

SUBDIVISION PLAN

NEHANTIC HIGHLANDS SUBDIVISION

APPLICANT:

KRISTEN CLARKE PE

& SHELLY HARNEY

HOLMES ROAD &

UPPER WALNUT HILL ROAD

EAST LYME, CONNECTICUT

FEBRUARY 7, 2023

REVISED: JULY 7, 2023

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, LS
102A SPITHEAD ROAD
WATERFORD, CT 06385
860-447-0236

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

APPLICANT:

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

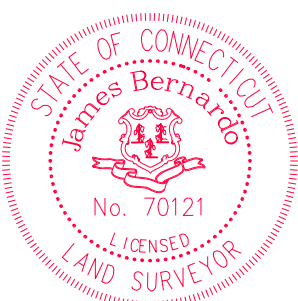
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LEGEND

THE FOLLOWING SYMBOLS/ABBREVIATIONS
MAY APPEAR ON THIS DRAWING

AC	ACRES	HTB	HIGH TIDE BUSH
BF	BASEMENT FLOOR	SP	SPARTINA PATENS
BIT	BITUMINOUS	SA	SPARTINA ALTERNAFLORA
BCLC	BITUMINOUS CONCRETE UP 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	BUILDING SETBACK LINE	
(MIN)	MINIMUM	CLEARING LIMIT LINE	
M/L	MORE OR LESS	EXISTING TREELINE	
N/F	NOW OR FORMERLY	EXISTING CONTOUR	
PVC	POLY VINYL CHLORIDE	NEW CONTOUR	
SCH40	SCHEDULE 40	SEDIMENT FENCE	
5.4x	SPOT ELEVATION	STORM DRAIN PIPE	
SF	SQUARE FEET	STONE WALL	
TR	TO REMAIN	S	SANITARY SEWER
		W	WATER



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

James Bernardo
JAMES BERNARDO LICENSE #70121 DATE 7-7-2023
THE TERM "CERTIFY" AS USED HEREON IS AN EXPRESSION OF
PROFESSIONAL OPINION AND IS NEITHER A WARRANTY OR
GUARANTEE.

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 A-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 LIVE SIGNATURE OF THE SURVEYOR WHOSE NAME AND REGISTRATION NUMBER APPEAR BELOW OR THEREON.

2. REFERENCE IS MADE TO EAST LYME LAND EVIDENCE RECORDS VOLUME 1079 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 (2010.0). ELEVATIONS DEPICTED HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) TRANSFORMED FROM ELLIPSOID HEIGHT TO ORTHOMETRIC HEIGHT UTILIZING NGS2018 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' 58.96930"
ELLIPSOID HEIGHT = -16.343 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 SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4465.

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

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 20, 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. FREJIE & ROBERT J. JANOVIC GRASSY HILL ROAD EAST LYME, CONN. DATED JANUARY 11, 1998 REVISED THRU 6-12-98 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, 1980 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. 89 MONTVILLE, CONNECTICUT - DATED: JANUARY 1992 REVISED: 10-22-92 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 SITTY, LS.

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 SIEGLBAUM AND OTHERS TOWNS OF MONTVILLE & EAST LYME, COUNTY OF NEW LONDON; STATE OF CONNECTICUT SCALE 1"=200' AUGUST 1966 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, 2015 BY JAMES BERNARDO LAND SURVEYING, LLC REVISED: 1-11-2016.

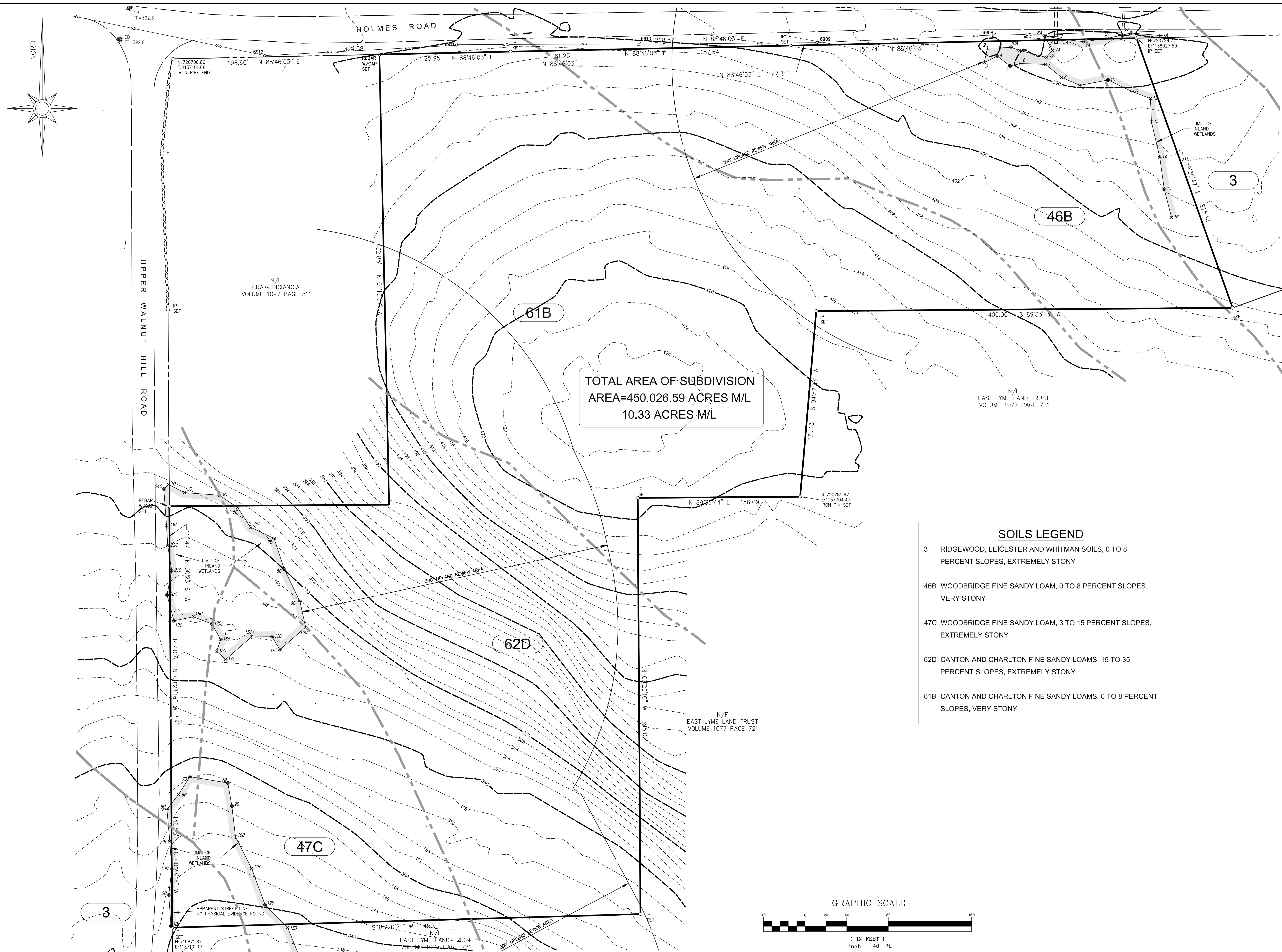
11. LOT LINE REVISION PLAN PREPARED FOR JONATHAN KATZ LOCATION: EAST LYME AND MONTVILLE, CONNECTICUT SHEET NUMBER 1 OF 1 SCALE: 1"=100' DATE: APRIL 15, 2003 BY J. ROBERT PFANNER & ASSOCIATES, P.C.

12. COMPILATION PLAN TOWN OF MONTVILLE MAP SHOWING LAND ACQUIRED FROM DAVID BINGHAM BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION ROUTE 11 GREENWAY OPEN SPACE LAND PURCHASE JULY 2007 TOWN NO. 085 PROJECT NO. 120-083 SERIAL NO. 6.

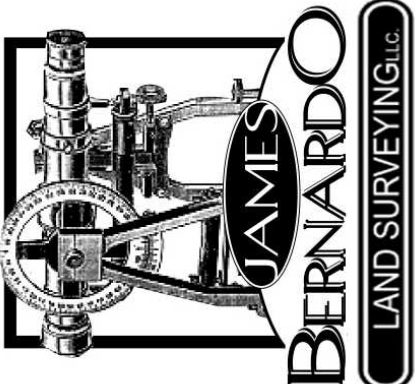
13. NEHANTIC NATURE PRESERVE EAST LYME LAND TRUST, INC. & STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION OSWA #576 DATE: SEPTEMBER 2, 2021 REVISED 1-29-2022 BY JAMES BERNARDO LAND SURVEYING, LLC.

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.

15. BOUNDARY SURVEY FIRST/FREE SPLIT LAND DIVISION PLAN PROPERTY OF PORT SIDE HOLDINGS INC. & ENGLISH HARBOUR CAPITAL PARTNERS LLC FOR PROPERTY LOCATED AT HOLMES ROAD & UPPER WALNUT HILL ROAD TOWN OF EAST LYME - COUNTY OF NEW LONDON -CONNECTICUT SHEET NO. 1 OF 1 SCALE: 1"=40' DATE: JUNE 7, 2023 PROJECT NO. 21040-6 BY JAMES BERNARDO LAND SURVEYING, LLC.



