

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

Revised: June 24, 2016
September 20, 2016

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

PHASE I

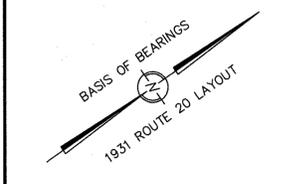
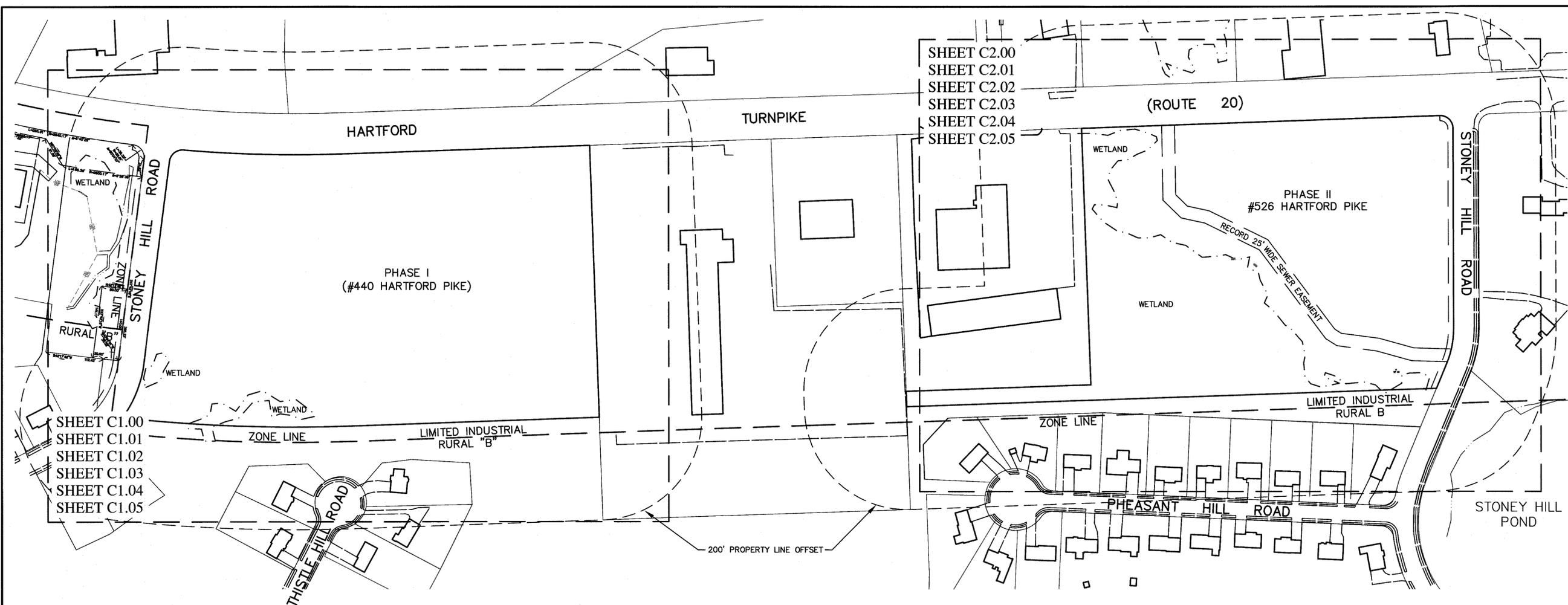
C1.00 EXISTING CONDITIONS PLAN
C1.01 LAYOUT AND MATERIALS PLAN
C1.02 GRADING AND DRAINAGE PLAN
C1.03 UTILITY PLAN
C1.04 PLANTING AND LIGHTING PLAN

PHASE II

C2.00 EXISTING CONDITIONS PLAN
C2.01 LAYOUT AND MATERIALS PLAN
C2.02 GRADING AND DRAINAGE PLAN
C2.03 UTILITY PLAN
C2.04 PLANTING AND LIGHTING PLAN

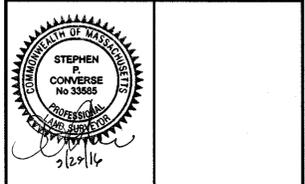
PHASES I & II

C3.00 DETAILS
C3.01 DETAILS
C3.02 DETAILS
C3.03 DETAILS
C3.04 DETAILS
C3.05 DETAILS
C3.06 DETAILS
C3.07 DETAILS



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REV.	DATE	DESCRIPTION	INIT.
C	09/20/16	PEER REVIEW COMMENTS	
B	06/24/16	NOTICE OF INTENT	
A		INITIAL ISSUE	



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 watermandesign.com wda@wdassoc.com

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 Shrewsbury, MA 01545

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.: 0927011C SHEET: **C0.00**

DESCRIPTION	EXISTING	RECORD	DESCRIPTION	EXISTING	RECORD
100' WETLAND BUFFER ZONE	100' BVW 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			PIPE -- POLYVINYL CHLORIDE	PVC	PVC
VEGETATED WETLANDS			POST INDICATOR VALVE	PIV	PIV
BUILDING	BLDG	BLDG	RIPRAP	RIP	RIP
CAPE COD BERM	CCB	CCB	SEWER MANHOLE/SEWER LINE	S-S	S-S
CATCH BASIN	CB	CB	SIGN	S	S
CATCH BASIN -- ROUND	CB	CB	SLOPED GRANITE EDGING	SSE	SSE
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	T-T	T-T
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	EGP	EGP	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		
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	HP + 150.25	HP + 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:
 PHASE I:
 DEED BOOK 8104 PAGE 312

PLAN REFERENCES:
 PHASE I:
 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 25027C0639F EFFECTIVE JULY 16, 2014

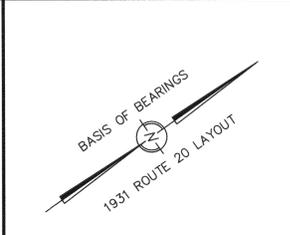
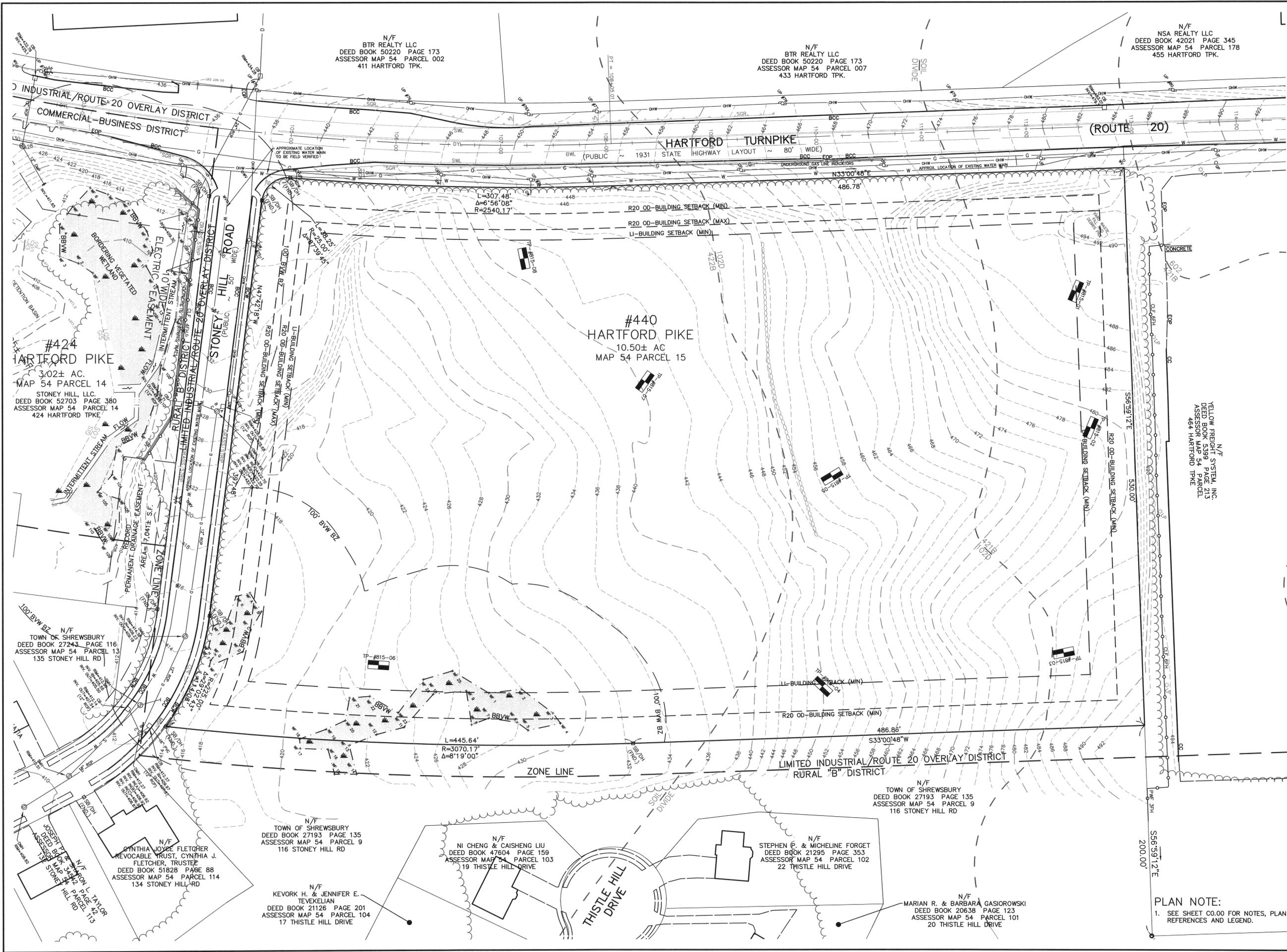
ZONING CLASSIFICATION:
 LIMITED INDUSTRIAL
 MINIMUM LOT AREA: 80,000 S.F.
 MINIMUM LOT FRONTAGE: 50 FEET
 MINIMUM FRONT YARD: 50 FEET
 MINIMUM SIDE YARD: 50 FEET
 MINIMUM REAR YARD: 50 FEET
 MAXIMUM BUILDING HEIGHT: 50 FEET
 MAXIMUM BUILDING STORIES: 4
 MAXIMUM LOT COVERAGE: 50%
 MINIMUM OPEN SPACE: 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 (MASSDEP FILE # 285-1460). WETLAND LIMITS FOR PHASE II RE-DELINEATED BY WATERMAN DESIGN ASSOCIATES IN JUNE 2016 AND IS SUBJECT TO RE-CONFIRMATION BY THE SHREWSBURY CONSERVATION COMMISSION WITH THE ISSUANCE OF AN ORDER OF CONDITIONS. WETLAND LIMITS FOR PHASE I CONFIRMED BY THE SHREWSBURY CONSERVATION COMMISSION WITH THE ISSUANCE OF AN ORDER OF RESOURCE AREA DELINEATION DATED JANUARY 4, 2016 (MASSDEP FILE # 285-1714).
 - 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 25027C0639F, EFFECTIVE DATE: JULY 16, 2014.
 - THE SUBJECT PARCEL(S) DO NOT LIE WITHIN THE TOWN OF SHREWSBURY AQUIFER OVERLAY PROTECTION DISTRICT.

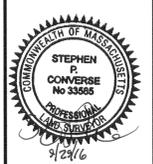
SOILS KEY:
 COMPILED FROM SOIL SURVEY OF WORCESTER COUNTY, MASSACHUSETTS, NORTHERN PART NATIONAL COOPERATIVE SOIL SURVEY (NCSS)

102C -- CHATFIELD HOLLIS ROCK OUTCROP COMPLEX, 3 TO 15 PERCENT SLOPES
 308B -- 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



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 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

DATE:	11/06/15	SCALE:	1" = 40'
JOB NO.:	0927.01	DWN. BY.:	
FILE NO.:	0927001	CHK'D. BY.:	
DRAWING NO.:	0927012C	SHEET:	

PLAN NOTE:
 1. SEE SHEET C0.00 FOR NOTES, PLAN REFERENCES AND LEGEND.

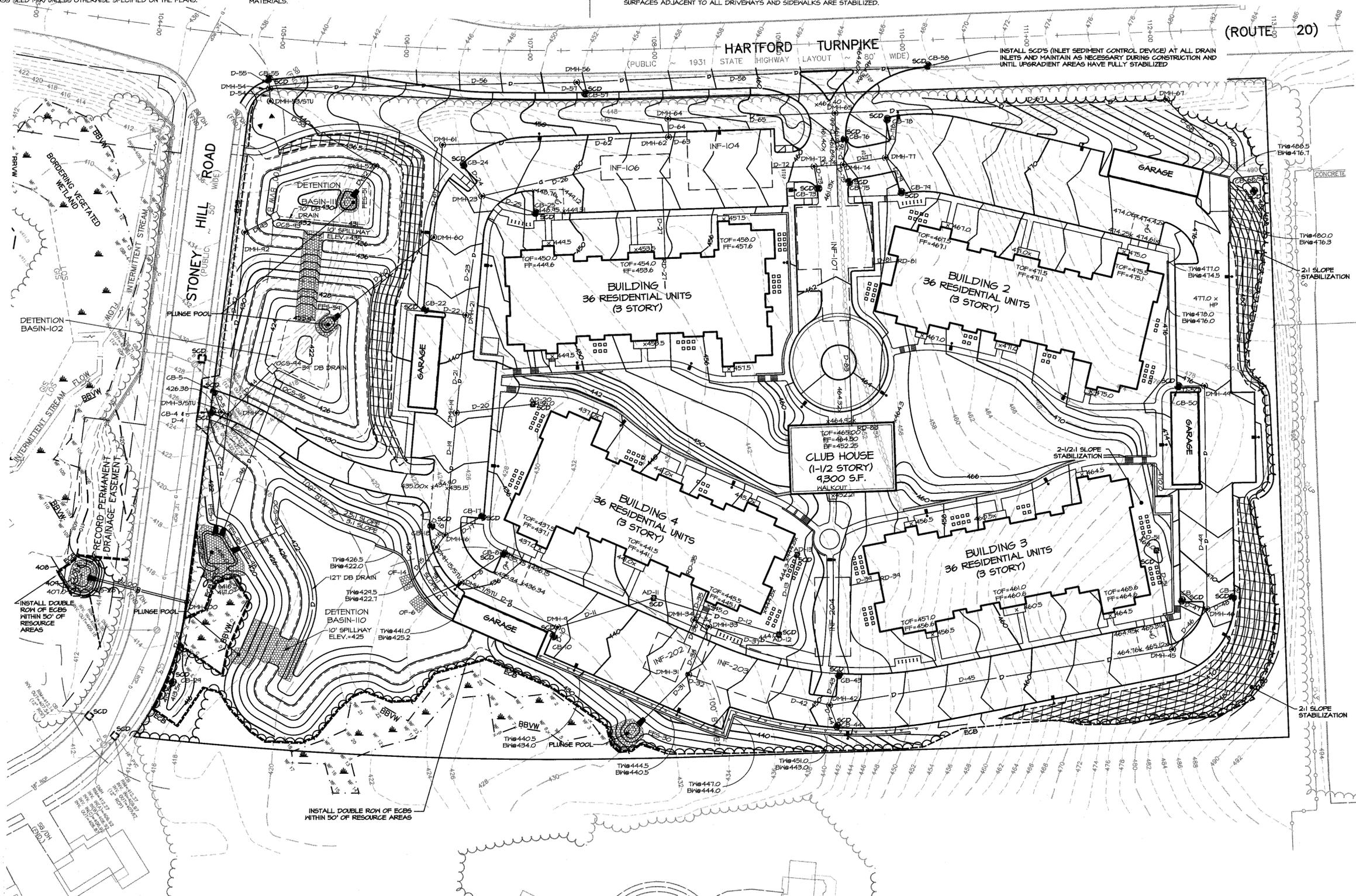
C1.00

GRADING & DRAINAGE NOTES:

- SEE SHEET C0.00 FOR NOTES AND REFERENCES.
- SEE SHEET C2.02 FOR EROSION AND SEDIMENTATION CONTROL NOTES, STORMWATER CONTROL NOTES AND INSPECTION & MONITORING PROCEDURES.
- 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. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-1233 (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 PERMITS 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 LOAMED (SIX INCH 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 CROSS 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 OF OFF SITE ACCORDING TO APPLICABLE REGULATIONS (910 CMR 7.10 & 14 AND 453 CMR 6). CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR DEMOLITION, HAULING AND DISPOSING OF SAID MATERIALS.

