

SITE PLANS-COMPREHENSIVE PERMIT

Pursuant to MGL Ch. 40B, Sections 20-23 & 760 CMR 56

FOR

THE POINTE AT HILLS FARM

IN

Shrewsbury, Massachusetts (Worcester County)

November 6, 2015

PREPARED BY:



WATERMAN DESIGN
ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (FAX)
WATERMANDSIGN.COM WDA@WDASSOC.COM

OWNER:

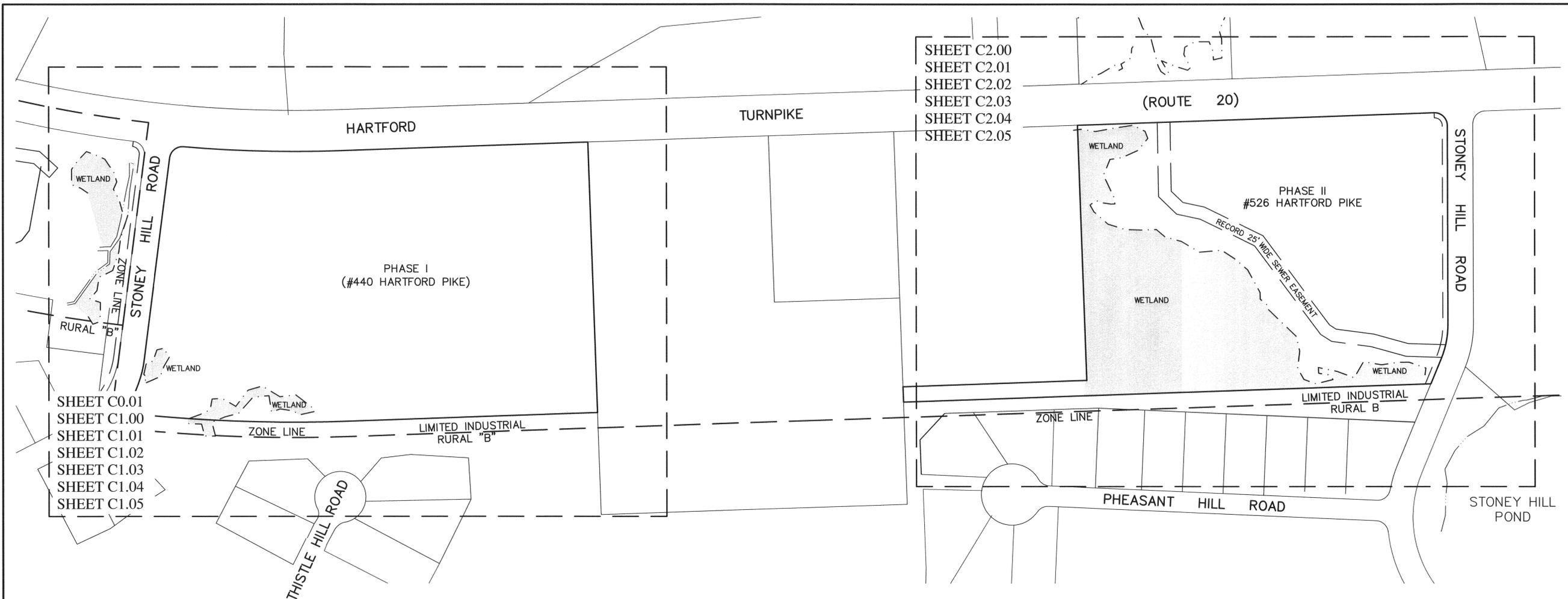
HARTFORD REALTY TRUST
OF SHREWSBURY
291 Grafton Street
Shrewsbury, Massachusetts

PREPARED FOR:

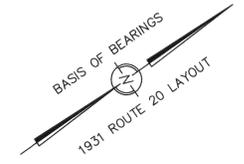
SMART GROWTH DESIGN,
LLC
625 South Street
Shrewsbury, Massachusetts 01545

SHEET LIST:

C0.00	KEY SHEET		
C0.01	CONCEPTUAL LOTTING PLAN (PHASE I)		
PHASE I		PHASE II	
C1.00	EXISTING CONDITIONS PLAN	C2.00	EXISTING CONDITIONS PLAN
C1.01	LAYOUT AND MATERIALS PLAN	C2.01	LAYOUT AND MATERIALS PLAN
C1.02	GRADING AND DRAINAGE PLAN	C2.02	GRADING AND DRAINAGE PLAN
C1.03	UTILITY PLAN	C2.03	UTILITY PLAN
C1.04	PLANTING AND LIGHTING PLAN	C2.04	PLANTING AND LIGHTING PLAN
C1.05	PHOTOMETRIC PLAN	C2.05	PHOTOMETRIC PLAN



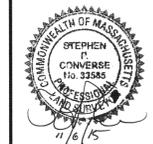
SHEET C2.00
 SHEET C2.01
 SHEET C2.02
 SHEET C2.03
 SHEET C2.04
 SHEET C2.05



THIS DOCUMENT, AS AN INSTRUMENT OF SERVICE, IS THE SOLE PROPERTY OF WATERMAN DESIGN ASSOCIATES, INC. ITS USE BY THE OWNER FOR OTHER PROJECTS OR FOR COMPLETION OF THIS PROJECT BY OTHERS IS STRICTLY FORBIDDEN. DISTRIBUTION IN CONNECTION WITH THIS PROJECT SHALL NOT BE CONSTRUED AS PUBLICATION IN DEROGATION OF THE ENGINEERS RIGHTS. ©2015, WATERMAN DESIGN ASSOCIATES, INC.

REV.	DATE	DESCRIPTION	INIT.
A		INITIAL ISSUE	

SHEET C0.01
 SHEET C1.00
 SHEET C1.01
 SHEET C1.02
 SHEET C1.03
 SHEET C1.04
 SHEET C1.05



PREPARED BY:



Waterman Design Associates, Inc.
 31 East Main Street
 Westborough, MA 01581
 508.366.6552
 508.366.6506 (fax)
 watermandesign.com wd@wdassoc.com

OWNER:

HARTFORD REALTY TRUST OF SHREWSBURY
 291 Grafton Street
 Shrewsbury, MA

PREPARED FOR:

SMART GROWTH DESIGN, LLC
 625 South Street
 Shrewsbury, MA 01545

TITLE:

KEY SHEET
THE POINTE AT HILLS FARM
 Shrewsbury, MA (Worcester County)

COMPREHENSIVE PERMIT



DATE:	11/06/15	SCALE:	1" = 100'
JOB NO.:	0927.01	DWN. BY:	
FILE NO.:	0927001	CHK'D. BY:	
DRAWING NO.:	0927001A	SHEET:	C0.00

LEGEND

DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED
100' WETLAND BUFFER ZONE	100' BW BZ		OVERHEAD WIRE	OHW	OHW
BITUMINOUS CONCRETE PAVEMENT	BIT. CONC.	BIT. CONC.	PARKING SPACE QUANTITY		
BITUMINOUS CONCRETE CURB	BCC	BCC	PIPE -- CEMENT LINED DUCTILE IRON	CLDIP	CLDIP
BOTTOM OF WALL	BOW	BOW	PIPE -- REINFORCED CONCRETE	RCP	RCP
BOUNDARY OF BORDERING	BBWW		PIPE -- POLYVINYL CHLORIDE	PVC	PVC
VEGETATED WETLANDS			POST INDICATOR VALVE	PIV	PIV
BUILDING	BLDG	BLDG	RIPRAP		
CAPE COD BERM	CCB	CCB	SEWER MANHOLE/SEWER LINE	SMH	SMH
CATCH BASIN	CB	CB	SIGN	S	S
CATCH BASIN -- ROUND	CB	CB	SLOPED GRANITE EDGING	SGE	SGE
CONCRETE	CONC.	CONC.	SPOT ELEVATION	+ 150.25	X 150.25
CONCRETE PAD	CP	CP	STORMWATER TREATMENT UNIT	STU	STU
CONTOUR LINE INDEX	150	150	TEE	T	T
CONTOUR LINE INTERMEDIATE	152	152	TELEPHONE MANHOLE/TELEPHONE LINE	TMH	TMH
CONTOUR LINE INDEX (FUTURE)			TOP OF CONCRETE (BUILDING FOUNDATION)	TOC	TOC
CONTOUR LINE INTERMEDIATE (FUTURE)			TOP OF WALL	TOW	TOW
DRAIN MANHOLE/DRAIN LINE	DMH	DMH	TRANSFORMER	T	T
DROP INLET	DI	DI	TREE -- DECIDUOUS	T	T
EDGE OF PAVEMENT	EOP	EOP	TREE -- CONIFEROUS	T	T
ELECTRIC, COMMUNICATION AND DATA LINE	E.C.D.	E.C.D.	TREELINE		
ELECTRIC MANHOLE/ELECTRIC LINE	EMH	EMH	UTILITY POLE	UP	UP
EROSION CONTROL BARRIER	ECB	ECB	WALL -- RETAINING	RW	RW
FENCE -- CHAIN LINK	CLF	CLF	WALL -- STONE	STW	STW
FENCE -- STOCKADE	STF	STF	WATER COURSE (STREAM)	FLOW	FLOW
FIRE ALARM/FIRE ALARM LINE	FA	FA	WATER LINE / WATER GATE VALVE	W	W
FLARED END	FE	FE	WATER QUALITY BASIN	WQB	WQB
FOUNDATION DRAIN	FD	FD	WATER SHUT OFF	WSO	WSO
GAS GATE VALVE/GAS LINE	GG	GG	WETLANDS	WF	WF
GAS METER	GM	GM	WETLAND FLAGS	WF	WF
GUIDERAIL -- WOODEN	WGR	WGR			
GUY WIRE	GW	GW			
HANDICAPPED ACCESSIBLE PARKING SPACE	WCR	WCR			
HANDICAPPED ACCESSIBLE (WHEELCHAIR) RAMP	HPX 150.25	HPX 150.25			
HIGH POINT	HP	HP			
HYDRANT	HYD	HYD			
INFILTRATION SYSTEM	INF. SYS.	INF. SYS.			
INVERT	INV.	INV.			
IRON PIN	IP	IP			
LIGHT POLE	LP	LP			
LOW POINT	LP 150.25	LP 150.25			
MISCELLANEOUS MANHOLE	MMH	MMH			
OUTLET CONTROL STRUCTURE	OCS	OCS			

