 Port Side Holdings Inc. &  
 English Harbour Capital Partners LLC  
 Tenants in Common  
 207 Clarendon Ave  
 Southport, NC 28461

**HOLMES ROAD**  
 EAST LYME, CT

SCALE: 1"=40'  
 DATE: 28 April 2023  
 JOB NUMBER SHEET

Erosion Control and Grading Plan  
 Lots 1-4  
 21040  
 7 of 10



**SOIL EROSION & SEDIMENTATION CONTROL NOTES**

E & S plan is based on Connecticut Guidelines for Soil Erosion and Sediment Control

Install Erosion Control silt fence as depicted on this plan. All disturbed areas shall have erosion control installed down gradient to stop soil migration. After each rainfall event erosion control shall be inspected and repairs to insure silt fence integrity to stop silt migration off site.

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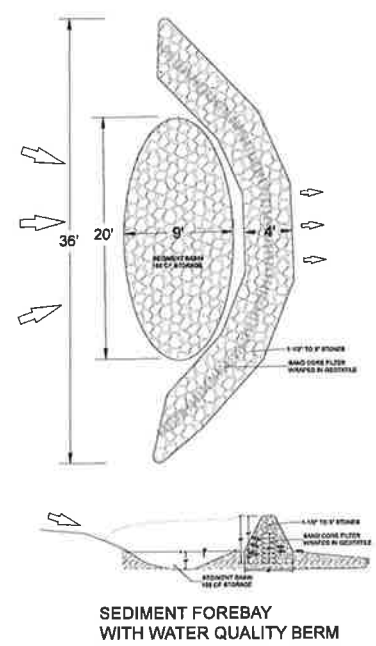
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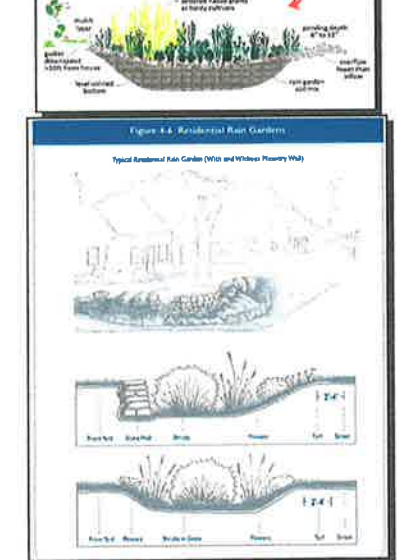
All suitable material excavated for roadway construction to be used elsewhere on site. Unsuitable material will be removed from the site and deposited in a suitable location.

All construction activity to occur between March 15 and October 15 to avoid adverse impacts on down stream flows.

Less than (1/2) of an acre of disturbance is proposed for this site plan.



**Rain Gardens**  
 Water Quality Volume rainfall event 1" WQV rainfall  
 where:  
 $P$  = design precipitation, inches (1" for water quality storm)  
 $A$  = drainage area (acres) roof area 2,400 sf >> 0.055 ac  
 $V$  = runoff volume CF  
 $V = (1.773)PA = 2400 \text{ sf} = 200 \text{ CF}$   
 Rain Gardens are 18-feet wide X 28-foot long X 1-foot deep @ 200 CF  
 Actual roof area is 1,480 sf >> 123 CF Required (200 CF provided)



**SITE DESCRIPTION:**

The site is a 12.39 acre parcel located on the east side of Upper Walnut Hill Rd. and the south side of Holmes Rd in the Town of East Lyme, CT. The proposed site development is for 5 residential subdivision lots. The parcel was previously part of the Hathaway Farm property, and is an undeveloped wooded parcel with mature deciduous trees and dense undergrowth of brush, with slopes ranging from 3% to 10%. There are wetlands and water courses located on this parcel. The soil type is primarily a hydraulic soil group B consisting of Canton-Carlton fine sandy loams and Woodbridge fine sandy loam. The soil types were evaluated for their permeability and have a moderate infiltration rate throughout the site.

The existing stormwater drainage flow paths for proposed lots #1 & 2 flow across the parcels in a northeasterly direction to the existing drainage path along Holmes Rd. and then into the wetlands south side of Holmes Rd. Stormwater drainage flows for proposed lots #3 & 4 flow across the parcel in a northwestern direction into the existing drainage paths along Holmes Rd. and Upper Walnut Hill Rd. Stormwater drainage flows for proposed lot #5 flows south west across the parcel into wetland on the east side of Upper Walnut Hill Rd. The stormwater then flows onto the surrounding adjacent property as shallow concentrated flow dispersing into the woods or wetland areas. No evidence of channelized flows or ponding is observed.