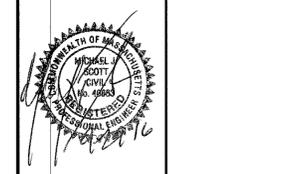
GENERAL CONSTRUCTION SEQUENCE:

- CLEAR AND GRUB TREES FROM PROPOSED CONSTRUCTION ENTRANCE.
- PROVIDE CONSTRUCTION ENTRANCE(S) (ANTI-TRACKING PAD).
- CLEAR TREES FROM PROPOSED CONSTRUCTION AREA.
- STAKE LIMITS OF CLEARING AND REVIEW TO DETERMINE TREES TO BE RETAINED.
- INSTALL EROSION CONTROL BARRIER AT THE LIMIT OF CLEARING AND LIMIT OF WORK LINE.
- ROUGH GRADE STORMWATER MANAGEMENT SWALES/BASINS, DIVERSION SWALES AND INSTALL TEMPORARY RISER PIPES. INSTALL DRAINAGE INFRASTRUCTURE, FLUNGE POOLS AND RIPRAP APRONS. LOAM AND SEED BASIN EMBANKMENTS AS SOON AS WEATHER CONDITIONS PERMIT.
- GRUB ACCESS DRIVEWAY CORRIDORS, PARKING AREAS, AND BUILDING AREA INCLUSIVE OF OFF GRADING.
- PROPERLY DISPOSE OF AND/OR STOCKPILE STUMPS AND BRUSH.
- STOCKPILE TOP AND SUBSOIL FROM CLEARED AREAS AND SURROUND WITH EROSION CONTROL BARRIER IF STOCKPILE IS TO REMAIN FOR MORE THAN 48 HOURS.
- ROUGH GRADE ACCESS DRIVEWAY CORRIDORS AND PARKING AREAS.
- INSTALL DRAINAGE, WATER, SEWER AND UNDERGROUND UTILITIES WITHIN ACCESS DRIVEWAYS AND SERVICES TO BUILDING.
- ADJUST GRADES IN BASINS AND SWALES. FINAL STABILIZATION AS NEEDED (REPAIR LOAM AND SEED, HAY MULCH, SOD, HYDROSEED, ETC.).
- SUBGRADE ACCESS DRIVEWAYS AND PARKING AREAS.
- PLACE AND ROLL GRAVEL BASE, APPLY BINDER COURSE ON AREAS TO BE PAVED.
- PLACE CURBING WHERE APPLICABLE.
- EXCAVATE, FORM AND POUR BUILDING FOUNDATIONS AND ROUGH GRADE AROUND FOUNDATIONS TO LIMITS OF YARDS CONSTRUCTING. RETAINING WALLS, SIDEWALKS AND SLOPE STABILIZATION WHERE INDICATED.
- BEGIN FRAMING AND CONTINUE BUILDING CONSTRUCTION.
- FINAL GRADE PROPOSED LAWN AREAS ALONG ALL DRIVEWAYS, PARKING AREAS, SIDEWALKS, PLANT STREET TREES, LOAM AND SEED, APPLY HAY MULCH COVER.
- ADJUST CATCH BASIN GRATES, PLACE HAYBALE CHECK DAMS ALONG CURBS PRIOR TO CATCH BASINS.
- APPLY TOP COURSE OF PAVEMENT TO ACCESS DRIVES, PARKING AREAS, AND SIDEWALKS.
- STREET SWEEPING SHOULD OCCUR ONCE PER WEEK OR AS SITE/CLIMATIC CONDITIONS WARRANT, DURING CONSTRUCTION AND UNTIL THE SURFACES ADJACENT TO ALL DRIVEWAYS AND SIDEWALKS ARE STABILIZED.



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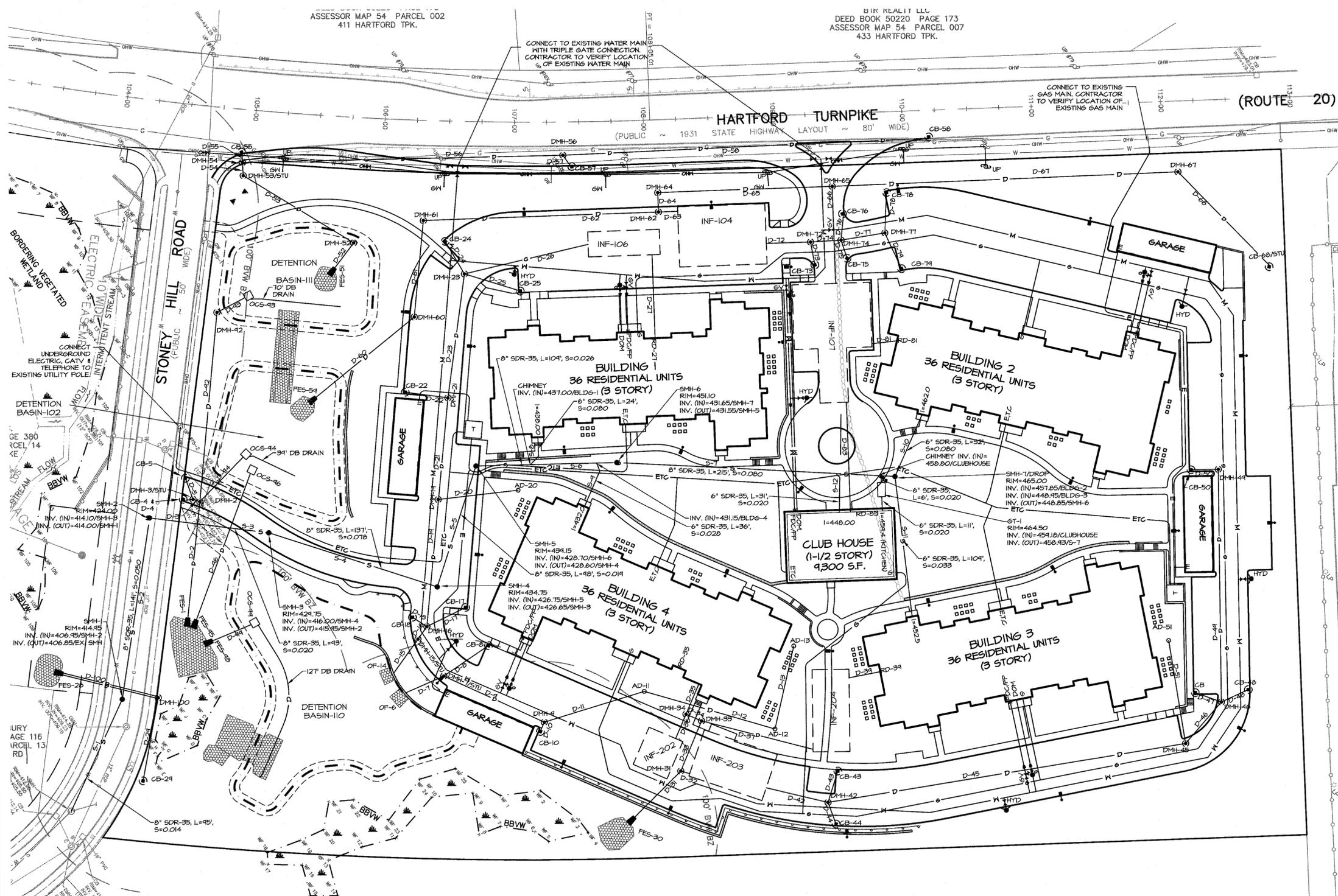
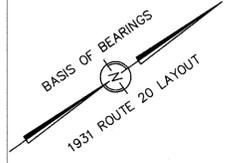
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 Shrewsbury, MA

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 625 South Street
 Shrewsbury, MA 01545

TITLE:
GRADING AND DRAINAGE PLAN (PHASE I)
THE POINTE AT HILLS FARM
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DATE:	11/06/15	SCALE:	1" = 40'
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FILE NO.:	0927300	CHK'D BY:	
DRAWING NO.:	0927301C	SHEET:	C1.02

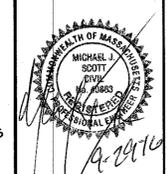
THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ISSUED FOR CONSTRUCTION BY WATERMAN DESIGN ASSOCIATES, INC.



- SEE SHEET 00.00 FOR NOTES AND PLAN 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. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-1233 (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.
- CONTRACTOR SHALL OBTAIN PERMIT(S) FOR TRENCH EXCAVATION (PER 520 CMR 14).
- 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 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.
- ALL DRAIN PIPE SHALL BE SMOOTH WALL CORRUGATED POLYETHYLENE (CPE, TYPE 5; AASHTO M252 OR M244), UNLESS OTHERWISE NOTED.
- 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.
- ALL WATER MAIN PIPE AND FITTINGS SHALL BE ANVVA C400 WITH RUBBER GASKETED JOINTS (D3914 & 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.
- 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 9.7.2 OF MASS. DEP "GUIDELINES AND POLICIES FOR PUBLIC WATER SYSTEMS" (AS DEFINED IN 310 CMR 22.02).
- PROPOSED GAS, ELECTRIC, TELEPHONE AND CABLE (E.T.C.) DEPICTED AS SCHEMATIC ONLY. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR FINAL PLANS AND SPECIFICATIONS.

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 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.:	0927300C	CHKD. BY:	
DRAWING NO.:	0927302C	SHEET:	C1.03

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ASSESSOR MAP 54 PARCEL 002
 411 HARTFORD TPK.

DEED BOOK 50220 PAGE 173
 ASSESSOR MAP 54 PARCEL 007
 433 HARTFORD TPK.

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

N/F
 NI CHENG & CAISHENG LIU
 DEED BOOK 47604 PAGE 159
 ASSESSOR MAP 54 PARCEL 103
 10 TRUSTS WAY

N/F
 STEPHEN P. & MICHELE FORGET
 DEED BOOK 21295 PAGE 353
 ASSESSOR MAP 54 PARCEL 102

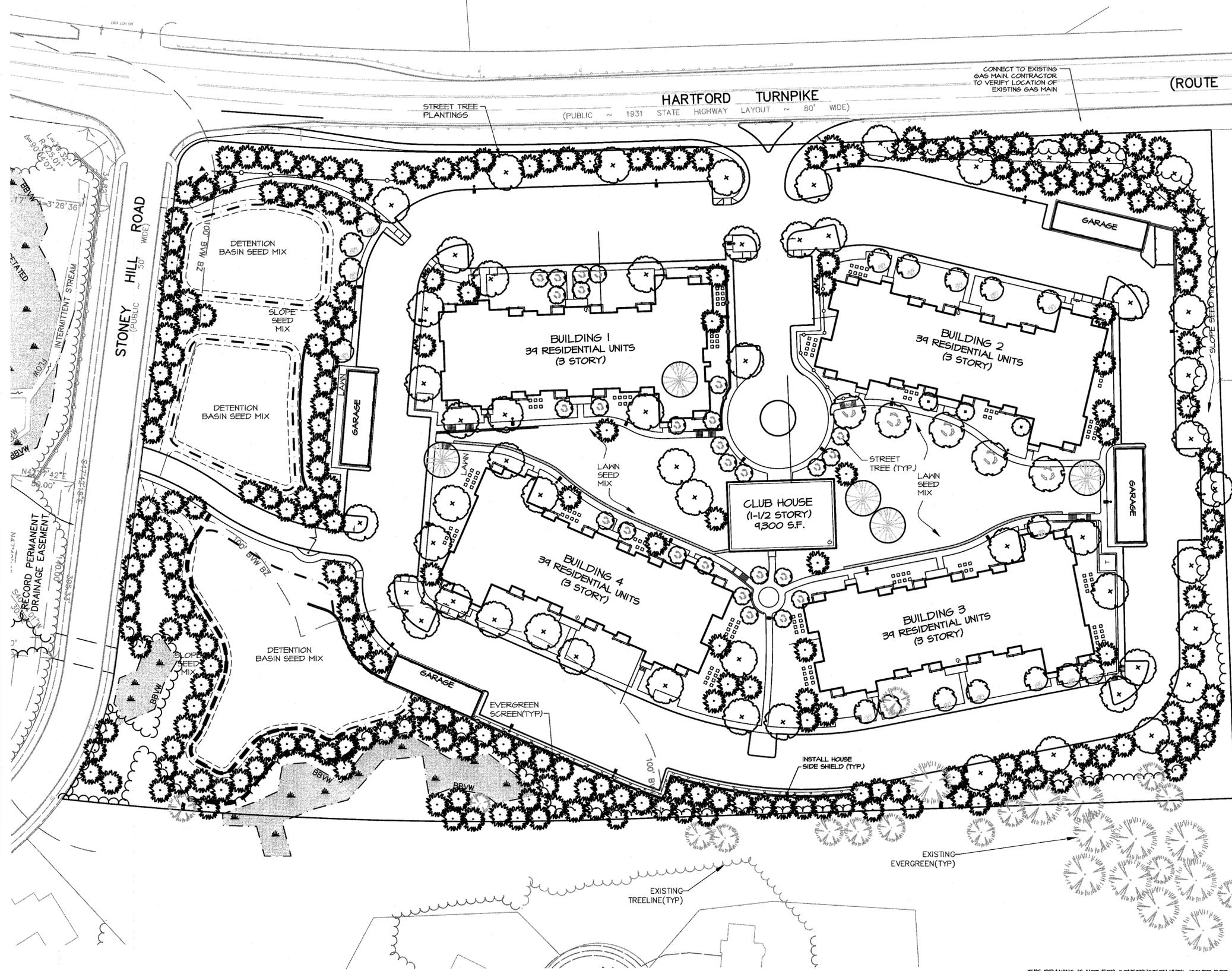
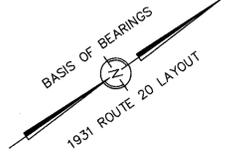
N/F
 TOWN OF SHREWSBURY
 DEED BOOK 27193 PAGE 135
 ASSESSOR MAP 54 PARCEL 9
 116 STONEY HILL RD

ALB NOTES:

1. ALL TREE AND VEGETATION REMOVAL SHALL BE COMPLETED BY AN ASIAN LONGHORNED BEETLE CERTIFIED CONTRACTOR.
2. 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
-  GREEN PILLAR (PIN) OAK
-  COLUMNAR OAK
-  EVERGREEN SCREEN
-  BLUE SPRUCE
-  WHITE PINE
-  NORWAY SPRUCE
-  HINOKI CYPRESS



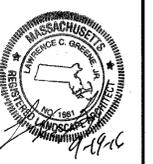
PLANTING & LIGHTING NOTES:

1. SEE SHEET 00.00 FOR GENERAL NOTES, REFERENCES AND LEGEND.
2. NOTIFY DIG-SAFE AT 1-888-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, 55% JEFFERSON KENTUCKY BLUEGRASS, 35% CARMEN CHESSING 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 MIX SHALL BE STALLION PERENNIAL RYE 10%, GREENING RED FESCUE 50%, 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 SEEDED AREAS HAVE BEEN ACCEPTED. THE WATERING SHALL OCCUR IN SMALL DOSES. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY WEEDS (GRASS) WITHIN THE SEEDED AREAS UNTIL THE SEEDED AREAS HAVE BEEN 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. 520 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 10' 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 BRANCHED OR CONTAINER GROWN, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
21. ALL CONTAINER GROWN STOCK SHALL BE HEALTHY, VIGOROUS, WELL ROOTED AND ESTABLISHED IN THE CONTAINERS 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 TO MEET 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, WEST 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 WATERING 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 MET A 20"X4" ROOT BALL AND PROVIDE THE EQUIVALENT OF ONE INCH OF RAIN. FALL-NEM 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.