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



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A	UPLAND REVIEW AREA ADDED	7-7-2023
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:

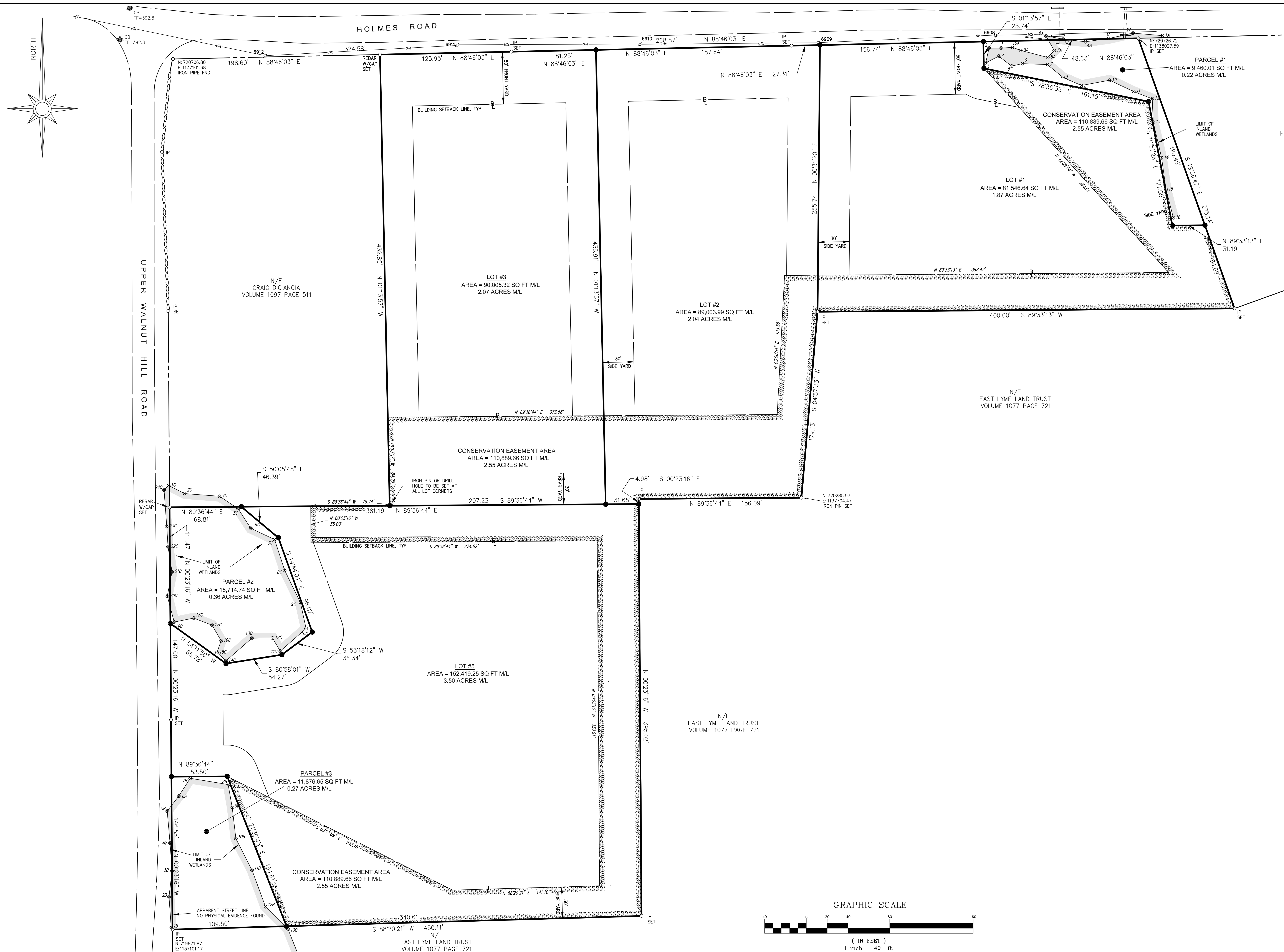
1" = 40'

Date

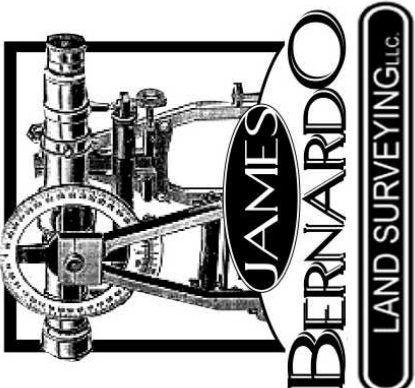
FEBRUARY 7, 2023

Project No.

21040-4



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



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A	LOT 4 REMOVED, WETLANDS PARCELS & CONSERVATION EASEMENT ADDED	7-7-2023
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REVISIONS	
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LOT LAYOUT
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. _____

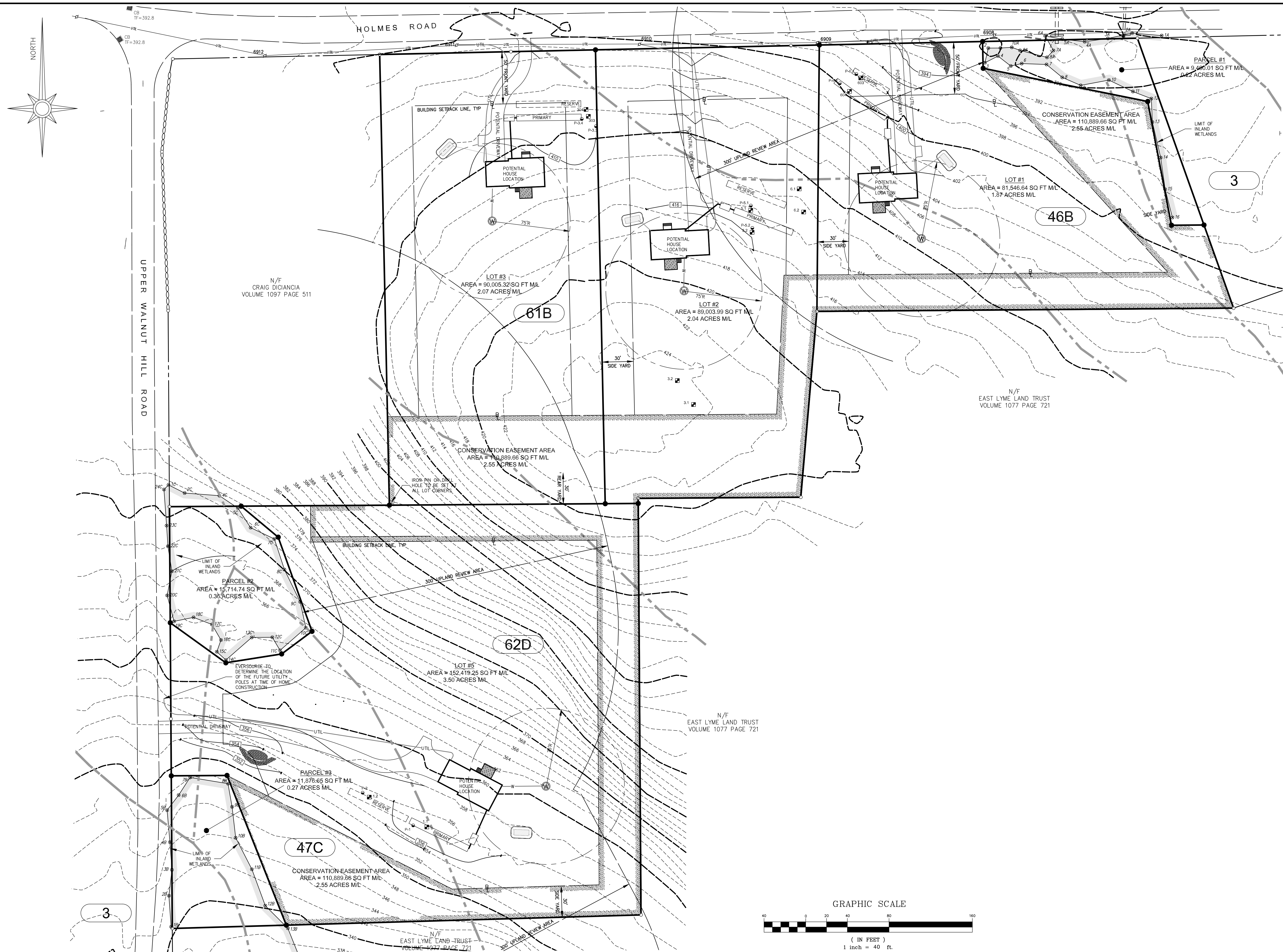
S-03

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
(860) 447-0236
WWW.JBSURVEY.COM



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A			LOT 4 REMOVED, WETLANDS PARCELS, CONSERVATION EASEMENT & UPLAND REVIEW AREA ADDED		7-7-	

DATE	DESCRIPTION	DATE
REVISIONS		

**KRISTEN CLARKE P.E. &
SHELLY HARNEY**
APPLICANT
**LOT DEVELOPMENT PLAN
NEHANTIC HIGHLAND SUBDIVISION**
FOR PROPERTY LOCATED AT
HOLMES ROAD & UPPER WALNUT HILL ROAD

Sheet No. _____

S-04

SHEET 4 OF 10

Scale: $1" = 40'$

Date **FEBRUARY 7 20**

Project No. 31040-4



SITE INVESTIGATION FOR A SUBSURFACE SEWAGE DISPOSAL SYSTEM

Property Address: Upper Walnut Hill Rd Town: East Lyme



DEEP TEST PIT DATA/ SOIL DESCRIPTIONS

DATE: 5-5-2022 (Record all Test Pits)			
TEST PIT: 1-1	TEST PIT: 1-2	TEST PIT: 2-1	TEST PIT: 2-2
0-7" Topsoil -21" Br. fine sandy loam, some silt -77" Br. gray fine sand w/ gravel, few cobbles	0-11" Topsoil -26" Br. fine sandy loam, some silt -75" Br. gray fine sand w/ gravel, few cobbles & stones	0-11" Topsoil -27" Br. fine-med sandy loam -70" Br. gray fine sand w/ gravel, few cobbles	0-7" Topsoil -21" Br. fine-med sandy loam -75" Br. gray fine sand w/ gravel, few cobbles
Mottles: 31"	Mottles: 40"	Mottles: 27" (faint)	Mottles: 23"
GW: 31"	GW: 40"	GW: 30"	GW: 23"
Ledge: none to 77"	Ledge: none to 75"	Ledge: none to 70"	Ledge: none to 75"
Roots:	Roots to:	Roots to:	Roots to:
Restrictive: 31"	Restrictive: 40"	Restrictive: 27"	Restrictive: 23"

