

# "VILLAGE GREEN APARTMENTS"

## 40B COMPREHENSIVE PERMIT APPLICATION

### at 15 Great Road

### Littleton, Massachusetts

NOTE:

ALL SUPPLEMENTAL DATA SUBMITTED IN CONJUNCTION WITH THIS 40B COMPREHENSIVE PERMIT APPLICATION AS REQUIRED BY THE LITTLETON ZONING BOARD OF APPEALS IS HEREBY INCORPORATED AS PART OF THE PLAN SET. THIS PLAN, ITS SUPPORTING DOCUMENTATION AND FORM WORK ARE SUBMITTED PURSUANT TO THE PROVISIONS OF THE TOWN OF LITTLETON'S ZONING BOARD OF APPEALS MODEL RULES FOR THE ISSUANCE OF A COMPREHENSIVE PERMIT AND MASSACHUSETTS GENERAL LAW, CHAPTER 40B.

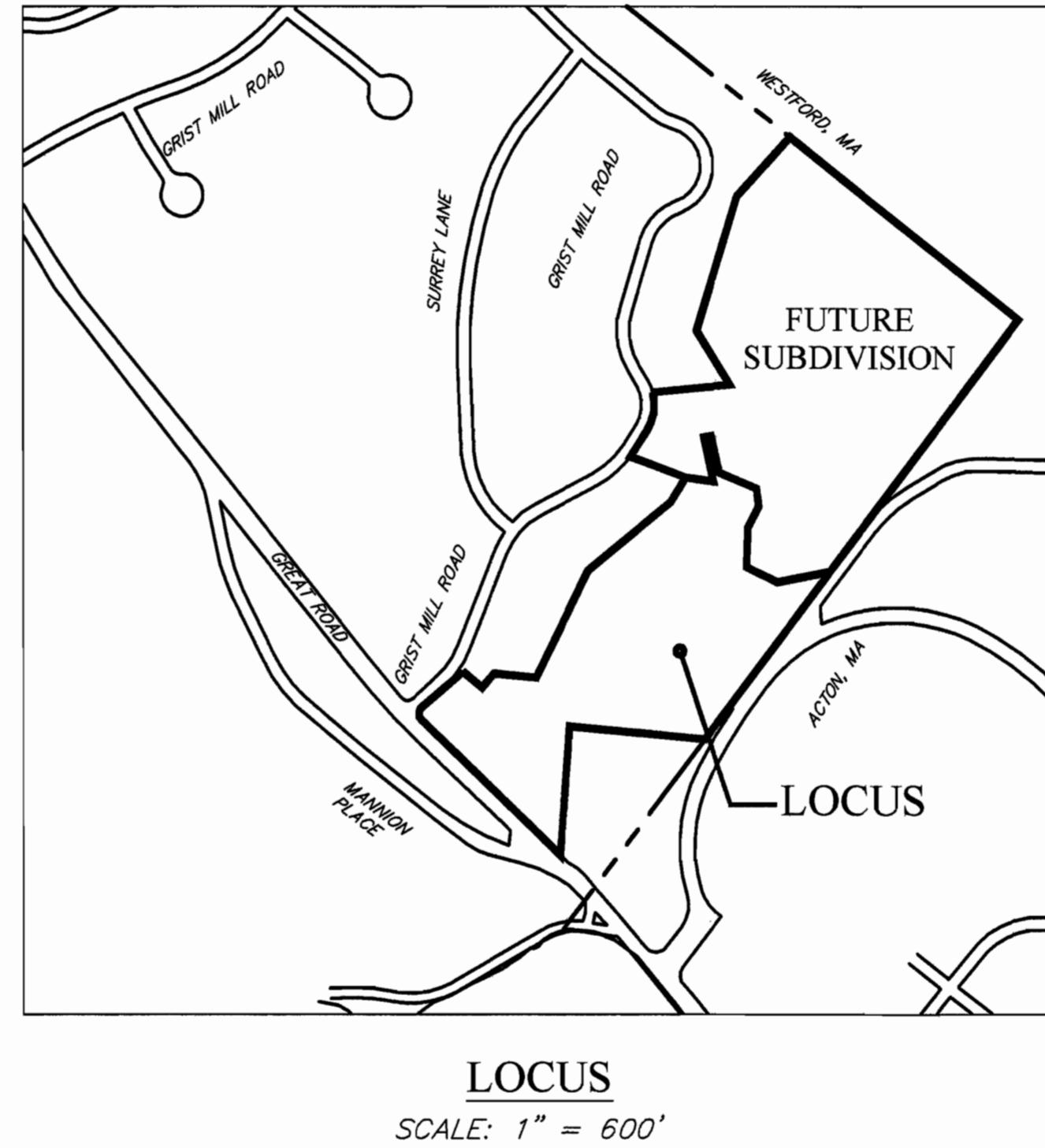
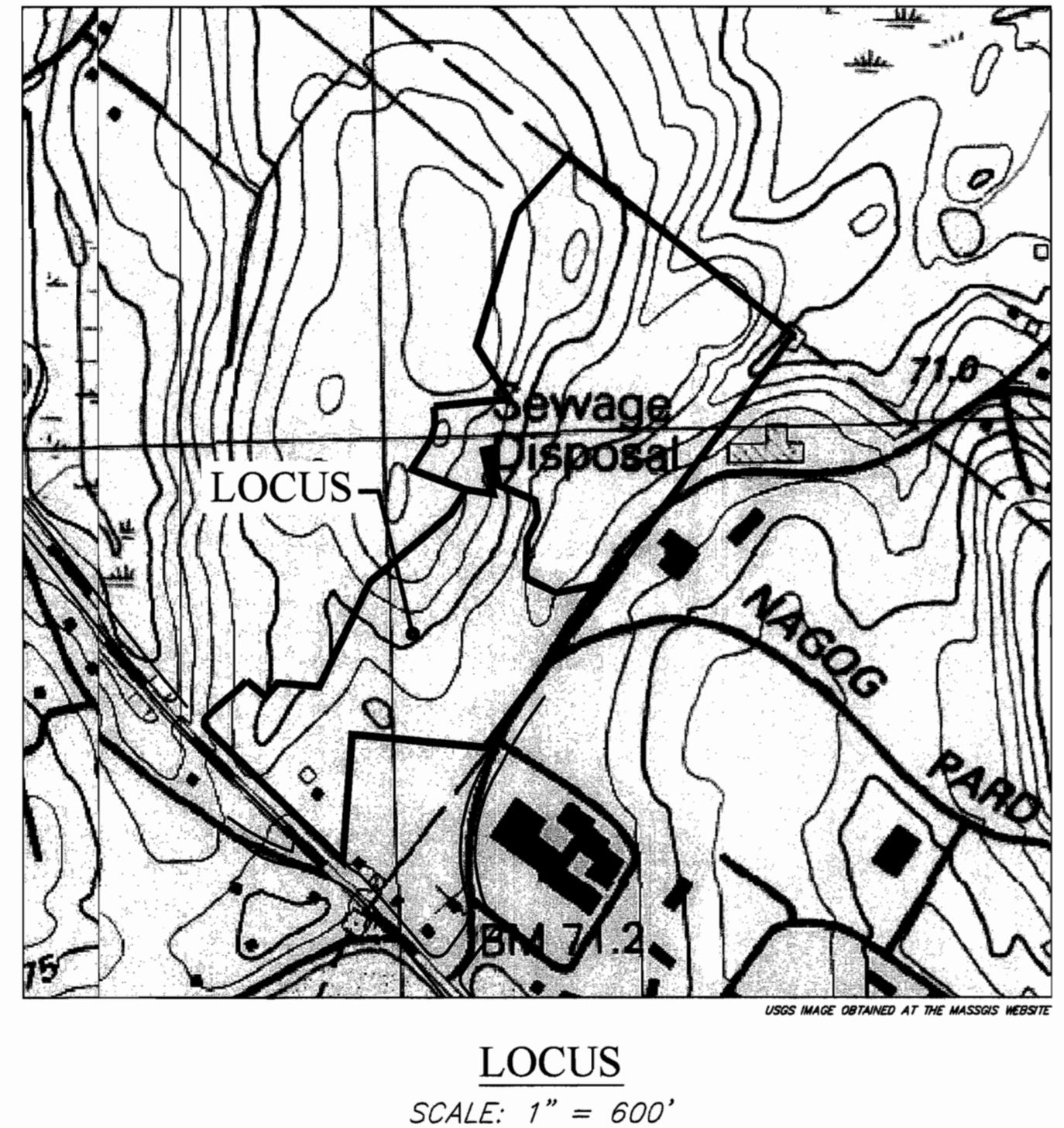
LITTLETON ASSESSOR DATA:  
MAP & PARCEL: MAP U01 PARCELS  
2-0, 6-0,32-17, 32-18, 32-20,32-27 AND  
32-28.

REFERENCES:  
MIDDLESEX SOUTH REGISTRY OF DEEDS  
BK 44725 PG 484  
BK 54533 PG 583  
BK 58154 PG 123  
BK 58154 PG 126

ZONING  
R-RESIDENTIAL

SITE DOES NOT CONTAIN ANY FLOOD HAZARD ZONE PER FLOOD INSURANCE RATE MAP 25017C243E PANEL 243 OF 656 EFFECTIVE JUNE 4, 2010.

SITE IS NOT WITHIN A LITTLETON AQUIFER OR WATERSHED PROTECTION OVERLAY DISTRICT.



APPLICANT:  
Fifteen Great Road LLC  
200 Baker Avenue—Suite 303  
Concord, MA 01742

OWNERS:  
Nashoba Place Realty Trust (Parcel 2.0)  
John R. Keilty, Trustee  
Seven Dearborn Rd.  
Peabody, MA 01960

JFM Realty Trust (Parcel 6.0)  
Leslie French, Trustee  
P.O. Box 1472  
Littleton, MA 01460

Littleton Holding Realty Trust  
(Parcels 32-17, 32-18, 32-19, 32-20,  
32-27, 32-28)  
John R. Keilty, Trustee  
40 Lowell Ave.  
Peabody, MA 01960

PLANNER, LANDSCAPE ARCHITECT, CIVIL ENGINEER & SURVEYOR:  
Places Associates, Inc.  
510 King Street, Suite 9  
Littleton, MA 01460

ARCHITECT:  
Maugel Architects, Inc.  
200 Ayer Road  
Harvard, MA 01451



GENERAL REVISION NOTE:  
PREVIOUS PLAN DATES:  
MAY 2011—ORIGINAL SUBMITTAL  
FEB 16, 2012—GENERAL REVISION

DUE TO EXTENSIVE REVISIONS, THESE PLANS SUPERCEDE ALL PREVIOUS PLANS AND ARE DATED JULY 9, 2012 TO AVOID CONFUSION.