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REV.	DATE	DESCRIPTION	INT.
C	09/20/16	PEER REVIEW COMMENTS	
B	06/24/16	NOTICE OF INTENT	
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

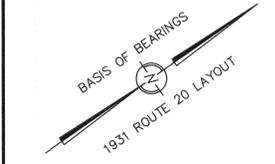
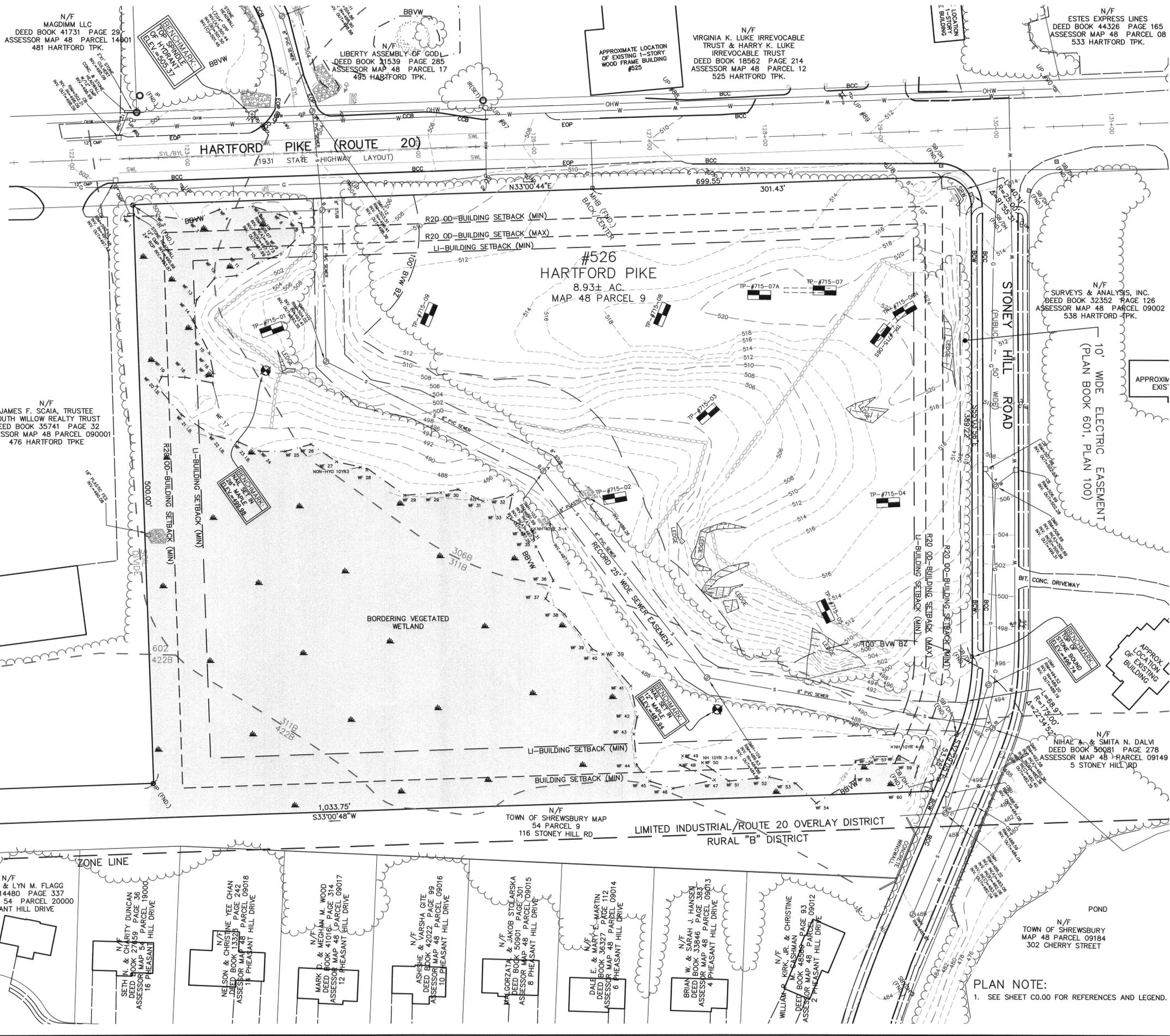
OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
291 Grafton Street
Shrewsbury, MA
PREPARED FOR:
SMART GROWTH DESIGN, LLC
625 South Street
Shrewsbury, MA 01545

TITLE:
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:	
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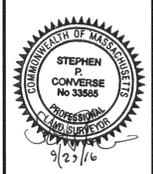
NOTE:

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PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
 31 East Main Street
 Westborough, MA 01581
 508.366.6552 (fax)
 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
526 HARTFORD PIKE (PHASE II)
 Shrewsbury, MA (Worcester County)
COMPREHENSIVE PERMIT

DATE:	11/06/15	SCALE:	1" = 40'
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FILE NO.:	0927900	CHK'D. BY:	
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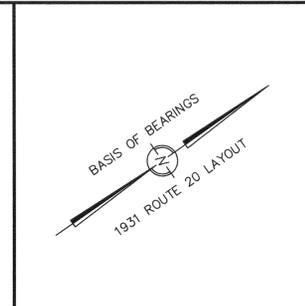
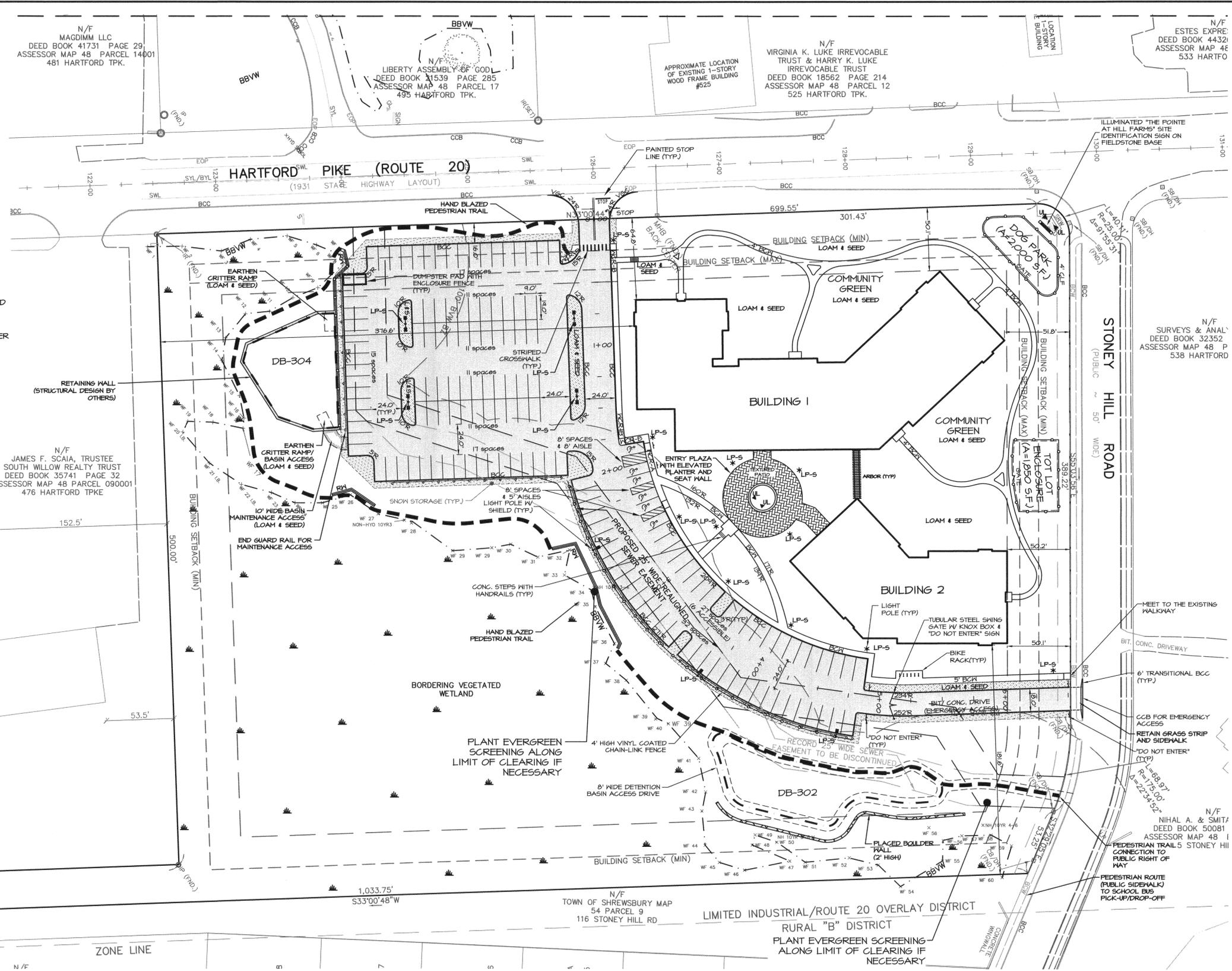
PLAN NOTE:
 1. SEE SHEET C0.00 FOR REFERENCES AND LEGEND.

LAYOUT & MATERIAL NOTES:

- SEE SHEET C0.00 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 OWNER'S REPRESENTATIVE 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').

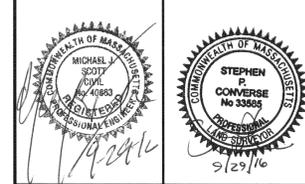
EASEMENT NOTES:

- PROPOSED RE-ALIGNED SEWER EASEMENT TO SUPERCEDE RECORD SEWER EASEMENT.
- RECORD SEWER EASEMENT TO BE DISCONTINUED IMMEDIATELY FOLLOWING THE RECORDING OF THE PROPOSED RE-ALIGNED SEWER EASEMENT PLAN.



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PREPARED BY:

WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdaassoc.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 II)
526 HARTFORD PIKE (PHASE II)
Shrewsbury, MA (Worcester County)

COMPREHENSIVE PERMIT

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

JOB NO.: 0927.02 DWN. BY:

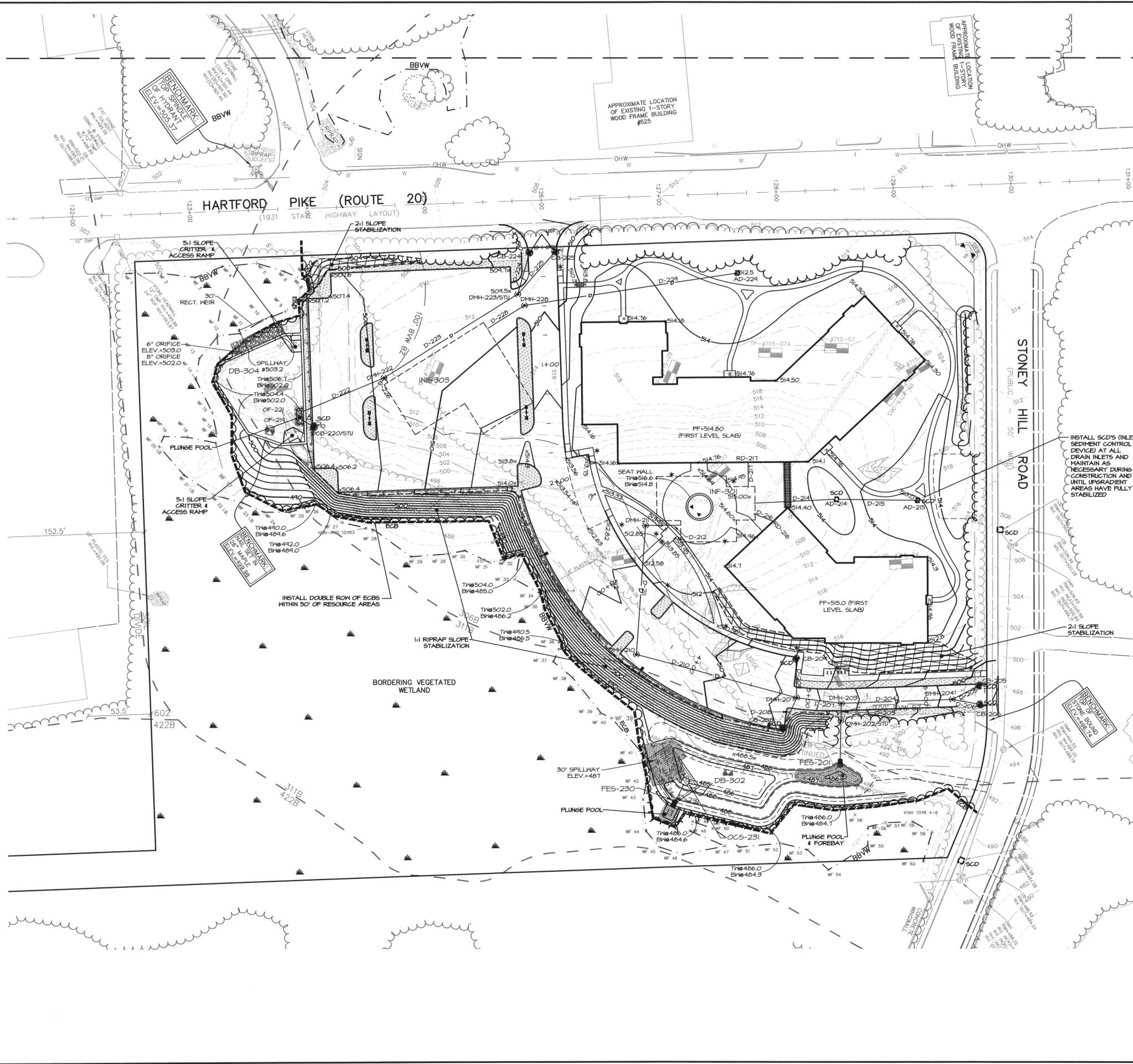
FILE NO.: 0927200 CHK'D. BY:

DRAWING NO.: 0927204C SHEET: **C2.01**

DISTRICT:	LIMITED INDUSTRIAL	ROUTE 20 OVERLAY DISTRICT	PROVIDED
USE	REQUIRED	REQUIRED	
LOT AREA (MIN)	80,000 S.F.	40,000 S.F.	388,911 S.F. +/-
FRONTAGE (MIN)	50'	150'	700 +/- (HARTFORD TPKE) 522 +/- (STONEY HILL ROAD)
FRONT YARD (MIN)	50'	25'	50' +/-
FRONT YARD (MAX)	N/A	40'	65' +/-
SIDE YARD (MIN)	50'	25'	37' +/-
REAR YARD (MIN)	N/A (CORNER LOT)	N/A (CORNER LOT)	N/A (CORNER LOT)
OPEN SPACE (MIN)	20%	25%	12%
LOT COVERAGE (MAX)	50%	35%	10%
IMPERVIOUS COVER (MAX)	N/A	65%	28%
BLDG HEIGHT (MAX)	50'	40'	SEE ARCHITECTURAL PLANS
NUMBER OF STORIES (MAX)	4	3	3 (SEE ARCHITECTURAL PLANS)

USE	REQUIRED	PROVIDED
RESIDENTS	15 SPACES / UNIT x 92 = 138 SPACES	138 (SURFACE)
VISITORS	"SUFFICIENT" SPACES, 138 (10%) = 14	14 (SURFACE)
TOTAL	152 SPACES	152 SPACES
ACCESSIBLE PARKING (HP) SPACES		
TOTAL PARKING SPACES	REQUIRED	PROVIDED
101 TO 150	5	6
VAN ACCESSIBLE		
1 PER 8 ACCESSIBLE SPACES	1	2
SNOW STORAGE	N/A	9,200 +/- S.F. (16%)

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GRADING & DRAINAGE NOTES:

- SEE SHEET C0.00 FOR NOTES AND REFERENCES.
- SEE SHEET C1.02 FOR GENERAL CONSTRUCTION SEQUENCE NOTES.
- 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. 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.
- CONTRACTOR SHALL OBTAIN PERMITS 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 LOAMED (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 CROSS 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 1801.2).
- 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 OF OFF SITE ACCORDING TO APPLICABLE REGULATIONS (910 CMR 1.18 & 1.19 AND 453 CMR 8). CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR DEMOLITION, HAULING AND DISPOSING OF SAID MATERIALS.