DATE: 5-5-2022 (Record all Test Pits)			
TEST PIT: 2-3	TEST PIT: 3-1	TEST PIT: 3-2	TEST PIT: 5-1
0-12" Topsoil -27" Br. fine sandy loam, some silt -68" Br. gray fine sand w/ gravel, few cobbles	0-5" Topsoil -17" Br. fine sandy loam w/ gravel, few cobbles	0-7" Topsoil -37" Br. fine-med sandy loam -75" Br. gray fine sand w/ gravel, few cobbles	0-5" Topsoil -21" Br. fine sandy loam, tr. silt -64" Br. gray fine sand w/ gravel, few cobbles
Mottles: 26"	Mottles: 46"	Mottles: 47"	Mottles: 30"
GW: 26"	GW: 48"	GW: 51"	GW: 30"
Ledge: none to 68"	Ledge: none to 78"	Ledge: none to 75"	Ledge: none to 64"
Roots to:	Roots to:	Roots to:	Roots to:
Restrictive: 26"	Restrictive: 46"	Restrictive: 47"	Restrictive: 30"

Perc Tests

Holmes Road
East Lyme Connecticut
Date: January 19, 2023

Lot # 1 Test No. 6.1
Hole Depth 14"

Pre soak-8:15am-Dry 1:00pm

	Reading	Drop
1:05 (refill hole 12")	14"	n/a
1:15	11.0"	3.0"
1:25	9.0"	2.0"
1:35	6.75"	2.25"
1:45	6.75"	1.0"
1:55	5.75"	1.0"

Percolation Rate: 10.0 min/in

Lot # 1 Test No. 6.2
Hole Depth 14"

Pre soak-8:20am-Dry 1:00pm

	Reading	Drop
1:00 (refill hole 12")	16"	n/a
1:10	12.0"	4.0"
1:20	10.0"	2.0"
1:30	8.75"	1.25"
1:40	7.5"	1.25"
1:50	6.75"	1.0"

Percolation Rate: 10 min/in



SITE INVESTIGATION FOR A SUBSURFACE SEWAGE DISPOSAL SYSTEM

Property Address: Upper Walnut Hill Rd Town: East Lyme

DEEP TEST PIT DATA/ SOIL DESCRIPTIONS

DATE: 5-5-2022 (Record all Test Pits)			
TEST PIT: 5-2	TEST PIT: 6-1	TEST PIT: 6-2	TEST PIT:
0-8" Topsoil -21" Br. fine sandy loam, w/ silt -72" Tan-gray fine sand w/ gravel, few cobbles	0-7" Topsoil -30" Br. fine-med sandy loam -64" Tan-gray fine sand w/ gravel, some cobbles	0-10" Topsoil -27" Br. fine sandy loam, tr. silt -72" Tan-gray fine sand w/ gravel, few cobbles	
Mottles: 32"	Mottles: 38"	Mottles: 30"	Mottles:
GW: 34"	GW: 38"	GW: 30"	GW:
Ledge: none to 72"	Ledge: none to 64"	Ledge: none to 72"	Ledge:
Roots:	Roots to:	Roots to:	Roots to:
Restrictive: 32"	Restrictive: 38"	Restrictive: 30"	Restrictive:

GROUNDWATER TABLE (Near max., below max., etc.)
SOIL MOISTURE (High, medium, low, etc.)

DATE: 5-5-2022 (Record all Test Pits)

PERC:	PERC:
DEPTH:	DEPTH:
PRE-SOAK:	PRE-SOAK:
TIME	TIME
READING	READING
Min/in	Min/in

PERC:	PERC:
DEPTH:	DEPTH:
PRE-SOAK:	PRE-SOAK:
TIME	TIME
READING	READING
Min/in	Min/in

PERC RATE: 1-10min/in

PERC RATE:

SPECIAL CONDITIONS	CONCLUSIONS
Design Flow > 2000 GPD	Suitable for Sewage Disposal
Public Water Supply Watershed	Unsuitable for Sewage Disposal
Probable High Groundwater	Additional Investigation Req'd
Slope > 25 percent	Wet Season Monitoring Req'd
Perc Rate < 1 min/inch	Retard During Wet Season
Perc Rate > 50 min/inch	Licensed Engineer Plan Req'd
Ledge < 5 feet below grade	Other:
Limited Suitable Area	

Perc Tests

Holmes Road
East Lyme Connecticut
Date: January 19, 2023

Lot # 2 Test No. 5.1
Hole Depth 24"

Pre soak-7:45am-Dry 12:00 noon

	Reading	Drop
12:05 (refill hole 12")	24"	n/a
12:15	19.0"	5.0"
12:25	17.25"	1.75"
12:35	16.0"	1.25"
12:45	15.0"	1.0"
12:55	14.0"	1.0"

Percolation Rate: 10.0 min/in

Lot # 2 Test No. 5.2
Hole Depth 24"

Pre soak-7:50am-Dry 12:00 noon

	Reading	Drop
12:00 (refill hole 12")	24"	n/a
12:10	19.75"	4.25"
12:20	18.0"	1.75"
12:30	16.75"	1.25"
12:40	15.5"	1.25"
12:50	14.25"	1.25"

Percolation Rate: 8 min/in



SITE INVESTIGATION FOR A SUBSURFACE SEWAGE DISPOSAL SYSTEM

Property Location: Holmes Rd at utility pole 6916 Town: East Lyme

DEEP TEST PIT DATA/ SOIL DESCRIPTIONS

DATE: 4-5-2023 (Record all Test Pits)	
TEST PIT: 303	TEST PIT: 304
0-4" Topsoil -16" Br. fine sandy loam w/ some gravel -61" Ls br - gray v. fine sand w/ gravel and cobbles, compact	0-7" Topsoil -19" Br. fine sandy loam w/ some gravel -63" Ls br - gray v. fine sandy loam w/ gravel and cobbles, compact in place
Mottles: 30"	Mottles: 33"
GW: 30"	GW: 34"
Ledge: none to 61"	Ledge: none to 63"
Roots to:	Roots to:
Restrictive: 30"	Restrictive: 33"

GROUNDWATER TABLE (Near max., below max., etc.)
SOIL MOISTURE (High, medium, low, etc.)

DATE: 4-5-2023 (Record all Test Pits)

PERC:	PERC:
DEPTH:	DEPTH:
PRE-SOAK:	PRE-SOAK:
TIME	TIME
READING	READING
Min/in	Min/in

PERC:	PERC:
DEPTH:	DEPTH:
PRE-SOAK:	PRE-SOAK:
TIME	TIME
READING	READING
Min/in	Min/in

PERC RATE: 1-10min/in

PERC RATE:

COMMENTS:

Perc Tests

Holmes Road
East Lyme Connecticut
Date: January 19, 2023

Lot # 3 Test No. 3.3
Hole Depth 14"

Pre soak-8:00am-Dry 2:05pm

	Reading	Drop
2:05 (refill hole 12")	16"	n/a
2:15	13.5"	2.5"
2:25	11.0"	2.5"
2:35	9.0"	2.0"
2:45	7.75"	1.25"
2:55	6.75"	1.0"

Percolation Rate: 10.0 min/in

Lot # 3 Test No. 3.4
Hole Depth 14"

Pre soak-8:05am-Dry 2:00pm

	Reading	Drop
2:00 (refill hole 12")	16"	n/a
2:10	12.25"	2.75"
2:20	10.0"	2.0"
2:30	8.75"	1.25"
2:40	7.5"	1.25"
2:50	6.75"	1"
3:00	5.875"	.875"

Percolation Rate: 11.4 min/in



SITE INVESTIGATION FOR A SUBSURFACE SEWAGE DISPOSAL SYSTEM

Property Location: Holmes Rd at utility pole 6909 Town: East Lyme

DEEP TEST PIT DATA/ SOIL DESCRIPTIONS

DATE: 4-5-2023 (Record all Test Pits)	
TEST PIT: 603	TEST PIT: 604
0-7" Topsoil -21" Br. fine sandy loam w/ gravel -64" Ls br - gray v. fine sand w/ gravel, few cobbles	0-7" Topsoil -19" Br. fine sandy loam w/ some gravel -52" Ls br - gray v. fine sandy loam w/ gravel and cobbles, compact in place
Mottles: 28"	Mottles: 25"
GW: 29"	GW: 25"
Ledge: none to 64"	Ledge: none to 52"
Roots to:	Roots to:
Restrictive: 28"	Restrictive: 25"

GROUNDWATER TABLE (Near max., below max., etc.)
SOIL MOISTURE (High, medium, low, etc.)

