DEFINITIVE PLAN

SILAS TAYLOR FARME ROAD

BOXBOROUGH, MA

SITE DATA

1. LOT AREA: 30.61± AC. (1,512,403± SF)
2. WATER SUPPLY: INDIVIDUAL WELLS
3. SEWAGE DISPOSAL: INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEMS
4. PROPOSED STREET CLASSIFICATION: MINOR

LAND USE SUMMARY

Parameter	Unit	Value
Total Lot Area	AC	30.61
Right of Way	AC	1.94
Building Lots	AC	20.38
Parcel 1 open space	AC	8.29
Area of Wetlands Within Subdivision	SF	113,223

GENERAL NOTES

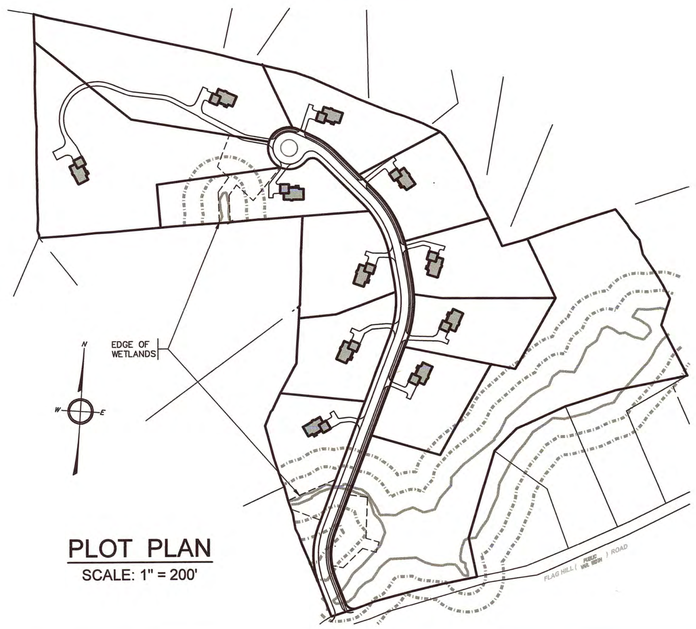
1. LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
2. UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
3. BURIED UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THEIR RESPECTIVE COMPANY SPECIFICATIONS.
4. CONSTRUCTION LAYOUT OF BUILDING AND SITE IMPROVEMENTS SHALL BE PERFORMED BY A LICENSED PROFESSIONAL LAND SURVEYOR. LOCATIONS OF EXISTING FEATURES OR PROPOSED IMPROVEMENTS DERIVED BY SCALING DRAWINGS MAY NOT BE ACCURATE. PROPERTY LINES SHOWN HEREON ARE APPROXIMATE. SEE PLAN REFERENCE HEREON.
5. SAFETY MEASURES, CONSTRUCTION METHODS, AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF CONTRACTOR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING UTILITY OR STRUCTURE DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND/OR REMOVAL HEREON. DAMAGED UTILITY OR STRUCTURE SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
7. ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
8. CONTRACTOR SHALL NOTIFY ENGINEER UPON COMMENCEMENT OF CONSTRUCTION IN ORDER TO ENSURE THAT REQUIRED INSPECTIONS ARE PERFORMED IN A TIMELY AND EFFICIENT MANNER.
9. CONTRACTOR SHALL PROMPTLY NOTIFY ENGINEER UPON DISCOVERY OF ANY UNFORESEEN SURFACE OR SUBSURFACE CONDITIONS THAT MAY IMPACT SITE CONSTRUCTION.
10. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
11. WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS.
12. EROSION CONTROL MEASURES, SUCH AS SILT FENCE OR STRAW BALES AS MAY BE SHOWN HEREON, SHALL BE INSTALLED BEFORE EARTH DISTURBANCE OCCURS WITHIN BUFFER ZONE, AND SHALL SERVE AS THE LIMIT OF WORK.
13. WHERE THE WORD "INSTALL" IS USED HEREIN, IT IS INTENDED TO DIRECT CONTRACTOR TO "FURNISH, INSTALL, AND PLACE IN OPERATION" THE COMPONENT REFERRED TO.
14. LIMITS OF WORK SHALL BE STAKED IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION.
15. ALL STORM DRAIN PIPE TO BE SMOOTH INTERIOR HDP PIPE, 2.0 PSI GASKETED JOINT, UNLESS OTHERWISE NOTED.
16. WHERE SHOWN, CONSTRUCTION NOTES ARE INTENDED TO SUMMARIZE AND CLARIFY MAJOR ITEMS OF WORK. THESE NOTES SHOULD NOT BE CONSTRUED AS AN EXHAUSTIVE LISTING OF ALL WORK REQUIRED. CONTRACTOR SHOULD CONTACT ENGINEER WHEN FURTHER CLARIFICATION OF DEPICTED WORK IS DESIRED.
17. CONSTRUCTION OF FIRE AND DOMESTIC WATER SUPPLY IMPROVEMENTS SHALL CONFORM TO TOWN OF BOXBOROUGH REQUIREMENTS.
18. WHERE DIMENSIONS INVOLVE CURB, DIMENSIONS ARE TO FACE OF CURB. WHERE SLOPED GRANITE CURB OR CAPE COD BERM SPECIFIED, FACE OF CURB IS EDGE OF FINISH PAVEMENT AT TOE OF CURB.
19. NO DEBRIS, JUNK, RUBBISH OR OTHER NON-BIODEGRADABLE MATERIALS, FILL CONTAINING HAZARDOUS MATERIALS OR WASTES, OR STUMPS SHALL BE BURIED ON ANY LAND ON THIS SITE, OR LEFT ON ANY LOT OR ON THE STREET RIGHT OF WAY.
20. EXISTING CONDITION INFORMATION BASED ON AN ON-THE-GROUND TOPOGRAPHIC AND BOUNDARY SURVEY PERFORMED BY GOLDSMITH, PREST & RINGWALL, INC. AUGUST 2015.
21. EDGE OF WETLANDS WAS DELINEATED BY OXBOW ASSOCIATES, INC. JULY 2014.

REGULATORY NOTES

1. CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 888.344.7233 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL GIVE TWENTY-FOUR (24)-HOUR NOTICE TO PERTINENT TOWN DEPARTMENTS BEFORE COMMENCING ANY WORK IN THE FIELD.
2. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
3. CONTRACTOR SHALL BE AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK.
4. ALL WORK OUTSIDE OF BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATION SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR 2.00.
5. GENERAL COMPLIANCE WITH 28 CFR PART 36 – 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND 521 CMR PART C, EXTERIOR OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REGULATIONS IS INTENDED. CONTRACTOR SHALL VERIFY COMPLIANCE DURING CONSTRUCTION AND SHALL NOTIFY THE OWNER OF ANY NON-COMPLIANCE ISSUES AS SOON AS DISCOVERED.

VICINITY MAP

SCALE: 1" = 1,000'



PLOT PLAN

SCALE: 1" = 200'

SHEET INDEX (20 TOTAL SHEETS)

C1.1 TITLE SHEET
C2.1 OVERALL LAYOUT PLAN
C3.1 LOTTING PLAN
C3.2 LOTTING PLAN
C3.3 LOTTING PLAN
C3.4 LOTTING PLAN
C4.1 GRADING, PAVING AND DRAINAGE INDEX PLAN
C4.2 GRADING, PAVING AND DRAINAGE PLAN
C4.3 GRADING, PAVING AND DRAINAGE PLAN
C5.1 ROADWAY PLAN AND PROFILE STA -20+00 TO 8+00
C5.2 ROADWAY PLAN AND PROFILE STA 8+00 TO 16+91
C6.1 COMMON DRIVEWAY PROFILE 0+00 TO 8+00
C7.1 STORMWATER POLLUTION PREVENTION PLAN
C8.1 CONSTRUCTION DETAILS
C8.2 CONSTRUCTION DETAILS
C8.3 CONSTRUCTION DETAILS
C8.4 CONSTRUCTION DETAILS
C9.1 WETLAND REPLICATION PLAN
C10.1 LANDSCAPE PLAN
C11.1 TURNING MOVEMENT ANALYSIS

ZONING

Glen Kauffman
205 Flagg Hill Road
Boxborough, MA

Map: 10-4
Parcel: 238
Lot: —

Proposed Use: Residential

Parameter	Section [1]	Requirement	Remarks
Zoning District	Appendix B	AR	Agricultural/Residential
Overlay District	145-6	Floodplain District: No	
		Aquifer Protection Overlay: No	
		Wetland District: No	Small Wetland onsite
		Groundwater Protection: No	
Proposed Use	Article 5	Residential	
Lot Area	Article 5, 5002	60,000 SF	See Note [3]
Frontage	Article 5, 5002	150	See Note [4]
Lot Width	Article 5, 5002	100	
Yard	Article 5, 5002		
Front		40 FT	
Side		30 FT	
Rear		40 FT	
Lot Regularity	Article 5, 5009	contain 70% req. area in a quadrangle	
Building Height	Article 5, 5002	45 FT	(to top of plate)
Building Volume			
Building Coverage	Article 5, 5002	N/A	
Floor Area Ratio	Article 5, 5002	N/A	
Open Space	Article 5, 5002	N/A	
Parking	Article 6,6005	Two (2) space per dwelling	Must have sufficient off-street parking for visitors
Driveways and Entrances	Article 6, 6104	see bylaw	Note [5]
Wetlands Setback	local bylaw	100 feet from resource area	Note [6]
MDEP Riverfront Area	OLIVER	within 200 feet of riverbank	No Waterbodies within 200 ft of site
FEMA Floodplain	25017C0351F	No	Article 7, 7304 - zoning bylaw
ACEC			
Zone 1 Protective Radius	N/A		none on site
Mapped Zone 2	N/A		none on site
IWPA	N/A		none on site

NOTES:
[1] Reference to section of Zoning Bylaw, where applicable.
[2] From maps entitled "Flood Insurance Rate Maps and Flood Boundary and Floodway Maps" dated July 7, 2014.
[3] Article 5 5002- minimum upland lot area 20,000. Article 5, 5003 - Reduced frontage lots shall have a minimum of 120,000 sf for 75 feet frontage, or 200,000 sf for 50 feet frontage.
[4] When a lot shall abut more than one street the lot must have a minimum of 150 feet combined, continuous frontage on one or more streets and shall not be required to have a minimum frontage of each of the streets. Reduced Frontage lots with 120,000 sf shall have 75 feet of frontage. Reduced frontage lots with 200,000 sf shall have no less than 50 feet front
[5] Article 6, 6104 - By special permit by the planning board, no more than 3 lots shall be accessed by a common driveway, and no more than 3 common driveways shall be located on a dead end street.
[6] Local Wetland Regs 2.5.3 - Within 100ft of wetland, no new sds (including grading for it). No new buildings. 50' do not disturb. Exceptions include installation of wells and waterlines when no other possibilities exist, grading required for house or road construction outisde the 25' buffer zone, decks and enclosed porches outside the 25' buffer zone. Commision must approve soil testing within the resource area.

ABBREVIATIONS:
SF=square feet; CF=cubic feet; FT=feet; GFA=gross floor area; AC=acres; PB=Planning Board; ZBA=Zoning Board of Appeals; IWPA=interim wellhead protection area; ACEC=Area of Critical Environmental Concern; FIRM=Flood Insurance Rate Map;

ASSESSORS REFERENCE

ASSESSORS PARCEL NUMBER: 20-066

PLAN REFERENCE

1. DEEDS RECORDED IN BOOK 62587, PAGES 203 & 205, MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS.
2. PLAN OF LAND IN BOXBOROUGH, MASS., OWNED BY DOLLY D. BJORKLUND AT 205 FLAGG HILL ROAD, PREPARED BY THIS OFFICE, DATED JULY 22, 2015.

ELEVATION DATUM

DATUM: NAVD 1988 B.M. NO.1

APPROVED BY THE
BOXBOROUGH PLANNING BOARD

_____ CHAIR
_____ APPLICATION FILED _____
_____ HEARING DATE _____
_____ PLAN APPROVED _____

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

TITLE SHEET

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

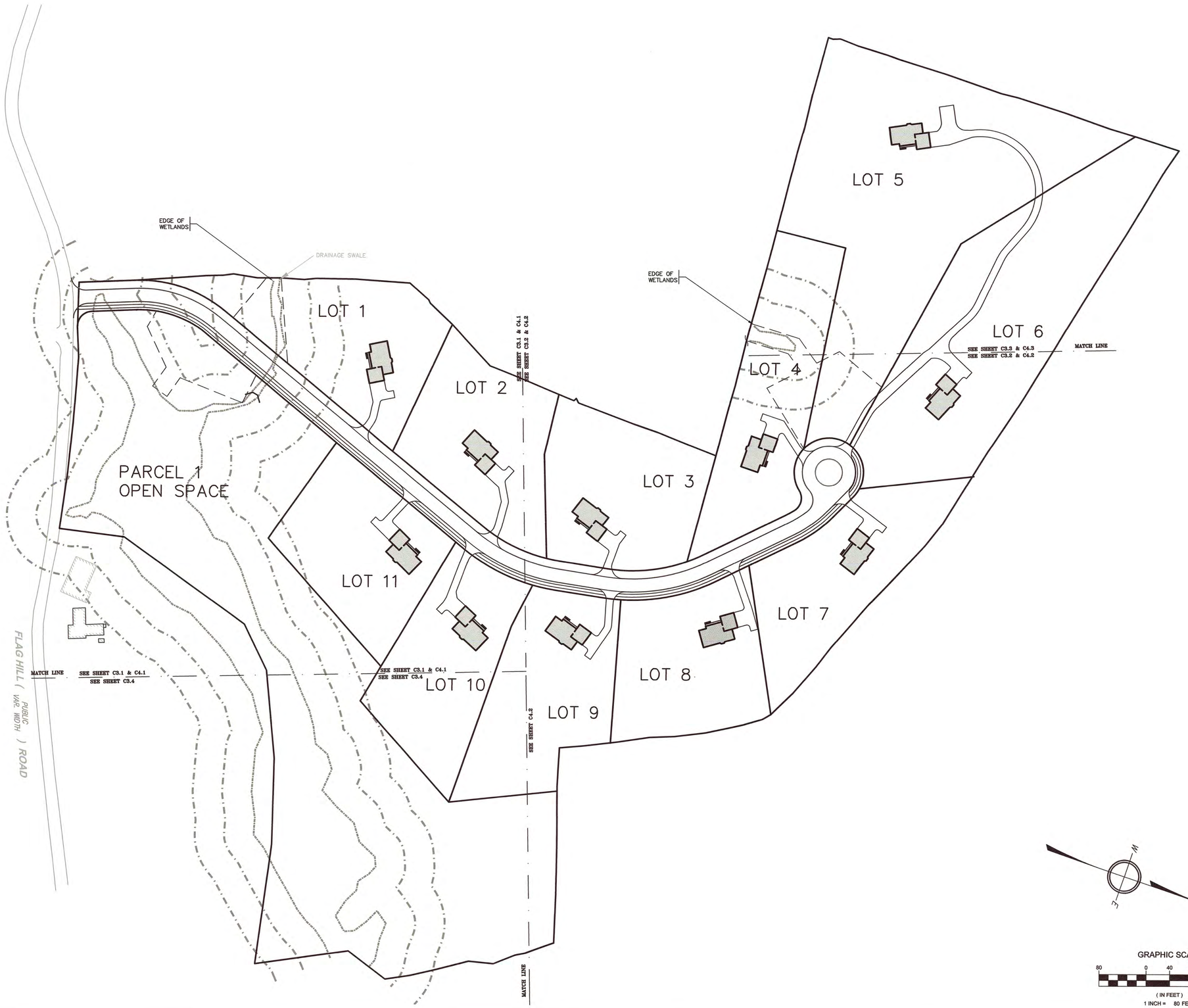
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG
CHK. BY: DEM
DATE: FEBRUARY 2016
JOB 141070
C1.1

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14----\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 04-29-16 3:33:12 PM - LAYOUT TITLE(SITE)



LEGEND

EXISTING		PROPOSED
100	ELEVATION CONTOUR	100
X100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
WL-1	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
SMH	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	E
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

DRAWING ISSUED FOR:

- ☐ CONCEPT
- ☐ CONSTRUCTION
- ■ PERMIT
- ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER

5/6/16

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION DEFINITIVE PLAN

OVERALL LAYOUT PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

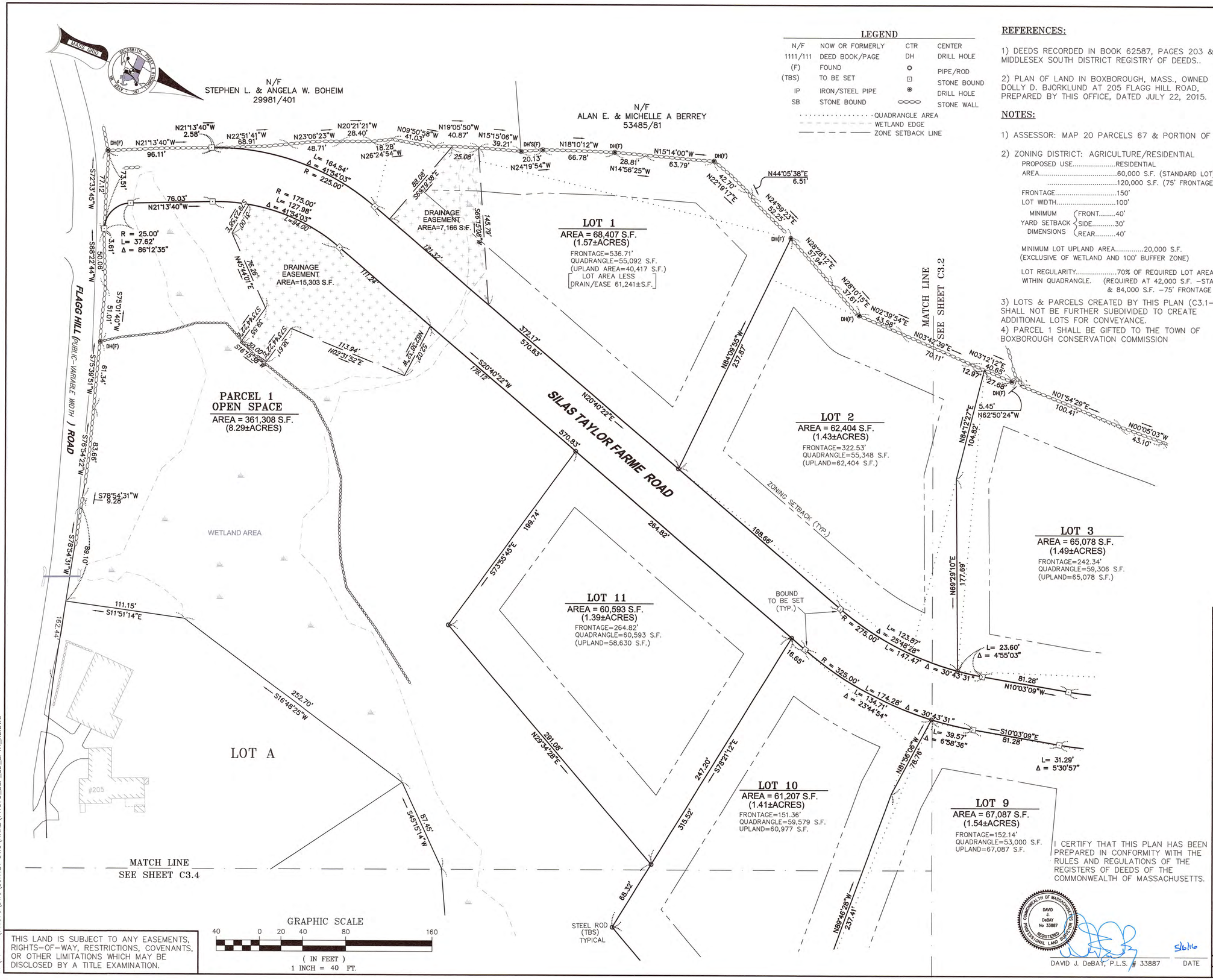
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C2.1
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14----\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 04-29-16 3:33:40 PM - LAYOUT OSPD



LEGEND

N/F	NOW OR FORMERLY	CTR	CENTER
1111/111	DEED BOOK/PAGE	DH	DRILL HOLE
(F)	FOUND	○	PIPE/ROD
(TBS)	TO BE SET	⊡	STONE BOUND
IP	IRON/STEEL PIPE	◉	DRILL HOLE
SB	STONE BOUND		STONE WALL

QUADRANGLE AREA
WETLAND EDGE
ZONE SETBACK LINE

REFERENCES:

1) DEEDS RECORDED IN BOOK 62587, PAGES 203 & 205, MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS..

2) PLAN OF LAND IN BOXBOROUGH, MASS., OWNED BY DOLLY D. BJORKLUND AT 205 FLAGG HILL ROAD, PREPARED BY THIS OFFICE, DATED JULY 22, 2015.

NOTES:

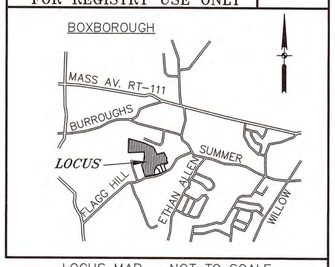
1) ASSESSOR: MAP 20 PARCELS 67 & PORTION OF 66.

2) ZONING DISTRICT: AGRICULTURE/RESIDENTIAL
PROPOSED USE.....RESIDENTIAL
AREA.....60,000 S.F. (STANDARD LOT)
.....120,000 S.F. (75' FRONTAGE LOT)
FRONTAGE.....150'
LOT WIDTH.....100'
MINIMUM YARD SETBACK DIMENSIONS { FRONT.....40' SIDE.....30' REAR.....40'
MINIMUM LOT UPLAND AREA.....20,000 S.F.
(EXCLUSIVE OF WETLAND AND 100' BUFFER ZONE)
LOT REGULARITY.....70% OF REQUIRED LOT AREA CONTAINED WITHIN QUADRANGLE. (REQUIRED AT 42,000 S.F. –STANDARD LOT & 84,000 S.F. –75' FRONTAGE LOT)

3) LOTS & PARCELS CREATED BY THIS PLAN (C3.1–C3.4) SHALL NOT BE FURTHER SUBDIVIDED TO THE CONVEYANCE ADDITIONAL LOTS FOR CONVEYANCE.
4) PARCEL 1 SHALL BE GIFTED TO THE TOWN OF BOXBOROUGH CONSERVATION COMMISSION

JOB NO. 141070

FOR REGISTRY USE ONLY



LOCUS MAP ~ NOT TO SCALE

APPROVAL IS REQUIRED UNDER THE SUBDIVISION CONTROL LAW
BOXBOROUGH PLANNING BOARD

BEING A MAJORITY
DATE APPROVED: _____
DATE ENDORSED: _____

I_____, CLERK OF THE TOWN OF BOXBOROUGH, HEREBY CERTIFY THAT THE NOTICE OF THE APPROVAL OF THIS PLAN BY THE PLANNING BOARD HAS BEEN RECEIVED AND RECORDED BY THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER RECEIPT AND RECORDING OF SAID NOTICE.