EROSION AND SEDIMENTATION CONTROLS:

- EROSION CONTROLS SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY, AND MAINTAINED UNTIL ALL DISTURBED LAND SURFACES ARE STABILIZED. EROSION CONTROL BARRIER (SILT FENCE STAKED IN PLACE BACKED BY STAKED HAYBALES) SHALL BE INSTALLED IN ACCORDANCE WITH THE SHREWSBURY CONSERVATION COMMISSION ORDER OF CONDITIONS AND THE SITE PLANS. EROSION CONTROL MEASURES SHALL BE INSTALLED TO PREVENT POTENTIAL EROSION AND SEDIMENTATION OF WETLAND AREAS AND DOWNSTREAM WATERWAYS.
- ANTI-TRACKING PADS OR PAVING SHALL BE USED TO MINIMIZE OFF-SITE MIGRATION OF SOIL BY VEHICLES. CONSTRUCTION ACCESS POINTS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS.
- EROSION CONTROL BARRIERS SHALL BE ERECTED AT THE DOWNGRADIENT LIMIT OF WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION, EXCAVATION, OR GRADING.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED ON THE UPGRADIENT EDGE OF THE PAVED ROADWAY OR SIDEWALK SURFACE TO ASSIST IN THE PREVENTION OF MIGRATING SEDIMENT TO THE STREET.
- HAYBALE CHECK DAMS SHALL BE INSTALLED AROUND EXISTING AND PROPOSED UNCOVERED CATCHBASINS TO PROTECT AGAINST OFF-SITE SEDIMENTATION/SILTATION, AS WELL AS AT 45 DEGREE ANGLES ALONG CURB LINES AND WITHIN DRIVEWAYS TO PREVENT SOIL DIVERSION.
- CURBING SHALL BE INSTALLED ALONG THE EDGE OF THE ACCESS DRIVEWAYS TO DIRECT SURFACE STORMWATER FLOWS THROUGH THE STORMWATER MANAGEMENT SYSTEM.
- DISTURBED AREAS SHALL BE MINIMIZED, AND SHALL BE STABILIZED WITHIN 14 DAYS OF THE LAST DISTURBANCE, UNLESS CONSTRUCTION ACTIVITIES SHALL RESUME ON THAT PORTION OF THE SITE WITHIN 21 DAYS OF PREVIOUS CONSTRUCTION ACTIVITIES.
- TEMPORARY STABILIZATION SHALL BE ACCOMPLISHED UTILIZING TEMPORARY SEEDING DURING GROWING SEASON AND CHOPPED HAY AND/OR TACKIFIER DURING NON-GROWING SEASON.
- STABILIZATION OF DISTURBED AREAS SHALL BE ACCOMPLISHED BY BUILDING COVER, PAVING, RIPRAP SLOPE STABILIZATION, TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, LANDSCAPING OR ACCEPTABLE EQUIVALENT PRACTICE.
- EROSION CONTROL PRACTICES SHALL BE CONTINUED UNTIL ALL AREAS AFFECTED BY THE CONSTRUCTION ARE STABILIZED.
- AN ADEQUATE RESERVE OF EROSION CONTROL MATERIALS SHALL BE KEPT ON SITE FOR EMERGENCY OR ROUTINE REPLACEMENT.
- RIPRAP OR OTHER VELOCITY CONTROL DEVICES SHALL BE USED WHERE NECESSARY TO CONTROL EROSION.
- STREET SWEEPING SHALL BE CONDUCTED ONCE WEEKLY (AT A MINIMUM AND ON A DAILY BASIS IF DEEMED NECESSARY DURING CONSTRUCTION), AND UNTIL SURFACES ARE PROPERLY STABILIZED.

STORMWATER MANAGEMENT CONTROLS:

- THE FOLLOWING MEASURES SHALL BE TAKEN TO CONTROL POLLUTANTS OCCURRING IN STORMWATER RUNOFF DURING AND FOLLOWING CONSTRUCTION.
- TEMPORARY SWALES WITH HAYBALE AND/OR STONE CHECK DAMS SHALL BE CONSTRUCTED IF NECESSARY DURING CONSTRUCTION TO DIRECT RUNOFF TO TEMPORARY SEDIMENTATION BASINS.
 - TEMPORARY STANDPIPES SHALL BE PROVIDED WITHIN THE PERMANENT BASINS TO ALLOW SETTLING OF SEDIMENTS PRIOR TO DISCHARGE, DURING THE CONSTRUCTION PHASES.
 - SILT FENCES AND HAYBALES, STAKED IN PLACE, SHALL BE INSTALLED ALONG ALL SLOPED BOUNDARIES OF THE CONSTRUCTION AREAS.
 - SEDIMENT SHALL BE RETAINED ON-SITE WITHIN THE LIMITS OF THE EROSION CONTROL BARRIERS AND REMOVED REGULARLY.
 - RUNOFF FROM THE PROJECT SITE SHALL BE DIRECTED THROUGH A CLOSED DRAINAGE SYSTEM INTO THE STORMWATER MANAGEMENT FACILITIES (SMF) THROUGH FLARED ENDS AND RIPRAP SPILLWAYS BEFORE DISCHARGE TO THE ADJACENT WETLAND RESOURCES.
 - THE STORMWATER MANAGEMENT SYSTEM ON-SITE CONSISTS OF A 4' DEEP SUMP HOODED CATCH BASIN CLOSED COLLECTION SYSTEM. THE MAJORITY OF SITE RUNOFF IS DIRECTED TO THE CLOSED DRAINAGE SYSTEM WHICH DISCHARGES TO STORMWATER MANAGEMENT BASINS OR WATER QUALITY SWALES DISTRIBUTED THROUGHOUT EACH PHASE, WHICH UTILIZE OUTLET CONTROL STRUCTURES WITH RIPRAP PROTECTION TO CONTROL THE RATE AT WHICH THE RUNOFF IS RELEASED AND DISSIPATE VELOCITIES.
 - TEMPORARY SEDIMENT FOREBAYS, WITH SAND/STONE FILTERS, SUPPORTED BY EROSION CONTROL BARRIERS SHALL BE UTILIZED AT FLARED END OUTLETS AS REQUIRED.

INSPECTION AND MAINTENANCE PROCEDURES:

- A SUPPLY OF HAYBALES, STAKES, AND SILT FENCING SHALL BE KEPT ON SITE DURING CONSTRUCTION FOR THE PURPOSE OF MAKING REPAIRS TO EROSION/SEDIMENTATION CONTROL BARRIERS WHEN NECESSARY. THIS SUPPLY OF ADDITIONAL MATERIALS SHALL BE KEPT PROTECTED FROM THE ELEMENTS.
- EROSION AND SEDIMENTATION CONTROL MECHANISMS AND PRACTICES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION OF DISTURBED AREAS HAS BEEN ACCOMPLISHED.
- THE SITE CONTRACTOR'S PROJECT MANAGER SHALL INSPECT THE EROSION CONTROLS AND STORMWATER MANAGEMENT MEASURES AFTER EACH RAINFALL EVENT GREATER THAN 0.5 INCHES AND ONCE PER MONTH DURING CONSTRUCTION AND CONTINUE UNTIL FINAL SITE STABILIZATION. THE PROJECT MANAGER OR ASSIGNEE, IN ACCORDANCE WITH THE GENERAL PERMIT, SHALL MAINTAIN INSPECTION LOGS ON-SITE.
- ALL CONTROLS, OUTFALLS, AND POTENTIAL PROBLEM AREAS SHALL BE CHECKED AT LEAST ONCE PER 14 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF 0.5 INCHES OR GREATER. APPROPRIATE ACTION AND NECESSARY REPAIRS SHALL BE COMPLETED PRIOR TO THE NEXT STORM EVENT (MINIMUM 0.5 INCHES) OR AS SOON AS PRACTICABLE FROM THE INITIAL OBSERVATION OF THE PROBLEM.

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REV.	DATE	DESCRIPTION	INT.
C	09/20/16	PEER REVIEW COMMENTS	
B	06/23/16	NOTICE OF INTENT	
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:

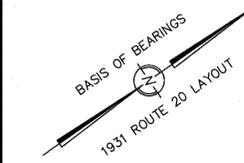
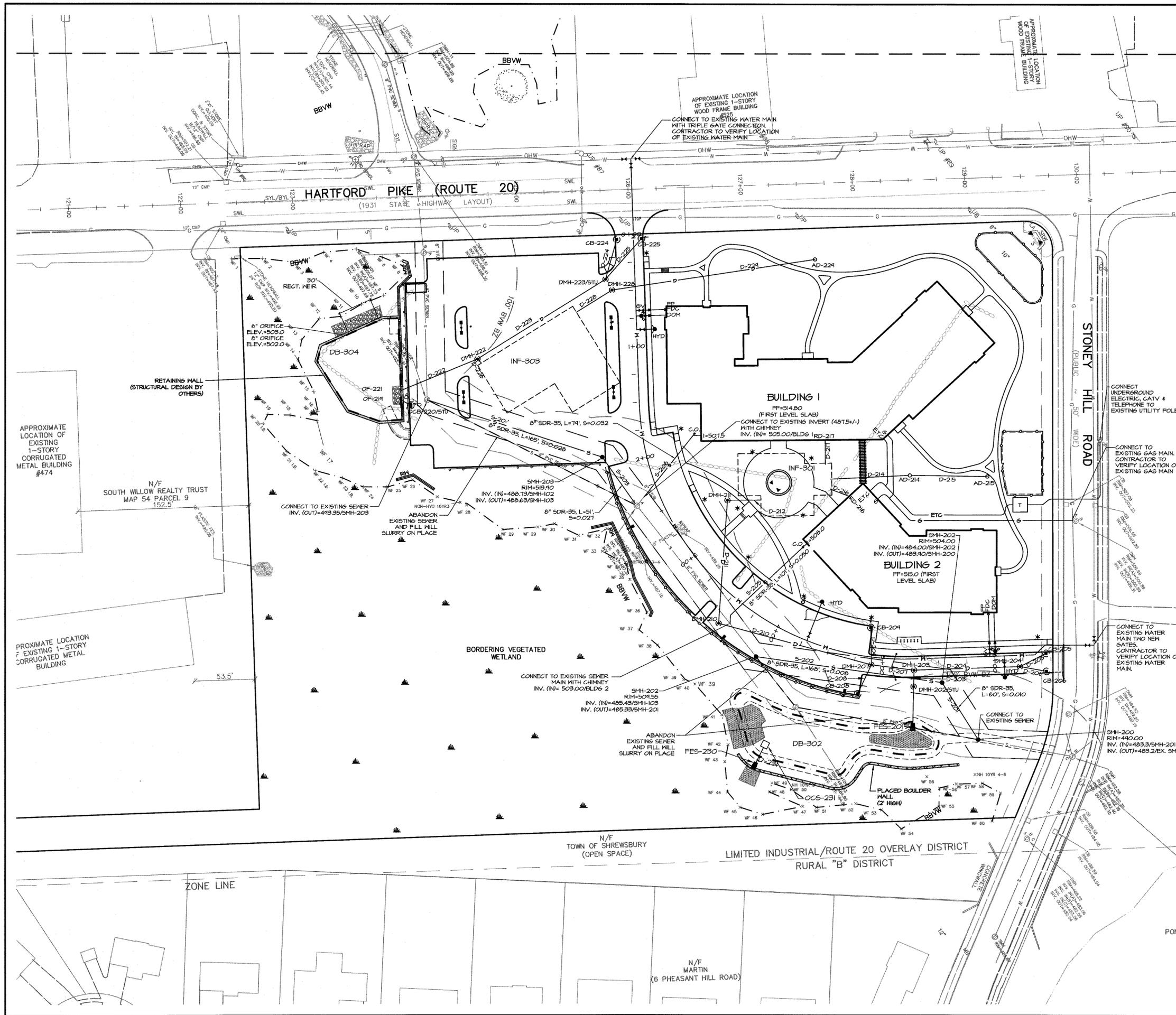
SMART GROWTH DESIGN, LLC
625 South Street
Shrewsbury, MA 01545

TITLE:

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

COMPREHENSIVE PERMIT

DATE:	11/06/15	SCALE:	1" = 40'
JOB NO.:	092700	DWN. BY:	
FILE NO.:	0927300	CHK'D. BY:	
DRAWING NO.:	0927303C	SHEET:	C2.02

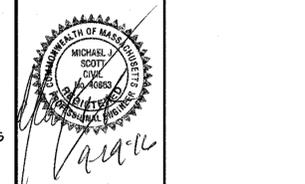


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UTILITY NOTES:

- SEE SHEET 00.00 FOR NOTES AND PLAN 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. BEFORE COMMENCING SITE WORK, CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-344-1233 (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.
- CONTRACTOR SHALL OBTAIN PERMIT(S) FOR TRENCH EXCAVATION (PER 520 CMR 14).
- CONTRACTOR SHALL CONFIRM DEPTH(S) 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 OF 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.
- ALL DRAIN PIPE SHALL BE SMOOTH WALL CORRUGATED POLYETHYLENE (CPE, TYPE S; AASHTO M252 OR M294), UNLESS OTHERWISE NOTED.
- 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.
- ALL WATER MAIN PIPE AND FITTINGS SHALL BE ANNA C400 WITH RUBBER GASKETED JOINTS (D3159 & 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.
- 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 91.2 OF MASS. DEP "GUIDELINES AND POLICIES FOR PUBLIC WATER SYSTEMS" (AS DEFINED IN 310 CMR 22.02).
- 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.

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 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