DATE: 4-5-2023 (Record all Test Pits)

PERC:	PERC:
DEPTH:	DEPTH:
PRE-SOAK:	PRE-SOAK:
TIME	TIME
READING	READING
Min/in	Min/in

PERC:	PERC:
DEPTH:	DEPTH:
PRE-SOAK:	PRE-SOAK:
TIME	TIME
READING	READING
Min/in	Min/in

PERC RATE: 1-10min/in

PERC RATE:

COMMENTS:

Perc Tests

Holmes Road
East Lyme Connecticut
Date: January 2, 2023

Lot # 6 Test No. 1
Hole Depth 15"

Pre soak-8:45am-Dry 1:20pm

	Reading	Drop
1:30 (refill hole 12")	15"	n/a
1:40	9.75"	4.25"
1:50	7.25"	2.5"
2:00	5.5"	1.75"
2:10	4.0"	1.5"

Percolation Rate: 6.7 min/in

Lot # 6 Test No. 2
Hole Depth 15"

Pre soak-7:50am-Dry 1:20pm

	Reading	Drop
1:35 (refill hole 12")	15"	n/a
1:45	11.0"	4.0"
1:55	9.75"	1.25"
2:05	8.75"	1.0"
2:10	7.75"	1.0"
2:20	7.0"	.75"
2:30	6.0"	1.0"

Percolation Rate: 11.4 min/in

PERC #1	PERC #2
PRE-SOAK: 9:35 AM	PRE-SOAK: 9:35 AM
HOLE DEPTH: 22"	HOLE DEPTH: 21"
AUGUST 31, 2021	AUGUST 31, 2021
11:15 10"	11:15 9"
11:20 10"	11:20 9"
11:25 11"	11:25 9"
11:30 12"	11:30 10"
11:35 12"	11:35 10"
11:40 13"	11:40 10"
11:45 13"	11:45 11"
11:50 14"	11:50 11"
11:55 14"	11:55 11"
12:00 14"	12:00 12"
12:05 15"	12:05 12"
	12:10 12"
	12:15 13"

RATE: 15 MINUTES/INCH

RATE: 15 MINUTES/INCH

NOTE: ALL PERCOLATION TEST AND TEST HOLE DATA WERE PROVIDED BY THE APPLICANT KRISTEN CLARKE, PE AND WERE NOT VERIFIED BY JAMES BERNARDO LAND SURVEYING , LLC.

LOT #1

PROPOSED 4 BEDROOM HOUSE
DESIGN PERCOLATION RATE = 1.0-10.0 MINUTES/INCH
LEACHING AREA REQUIRED = 577.5 SF EFFECTIVE
DESIGN: 1,250 GALLON SEPTIC TANK (MINIMUM) AND 1 ROW, 60LF-GST6212
LEACHING AREA PROVIDED = 600 SF EFFECTIVE
100% RESERVE AREA PROVIDED

HYDRAULIC GRADIENT	= 9%
DEPTH TO RESTRICTIVE LAYER	= 25"
HYDRAULIC FACTOR	= 28
FLOW FACTOR FOR 4 BEDROOMS	= 1.75
PERCOLATION FACTOR FOR UP TO 10 MINUTES/INCH	= 1.0
MLSS REQUIRED	= 49'
MLSS PROVIDED	= 60'

LOT #2

PROPOSED 4 BEDROOM HOUSE
DESIGN PERCOLATION RATE = 1.0-10.0 MINUTES/INCH
LEACHING AREA REQUIRED = 577.5 SF EFFECTIVE
DESIGN: 1,250 GALLON SEPTIC TANK (MINIMUM) AND 1 ROW, 60 LF-GST6212
LEACHING AREA PROVIDED = 600 SF EFFECTIVE
100% RESERVE AREA PROVIDED

HYDRAULIC GRADIENT	= 7%
DEPTH TO RESTRICTIVE LAYER	= 30"
HYDRAULIC FACTOR	= 28
FLOW FACTOR FOR 4 BEDROOMS	= 1.75
PERCOLATION FACTOR FOR UP TO 10 MINUTES/INCH	= 1.0
MLSS REQUIRED	= 49'
MLSS PROVIDED	= 60'

LOT #3

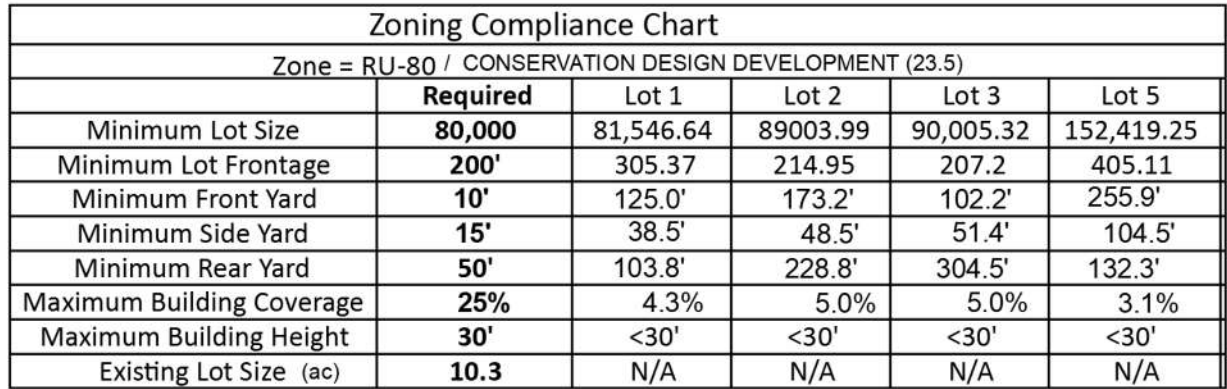
PROPOSED 4 BEDROOM HOUSE
DESIGN PERCOLATION RATE = 10.1-20.0 MINUTES/INCH
LEACHING AREA REQUIRED = 787.5 SF EFFECTIVE
DESIGN: 1,250 GALLON SEPTIC TANK (MINIMUM) AND 1 ROW, 62 LF-GST6218
LEACHING AREA PROVIDED = 868 SF EFFECTIVE
100% RESERVE AREA PROVIDED

HYDRAULIC GRADIENT	= 8%
DEPTH TO RESTRICTIVE LAYER	= 30"
HYDRAULIC FACTOR	= 28
FLOW FACTOR FOR 4 BEDROOMS	= 1.75
PERCOLATION FACTOR FOR UP TO 20 MINUTES/INCH	= 1.25
MLSS REQUIRED	= 61.25'
MLSS PROVIDED	= 62'

LOT #5

PROPOSED 4 BEDROOM HOUSE
DESIGN PERCOLATION RATE = 10.1-20.0 MINUTES/INCH
LEACHING AREA REQUIRED = 787.5 SF EFFECTIVE
DESIGN: 1,250 GALLON SEPTIC TANK (MINIMUM) AND 1 ROW, 62 LF-GST6218
LEACHING AREA PROVIDED = 868 SF EFFECTIVE
100% RESERVE AREA PROVIDED

HYDRAULIC GRADIENT	= 8%
DEPTH TO RESTRICTIVE LAYER	= 31"
HYDRAULIC FACTOR	= 28
FLOW FACTOR FOR 4 BEDROOMS	= 1.75
PERCOLATION FACTOR FOR UP TO 20 MINUTES/INCH	= 1.25
MLSS REQUIRED	= 61.25'
MLSS PROVIDED	= 62'