The proposed 5 residential subdivision lots will have less than 1/5 ac of disturbance for each lot. Water quality volumes WQV will be implemented by the use of rain gardens to capture the roof runoff and will reduce the Water Quality Flow (WQF). Each parcel will have paved driveways and grassed lawns. Additional water quality measures are proposed to slow down stormwater velocities and reduce sediment loads prior to stormwater entering the wetlands. A sediment forebay along with a water quality berm is proposed to intercept stormwater flows from Lot #1 & #2 and another is proposed to intercept flows from Lot #5. The proposed sediment forebay along with water quality berm are designed using the Connecticut Stormwater Quality Manual. Each Sediment forebay is designed with a shallow basin, with 150 of storage that will slow stormwater to settle out sediments. The water quality berm is a mound of 1-1/2' to 3" stones with geotextile & sand core filler, that is designed to reduce stormwater velocities and improve water quality. Stormwater will be managed during construction with a soil and erosion control plan using best management practices (BMP's) from the ConnDOT Drainage Manual and the Connecticut Stormwater Quality Manual. Stormwater will also be managed by treatment controls for stormwater discharges. These will include rain gardens for all roof discharges to mitigate water quality volumes (WQV) for the 1" rain fall. Designed devices such as sediment forebay and water quality berms designed to intercept stormwater, reduce sediment and slow velocities before entering into the wetlands.

**May Engineering LLC**  
 Civil Engineering and Site Planning  
 1297 RT 163 Oakdale, CT 06370  
 860 884-9671

Applicant:  
**Nehantic Highlands Subdivision**  
 Kristen Clarke P.E. & Shelly Harney

Owner:  
 Port Side Holdings Inc. & English Harbour Capital Partners LLC  
 Tenants in Common  
 207 Clarendon Ave  
 Southport, NC 28461

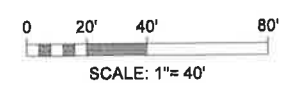
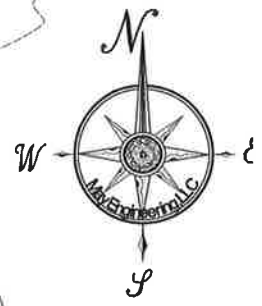
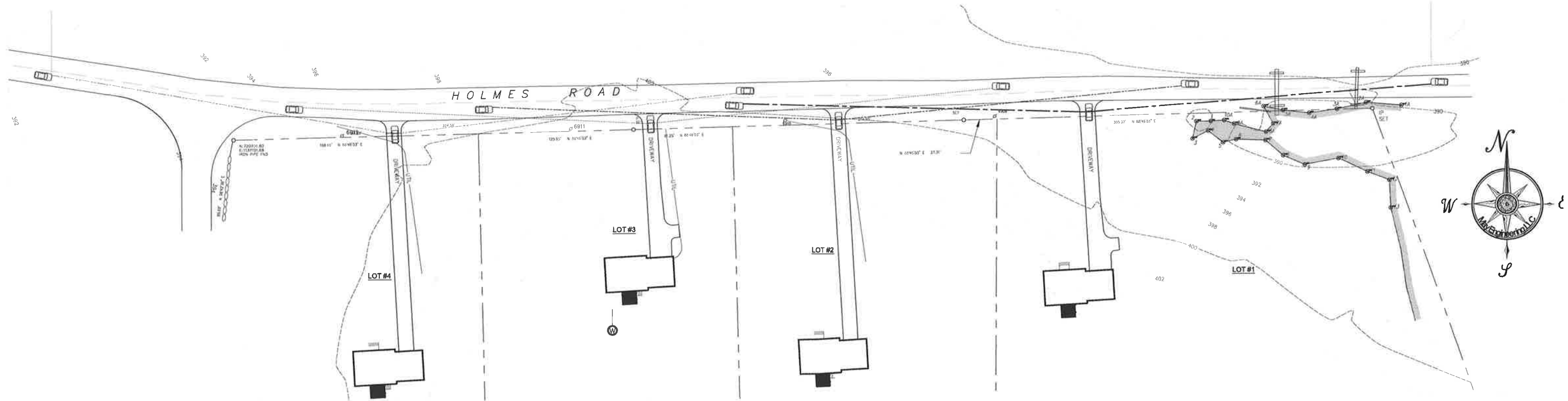
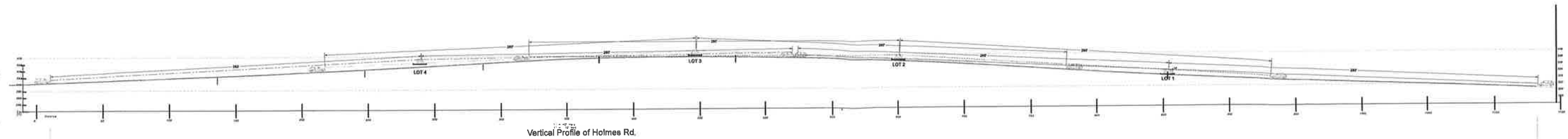
**HOLMES ROAD**  
 EAST LYME, CT