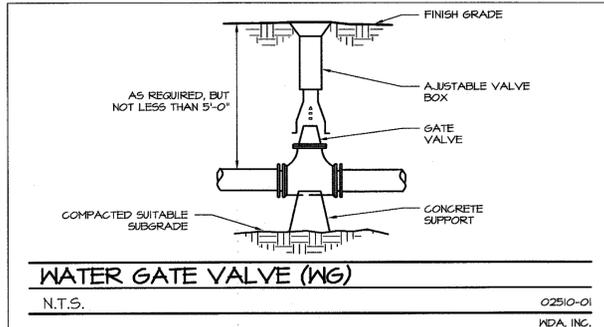
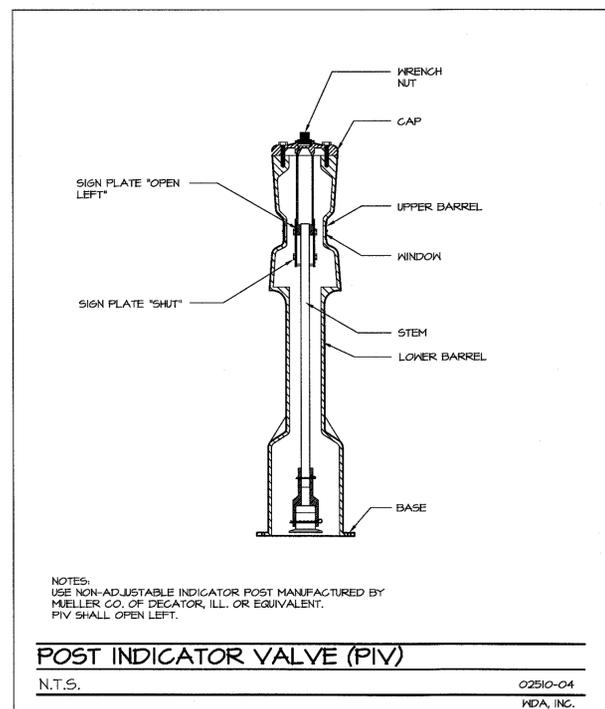
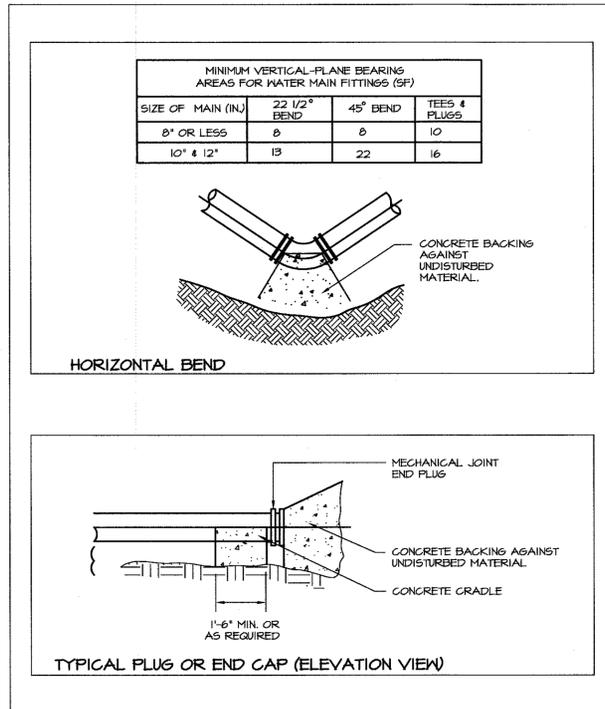
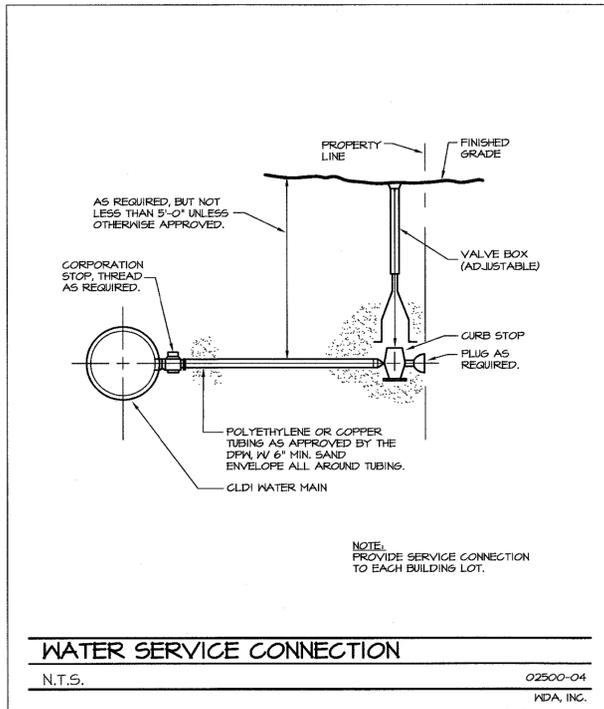
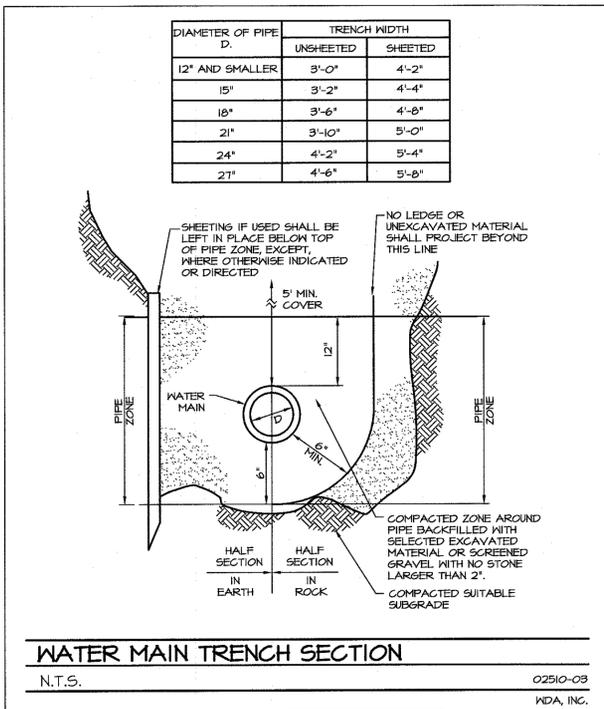
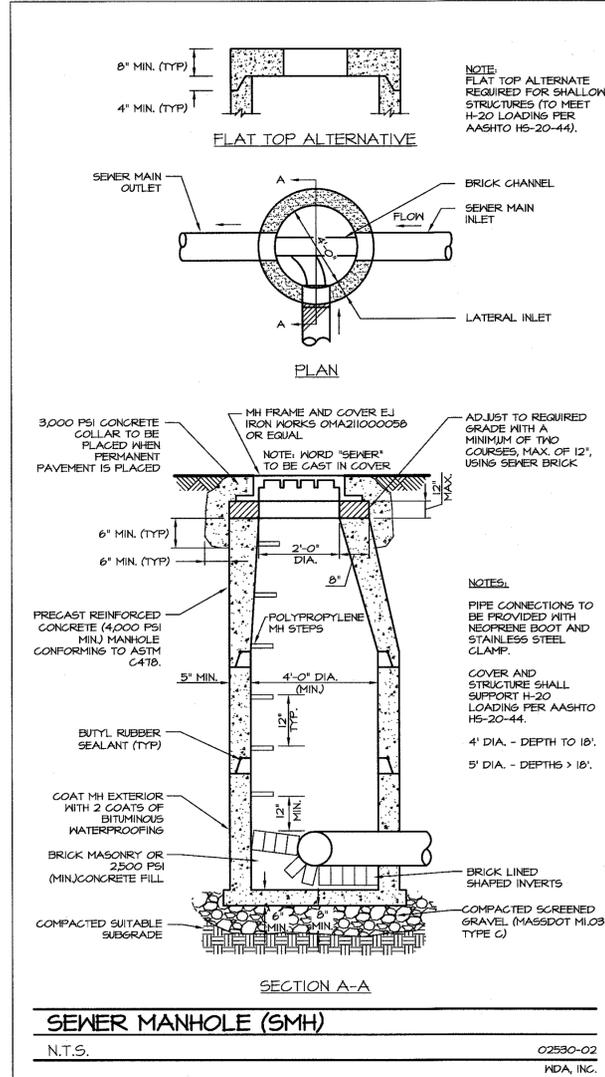
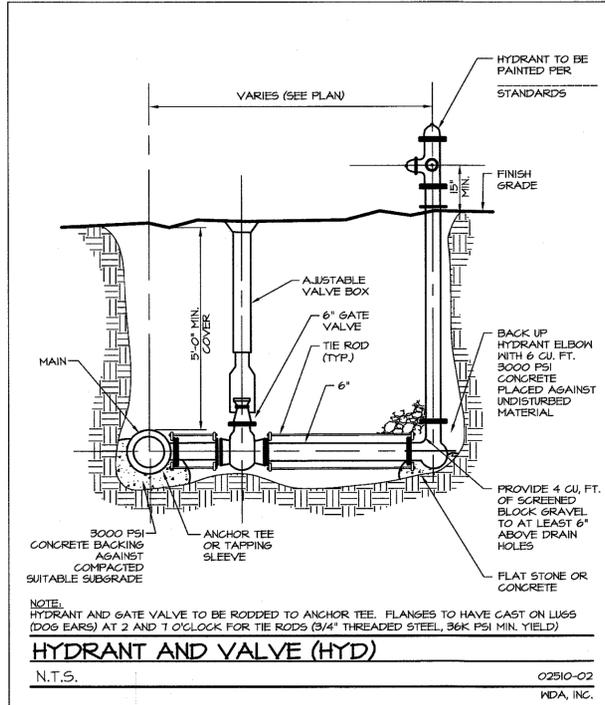
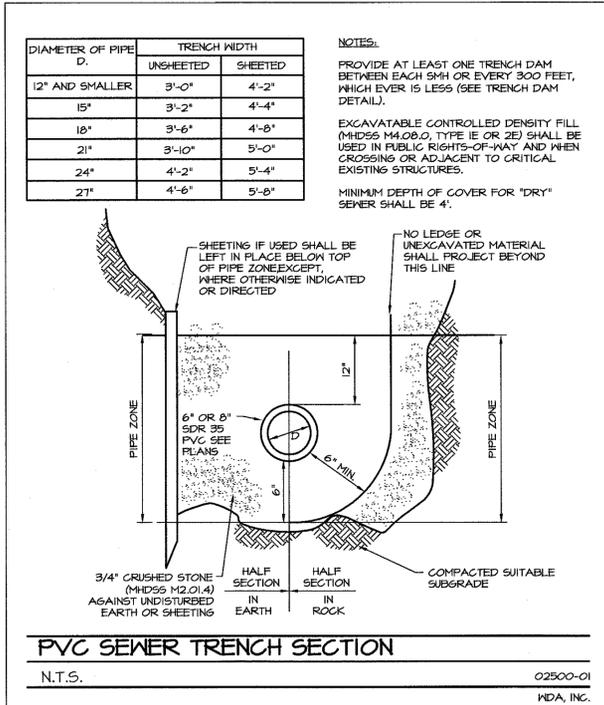
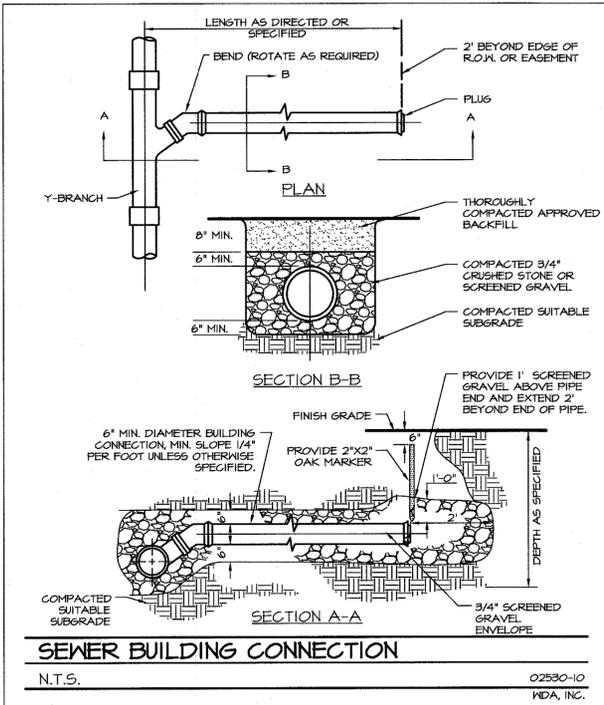
PREPARED FOR:
SMART GROWTH DESIGN, LLC
 625 South Street
 Shrewsbury, MA 01545

TITLE:
UTILITIES PLAN (PHASE II)
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.:	0927304C	SHEET:	C2.03

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

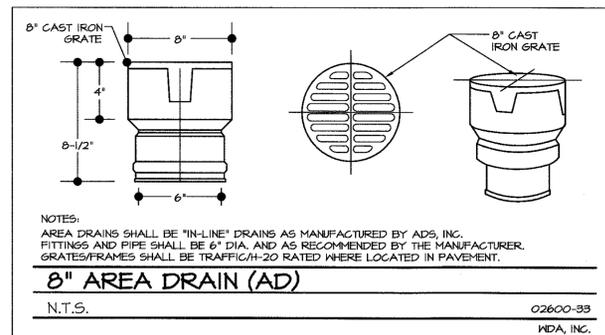
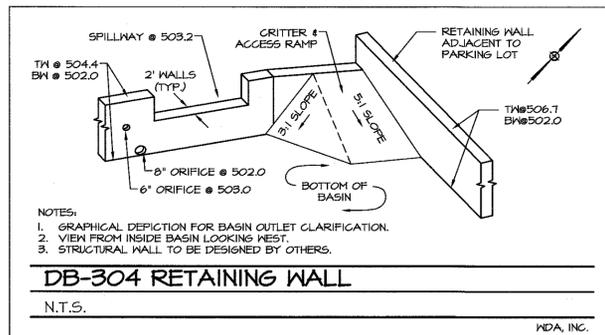
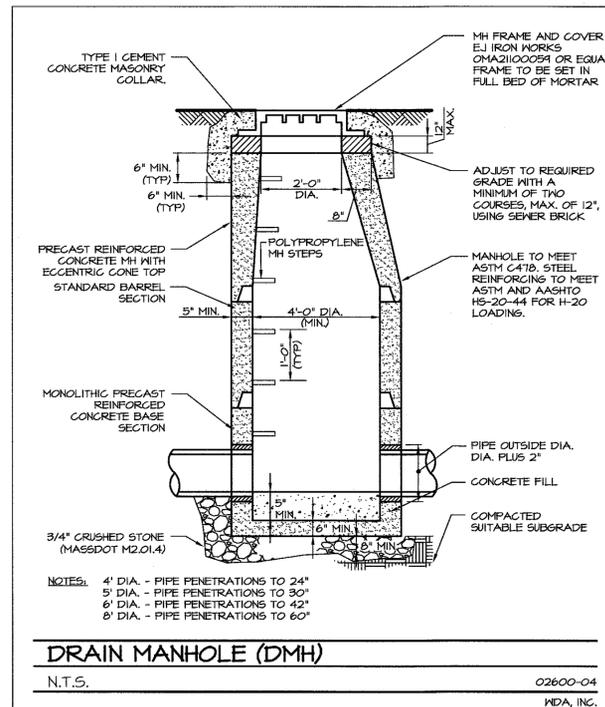
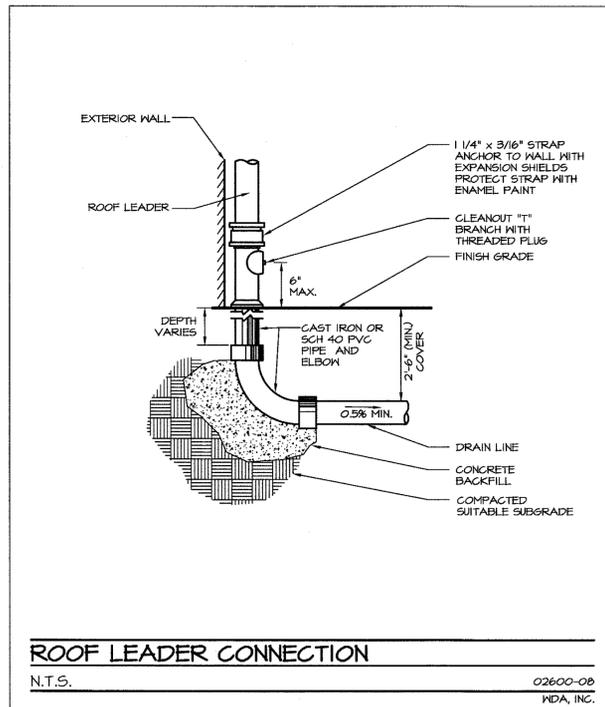
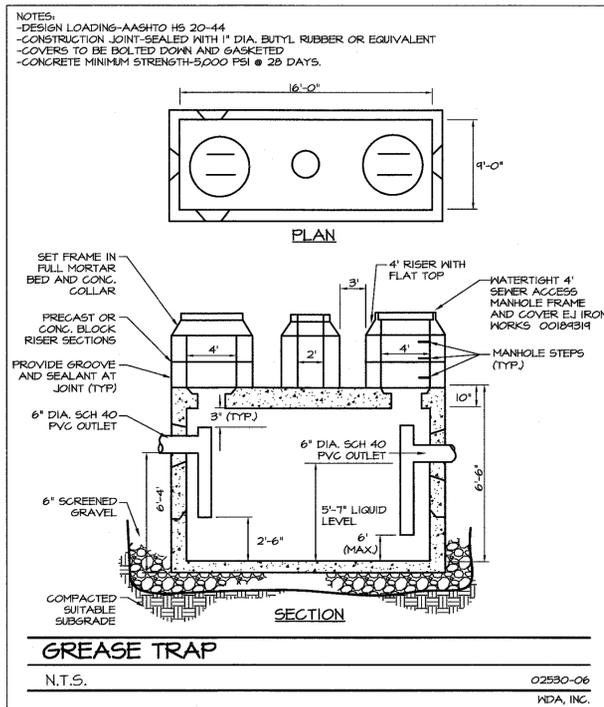
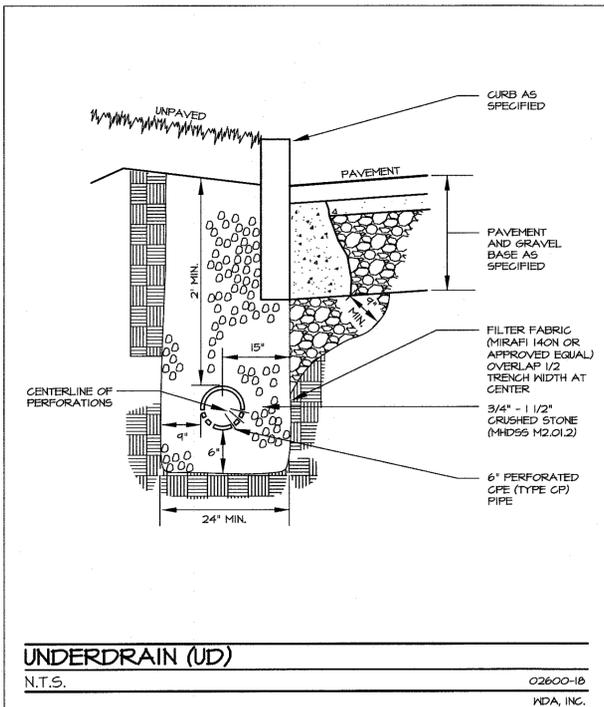
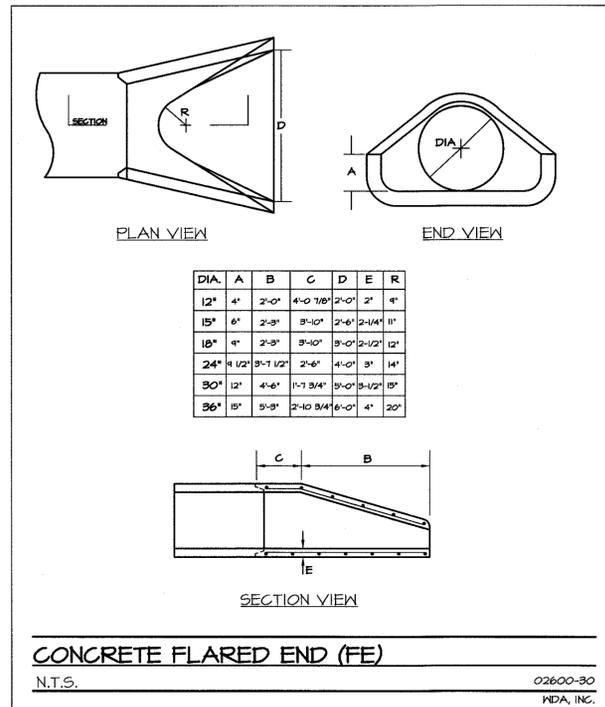
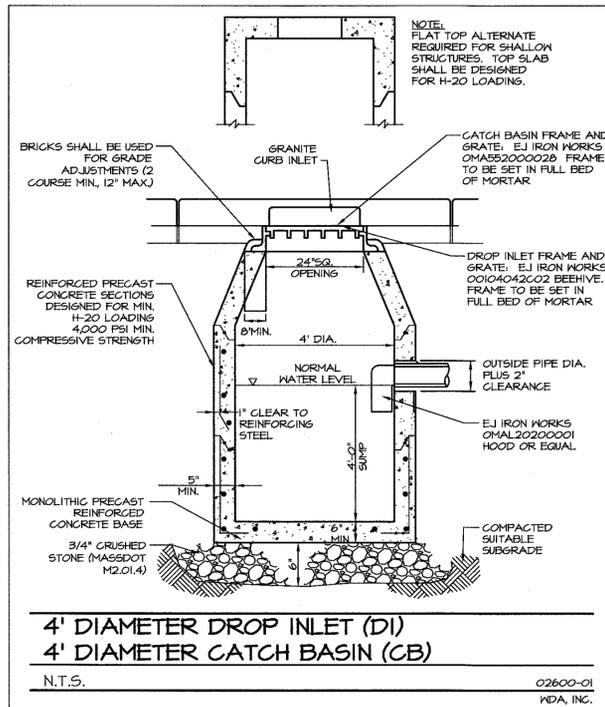
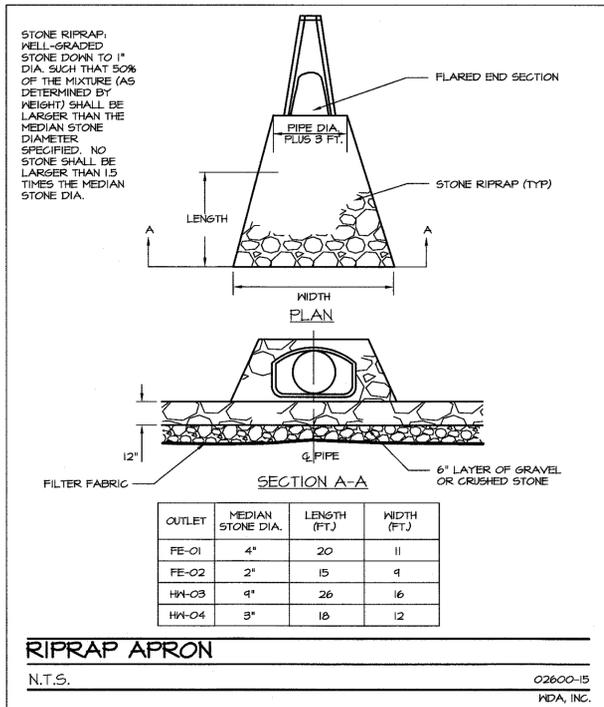
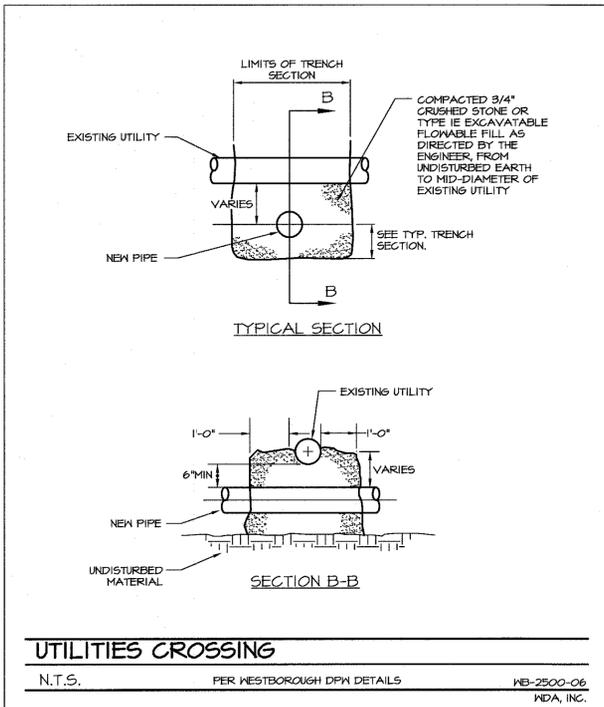
OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
291 Grafton Street
Shrewsbury, MA