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

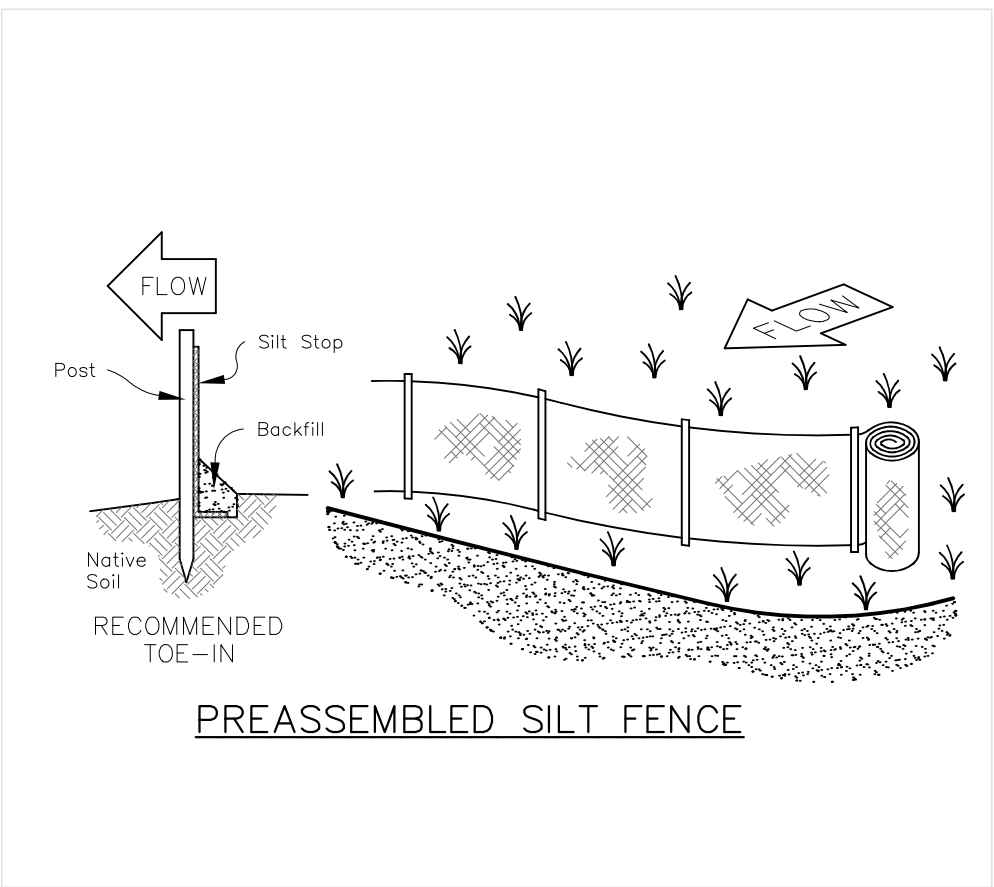
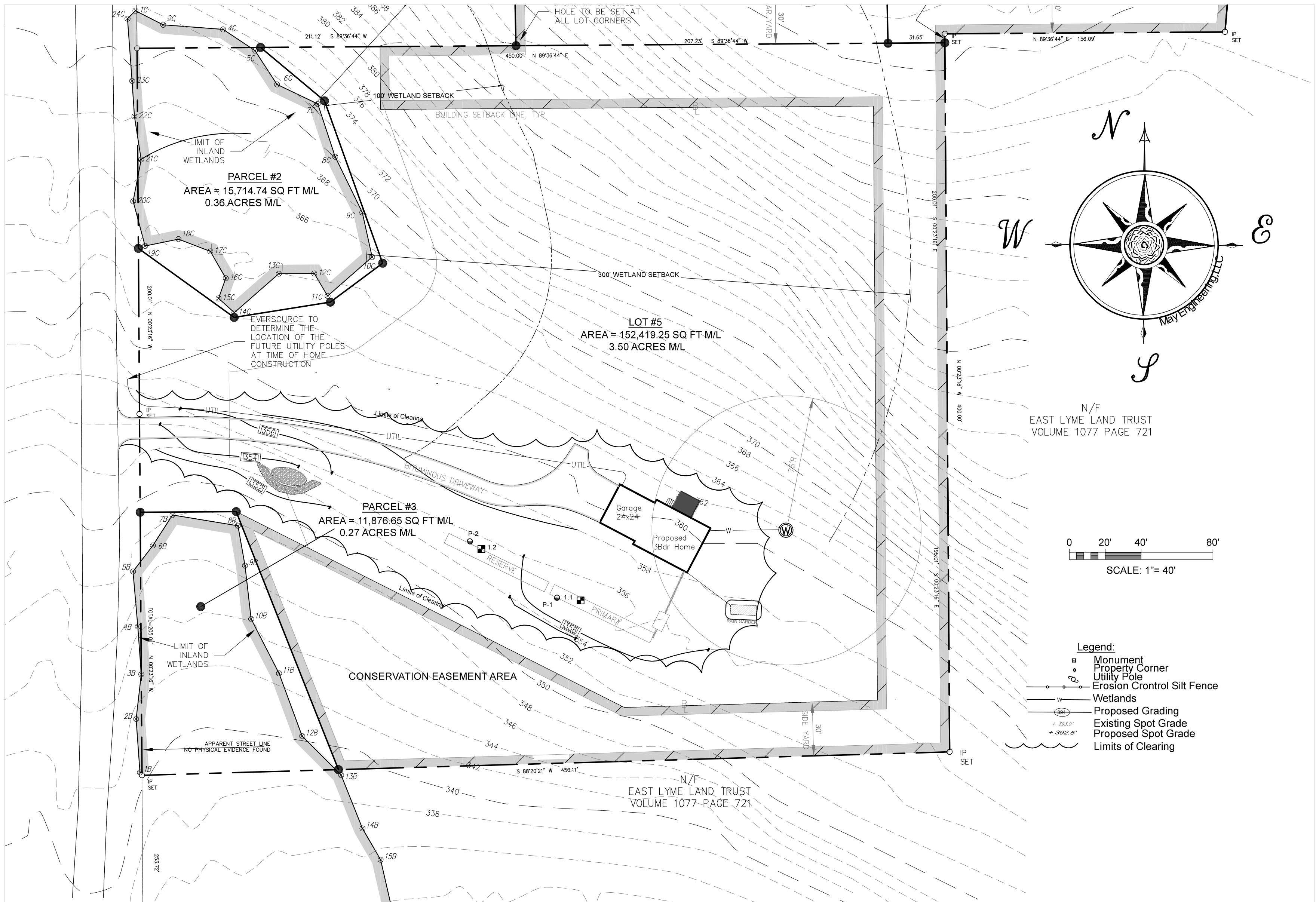
Nehantic Highlands Subdivision
Kristen Clarke P.E. & Shelly Harney

JOB NUMBER

SHEET

21040

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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.

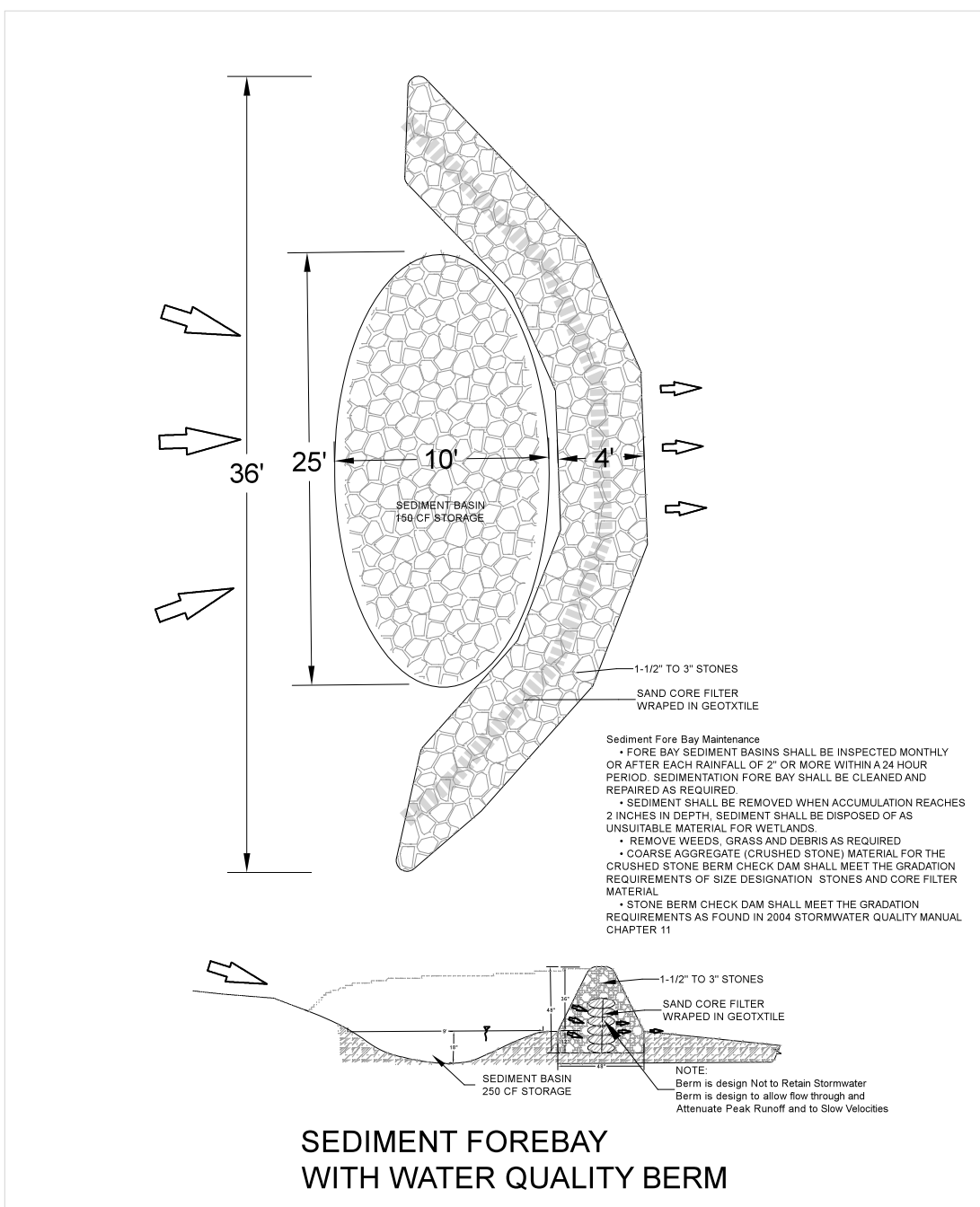
Seed Mixture Seeding Rate	% by Wt. Lbs./Ac.
Red Fescue	75-100
Colonial Bentgrass-Exeter	5
Perennial Ryegrass	5
Birdsfoot Trefoil-Empire	15

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 each lot.



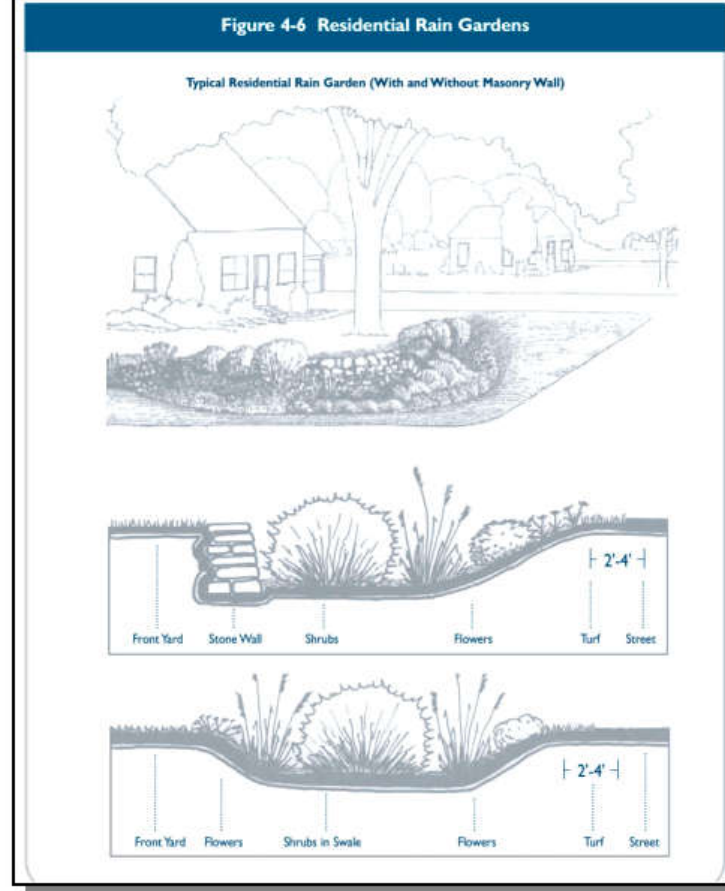
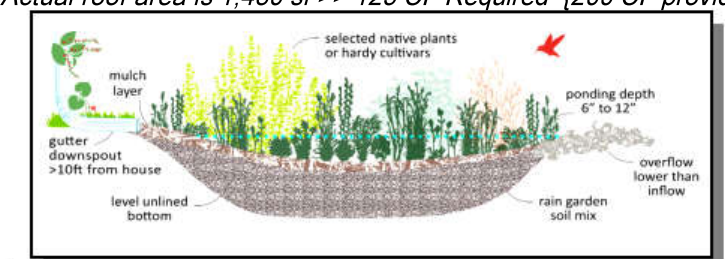
Rain Gardens