OWNER OF RECORD:

HARTFORD REALTY TRUST OF SHREWSBURY
 291 GRAFTON STREET
 SHREWSBURY, MA 01545

ASSESSORS MAP REFERENCE:

PHASE I:
 PARCEL ID #54 015000

 PHASE II:
 PARCEL ID #48 009000

DEED REFERENCE:

PHASES I&II:
 DEED BOOK 8104 PAGE 312

PLAN REFERENCES:

PHASES I&II:
 PLAN BOOK 314 PLAN 70
 PLAN BOOK 754 PLAN 44
 PLAN BOOK 784 PLAN 64
 PLAN BOOK 784 PLAN 65
 1931 STATE HIGHWAY LAYOUT OF
 HARTFORD TURNPIKE (ROUTE 20)

FIRM CLASSIFICATION:

FLOOD INSURANCE RATE MAP
 NUMBER 25027C 0639F
 EFFECTIVE JULY 16, 2014

ZONING CLASSIFICATION:

LIMITED INDUSTRIAL
 MINIMUM LOT AREA: 80,000 S.F.
 MINIMUM LOT FRONTAGE: 50 FEET
 MINIMUM FRONT YARD: 50 FEET
 MINIMUM SIDE YARD: 50 FEET
 MINIMUM REAR YARD: 50 FEET
 MAXIMUM BUILDING HEIGHT: 50 FEET
 MAXIMUM BUILDING STORIES: 4
 MAXIMUM LOT COVERAGE: 50%
 MINIMUM OPEN SPACE: 20%

ROUTE 20 OVERLAY DISTRICT
 MINIMUM LOT AREA: 80,000 S.F.*
 MINIMUM LOT FRONTAGE: 150 FEET
 MINIMUM FRONT YARD: 25 FEET
 MAXIMUM FRONT YARD: 40 FEET
 MINIMUM SIDE YARD: 25 FEET
 MINIMUM REAR YARD: 25 FEET
 MAXIMUM BUILDING HEIGHT: 40 FEET
 MAXIMUM BUILDING STORIES: 3
 MAXIMUM LOT COVERAGE: 35%
 MAXIMUM IMPERVIOUS COVERAGE: 65%
 MINIMUM OPEN SPACE: 25%
 *-EXCEPT WHERE THE OVERLAY DISTRICT DOES NOT EXCEED 600' IN DEPTH FROM THE CENTERLINE OF ROUTE 20, THE LOT AREA SHALL BE 40,000 S.F.

PLAN NOTES:

- EXISTING CONDITIONS INFORMATION IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY WATERMAN DESIGN ASSOCIATES, INC. IN JULY 2000, MAY 2007, AND DECEMBER, 2014 THROUGH OCTOBER, 2015. ELEVATIONS REFER TO NAVD 1988.
- WETLAND BOUNDARIES WERE DETERMINED IN THE FIELD BASED ON ANALYSIS OF SOIL, VEGETATION AND HYDROLOGY. WETLAND FLAGS/LIMITS DELINEATED IN THE FIELD AND SURVEY LOCATED BY WATERMAN DESIGN ASSOCIATES. WETLAND LIMITS FOR PHASE II CONFIRMED BY THE SHREWSBURY CONSERVATION COMMISSION WITH THE ISSUANCE OF AN ORDER OF CONDITIONS DATED JANUARY 16, 2008 (MA DEP FILE # 285-1460).
- LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND ARE APPROXIMATE AND ASSUMED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES PRESENT AT THE SITE THAT ARE NOT DEPICTED HEREON. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-7233 TO ACCURATELY LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY DEPARTMENTS / COMPANIES OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. ANY COSTS RELATED TO THE REPAIR OF UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL BE PERFORMED UNTIL ALL UTILITY COMPANIES HAVE BEEN NOTIFIED.
- THE SUBJECT PARCELS DO NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN. REFER TO FLOOD INSURANCE RATE MAP FOR THE TOWN OF SHREWSBURY, MA., WORCESTER COUNTY MAP NUMBER 25027C0639, EFFECTIVE DATE: JULY 4, 2011.
- THE SUBJECT PARCEL(S) DO NOT LIE WITHIN THE TOWN OF SHREWSBURY AQUIFER OVERLAY PROTECTION DISTRICT.

SOILS KEY:

COMPILED FROM SOIL SURVEY OF WORCESTER COUNTY, MASSACHUSETTS, NORTHERN PART NATIONAL COOPERATIVE SOIL SURVEY (NCSS)
 102C -- CHATFIELD HOLLIS ROCK OUTCROP COMPLEX, 3 TO 15 PERCENT SLOPES
 306B -- PAXTON FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES, VERY STONY
 311B -- WOODBRIDGE FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES, VERY STONY
 421B -- CANTON FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES, VERY STONY
 422B -- CANTON FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES, EXTREMELY STONY
 602 -- URBAN LAND

N/F
BTR REALTY LLC
DEED BOOK 50220 PAGE 173
ASSESSOR MAP 54 PARCEL 002
411 HARTFORD TPK.

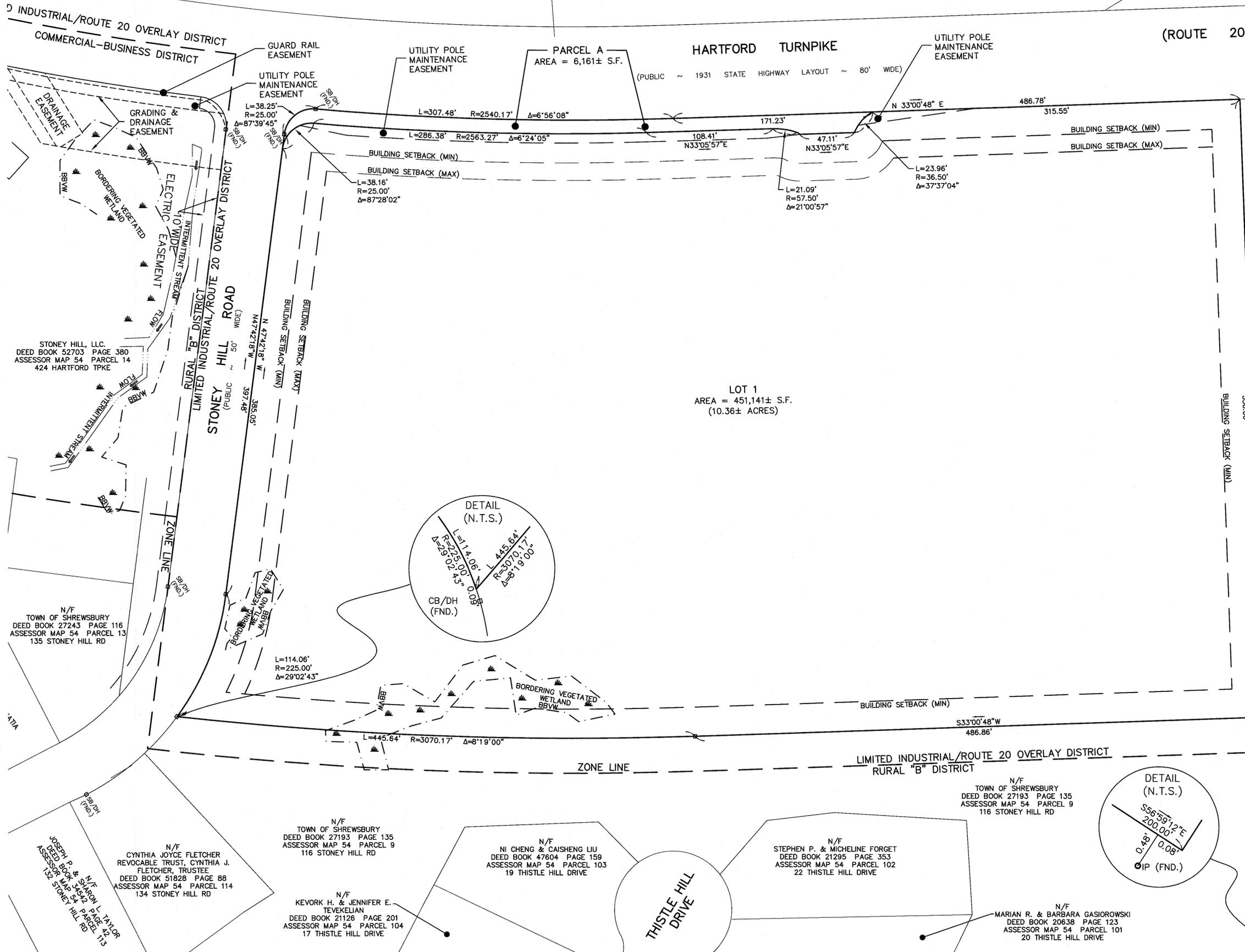
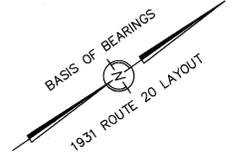
N/F
BTR REALTY LLC
DEED BOOK 50220 PAGE 173
ASSESSOR MAP 54 PARCEL 007
433 HARTFORD TPK.