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

TITLE:
DETAILS THE POINTE AT HILLS FARM
Shrewsbury, MA (Worcester County)

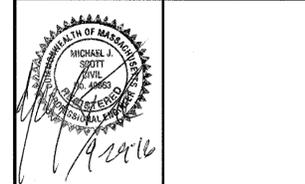
COMPREHENSIVE PERMIT

DATE: 11/06/15 SCALE: AS NOTED
JOB NO.: 0927.00 DWN. BY: _____
FILE NO.: 0927500 CHK'D. BY: _____
DRAWING NO.: 0927502C SHEET: **C3.01**



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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:

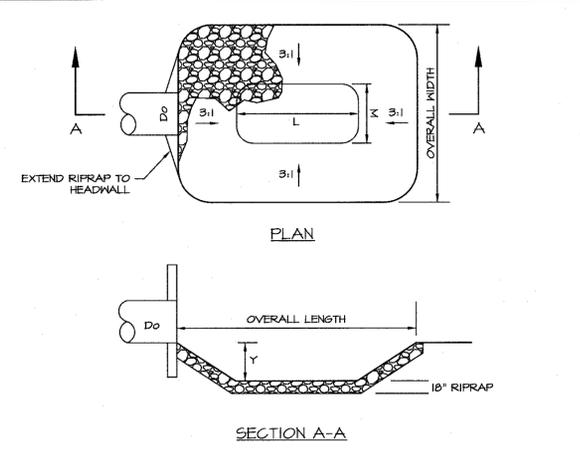
DETAILS

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

COMPREHENSIVE PERMIT

DATE: 11/06/15 SCALE: AS NOTED
JOB NO.: 0927.00 DWN. BY: _____
FILE NO.: 0927500 CHK'D. BY: _____
DRAWING NO.: 0927503C SHEET: **C3.02**

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FOR Y=1/2D0
L=6D0
W=5D0

OUTLET	D0 (IN)	INVERT ELEV.	Y (FT)	L (FT)	W (FT)	OVERALL LENGTH (FT)	OVERALL WIDTH (FT)
FES-30	12	432.50	0.5	3.0	2.5	6.0	5.5
FES-51	10	430.00	0.75	4.5	3.0	9.0	8.3
FES-54	15	424.00	0.63	3.0	3.1	7.5	6.4
OF-219	12	432.50	0.5	3.0	2.5	6.0	5.5
OF-221	12	432.50	0.5	3.0	2.5	6.0	5.5

FOR Y=1D0
L=3D0
W=2D0

OUTLET	D0 (IN)	INVERT ELEV.	Y (FT)	L (FT)	W (FT)	OVERALL LENGTH (FT)	OVERALL WIDTH (FT)
FES-1	15	410.00	1.25	3.0	2.5	11.3	10.0
FES-45	12	410.00	1.0	3.0	2.0	9.0	8.0
FES-48	12	410.00	1.0	3.0	2.0	9.0	8.0
FES-201	12	401.00	1.0	3.0	2.0	9.0	8.0
FES-230	15	404.00	1.25	3.0	2.5	11.3	10.0

- NOTES:
- REFERENCE: STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, NJ STATE SOIL CONSERVATION COMMITTEE, NJ DEPT. OF AGRICULTURE (REV 1987).
 - USE AT ALL RINGWALLS.
 - MEDIAN STONE SIZE (D50) SHALL BE 4".
 - DRAINAGE FABRIC BELOW RIPRAP SHALL BE MIRAFI 140N OR EQUAL.

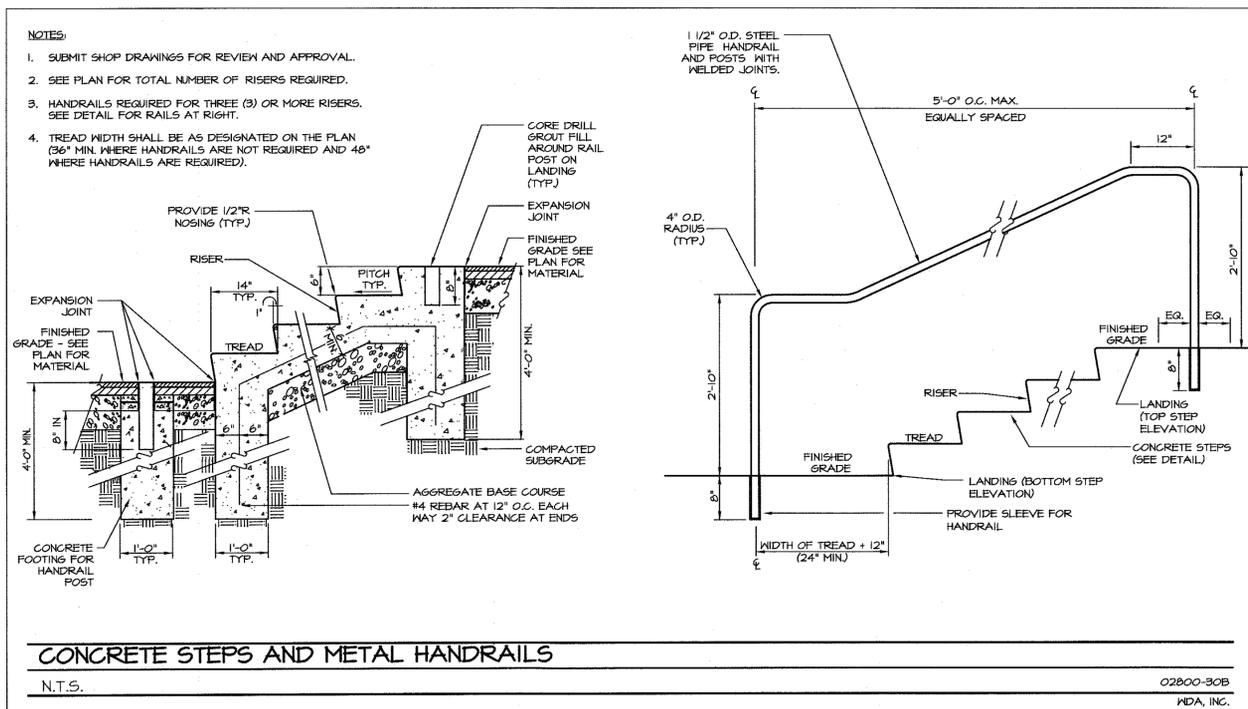
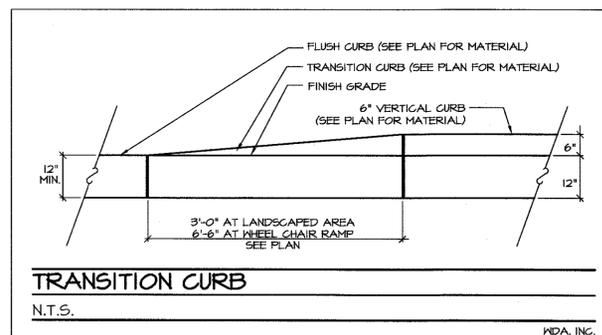
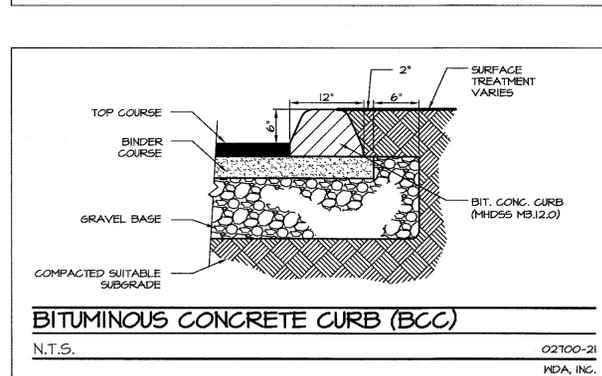
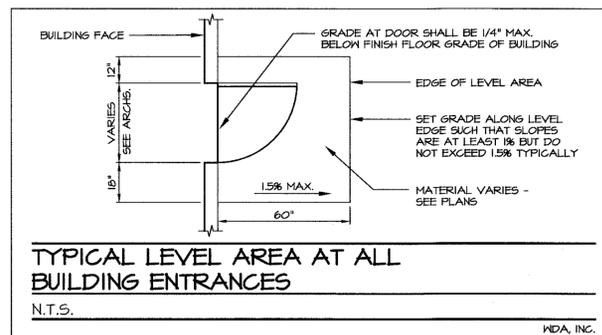
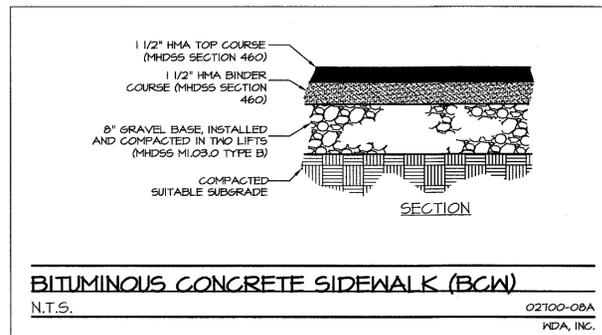
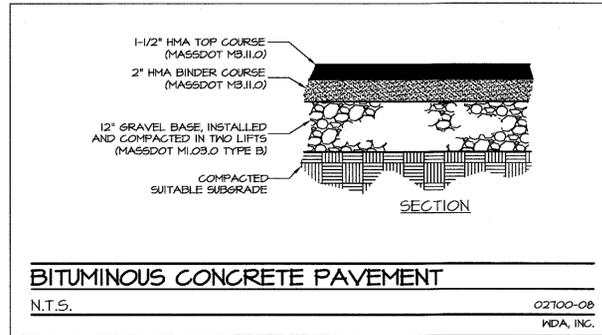
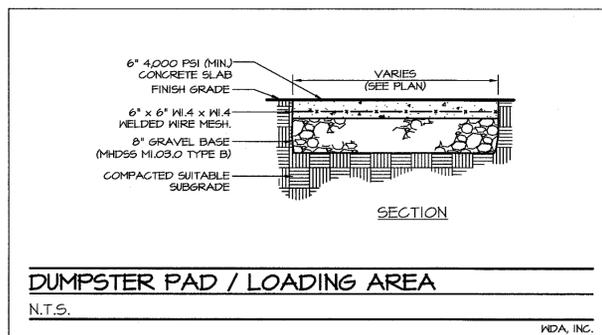
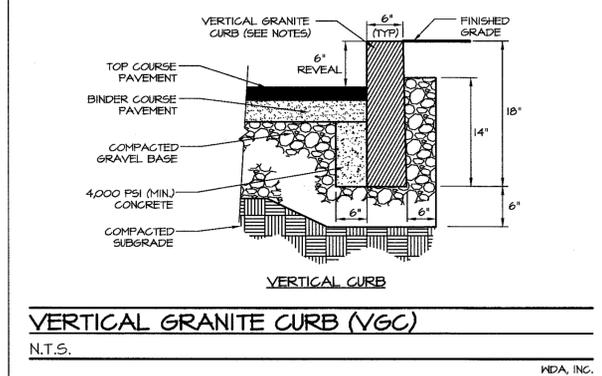
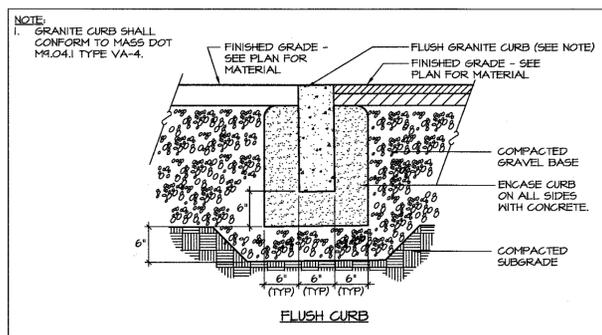
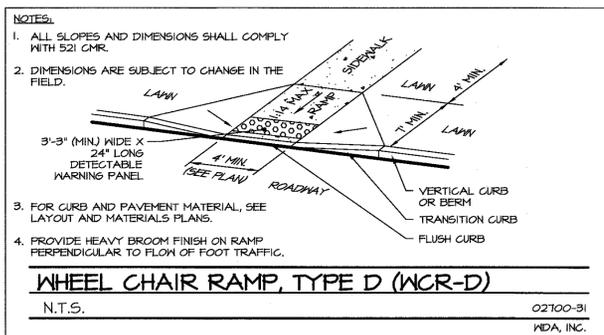
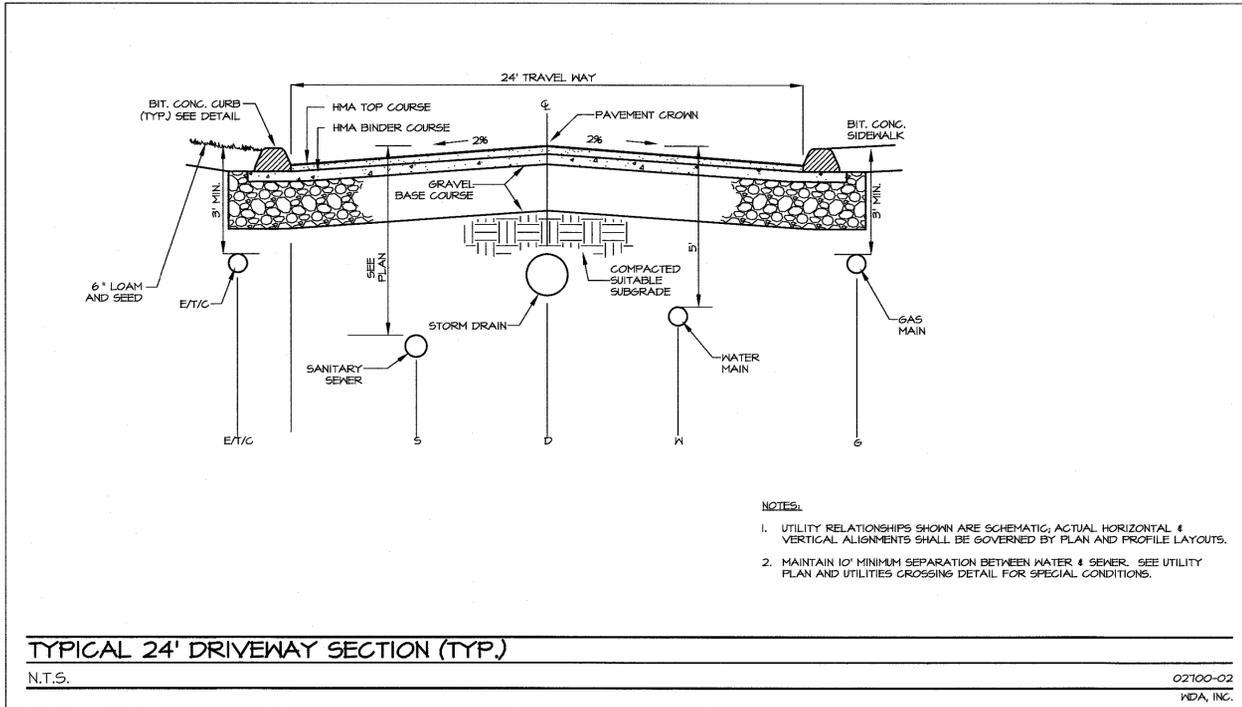
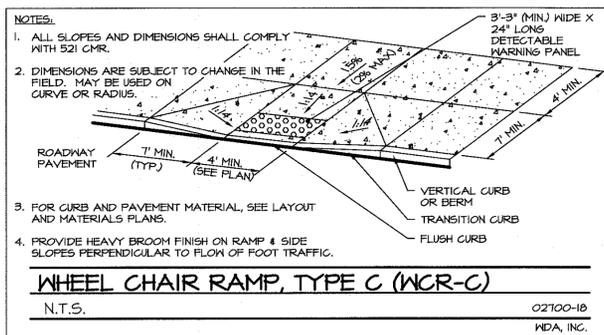
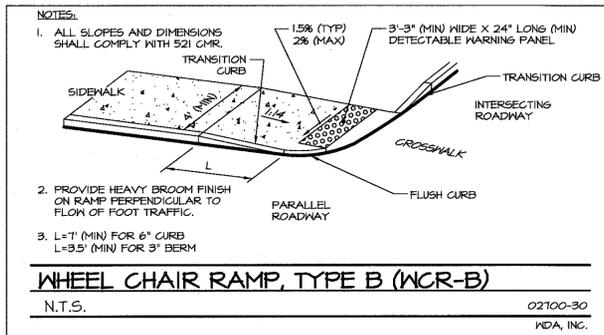
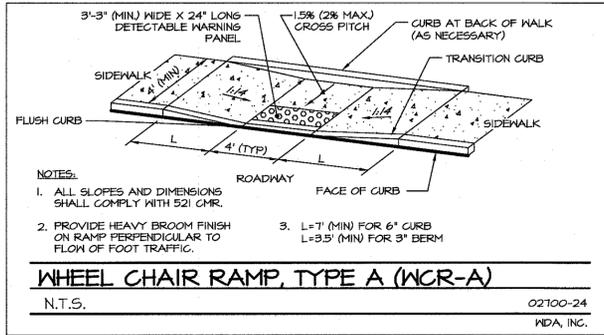
RIPRAP PLUNGE POOL
N.T.S. 02600-STILLINGSBASIN
WDA, INC.