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
- $V = (1/12)A \times 2400 \text{ sf} = 200 \text{ CF}$

Rain Garden size 10-feet wide X 20-feet long x 1-foot deep = 200 CF
Actual roof area is 1,480 sf >> 123 CF Required (200 CF provided)



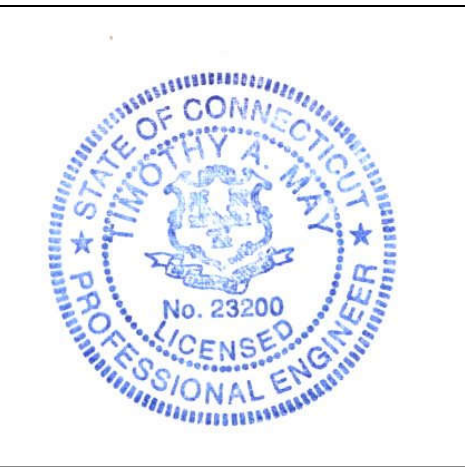
SITE DESCRIPTION:

The site is a 10.39 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 understory 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 wetlands on the south side of Holmes Rd. Stormwater drainage flows for proposed lot #3 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 flow southwest 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 1/2 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 are proposed to intercept stormwater flows from Lots #1 & #2 and another is proposed to intercept flows from Lot #5. The proposed sediment forebay and water quality berm are designed using the Connecticut Stormwater Quality Manual. Each Sediment forebay is designed with a shallow basin, with 250 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 (BMPs) 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 are 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

Erosion Control and Grading Plan
Lot #5

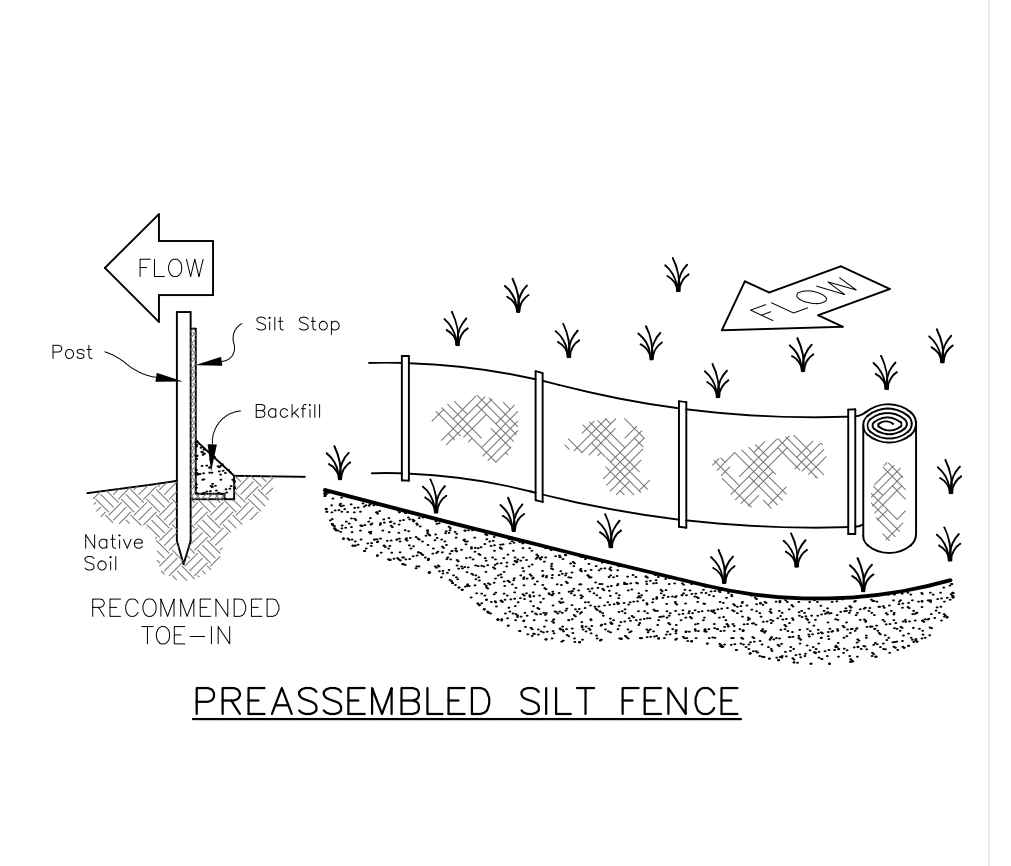
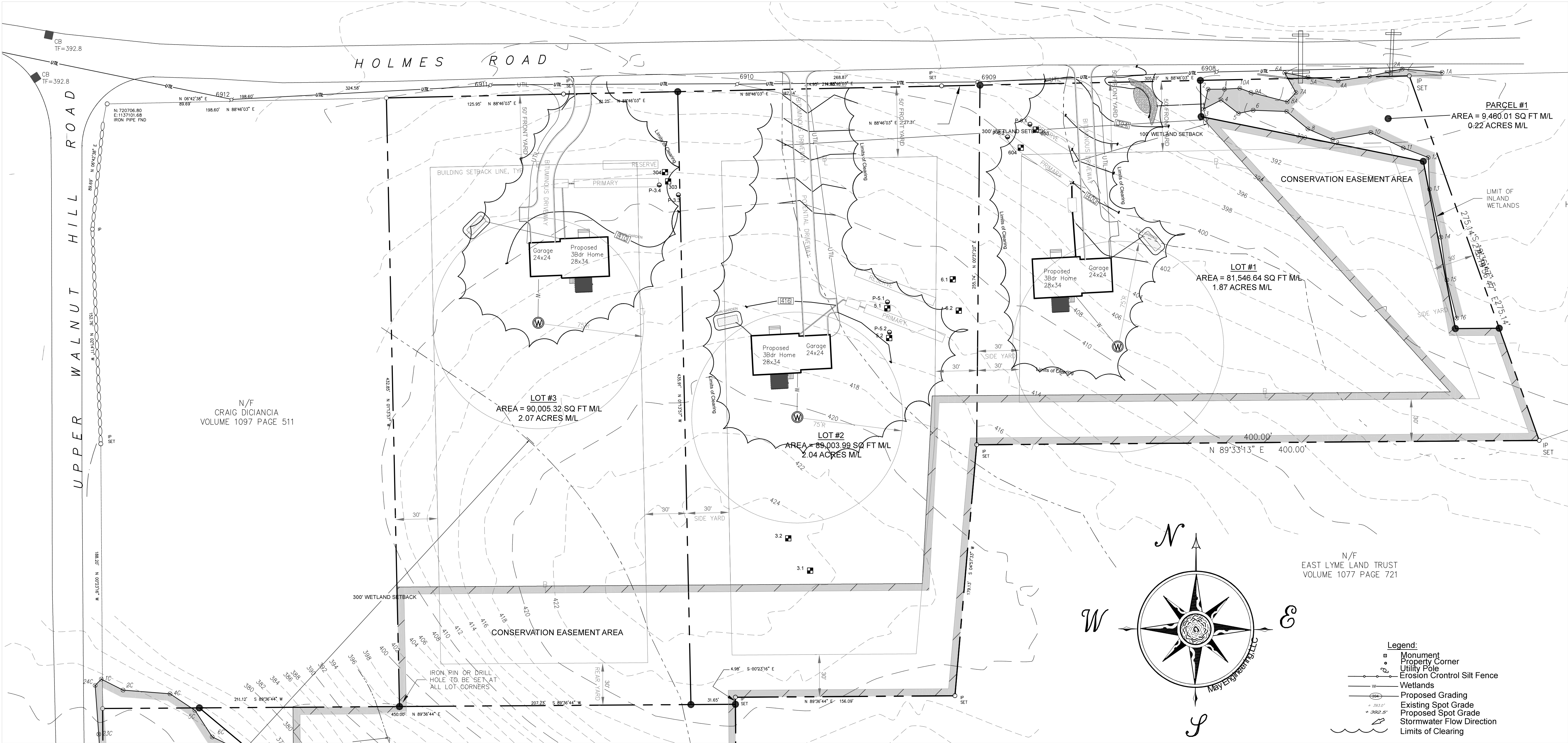
HOLMES ROAD
EAST LYME, CT

SCALE: 1"=40'