SCALE: 1"=40'  
 DATE: 28 April 2023

Erosion Control and Grading Plan  
 Lot #5

JOB NUMBER: 21040  
 SHEET: 8 of 10





- Legend:**
- Monument
  - Property Corner
  - Utility Pole
  - Erosion Control Silt Fence
  - Wetlands
  - Proposed Grading
  - Existing Spot Grade
  - Proposed Spot Grade
  - Stormwater Flow Direction

**Traffic Sightline Data Reference**

1) American Association of State Highway and Transportation Officials (ASHTO)

- Stopping Sight Distance on Level Roadways**
- Design Speed 25 mph
  - Brake Reaction Distance 91.9 ft
  - Stopping Sight Distance 155 ft
  - Intersection Sight Distance
    - Left Turn 280 ft
    - Right Turn 240 ft

2) Sight Distance.

Intersection sight distance should be evaluated at all driveways. However, only intersection sight distance for major commercial driveways will be considered as a controlling design criteria and will require an exception if the minimum values are not met. Residential and minor commercial driveways will not require an exception if the minimum values are not met. The designer should verify that adequate sight distance at an existing drive is not reduced below minimum values, and drive that are already substandard are not made worse.

3) Adequate stopping sight distance, intersection sight distance for proposed driveways and existing driveways have been evaluated and are met for design speed of 25mph.