BOXBOROUGH TOWN CLERK DATE

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	DJD	NO CHANGES – THIS SHEET
2	4/28/16	DSB	DJD	NO CHANGES – THIS SHEET
1	4/7/16	DSB	DJD	PER PEER REVIEW REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures
GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

LOTTING PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MASSACHUSETTS

OWNER: DOLLY D. BJORKLUND
PO BOX 2875
ACTON, MA 01720

APPLICANT: MERIDIAN HOMES, INC.
114 NEWTOWN ROAD
ACTON, MA. 01720

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

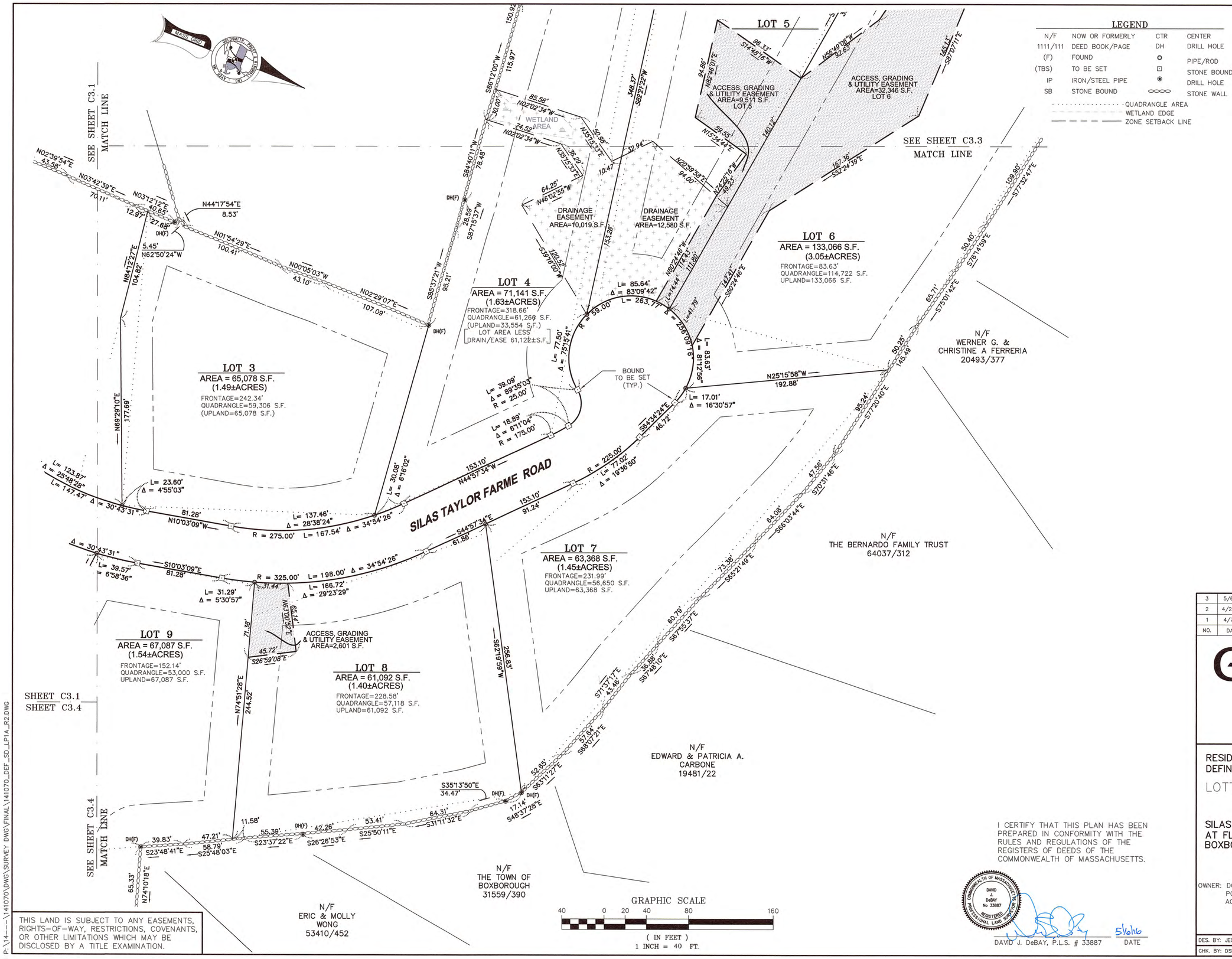
COMMONWEALTH OF MASSACHUSETTS DAVID J. DeBAY No 33887 REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID J. DeBAY, P.L.S. # 33887 5/6/16 DATE

THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS–OF–WAY, RESTRICTIONS, COVENANTS, OR OTHER LIMITATIONS WHICH MAY BE DISCLOSED BY A TITLE EXAMINATION.

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C3.1
CHK. BY: DSB			

P:\14---\141070\DWG\SURVEY DWG\FINAL\141070_DEF_SD_LP1A_R2.DWG



THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, COVENANTS, OR OTHER LIMITATIONS WHICH MAY BE DISCLOSED BY A TITLE EXAMINATION.

LEGEND

N/F	NOW OR FORMERLY	CTR	CENTER
1111/111	DEED BOOK/PAGE	DH	DRILL HOLE
(F)	FOUND	○	PIPE/ROD
(TBS)	TO BE SET	⊡	STONE BOUND
IP	IRON/STEEL PIPE	◉	DRILL HOLE
SB	STONE BOUND	⬭⬭⬭	STONE WALL

QUADRANGLE AREA
WETLAND EDGE
ZONE SETBACK LINE

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

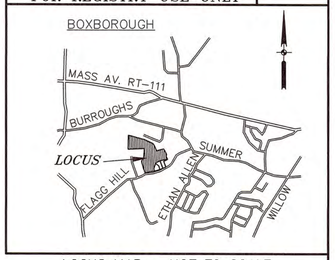
COMMONWEALTH OF MASSACHUSETTS DAVID J. DeBAY No. 33887 REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID J. DeBAY, P.L.S. # 33887 — DATE 5/6/16

FOR REGISTRY USE ONLY

JOB NO. 141070

BOXBOROUGH



LOCUS MAP ~ NOT TO SCALE

APPROVAL IS REQUIRED UNDER THE SUBDIVISION CONTROL LAW
BOXBOROUGH PLANNING BOARD

BEING A MAJORITY
DATE APPROVED: _____
DATE ENDORSED: _____

I_____, CLERK OF THE TOWN OF BOXBOROUGH, HEREBY CERTIFY THAT THE NOTICE OF THE APPROVAL OF THIS PLAN BY THE PLANNING BOARD HAS BEEN RECEIVED AND RECORDED BY THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER RECEIPT AND RECORDING OF SAID NOTICE.

_____
BOXBOROUGH TOWN CLERK — DATE

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	DJD	NO CHANGES – THIS SHEET
2	4/28/16	DSB	DJD	NO CHANGES – THIS SHEET
1	4/7/16	DSB	DJD	PER PEER REVIEW REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

LOTTING PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MASSACHUSETTS

OWNER: DOLLY D. BJORKLUND
PO BOX 2875
ACTON, MA 01720

APPLICANT: MERIDIAN HOMES, INC.
114 NEWTOWN ROAD
ACTON, MA. 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C3.2
CHK. BY: DSB			

P:\14---\141070\DWG\SURVEY DWG\FINAL\141070_DEF_SD_LP1A_R2.DWG

WAIVERS:

Section III - Submission and approval of plans

C.1.7 Requirement: Provide drafts of easements for utility, drainage and right-of-way purposes.
Requested: Said easements have been shown on the plans. Applicant will submit drafts after review comments to avoid multiple drafts.

C.2.15 Requirement: Proposed layout of street lighting
Requested: No street lights

C.2.22 Requirement: An Erosion and Sedimentation Control Plan with the components required for compliance with the National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan and all the temporary and permanent measures for erosion control.
Requested: An erosion and Sedimentation Control Plan in compliance with (NPDES) after design review comments have been addressed with the Planning Board and Town Engineering Consultant to avoid multiple drafts.

Section IV - Design Standards

A.6 Requirement: Right of Way rounding radii of not less than 20 feet.
Requested: Right of Way radii of 0 feet to allow the right of way to align with the abutting property line to minimize the wetland disturbance.

A.14 Requirement: A Dead-end street shall be no longer than 500 linear feet in combined total length unless, in the opinion of the Board, a greater length is necessitated by topography or other local conditions, and there are clear and compelling benefits to the town for granting a greater length.
Requested: Allow for a dead-end street to be 1500+/- linear feet due to site topography, lot shape and wetland crossings.

A.15 Requirement: The number of dwelling units served by a dead-end street shall not exceed ten (10).
Requested: The proposed number of dwelling units served by the proposed street shall be eleven (11).

B.3.5 Requirement: If a roadway results in a cut slope of 5' or more vertical, a swale at the top of the cut slope shall be provided to minimize erosion and limit the runoff onto the property.
Requested: Provide rip rap armor on the proposed cut slope STA 5+63 -8+15 with a rip rap swale at the toe of cut slope conveying potential groundwater breakout into a landscape catch basin.

Section V - Required Improvements for an approved subdivision

A.3.1 Requirement: Sidewalks shall be a minimum of five (5) feet wide and shall be offset from the edge of pavement by a ten (10) foot grass strip.
Requested: Sidewalk to be five (5) feet wide and offset by a four (4) foot wide grass strip.

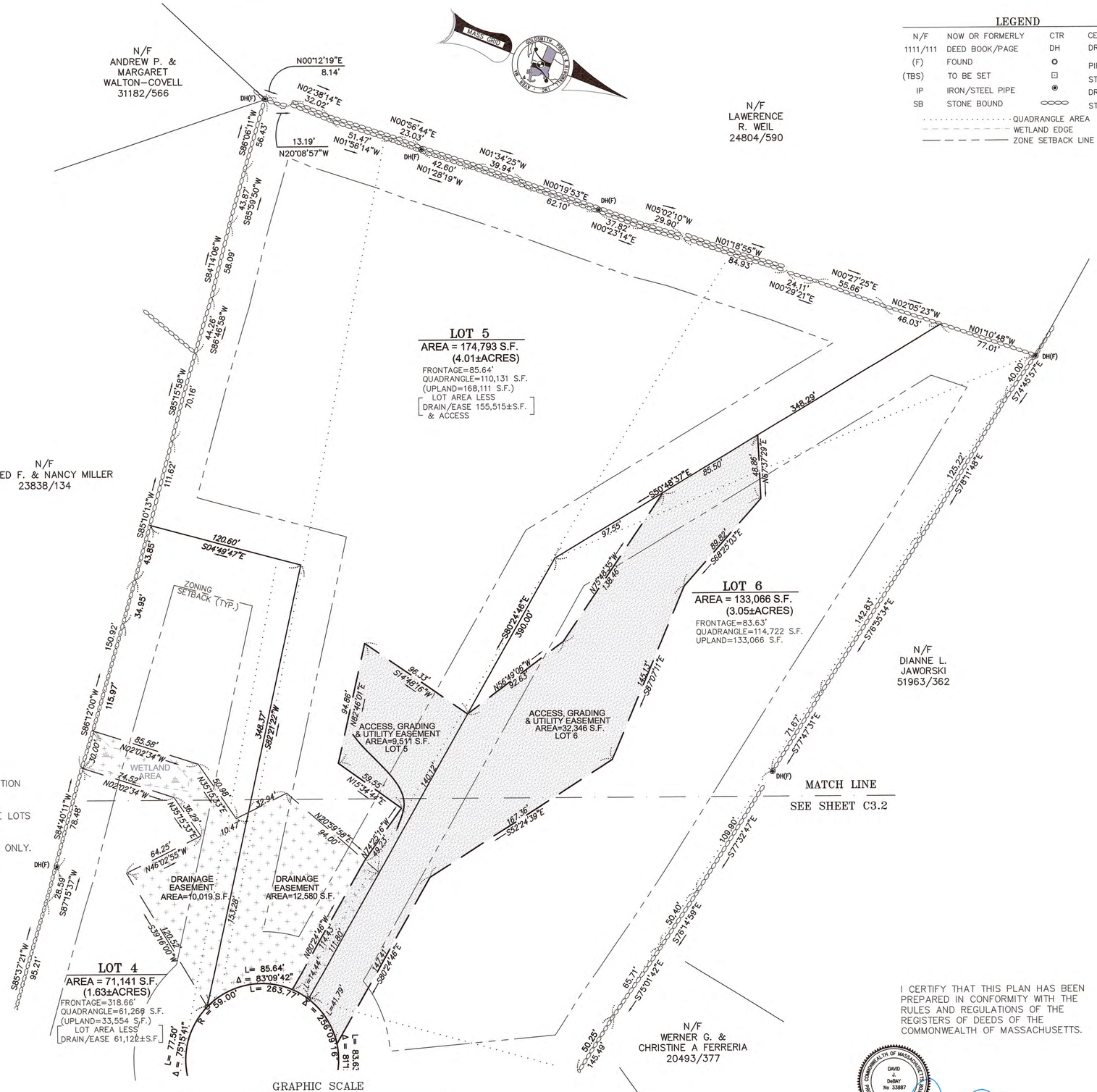
REQUIRED PERMIT(S):

1. SPECIAL PERMIT FOR A PRIVATE/COMMON DRIVEWAY PER SECTION 6104 & 6105
2. SPECIAL PERMIT FOR LOT 5 & LOT 6 AS REDUCED FRONTAGE LOTS PER SECTION 5003
3. STONEWALL REMOVAL PERMIT AT PROPOSED ROAD ENTRANCE ONLY.

Site Data

Zoning District:	Agricultural-Resdential
Total Area of Subdivision:	30.61 Acres
Building Lots	11
Total Area of Building Lots:	20.38 Acres
Area of Roadway:	1.94 Acres
Length of Road:	1,508 LF
Centerline Length of Road	1,691
Area of Wetlands within Subdivision	113,223 SF
Open Space:	8.29 Acres
# of Bounds to be set:	20 granite 15 Iron rod or DH

THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, COVENANTS, OR OTHER LIMITATIONS WHICH MAY BE DISCLOSED BY A TITLE EXAMINATION.



LEGEND

N/F	NOW OR FORMERLY	CTR	CENTER
1111/111	DEED BOOK/PAGE	DH	DRILL HOLE
(F)	FOUND	○	PIPE/ROD
(TBS)	TO BE SET	⊡	STONE BOUND
IP	IRON/STEEL PIPE	◉	DRILL HOLE
SB	STONE BOUND	⬭⬭⬭	STONE WALL

QUADRANGLE AREA
WETLAND EDGE
ZONE SETBACK LINE

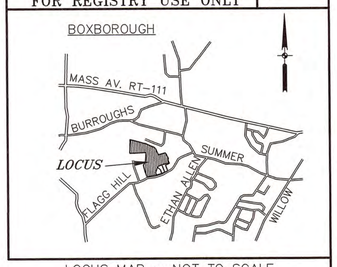
I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

COMMONWEALTH OF MASSACHUSETTS — DAVID J. DeBAY — No 33887 — REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID J. DeBAY, P.L.S. # 33887 — DATE 5/6/16

JOB NO. 141070

FOR REGISTRY USE ONLY



LOCUS MAP ~ NOT TO SCALE

APPROVAL IS REQUIRED UNDER THE SUBDIVISION CONTROL LAW
BOXBOROUGH PLANNING BOARD

BEING A MAJORITY
DATE APPROVED: _____
DATE ENDORSED: _____

I _____, CLERK OF THE TOWN OF BOXBOROUGH, HEREBY CERTIFY THAT THE NOTICE OF THE APPROVAL OF THIS PLAN BY THE PLANNING BOARD HAS BEEN RECEIVED AND RECORDED BY THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER RECEIPT AND RECORDING OF SAID NOTICE.

BOXBOROUGH TOWN CLERK — DATE

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	DJD	REVISE WAIVER LIST
2	4/28/16	DSB	DJD	WAIVER TABLE AND ADJ. LOT 5 AREA
1	4/7/16	DSB	DJD	PER PEER REVIEW REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures
GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

LOTTING PLAN

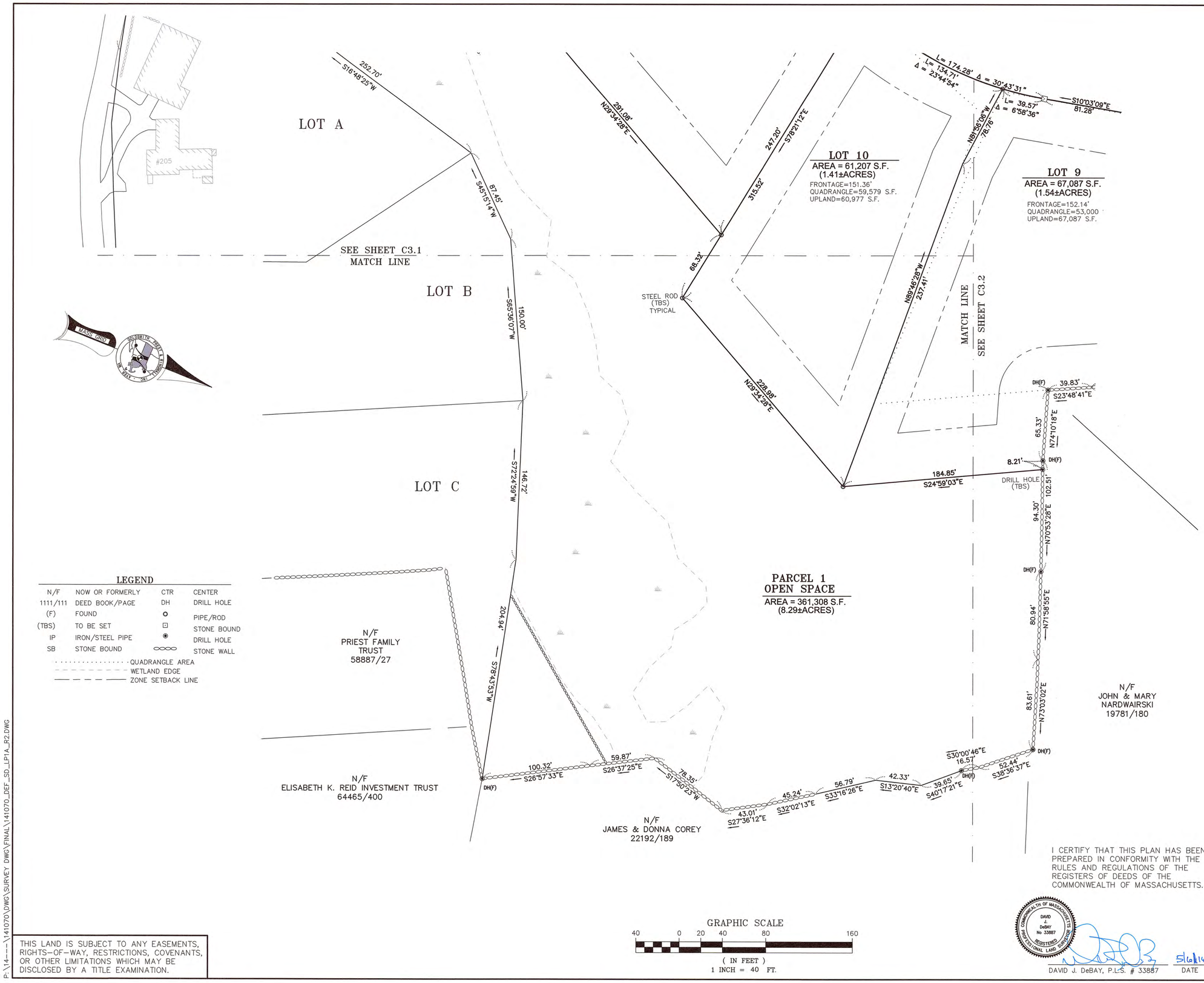
SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MASSACHUSETTS

OWNER: DOLLY D. BJORKLUND
PO BOX 2875
ACTON, MA 01720

APPLICANT: MERIDIAN HOMES, INC.
114 NEWTOWN ROAD
ACTON, MA. 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C3.3
CHK. BY: DSB			

P:\14---\141070\DWG\SURVEY DWG\FINAL\141070_DEF_SD_LP1A_R2.DWG



LEGEND

N/F	NOW OR FORMERLY	CTR	CENTER
1111/111	DEED BOOK/PAGE	DH	DRILL HOLE
(F)	FOUND	○	PIPE/ROD
(TBS)	TO BE SET	⊡	STONE BOUND
IP	IRON/STEEL PIPE	◉	DRILL HOLE
SB	STONE BOUND	⬭⬭⬭	STONE WALL

QUADRANGLE AREA
WETLAND EDGE
ZONE SETBACK LINE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 INCH = 40 FT.

THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, COVENANTS, OR OTHER LIMITATIONS WHICH MAY BE DISCLOSED BY A TITLE EXAMINATION.

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

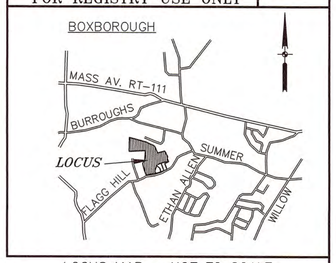
COMMONWEALTH OF MASSACHUSETTS DAVID J. DeBAY No 33887 REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID J. DeBAY, P.L.S. # 33887 — DATE 5/6/16

P:\14---\141070\DWG\SURVEY DWG\FINAL\141070_DEF_SD_LP1A_R2.DWG

FOR REGISTRY USE ONLY

JOB NO. 141070



LOCUS MAP ~ NOT TO SCALE

APPROVAL IS REQUIRED UNDER THE SUBDIVISION CONTROL LAW
BOXBOROUGH PLANNING BOARD

BEING A MAJORITY
DATE APPROVED: _____
DATE ENDORSED: _____

I_____, CLERK OF THE TOWN OF BOXBOROUGH, HEREBY CERTIFY THAT THE NOTICE OF THE APPROVAL OF THIS PLAN BY THE PLANNING BOARD HAS BEEN RECEIVED AND RECORDED BY THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER RECEIPT AND RECORDING OF SAID NOTICE.