DATE: 28 April 2023 Revised 7 July 2023
JOB NUMBER SHEET

21040

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SOIL EROSION & SEDIMENTATION CONTROL NOTES

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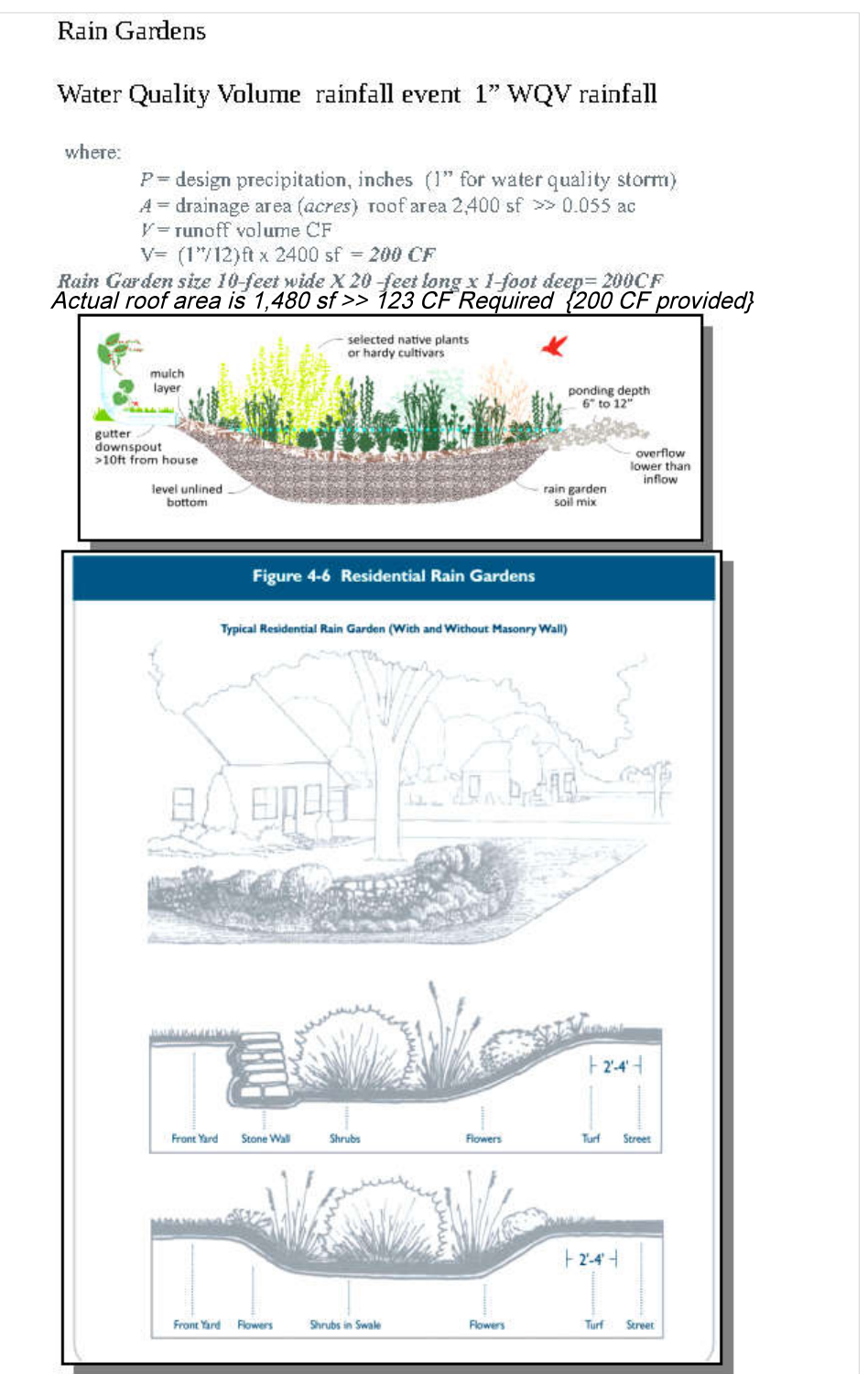
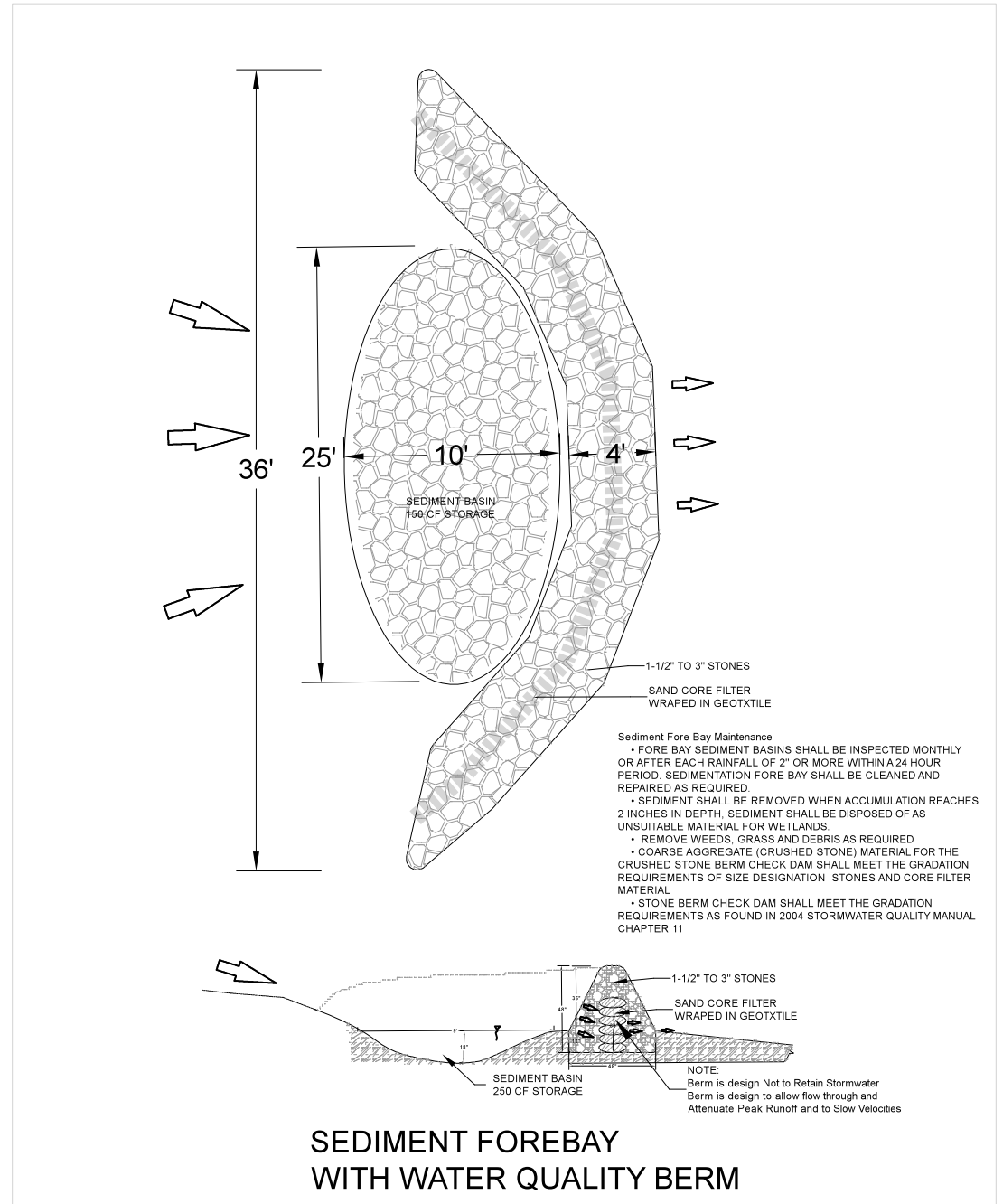
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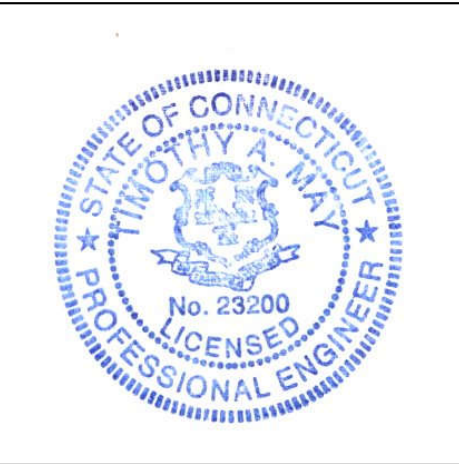
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May Engineering LLC

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

Erosion Control and Grading Plan

Lots 1, 2 & 3

HOLMES ROAD

EAST LYME, CT

SCALE: 1"=40'