PHASE 1 PIPE & STRUCTURE SCHEDULE

PIPE	UPSTREAM STRUCTURE	UPSTREAM RIM (ft)	UPSTREAM INVERT (ft)	DOWNSTREAM STRUCTURE	DOWNSTREAM RIM (ft)	DOWNSTREAM INVERT (ft)	DIAMETER (in)	MATERIAL	LENGTH (ft)	SLOPE (ft/ft)
D-2	DMH-2	426.95	421.50	FES-1	N/A	418.00	15	CPE (TYPE S)	97	0.036
D-3	DMH-3	426.80	421.80	DMH-2	426.95	421.60	12	CPE (TYPE S)	6	0.033
D-4	CB-4	426.25	422.50	DMH-3	426.80	421.80	12	CPE (TYPE S)	8	0.056
D-5	CB-5	426.25	422.25	DMH-3	426.80	421.80	12	CPE (TYPE S)	18	0.025
D-7	DMH-7	435.95	425.20	OF-6	N/A	424.00	12	CPE (TYPE S)	32	0.037
D-8	CB-8	435.75	431.75	DMH-7	435.95	430.75	12	CPE (TYPE S)	42	0.024
D-9	DMH-9	437.40	432.80	DMH-7	435.95	431.00	12	CPE (TYPE S)	86	0.021
D-10	CB-10	437.25	433.25	DMH-9	437.40	432.80	12	CPE (TYPE S)	8	0.056
D-11	AD-11	441.35	437.35	DMH-9	437.40	432.80	12	CPE (TYPE S)	81	0.056
D-12	AD-12	445.50	439.50	AD-11	441.35	437.35	12	CPE (TYPE S)	105	0.020
D-13	AD-13	445.50	440.50	AD-12	445.50	439.50	12	CPE (TYPE S)	66	0.015
D-15	DMH-15	435.20	424.20	OF-14	N/A	423.00	12	CPE (TYPE S)	32	0.037
D-16	DMH-16	435.30	430.05	DMH-15	435.20	429.75	12	CPE (TYPE S)	12	0.025
D-17	CB-17	435.30	431.30	DMH-16	435.30	430.85	12	CPE (TYPE S)	34	0.013
D-18	CB-18	434.70	430.70	DMH-16	435.30	430.05	12	CPE (TYPE S)	14	0.046
D-19	DMH-19	438.60	432.00	DMH-16	435.30	430.05	12	CPE (TYPE S)	99	0.020
D-20	AD-20	436.00	432.50	DMH-19	438.60	432.00	12	CPE (TYPE S)	62	0.008
D-21	DMH-21	441.15	436.65	DMH-19	438.60	434.60	12	CPE (TYPE S)	79	0.026
D-22	CB-22	441.25	437.25	DMH-21	441.15	436.65	12	CPE (TYPE S)	33	0.018
D-23	DMH-23	446.45	441.75	DMH-21	441.15	436.65	12	CPE (TYPE S)	97	0.053
D-24	CB-24	446.35	442.35	DMH-23	446.45	441.75	12	CPE (TYPE S)	30	0.020
D-25	CB-25	448.20	443.70	DMH-23	446.45	441.75	12	CPE (TYPE S)	45	0.043
D-26	INF-106 OUT	451.00	447.50	DMH-23	446.45	442.25	12	CPE (TYPE S)	99	0.053
D-27	RD-27	453.60	443.75	INF-106 IN	N/A	443.75	12	CPE (TYPE S)	65	0.000
D-29	CB-29	415.00	410.86	DMH-100	415.60	409.56	18	CPE (TYPE S)	65	0.020
D-31	DMH-31	444.00	433.00	FES-30	N/A	432.50	12	CPE (TYPE S)	57	0.009
D-32	INF-203 OUT	444.40	440.75	DMH-31	444.00	440.50	12	CPE (TYPE S)	7	0.036
D-33	DMH-33	444.30	433.25	DMH-31	444.00	433.00	12	CPE (TYPE S)	42	0.006
D-34	DMH-34	443.90	439.00	DMH-33	444.30	438.50	8	CPE (TYPE S)	13	0.038
D-35	RD-35	445.00	433.80	DMH-34	443.90	433.75	12	CPE (TYPE S)	31	0.002
D-36	DMH-34	443.90	433.75	INF-202 IN	N/A	433.75	12	CPE (TYPE S)	20	0.000
D-37	INF-204 OUT	449.00	445.50	DMH-33	444.30	440.30	12	CPE (TYPE S)	89	0.058
D-39	RD-39	456.00	441.75	INF-204 IN	N/A	441.75	12	CPE (TYPE S)	26	0.000
D-42	DMH-42	450.80	437.80	INF-203 IN	N/A	436.75	12	CPE (TYPE S)	49	0.021
D-43	CB-43	450.90	446.40	DMH-42	450.80	445.90	12	CPE (TYPE S)	25	0.020
D-44	CB-44	450.80	446.30	DMH-42	450.80	445.90	12	CPE (TYPE S)	18	0.022
D-45	DMH-45	465.70	458.70	DMH-42	450.80	446.80	12	CPE (TYPE S)	280	0.042
D-46	DMH-46	468.00	462.50	DMH-45	465.70	461.70	12	CPE (TYPE S)	42	0.019
D-47	CB-47	467.50	463.00	DMH-46	468.00	462.50	12	CPE (TYPE S)	22	0.023
D-48	CB-48	468.95	464.45	DMH-46	468.00	464.00	12	CPE (TYPE S)	24	0.019
D-49	DMH-49	476.00	470.00	DMH-46	468.00	464.00	12	CPE (TYPE S)	180	0.033
D-50	CB-50	475.75	471.75	DMH-49	476.00	471.25	12	CPE (TYPE S)	21	0.024
D-51	AD-51	463.00	459.50	DMH-45	465.70	458.70	12	CPE (TYPE S)	81	0.010
D-52	DMH-52	436.00	431.00	FES-51	N/A	430.00	18	CPE (TYPE S)	31	0.032
D-53	DMH-53	438.60	434.30	DMH-52	436.00	431.00	18	CPE (TYPE S)	100	0.033
D-54	DMH-54	438.60	434.40	DMH-53	438.60	434.30	18	CPE (TYPE S)	10	0.010
D-55	CB-55	437.95	434.45	DMH-54	438.60	434.40	12	CPE (TYPE S)	7	0.007
D-56	DMH-56	451.60	446.60	DMH-54	438.60	434.40	18	CPE (TYPE S)	248	0.049
D-57	CB-57	451.95	446.95	DMH-56	451.60	446.60	12	CPE (TYPE S)	10	0.035
D-58	CB-58	467.85	462.85	DMH-56	451.60	446.60	18	CPE (TYPE S)	283	0.057
D-60	DMH-60	444.10	428.00	FES-59	N/A	424.00	15	CPE (TYPE S)	100	0.040
D-61	DMH-61	446.25	442.05	DMH-60	444.10	440.10	15	CPE (TYPE S)	75	0.026
D-62	DMH-62	453.65	449.65	DMH-61	446.25	442.05	15	CPE (TYPE S)	182	0.042
D-63	INF-104 OUT	455.00	451.50	DMH-62	453.65	451.00	12	CPE (TYPE S)	15	0.033
D-64	DMH-64	456.00	450.00	DMH-62	453.65	449.65	12	CPE (TYPE S)	15	0.023
D-65	DMH-65	462.85	457.35	DMH-64	456.00	450.00	12	CPE (TYPE S)	135	0.054
D-66	CB-66	461.00	459.00	DMH-65	462.85	457.35	12	CPE (TYPE S)	75	0.022
D-67	DMH-67	483.00	476.00	DMH-65	462.85	458.85	12	CPE (TYPE S)	267	0.064
D-68	CB-68	485.00	480.00	DMH-67	483.00	476.00	12	CPE (TYPE S)	101	0.040
D-72	DMH-72	460.75	448.75	INF-104 IN	N/A	447.75	12	CPE (TYPE S)	34	0.029
D-73	CB-73	460.50	456.50	DMH-72	460.75	456.00	12	CPE (TYPE S)	18	0.028
D-74	DMH-74	461.95	457.45	DMH-72	460.75	456.70	12	CPE (TYPE S)	24	0.031
D-75	CB-75	461.70	457.70	DMH-74	461.95	457.45	12	CPE (TYPE S)	15	0.017
D-76	CB-76	462.00	458.25	DMH-74	461.95	457.95	12	CPE (TYPE S)	21	0.014
D-77	DMH-77	464.00	459.00	DMH-74	461.95	457.95	12	CPE (TYPE S)	34	0.031
D-78	CB-78	463.50	459.50	DMH-77	464.00	459.00	12	CPE (TYPE S)	31	0.016
D-79	CB-79	463.50	459.50	DMH-77	464.00	459.00	12	CPE (TYPE S)	31	0.016
D-81	RD-81	466.00	458.00	OF-80	N/A	458.00	12	CPE (TYPE S)	20	0.000
D-83	RD-83	464.00	458.50	OF-82	N/A	458.00	12	CPE (TYPE S)	85	0.006
D-92	DMH-92	436.00	429.50	DMH-2	426.85	422.85	12	CPE (TYPE S)	147	0.045
D-93	OCS-93	434.90	430.00	DMH-92	436.00	429.50	12	CPE (TYPE S)	25	0.020
D-94	OCS-94	426.80	422.00	DMH-2	426.85	421.50	12	CPE (TYPE S)	48	0.010
D-96	OCS-96	427.00	422.00	FES-95	N/A	418.00	12	CPE (TYPE S)	127	0.031
D-99	OCS-99	424.90	420.00	FES-98	N/A	418.00	12	CPE (TYPE S)	39	0.051
D-100	DMH-100	415.60	409.56	FES-28	N/A	408.75	2 x 12	CPE (TYPE S)	82	0.010