BOXBOROUGH TOWN CLERK — DATE

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	DJD	NO CHANGES – THIS SHEET
2	4/28/16	DSB	DJD	NO CHANGES – THIS SHEET
1	4/7/16	DSB	DJD	PER PEER REVIEW REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

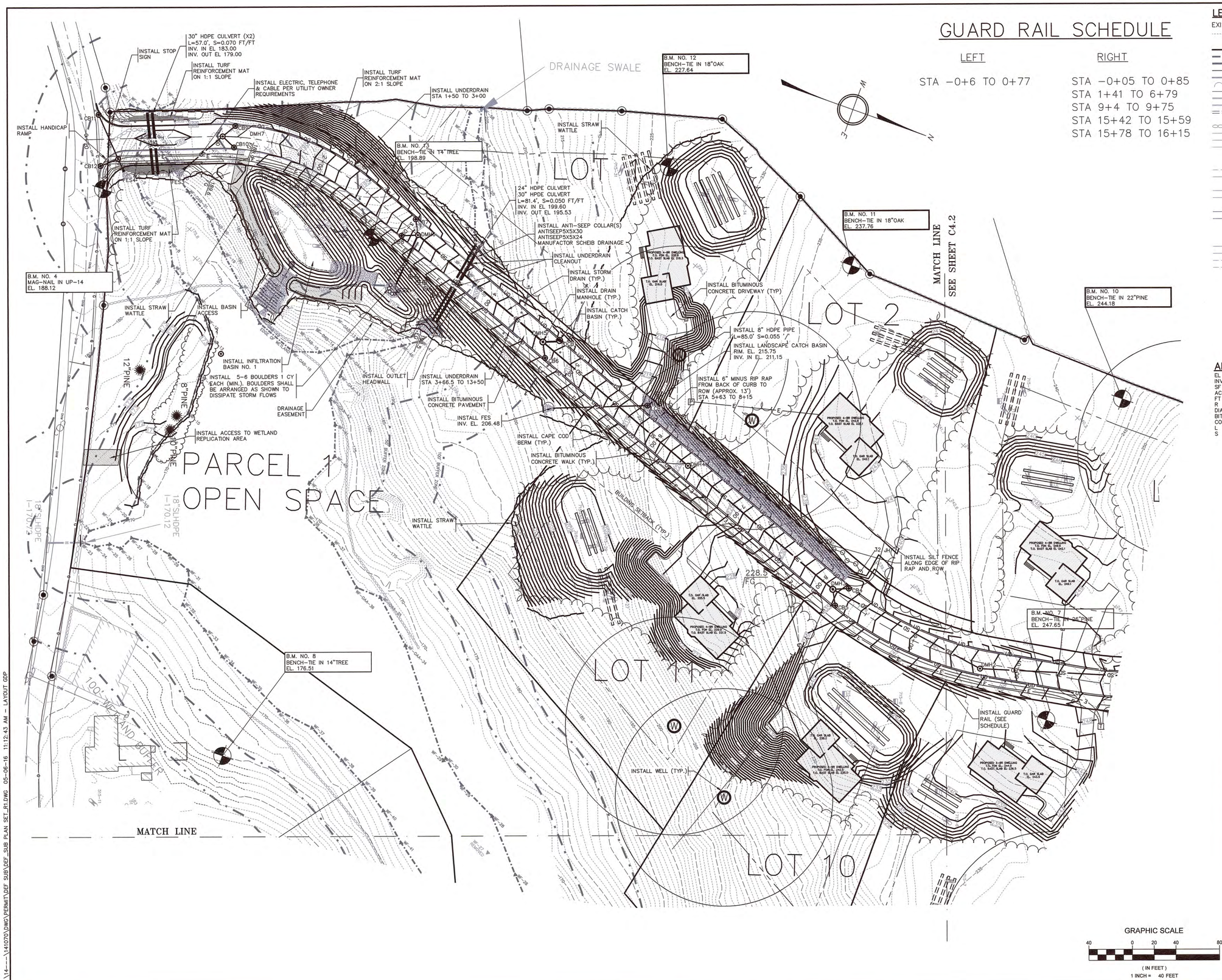
LOTTING PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MASSACHUSETTS

OWNER: DOLLY D. BJORKLUND
PO BOX 2875
ACTON, MA 01720

APPLICANT: MERIDIAN HOMES, INC.
114 NEWTOWN ROAD
ACTON, MA. 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C3.4
CHK. BY: DSB			



GUARD RAIL SCHEDULE

LEFT	RIGHT
STA -0+6 TO 0+77	STA -0+05 TO 0+85
	STA 1+41 TO 6+79
	STA 9+4 TO 9+75
	STA 15+42 TO 15+59
	STA 15+78 TO 16+15

LEGEND

EXISTING		PROPOSED
100	ELEVATION CONTOUR	100
X100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
WL-1	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
S	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

DRAWING ISSUED FOR:

- ☐ CONCEPT
- ☐ CONSTRUCTION
- ■ PERMIT
- ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION DEFINITIVE PLAN

GRADING DRAINAGE AND PAVING PLAN

SILAS TAYLOR FARME ROAD AT FLAGG HILL ROAD BOXBOROUGH, MA

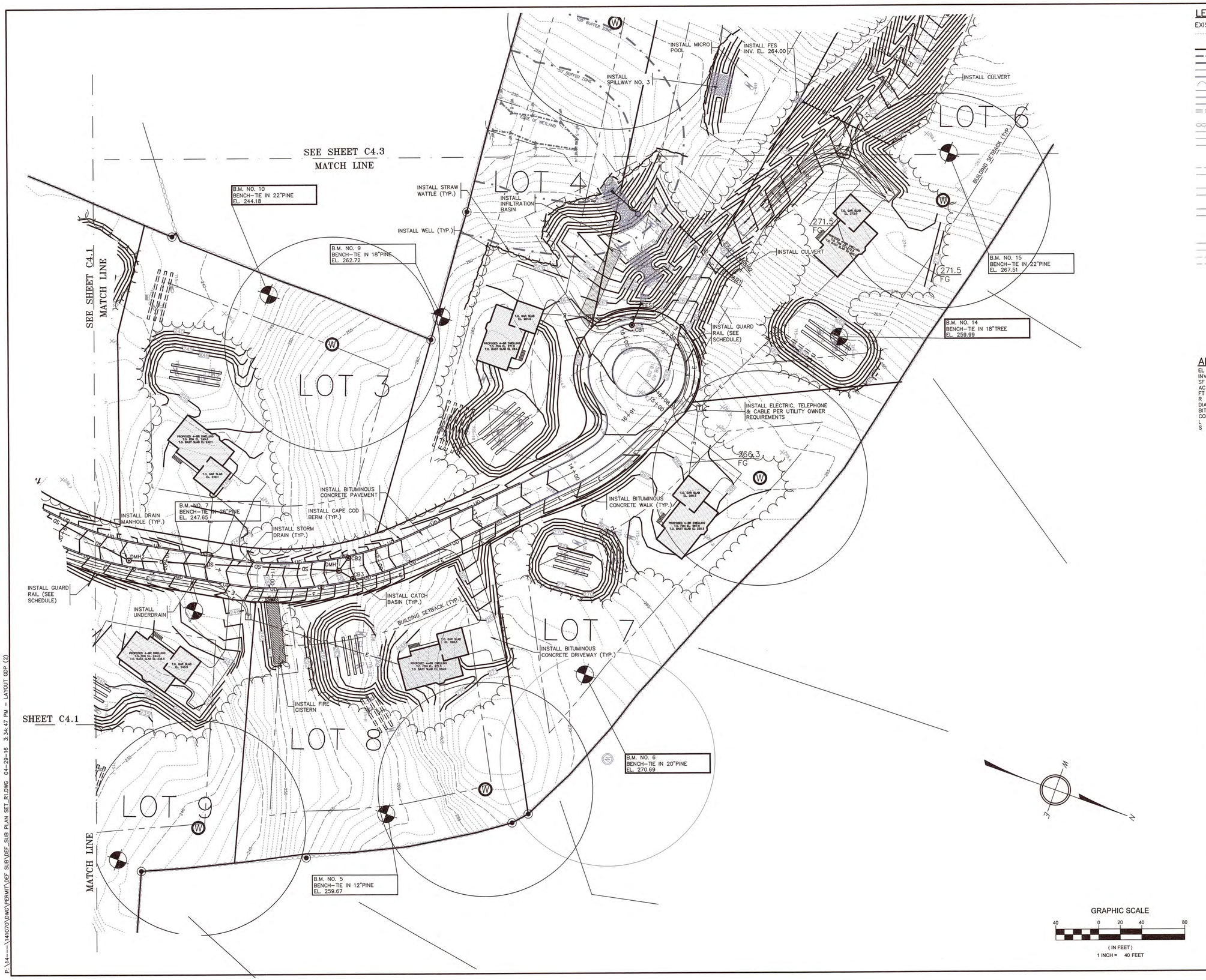
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C4.1
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14-----\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 05-06-16 11:12:43 AM - LAYOUT GDP



LEGEND

EXISTING		PROPOSED
100	ELEVATION CONTOUR	100
x100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
WF-1	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
FH	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
S	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	E
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 INCH = 40 FEET

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION

■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER 5/5/16

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION DEFINITIVE PLAN

GRADING DRAINAGE AND PAVING PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

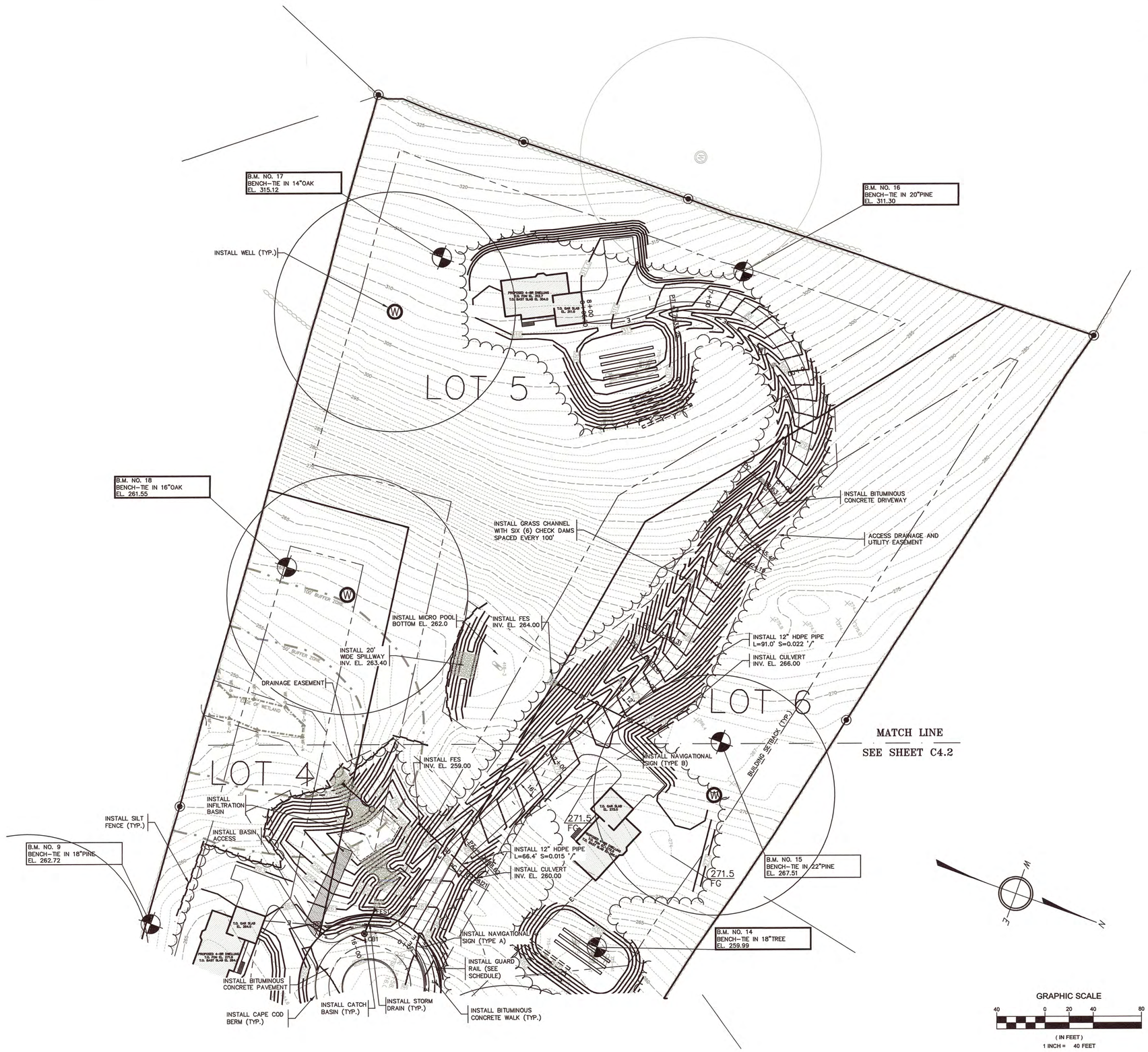
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C4.2
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14---\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 04-29-16 3:34:47 PM - LAYOUT GDP (2)



LEGEND

EXISTING		PROPOSED
100	ELEVATION CONTOUR	100
X100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
S	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	E
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION

■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

GRADING DRAINAGE AND PAVING PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

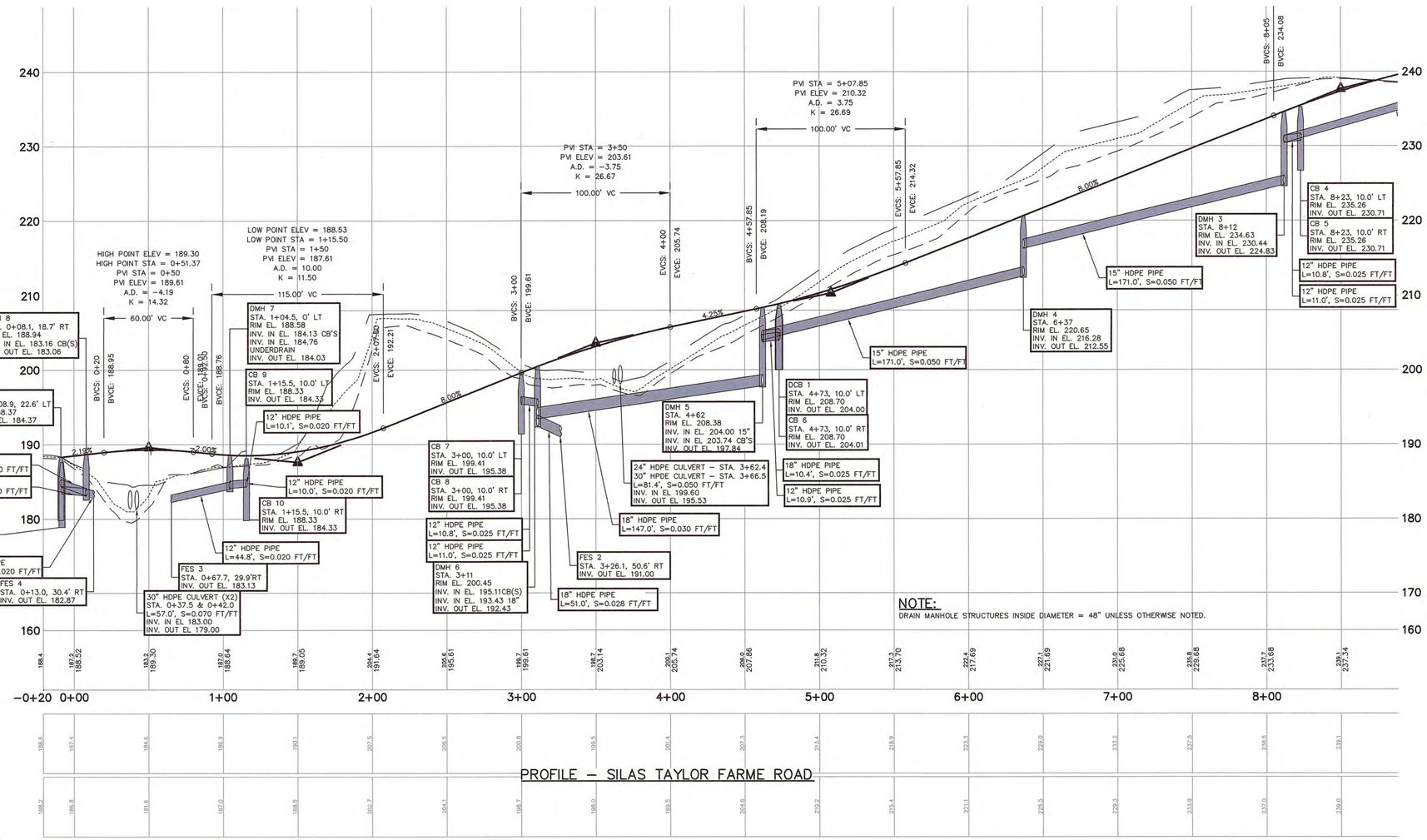
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

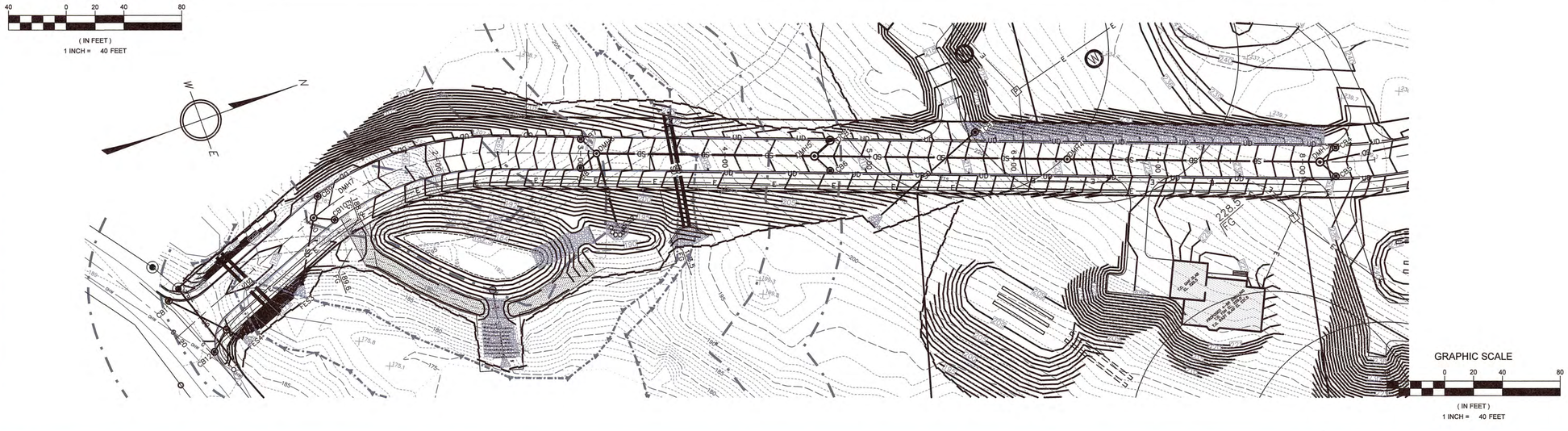
DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C4.3
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14---\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 04-29-16 3:35:19 PM - LAYOUT GDP (3)



NOTE:
DRAIN MANHOLE STRUCTURES INSIDE DIAMETER = 48" UNLESS OTHERWISE NOTED.



LEGEND

EXISTING / PROPOSED

- ELEVATION CONTOUR
- SPOT GRADE
- PROPERTY LINE
- WETLAND DELINEATION
- WETLAND BUFFER ZONE
- SHORELINE
- 100-YEAR FLOODPLAIN LIMIT
- TREE LINE / EDGE OF VEGETATION
- EDGE OF PAVEMENT
- CAPE COD BERM CURBING
- GRANITE CURBING
- GRAVEL/DIRT ROAD
- STOCKADE FENCE
- STONE WALL
- WATER MAIN
- WATER SERVICE
- FIRE SERVICE
- WATER VALVE
- FIRE HYDRANT
- FORCE MAIN
- GRAVITY SEWER LINE
- SEWER MANHOLE
- GAS LINE
- GAS SERVICE
- GAS VALVE
- BURIED POWER LINE
- OVERHEAD POWER LINE
- UTILITY POLE
- GUY WIRE
- ELECTRIC BOX
- STORM DRAIN
- UNDERDRAIN
- ROOF DRAIN
- FOUNDATION DRAIN
- CATCH BASIN
- DRAIN MANHOLE
- SILT FENCE BARRIER
- STRAW WATTLES
- DEEP SOIL OBSERVATION HOLE
- SITE LUMINAIRE
- SIGN
- SURFACE RUNOFF DIRECTION
- STONE BOUND
- DRILL HOLE
- IRON ROD

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION

■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 PROFESSIONAL ENGINEER

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

ROADWAY PLAN AND PROFILE
STA −20+00 TO 8+00

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

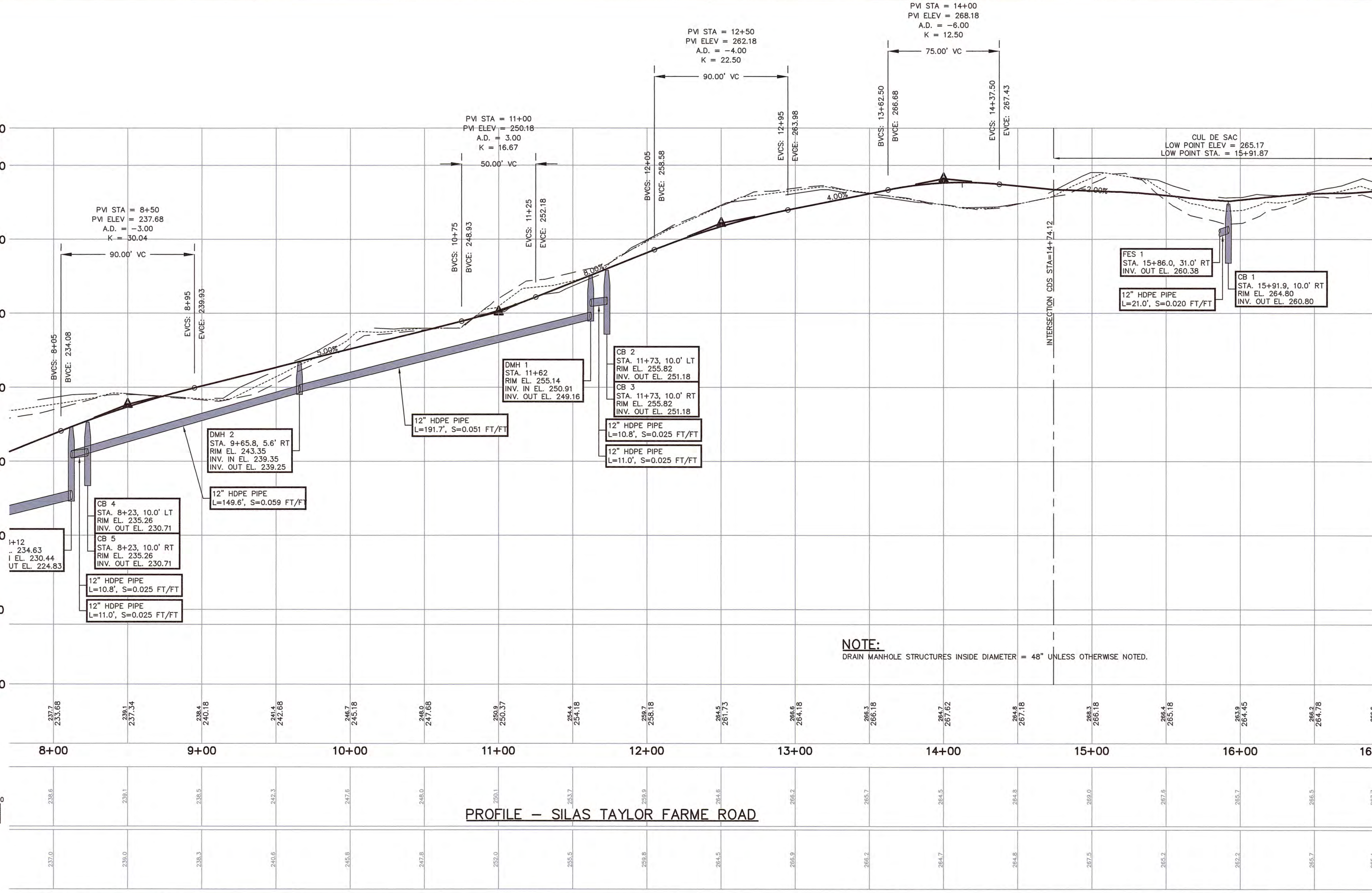
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2014	JOB 141070	C5.1
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14----\141070\DWG\PERMIT\DEF SUB\DEF_SUB_OS_R1.DWG 04-29-16 3:22:12 PM – LAYOUT PROFILE

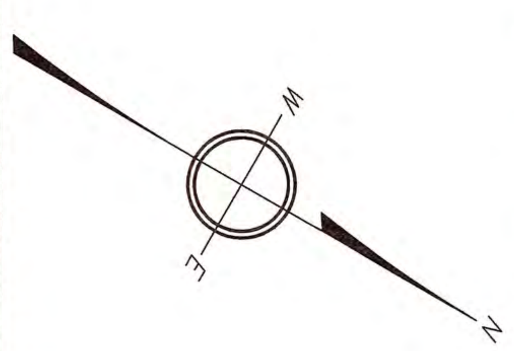


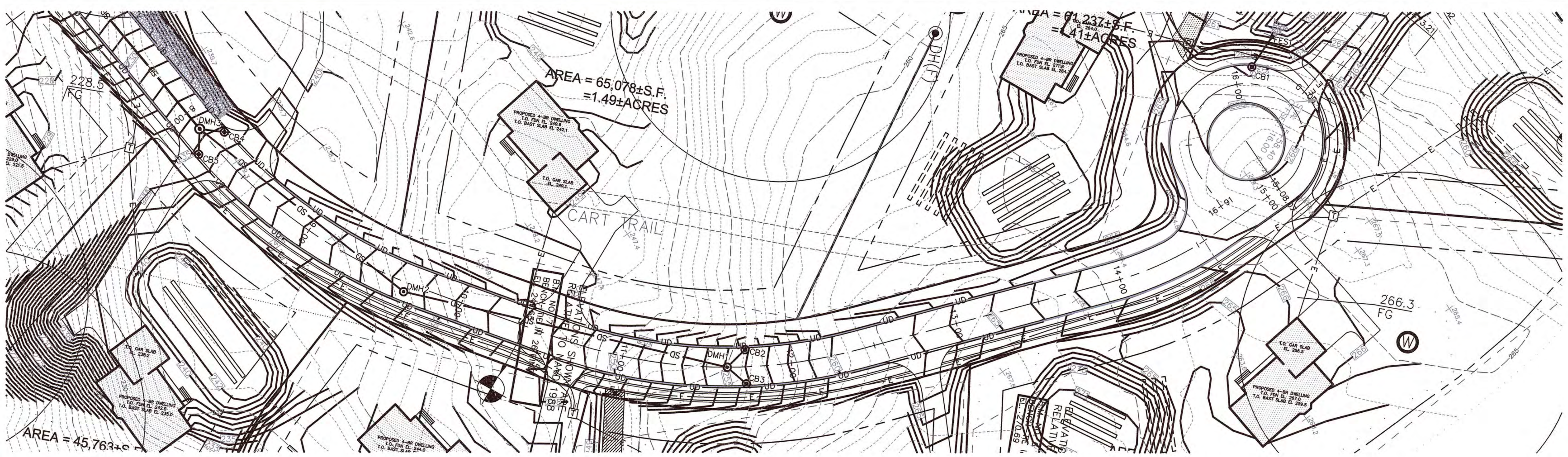
GRAPHIC SCALE
0 2 4 8
(IN FEET)
1 INCH = 4 FEET

NOTE:
DRAIN MANHOLE STRUCTURES INSIDE DIAMETER = 48" UNLESS OTHERWISE NOTED.

