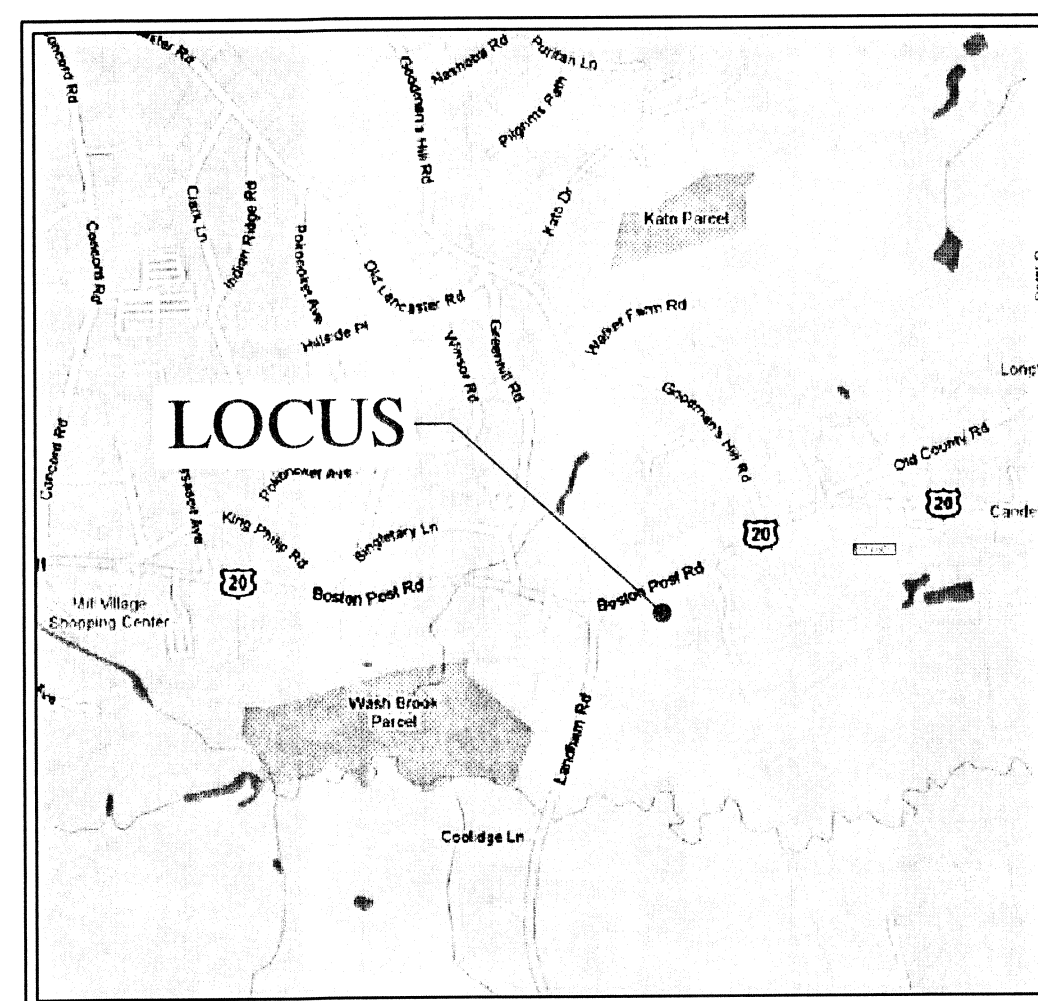


# COMPREHENSIVE PERMIT SITE PLAN THE COOLIDGE AT SUDBURY 2 187-189 BOSTON POST ROAD, SUDBURY MA

FOR  
B'nai B'rith Housing New England, Inc.

A 56 UNIT SENIOR HOUSING COMMUNITY  
PERMITTED UNDER M.G.L. CHAPTER 40B



VICINITY MAP  
N.T.S.

## SUDBURY ZONING A-1 RESIDENTIAL

USE: RESIDENTIAL (AGE RESTRICTED RENTAL) 56 UNITS, DENSITY 18.48 UNITS PER ACRE			
	REQUIRED	PROPOSED	WAIVER
LOT AREA MINIMUM	40,000 SQ.FT	134,479 SQ.FT (3.09 AC.)	NO
MINIMUM LOT FRONTAGE	180'	219'	NO
FRONT YARD SETBACK	40'	106'±	NO
SIDE YARD SETBACK	20'	18'±	YES
REAR YARD SETBACK	30'	168'±	NO
MAXIMUM BUILDING HEIGHT	35' / 2.5 STORIES	47' / 3 STORIES	YES
MAXIMUM BUILDING COVERAGE	40%	13.9%	NO
PARKING			
SPACES PER UNIT	2 (112 TOTAL)	1 (56 TOTAL)	YES
STALL WIDTH	9'	9'	NO
STALL LENGTH	18.5'	18.5'	NO
AISLE WIDTH	24'	24'	NO

LOT USE AREAS		
	AREA	% OF LOT
TOTAL LOT	3.09 acres	-
BUILDINGS	0.43 acres	13.9%
SIDEWALKS	0.08 acres	2.6%
PATIOS	0.06 acres	1.9%
PERMEABLE PAVEMENT FIRE LANE	0.01 acres	0.3%
PARKING LOT	0.43 acres	13.9%
LANDSCAPE AREA W/IN AREA OF DISTURBANCE	0.88 acres	28.5%
UNDISTURBED	1.2 acres	38.9%

## OWNER

CCC POST ROAD LIMITED PARTNERSHIP  
189 BOSTON POST ROAD  
SUDBURY, MA 01776

## APPLICANT

COVENANT COMMONWEALTH CORPORATION  
34 WASHINGTON STREET  
BRIGHTON, MA 01752

## SHEET INDEX

- 1..... TITLE SHEET
- 2..... NOTE SHEET
- 3..... EXISTING CONDITIONS
- 4..... PRELIMINARY SUBDIVISION PLAN
- 5..... PRELIMINARY LAYOUT PLAN
- 6..... PRELIMINARY GRADING AND UTILITY PLAN
- 7..... PRELIMINARY LANDSCAPE PLAN
- 8..... DETAILS
- 9..... DETAILS

## PROJECT TEAM

### SPONSOR:

B'NAI B'RITH HOUSING, NEW  
ENGLAND, INC.  
34 WASHINGTON STREET  
BRIGHTON, MA 02135  
617-731-5293  
holly@bbhousing.org

### LANDSCAPE ARCHITECT:

JAMES K. EMMANUEL, RLS  
16 CROSSMAN AVENUE  
SWAMPSCOTT, MA 01907  
781-622-7487  
james@jamesemmanuel.com

### CIVIL ENGINEER:

HANCOCK ASSOCIATES  
315 ELM STREET  
MARLBOROUGH, MA  
01752  
508-460-1111  
jpeznola@hancockassociates.com

### ARCHITECT:

THE ARCHITECTURAL TEAM  
50 COMMANDANT'S WAY  
CHELSEA, MA 02150  
617-889-4402  
tschultz@architecturalteam.com

### SURVEYOR:

HANCOCK ASSOCIATES  
315 ELM STREET  
MARLBOROUGH, MA  
01752  
508-460-1111  
cfrias@hancockassociates.com



**tat** |  
the architectural team

The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
www.architecturalteam.com  
©2008 The Architectural Team, Inc.