DATE: 28 April 2023

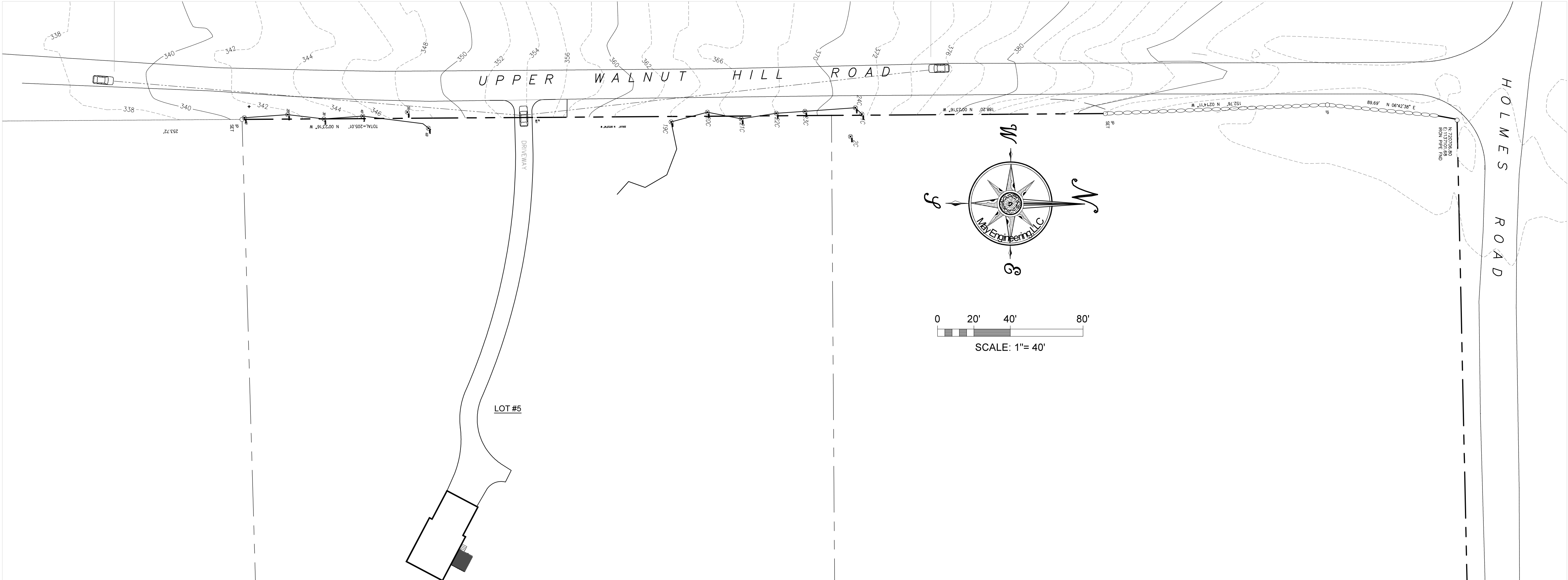
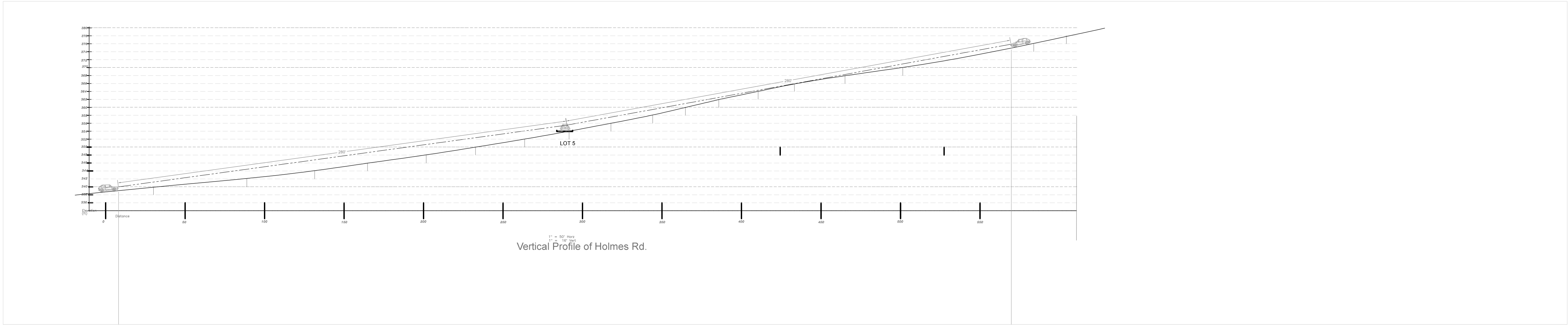
Revised 7 July 2023

JOB NUMBER

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21040

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- 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)

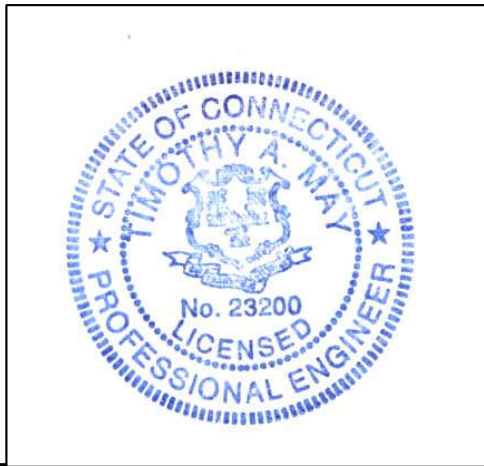
Stopping Sight Distance on Level Roadways

- 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.



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.

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

HOLMES ROAD
EAST LYME, CT

SCALE: 1"=40'

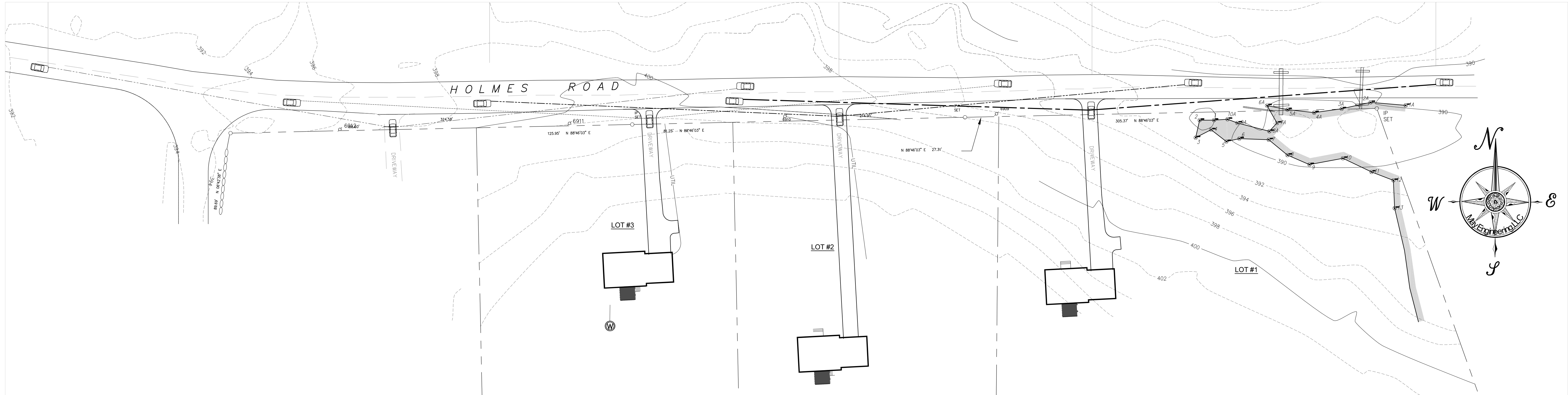
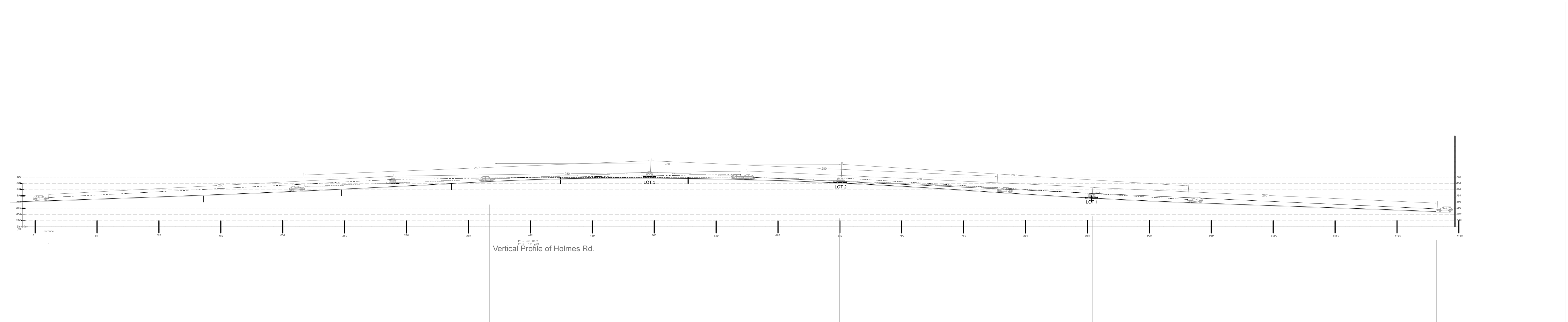
DATE: 28 April 2023 Revised July 7 2023

JOB NUMBER

SHEET

21040

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Traffic Sightline Data
Reference

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

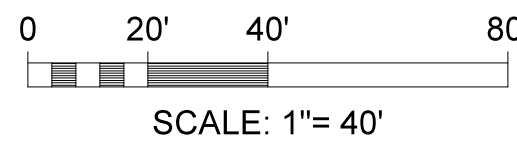
Stopping Sight Distance on Level Roadways

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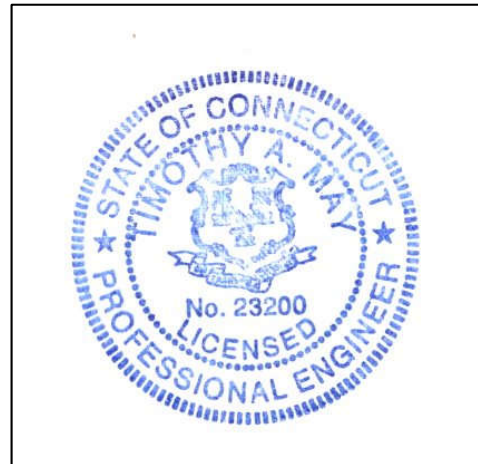
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3) Adequate stopping sight distance, intersection sight distance for proposed driveways and existing driveways have been evaluated and are met for design speed of 25mph.



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



Owner:
Port Side Holdings Inc. &
English Harbour Capital Partners LLC
Tenants in Common
207 Clarendon Ave
Southport, NC 28461
Sightline Verification Lots #1, 2 & 3
Holmes Rd.

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HOLMES ROAD
EAST LYME, CT
SCALE: 1"=40'
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