<b>COVER SHEET</b>	
LOCATION: 15 GREAT ROAD TOWN: LITTLETON, MASSACHUSETTS PREPARED FOR:	
<b>FIFTEEN GREAT ROAD LLC</b>	
SCALE: AS SHOWN DATE: JULY 9, 2012	
Places Associates, Inc.	
 <i>Planning, Landscape Architecture, Civil Engineering, Surveying</i> 510 KING STREET, SUITE 9 LITTLETON, MA 01460 978.486.0334 Fax 978.486.0447 EMAIL: <a href="mailto:places@verizon.net">places@verizon.net</a>	
PROJECT No.: 11-6303 PLAN No. CP-1	

#### GENERAL NOTES:

- PRIOR TO THE PREPARATION OF BIDS AND/OR THE INITIATION OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN AND CAREFULLY EXAMINE THIS PLAN SET, RELATED CONSTRUCTION PLAN SETS FROM OTHER PROFESSIONAL DISCIPLINES, CONSTRUCTION SPECIFICATIONS, MANUFACTURERS INFORMATION AND ANY APPLICABLE PERMIT REQUIREMENTS/CONDITIONS OF APPROVAL FOR THE PROJECT.
- THE EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. DIG SAFE AND THE APPROPRIATE UTILITY COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
- NOT ALL UTILITIES WERE ABLE TO BE LOCATED BY RECORD INFORMATION, SITE SURVEYS OR UTILITY LOCATOR SERVICES. THE DESIGN ENGINEER AND BASE PLAN SURVEYOR DO NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OR SUBSURFACE STRUCTURES WHICH ARE OMITTED OR INACCURATELY SHOWN. PRIOR TO THE INITIATION OF WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION/ELEVATION OF EXISTING UTILITIES SHOWN ON THE PLAN.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY DISCREPANCY BETWEEN THE LOCATION/ELEVATION OF ANY EXISTING UTILITIES SHOWN ON THE PLANS AND THAT WHICH IS FOUND IN THE FIELD.
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL LAND SURVEYOR TO PROVIDE LAYOUT & CONTROL FOR THE DEVELOPMENT OF THE SITE.
- ALL CONSTRUCTION UNDER AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONSTRUCTED TO WITHSTAND A DIRECT H2O DESIGN LOAD. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL UTILITY/SITE IMPROVEMENT AREAS UNDER LANDSCAPED/NON-TRAFFIC BEARING AREAS FROM TEMPORARY CONSTRUCTION LOADS DURING CONSTRUCTION.
- THE CONSTRUCTION SHOWN ON THESE PLANS REQUIRES AN ORDER OF CONDITIONS BE ISSUED BY THE LITTLETON CONSERVATION COMMISSION. THE CONTRACTOR SHALL OBTAIN A COPY OF SUCH ORDERS OF CONDITIONS PRIOR TO ANY SITE-RELATED DISTURBANCES AND SHALL COMPLY WITH APPROPRIATE CONDITIONS FOR CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ADJACENT PROPERTY FROM DAMAGE. ALL DAMAGES BY THE CONTRACTOR OR SUBCONTRACTORS SHALL BE REPAIRED AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING SURVEY MONUMENTS (BOUNDS, PINS, PIPES, DRILL HOLES, ETC.) THROUGHOUT ALL PHASES OF CONSTRUCTION. ANY DISTURBED MONUMENTS SHALL BE REPLACED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY CONTRADICTORY, INCOMPLETE OR MISLABELED INFORMATION SHOWN ON THE PLANS OR PLANS PREPARED BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR ADEQUATE TIME FOR THE ENGINEER TO RESPOND/PROVIDE DIRECTION FOR THE PLAN DISCREPANCY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS OF PRODUCTS/MATERIALS TO THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY AS REQUIRED IN THE CONSTRUCTION DOCUMENTS OR IF REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OVER THE PRODUCT. ADEQUATE TIME SHALL BE ALLOWED FOR THE SHOP DRAWINGS TO BE REVIEWED AND RETURNED TO THE CONTRACTOR PRIOR TO ORDERING THE SPECIFIED PRODUCTS/MATERIALS.
- ALL SUPPLEMENTAL DATA SUBMITTED IN CONJUNCTION WITH THIS PRELIMINARY SUBDIVISION AS REQUIRED BY THE SUBDIVISION REGULATIONS IS HEREBY INCORPORATED AS PART OF THE PLAN SET.
- ALL PERMANENT BOUNDARY AND SURVEY MONUMENTS SHALL BE INSTALLED AFTER THE COMPLETION OF ALL HEAVY SITE WORK.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
- UNLESS OTHERWISE SPECIFIED OR SHOWN, ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM THE THE STANDARDS DESCRIBED IN THE TOWN OF LITTLETON'S SUBDIVISION CONTROL REGULATIONS. IF NOT SPECIFIED THEREIN, SUCH CONSTRUCTION SHALL THEN CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MDOT, FORMERLY MASSHIGHWAY) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST VERSION.
- THE CONTRACTOR SHALL APPLY FOR AND OBTAIN A PERMIT FROM MASS HIGHWAY TO CONSTRUCT WITHIN A PUBLIC WAY FOR WORK WITHIN GREAT ROAD, STATE ROUTE 2A. CONTROLLED DENSITY FILL SHALL BE USED AS PAVEMENT BASE COURSE WITHIN THE STATE HIGHWAY LAYOUT.
- WETLANDS DELINEATION PERFORMED BY OXBOW ASSOCIATES, INC OF ACTON, MA IN APRIL 2011. LOCATIONS OF FLAGS WERE FIELD-SURVEY LOCATED BY PLACES ASSOCIATES, INC. THE FINAL WETLANDS LIMITS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LITTLETON CONSERVATION COMMISSION.
- TOWN LINES DEPICTED HEREON ARE DERIVED FROM PLAN RECORD INFORMATION AND WILL BE FIELD SURVEY DETERMINED PRIOR TO SUBMITTAL OF A DEFINITIVE PLAN.

#### SITE WORK NOTES:

- THE LIMITS OF WORK SHALL BE FIELD ESTABLISHED PRIOR TO INITIATION OF ANY CONSTRUCTION, SITE EXPLORATIONS OR EARTHEN DISTURBANCE.
- EROSION CONTROLS SHALL BE IMPLEMENTED PRIOR TO SITE CLEARING OR DISTURBANCE. SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- EXCEPT FOR THE SETUP FOR ENTRY TO THE SITE, NO CONSTRUCTION OR CONTRACTOR'S VEHICLES SHALL BE PARKED ON GRIST MILL ROAD OR GREAT ROAD, UNLESS COORDINATED WITH ADJACENT PROPERTY OWNERS. ALL CONSTRUCTION STAGING, STOCKPILE AND PARKING AREAS SHALL BE ONSITE.
- LOAM SHALL BE STOCKPILED FOR RE-USE ON THE SITE TO THE EXTENT PRACTICAL, SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS. THE SITE SHALL BE KEPT IN A NEAT AND ORDERLY FASHION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TRENCH OPERATIONS PERMIT PURSUANT TO THE REQUIREMENTS OF THE TOWN OF LITTLETON AND 520 CMR 14.00 (AKA "JACKIE'S LAW").

#### MATERIAL DEFINITIONS:

BITUMINOUS CONCRETE PAVEMENT: ALL SITE PAVING SHALL BE CLASS 1 BITUMINOUS CONCRETE. MIXTURES SHALL BE COMPOSED OF MINERAL AGGREGATE, MINERAL FILLER (IF REQUIRED) AND BITUMINOUS MATERIAL. THE MIXTURE MAY INCLUDE RECLAIMED ASPHALT AT THE OPTION OF THE CONTRACTOR.

CAST IN PLACE CONCRETE: THE MIXTURE COMPOSITION AND TOLERANCES SHALL MEET THE SPECIFICATIONS FOR BINDER COURSE AND TOP COURSE MIXTURES AS SPECIFIED IN TABLE A OF THE MASSACHUSETTS DECLAIMED ASPHALT CONCRETE (R20) USE. THE MIXTURE, THE PROPORTION OF 100% VIRGIN AGGREGATE SHALL BE LIMITED TO A MAXIMUM OF 40% FOR DRUM MIX PLANTS AND 20% FOR MODIFIED BATCH PLANTS.

CONTROLLED DENSITY FILL (CDF): ALL SITE CAST IN PLACE CONCRETE AND RELATED REINFORCING SHALL MEET THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE, THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) FOR PRODUCT MATERIALS, FORM WORK, PLACEMENT AND CURE. ALL SITE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS OTHERWISE REQUIRED IN THE CONSTRUCTION DOCUMENTS.

CRUSHED STONE: CONTROL DENSITY FILL SHALL BE A FLOWABLE, SELF-CONSOLIDATING, RIGID SETTING, LOW DENSITY MATERIAL THAT CAN SUBSTITUTE FOR COMPACTED GRAVELS FOR BACKFILLS, FILLS AND STRUCTURAL FILLS. CDF SHALL BE EXCAVATED BY HAND TOOLS AND/OR SMALL EQUIPMENT WHEN PLACED AND CURED. CDF SHALL MEET THE REQUIREMENTS OF SSBH M4.0.08, TYPE 2E, AND SHALL MEET THE FOLLOWING REQUIREMENTS:

- CDF IS TO BE BATCHED AT A READY MIX PLANT AND IS TO BE USED AT A HIGH OF "VERY HIGH SLUMP FROM 10" TO 12". IT SHALL BE FLOWABLE AND REQUIRE NO VIBRATION AFTER IT HAS BEEN PLACED.
- CDF SHALL BE A MIXTURE OF PORTLAND CEMENT, FLYASH, SAND AND WATER DESIGNED TO MEET THE CDF REQUIREMENTS. HIGH AIR ENTRAINMENT MAY BE SUBSTITUTED FOR FLYASH WITH AN ADMIXTURES (25%) ADJUSTMENT IN SAND CONTENT.
- CDF MUST MEET THE FOLLOWING STRENGTH REQUIREMENTS:
  - 28 DAY COMPRESSIVE STRENGTH: 30-80 PSI
  - 90 DAY COMPRESSIVE STRENGTH: 100 PSI MAX

DENSE GRADED CRUSHED STONE: CRUSHED STONE SHALL BE THE SIZE AS INDICATED ON THE PLANS. THE STONE SHALL BE FROM A STONE QUARRY THAT PRODUCES HARD, ANGULAR DURABLE WASHED STONE FREE FROM DEBRIS AND ORGANIC MATERIALS. THE STONE SHALL MEET THE REQUIREMENTS OF SSBH M2.01.0

GLACIAL TILL: DENSE GRADED CRUSHED STONE SHALL CONSIST OF THE COMBINATION OF CRUSHED STONE AND COARSE AGGREGATE (MASSHIGHWAY M2.01.0) AND PARTICLES OF NATURAL SAND OR COARSE AGGREGATE UNIFORMLY DIMPRESSED WITH A PREDETERMINED QUANTITY OF WATER. COARSE AGGREGATE SHALL CONSIST OF HARD, DURABLE PARTICLES OF FRAGMENTS OF STONE. MATERIALS THAT BREAK UP WHEN ALTERNATELY FROZEN AND THAWED OR WETTED AND DRIED SHALL NOT BE USED. FINE AGGREGATE SHALL CONSIST OF NATURAL OR CRUSHED SAND. THE GRADATION/MATERIAL SHALL COMPLY WITH THE SPECIFICATIONS OF SSBH M2.01.7

GRAVEL BORROW: A. GLACIAL TILL: NATURAL INORGANIC SOIL APPROVED BY THE ENGINEER AND MEETING THE FOLLOWING REQUIREMENTS:
 

- IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIALS, FROZEN MATERIALS AND STONES GREATER THAN TWO INCHES IN MAXIMUM DIMENSION.
- IT SHALL BE A SILT LOAM AS DEFINED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL TEXTURAL CLASSIFICATION.
- THE SOIL SHALL CONSIST OF GREATER THAN 50% SILT, 12% TO 27% CLAY, OR 50% TO 80% SILT AND LESS THAN 12% CLAY.