Consultant:

**HANCOCK  
ASSOCIATES**

Civil Engineers  
Land Surveyors  
Wetland Scientists

315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
www.hancockassociates.com

Revision:

**THE COOLIDGE AT  
SUDBURY 2**

187-189 BOSTON POST RD  
SUDBURY, MA

Drawn: JTL

Checked: JP

Scale: AS NOTED

Key Plan:

Sheet Name:

**TITLE SHEET**

Project Number: **15526**

Project Name:

Issue Date: **JUNE 29, 2016**  
Revision Date: **JANUARY 17, 2016**

Sheet Number:

**C1**

15526



NOTES

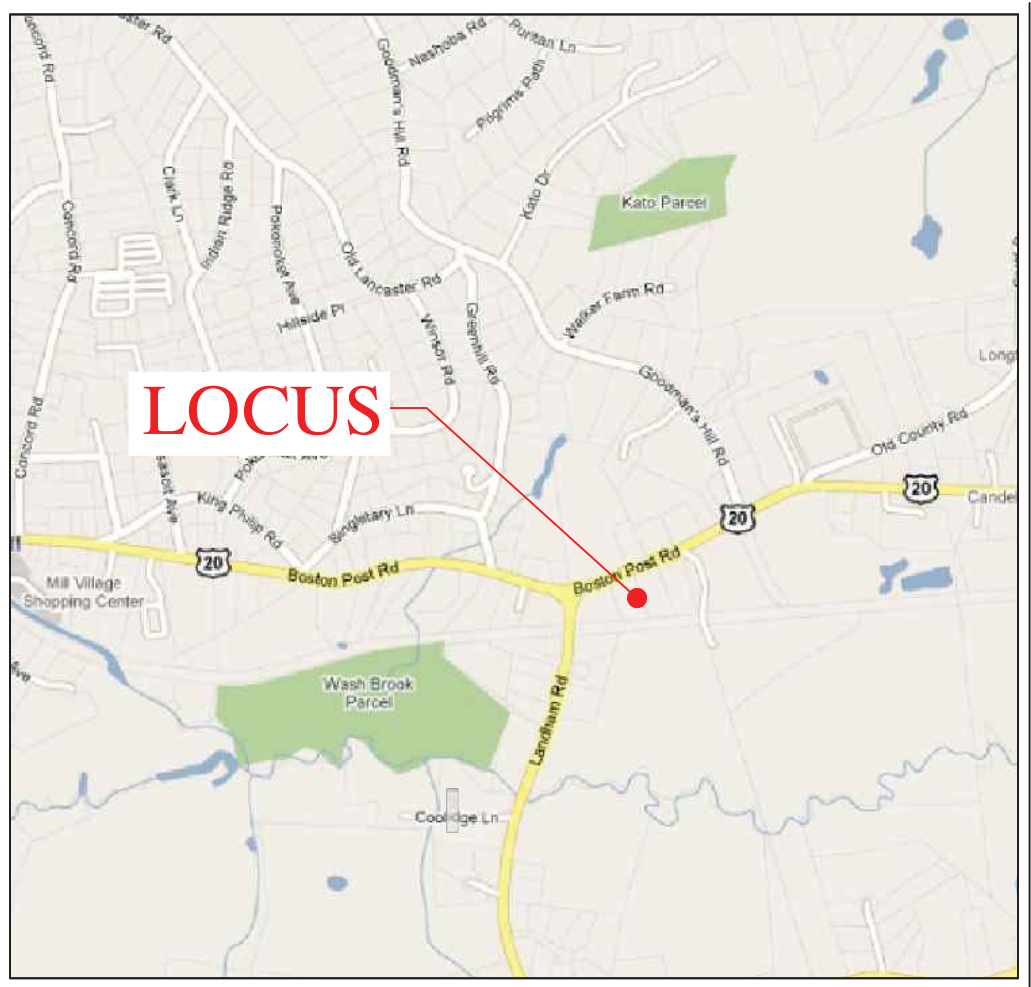
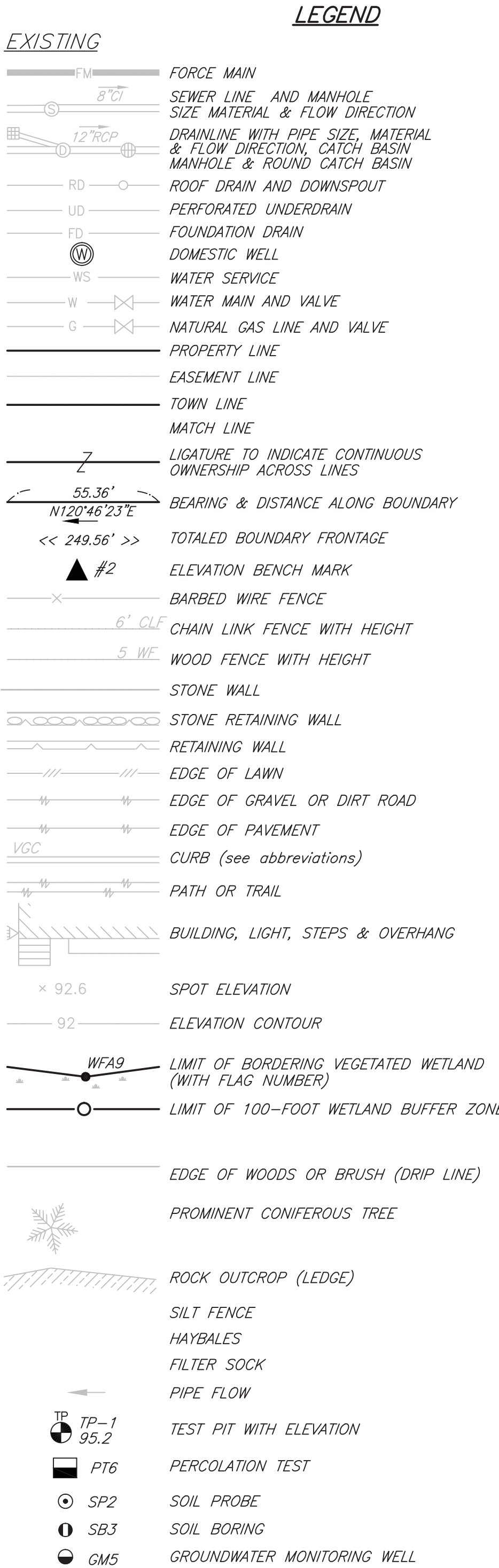
1. THESE PLANS ARE ISSUED FOR APPROVAL OF A SITE PLAN IN ACCORDANCE WITH M.G.L. CHAPTER 40B AND PROCEDURES OF THE TOWN OF SUDBURY. THE PLANS ARE NOT INTENDED FOR CONSTRUCTION.
2. ADDITIONAL INFORMATION IS CONTAINED IN A REPORT TO ACCOMPANY THE APPLICATION TO THE SUDBURY ZONING BOARD OF APPEALS.
3. WATER MAINS SHALL BE CLASS 52 D.I.P. PER AWWA. STORM DRAINS SHALL BE ADS N-12 DRAIN PIPE OR EQUAL.
4. SIGNS AND LIGHTING SHALL COMPLY WITH THE ZONING BYLAW UNLESS OTHERWISE NOTED.
5. EXISTING CONDITIONS INFORMATION COMPILED FROM INDEPENDENT SURVEY DONE BY SCHOFIELD BROTHERS INC. OF NEW ENGLAN, AND HANCOCK SURVEY ASSOCIATES.

CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
2. CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.
3. ALL WORK OUTSIDE OF BUILDING THAT IS LESS THAN 10 FEET FROM THE INSIDE FACE OF BUILDING FOUNDATIONS SHALL CONFORM WITH THE UNIFORM STATE PLUMBING CODE OF MASSACHUSETTS, 248 CMR 2.00.

GENERAL NOTES

1. LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
2. UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
3. CONTRACTOR SHALL FURNISH CONSTRUCTION LAYOUT OF BUILDING AND SITE IMPROVEMENTS. THIS WORK SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR.
4. SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND / OR REMOVAL HEREON. DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
6. THIS PLAN IS NOT INTENDED TO SHOW AN ENGINEERED BUILDING FOUNDATION DESIGN, WHICH WOULD INCLUDE DETAILS AND FINAL ELEVATIONS OF FOOTINGS, WALLS AND SUBSURFACE DRAINAGE TO PREVENT INTERIOR FLOODING. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.
7. ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO IMPLEMENTATION.
8. RIM ELEVATIONS SHOWN FOR NEW STRUCTURES ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR WITH MATERIAL TAKEOFFS. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
9. WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH OWNER REQUIREMENTS.
10. THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCH MARKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
11. PROPOSED BUILDING FOUNDATION CONFIGURATION AND LOCATION ON THE LOT AS SHOWN ARE CONCEPTUAL AND SHALL BE VERIFIED AS TO CONFORMANCE WITH FINAL ARCHITECTURAL PLANS, COMPREHENSIVE PERMIT AND ZONING ORDINANCES (AS APPLICABLE) PRIOR TO CONSTRUCTION .



VICINITY MAP

N.T.S.

tat |  
the architectural team

The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
www.architecturalteam.com  
©2008 The Architectural Team, Inc.

Consultant:

HANCOCK  
ASSOCIATES

Civil Engineers

Land Surveyors

Wetland Scientists

315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
www.hancockassociates.com

Revision:

THE COOLIDGE AT  
SUDBURY 2

187-189 BOSTON POST RD  
SUDBURY, MA

Drawn: JTL

Checked: JP

Scale: AS NOTED

Key Plan:

Sheet Name:

NOTES

Project Number: 15526

Project Name:

Issue Date:  
JUNE 29, 2016  
Revision Date:  
JANUARY 17, 2016

Sheet Number:

C2



The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
www.architecturalteam.com  
©2008 The Architectural Team, Inc.

Consultant:

HANCOCK  
ASSOCIATES

Civil Engineers

Land Surveyors

Wetland Scientists

315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
www.hancockassociates.com

Revision:

THE COOLIDGE AT  
SUDBURY

187-189 BOSTON POST RD  
SUDBURY, MA

Drawn: JTL

Checked: JP

Scale: 1"=30'

Key Plan:

Sheet Name:

EXISTING  
CONDITIONS

Project Number: 15526

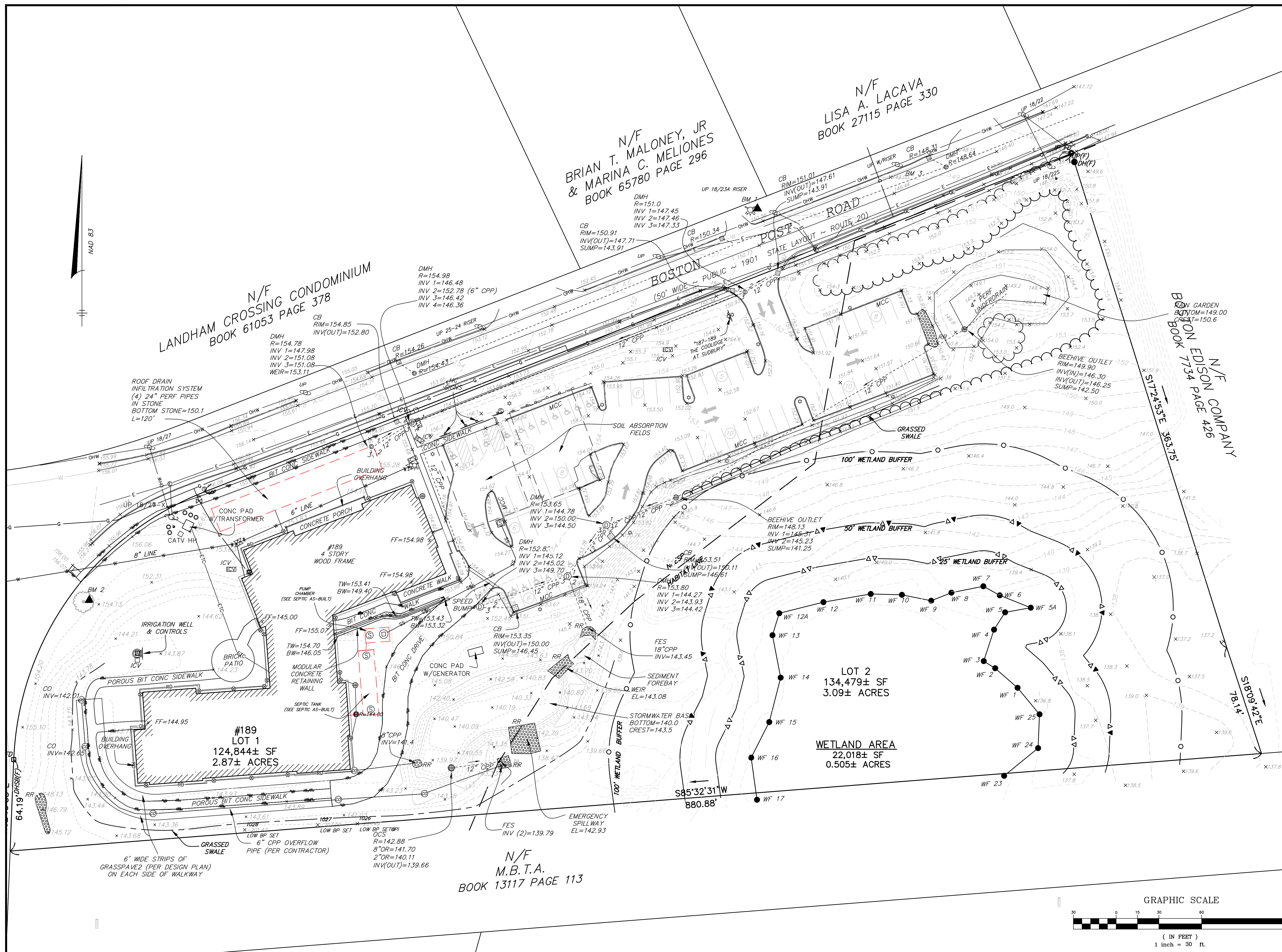
Project Name:

Issue Date:  
JUNE 15, 2016  
Revision Date:  
NOVEMBER 11, 2016

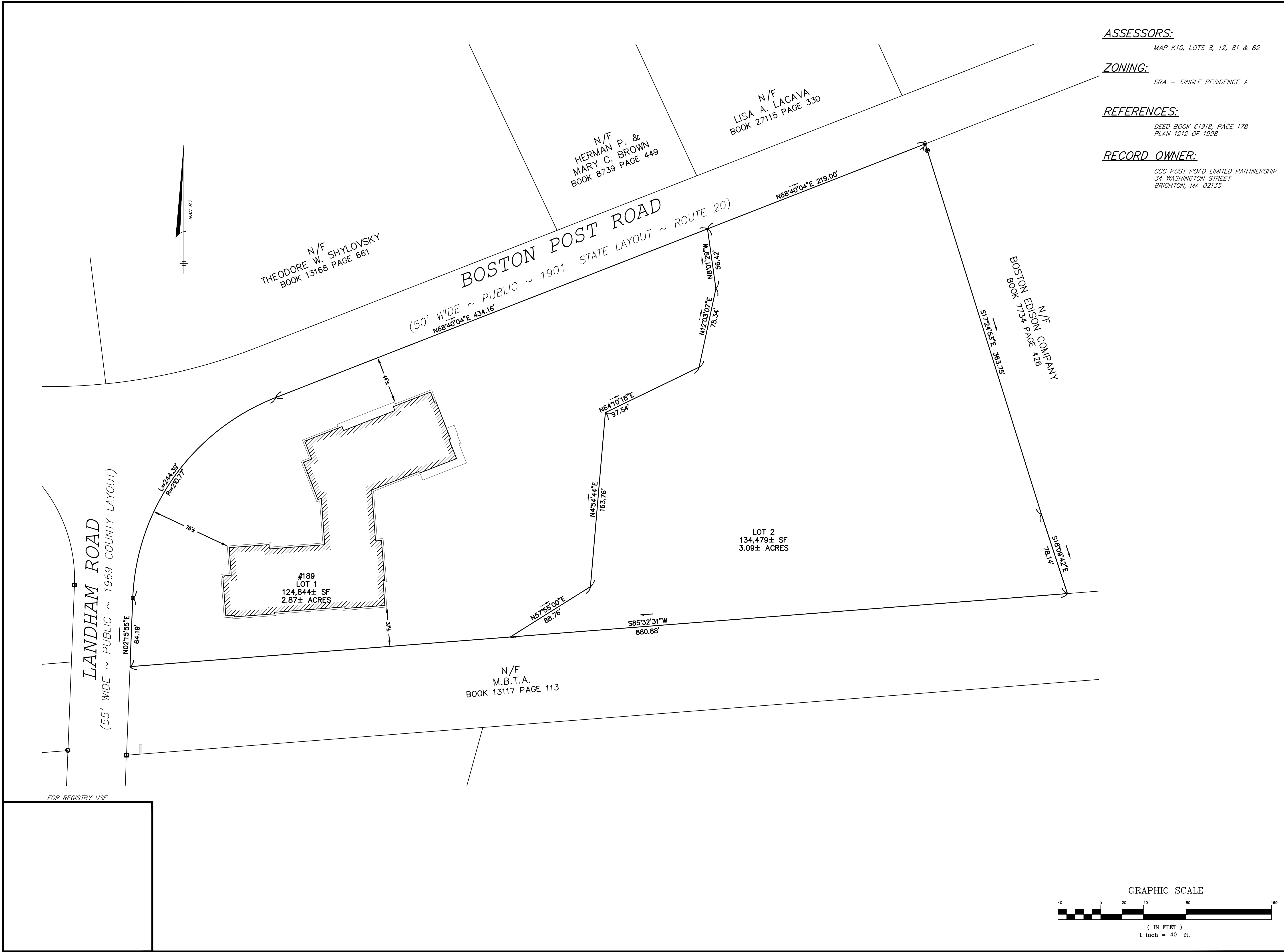
Sheet Number:

C3

15526







ASSESSORS:  
MAP K10, LOTS 8, 12, 81 & 82

ZONING:  
SRA - SINGLE RESIDENCE A

REFERENCES:  
DEED BOOK 61918, PAGE 178  
PLAN 1212 OF 1998

RECORD OWNER:  
CCC POST ROAD LIMITED PARTNERSHIP  
34 WASHINGTON STREET  
BRIGHTON, MA 02135

tat |  
the architectural team

The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
www.architecturalteam.com  
©2008 The Architectural Team, Inc.

Consultant:  
**HANCOCK ASSOCIATES**

Civil Engineers  
Land Surveyors  
Wetland Scientists

315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
www.hancockassociates.com

Revision: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THE COOLIDGE AT  
SUDBURY 2

187-189 BOSTON POST RD  
SUDBURY, MA

Drawn: JTL

Checked: JP

Scale: 1"=40'

Key Plan:

Sheet Name:

PRELIMINARY  
SUBDIVISION

Project Number: 15526

Project Name:

Issue Date: JUNE 29, 2016

Revision Date: JANUARY 17, 2016

Sheet Number:

C4



The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
[www.architecturalteam.com](http://www.architecturalteam.com)  
©2008 The Architectural Team, Inc.