PLAN NOTES:

1. PARCEL A IS TO BE CONVEYED TO THE COMMONWEALTH OF MASSACHUSETTS FOR THE PURPOSES OF A WIDENING TO THE STATE HIGHWAY LAYOUT OF ROUTE 20. SAID CONVEYANCE WILL BE SUBJECT TO AN APPLICATION WITH MASSDOT.

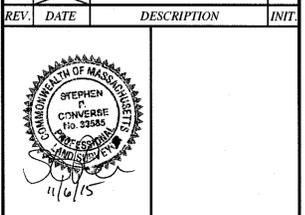
LEGEND

DESCRIPTION	EXISTING
CONCRETE BOUND W/DRILL HOLE	CB/DH
FOUND	(FND.)
IRON PIPE	IP
NOT TO SCALE	N.T.S.
NOW OR FORMERLY	N/F
PLUS OR MINUS	±
STONE BOUND W/DRILL HOLE	SB/DH



THIS DOCUMENT, AS AN INSTRUMENT OF SERVICE, IS THE SOLE PROPERTY OF WATERMAN DESIGN ASSOCIATES, INC. ITS USE BY THE OWNER FOR OTHER PROJECTS OR FOR COMPLETION OF THIS PROJECT BY OTHERS IS STRICTLY FORBIDDEN. DISTRIBUTION IN CONNECTION WITH THIS PROJECT SHALL NOT BE CONSTRUED AS PUBLICATION IN DEROGATION OF THE ENGINEER'S RIGHTS.
©2015, WATERMAN DESIGN ASSOCIATES, INC.

REV.	DATE	DESCRIPTION	INIT.



PREPARED BY:
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
291 Grafton Street
Shrewsbury, MA

PREPARED FOR:
SMART GROWTH DESIGN, LLC
625 South Street
Shrewsbury, MA 01545

TITLE:
CONCEPTUAL LOTTING PLAN (PHASE I)
THE POINTE AT HILLS FARM
Shrewsbury, MA (Worcester County)

COMPREHENSIVE PERMIT

0 40 80 120

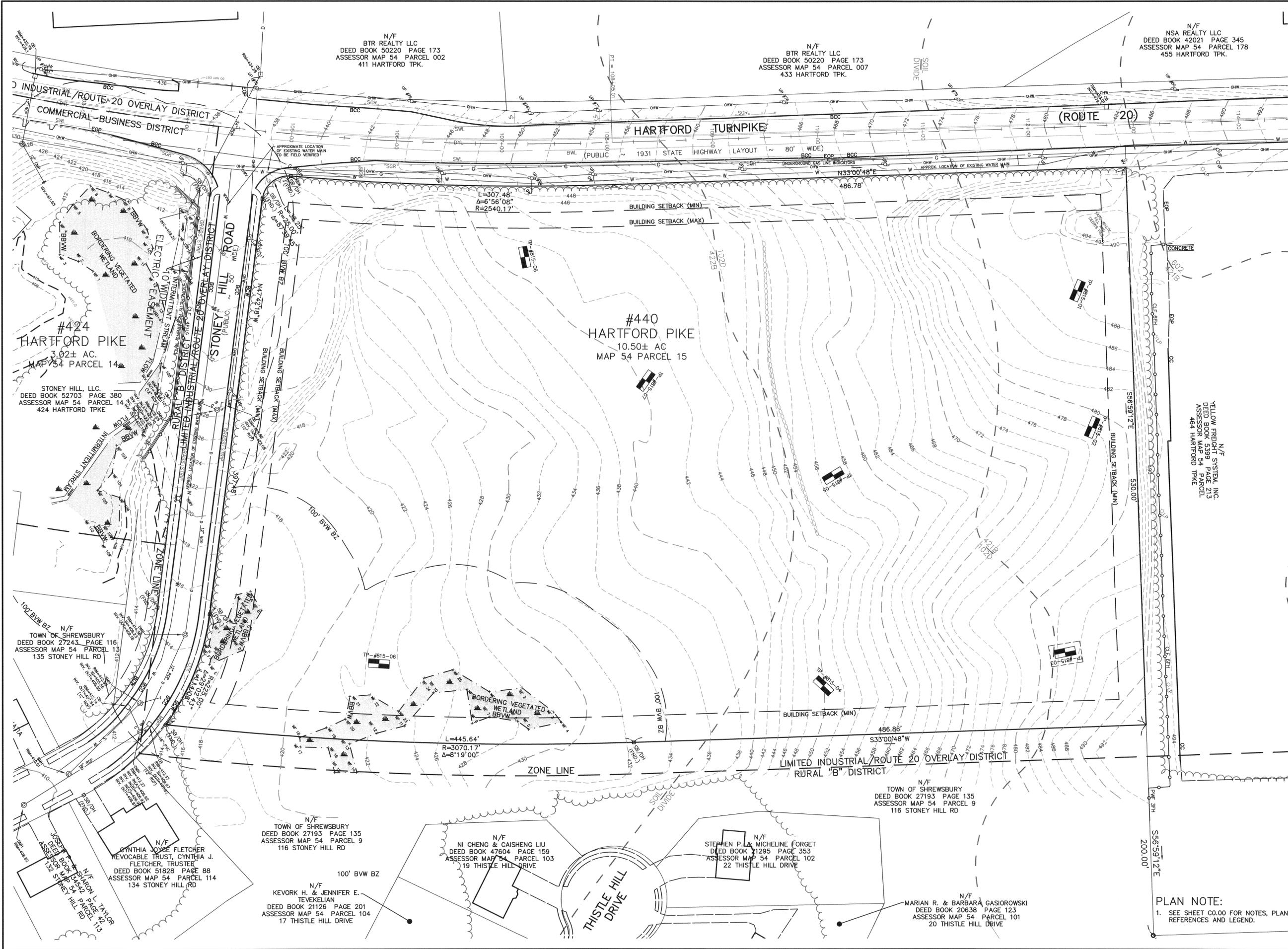
DATE: 11/06/15 SCALE: 1" = 40'

JOB NO.: 092701 DWN. BY: _____

FILE NO.: 0927100 CHK'D. BY: _____

DRAWING NO.: 0927101A SHEET: **C0.01**

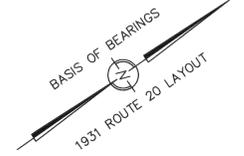
THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ISSUED FOR CONSTRUCTION BY WATERMAN DESIGN ASSOCIATES, INC.



N/F
BTR REALTY LLC
DEED BOOK 50220 PAGE 173
ASSESSOR MAP 54 PARCEL 002
411 HARTFORD TPK.

N/F
BTR REALTY LLC
DEED BOOK 50220 PAGE 173
ASSESSOR MAP 54 PARCEL 007
433 HARTFORD TPK.