LOAM (BORROW): GRAVEL BORROW SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM CLAY, SURFACE COATINGS, ORGANIC AND DELETERIOUS MATERIAL. ALL GRAVEL BORROW SHALL MEET THE REQUIREMENTS OF SSBH M1.03.0. MAXIMUM STONE SIZE SHALL BE AS FOLLOWS:

TYPE A: 6" LARGEST DIMENSION
TYPE B: 3" LARGEST DIMENSION
TYPE C: 2" LARGEST DIMENSION

ORDINARY BORROW: LOAM SHALL CONSIST OF NATURAL TOPSOIL, FREE FROM SUB-SOIL, OBTAINED FROM AN AREA WHICH HAS NEVER BEEN STRIPPED. LOAM SHALL BE OF UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, HARDPAN, SOD, PARTIALLY DISINTEGRATED STONE, LIME, CEMENT, ASHES, SLAG, CONCRETE, TAR RESIN, TARRED PAPER, BOARDS, CHIPS OR ANY OTHER UNDESIRABLE MATERIAL.

RIP RAP: LOAM SHALL CONTAIN BETWEEN 5.5 AND 7.5 PERCENT ORGANIC MATTER AS DETERMINED BY LOSS ON IGNITION OF A MOISTURE-FREE SAMPLE DRIED IN ACCORDANCE WITH THE CURRENT METHOD OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

THE ACIDITY RANGE OF THE LOAM SHALL BE PH 6.5 TO PH 7.5 INCLUSIVE.

THE MECHANICAL ANALYSIS OF THE SOIL SHALL BE AS FOLLOWS:

U.S. SIEVE SIZE & NUMBER	PERCENT PASSING
1 INCH	MINIMUM 100%
1/2 INCH	97%
NO. 100 (SAND)	49%
NO. 100 (SILT & CLAY)	40%
MAXIMUM	100%
	60%
	60%

SAND BORROW: ORDINARY BORROW SHALL CONSIST OF MATERIAL NOT SPECIFIED AS ANY OTHER EARTHEN MATERIAL. ORDINARY BORROW SHALL BE WELL GRADED, NATURAL, INORGANIC MATERIAL ACCEPTABLE TO THE ENGINEER FOR THE GENERAL FILLING TO THE SPECIFIED SUB-GRADE. THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:

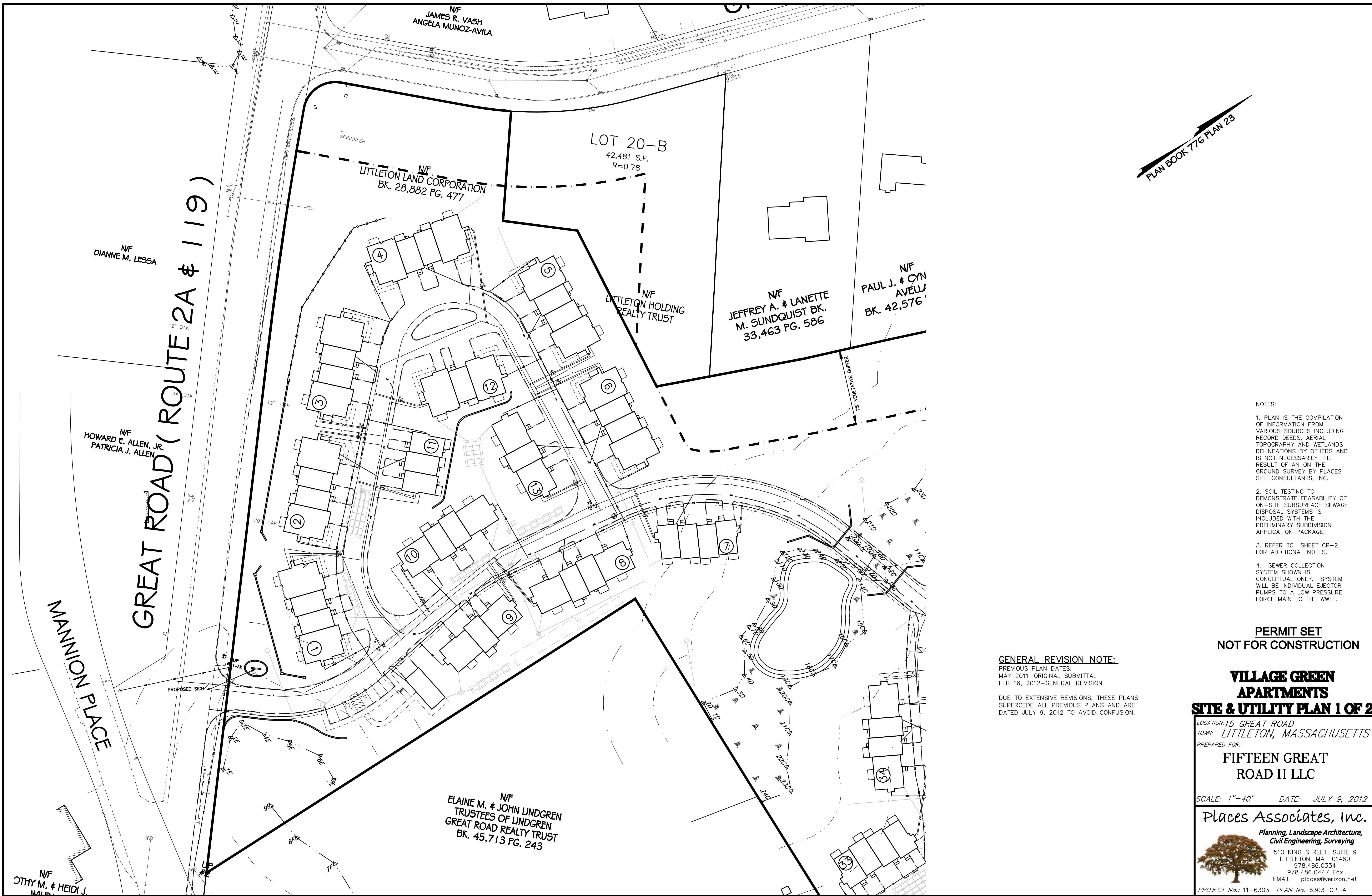
- IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIAL, FROZEN MATERIALS AND OF STONES LARGER THAN 6 INCHES IN MAXIMUM DIMENSION.
- IT SHALL BE OF SUCH NATURE & CHARACTER THAT IT CAN BE COMPACTED TO THE SPECIFIED DENSITIES IN A REASONABLE AMOUNT OF TIME.
- IT SHALL BE FREE OF HIGHLY PLASTIC CLAYS, OF ALL MATERIALS SUBJECT TO DECAY, DECOMPOSITION, AND OF CINDERS OR OTHER MATERIALS WHICH WILL CORRODE PIPING OR OTHER BURIED MATERIALS.
- IT SHALL HAVE A MAXIMUM DRY DENSITY OF NOT LESS THAN 100 POUNDS PER CUBIC FOOT AND LESS THAN 40% OF THE MATERIAL SHALL PASS THE NUMBER 200 SIEVE.
- EXCAVATED ROCK & BOULDERS SMALLER THAN ONE CUBIC YARD IN SIZE MAY BE USED IN FILL AREAS UNDER LAWNS ONLY, PROVIDED THEY ARE A MINIMUM OF 24 INCHES BELOW THE SUBGRADE, PLACED AND COMPACTED IN LAYERS WITH NO Voids AND ALL INTERSTICES FILLED.

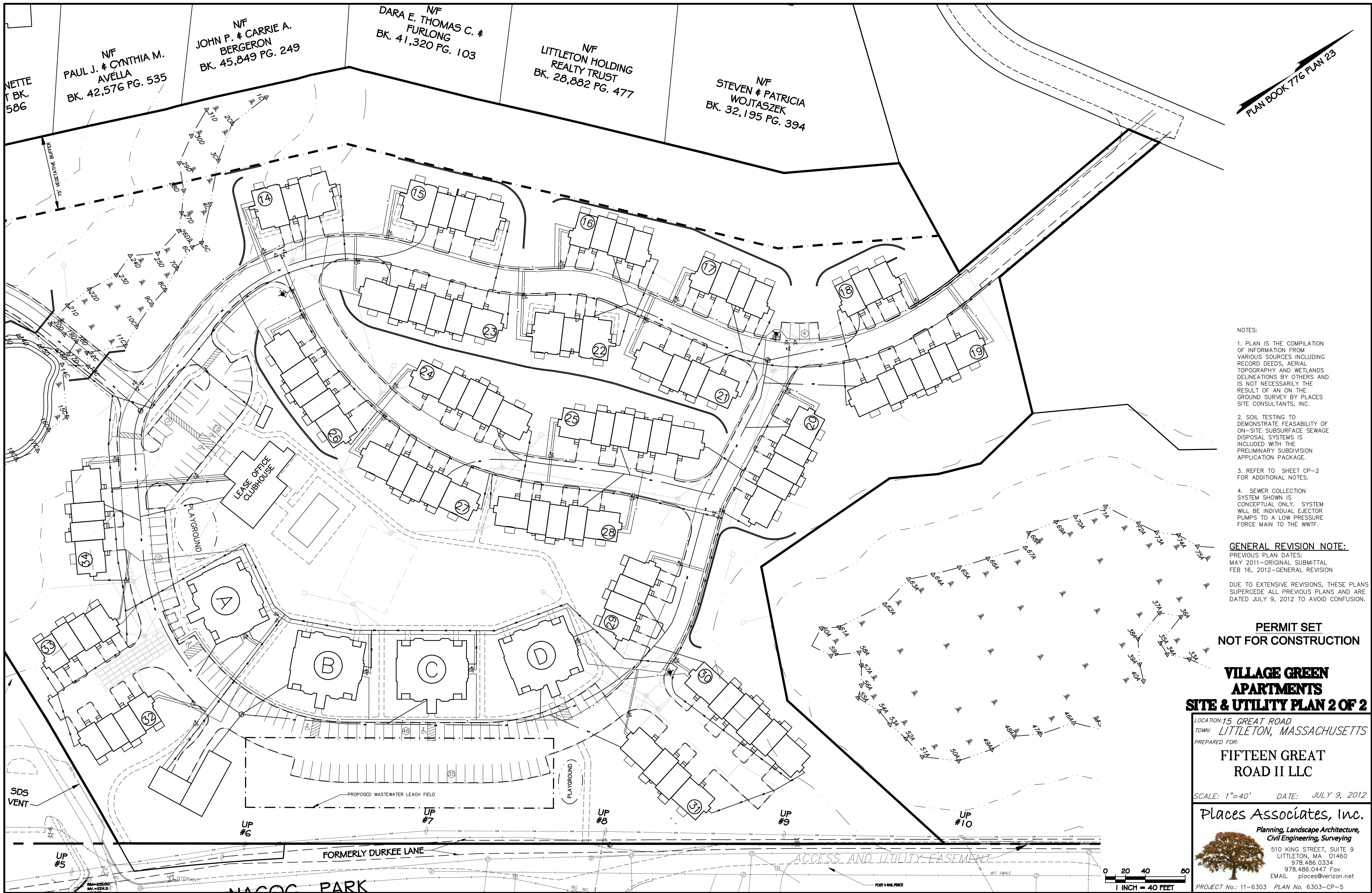
RIP RAP: RIP-RAP STONE SHALL BE SOUND, DURABLE ROCK, ANGULAR IN SHAPE. RIP RAP SHALL BE FREE FROM DEBRIS, ORGANIC OR DELETERIOUS MATERIAL, ROUNDED STONES, BOULDERS, SANDSTONES, SIMILAR SOIL STONES, RELIC STONES, SLATE, AND OTHER MATERIALS NOT PERMITTED UNLESS SPECIFICALLY PERMITTED BY THE DESIGN ENGINEER. ALL RIP RAP MATERIALS SHALL MEET THE REQUIREMENTS OF SSBH M2.02.0.