HANCOCK  
ASSOCIATES

315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
[www.hancockassociates.com](http://www.hancockassociates.com)

---

---

---

---

---

187-189 BOSTON POST RD  
SUDBURY, MA

Checked: JP

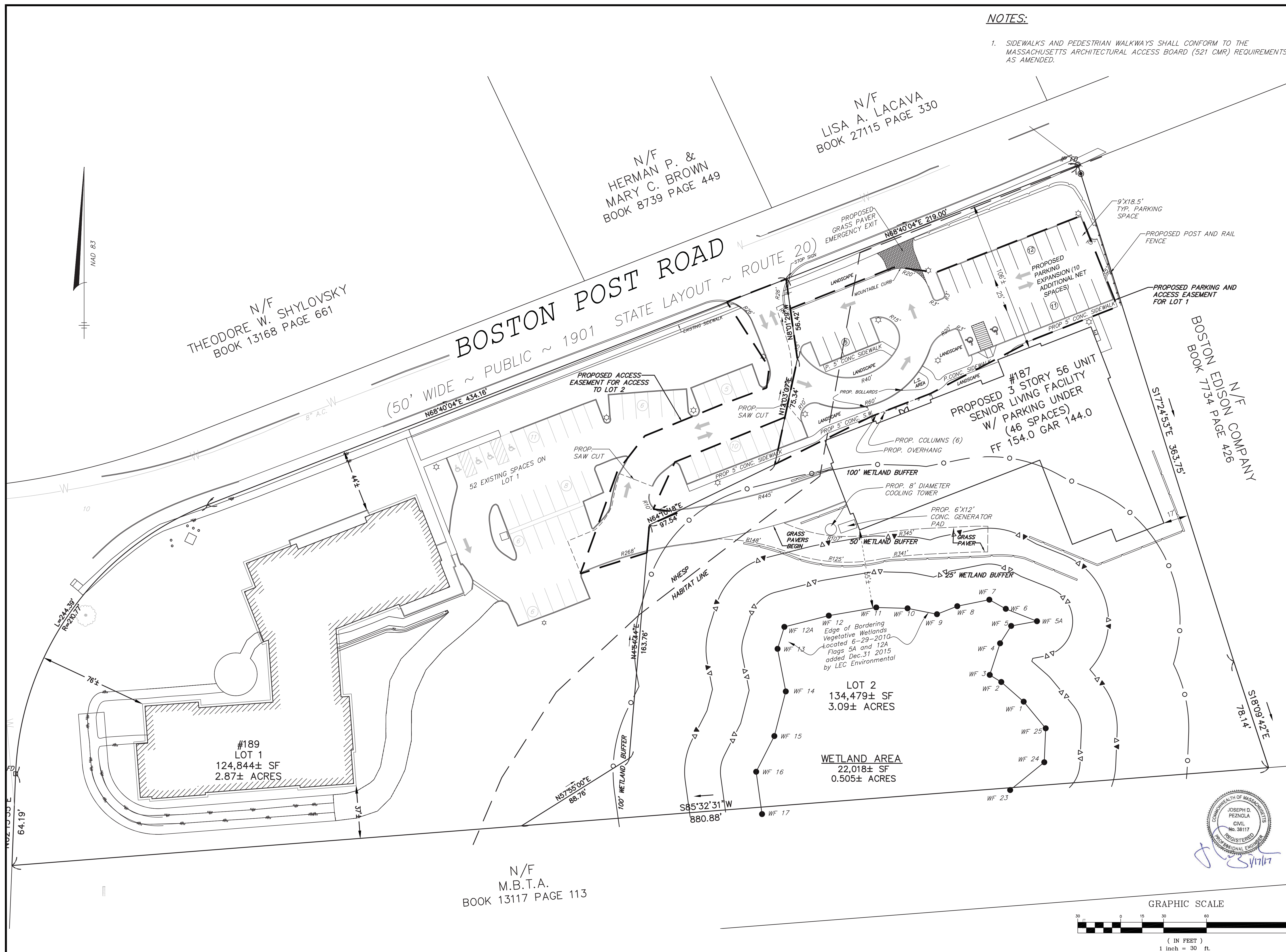
**Key Plan:**

# PRELIMINARY LAYOUT PLAN

Project Name:

Sheet Number:

15526





## TEST PIT DATA

### STORMWATER

TP-106 GR 137.6

0-1' TOPSOIL  
1-8.5' SILTY LOAM

ESHW BASED ON REDOX  
AT 2.2' (EL 135.4)

TP-107 GR 138.4

0-1' TOPSOIL  
1-2' SANDY LOAM  
2-7.5' SANDY LOAM

ESHW BASED ON REDOX  
AT 2.5' (EL 135.9)

FIELD PERMEABILITY 62.36 IN/HR

### SEPTIC

TP-2A GR 154.0

0-14" SANDY LOAM  
14-26" LOAMY SAND  
26-124" FINE SANDY LOAM

NO REDOX, ESHW = 143.7

PERC. RATE = 4 MIN/INCH

TP-3A GR 152.9

0-48" FILL  
48-60" SANDY LOAM  
60-70" LOAMY SAND  
70-124" LOAMY SAND

ESHW BASED ON REDOX  
AT 103" (EL 144.3)

PERC RATE = 7 MIN/INCH

TP-4A GR 152.0

0-18" FILL  
18-22" LOAMY SAND  
22-54" MEDIUM/COARSE SAND  
54-112" LOAMY SAND

ESHW BASED ON REDOX  
AT 84" (EL 145.0)

PERC RATE = 6 MIN/INCH

## SEPTIC DESIGN CRITERIA

### LEACHING AREA

56 1 BEDROOM UNITS @ 110 GPD (TITLE 5 DESIGN FLOW) = 6160 GPD  
PERCOLATION RATE = 7 MIN/INCH (TP-3A) = 0.68 GPD/SF OF LEACHING AREA  
REQUIRED LEACHING AREA (6160/0.68) = 9059 SQUARE FEET  
AREA REDUCTION USING PRESBY SYSTEM = 408  
REQUIRED LEACHING AREA FOR PRESBY (0.6\*9059) = 5435 SQUARE FEET  
LEACHING AREA PROVIDED = 5530 SQUARE FEET