N/F
NSA REALTY LLC
DEED BOOK 42021 PAGE 345
ASSESSOR MAP 54 PARCEL 178
455 HARTFORD TPK.



THIS DOCUMENT, AS AN INSTRUMENT OF SERVICE, IS THE SOLE PROPERTY OF WATERMAN DESIGN ASSOCIATES, INC. ITS USE BY THE OWNER FOR OTHER PROJECTS OR FOR COMPLETION OF THIS PROJECT BY OTHERS IS STRICTLY FORBIDDEN. DISTRIBUTION IN CONNECTION WITH THIS PROJECT SHALL NOT BE CONSTRUED AS PUBLICATION IN DEROGATION OF THE ENGINEER'S RIGHTS.
©2015, WATERMAN DESIGN ASSOCIATES, INC.

REV.	DATE	DESCRIPTION	INIT.
A		INITIAL ISSUE	

PROFESSOR OF CIVIL ENGINEERING
STEPHEN T. CONVERSE
No. 33585
SHREWSBURY, MA
11/6/15

PREPARED BY:
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
291 Grafton Street
Shrewsbury, MA

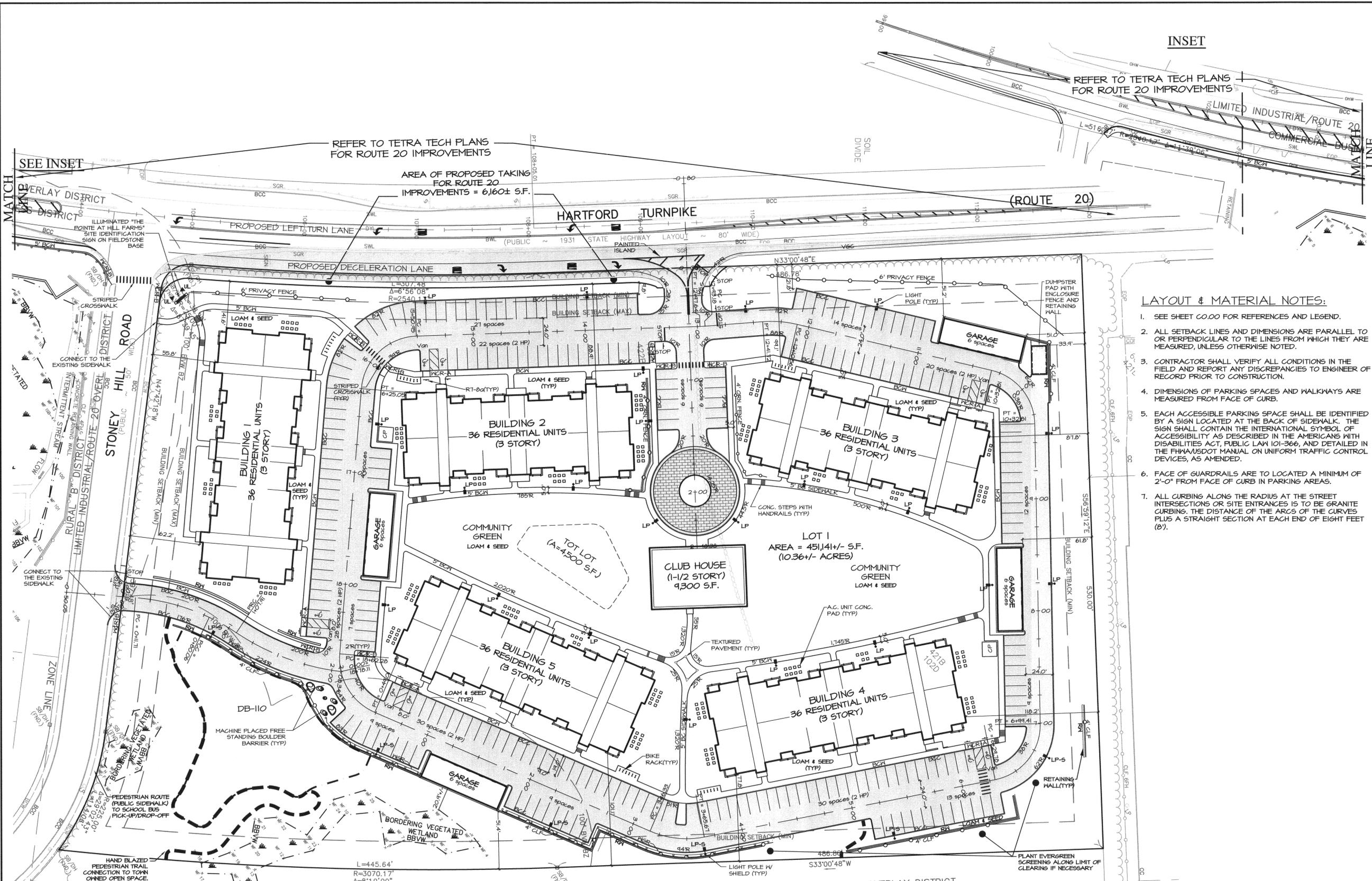
PREPARED FOR:
SMART GROWTH DESIGN, LLC
625 South Street
Shrewsbury, MA 01545

TITLE:
EXISTING CONDITIONS PLAN
440 HARTFORD PIKE (PHASE I)
Shrewsbury, MA (Worcester County)
COMPREHENSIVE PERMIT

PLAN NOTE:
1. SEE SHEET 00.00 FOR NOTES, PLAN REFERENCES AND LEGEND.

DATE:	11/06/15	SCALE:	1" = 40'
JOB NO.:		DWN. BY:	
FILE NO.:	0927.01	CHK'D. BY:	
DRAWING NO.:	0927001	SHEET:	
	0927002A		

C1.00



INSET

REFER TO TETRA TECH PLANS FOR ROUTE 20 IMPROVEMENTS

REFER TO TETRA TECH PLANS FOR ROUTE 20 IMPROVEMENTS

AREA OF PROPOSED TAKING FOR ROUTE 20 IMPROVEMENTS = 6,160± S.F.

HARTFORD TURNPIKE

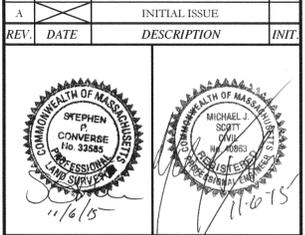
(ROUTE 20)

LAYOUT & MATERIAL NOTES:

- SEE SHEET 00.00 FOR REFERENCES AND LEGEND.
- ALL SETBACK LINES AND DIMENSIONS ARE PARALLEL TO OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
- DIMENSIONS OF PARKING SPACES AND WALKWAYS ARE MEASURED FROM FACE OF CURB.
- EACH ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN LOCATED AT THE BACK OF SIDEWALK. THE SIGN SHALL CONTAIN THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AS DESCRIBED IN THE AMERICANS WITH DISABILITIES ACT, PUBLIC LAW 101-366, AND DETAILED IN THE FHWA/USDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AS AMENDED.
- FACE OF GUARDRAILS ARE TO BE LOCATED A MINIMUM OF 2'-0" FROM FACE OF CURB IN PARKING AREAS.
- ALL CURBING ALONG THE RADIUS AT THE STREET INTERSECTIONS OR SITE ENTRANCES IS TO BE GRANITE CURBING. THE DISTANCE OF THE ARCS OF THE CURVES PLUS A STRAIGHT SECTION AT EACH END OF EIGHT FEET (8').

THIS DOCUMENT, AS AN INSTRUMENT OF SERVICE, IS THE SOLE PROPERTY OF WATERMAN DESIGN ASSOCIATES, INC. ITS USE BY THE OWNER FOR OTHER PROJECTS OR FOR COMPLETION OF THIS PROJECT BY OTHERS IS STRICTLY FORBIDDEN. DISTRIBUTION IN CONNECTION WITH THIS PROJECT SHALL NOT BE CONSTRUED AS PUBLICATION IN DEROGATION OF THE ENGINEER'S RIGHTS.
©2015, WATERMAN DESIGN ASSOCIATES, INC.