GENERAL NOTES:

#### GENERAL NOTES:







NVF  
JAMES R. VASH  
ANGELA MUÑOZ-AVIL

DIANNE M. LESSA <sup>NF</sup>

HOWARD E. ALLEN, <sup>NF</sup>  
PATRICIA J. ALLEN

# MANNION PLACE

OTHY M. & HEIDI J.  
WILSON

**LOT 20-B**  
42,481 S.F.  
R=0.78

**LITTLETON LAND CORPORATION**  
N.F.  
B.K. 28,882 PG. 477

**LITTLETON HOLDING REALTY TRUST**  
N.F.  
JEFFREY A. & LANETTE M. SUNDQUIST BK. 33,463 PG. 586

**ELAINE M. & JOHN LINDGREN TRUSTEES OF LINDGREN GREAT ROAD REALTY TRUST**  
N.F.  
B.K. 45,713 PG. 243

**PAUL J. A.**  
N.F.  
B.K. 42,5

**RECYCLING**  
SLAB= 237.5

**STORMWATER TREATMENT UNIT**

**EXISTING FARM POND ELEV = 232.2**

**75' VEGETATIVE BUFFER**

**PROPOSED BRIDGE DECK**

**9F**  
**8F**  
**7F**

**PERMIT SET**  
**NOT FOR CONSTRUCTION**

# **VILLAGE GREEN APARTMENTS GRADING PLAN 1 OF 2**

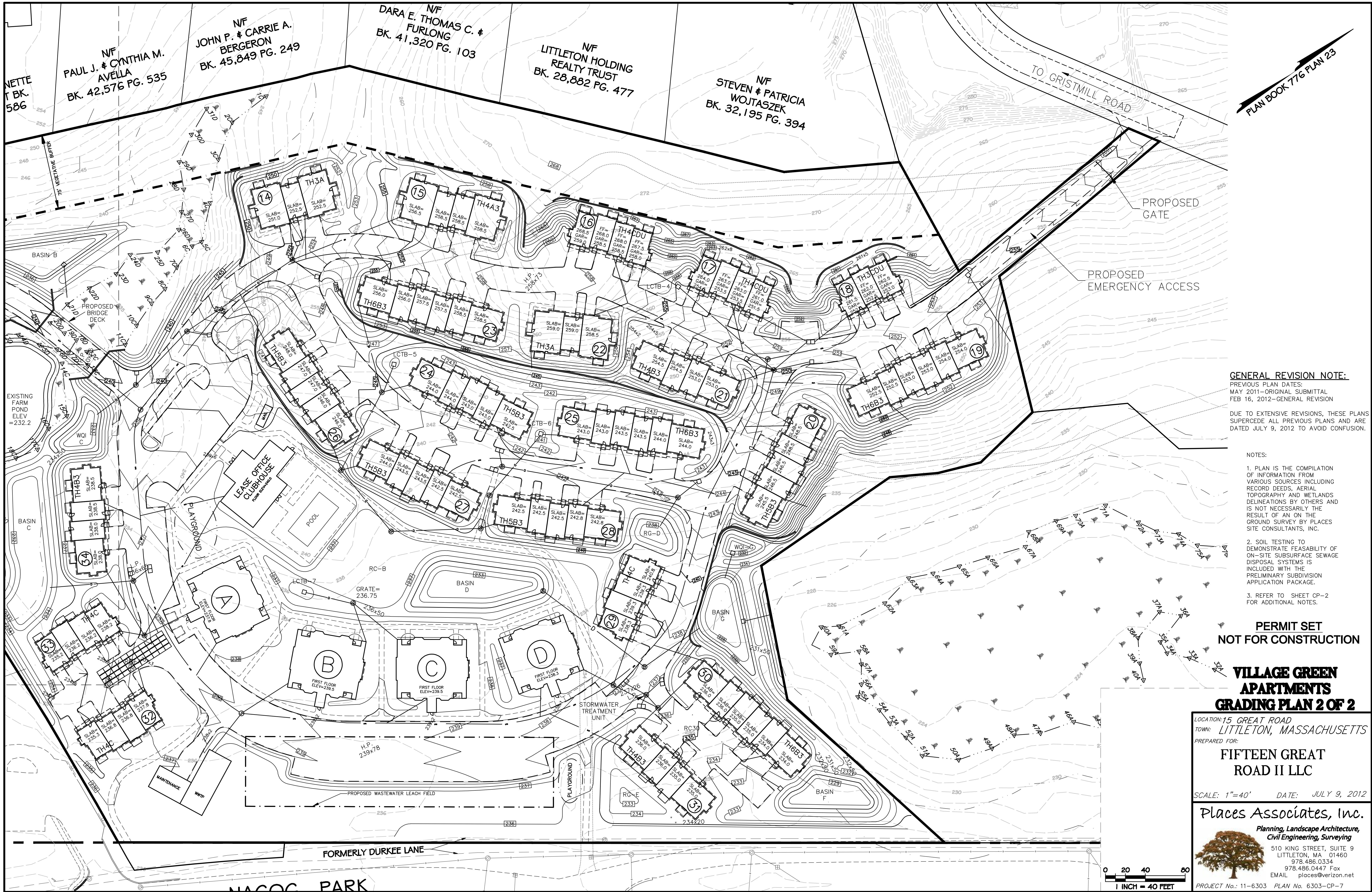
LOCATION: 15 GREAT ROAD  
TOWN: LITTLETON, MASSACHUSETTS  
PREPARED FOR:

# FIFTEEN GREAT ROAD II LLC

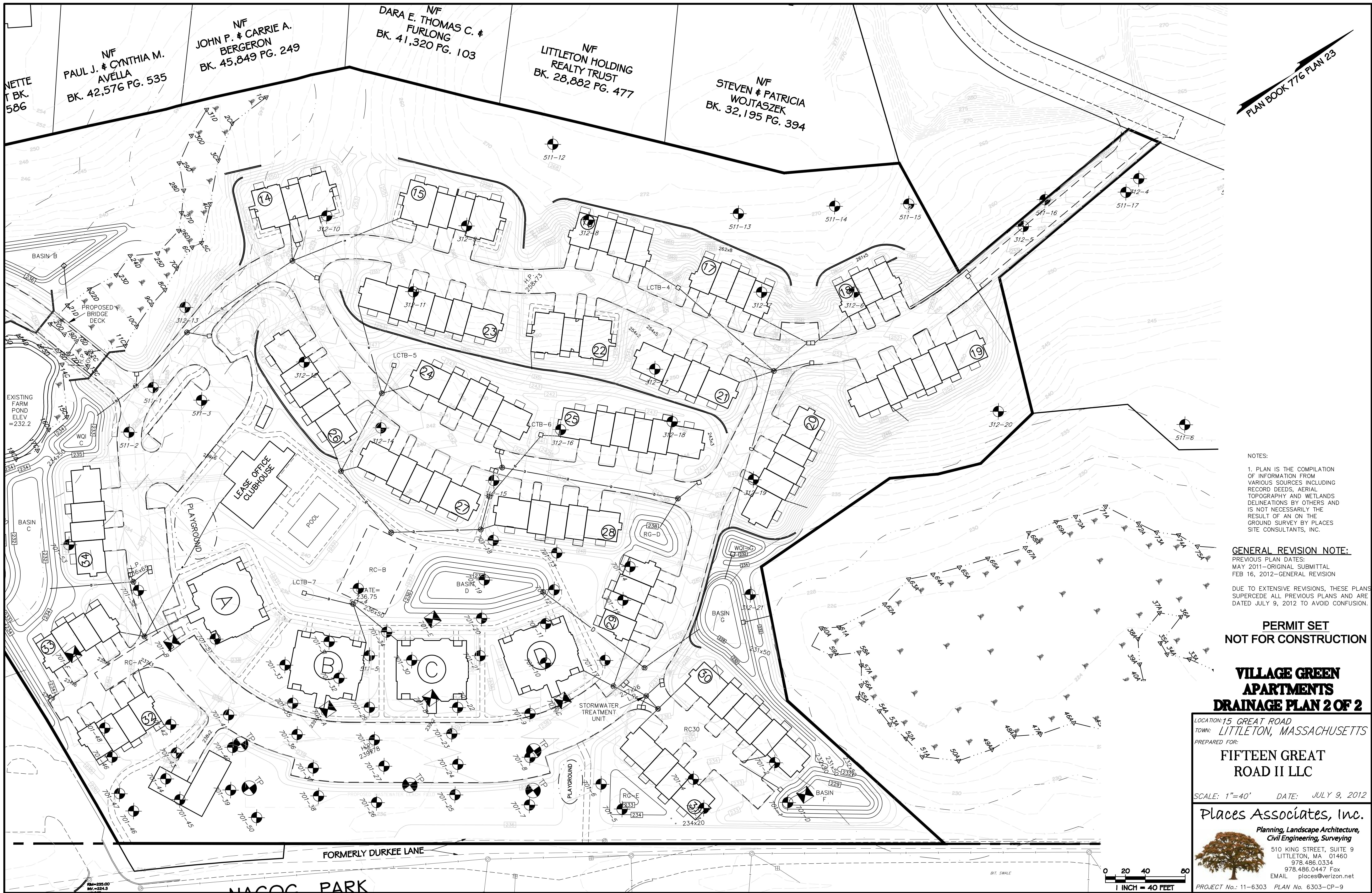
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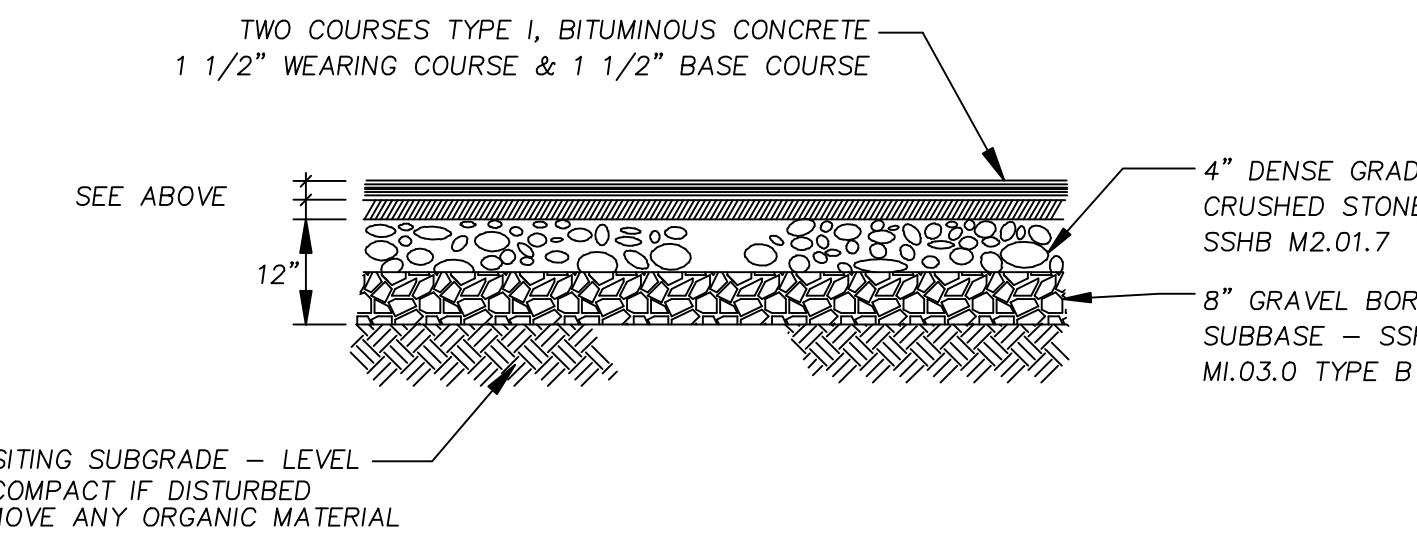
Places Associates, Inc.