PROFILE – SILAS TAYLOR FARME ROAD

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 INCH = 40 FEET





GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 INCH = 40 FEET

LEGEND

EXISTING		PROPOSED
	ELEVATION CONTOUR	
X100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
WF-1	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	E
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER
5/6/16

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR
Engineering Solutions for Land & Structures
GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION DEFINITIVE PLAN

ROADWAY PLAN AND PROFILE STA 8+00 TO 16+91

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

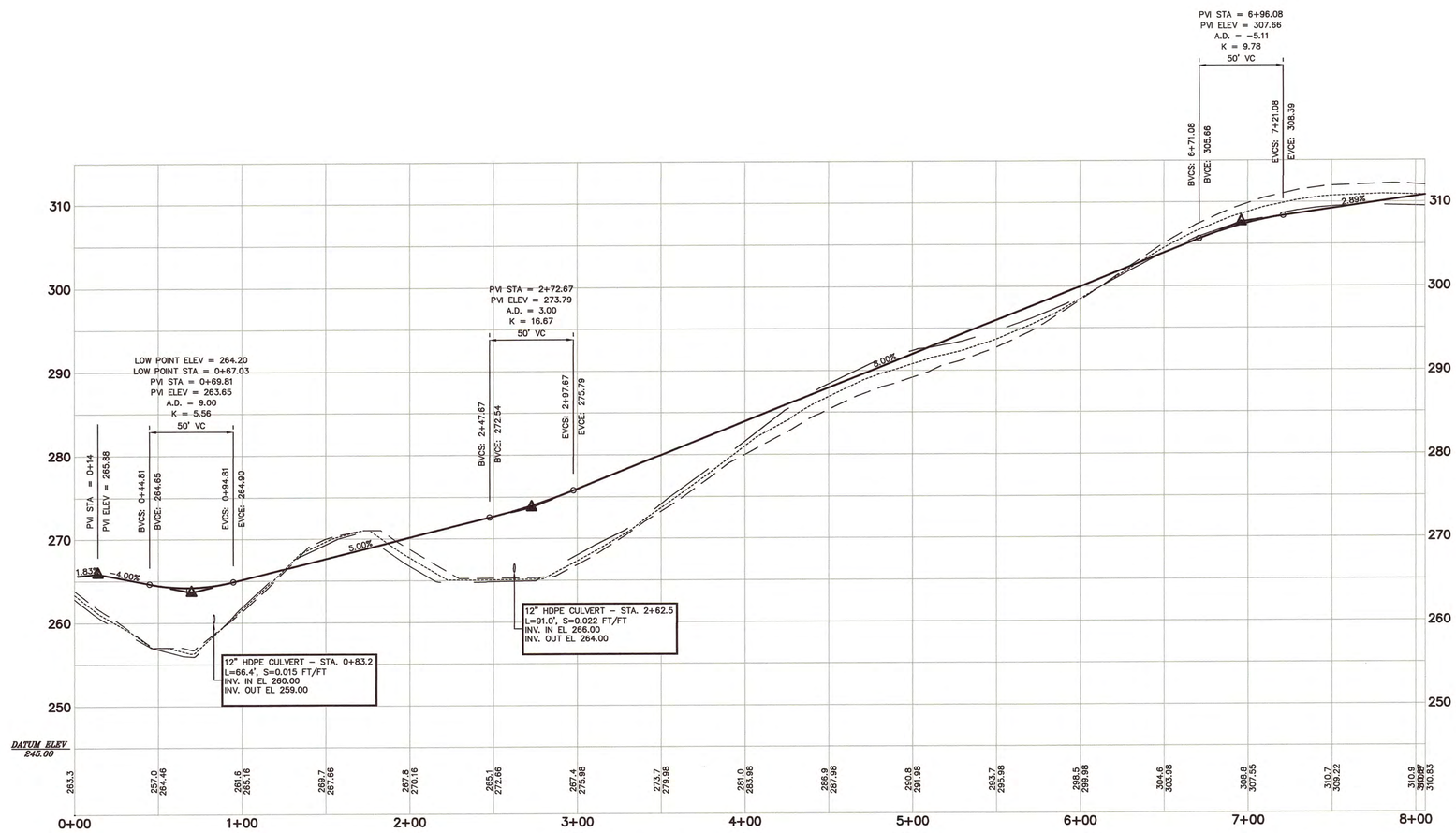
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

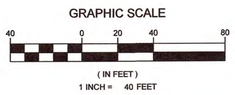
DES. BY: JEG / CHK. BY: DEM	DATE: FEBRUARY 2014	JOB 141070	C5.2

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14---\141070\DWG\PERMIT\DEF SUB\DEF_SUB_OS_R1.DWG 04-29-16 3:22:57 PM - LAYOUT PROFILE (2)



PROFILE – LOT 5 DRIVEWAY



LEGEND

EXISTING		PROPOSED
100	ELEVATION CONTOUR	100
x100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
WC-1	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
S	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	E
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

DRAWING ISSUED FOR:

- ☐ CONCEPT
- ☐ CONSTRUCTION
- ■ PERMIT
- ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS — DOUGLAS E. MILLER — CIVIL — No. 33950 — REGISTERED PROFESSIONAL ENGINEER

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

COMMON DRIVEWAY PROFILE
STA 0+00 TO 8+00

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2014	JOB 141070	C6.1
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14----\141070\DWG\PERMIT\DEF SUB\DEF_SUB_OS_R1.DWG 04-29-16 3:23:14 PM - LAYOUT PROFILE (3)

EROSION AND SEDIMENT CONTROL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

A. FURNISH, INSTALL, AND MAINTAIN TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS, BUT NOT NECESSARILY LIMITED TO, HAY BALE AND SILT FENCE BARRIERS, RIPRAP, DIVERSION CHANNELS AND BERMS, VEHICLE TRACKING PAD, EROSION CONTROL BLANKETS, INLET PROTECTION DEVICES, CHECK DAMS, STRATEGICALLY LOCATED AND PROTECTED STOCKPILES, SEDIMENT BASINS, MULCH, AND SEED MIX (HEREINAFTER "CONTROL MEASURES") ADEQUATE TO PREVENT THE CONVEYANCE OF SEDIMENT LADEN RUNOFF FROM SITE, OR INTO ENVIRONMENTALLY SENSITIVE AREAS, OR INTO AREAS WHERE WORK WILL BE ADVERSELY IMPACTED. ENVIRONMENTALLY SENSITIVE AREAS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, WETLANDS, TRIBUTARIES TO WETLANDS, WETLAND BUFFER ZONES, INTERMITTENT AND PERENNIAL STREAMS / RIVERS, AND THEIR ATTENDANT BUFFER ZONES.
1. REFER TO DRAWINGS FOR LOCATION AND DETAILS OF CONTROL MEASURES REQUIRED TO COMMENCE WORK. THESE CONTROL MEASURES WILL BE ADEQUATE ONLY FOR VEGETATION CLEARING. THE DRAWINGS ARE NOT INTENDED TO GRAPHICALLY DEPICT ALL CONTROL MEASURES THAT WILL BE REQUIRED TO MEET THE REQUIREMENTS OF SECTION 1.01.A ABOVE.
2. DEVISE AND EMPLOY CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT, OVER ALL AREAS DISTURBED OR UNDISTURBED BY CONSTRUCTION, AS NECESSARY TO MEET THE REQUIREMENTS OF SECTION 1.01.A ABOVE.
3. DEVISE AND EMPLOY TEMPORARY CONTROL MEASURES AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN SECTION 1.01.A ABOVE, WHILE ALLOWING WORK TO PROCEED IN AN EFFICIENT, COST EFFECTIVE MANNER.
4. DEVISE, EMPLOY AND MAINTAIN CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA.
5. ONCE THE SITE IS PERMANENTLY STABILIZED AND CERTIFIED AS SUCH BY ENGINEER, REMOVE TEMPORARY CONTROL MEASURES WHILE PROTECTING STABILIZED SURFACES.

1.02 SUBMITTALS

A. SUBMIT PRODUCT DATA, WARRANTY, AND TEST REPORTS FOR PRODUCTS AS INDICATED ON THE DRAWINGS.

1.03 QUALITY ASSURANCE

A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS FROM ACCEPTABLE MANUFACTURERS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. CONFORM TO CONDITIONS OF APPROVAL ISSUED BY REGULATORY AGENCIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, LOCAL PLANNING BOARD, CONSERVATION COMMISSION, BOARD OF SELECTMEN, BOARD OF HEALTH, PUBLIC WORKS / HIGHWAY DEPARTMENT, STATE ENVIRONMENTAL PROTECTION DEPARTMENT, AND U.S. GOVERNMENT, ENVIRONMENTAL PROTECTION AGENCY. WHERE CONDITIONS OF REGULATORY APPROVAL DIFFER FROM REQUIREMENTS CONTAINED HEREIN OR ON THE DRAWINGS, COMPLY WITH THE MORE STRINGENT REQUIREMENT.

PART 2 – PRODUCTS

2.01 MATERIALS

A. HAY/STRAW BALES: WEED AND SEED FREE DRY GRASS OR STRAW, MACHINE BOUND WITH JUTE OR WIRE, APPROXIMATE SIZE EACH BALE 42" X 16" X 16".
B. PRE–FABRICATED SEDIMENT FENCE: WOVEN OR MONOFILAMENT GEOTEXTILE; UV–RESISTANT; POLYPROPYLENE OR POLYESTER; MINIMUM GRAB TENSILE OF 124 LBS; WATER PERMITIVITY BETWEEN 0.1 SEC^–1 AND 0.15 SEC^–1; SLURRY FLOW RATE OF 0.3 GAL/SF/MIN; MINIMUM 1"x1" HARDWOOD STAKES WITH INTEGRAL STAKE LOOPS AND STAPLED; APPROVED MANUFACTURERS: NILEX, PROPEX AND MIRAFI OR APPROVED EQUAL.
C. MULCH: ORGANICS INCLUDING STRAW, PROCESSED PINE / HEMLOCK TWIGS, NEEDLES, AND STUMP GRINDING.
D. SEED MIXES: PERENNIAL RYEGRASS, KENTUCKY BLUEGRASS, AND / OR FINE FESCUE, DISEASE RESISTANT. NON–MAINTAINED AREA OPTION – ANNUAL RYEGRASS COMBINED WITH MEDIUM RED CLOVER. CONFIRM USE WITH ENGINEER.
E. EROSION CONTROL EXCELSIOR BLANKET: CURLED WOOD FIBER ON PHOTODEGRADABLE EXTRUDED PLASTIC MATRIX, 80% OF FIBERS 6–INCHES LONG OR LONGER, WEIGHT 0.975 POUNDS / SY, CONTAINING NO CHEMICAL ADDITIVES. APPROVED MANUFACTURERS: NORTH AMERICAN GREEN, AND PROPEX OR APPROVED EQUAL.
F. ROCK RIPRAP: SOUND, ANGULAR, 6–INCH MINUS PROCESSED ROCK, BLAST ROCK, OR TAILINGS.
G. CRUSHED STONE: SOUND, ANGULAR, 2–INCH MINUS PROCESSED CRUSHED STONE

PART 3 – EXECUTION

3.01 THROUGHOUT CONSTRUCTION

A. DEVISE WORK SEQUENCE SO AS TO LIMIT DRAINAGE AREA THAT IS TRIBUTARY TO DISTURBED AREAS. DEVISE, EMPLOY, AND MAINTAIN CONTROL MEASURES SUCH AS DIVERSION CHANNELS AND BERMS, STRATEGICALLY LOCATED STOCKPILES, AND SEDIMENT BASINS TO SUBDIVIDE DRAINAGE AREAS INTO SMALL, MANAGEABLE SUBAREAS, THEREBY MINIMIZING RUNOFF AND THE POTENTIAL FOR EROSION.
B. MAINTAIN BARRIER AT LIMIT OF WORK AND PROTECT EXISTING VEGETATION / FACILITIES OUTSIDE OF LIMIT OF WORK.
C. MAINTAIN SPARE MATERIAL STOCKPILES FOR IMMEDIATE EMPLOYMENT / REPAIR / EXPANSION OF CONTROL MEASURES. AT A MINIMUM, SUCH MATERIALS SHALL INCLUDE HAY BALES, SILT FENCE AND STAKES, AND CRUSHED STONE.
D. INSPECT AND MAINTAIN EFFECTIVENESS OF CONTROL MEASURES BY REPAIRING AS NECESSARY TO ENSURE INTENDED FUNCTION; BY SUPPLEMENTING AS NECESSARY FOR ADEQUATE EXTENT; BY REMOVING TRAPPED PRODUCTS OF EROSION AS NECESSARY TO MAINTAIN EFFECTIVE TRAP VOLUME.
E. LIMIT EXTENT OF WORK AREA SO THAT ALL DISTURBED AREAS CAN BE STABILIZED WITH CONTROL MEASURES WITHIN A 24–HOUR PERIOD.
F. INSTALL CONTROL MEASURES AS SOON AS PRACTICABLE AFTER EACH MANAGEABLE PORTION OF EARTHWORK IS COMPLETE. EMPLOY TEMPORARY MEASURES AS NECESSARY TO STABILIZE DISTURBED AREAS, EVEN WHERE SUBSEQUENT CONSTRUCTION OPERATIONS MAY REQUIRE RE–DISTURBANCE.
G. WHEN INTENSE RAINFALL IS EXPECTED, CONSIDER, DEVISE, AND EMPLOY REINFORCING CONTROL MEASURES PRIOR TO THE RAINFALL EVENT TO MEET THE REQUIREMENTS DESCRIBED IN SECTION 1.01.A ABOVE. IF NECESSARY, EMPLOY TEMPORARY CONTROL MEASURES ON MATERIAL STOCKPILES TO COUNTERACT POTENTIAL SEDIMENT TRANSPORT DURING INTENSE RAINFALL.
H. WHEN VEHICLE REFUELING IS REQUIRED ON SITE, CONDUCT REFUELING OPERATIONS OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS AND WITHIN AN AREA THAT IS CONTAINED BY A BEST MANAGEMENT PRACTICE. A PORTABLE SPILL KIT SHALL BE KEPT ONSITE AT ALL TIMES.
I. PROPERLY DISPOSE OF DEBRIS, SOLID WASTE, TRASH, AND CONSTRUCTION WASTE / BYPRODUCTS OFF SITE. KEEP TRASH BINS/DUMPSTERS COVERED AT ALL TIMES.
J. SWEEP ON–SITE PAVED AREAS AND OFF–SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND / OR ENVIRONMENTALLY SENSITIVE AREAS.

3.02 SITE PREPARATION AND ACCESS

A. WALK SITE AND IDENTIFY LOCATIONS OF LIMIT OF WORK AND ENVIRONMENTALLY SENSITIVE AREAS. ESTABLISH CONSTRUCTION STAGING AREA, LOCATED BEYOND ENVIRONMENTALLY SENSITIVE AREAS.
B. INSTALL CONTROL MEASURES AS SHOWN ON THE DRAWINGS, INCLUDING THOSE DEFINING THE LIMIT OF WORK.
C. LIMIT VEHICULAR TRAFFIC TO AND FROM SITE TO MINIMIZE TRANSPORT OF SEDIMENTATION.

3.03 CLEARING, GRUBBING, AND STRIPPING

A. SCHEDULE GRUBBING AND STRIPPING TO OCCUR IMMEDIATELY PRIOR TO EARTH DISTURBANCE. DEPENDING ON SITE AREA, CONSIDER MULTIPLE GRUBBING PHASES, SEQUENCED TO TAKE ADVANTAGE OF THE EROSION PREVENTION POTENTIAL OF EXISTING VEGETATIVE COVER.
B. MINIMIZE THE AREA OF EXISTING VEGETATION REMOVED WHEREVER POSSIBLE.
C. LOCATE AND SIZE STOCKPILES TO MINIMIZE EROSION POTENTIAL, TAKING ADVANTAGE OF TERRAIN SLOPE AND ASPECT, WHERE APPROPRIATE.
D. PROTECT VEGETATION, INCLUDING ROOT SYSTEMS, BEYOND LIMIT OF CLEARING.
E. PROCESS TIMBER, STUMPS, SLASH, AND BRUSH SO AS TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND INSTALLED CONTROL MEASURES. PROPERLY DISPOSE OF EXCESS OFF SITE. BURIAL OF STUMPS ON SITE IS PROHIBITED.

3.04 EXCAVATION FOR BUILDING FOUNDATIONS AND UTILITIES

A. DEVISE AND INSTALL CONTROL MEASURES ADEQUATE TO HANDLE DISCHARGES AND TRAP SEDIMENT FROM FOOTING SUMP AND WELL POINT PUMPS PRIOR TO EXCAVATION.
B. ARMOR SUMP PUMP DISCHARGE LOCATIONS TO PREVENT EROSION AT POINT OF DISCHARGE AND AREAS DOWNSTREAM.
C. IF FOUNDATION EXCAVATIONS GRADE TO DAYLIGHT ON THE LOW SIDE, DEVISE AND INSTALL CONTROL MEASURES TO HANDLE SURFACE AND GROUNDWATER FLOW FROM EXCAVATION LOW POINT.
D. STOCKPILE EXCAVATED MATERIALS TO BAFFLE OVERLAND RUNOFF, AVOIDING THE CREATION OF LENGTHY PATHS OF CONCENTRATED RUNOFF.
E. BACKFILL UTILITY TRENCHES AS SOON AS PRACTICABLE TO PREVENT FLOODING, SLOUGHING, POTENTIAL OVERFLOW, AND REPETITIVE EARTH DISTURBANCE.

3.05 SITE GRADING

A. WHERE APPLICABLE, FOLLOW EXCAVATION AND FILL PRACTICES SHOWN ON DRAWINGS TO LOCALIZE AND MINIMIZE SEDIMENT TRANSPORT.
B. MONITOR SEDIMENTATION VOLUME IN TEMPORARY SEDIMENT BASINS AND AT DIVERSION BERMS AND CHECK DAMS. IN ALL AREAS EXCEPT THOSE THAT DO NOT PRESENT POTENTIAL PROBLEMS WITH REGARD TO FUTURE SOIL STABILITY, DRAINAGE, OR BEARING CAPACITY, REMOVE AND PROPERLY DISPOSE OF TRAPPED SEDIMENTATION BEFORE BRINGING SITE TO FINAL SUBGRADE.
C. IF SEDIMENTATION IS DISPOSED ONSITE, IT SHALL BE DEPOSITED IN AREAS WHERE RUNOFF CANNOT RE–TRANSPORT DOWNSTREAM.

3.06 STORMWATER MANAGEMENT SYSTEM

A. THE STORMWATER MANAGEMENT SYSTEM INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, ALL PERMANENT DETENTION / RETENTION BASINS, DISCHARGE STRUCTURES / WEIRS, CULVERTS, OPEN CHANNELS, CURBS, GUTTERS, PAVED SWALES, CATCH BASINS, DRAIN MANHOLES, DRAINAGE PIPES, ROOF DRAIN MANIFOLDS, WATER QUALITY SWALES, SEPARATORS, AND SIMILAR STORMWATER RUNOFF CONVEYANCE, TREATMENT, AND STORAGE FACILITIES.
B. INSTALL STORMWATER MANAGEMENT SYSTEM COMPONENTS STARTING AT THE DOWNSTREAM END AND PROCEED UPSTREAM. WHERE POSSIBLE, COMPLETE INSTALLATION OF PERMANENT DETENTION / RETENTION BASINS PRIOR TO BEGINNING WORK ON UPSTREAM SYSTEM COMPONENTS.
C. INSTALL CONTROL MEASURES AT FINISHED UPSTREAM AND DOWNSTREAM PIPE ENDS AS SOON AS POSSIBLE AFTER COMPLETION OF PIPE RUN. SUCH MEASURES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, RIPRAP, CHECK DAMS, HAY BALE / SILT FENCE BARRIERS, AND VELOCITY DISSIPATERS.
D. AT THE END OF EACH DAY OR WHEN RAINFALL IS EXPECTED, PLUG UPSTREAM END OF PIPES / DAM OPEN CHANNELS OR OTHERWISE REDIRECT POTENTIAL RUNOFF AND PREVENT FLOW FROM ENTERING PARTIALLY COMPLETED SYSTEM / SYSTEM COMPONENTS.
E. WHERE PORTIONS OF A NEW SYSTEM ARE TO BE ACTIVATED PRIOR TO COMPLETION OF THE ENTIRE SYSTEM, EMPLOY CONTROL MEASURES TO PREVENT SEDIMENT LADEN RUNOFF AND DEBRIS FROM ENTERING THE SYSTEM. EMPLOY SILT SACKS OR FABRIC ON CATCH BASIN INLETS, AND PIPE AND CULVERT OPENINGS. EMPLOY CHECK DAMS AND TEMPORARY SEDIMENT BASINS UPSTREAM OF AND ALONG OPEN CHANNELS, SWALES, AND DITCHES TO TRAP SEDIMENT UPGRADIENT OF ENVIRONMENTALLY SENSITIVE AREAS.
F. REMOVE TRAPPED SEDIMENTATION AND DEBRIS FROM ALL SYSTEM COMPONENTS AFTER COMPLETION OF INSTALLATION, AND AGAIN AFTER THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA. REMOVE TRAPPED SEDIMENTATION AND DEBRIS FROM DETENTION / RETENTION BASIN BOTTOMS SO THAT FINISH BOTTOM MATERIALS / INFILTRATION FUNCTION CONFORM TO DESIGN.