REV.	DATE	DESCRIPTION	INIT.
A		INITIAL ISSUE	



PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
 31 East Main Street
 Westborough, MA 01581
 508.366.6552
 508.366.6506 (fax)
 watermandesign.com wda@wdassoc.com

OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
 291 Grafton Street
 Shrewsbury, MA

PREPARED FOR:
SMART GROWTH DESIGN, LLC
 625 South Street
 Shrewsbury, MA 01545

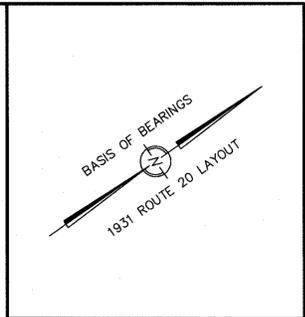
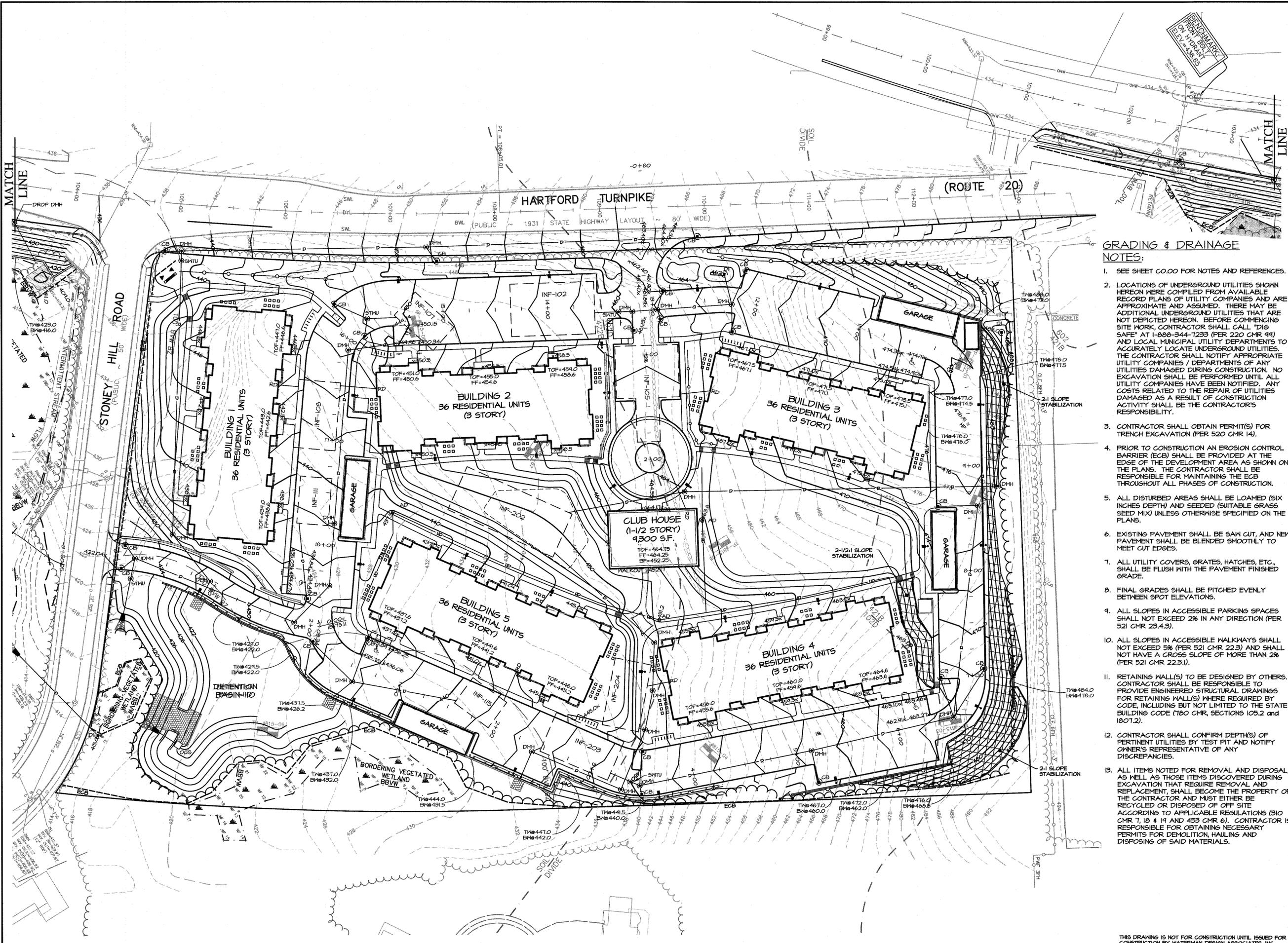
TITLE:
LAYOUT & MATERIALS PLAN (PHASE I)
THE POINTE AT HILLS FARM
 Shrewsbury, MA (Worcester County)
 COMPREHENSIVE PERMIT

DATE:	11/06/15	SCALE:	1" = 40'
JOB NO.:	0927.01	DWN. BY:	
FILE NO.:	0927200	CHK'D. BY:	
DRAWING NO.:	0927200A	SHEET:	C1.01

DISTRICT:	LIMITED INDUSTRIAL	ROUTE 20 OVERLAY DISTRICT	PROVIDED
USE	REQUIRED	REQUIRED	REQUIRED
LOT AREA (MIN.)	80,000 S.F.	40,000 S.F.	45,140 S.F. +/-
FRONTAGE (MIN.)	50'	150'	824' +/- (HARTFORD TPKE) 518' +/- (STONE HILL ROAD)
FRONT YARD (MIN.)	50'	25'	51' +/- (GARAGE) 56' +/- (RESIDENTIAL BLDG)
FRONT YARD (MAX.)	N/A	40'	51' +/- (GARAGE) 136' +/- (RESIDENTIAL BLDG)
SIDE YARD (MIN.)	50'	25'	51' +/- (GARAGE) 52' +/- (RESIDENTIAL BLDG)
REAR YARD (MIN.)	N/A (CORNER LOT)	N/A (CORNER LOT)	N/A (CORNER LOT)
OPEN SPACE (MIN.)	20%	25%	55%
LOT COVERAGE (MAX.)	50%	35%	19%
IMPERVIOUS COVER (MAX.)	N/A	65%	45%
BLDG HEIGHT (MAX.)	50'	40'	SEE ARCHITECTURAL PLANS
NUMBER OF STORIES (MAX.)	4	3	3

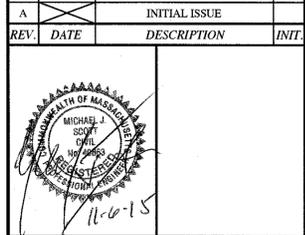
USE	REQUIRED	PROVIDED
RESIDENTIAL*	15 SPACES / UNIT x 180 = 270 SPACES	270 (246 SURFACE) (24 GARAGE)
ACCESSIBLE PARKING (HF) SPACES		
TOTAL PARKING SPACES	REQUIRED	PROVIDED
201 TO 300	7	10
VAN ACCESSIBLE	1 VAN	5 VAN
1 PER 6 ACCESSIBLE SPACES	6 ACCESSIBLE	

THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ISSUED FOR CONSTRUCTION BY WATERMAN DESIGN ASSOCIATES, INC.



THIS DOCUMENT, AS AN INSTRUMENT OF SERVICE, IS THE SOLE PROPERTY OF WATERMAN DESIGN ASSOCIATES, INC. ITS USE BY THE OWNER FOR OTHER PROJECTS OR FOR COMPLETION OF THIS PROJECT BY OTHERS IS STRICTLY FORBIDDEN. DISTRIBUTION IN CONNECTION WITH THIS PROJECT SHALL NOT BE CONSTRUED AS PUBLICATION IN DEROGATION OF THE ENGINEER'S RIGHTS. 62015, WATERMAN DESIGN ASSOCIATES, INC.

REV.	DATE	DESCRIPTION	INIT.
A		INITIAL ISSUE	



PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
 31 East Main Street
 Westborough, MA 01581
 508.366.6552
 508.366.6506 (fax)
 watermandesign.com wda@wdassoc.com

OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
 291 Grafton Street
 Shrewsbury, MA

PREPARED FOR:
SMART GROWTH DESIGN, LLC
 625 South Street
 Shrewsbury, MA 01545

TITLE:
GRADING AND DRAINAGE PLAN (PHASE I)
THE POINTE AT HILLS FARM
 Shrewsbury, MA (Worcester County)

COMPREHENSIVE PERMIT

0 40 80 120

DATE: 11/06/15 SCALE: 1" = 40'

JOB NO.: 0927.00 DWN. BY:

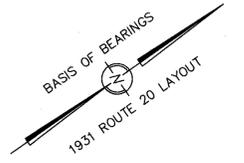
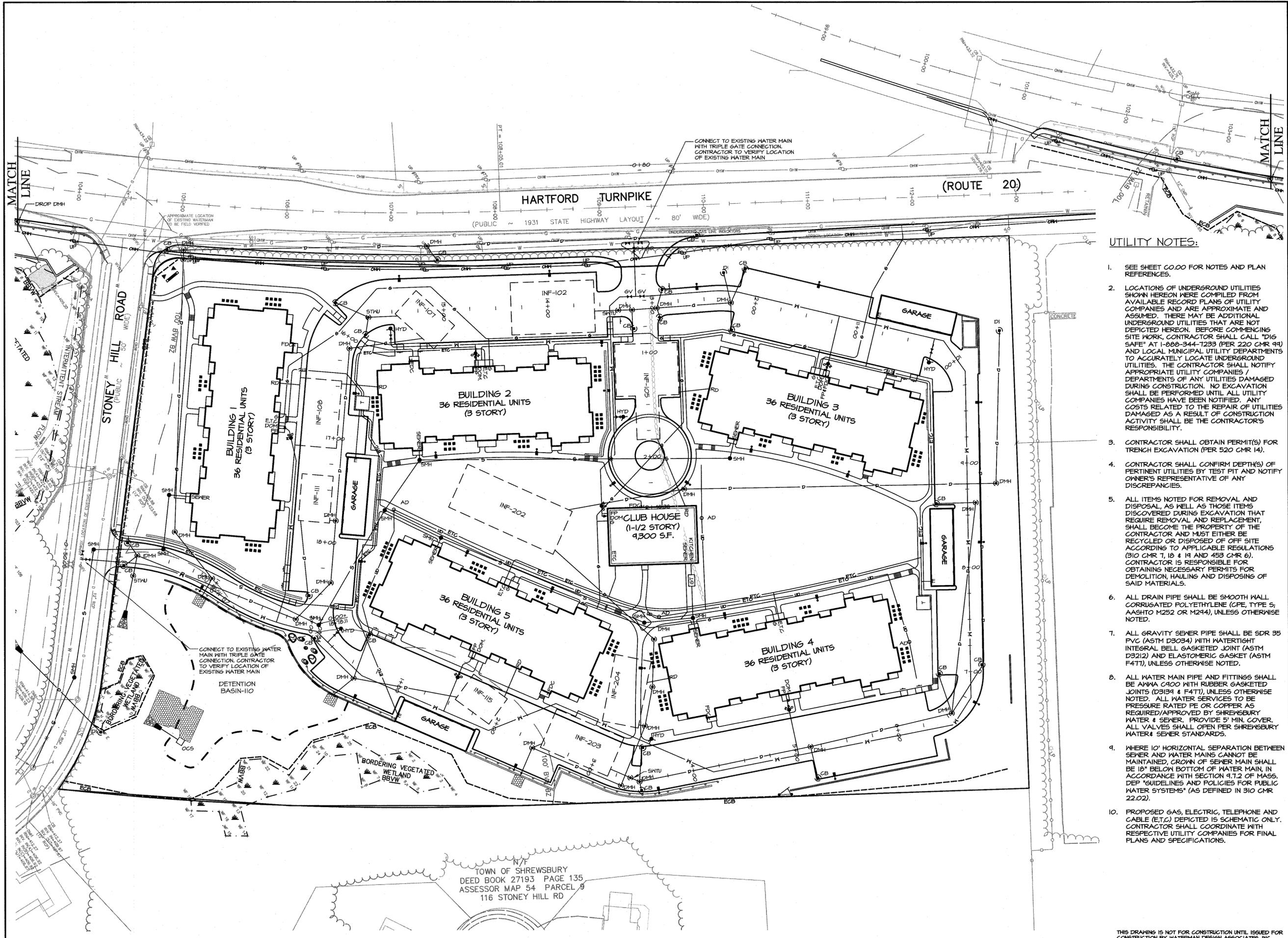
FILE NO.: 0927300 CHK'D. BY:

DRAWING NO.: 0927301A SHEET: **C1.02**

GRADING & DRAINAGE NOTES:

- SEE SHEET 00.00 FOR NOTES AND REFERENCES.
- LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND ARE APPROXIMATE AND ASSUMED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES THAT ARE NOT DEPICTED HEREON. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-7233 (PER 220 CMR 49) AND LOCAL MUNICIPAL UTILITY DEPARTMENTS TO ACCURATELY LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES, DEPARTMENTS OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. NO EXCAVATION SHALL BE PERFORMED UNTIL ALL UTILITY COMPANIES HAVE BEEN NOTIFIED. ANY COSTS RELATED TO THE REPAIR OF UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- CONTRACTOR SHALL OBTAIN PERMIT(S) FOR TRENCH EXCAVATION (PER 520 CMR 14).
- PRIOR TO CONSTRUCTION AN EROSION CONTROL BARRIER (ECB) SHALL BE PROVIDED AT THE EDGE OF THE DEVELOPMENT AREA AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ECB THROUGHOUT ALL PHASES OF CONSTRUCTION.
- ALL DISTURBED AREAS SHALL BE LOANED (SIX INCHES DEPTH) AND SEEDED (SUITABLE GRASS SEED MIX) UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- EXISTING PAVEMENT SHALL BE SAW CUT, AND NEW PAVEMENT SHALL BE BLENDED SMOOTHLY TO MEET CUT EDGES.
- ALL UTILITY COVERS, GRATES, HATCHES, ETC., SHALL BE FLUSH WITH THE PAVEMENT FINISHED GRADE.
- FINAL GRADES SHALL BE PITCHED EVENLY BETWEEN SPOT ELEVATIONS.
- ALL SLOPES IN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION (PER 521 CMR 23.4.3).
- ALL SLOPES IN ACCESSIBLE WALKWAYS SHALL NOT EXCEED 5% (PER 521 CMR 22.3) AND SHALL NOT HAVE A GROSS SLOPE OF MORE THAN 2% (PER 521 CMR 22.3.1).
- RETAINING WALL(S) TO BE DESIGNED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ENGINEERED STRUCTURAL DRAWINGS FOR RETAINING WALL(S) WHERE REQUIRED BY CODE, INCLUDING BUT NOT LIMITED TO THE STATE BUILDING CODE (180 CMR SECTIONS 105.2 AND 1807.2).
- CONTRACTOR SHALL CONFIRM DEPTHS OF PERTINENT UTILITIES BY TEST PIT AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
- ALL ITEMS NOTED FOR REMOVAL AND DISPOSAL, AS WELL AS THOSE ITEMS DISCOVERED DURING EXCAVATION THAT REQUIRE REMOVAL AND REPLACEMENT, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND MUST EITHER BE RECYCLED OR DISPOSED OFF-SITE ACCORDING TO APPLICABLE REGULATIONS (310 CMR 7.10 & 19 AND 453 CMR 6). CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR DEMOLITION, HAULING AND DISPOSING OF SAID MATERIALS.

THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ISSUED FOR CONSTRUCTION BY WATERMAN DESIGN ASSOCIATES, INC.

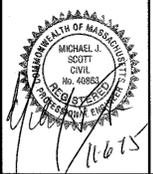


THIS DOCUMENT, AS AN INSTRUMENT OF SERVICE, IS THE SOLE PROPERTY OF WATERMAN DESIGN ASSOCIATES, INC. ITS USE BY THE OWNER FOR OTHER PROJECTS OR FOR COMPLETION OF THIS PROJECT BY OTHERS IS STRICTLY FORBIDDEN. DISTRIBUTION IN CONNECTION WITH THIS PROJECT SHALL NOT BE CONSTRUED AS PUBLICATION IN DEROGATION OF THE ENGINEERS RIGHTS. ©2015, WATERMAN DESIGN ASSOCIATES, INC.

UTILITY NOTES:

1. SEE SHEET 00.00 FOR NOTES AND PLAN REFERENCES.
2. LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND ARE APPROXIMATE AND ASSUMED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES THAT ARE NOT DEPICTED HEREON. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-7233 (PER 220 CMR 94) AND LOCAL MUNICIPAL UTILITY DEPARTMENTS TO ACCURATELY LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES / DEPARTMENTS OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. NO EXCAVATION SHALL BE PERFORMED UNTIL ALL UTILITY COMPANIES HAVE BEEN NOTIFIED. ANY COSTS RELATED TO THE REPAIR OF UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
3. CONTRACTOR SHALL OBTAIN PERMIT(S) FOR TRENCH EXCAVATION (PER 520 CMR 14).
4. CONTRACTOR SHALL CONFIRM DEPTH(S) OF FERTINENT UTILITIES BY TEST PIT AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
5. ALL ITEMS NOTED FOR REMOVAL AND DISPOSAL, AS WELL AS THOSE ITEMS DISCOVERED DURING EXCAVATION THAT REQUIRE REMOVAL AND REPLACEMENT, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND MUST EITHER BE RECYCLED OR DISPOSED OF OFF SITE ACCORDING TO APPLICABLE REGULATIONS (310 CMR 7, 18 & 19 AND 453 CMR 6). CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR DEMOLITION, HAULING AND DISPOSING OF SAID MATERIALS.
6. ALL DRAIN PIPE SHALL BE SMOOTH WALL CORRUGATED POLYETHYLENE (CPE, TYPE S; AASHTO M252 OR M244), UNLESS OTHERWISE NOTED.
7. ALL GRAVITY SEWER PIPE SHALL BE SDR 35 PVC (ASTM D3034) WITH WATERTIGHT INTEGRAL BELL GASKETED JOINT (ASTM D3212) AND ELASTOMERIC GASKET (ASTM F471), UNLESS OTHERWISE NOTED.
8. ALL WATER MAIN PIPE AND FITTINGS SHALL BE ANPPA C900 WITH RUBBER GASKETED JOINTS (D3919 & F471) UNLESS OTHERWISE NOTED. ALL WATER SERVICES TO BE PRESSURE RATED PE OR COPPER AS REQUIRED/APPROVED BY SHREWSBURY WATER & SEWER. PROVIDE 5' MIN. COVER. ALL VALVES SHALL OPEN PER SHREWSBURY WATER & SEWER STANDARDS.
9. WHERE 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAINS CANNOT BE MAINTAINED, CROWN OF SEWER MAIN SHALL BE 18" BELOW BOTTOM OF WATER MAIN IN ACCORDANCE WITH SECTION 9.1.2 OF MASS. DEP "GUIDELINES AND POLICIES FOR PUBLIC WATER SYSTEMS" (AS DEFINED IN 310 CMR 22.02).
10. PROPOSED GAS, ELECTRIC, TELEPHONE AND CABLE (E.T.C.) DEPICTED IS SCHEMATIC ONLY. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR FINAL PLANS AND SPECIFICATIONS.