*Planning, Landscape Architecture,  
Civil Engineering, Surveying*

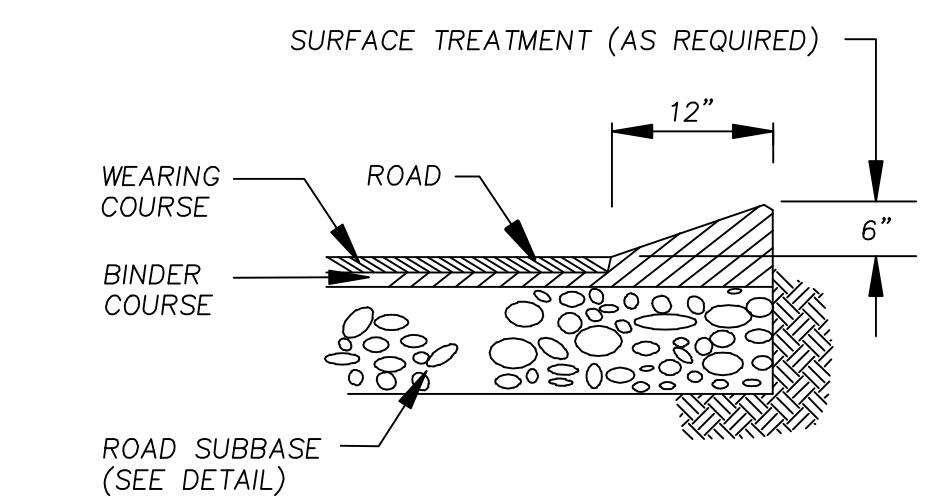




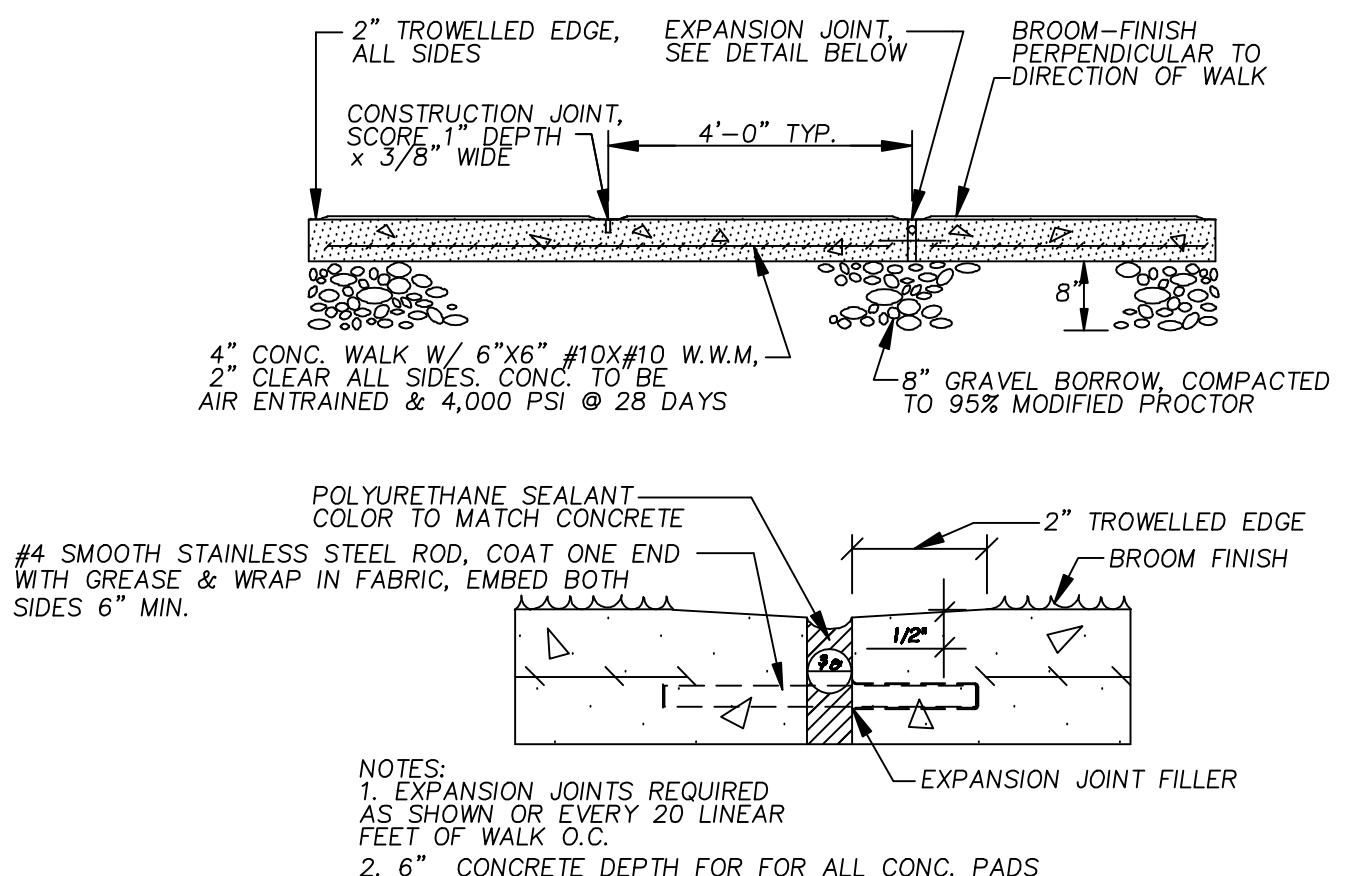




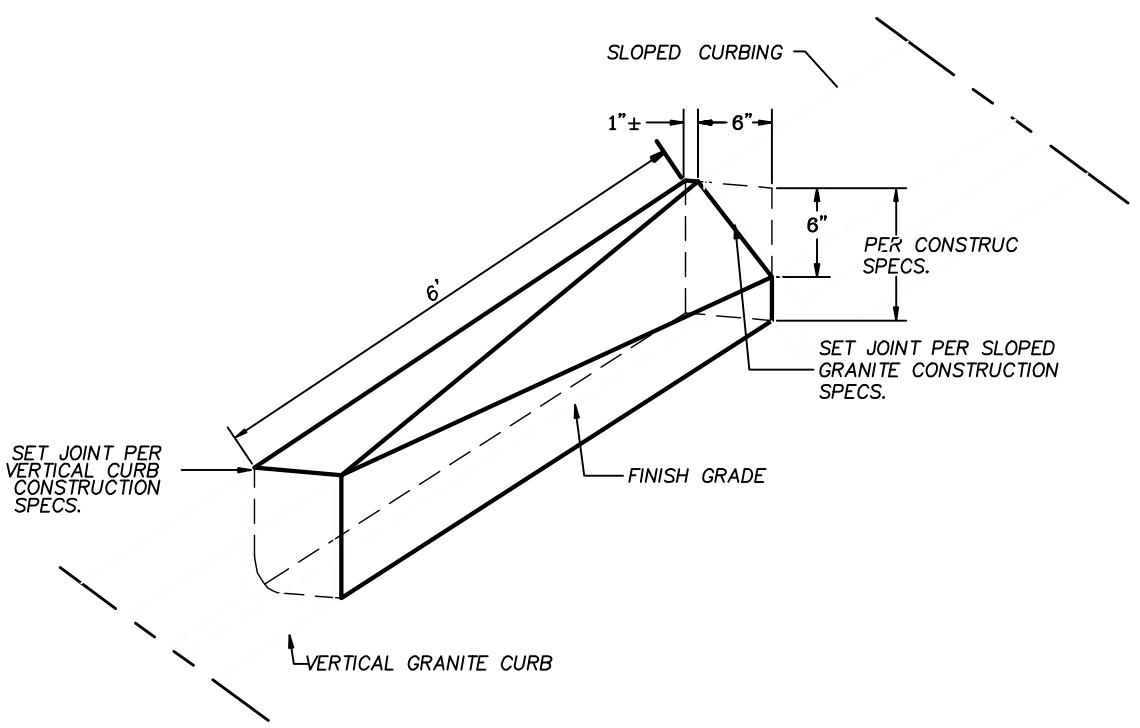
**BITUMINOUS CONC. WALKWAY, DRIVE & PARKING**  
NOT TO SCALE



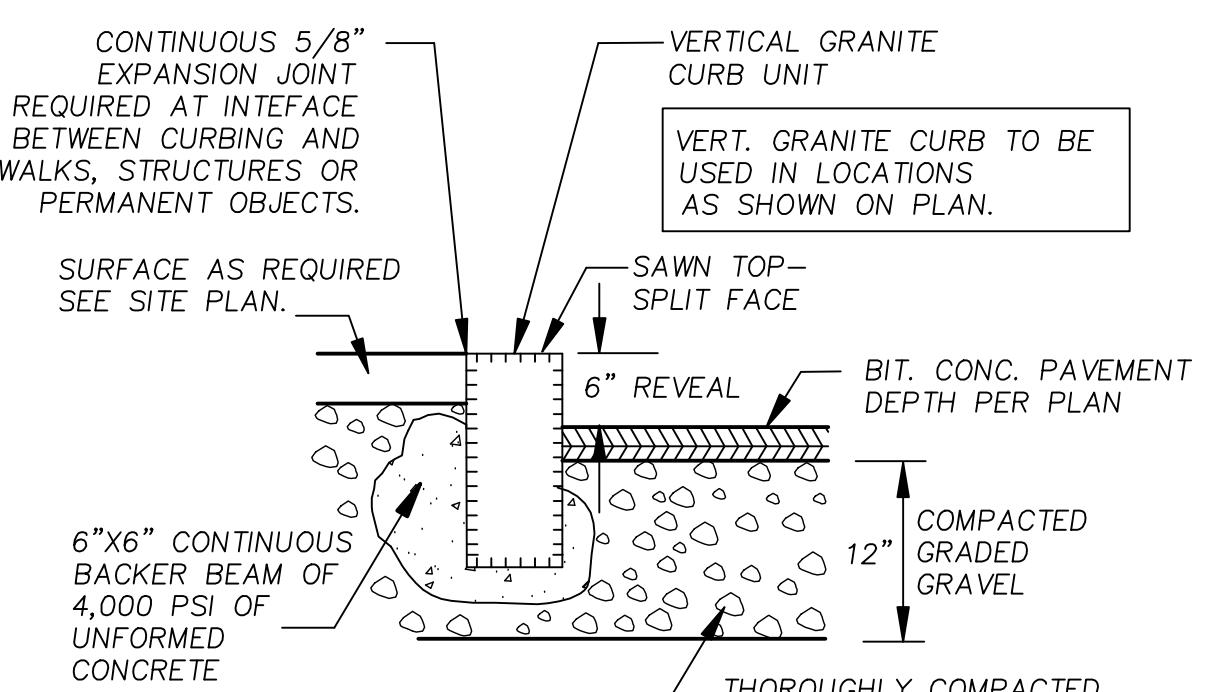
**CAPE COD BERM**  
NOT TO SCALE



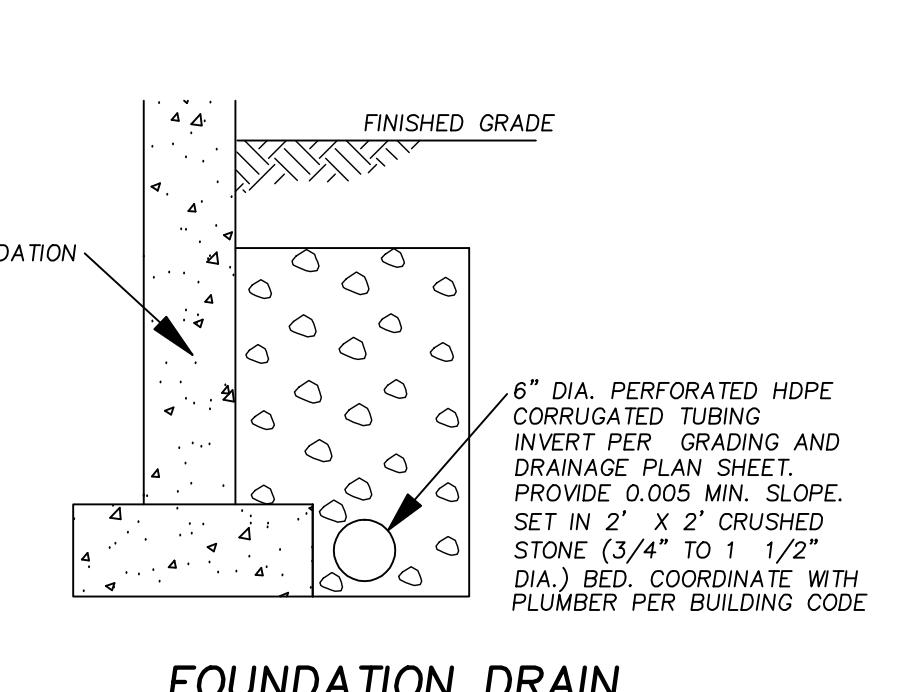
**CONCRETE PADS**  
NOT TO SCALE



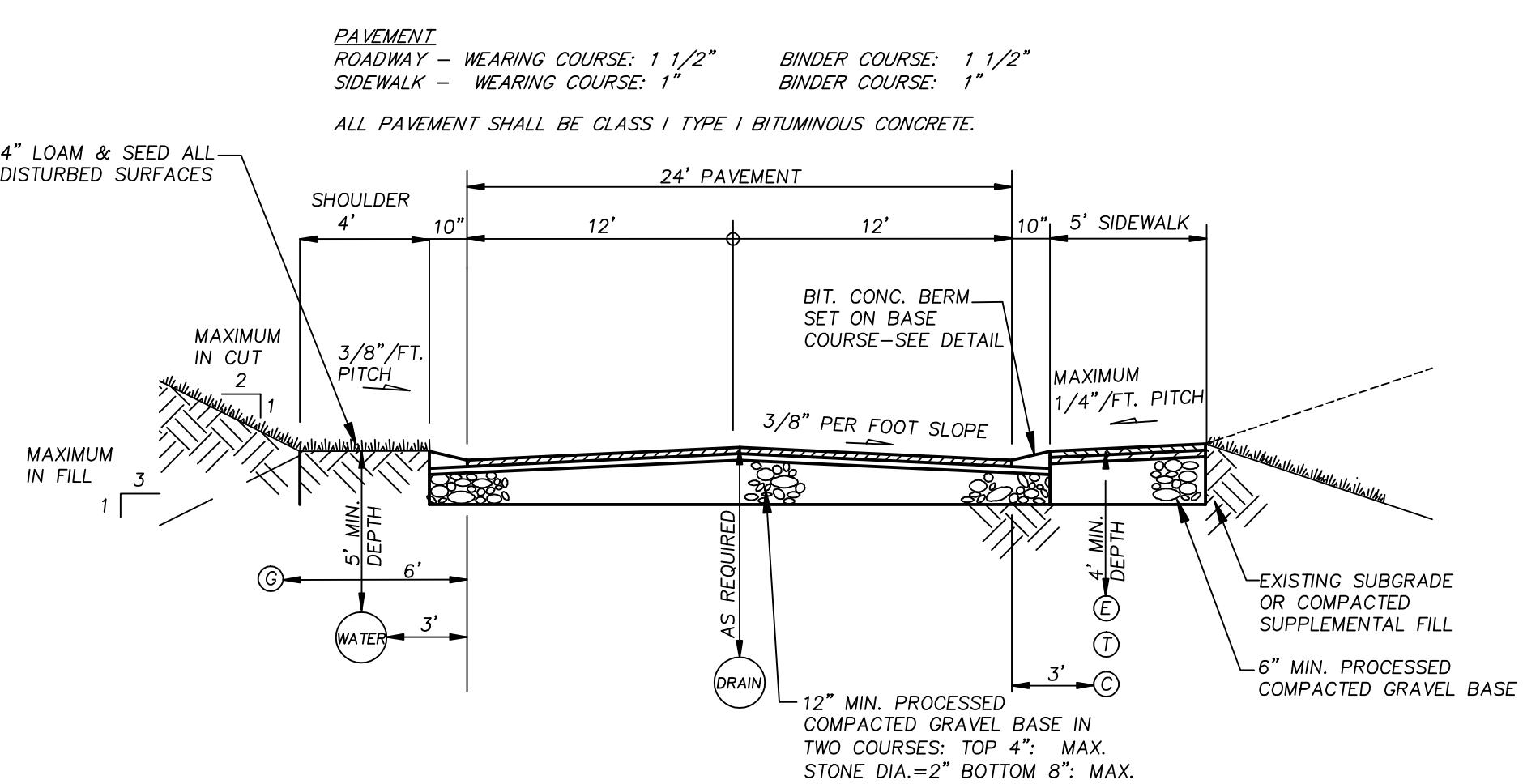
**SLOPED TO VERTICAL TRANSITION CURBING**  
NOT TO SCALE



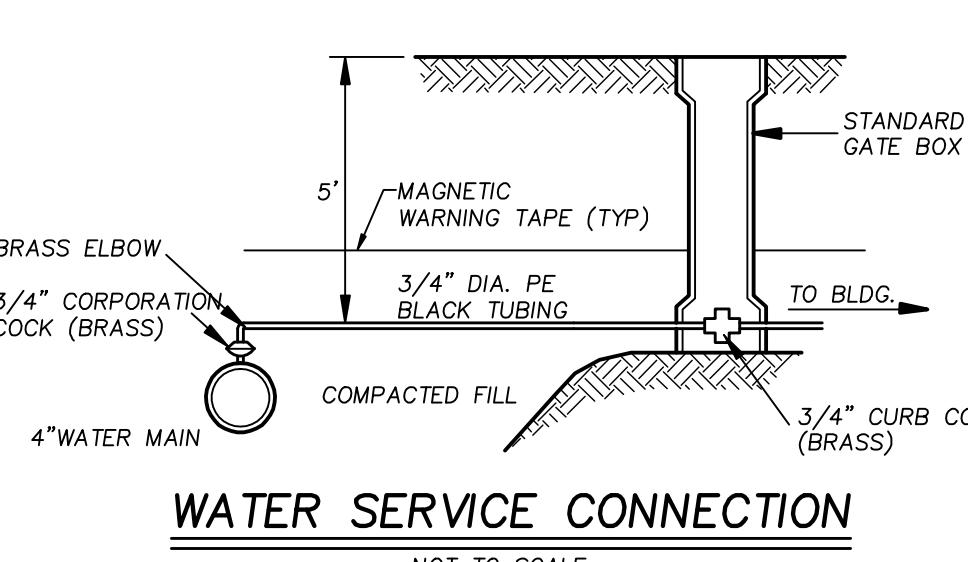
**VERTICAL GRANITE CURB**  
NOT TO SCALE



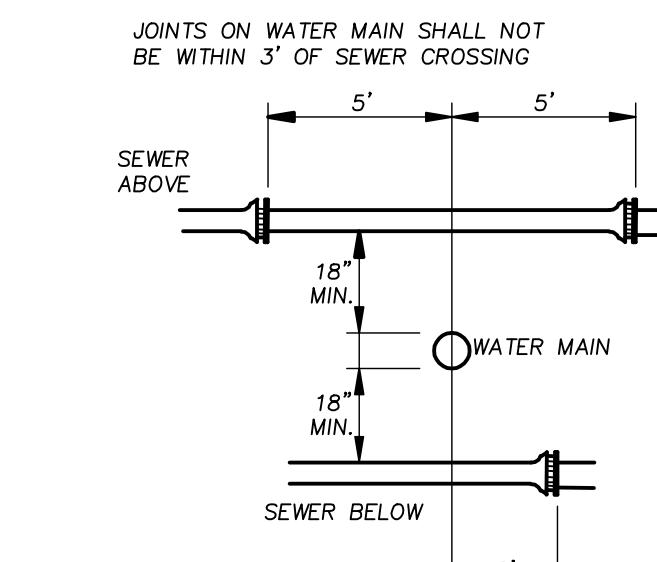
**FOUNDATION DRAIN**  
NOT TO SCALE



**TYPICAL ROAD CROSS SECTION**



**WATER SERVICE CONNECTION**



**SEWER LINE CROSSING-WATER LINE**

**NOTES**  
THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE FOLLOWING GENERAL REQUIREMENTS:  
A. PARALLEL INSTALLATION:  
1. NORMAL CONDITIONS: THE INSIDE EDGE OF A WATER MAIN SHALL BE LAID AT LEAST 10 FEET FROM THE INSIDE EDGE OF ANY SANITARY SEWER, STORM SEWER OR SEWER MANHOLE.  
2. WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, IN BOTH CASES THE INVERT OF THE WATER LINE MUST BE AT LEAST 18" ABOVE THE CROWN OF THE SEWER LINE.  
(a) LAY WATER AND SEWER IN SEPARATE TRENCHES  
(b) LAY THE WATER AND SEWER IN THE SAME TRENCH WITH THE WATER MAIN AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH WITH A MINIMUM HORIZONTAL SEPARATION FROM INSIDE PIPE TO INSIDE PIPE OF 36".  
B. CROSSINGS:  
1. WHEN SEWERS MUST CROSS UNDER WATER MAINS, THE SEWER LAID SUCH THAT THE INVERT OF THE WATER LINE IS AT LEAST 18 INCHES ABOVE THE CROWN OF THE SEWER LINE.  
2. WHEN THE SEWER ELEVATION CANNOT BE VARIED TO MEET THE REQUIREMENT, THE WATER LINE MUST BE RELOCATED OR RECONSTRUCTED WITH MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10' ON EACH SIDE OF THE SEWER.  
3. WHEN IT IS IMPOSSIBLE TO OBTAIN EITHER OR BOTH OF THE ABOVE REQUIREMENTS, BOTH THE WATER LINE AND THE SEWER LINE SHALL BE LINED DUCTILE IRON PIPE OR OTHER EQUIVALENT MATERIAL. BOTH PIPES SHALL BE PRESSURE TESTED BY AN APPROVED METHOD TO ASSURE WATER TIGHTNESS OR BOTH PIPES SHALL BE ENCADED IN CONCRETE.