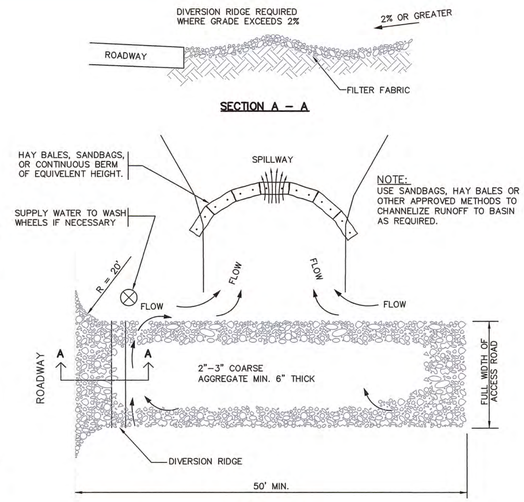
3.07 LANDSCAPING

A. COMPLETE LANDSCAPING AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL SUBGRADE.
B. IMMEDIATELY AFTER PLACEMENT OF TOPSOIL, STABILIZE WITH CONTROL MEASURES INCLUDING, BUT NOT NECESSARILY LIMITED TO, SEED MIX, MULCH, AND / OR BLANKET.
C. STABLIZE ALL DISTURBED AREAS WITH MINIMUM 4–INCHES OF TOPSOIL AND GRASS SEED.
D. WITHIN ROAD RIGHT OF WAY, SPREAD MINIMUM OF 8–INCHES OF TOPSOIL AND SEED WITH FOLLOWING GRASS MIX:

FOR GRASSPLOTS AND ISLANDS	PROPORTION	GERMINATION MINIMUM	PURITY MINIMUM
CREEPING RED FESCUE	50%	85%	95%
KENTUCKY BLUE	25%	85%	90%
DOMESTIC RYE	10%	90%	98%
RED TOP	10%	85%	92%
LADINO CLOVER	5%	85%	96%
FOR SLOPES AND SHOULDERS			
CREEPING RED FESCUE	50%	85%	95%
KENTUCKY 31	30%	85%	95%
DOMESTIC RYE	10%	90%	98%
RED TOP	5%	85%	92%
LADINO CLOVER	5%	85%	96%

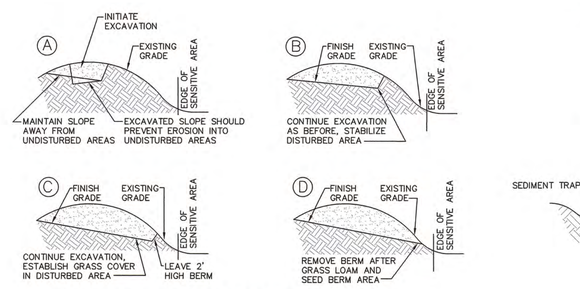
NOTE:

IT IS THE DEVELOPER'S RESPONSIBILITY TO MAINTAIN EROSION AND SEDIMENT CONTROLS UNTIL FINAL STABILIZATION.

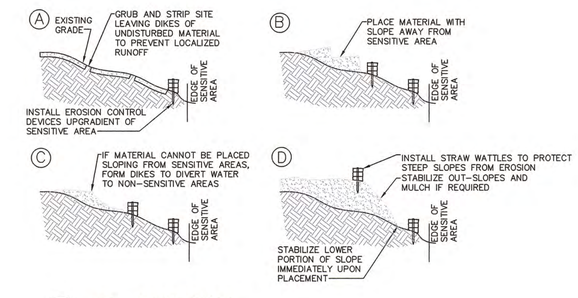


NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

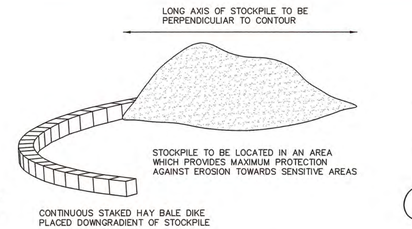
CONSTRUCTION ENTRANCE
NOT TO SCALE



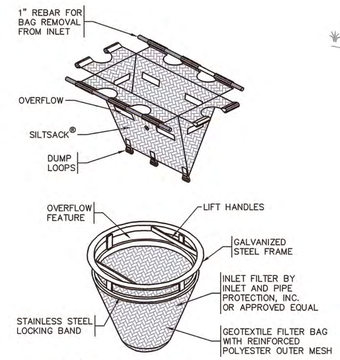
EXCAVATION PROCEDURE
TYPICAL CROSS SECTION
NOT TO SCALE



FILL PROCEDURE
SLOPE PROFILES
NOT TO SCALE

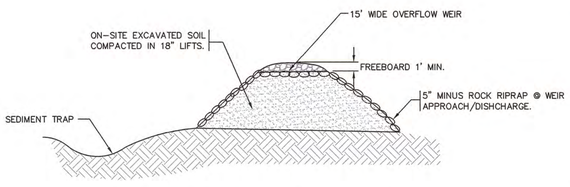


TEMPORARY STOCKPILE
ISOMETRIC VIEW
NOT TO SCALE

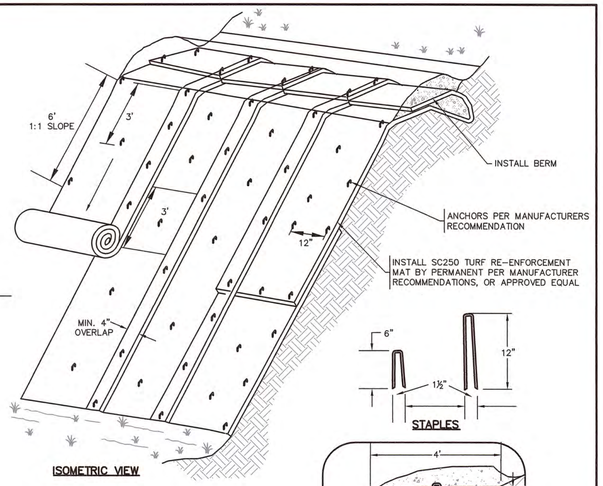


NOTES:
[1] CLEAN INLET PROTECTION WHEN 30% FULL
[2] BURLAP IS NOT AN ACCEPTABLE GEOTEXTILE

INLET PROTECTION
TYPICAL CROSS SECTION Inlet_Protection.DWG 2/6/08
NOT TO SCALE

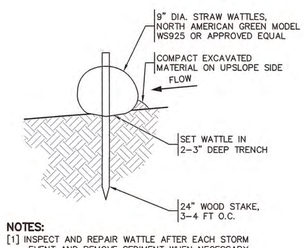


TEMPORARY SEDIMENT BASIN
TYPICAL CROSS SECTION
NOT TO SCALE



NOTES:
[1] SLOPE SURFACE SHALL BE FREE OF ROCK, CLODS, STICKS AND GRASS, MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT
[2] APPLY PERMANENT SEEDING PER MHD M6.03.1 EROSION SEED PRIOR TO PLACING MATS.
[3] LAY MATS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH
[4] MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE
[5] TAMP SOIL OVER MAT/BLANKET

TURF REINFORCEMENT MAT
NOT TO SCALE BLNKTSLP.DWG 2/6/08



NOTES:
[1] INSPECT AND REPAIR WATTLE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
[2] TRAPPED SEDIMENT SHALL BE REMOVED TO A NON–SENSITIVE UPLAND AREA.

STRAW WATTLE
TYPICAL CROSS SECTION
NOT TO SCALE

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33665 REGISTERED PROFESSIONAL ENGINEER 7/7/2016

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

STORMWATER POLLUTION PREVENTION PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

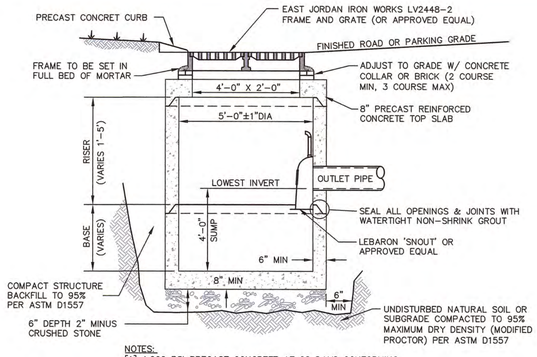
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: MEH	DATE: FEBRUARY 2016	JOB 141070	C7.1
CHK. BY: DEM			

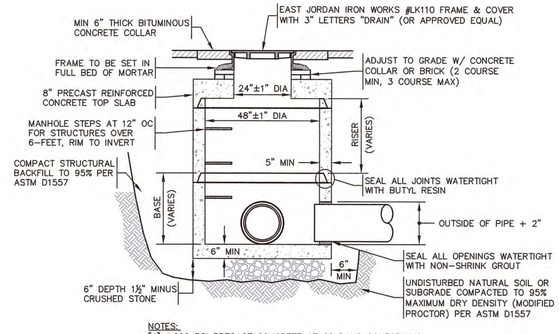
2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14----\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 04-29-16 3:35:35 PM - LAYOUT SPPP



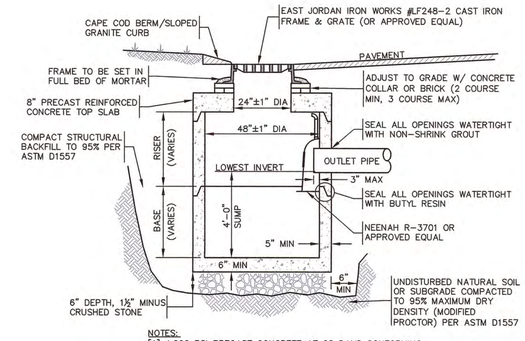
NOTES:
[1] 4,000 PSI PRECAST CONCRETE AT 28 DAYS CONFORMING WITH LATEST ASTM C478.
[2] REINFORCING PER LATEST ASTM A-185.
[3] STRUCTURE SHALL BE RATED FOR H-20 LOADING UNLESS SPECIFIED OTHERWISE.
[4] STRUCTURES SHALL HAVE EXTERIOR SEALED WITH TWO COATINGS OF BIT MASTIC OR OTHER APPROVED CONCRETE WATER SEALANT APPLIED BY MANUFACTURER PRIOR TO DELIVERY.

DOUBLE CATCH BASIN
TYPICAL CROSS SECTION
NOT TO SCALE



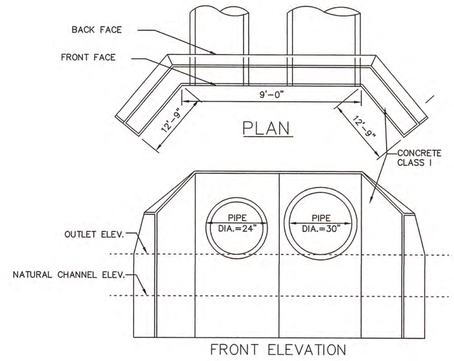
NOTES:
[1] 4,000 PSI PRECAST CONCRETE AT 28 DAYS CONFORMING WITH LATEST ASTM C478.
[2] REINFORCING PER LATEST ASTM A185.
[3] STRUCTURE SHALL BE RATED FOR H-20 LOADING UNLESS SPECIFIED OTHERWISE.
[4] STRUCTURES SHALL HAVE EXTERIOR SEALED WITH TWO COATINGS OF BIT MASTIC OR OTHER APPROVED CONCRETE WATER SEALANT APPLIED BY MANUFACTURER PRIOR TO DELIVERY.

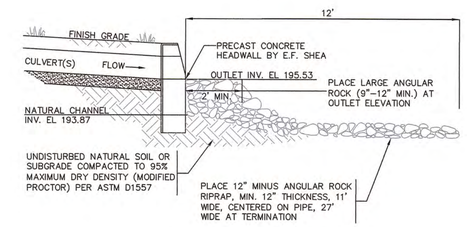
DRAIN MANHOLE
TYPICAL CROSS SECTION
NOT TO SCALE



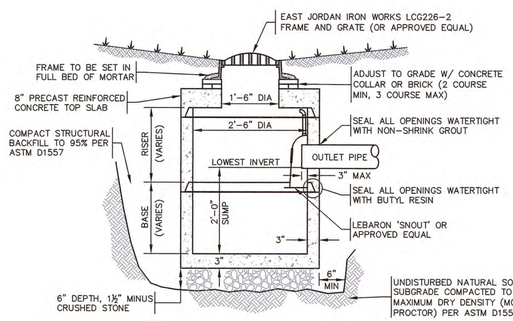
NOTES:
[1] 4,000 PSI PRECAST CONCRETE AT 28 DAYS CONFORMING WITH LATEST ASTM C478
[2] REINFORCING PER LATEST ASTM A185.
[3] STRUCTURE SHALL BE RATED FOR H-20 LOADING UNLESS SPECIFIED OTHERWISE.
[4] STRUCTURES SHALL HAVE EXTERIOR SEALED WITH TWO COATINGS OF BIT MASTIC OR OTHER APPROVED CONCRETE WATER SEALANT APPLIED BY MANUFACTURER PRIOR TO DELIVERY.

CATCH BASIN
TYPICAL CROSS SECTION
NOT TO SCALE



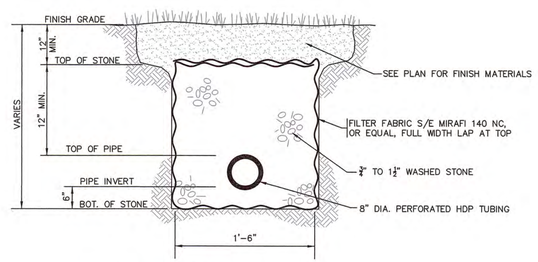


OUTLET HEADWALL
TYPICAL CROSS SECTION
NOT TO SCALE

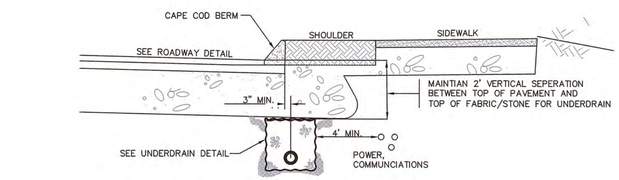


NOTES:
[1] 4,000 PSI PRECAST CONCRETE AT 28 DAYS CONFORMING WITH LATEST ASTM C478
[2] REINFORCING PER LATEST ASTM A185.
[3] STRUCTURE SHALL BE RATED FOR H-20 LOADING UNLESS SPECIFIED OTHERWISE.

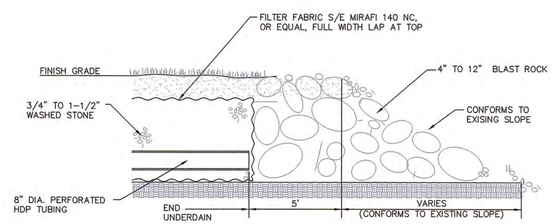
LANDSCAPE CATCH BASIN
TYPICAL CROSS SECTION
NOT TO SCALE
LNDSCP_CB.DWG 2/5/08



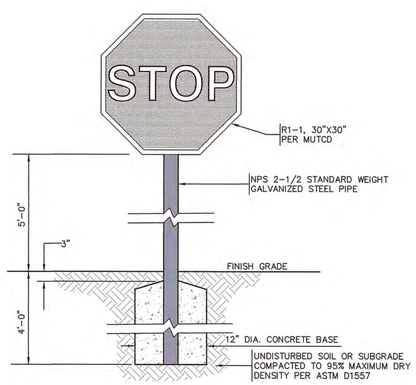
UNDERDRAIN
TYPICAL CROSS SECTION
NOT TO SCALE



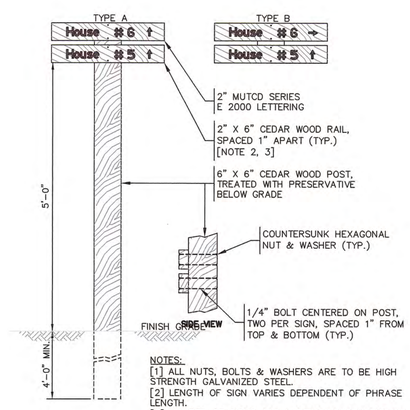
ROADWAY UNDERDRAIN
TYPICAL CROSS SECTION
NOT TO SCALE



UNDERDRAIN OUTLET
TYPICAL PROFILE
NOT TO SCALE

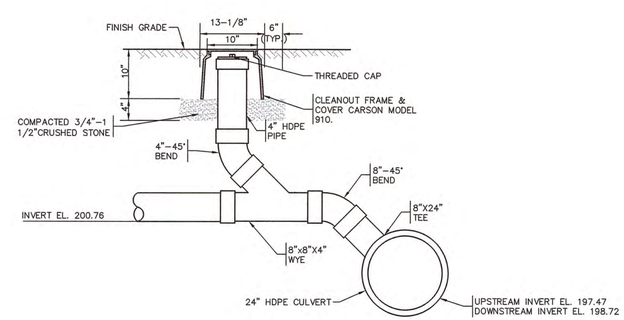


STOP SIGN
NOT TO SCALE
stopsign.DWG 1/23/08



NOTES:
[1] ALL NUTS, BOLTS & WASHERS ARE TO BE HIGH STRENGTH GALVANIZED STEEL.
[2] LENGTH OF SIGN VARIES DEPENDENT OF PHRASE LENGTH.
[3] NUMBER OF SIGNS AND LABELING DEPENDENT ON SIGN, SEE SITE PLAN FOR DETAILS

NAVIGATION SIGN
TYPICAL ELEVATION
NOT TO SCALE



UNDERDRAIN CLEANOUT
TYPICAL CROSS SECTION
NOT TO SCALE

DRAWING ISSUED FOR:
☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER 5/6/16

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

CONSTRUCTION DETAILS

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

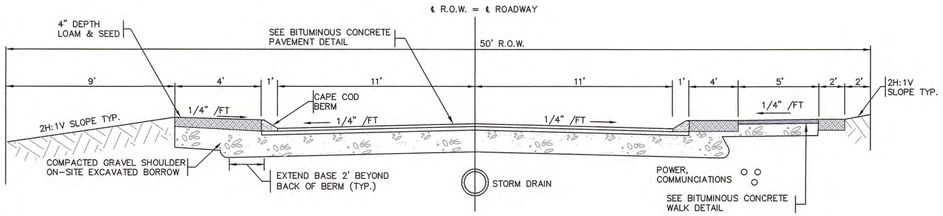
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C8.1
CHK. BY: DEM			

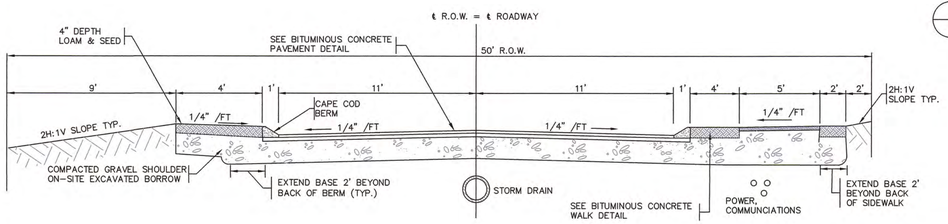
P:\14---\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 04-29-16 3:54:30 PM - LAYOUT CD

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.



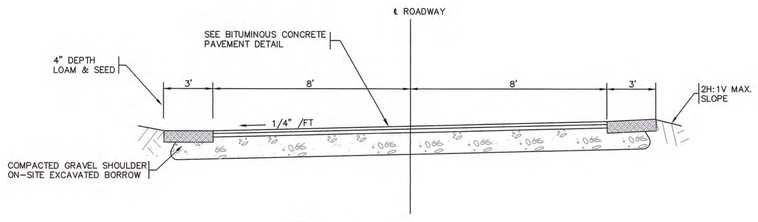
ROADWAY STA. 0+00 TO 10+57 & 11+50 TO 15+58

TYPICAL CROSS SECTION
NOT TO SCALE



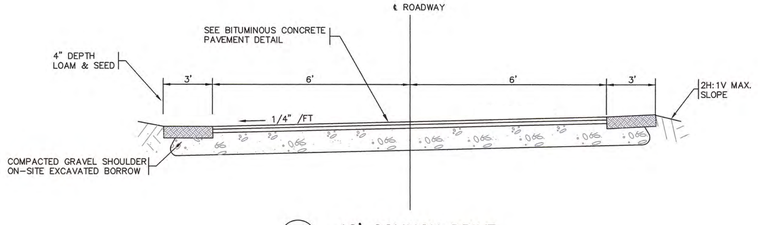
ROADWAY STA. 10+57 TO 11+50

TYPICAL CROSS SECTION
NOT TO SCALE



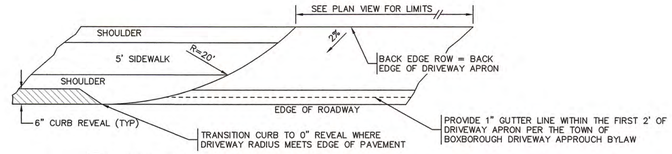
16' COMMON DRIVE

TYPICAL CROSS SECTION
NOT TO SCALE



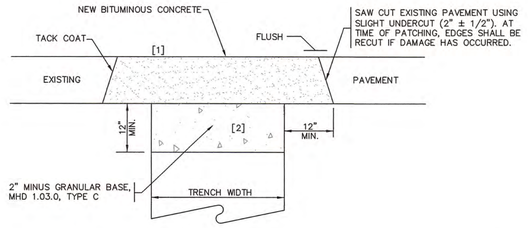
12' COMMON DRIVE

TYPICAL CROSS SECTION
NOT TO SCALE



DRIVEWAY APRON

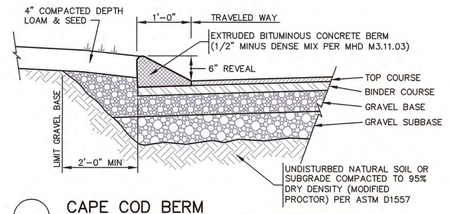
TYPICAL PLAN VIEW
NOT TO SCALE



NOTES:
[1] GRANULAR BASE COMPACTION: 95% PER ASTM D-1557 MODIFIED PROCTOR METHOD
[2] BIT. CONCRETE COMPACTION: 95%

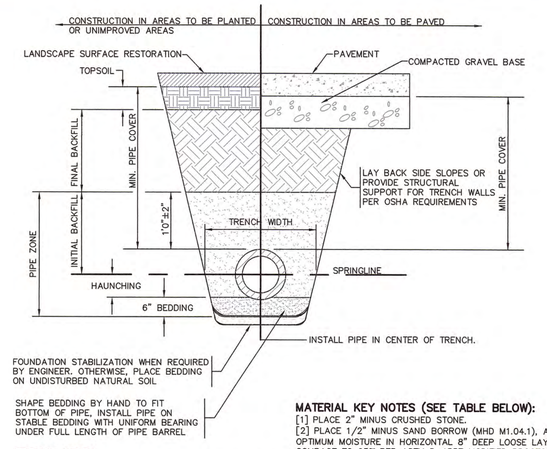
TRENCH PATCH

TYPICAL CROSS SECTION
NOT TO SCALE



CAPE COD BERM

TYPICAL CROSS SECTION
NOT TO SCALE



TRENCH WIDTH:
[1] MINIMUM WIDTH OF TRENCH MEASURED AT SPRINGLINE OF PIPE, INCLUDING ANY NECESSARY SHEATHING:

PIPE I.D.	WIDTH
LESS THAN 21"	O.D. + 12"
21" TO 42"	O.D. + 24"
GREATER THEN 42"	O.D. + 30"

MINIMUM PIPE COVER:
[1] MINIMUM SOIL COVER OVER TOP OF PIPE.