PHASE 2 PIPE & STRUCTURE SCHEDULE

PIPE	UPSTREAM STRUCTURE	UPSTREAM RIM (ft)	UPSTREAM INVERT (ft)	DOWNSTREAM STRUCTURE	DOWNSTREAM RIM (ft)	DOWNSTREAM INVERT (ft)	DIAMETER (in)	MATERIAL	LENGTH (ft)	SLOPE (ft/ft)
D-202	DMH-202	506.00	489.00	FES-201	N/A	487.00	12	CPE (TYPE S)	39	0.051
D-203	DMH-203	504.90	493.50	DMH-202	506.00	493.00	12	CPE (TYPE S)	15	0.033
D-204	DMH-204	499.55	494.20	DMH-203	504.90	493.50	12	CPE (TYPE S)	94	0.007
D-205	CB-205	498.60	494.60	DMH-204	499.55	494.20	12	CPE (TYPE S)	26	0.015
D-206	CB-206	498.45	494.45	DMH-204	499.55	494.20	12	CPE (TYPE S)	24	0.010
D-207	DMH-207	506.90	502.40	DMH-203	504.90	500.90	12	CPE (TYPE S)	38	0.039
D-208	CB-208	507.75	503.75	DMH-207	506.90	502.40	12	CPE (TYPE S)	29	0.047
D-209	CB-209	507.50	503.50	DMH-207	506.90	502.40	12	CPE (TYPE S)	34	0.032
D-210	DMH-210	511.05	507.05	DMH-207	506.90	502.40	12	CPE (TYPE S)	141	0.033
D-211	DMH-211	513.50	509.50	DMH-210	511.05	507.05	12	CPE (TYPE S)	110	0.022
D-212	INF-301 OUT	515.00	511.50	DMH-211	513.50	509.50	12	CPE (TYPE S)	31	0.065
D-214	AD-214	513.50	508.00	INF-301 IN A	N/A	507.25	12	CPE (TYPE S)	71	0.011
D-215	CB-215	513.00	509.00	AD-214	513.50	508.00	12	CPE (TYPE S)	69	0.014
D-216	RD-216	515.00	507.75	INF-301 IN C	N/A	507.25	12	CPE (TYPE S)	24	0.021
D-217	RD-217	514.80	507.45	INF-301 IN B	N/A	507.25	12	CPE (TYPE S)	22	0.009
D-220	CB-220	506.10	502.10	OF-219	N/A	502.00	12	CPE (TYPE S)	10	0.010
D-222	DMH-222	508.35	502.65	OF-221	N/A	502.00	12	CPE (TYPE S)	74	0.009
D-223	DMH-223	509.60	503.75	DMH-222	508.35	502.65	12	CPE (TYPE S)	135	0.008
D-224	CB-224	508.00	504.00	DMH-223	509.60	503.75	12	CPE (TYPE S)	37	0.007
D-225	CB-225	508.00	504.00	DMH-223	509.60	503.75	12	CPE (TYPE S)	49	0.005
D-226	INF-303 OUT	508.40	506.00	DMH-222	508.35	504.35	12	CPE (TYPE S)	5	0.330
D-228	DMH-228	509.80	505.80	INF-303 IN	N/A	505.50	12	CPE (TYPE S		



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REV.	DATE	DESCRIPTION	INT.
C	09/20/16	PEER REVIEW COMMENTS	
B	06/24/16	INITIAL ISSUE	
A		NOT ISSUED	

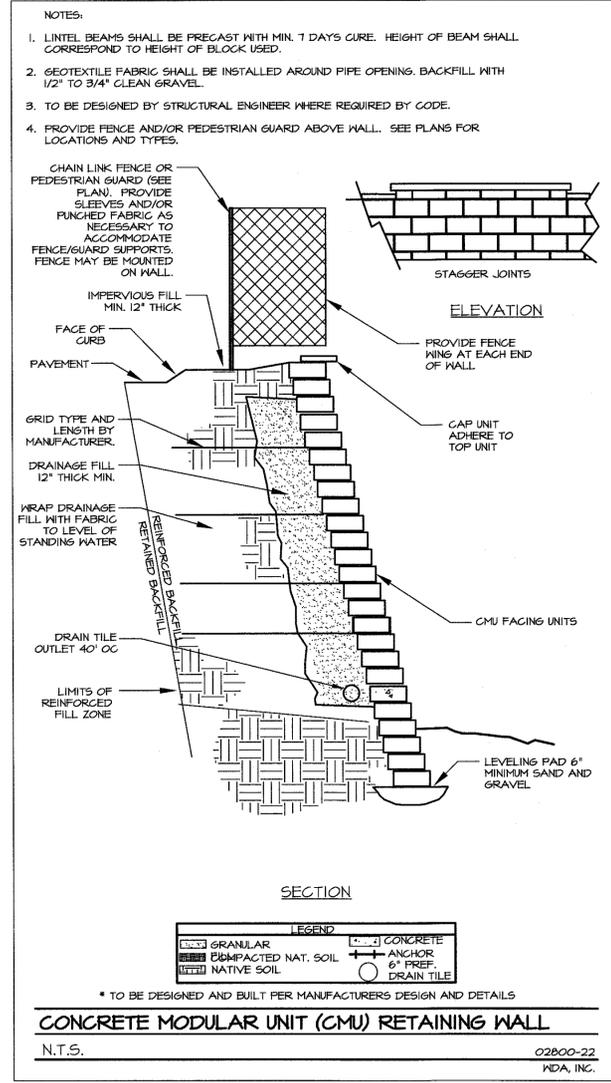
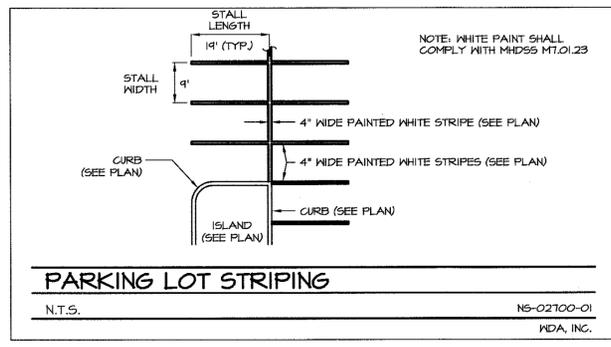
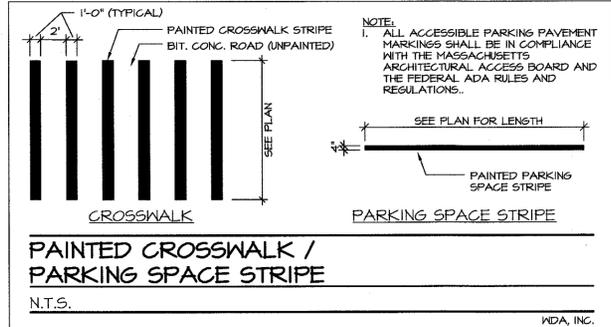
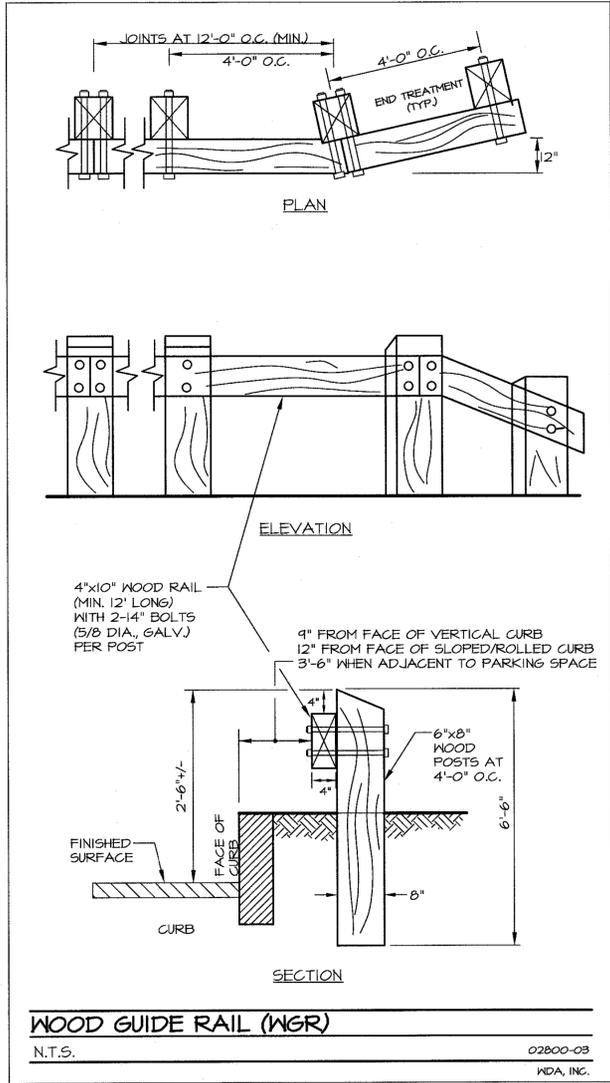
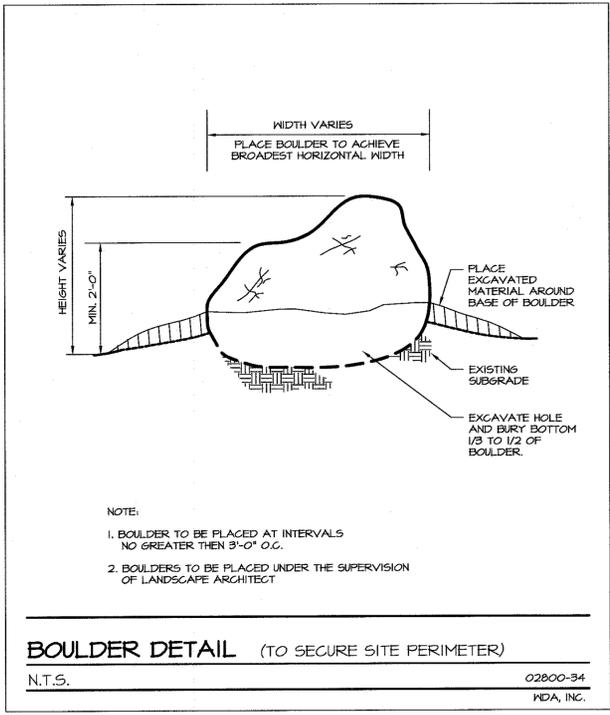
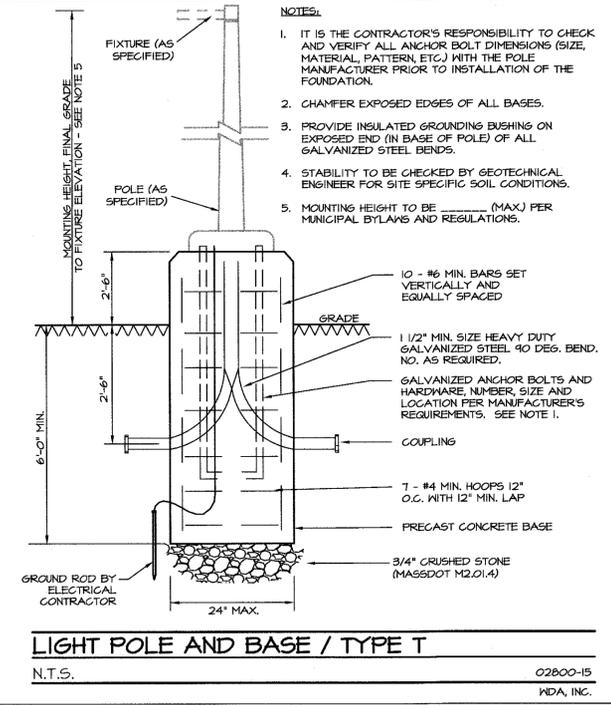
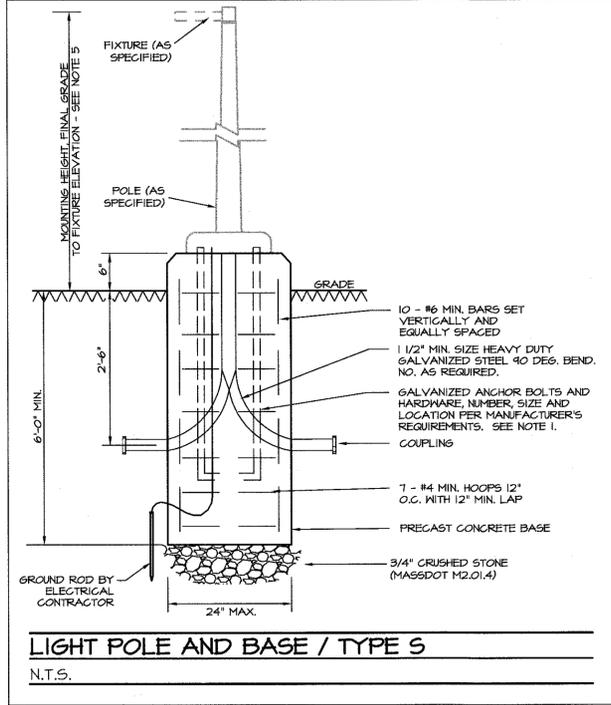
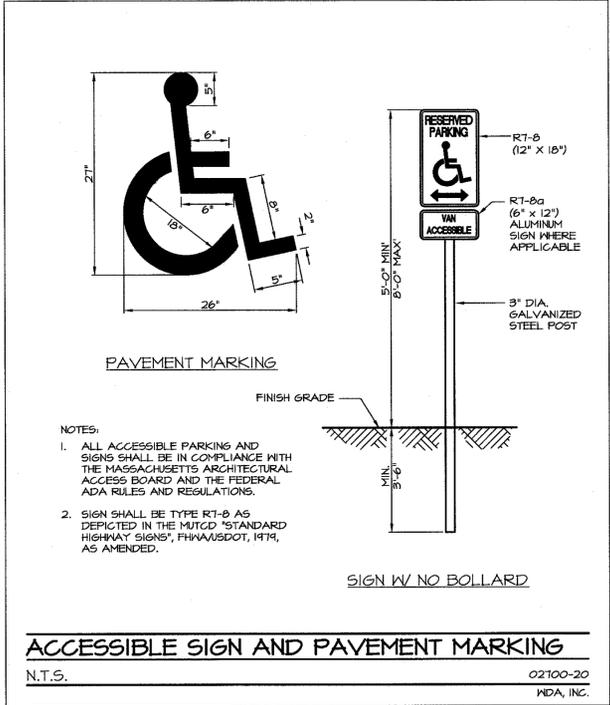
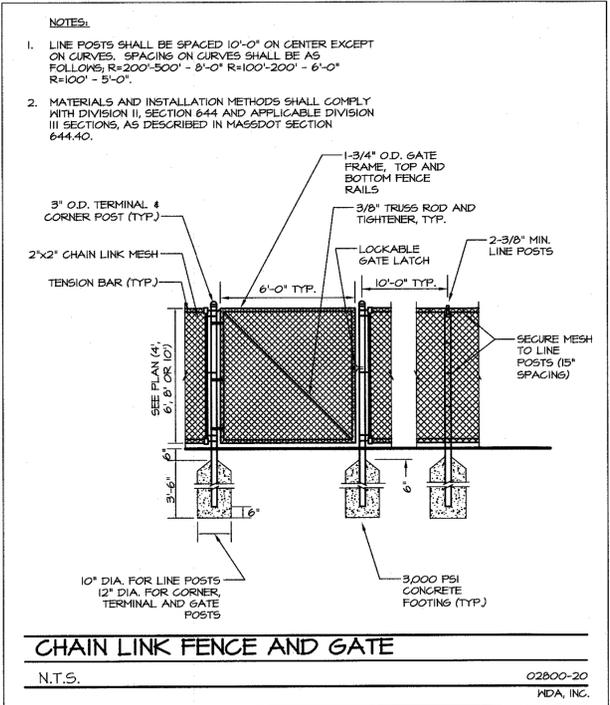


PREPARED BY:
WDA
WATERMAN DESIGN ASSOCIATES, INC.
31 East Main Street
Westborough, MA 01581
508.366.6552
508.366.6506 (fax)
watermandesign.com wda@wdassoc.com

OWNER:
HARTFORD REALTY TRUST OF SHREWSBURY
291 Grafton Street
Shrewsbury, MA
PREPARED FOR:
SMART GROWTH DESIGN, LLC
625 South Street
Shrewsbury, MA 01545

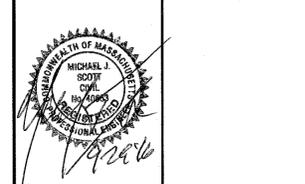
TITLE:
DETAILS
THE POINTE AT HILLS FARM
Shrewsbury, MA (Worcester County)
COMPREHENSIVE PERMIT

DATE: 11/06/15 SCALE: AS NOTED
JOB NO.: 0927.00 DWN. BY:
FILE NO.: 0927500 CHK'D. BY:
DRAWING NO.: 0927506C SHEET: **C3.05**



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PREPARED BY:

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

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

COMPREHENSIVE PERMIT

DATE:	11/06/15	SCALE:	AS NOTED
JOB NO.:	0928.00	DWN. BY:	
FILE NO.:	0927500	CHK'D. BY:	
DRAWING NO.:	0927507C	SHEET:	C3.06