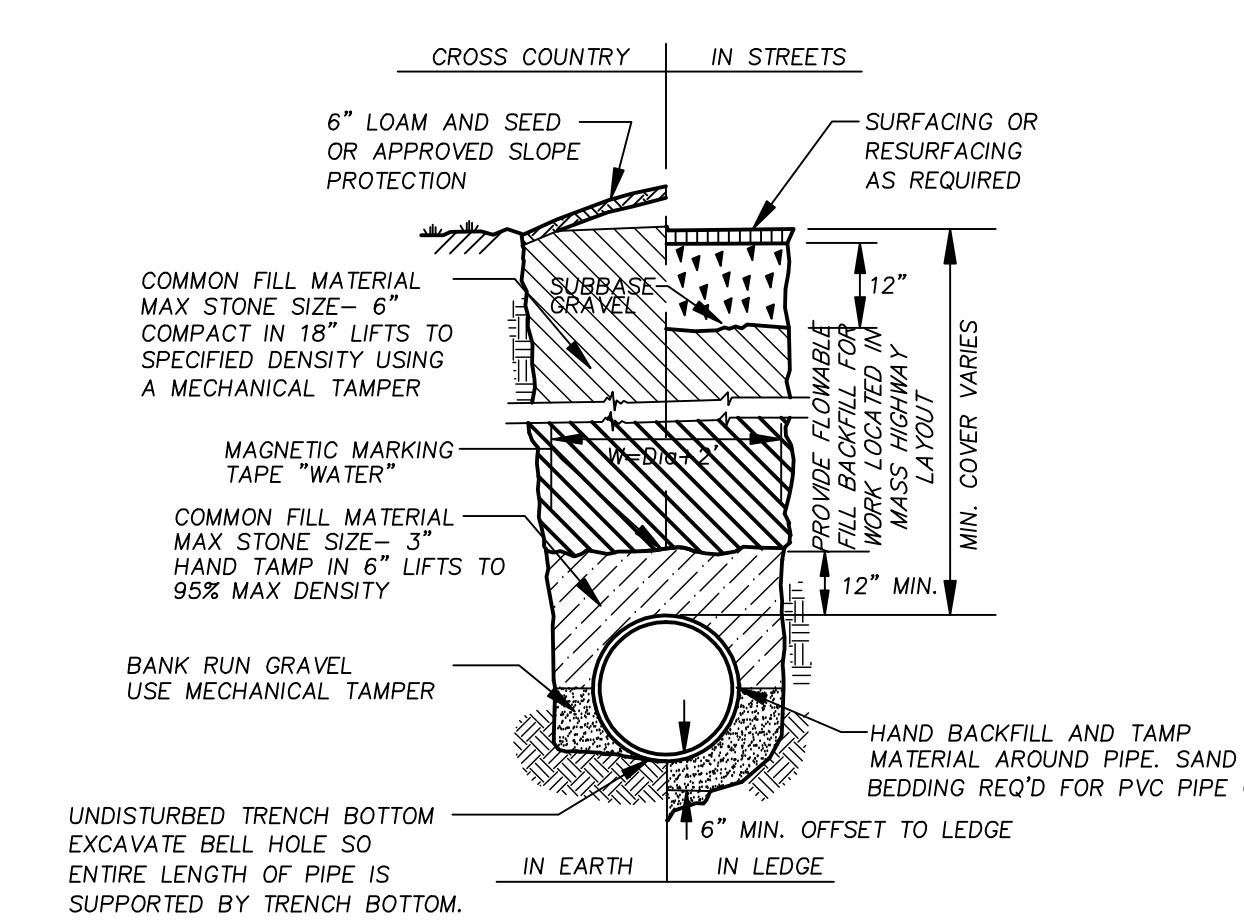
AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET BASED ON 250 P.S.I. & 1.5 TONS/S.F. ALLOWABLE SOIL BEARING CAPACITY

PIPE SIZE (M.)	1/4 BEND	1/8 BEND	1/16 BEND	PLUG & TEES
4.6.8	6.0	2.9	2.3	4.5
10	9.6	5.2	2.3	6.7
12	13.3	6.7	3.7	9.6
16	24.0	11.8	3.7	17.0

BEARING AREA - SQ. FT.			
NORMAL FITTING DIAMETER	90° BEND	45° BEND	BETWEEN BRANCH & TEE
6"	4	2	2
8"	7	4	3

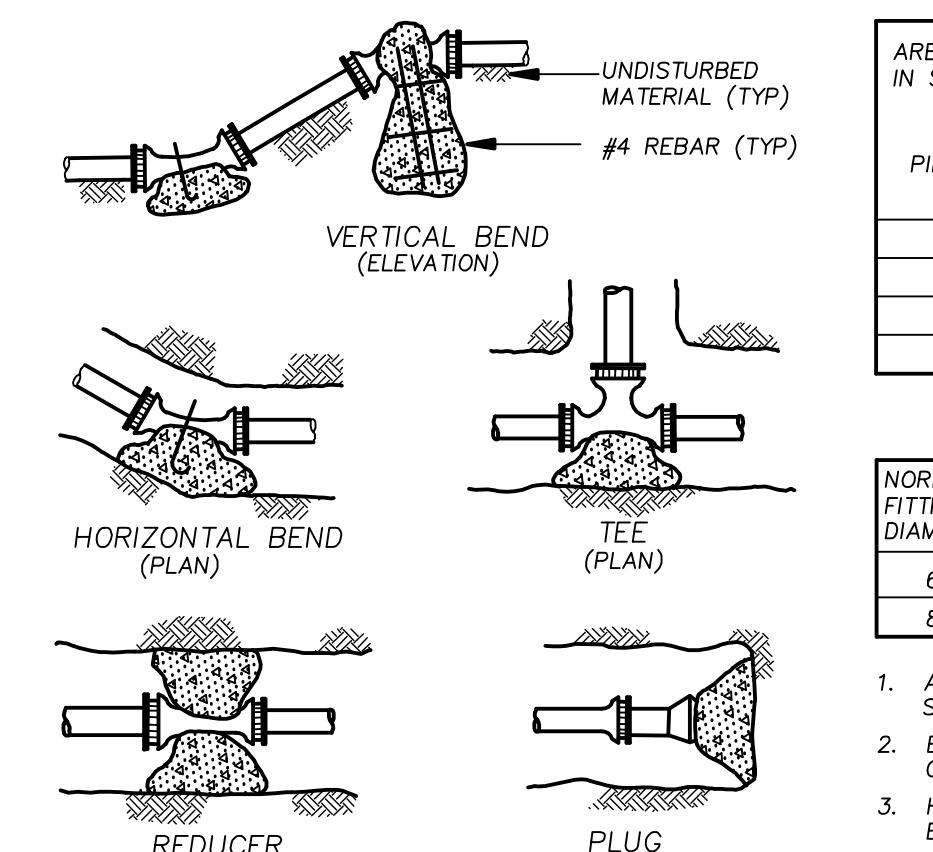
1. ALL BENDS, TEES, WYES, HYDRANTS AND DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS.
2. BEARING AREA (H X L) IS AREA OF CONE IN CONTACT WITH WALL OF TRENCH.
3. HEIGHT (H) & LENGTH (L) AS REQUIRED TO OBTAIN BEARING AREA IN TABLE.
4. BOULDERS ARE NOT TO BE USED AS THRUST BLOCKS.

**TYPICAL WATER MAIN TRENCH**  
NOT TO SCALE



NOTE:  
1. WATER JETTING OR PUDDLING PROHIBITED.

**THRUST BLOCK DETAILS**  
NOT TO SCALE



**GENERAL REVISION NOTE:**  
PREVIOUS PLAN DATES:  
MAY 2011-ORIGINAL SUBMITTAL  
FEB 16, 2012-GENERAL REVISION

DUE TO EXTENSIVE REVISIONS, THESE PLANS SUPERCEDE ALL PREVIOUS PLANS AND ARE DATED JULY 9, 2012 TO AVOID CONFUSION.

## VILLAGE GREEN APARTMENTS CONSTRUCTION DETAILS

LOCATION: 15 GREAT ROAD  
TOWN: LITTLETON, MASSACHUSETTS  
PREPARED FOR:

FIFTEEN GREAT  
ROAD II LLC

SCALE: AS NOTED DATE: JULY 9, 2012

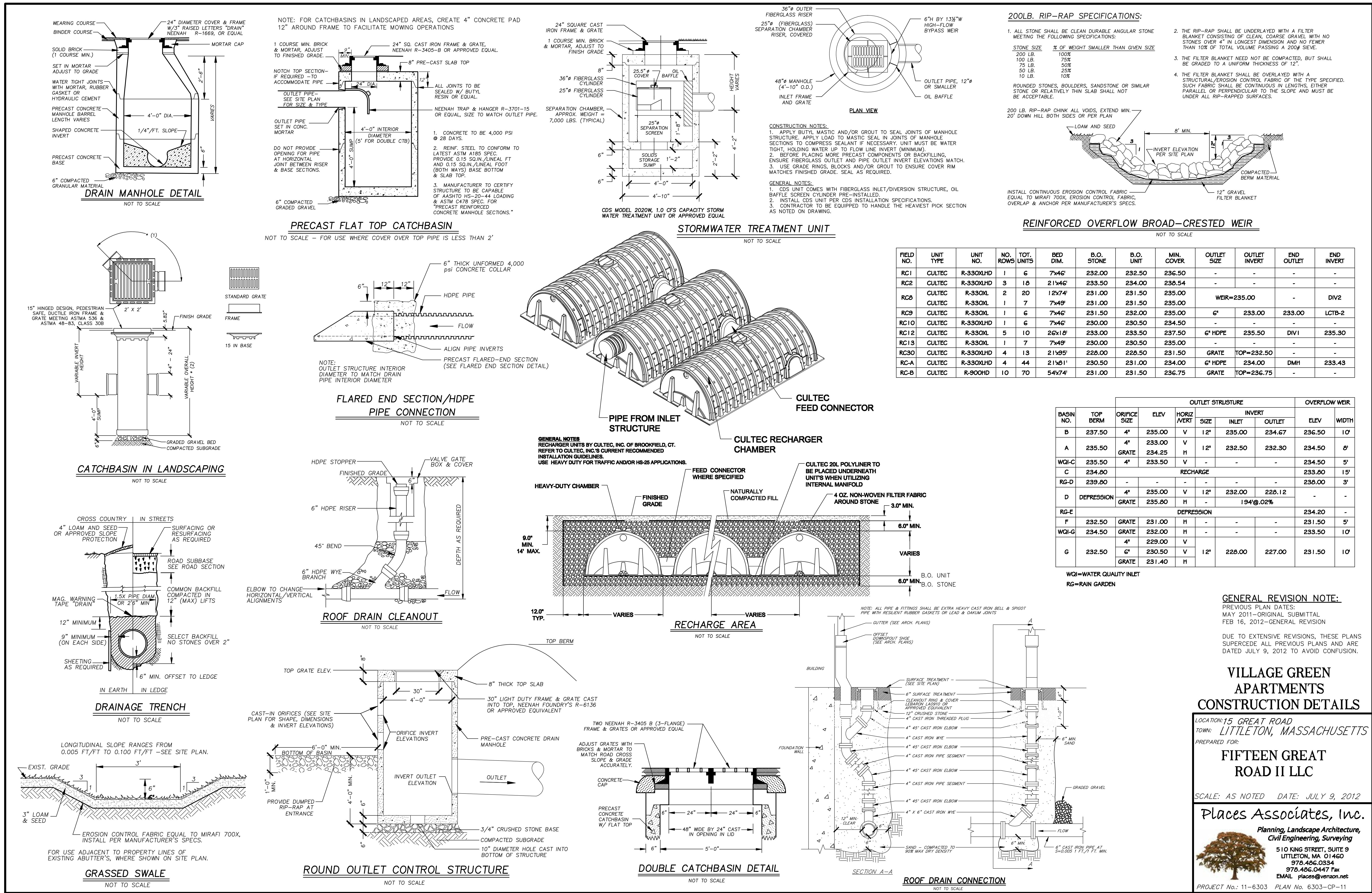
Places Associates, Inc.