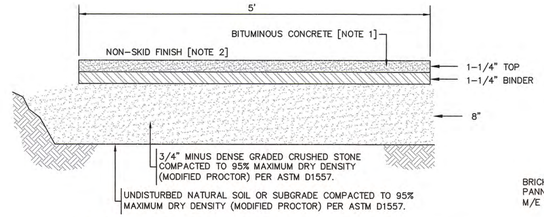
PIPE MATERIAL	HDPE, PVC	RC, DI
WATER	5' – 0"	5' – 0"
SEWER	4' – 0"	4' – 0"
DRAIN	2' – 0"	1' –0"

MATERIAL KEY NOTES (SEE TABLE BELOW):
[1] PLACE 2" MINUS CRUSHED STONE.
[2] PLACE 1/2" MINUS SAND BORROW (MHD M1.04.1), AT OPTIMUM MOISTURE IN HORIZONTAL 8" DEEP LOOSE LAYERS, COMPACT TO 95% PER ASTM D-1557 MODIFIED PROCTOR METHOD.
[3] IN PLANTED OR UNIMPROVED AREAS, USE 2-INCH MINUS ON-SITE EXCAVATED MATERIAL. COMPACT TO 95% PER ASTM D-1557. IN PAVED AREAS, OBTAIN ENGINEER APPROVAL OF 2-INCH MINUS ON-SITE EXCAVATED MATERIALS.

FOUNDATION, BEDDING AND BACKFILL MATERIALS		
PIPE MATERIAL	HDP, PVC	RC, DI
FOUNDATION STABILIZATION	[NOTE 1]	[NOTE 1]
BEDDING	[NOTE 2]	[NOTE 2]
HAUNCHING	[NOTE 2]	[NOTE 2]
INITIAL BACKFILL	[NOTE 2]	[NOTE 2]
FINAL BACKFILL	[NOTE 3]	[NOTE 3]

PIPE TRENCH

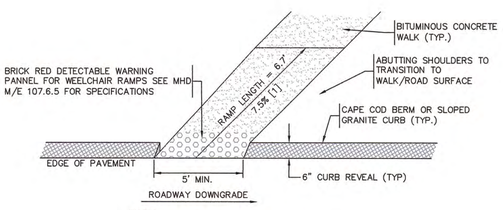
TYPICAL CROSS SECTION
NOT TO SCALE



NOTES:
[1] MHD M3.11.03 CLASS I, TYPE I-1 BITUMINOUS CONCRETE. 1/2" MAXIMUM AGGREGATE OR PARTICLE SIZE. COMPACT TO TEST AVERAGE OF 95%. NO TEST LOWER THAN 93%.

BITUMINOUS CONCRETE WALK

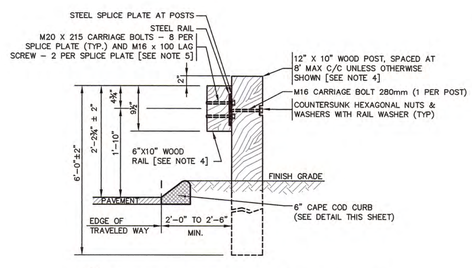
TYPICAL CROSS SECTION
NOT TO SCALE



NOTES:
[1] TOLERANCE FOR CONSTRUCTION 0.5%

HANDICAP ACCESSIBLE RAMP

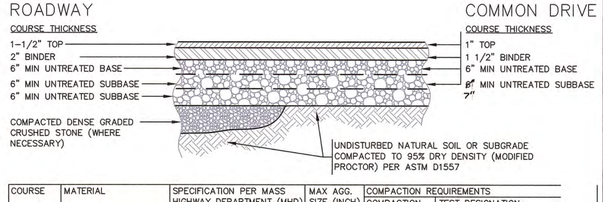
TYPICAL PLAN VIEW
NOT TO SCALE



NOTES:
[1] ALL NUTS, BOLTS & WASHERS ARE TO BE HIGH STRENGTH GALVANIZED STEEL.
[2] ALL SPLICES ARE TO BE MADE AT POST; FOUR (4) BOLTS EACH SPLICE.
[3] BACK-UP PLATE IS TO BE PLACED BEHIND RAIL ELEMENTS AT NON SPLICE LOCATIONS (INTERMEDIATE POSTS).
[4] WOOD AND WOOD TREATMENT SHALL COMPLY WITH FHA SPECIFICATIONS AND STANDARDS.
[5] LAG BOLTS THROUGH STEEL RAIL ONLY.

GUARDRAIL (FHA TYPE B)

TYPICAL CROSS SECTION
NOT TO SCALE



COURSE	MATERIAL	SPECIFICATION PER MASS HIGHWAY DEPARTMENT (MHD)	MAX AGG. SIZE (INCH)	COMPACTION REQUIREMENTS	
				COMPACTION	TEST DESIGNATION
TOP	BITUMINOUS CONCRETE	M.3.11.03 CLASS I, TYPE I-1	1/2	[NOTE 1]	AASHTO-T166
BINDER	BITUMINOUS CONCRETE	M.3.11.03 CLASS I, TYPE I-1	3/4	[NOTE 1]	AASHTO-T166
BASE	GRAVEL BORROW	M1.03.0 TYPE A	3	95% [NOTE 3]	ASTM D1557/AASHTO-T99
SUBBASE	GRAVEL BORROW	M1.03.0 TYPE A	3	95% [NOTE 3]	ASTM D1557/AASHTO-T99
SUBGRADE	ORDINARY BORROW	M1.01.0 [SEE NOTE 2]	8	95% [NOTE 3]	ASTM D1557/AASHTO-T99

NOTES:
[1] COMPACT TO TEST AVERAGE OF 95%. TEST SHALL NOT BE LOWER THAN 95%.
[2] UNSUITABLE MATERIAL IN THE SUBGRADE SHALL BE REMOVED AND REPLACED WITH AN ACCEPTABLE SUBSTITUTE MATERIAL: 3/4" MINUS DENSE GRADED CRUSHED STONE.
[3] MATERIAL SHALL BE SPREAD AND COMPACTED IN LAYERS NOT EXCEEDING 6-INCHES IN DEPTH, COMPACTED MEASUREMENT; LAST LAYER OF MATERIAL SHALL NOT EXCEED 4-INCHES IN DEPTH, COMPACTED MEASUREMENT.

BITUMINOUS CONCRETE PAVEMENT

TYPICAL CROSS SECTION
NOT TO SCALE

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS — DOUGLAS E. MILLER — CIVIL — No. 33965 — REGISTERED PROFESSIONAL ENGINEER — 5/2/16

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

CONSTRUCTION DETAILS

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

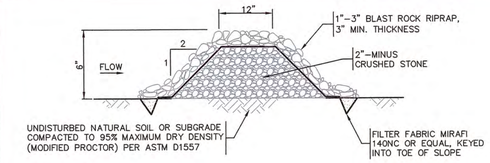
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

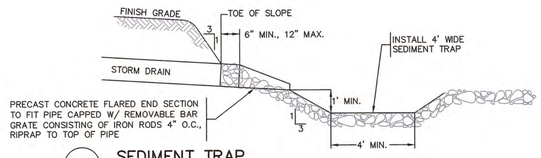
DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C8.2
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

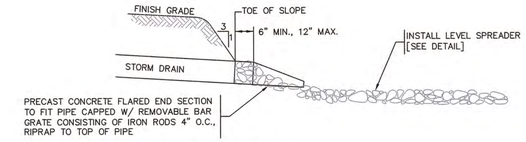
P:\14----\141070\DWG\PERMIT\DEF SUB\DEF SUB PLAN SET_R1.DWG 05-02-16 10:24:25 AM – LAYOUT CD (2)



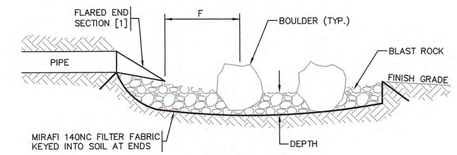
CHECK DAM
TYPICAL CROSS SECTION
NOT TO SCALE



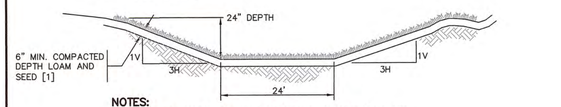
SEDIMENT TRAP
TYPICAL CROSS SECTION
NOT TO SCALE



FLARED END SECTION
TYPICAL CROSS SECTION
NOT TO SCALE

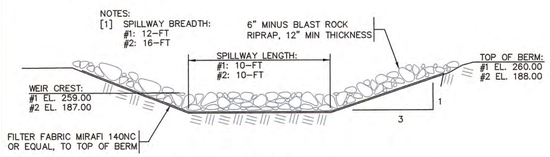


CROSS SECTION

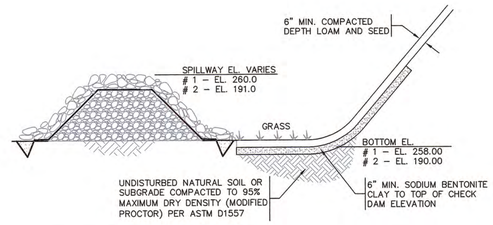


NOTES:
[1] APPLY PERMANENT SEEDING PER MHD M6.03.1 EROSION SEED

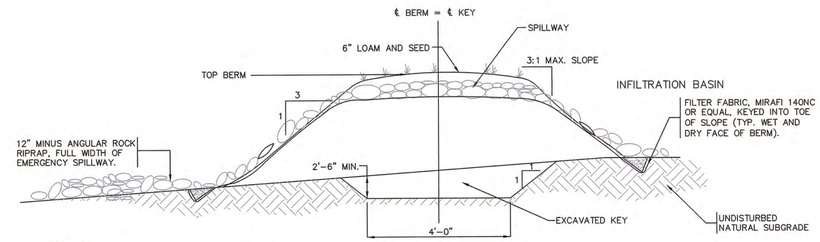
GRASSED CHANNEL
PROFILE
NOT TO SCALE



EMERGENCY SPILLWAY
TYPICAL CROSS SECTION
NOT TO SCALE

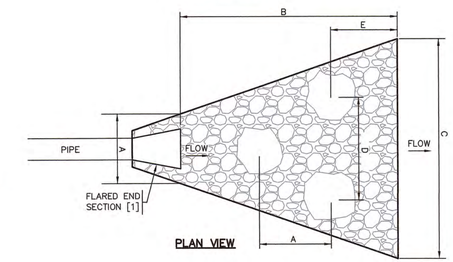


SEDIMENT FOREBAY
TYPICAL CROSS SECTION
NOT TO SCALE



NOTES:
1. EMBANKMENT MATERIAL SHALL BE NATURAL TILL MATERIAL, MIN. 40% PASSING NO. 200 SIEVE, UNIFIED CLASSIFICATION SM, SC, ML OR CL, NO STONE LARGER THAN 12" LARGEST DIMENSION. ENGINEER SHALL APPROVE MATERIAL PRIOR TO PLACEMENT. GRADATION ANALYSIS OF ON-SITE SAMPLES MAY BE REQUIRED.
2. MATERIAL TO BE PLACED IN 12" LIFTS AND MECHANICALLY COMPACTED TO 95% (MODIFIED PROCTOR). PLACE TO PREVENT NESTING OF STONES THAT MAY BE PRESENT.
3. MATERIAL SHALL BE AT OR NEAR OPTIMUM MOISTURE WHEN PLACED.

BASIN BERM
TYPICAL CROSS SECTION
NOT TO SCALE

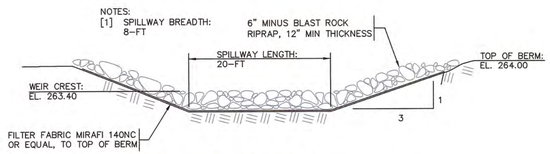


PLAN VIEW

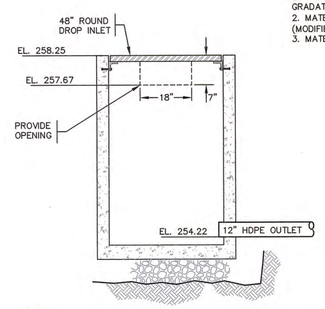
PIPE DIA.	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	DEPTH (FT)	BLAST ROCK	BOULDER
10 IN.	2	2.75	6	[2]	–	–	0.5	6" MINUS	–
12 IN.	3	8	9	4	2	1.5	0.5	6" MINUS	18" – 24"
18 IN.	4.5	12	13.5	6	3	2.25	0.75	9" MINUS	27" – 36"

NOTES:
[1] INSTALL TRASH RACK OR OTHER MEANS OF PREVENTION ON PIPE OUTLET TO PREVENT UNWANTED ITEMS FROM ENTERING CULVERT.
[2] DO NOT PLACE BOULDERS WITHIN LEVEL SPREADER FOR INLET PIPE DIAMETERS LESS THAN 12".

LEVEL SPREADER
NOT TO SCALE

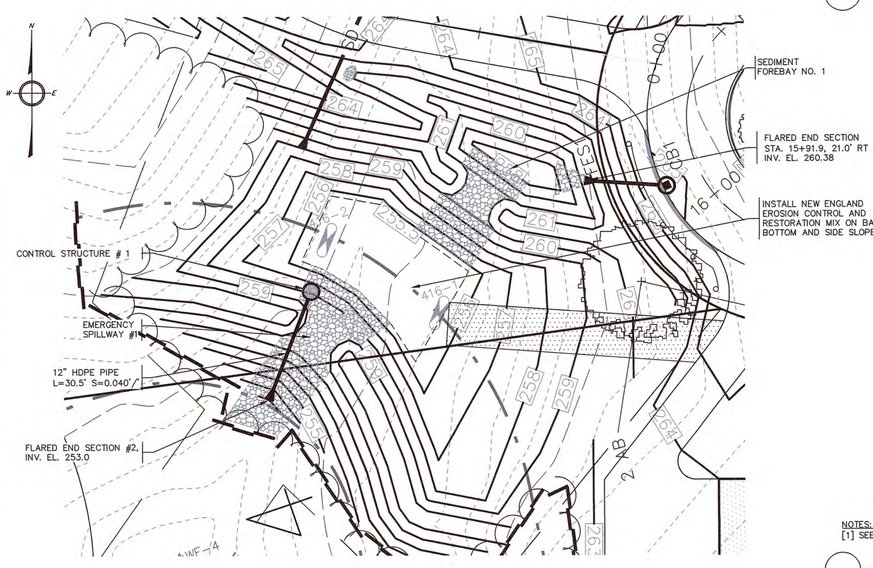


MICRO POOL SPILLWAY
TYPICAL CROSS SECTION
NOT TO SCALE

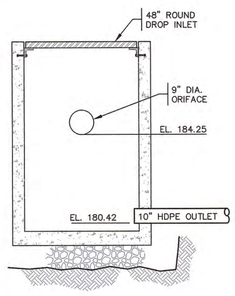


NOTES:
[1] SEE 'CATCH BASIN' DETAIL FOR CONSTRUCTION SPECIFICATIONS.

CONTROL STRUCTURE # 1
TYPICAL CROSS SECTION
NOT TO SCALE

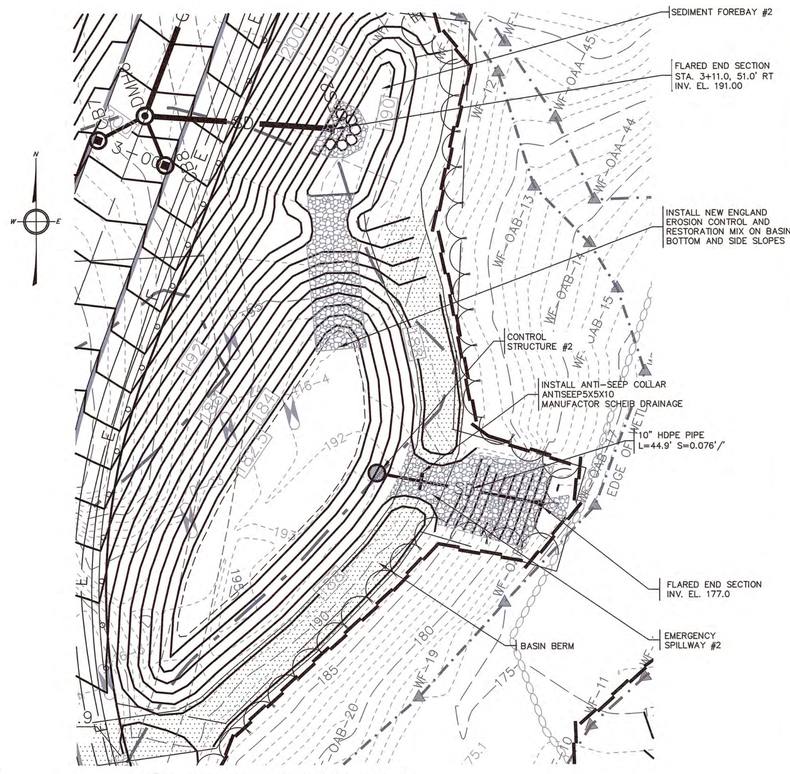


INFILTRATION BASIN NO. 1
PLAN VIEW
SCALE 1"=20'



NOTES:
[1] SEE 'CATCH BASIN' DETAIL FOR CONSTRUCTION SPECIFICATIONS.

CONTROL STRUCTURE # 2
TYPICAL CROSS SECTION
NOT TO SCALE



INFILTRATION BASIN NO. 2
PLAN VIEW
SCALE 1"=20'

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS — DOUGLAS E. MILLER — CIVIL — No. 33963 — REGISTERED PROFESSIONAL ENGINEER

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/2016	JEG	BDR	PER PEER REVIEW LETTER DATED 3/20&21/2016
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

CONSTRUCTION DETAILS

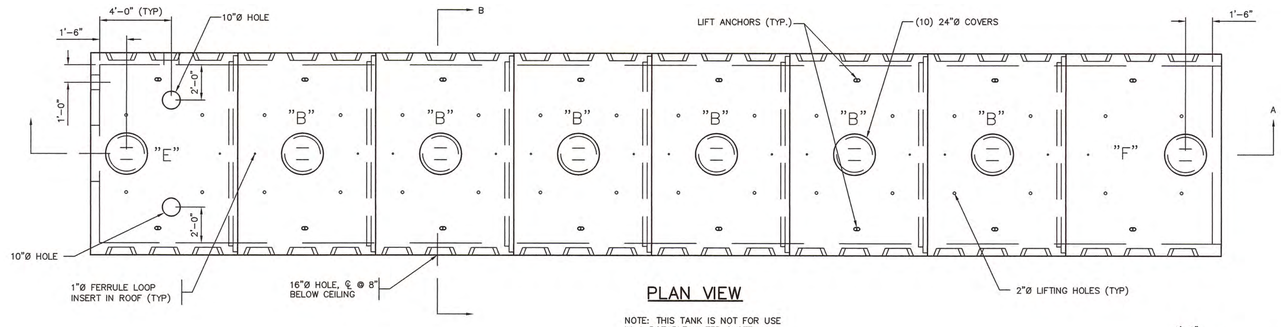
SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

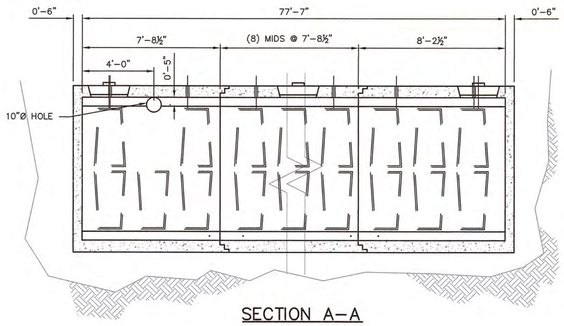
DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C8.3
CHK. BY: DEM			

P:\14---\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 05-02-16 10:14:05 AM - LAYOUT CD (3)
2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

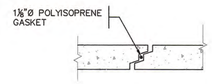


PLAN VIEW

NOTE: THIS TANK IS NOT FOR USE IN A POTABLE WATER SYSTEM.

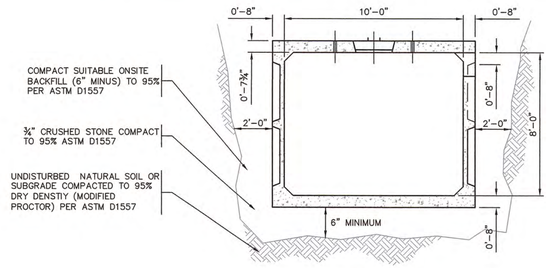


SECTION A–A



TYPICAL JOINT DETAIL

SCALE ½" = 1'-0"



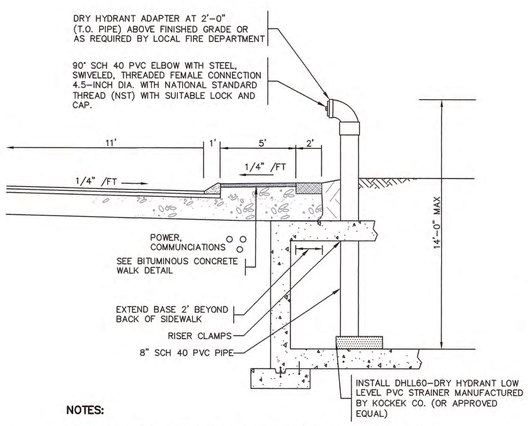
SECTION B–B

INSTALLATION NOTES:-

1. A MANUFACTURER'S REPRESENTATIVE SHALL INSPECT THE BASE PAD PRIOR TO INSTALLATION AND SHALL INSPECT BACKFILL MATERIALS AND APPROVE PROCEDURES.
2. SUITABLE ONSITE MATERIAL FOR BACKFILL SHALL CONSIST OF A MINERAL MATERIAL FREE FROM CINDERS, ASHES, ORGANIC MATERIAL, LOAM, WOOD, TRASH, AND OTHER OBJECTIONABLE MATERIALS. IT SHALL HAVE NO STONE LARGER THAN 6" IN ITS GREATEST DIMENSION
3. LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH NFPA22 CHAPTER 18.