**May Engineering LLC**  
 Civil Engineering and Site Planning  
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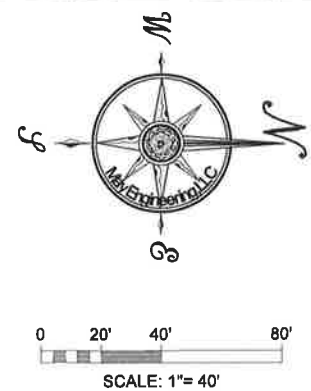
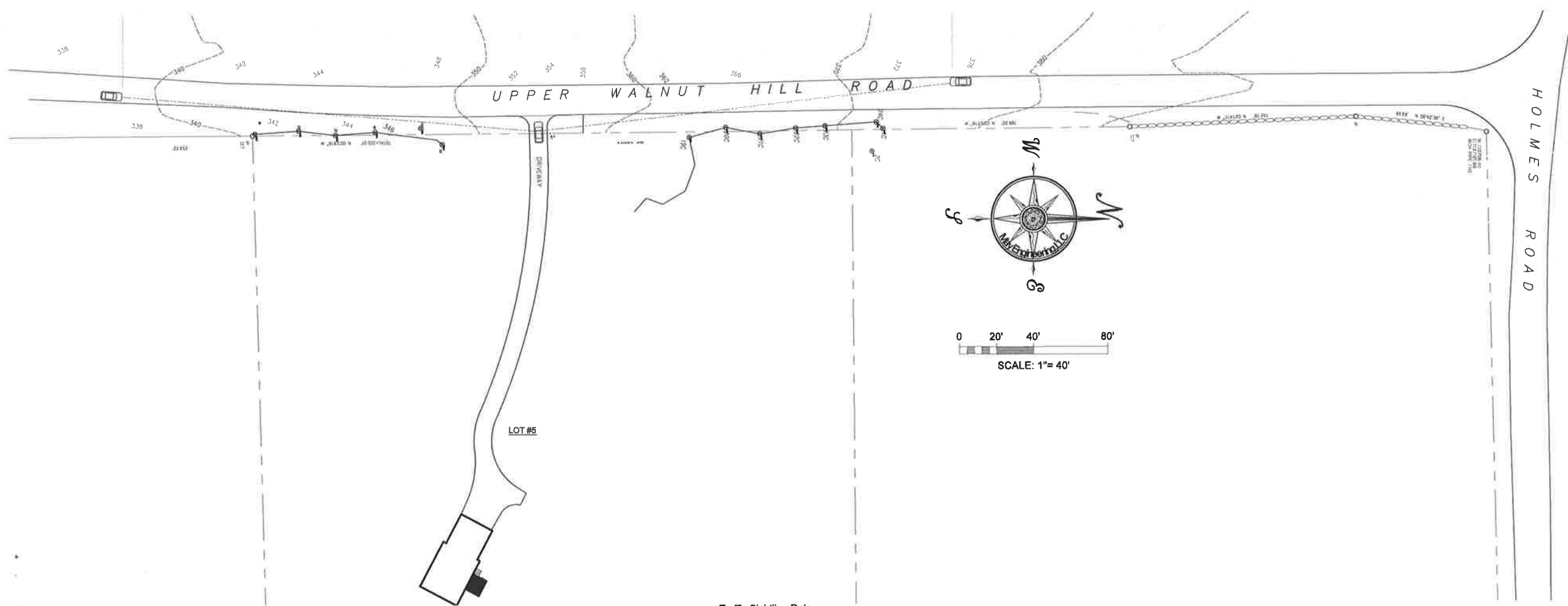
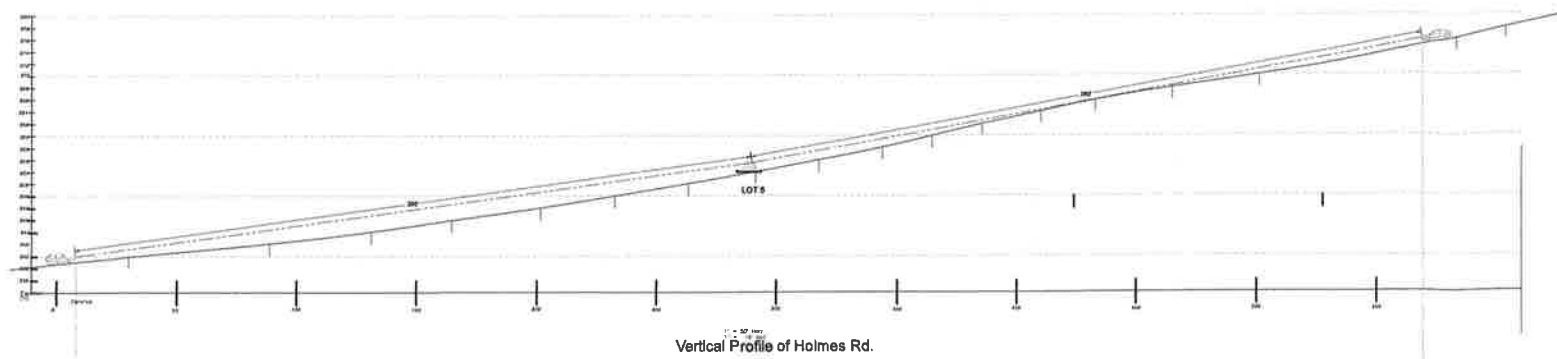
**Applicant:**  
 Nehantic Highlands Subdivision  
 Kristen Clarke P.E. & Shelly Harney

**Owner:**  
 Port Side Holdings Inc. &  
 English Harbour Capital Partners LLC  
 Tenants in Common  
 207 Clarendon Ave  
 Southport, NC 28461  
 Sightline Verification Lots #1-4  
 Holmes Rd.

**HOLMES ROAD**  
**EAST LYME, CT**

SCALE: 1"=40'  
 DATE: 28 April 2023

JOB NUMBER	SHEET
21040	9 of 10



- Legend:**
- Monument
  - Property Corner
  - Utility Pole
  - Erosion Control Silt Fence
  - W Wetlands
  - Proposed Grading
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  - Proposed Spot Grade
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Owner:  
Port Side Holdings Inc. &  
English Harbour Capital Partners LLC  
Tenants in Common  
207 Clarendon Ave  
Southport, NC 28461  
Sightline Verification Lot #5  
Upper Walnut Hill Rd.

**HOLMES ROAD**  
EAST LYME, CT

SCALE: 1"=40'  
DATE: 28 April 2023

JOB NUMBER	SHEET
21040	10 of 10