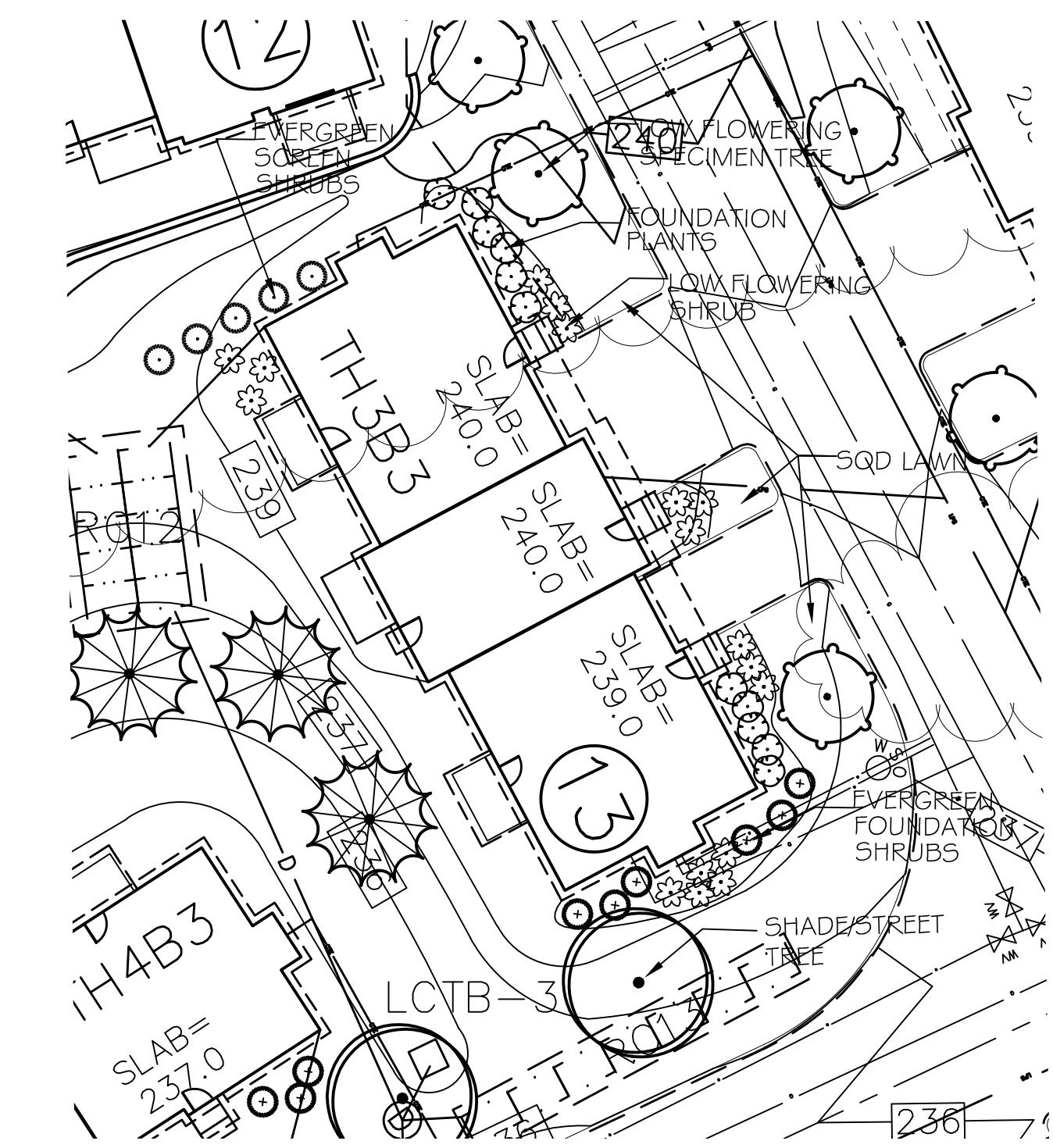
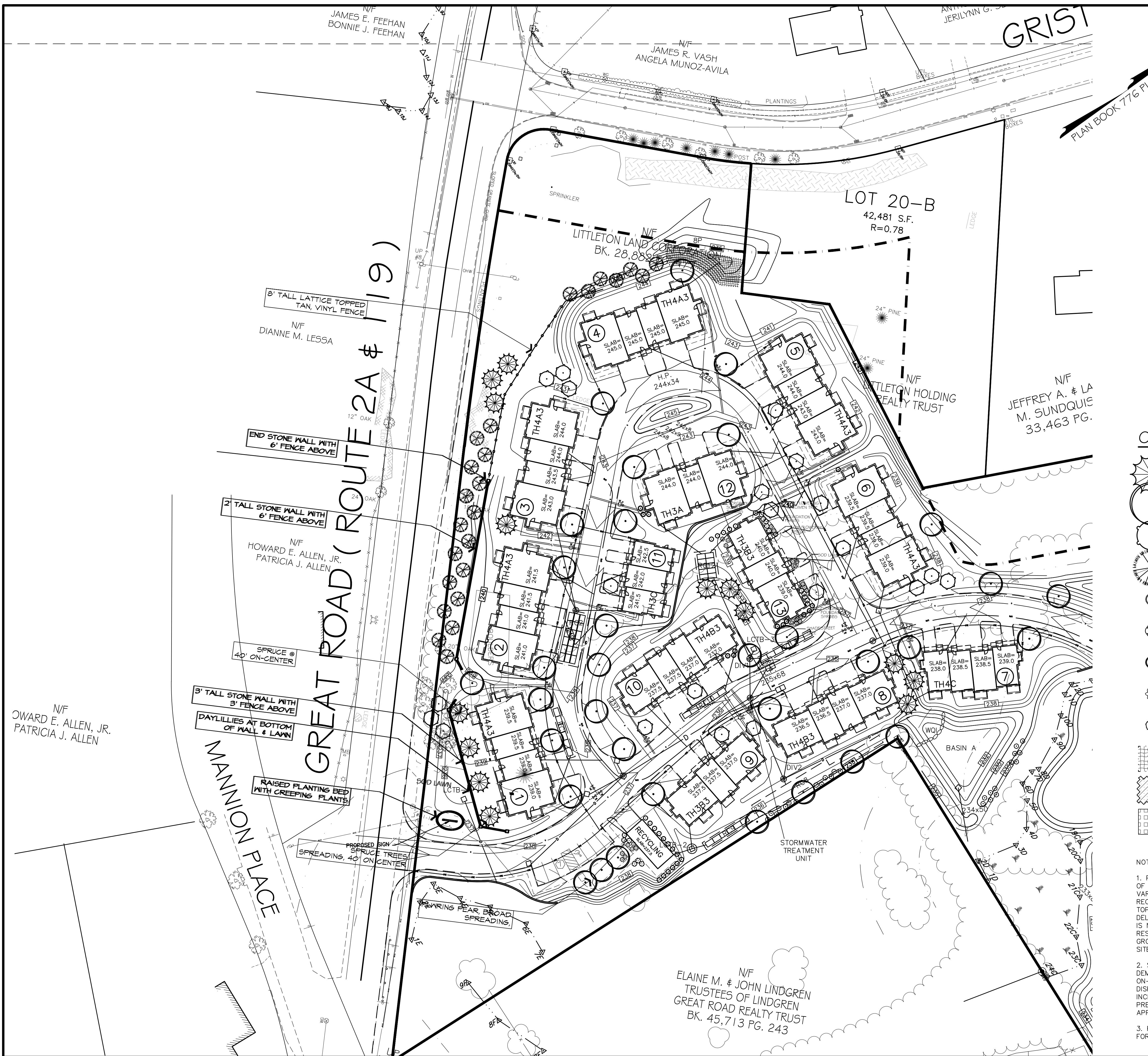
Planning, Landscape Architecture,  
Civil Engineering, Surveying

510 KING STREET, SUITE 9  
LITTLETON, MA 01460  
978.466.0447 Fax

EMAIL: places@venzon.net

PROJECT No.: 11-6303 PLAN No.: 6306-CP-10





## TYPICAL FOUNDATION PLANTING

DETAIL: 1" = 20

## CONCEPT PLANT SCHEDULE





PINE  
*Pinus abies* / Norway Spruce

SHADE SPECIMEN  
-

FLOWERING SPECIMEN  
-

WHITE PINE  
*Pinus strobus* / White Pine

EVERGREEN SCREEN  
-

FOUNDATION/SPECIMEN  
-

EVERGREEN SPECIMEN  
-

SMALL FLOWERING  
-

NATURALIZED SHRUB  
-

MASSED SHRUB  
-

NATURALIZED  
-

PERENNIAL

## NOTES:

1. THIS PLAN DEPICTS GENERAL SITE LANDSCAPING. TREES AND FOUNDATION PLANTINGS ARE DIAGRAMMATICAL. THE LANDSCAPE DESIGN WILL INCORPORATE INDIGENOUS AND OTHER ADAPTIVE PLANT SPECIES WHICH REQUIRE LOW MAINTENANCE AND WATER. PLANT SPECIES WILL BE A COMBINATION OF EVERGREENS AND DECIDUOUS PLANTS TO PROVIDE YEAR-ROUND COLOR AND TEXTURE VARIATIONS.
2. SCREENING PLANTS ARE INTENDED TO BE EVERGREENS, PRINCIPALLY EASTERN WHITE PINE, NORWAY MAPLES AND SIMILAR PLANTS. EVERGREENS ARE TO BE A MINIMUM OF 8-10' HEIGHT WHEN PLANTED.
3. THE SITE WILL HAVE A WELL WATER SUPPLIED IRRIGATION SYSTEM FOR LAWN AND FOUNDATION PLANTINGS.
4. FRONT LAWN AREAS WILL BE SODDED, OTHER AREAS WILL BE SEEDED. ALL AREAS WHICH ARE DISTURBED WILL EITHER BE PLANTED OR HAVE A DURABLE LANDSCAPE TREATMENT. SLOPES 3:1 (HORIZ: VERT) WILL HAVE SLOPE STABILIZATION FABRIC WHICH WILL ALLOW PLANTS TO GROW THROUGH, WHILE MAINTAINING SOILS IN PLACE.
5. AREAS NOTED FOR NATURALIZED LANDSCAPE ARE INTENDED TO BE NON-MAINTAINED, STABILIZED SLOPES OR OPEN AREAS.
6. DRAINAGE BASINS WILL BE PLANTED WITH A WETLANDS SEED MIXTURE.
7. ALL PLANTS ARE TO MEET THE MOST CURRENT STANDARDS OF THE AMERICAN NURSERYMEN'S ASSOCIATION STANDARDS FOR PLANT "MATERIAL" AND SHALL BE WARRANTED BY THE SUPPLIER FOR ONE YEAR AFTER INSTALLATION.
8. REFER TO THE SITE PLANS FOR UTILITIES AND OTHER CONSTRUCTION INFORMATION

# VILLAGE GREEN APARTMENTS

## LANDSCAPE PLAN 1 OF 2

LOCATION: 15 GREAT ROAD  
TOWN: LITTLETON MASSACHUSETTS

SHRED FOR:  
FIFTEEN GREAT  
ROAD LLC

SCALE: 1"-10' DATE: 11/18/2013

## Planes Asociados