FIRE CISTERN

NOT TO SCALE

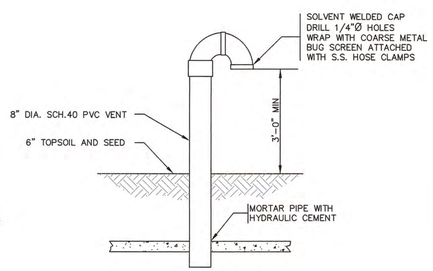


NOTES:

[1] ALL ABOVE TANK SUCTION PIPING SHALL BE SLOPED 0.5% TOWARDS THE TANK

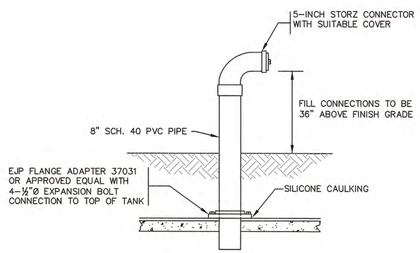
DRY HYDRANT

TYPICAL CROSS SECTION
NOT TO SCALE



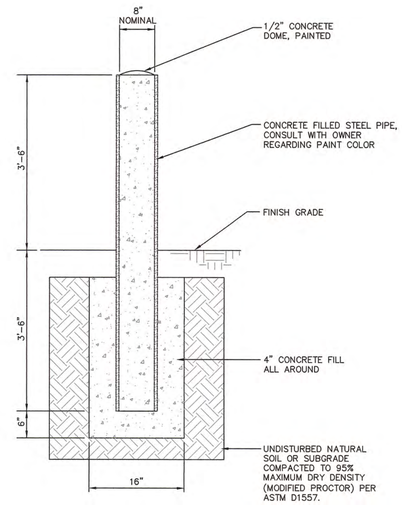
VENT PIPE

TYPICAL CROSS SECTION
NOT TO SCALE



FILL PIPE

TYPICAL CROSS SECTION
NOT TO SCALE



BOLLARD

TYPICAL CROSS SECTION
NOT TO SCALE

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS — DOUGLAS E. MILLER — CIVIL — No. 33965 — REGISTERED PROFESSIONAL ENGINEER — 5/9/16

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

CONSTRUCTION DETAILS

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C8.4
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14-----\141070\DWG\PERMIT\DEF SUB\DEF_SUB PLAN SET_R1.DWG 05-02-16 12:16:46 PM - LAYOUT CD (4)

WETLAND REPLICATION PROCEDURE

PART 1 GENERAL

1.01 EXTENT OF WORK

A. THE WORK INCLUDES THE FURNISHING OF ALL PLANT, LABOR, EQUIPMENT, MATERIALS AND REQUIRED PROFESSIONAL SERVICES IN CONNECTION WITH THE PROTECTION, REPLICATION AND PROVISION OF SPECIFIC MITIGATION AND ENHANCEMENT MEASURES TO MINIMIZE AND COMPENSATE FOR IMPACTS TO WETLANDS.

B. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO RETAIN A BOTANIST, BIOLOGIST, WETLAND SCIENTIST OR OTHER INDIVIDUAL WITH QUALIFICATIONS AND A MINIMUM OF FIVE YEARS EXPERIENCE IN SIMILAR WETLAND REPLICATIONS, AND THOROUGHLY VERSED IN THE COMMONWEALTH OF MASSACHUSETTS WETLANDS PROTECTION ACT (MGL CHAPTER 131, SECTION 40) AND ALL OTHER RELEVANT REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. THIS INDIVIDUAL, HEREIN AFTER REFERRED TO AS "BOTANIST", SHALL BE APPROVED BY THE TOWN OF BOXBOROUGH CONSERVATION COMMISSION.

PART 2 EXECUTION

2.01 GENERAL

A. THE APPLICANT SHALL PLAN AND EXECUTE OPERATIONS IN A MANNER MINIMIZING THE AMOUNT OF EXCAVATED AND EXPOSED FILL, OR OTHER FOREIGN MATERIALS THAT MAY BE WASHED OR OTHERWISE CARRIED INTO THE REPLICATION AREAS.

2.02 EROSION/SEDIMENTATION CONTROL

A. THE APPLICANT SHALL INSTALL STRAW WATTLES AND/OR SILTATION FENCING AND UTILIZE EROSION/SEDIMENTATION CONTROL METHODS PRIOR TO THE COMMENCEMENT OF ANY WORK.

2.03 REPLICATION AREA PREPARATION

A. THE REPLICATION AREAS ARE TO BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. THIS WETLAND REPLICATION SHALL BE PERFORMED UNDER THE DIRECTION AND GUIDANCE OF A QUALIFIED BOTANIST AND AS SPECIFIED HEREIN.

B. THE REPLICATION AREAS SHALL HAVE FINISHED GRADES WHICH MEET THE EXISTING GRADES IN THE ADJACENT WETLAND AS SHOWN ON THE GRADING PLAN.

C. BEFORE PLANTING THE REPLICATION AREAS, THE APPLICANT SHALL REMOVE ALL TREES, SHRUBS, STUMPS, AND SOD FROM THE REPLICATION AREAS. THESE ARE NOT TO BE STOCKPILED IN THE RESOURCE AREAS OR BUFFER ZONES WHILE AWAITING DISPOSITION.

D. DURING THE REMOVAL OF THE TREES, SHRUBS, STUMPS AND SOD, SOME OF THE SOILS (WITHIN THE REPLICATION AREAS) WILL LIKELY BE REMOVED DURING THE PROCESS. ADDITIONAL WETLAND SOILS SHALL BE PROVIDED IN QUANTITIES SUFFICIENT TO ESTABLISH GRADES AS SHOWN ON THE PREVIOUSLY REFERENCED PLANS. THE REPLACEMENT SOIL SHALL BE PURCHASED BY THE APPLICANT AT A 1:1 MIX OF LOAM TO PEAT.

1. THE REPLICATION AREAS SHALL BE EXCAVATED TO A DEPTH OF 8 TO 12 INCHES BELOW PROPOSED FINISH GRADES. THE REPLICATION AREAS ARE TO THEN BE BACKFILLED WITH A 1:1 MIXTURE OF LOAM TO PEAT.

2. THE WETLAND SOILS SHALL BE DEPOSITED IN THE REPLICATION AREAS IN A MANNER MINIMIZING TRAVEL AND SUBSEQUENT COMPACTION OF THE UNDERLYING MATERIAL AND REPLACEMENT WETLAND SOILS.

3. THE REPLICATION AREAS SHALL NOT HAVE FINISHED GRADING WHICH RESULTS IN A COMPLETELY FLAT TOPOGRAPHY. THE FINISH GRADING SHOULD RESULT IN A SHALLOW PIT AND MOUND TOPOGRAPHY THROUGHOUT THE REPLICATION AREAS.

E. ALL FILL MUST BE STOCKPILED BEYOND THE RESOURCE AREAS AND BUFFER ZONES. PRECAUTIONS SHALL BE TAKEN AS NECESSARY TO PREVENT EROSION OF THE STOCKPILED MATERIAL. BEFORE FILL IS PUT INTO PLACE, ALL TREES, BRUSH AND STUMPS SHALL BE REMOVED FROM THE AREAS TO BE FILLED. THESE ARE NOT TO BE STOCKPILED IN THE RESOURCE AREAS OR BUFFER ZONES WHILE AWAITING DISPOSITION.

F. THE FINISHED GRADES MUST BE WITHIN TWELVE INCHES FROM THE GROUNDWATER TABLE.

G. ANY SIGNIFICANT FIELD CHANGES DEEMED NECESSARY TO ACHIEVE FINAL GRADING WITHIN TWELVE INCHES FROM THE GROUNDWATER TABLE, MUST BE APPROVED BY THE BOTANIST (IN THE FIELD) AND REPORTED TO THE CONSERVATION COMMISSION IN THE WEEKLY REPORT.

H. THE OUTER EDGES OF THE REPLICATION AREAS SHALL BE BERMED TO PREVENT WATER DRAINING FROM THE REPLICATION AREAS.

I. UPON COMPLETION OF THE REPLICATION AREAS, SILTATION FENCE SHALL BE PLACED AROUND THE ENTIRE PERIMETER (OF THE REPLICATION AREAS) TO PROTECT THE REPLICATION AREAS DURING THE REMAINDER OF CONSTRUCTION.

J. AFTER REPLICATION CONSTRUCTION IS COMPLETED, NO FERTILIZER, LIMESTONE, SUPERPHOSPHATE, MULCH OR OTHER AMENDMENTS SHALL BE ADDED TO THE WETLAND SOILS.

PART 3 REMOVING, STORING, AND REPLANTING OF EXISTING WETLAND SOIL, TREES AND SHRUBS

A. IN ANY FILLED WETLAND AREA (WHERE PRACTICAL), THE APPLICANT MAY, AT HIS OPTION, DIG UP, STORE AND MAINTAIN EXISTING WETLAND SOILS, TREES AND SHRUBS FOR USE IN THE REPLICATION AREAS. TREES SHALL BE A MINIMUM OF ONE INCH CALIPER AND SHRUBS SHALL BE THIRTY-SIX INCHES IN SPREAD OR HEIGHT. ALL PLANTS SHALL BE VIGOROUS AND WELL FORMED SPECIMENS. ALL PLANT MATERIALS DUG FOR THIS PURPOSE SHALL BE DUG BY HAND, HYDRAULIC TREE SPADE SPECIFICALLY DESIGNED FOR THIS PURPOSE OR OTHER SUITABLE EQUIPMENT OF SUFFICIENT SIZE TO REMOVE THE ROOTBALL. ROOTBALL SIZE SHALL BE THE MINIMUM SPECIFIED BY THE AMERICAN ASSOCIATION OF NURSERYMEN FOR EACH SPECIES. FOR HAND DUG PLANTS, A SUITABLE BURLAP OR OTHER WRAP OR CONTAINER SHALL BE PROVIDED TO KEEP THE ROOTBALL INTACT.

1. ALL PLANTS DUG FOR REUSE SHALL BE IMMEDIATELY MOVED TO A PROTECTIVE STORAGE AREA APPROVED BY THE BOTANIST. PLANTS SHALL BE SET PLUMB ON GRADE OR IN PREPARED HOLES AND GUYED AS NECESSARY. THE AREA OR HOLES SHALL BE BACKFILLED WITH SUITABLE TOPSOIL TO COVER THE ROOTBALLS ENTIRELY MULCHED TO PREVENT EROSION. ALL STORED VEGETATION SHALL BE MAINTAINED IN A DAMP CONDITION BY REGULAR WATERING. ALL HORTICULTURAL MEASURES REQUIRED FOR THE SURVIVAL OF COLLECTED PLANTINGS SHALL BE UTILIZED BY THE APPLICANT.

2. AFTER THE REPLICATION AREAS HAVE BEEN CONSTRUCTED, STOCKPILED PLANTS SHALL BE REPLANTED IN LOCATIONS SPECIFIED AND APPROVED BY THE BOTANIST.

PART 4 WETLAND REPLICATION PLANTING

A. WETLAND PLANTING SHALL BE PERFORMED BETWEEN MARCH 1 AND OCTOBER 15 OR AS RECOMMENDED BY THE BOTANIST.

B. WETLAND PLANTINGS SHALL CONSIST OF A MINIMUM OF 6 TREES PLANTED NO FARTHER APART THAN THIRTY FEET ON CENTER AND FIFTY-FIVE SHRUBS PLANTED NO FARTHER APART THAN EIGHT FEET ON CENTER.

1. THE TREE LAYER WILL BE COMPRISED OF FOUR (4) RED MAPLES (ACER RUBRUM) AND TWO (2) GREEN ASH (FRAXINUS PENNSYLVANICA).

2. SHRUBS SHALL CONSIST OF TEN (10) HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM), FIFTEEN (15) WINTERBERRY (ILEX VERTICILLATA), FIFTEEN (15) NORTHERN ARROWWOOD (VIBURNUM DENTATUM), FIFTEEN (15) SPICEBUSH (LINDERA BENZOIN).

3. HERBACEOUS VEGETATION WILL BE COMPRISED OF THIRTY (30) CINNAMON FERN (OSMUNDA CINNAMOMEA), TWENTY (20) SENSITIVE FERN (ONOCLEA SENSIBILIS) AND TEN (10) ROYAL FERN (OSMUNDA REGALIS).

C. THE APPLICANT SHALL HAVE THE OPTION OF DIGGING, STORING AND REPLANTING EXISTING TREES AND SHRUBS PER PART 3 OF THIS SCHEDULE, OR ALTERNATIVELY, PROVIDING AND PLANTING NEW WETLAND SPECIES, PURCHASED BY THE APPLICANT FROM NURSERY STOCK, AND APPROVED BY THE BOTANIST.

D. WETLAND PLANTING, IN THE REPLICATION AREAS, SHALL BE PERFORMED IN A MANNER WHICH REPRODUCES THE PLACEMENT AND PROPORTIONS OF THE PLANT SPECIES THAT WERE FOUND IN THE ORIGINAL LOST WETLAND AREAS.

E. ALL WETLAND PLANTINGS SHALL BE PERFORMED BY HAND. BURLAP SHALL BE REMOVED FROM THE TOP THIRD OF THE ROOTBALLS AND ROPES, TWINE AND WIRE BASKETS SHALL BE COMPLETELY REMOVED FROM THE ROOTBALLS. COMPLETELY REMOVE ALL PLASTIC BURLAP, ROPE, TWINE AND WIRE BASKETS FROM THE REPLICATION AREAS. COMPLETELY REMOVE THE CONTAINERS FROM THE POTTED PLANTS WHILE KEEPING THE SOIL AROUND THE ROOTS UNBROKEN.

F. AFTER PLANTINGS ARE COMPLETED, THE REPLICATION AREAS SHALL BE HAND RAKED TO ELIMINATE ANY DEPRESSIONS, GREATER THAN FOUR INCHES IN DEPTH, WHICH MAY BE CREATED DURING DIGGING AND TO ELIMINATE COMPACTION OF THE SOILS AS MUCH AS POSSIBLE.

1. ONCE PLANTING IS COMPLETED, LEAVES (COLLECTED FROM UPLAND AREAS OF THE PROPOSED SITE CONSTRUCTION) SHALL BE SPREAD THROUGHOUT THE REPLICATION AREAS.

G. THE INTENT OF THIS SCHEDULE IS TO INSURE THAT AT LEAST 75 PERCENT OF THE REPLICATION SURFACE AREA IS RE-ESTABLISHED WITH INDIGENOUS WETLAND PLANT SPECIES WITHIN TWO GROWING SEASONS OF THEIR PLANTING, IN ACCORDANCE WITH THE MASSACHUSETTS DEP WETLANDS PROTECTION ACT REGULATIONS. PURPLE LOOSESTRIFE (LYTHRUM SALICARI) AND EUROPEAN BUCKTHORN (RHAMNUS FRANGULA) SHALL NOT BE PLANTED IN THE REPLICATION AREAS. IF AFTER 180 GROWING SEASON DAYS, IT IS EVIDENT IN THE OPINION OF THE BOTANIST THAT IT IS UNLIKELY THAT THE 75 PERCENT RE-ESTABLISHMENT REQUIREMENT WILL BE ACHIEVED, THE APPLICANT SHALL SUPPLEMENT THE PLANTINGS AS NECESSARY TO ACHIEVE THE REQUIRED COVERAGE. IF AFTER THE END OF TWO GROWING SEASONS, 75 PERCENT RE-ESTABLISHMENT HAS NOT BEEN ACHIEVED, THE APPLICANT SHALL PROVIDE AND PLANT HEALTHY WETLAND VEGETATION IN SUFFICIENT QUANTITIES TO ACHIEVE THE 75 PERCENT RE-ESTABLISHMENT.

PART 5 WETLAND REPLICATION MONITORING

A. THE TOWN OF BOXBOROUGH CONSERVATION COMMISSION SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF THE COMMENCEMENT OF THE WETLAND REPLICATION CONSTRUCTION.

B. ALL CONSTRUCTION AND PLANTING SHALL BE OVERSEEN BY A QUALIFIED BOTANIST.

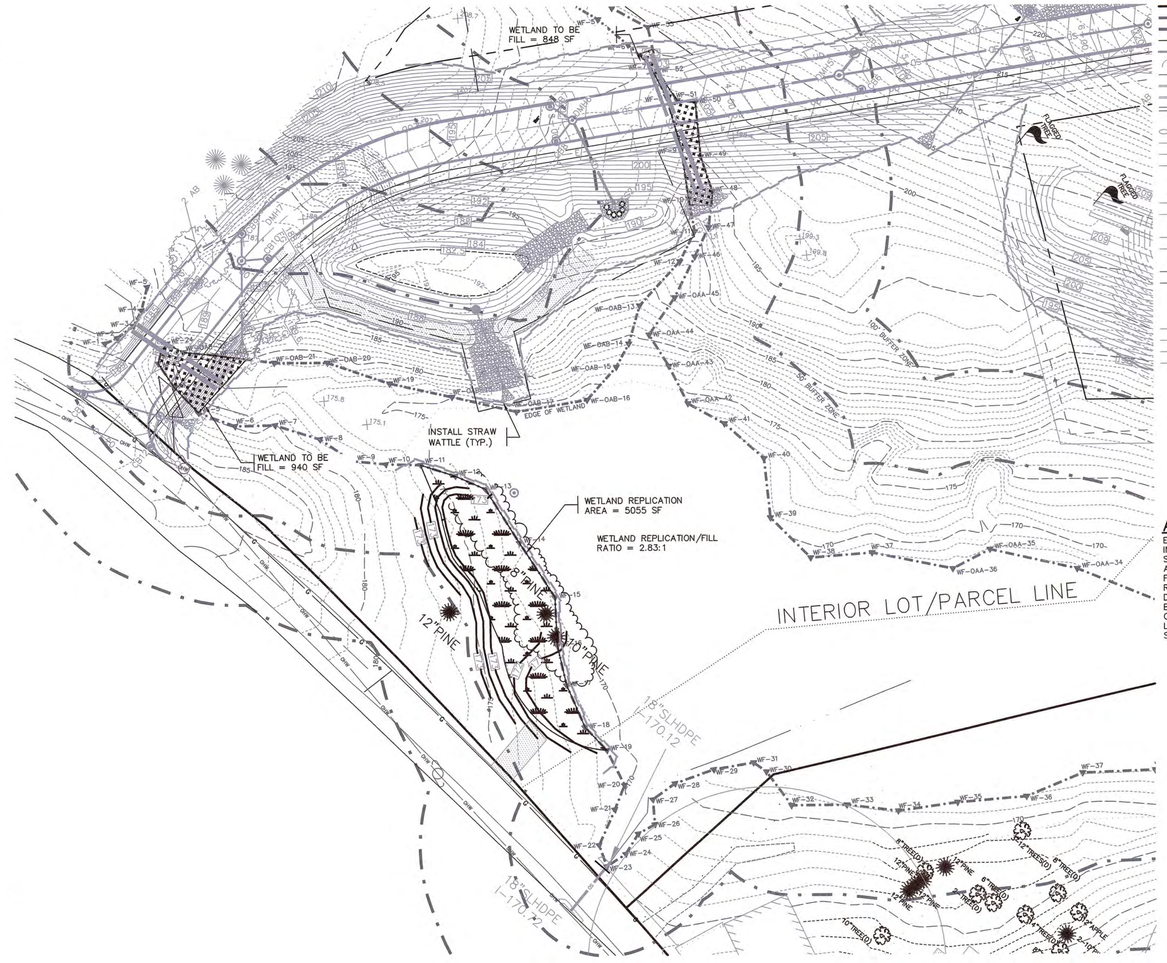
C. A BRIEF PROGRESS REPORT WILL BE PROVIDED TO THE TOWN OF BOXBOROUGH CONSERVATION COMMISSION AT THE END OF EACH WEEK UNTIL CONSTRUCTION AND PLANTING OF THE REPLICATION AREAS HAVE BEEN COMPLETED.

D. FOUR REPORTS, PREPARED BY A QUALIFIED BOTANIST, SHALL BE SUBMITTED TO THE TOWN OF BOXBOROUGH CONSERVATION DURING THE FIRST YEAR. THESE REPORTS WILL BE SUBMITTED QUARTERLY. TWO REPORTS WILL BE PROVIDED TO THE TOWN OF BOXBOROUGH CONSERVATION COMMISSION ON MAY 1ST AND OCTOBER 1ST OF THE FOLLOWING YEAR.

E. EACH REPORT SHALL INCLUDE AN OBSERVED SPECIES LIST, RELATIVE ABUNDANCE OF EACH SPECIES, PERCENT COVER OF UPLAND AND WETLAND SPECIES, THE VIABILITY OF THE PLANTINGS AND PROPOSED REMEDIAL MEASURES TO ENSURE 75 PERCENT RE-ESTABLISHMENT WITHIN TWO GROWING SEASONS.

F. WHILE PERFORMING THE INSPECTION OF THE REPLICATION AREAS, ANY INVASIVE PLANTS SPECIES FOUND SHALL BE REMOVED. THE PLANT SPECIES, AND NUMBER OF PLANTS REMOVED, SHALL BE INCLUDED WITHIN THE MONITORING REPORTS.

G. IF THE REPLICATION AREAS DO NOT ACHIEVE THE REQUIRED 75 PERCENT COVERAGE WITHIN TWO GROWING SEASONS, THEN ADDITIONAL PLANTINGS SHALL BE PROVIDED AS PER PART 4 SECTION G. THESE PLANTINGS WILL BE MONITORED FOR THE NEXT TWO GROWING SEASONS WITH REPORTS PROVIDED TO THE TOWN OF BOXBOROUGH CONSERVATION COMMISSION ON MAY 1ST AND OCTOBER 1ST OF EACH YEAR IN ORDER TO ENSURE THE VIABILITY OF THESE LATE PLANTINGS.

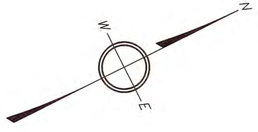


PLANT LIST

	Symbol	Botanical Name	Common Name	Size	Quantity	Condition
TREES						
	AR	ACER RUBRUM	RED MAPLE	6'-8' HT. 1.5'-2' CAL	4	B & B
	FP	FRAXINUS PENNSYLVANICA	GREEN ASH	6'-8' HT. 1.5'-2' CAL	2	B & B
SHRUBS						
	VC	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	2'-3' HT.	10	CONT. GROWN
	IV	ILEX VERTICILLATA	WINTERBERRY	2'-3' HT.	15	CONT. GROWN
	VD	VIBURNUM DENTATUM	NORTHERN ARROWWOOD	3'-4' HT.	15	CONT. GROWN
	LB	LINDERA BENZOIN	SPICEBUSH	3'-4' HT.	15	CONT. GROWN
HERBACIOUS PLANTS						
	OC	OSMUNDA CINNAMOMEA	CINNAMON FERN	#1 POT	30	CONT. GROWN
	OS	ONOCLEA SENSIBILIS	SENSITIVE FERN	#1 POT	20	CONT. GROWN
	OR	OSMUNDA REGALIS	ROYAL FERN	#1 POT	10	CONT. GROWN

ADDITIONAL NOTES:

THE AREA OF PROPOSED REPLICATION CONTAINS MANY INVASIVE SPECIES (MULTI-FLORA ROSE, PRIVET, HONEYSUCKLE AND ORIENTAL BITTERSWEET). THE SOIL FROM THIS AREA SHOULD NOT BE USED AS TOPSOIL ON SITE DUE TO THE POSSIBLE SPREAD OF THESE INVASIVES.
THE WHITE PINES WITHIN THE REPLICATION AREA SHOULD BE SAVED AND PLANTED SOUTH OF THE AREA TO HELP SHADE THE NEW PLANTINGS.



GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 INCH = 40 FEET

LEGEND

EXISTING		PROPOSED
100	ELEVATION CONTOUR	100
X100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
WF-1	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
S	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	E
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

WETLAND REPLICATION PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

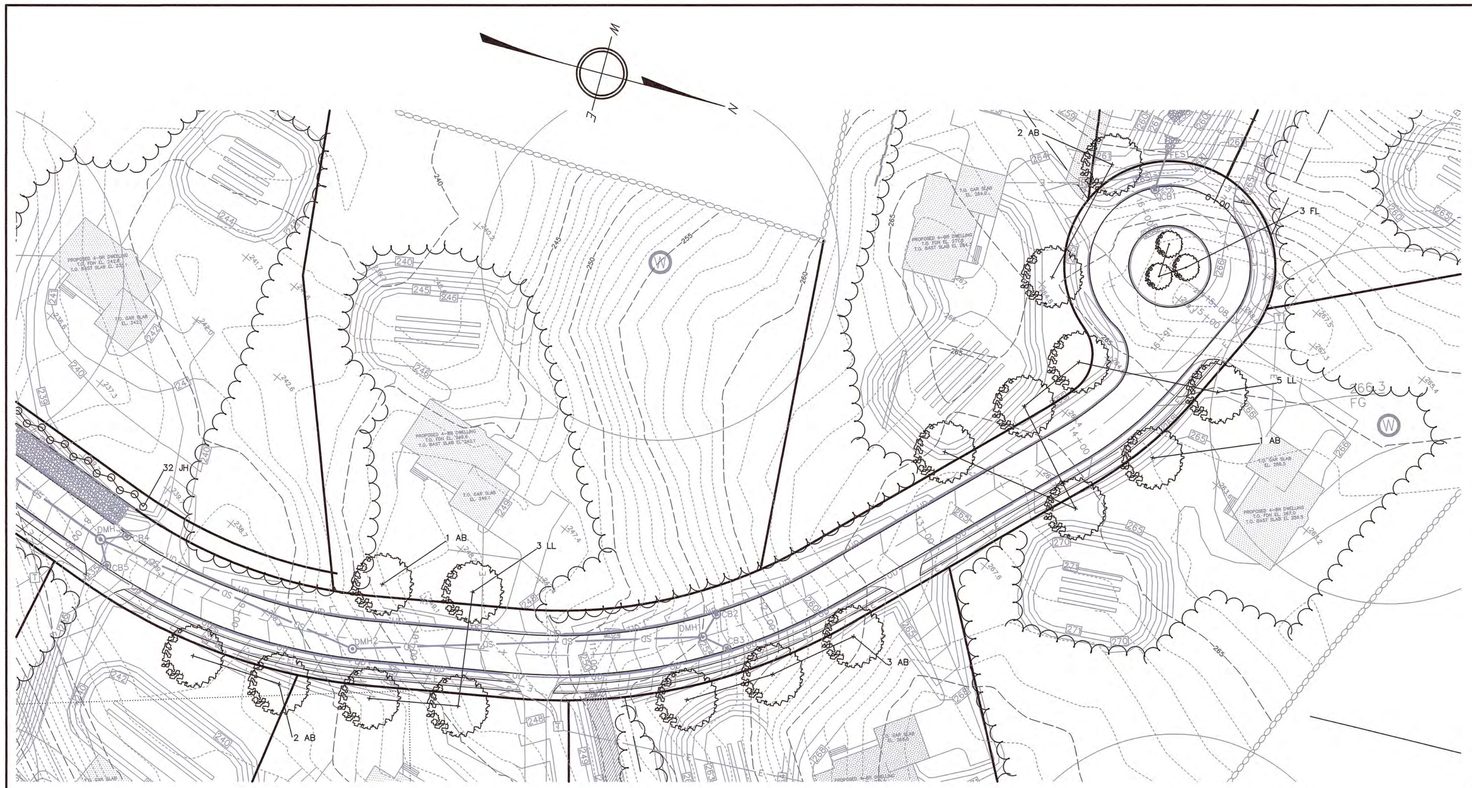
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

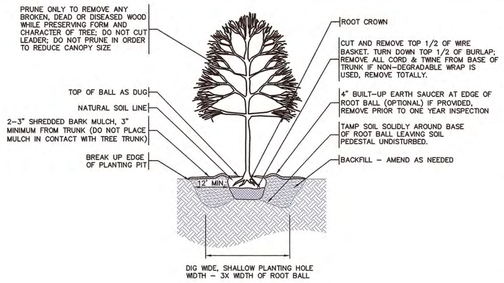
PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2014	JOB 141070	C9.1
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14----\141070\DWG\PERMIT\DEF SUB\DEF_SUB_OS_R1.DWG 05-02-16 12:16:03 PM - LAYOUT WRP



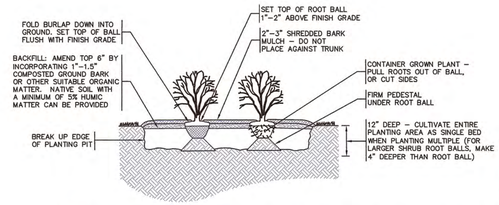


NOTES:

1. CONTRACTOR TO VERIFY THAT ADEQUATE DRAINAGE EXISTS PRIOR TO PLANTING.
2. DO NOT WRAP TRUNK OF TREE.
3. STAKING OF TREES IS NOT RECOMMENDED, EXCEPT ON WINDY SITES OR FOR LARGE EVERGREEN TREES. IF STAKING IS DONE, FLEXIBLE STRAPS – NOT HOSE AND WIRE – SHOULD BE USED AND MUST BE REMOVED AT APPROPRIATE TIME.
4. ALL TREES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE MOST RECENT AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (A.A.N.).
5. TREES WITH ROOT FLARE COVERED BY MORE THAN 1.5" OF SOIL WILL BE REJECTED PRIOR TO INSTALLATION.

TREE PLANTING

NOT TO SCALE — TREE_PLANTING.DWG — 2/18/15



NOTES:

1. ALL SHRUBS MUST CONFORM TO THE STANDARDS SET FORTH IN THE MOST RECENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (A.A.N).
2. SOIL ANALYSIS SHALL BE OBTAINED PRIOR TO PLANTING. SOIL SHALL BE AMENDED AS RECOMMENDED.
3. SHEET PREPARATION OF BEDS IS HIGHLY PREFERRED TO INDIVIDUALLY DUG HOLES.

SHRUB PLANTING

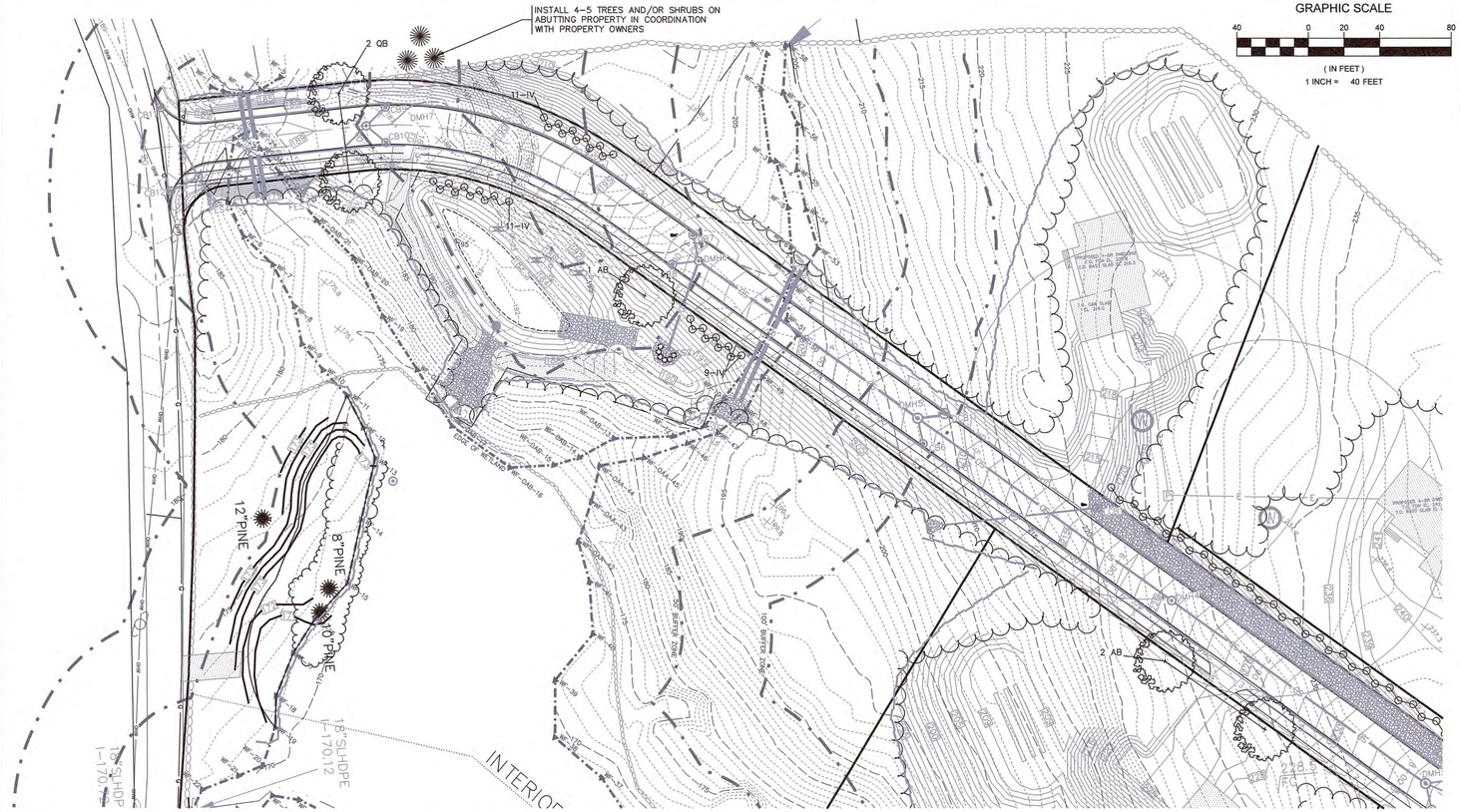
NOT TO SCALE — SHRUB_PLANTING.DWG — 2/18/15

LEGEND

EXISTING		PROPOSED
100	ELEVATION CONTOUR	100
x100.0	SPOT GRADE	100.0 FG
	PROPERTY LINE	
WC-1	WETLAND DELINEATION	
	WETLAND BUFFER ZONE	
	SHORELINE	
	100-YEAR FLOODPLAIN LIMIT	
	TREE LINE / EDGE OF VEGETATION	
	EDGE OF PAVEMENT	
	CAPE COD BERM CURBING	
	GRANITE CURBING	
	GRAVEL/DIRT ROAD	
	STOCKADE FENCE	
	STONE WALL	
W	WATER MAIN	W
WS	WATER SERVICE	WS
FS	FIRE SERVICE	FS
WV	WATER VALVE	WV
	FIRE HYDRANT	
FM	FORCE MAIN	FM
SS	GRAVITY SEWER LINE	SS
S	SEWER MANHOLE	SMH
G	GAS LINE	
GS	GAS SERVICE	GS
GV	GAS VALVE	
E	BURIED POWER LINE	E
OHW	OVERHEAD POWER LINE	OHW
	UTILITY POLE	
	GUY WIRE	
E	ELECTRIC BOX	E
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
RD	ROOF DRAIN	RD
FD	FOUNDATION DRAIN	FD
CB	CATCH BASIN	
DMH	DRAIN MANHOLE	
	SILT FENCE BARRIER	
	STRAW WATTLES	
199-1	DEEP SOIL OBSERVATION HOLE	
	SITE LUMINAIRE	
	SIGN	
	SURFACE RUNOFF DIRECTION	
	STONE BOUND	
	DRILL HOLE	
	IRON ROD	

ABBREVIATIONS

EL	ELEVATION	HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT	PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET	RCP	REINFORCED CONCRETE PIPE
AC	ACRES	N/F	NOW OR FORMERLY
FT	FEET	VP	VERNAL POOL
R	RADIUS	WF	WETLAND FLAG
DIA	DIAMETER	TW	TOP OF WALL
BIT	BITUMINOUS	BW	BOTTOM OF WALL
CONC	CONCRETE	FG	FINISH GRADE
L	LENGTH	BSMT	BASEMENT
S	SLOPE	FF	FINISH FLOOR



Plant List

TREES

Symbol	No.	Botanical Name	Common Name	Size
AB	10	Acer x freemanii 'Jeffersred'	Autumn Blaze Maple	2.5"
LL	8	Tilia cordata 'Greenspire'	Littleleaf Linden	2.5" cal.
FL	3	Prunus serrulata 'Kwanzan'	Pink Flowering Cherry	1"-1.5" cal.
QB	2	Quercus Bi-color	White Oak	2.5" cal.

SHRUBS

Symbol	No.	Botanical Name	Common Name	Size
JH	32	Juniperus horizontalis 'Wiltoni'	Blue rug Juniper	15" - 18"
IV	31	Ilex Verticillata	Winter Red	5 gal.

LANDSCAPING NOTES

1. EVERY EFFORT SHALL BE MADE TO MAKE USE OF THE EXISTING TREES ON SITE. THIS PLAN IS MEANT TO SUPPLEMENT EXISTING TREE LINES WHERE CONSTRUCTION OF THE ROAD REQUIRES REMOVAL OF TREES IN CERTAIN AREAS.

2. DURING CONSTRUCTION OF THE ROAD, DEVELOPER SHALL MARK TREES TO BE SAVED AND A REPRESENTATIVE FROM THE PLANNING BOARD SHALL BE CONTACTED FOR AN ONSITE REVIEW OF TREES TO BE SAVED.

3. IF IN THE OPINION OF THE BOARD MORE TREES ARE NEED TO SUPPLEMENT THE SAVED VEGETATION, THE DEVELOPER SHALL FURNISH A TREE PLANTING PLAN DETAILING ADDITIONAL TREES.

4. COMPLETE LANDSCAPING AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL SUBGRADE.

5. IMMEDIATELY AFTER PLACEMENT OF TOPSOIL, STABILIZE WITH CONTROL MEASURES INCLUDING, BUT NOT NECESSARILY LIMITED TO, SEED MIX, MULCH, AND / OR BLANKET.

6. STABILIZE ALL DISTURBED AREAS WITH MINIMUM 4-INCHES OF TOPSOIL AND GRASS SEED.

7. USE NEW ENGLAND EROSION CONTROL AND RESTORATION MIX ON BASIN BOTTOM AND SIDE SLOPES

8. WITHIN ROAD RIGHT OF WAY, SPREAD MINIMUM OF 8-INCHES OF TOPSOIL AND SEED WITH FOLLOWING GRASS MIX:

	PROPORTION	GERMINATION MINIMUM	PURITY MINIMUM
FOR GRASSPLOTS AND ISLANDS			
CREEPING RED FESCUE	50%	85%	95%
KENTUCKY BLUE	25%	85%	90%
DOMESTIC RYE	10%	90%	98%
RED TOP	10%	85%	92%
LADINO CLOVER	5%	85%	96%
FOR SLOPES AND SHOULDERS			
CREEPING RED FESCUE	50%	85%	95%
KENTUCKY 31	30%	85%	95%
DOMESTIC RYE	10%	90%	98%
RED TOP	5%	85%	92%
LADINO CLOVER	5%	85%	96%

Lorayne Black ASLA
Landscape Architect

P.O. Box 595
Groton, MA 01450
978.302.0448
lorayne@lorayneblack.com

www.lorayneblack.com

MASSACHUSETTS LORAYNE ALGREEN BLACK NO. 997 REGISTERED LANDSCAPE ARCHITECT

Lorayne Black 5-6-16

DRAWING ISSUED FOR:

☐ CONCEPT ☐ CONSTRUCTION
■ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	LANDSCAPING PER PB MTG. 5/2/16
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

LANDSCAPE PLAN

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

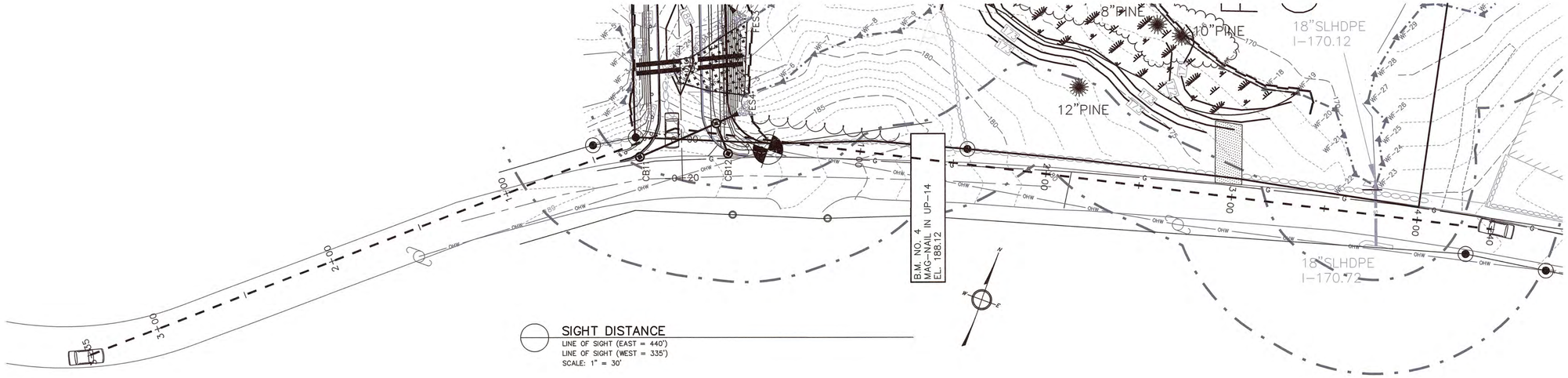
OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

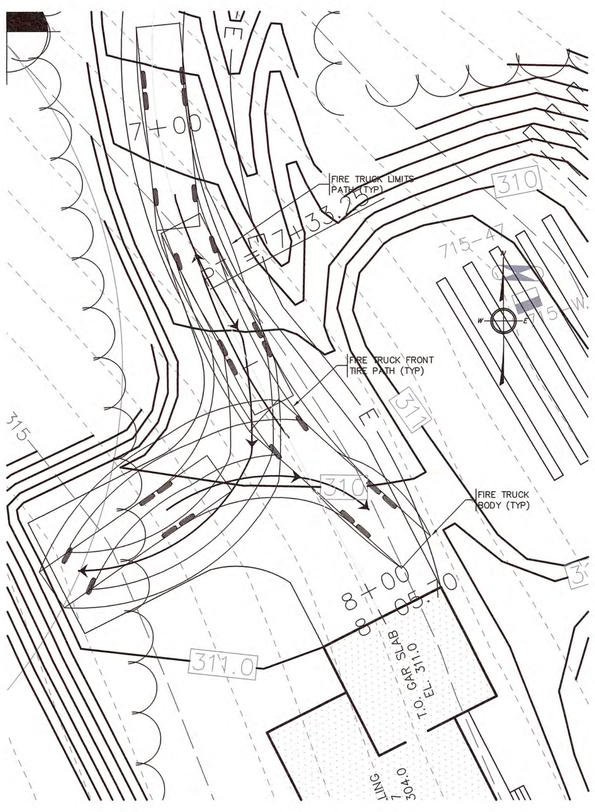
DES. BY: JEG
CHK. BY: DEM
DATE: FEBRUARY 2016
JOB 141070
C10.1

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

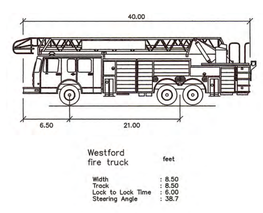
P:\14----\141070\DWG\PERMIT\DEF SUB\DEF_SUB_OS_R1.DWG 05-06-16 11:11:22 AM – LAYOUT LANDSCAPE

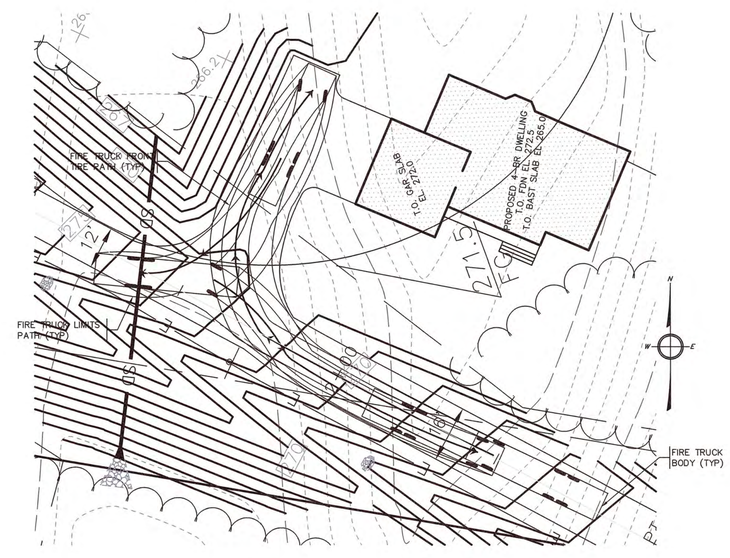


SIGHT DISTANCE
LINE OF SIGHT (EAST = 440')
LINE OF SIGHT (WEST = 335')
SCALE: 1" = 30'



TURNING RADIUS ANALYSIS (LOT 5)
SCALE: 1" = 20'





TURNING RADIUS ANALYSIS (LOT 6)
SCALE: 1" = 20'

DRAWING ISSUED FOR:

- ☐ CONCEPT
- ☐ CONSTRUCTION
- ■ PERMIT
- ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

COMMONWEALTH OF MASSACHUSETTS DOUGLAS E. MILLER CIVIL No. 33965 REGISTERED PROFESSIONAL ENGINEER 4/21/16

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS HIGHER THAN 4 FEET ABOVE GRADE, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION
3	5/6/16	JEG	BDR	NO CHANGE THIS SHEET
2	4/29/16	JEG	BDR	PER PEER REVIEW LETTER DATED 4/20&21/16
1	4/7/16	JEG	BDR	PER PEER REVIEW LETTER DATED 3/21/16

GPR Engineering Solutions for Land & Structures

GOLDSMITH, PREST & RINGWALL, INC.
39 MAIN STREET, SUITE 301. AYER, MA 01432
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
VOICE: 978.772.1590 FAX: 978.772.1591
www.gpr-inc.com

RESIDENTIAL SUBDIVISION
DEFINITIVE PLAN

TURNING MOVEMENT ANALYSIS

SILAS TAYLOR FARME ROAD
AT FLAGG HILL ROAD
BOXBOROUGH, MA

OWNER:
DOLLY D. BJORKLUND
P.O. BOX 2875
ACTON, MA 01720

PREPARED FOR:
MERIDIAN HOMES, INC
114 NEWTOWN ROAD
ACTON, MA 01720

DES. BY: JEG	DATE: FEBRUARY 2016	JOB 141070	C11.1
CHK. BY: DEM			

2016 © COPYRIGHT GOLDSMITH, PREST & RINGWALL, INC.

P:\14---\141070\DWG\PERMIT\DEF SUB\DEF SUB PLAN SET_R1.DWG 04-29-16 3:36:23 PM - LAYOUT TMA