REV.	DATE	DESCRIPTION	INIT.



PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
 31 East Main Street
 Westborough, MA 01581
 508.366.6552
 508.366.6506 (fax)
 watermandesign.com wda@wdasoc.com

OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
 291 Grafton Street
 Shrewsbury, MA

PREPARED FOR:
SMART GROWTH DESIGN, LLC
 625 South Street
 Shrewsbury, MA 01545

TITLE:
UTILITIES PLAN (PHASE I)
THE POINTE AT HILLS FARM
 Shrewsbury, MA (Worcester County)

COMPREHENSIVE PERMIT



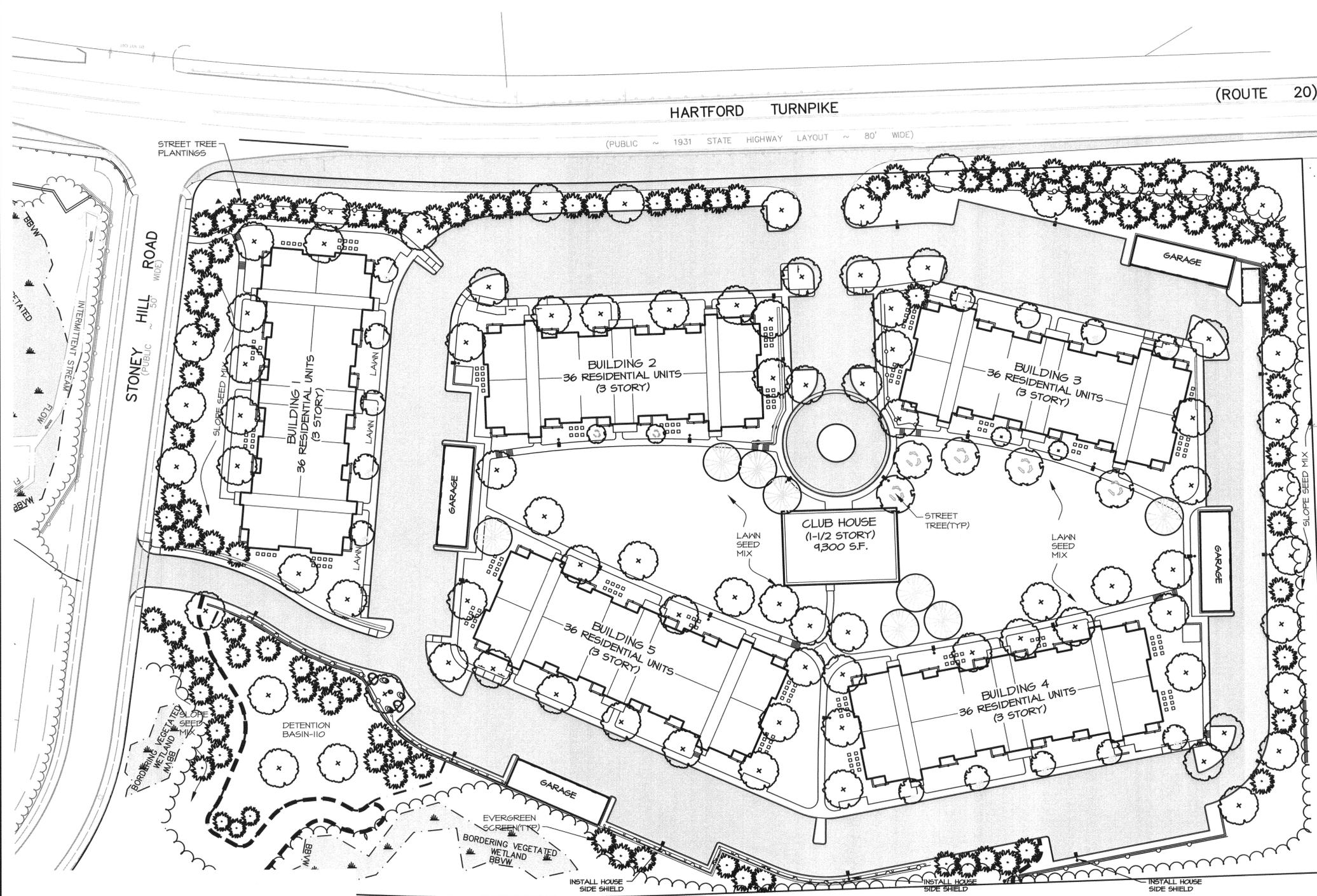
DATE:	11/06/15	SCALE:	1" = 40'
JOB NO.:	0927.00	DWN. BY:	
FILE NO.:	0927300	CHK'D BY:	
DRAWING NO.:	0927302A	SHEET:	C1.03

THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ISSUED FOR CONSTRUCTION BY WATERMAN DESIGN ASSOCIATES, INC.

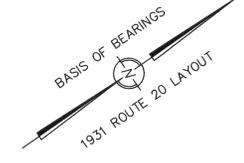
TOWN OF SHREWSBURY
 DEED BOOK 27193 PAGE 135
 ASSESSOR MAP 54 PARCEL 9
 116 STONEY HILL RD

ALL TREE AND VEGETATION REMOVAL SHALL BE COMPLETED BY AN ASIAN LONGHORNED BEETLE CERTIFIED CONTRACTOR.

ALL TREES AND SHRUBS TO BE PLANTED SHALL BE ASIAN LONGHORNED BEETLE RESISTANT.



- STREET TREE
- 'GREEN VASE' ZELKOVA
 - JAPANESE STEWARTIA
 - PERSIAN PARROTTA
 - GINKGO BILOBA
 - LITTLE LEAF LINDEN
 - EVERGREEN SCREEN
 - BLUE SPRUCE
 - WHITE PINE
 - NORWAY SPRUCE
 - CANADIAN HEMLOCK
 - HINOKI CYPRESS

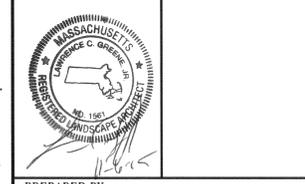


PLANTING & LIGHTING NOTES:

1. SEE SHEET 00.00 FOR GENERAL NOTES, REFERENCES AND LEGEND.
2. NOTIFY DIG-SAFE AT 1-800-DIG-SAFE AND LOCAL AUTHORITIES PRIOR TO ANY TYPE OF SITE PREPARATION OR CONSTRUCTION.
3. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL AND MULCH IN SUFFICIENT QUANTITIES TO COMPLETE PLANTING AS SHOWN ON THE DRAWINGS.
4. DRAWING QUANTITIES TAKE PRECEDENCE OVER PLANT LIST QUANTITIES.
5. ALL PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES AS OUTLINED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN, INC.
6. ANY PROPOSED SUBSTITUTION OF PLANT MATERIAL SHALL BE EQUAL IN OVERALL HEIGHT, LEAF, FORM, BRANCHING HABIT, FRUIT, FLOWER, COLOR, AND CULTURE.
7. LAWN AREAS ARE TO BE LOAMED AND SEEDED UNLESS OTHERWISE NOTED.
8. LAWN SEED MIX SHALL BE THE PREVIOUS YEARS CROP, 35% JEFFERSON KENTUCKY BLUEGRASS, 35% CARMEN CHEVENS FESCUE AND 30% STALLION PERENNIAL RYEGRASS, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 150 SQUARE FEET.
9. SLOPE SEED MIX SHALL BE THE PREVIOUS YEARS CROP. PLANT AT A RATE OF 1 LB. PER 150 SQUARE FEET. SEED SHALL BE STALLION PERENNIAL RYE 10%, GREY PINE 30%, ANNUAL RYE GRASS 15%, JEFFERSON KENTUCKY BLUE GRASS 10%, RED TOP CLOVER 5%, AND LADINO CLOVER 5%, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 150SF.
10. LAWN SEED AREAS SHALL BE NOT BE DEEMED ACCEPTABLE UNTIL IN EXCESS OF 40% OF EACH AREA, INDEPENDENTLY, IS GERMINATED, GROWING AND DISPLAYING HEALTHY, UNIFORM GROWTH AND HAS BEEN CUT TWICE. THE SITE CONTRACTOR IS RESPONSIBLE FOR APPLYING AT A MINIMUM 1" OF WATER A WEEK UNTIL THE SEEDS ARE ACCEPTED. THE WATERING SHALL OCCUR IN SMALL DOSES. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY WEEDS (CRAB GRASS) WITHIN THE SEEDED AREAS UNTIL THE SEEDS ARE ACCEPTED.
11. THE DETENTION BASIN AND SHALE SEED MIX SHALL BE THE NEW ENGLAND EROSION CONTROL/ RESTORATION SEED MIX BY NEW ENGLAND WETLAND PLANTS INC. 620 WEST STREET, AMHERST, MA 01002, PH-413-544-4000. PLANT AT A RATE OF 1 LB. PER 1,250SF.
12. THE HYDRO SEED SLURRY SHALL BE A HOOD BASED BONDED FIBER MATRIX. THE APPLICATION RATE SHALL BE 2500-3,000LB. PER ACRE SPRAYED IN A LEAST TWO DIRECTIONS. DO NOT APPLY HYDRO SEED SLURRY IF RAIN IS EXPECTED WITHIN 12 HOURS, AND WHEN TEMPERATURES ARE BELOW 50 DEGREES.
13. ALL LANDSCAPE ISLANDS WITHIN PARKING AREAS ARE TO BE BARK MULCHED TO A MINIMUM DEPTH OF 3" UNLESS OTHERWISE NOTED.
14. ALL PLANTING BEDS ARE TO BE CROWNED WITH TOPSOIL ABOVE ADJACENT AREAS.
15. WITHIN THE LANDSCAPE BEDS ADJACENT TO THE BUILDING FOUNDATIONS, NO (HEMLOCK, PINE, SPRUCE, OR CEDAR) MULCH OR OTHER COMBUSTIBLE LANDSCAPE MATERIALS SHALL BE INSTALLED WITHIN 18" OF THE FOUNDATION.
16. PROVIDE A PLANTING BED WITH A MINIMUM DIAMETER OF 5' AROUND ALL TREES NOT LOCATED WITHIN A PLANTING BED. PROVIDE A CONTINUOUS MULCH BED AROUND ALL SHRUB PLANTINGS AS INDICATED ON THE PLANS.
17. PROVIDE A MINIMUM 3" GRASS STRIP ALONG ALL CURB LINES AS INDICATED ON THE PLANS.
18. ALL TREE PLANTINGS TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION FROM PROPOSED AND EXISTING SEWER AND WATER LINES.
19. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER IRRIGATION TO ALL PLANT MATERIAL. IRRIGATION DESIGN AND PERMITTING TO BE PROVIDED BY OTHERS.
20. ALL TREES AND SHRUBS SHALL BE PLANTED WITH THE 'BEST FACE' SHOWING. ALL PLANTS SHALL BE BALLED AND CONTAINER GROWN, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
21. ALL CONTAINER GROWN STOCK SHALL BE HEALTHY, VIGOROUS, WELL ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE GROWING. THEY SHALL HAVE TOPS OF GOOD QUALITY, NO APPARENT INJURY AND BE IN A HEALTHY GROWING CONDITION. A CONTAINER GROWN PLANT SHALL HAVE A WELL ESTABLISHED ROOT SYSTEM REACHING THE SIDES OF THE CONTAINER TO MAINTAIN A FIRM BALL.
22. THE QUALITY OF ALL TREES & SHRUBS IS TO BE NORMAL FOR THE SPECIES. ALL PLANTS ARE TO HAVE DEVELOPED ROOT SYSTEMS, TO BE FREE OF INSECTS AND DISEASES AS WELL AS MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR PLANTINGS.
23. ALL CONIFERS SHALL HAVE DORMANT BUDS AND SECONDARY NEEDLES.
24. WHERE SPECIFIED, CALIPER SIZE IS TO BE THE OVERRIDING FACTOR IN TREE SELECTION. CALIPER SIZE SHALL BE MEASURED 12" ABOVE THE ROOTBALL.
25. PLANT SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED BY THE PROJECT LANDSCAPE ARCHITECT.
26. ALL DISTURBED AREAS NOT SHOWN OTHERWISE SHALL BE LOAMED AND SEEDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS.
27. PRIOR TO INSTALLING ANY PLANT MATERIAL, THE CONTRACTOR SHALL SUBMIT A LOAM SOIL SAMPLE FOR A ROUTINE, ORGANIC, SALTS, AND NITRATE SOIL TEST. UPON THE RESULTS OF THIS TEST, THE SITE CONTRACTOR SHALL AMEND THE LOAM AS RECOMMENDED. SEND THE SOIL SAMPLE TO THE UNIVERSITY OF MASSACHUSETTS SOIL AND PLANT TISSUE TESTING LABORATORY, NEST EXPERIMENT STATION, 682 NORTH PLEASANT ST., UNIVERSITY OF MASSACHUSETTS, AMHERST, MA 01003.
28. THE ROOTS OF NEWLY PLANTED TREES AND SHRUBS MUST BE KEPT STEADILY MOIST, AS THE DEVELOPING ROOTS ESTABLISH IN THE NEW SOIL. AT PLANTING, WATER THOROUGHLY TO SOAK THE ROOTS AND TO SETTLE THE NEW SOIL AROUND THE ROOT BALL. THE AMOUNT OF SUPPLEMENTAL WATER NEEDED EACH WEEK DURING THE FIRST GROWING SEASON AFTER PLANTING DEPENDS ON RECENT RAINFALL, TEMPERATURE, AND WIND. IF LESS THAN ONE-INCH OF RAIN HAS FALLEN OVER THE PAST FIVE TO SEVEN DAYS, THE NEW PLANTINGS MUST BE WATERED. LAWNS, TREES, AND SHRUBS WATERINGS SHALL OCCUR AT A MINIMUM OF TWO (2) TIMES A DAY FOR THE FIRST TWO (2) MONTHS, ONCE IN THE EARLY MORNING AND THEN THE OTHER IN THE LATE AFTERNOON. IN GENERAL, TEN GALLONS OF WATER APPLIED TWICE A WEEK WILL YIELD A 20"-24" ROOT BALL AND PROVIDE THE EQUIVALENT OF ONE INCH OF RAIN FALL. NEW LAWNS SHALL BE WATERED SO THAT IT RECEIVES AT A MINIMUM ONE INCH (1") OF WATER EVERY WEEK.
29. DURING CONSTRUCTION LANDSCAPE AREAS SHALL BE PROTECTED FROM SOIL COMPACTION.
30. LANDSCAPE AREAS SHALL BE DEEP TILLED TO A DEPTH OF TWELVE INCHES TO FACILITATE DEEP WATER PENETRATION.

THIS DOCUMENT, AS AN INSTRUMENT OF SERVICE, IS THE SOLE PROPERTY OF WATERMAN DESIGN ASSOCIATES, INC. ITS USE BY THE OWNER FOR OTHER PROJECTS OR FOR COMPLETION OF THIS PROJECT BY OTHERS IS STRICTLY FORBIDDEN. DISTRIBUTION IN CONNECTION WITH THIS PROJECT SHALL NOT BE CONSTRUED AS PUBLICATION OR DEROGATION OF THE ENGINEER'S RIGHTS.
©2015, WATERMAN DESIGN ASSOCIATES, INC.

REV.	DATE	DESCRIPTION	INT.
A		INITIAL ISSUE	INT.



PREPARED BY:
WDA
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
291 Grafton Street
Shrewsbury, MA

PREPARED FOR:
SMART GROWTH DESIGN, LLC
625 South Street
Shrewsbury, MA 01545

TITLE:
PLANTING AND LIGHTING PLAN
THE POINTE AT HILLS FARM
Shrewsbury, MA (Worcester County)
COMPREHENSIVE PERMIT

DATE:	11/06/15	SCALE:	1" = 40'
JOB NO.:	0927.01	DWN. BY:	
FILE NO.:	0927400	CHK'D. BY:	
DRAWING NO.:	0927401A	SHEET:	C1.04