### RESERVE LEACHING AREA

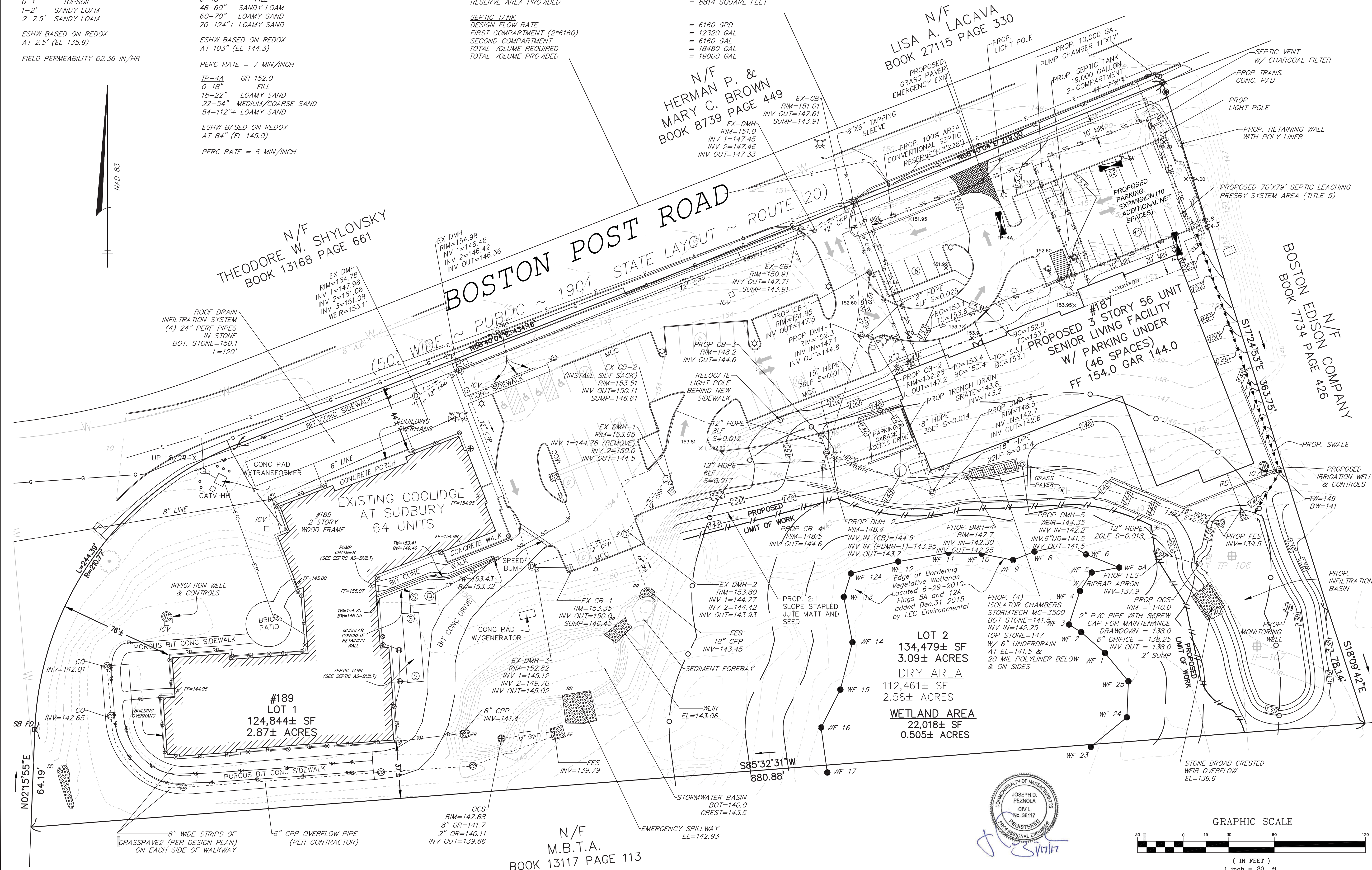
PERCOLATION RATE = 6 MIN/INCH (TP-4A) = 0.70 GPD/SF OF LEACHING AREA  
LOADING RATE (TITLE 5) = 8800 SQUARE FEET  
REQUIRED RESERVE AREA (6160/0.7) = 8814 SQUARE FEET  
RESERVE AREA PROVIDED = 19000 GAL

### SEPTIC TANK

DESIGN FLOW RATE = 6160 GPD  
FIRST COMPARTMENT (2\*6160) = 12320 GAL  
SECOND COMPARTMENT = 6160 GAL  
TOTAL VOLUME REQUIRED = 18480 GAL  
TOTAL VOLUME PROVIDED = 19000 GAL

### PUMP CHAMBER

ONE DAY STORAGE = 6160 GAL  
DOSING FREQUENCY (SANDS/LOAMY SANDS) = 4 TIMES PER DAY  
DOSING VOLUME (6160/4) = 1540 GAL  
FORCE MAIN VOLUME = 1± GAL  
DESIGN DOSING VOLUME (1540+4) = 1541 GAL  
VOL. REQUIRED BELOW INLET INVERT = 7701 GAL  
VOL. PROVIDED BELOW INLET INVERT = 8393± GAL



**tat**  
the architectural team

The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
www.architecturalteam.com  
©2008 The Architectural Team, Inc.

Consultant:

**HANCOCK ASSOCIATES**

Civil Engineers

Land Surveyors

Wetland Scientists

315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
www.hancockassociates.com

Revision:


**THE COOLIDGE AT SUDBURY 2**

**187-189 BOSTON POST RD SUDBURY, MA**

Drawn: JTL

Checked: JP

Scale: 1"=30'

Key Plan:

Sheet Name:

**PRELIMINARY GRADING AND UTILITY PLAN**

Project Number: 15526

Project Name:

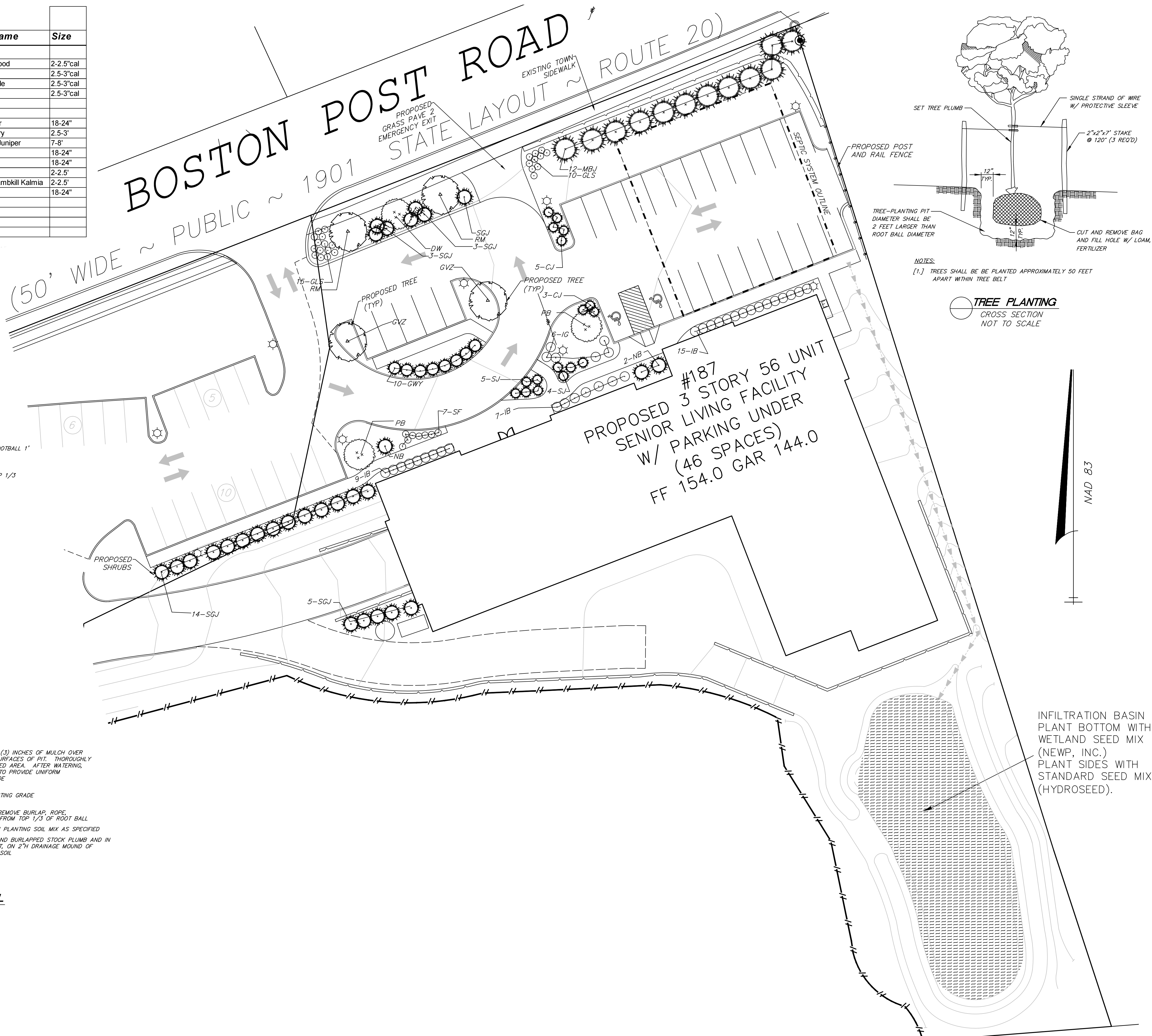
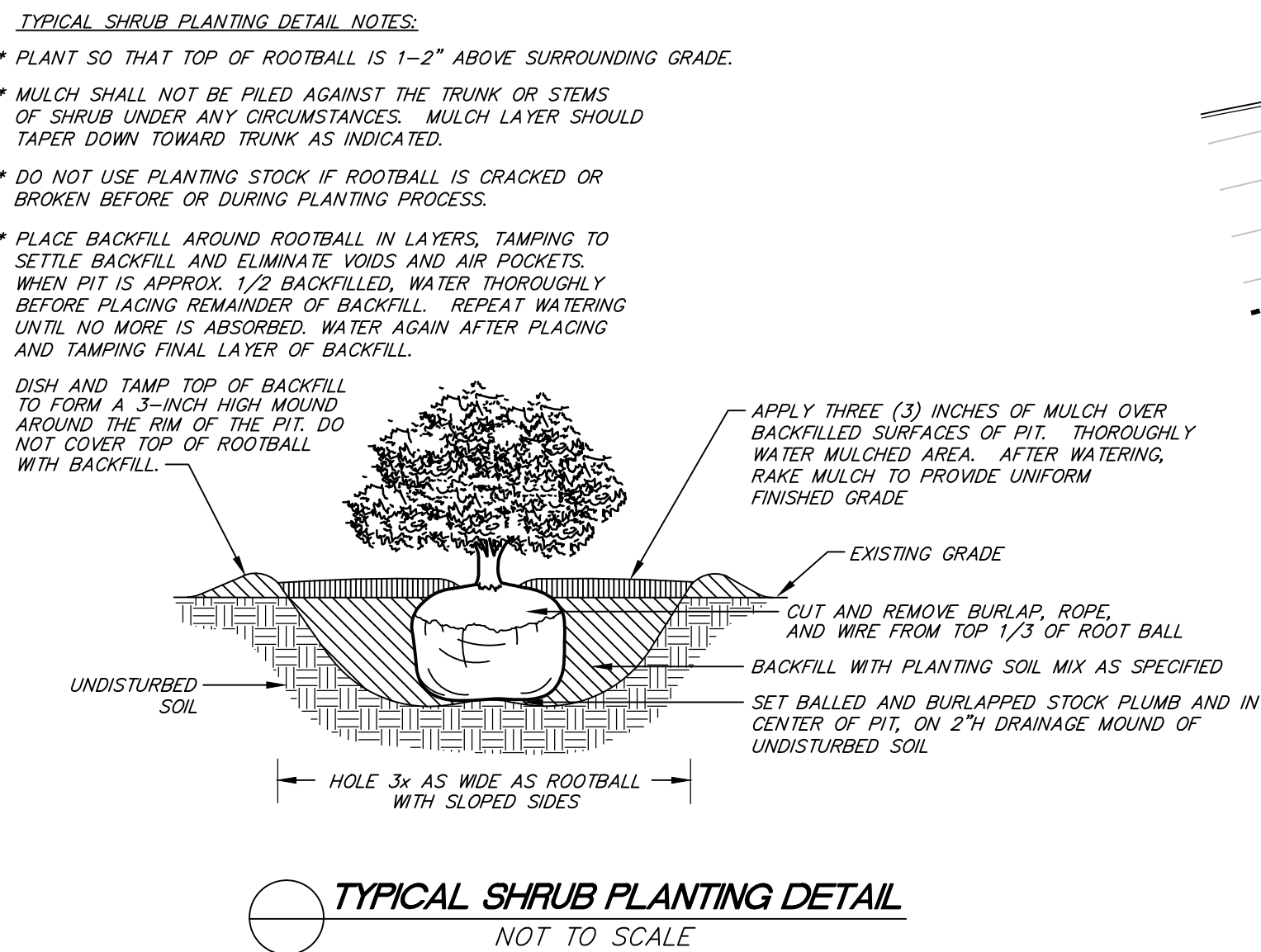
Issue Date: **JUNE 29, 2016**  
Revision Date: **JANUARY 17, 2016**

Sheet Number:

**C6**



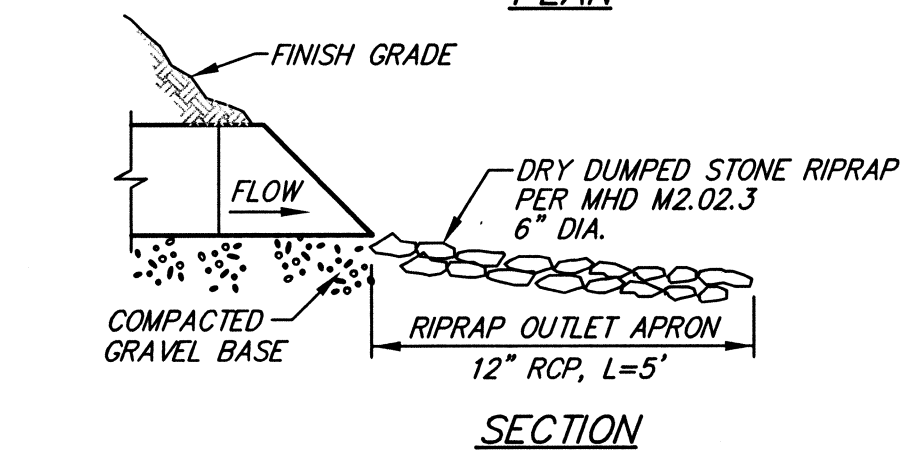
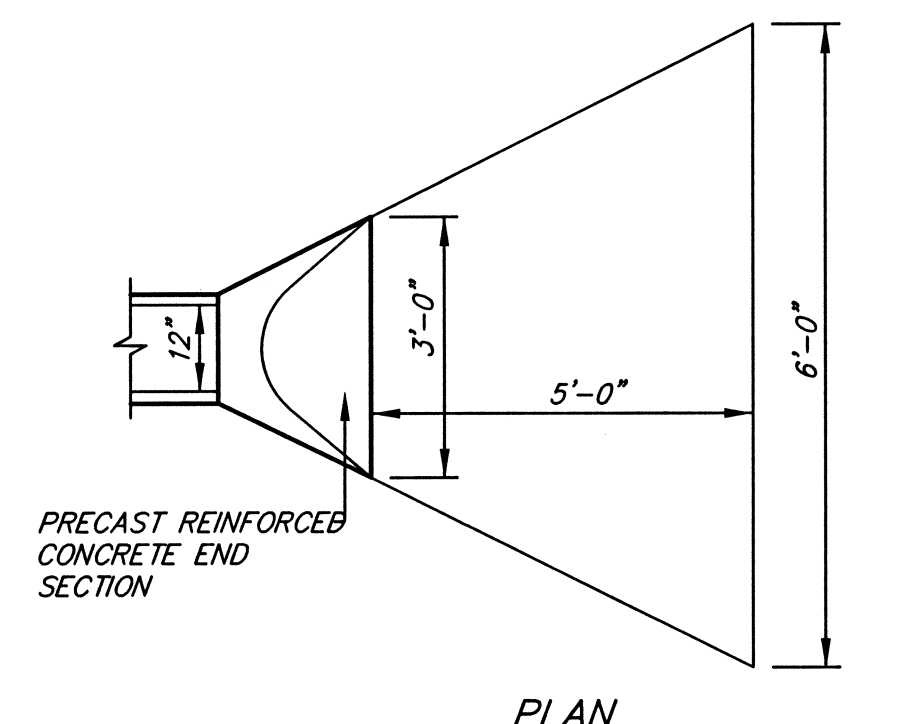
Qty	Key	Botanical Name	Common Name	Size
<b>TREES:</b>				
1	KD	Cornus florida	Flowering Dogwood	2-2.5"cal
2	PB	Betula papyrifera	Paper Birch	2.5-3"cal
2	RM	Acer rubrum 'Red Sunset'	Red Sunset Maple	2.5-3"cal
2	GVZ	Quercus coccinea	Scarlet Oak	2.5-3"cal
<b>SHRUBS/GRASSES:</b>				
17	CJ	Juniperus communis	Common Juniper	18-24"
3	NB	Myrica Pennsylvanica	Northern Bayberry	2.5-3"
12	MBJ	Juniperus Virginiana	Manhattan Blue Juniper	7-8'
25	GLS	Rhus aromatica 'Gro-Low'	Gro-Low Sumac	18-24"
7	GTf	Comptonia peregrina	Sweet Fern	18-24"
37	IB	Ilex glabra	Inkberry	2-2.5'
8	WVY	Kalmia angustifolia	Sheep Laurel, Lambkill Kalmia	2-2.5'
28	SGJ	Panicum virgatum	Switchgrass	18-24"
APPROXIMATE LAWN SPACE= 9,860 S.F. ±				



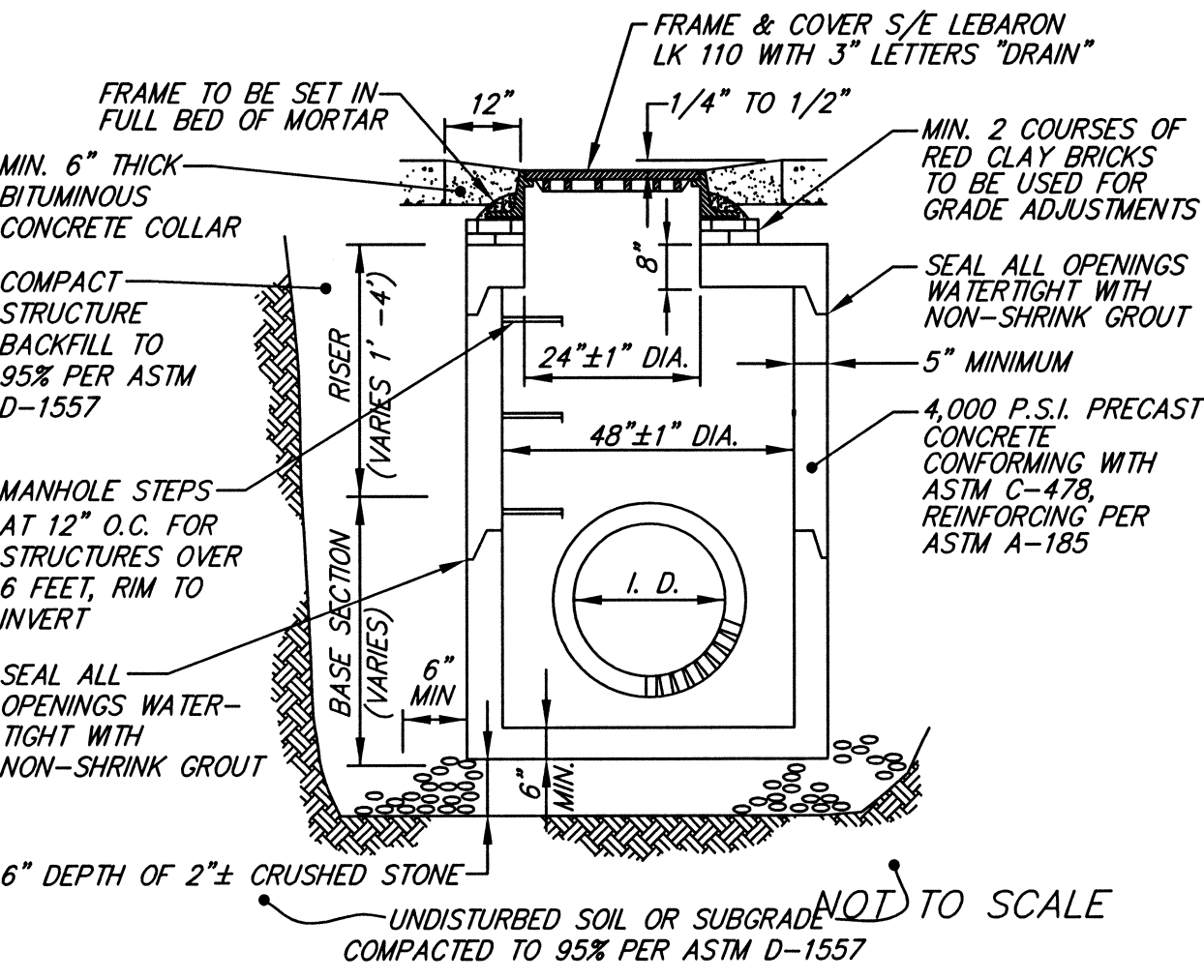
C7

15526

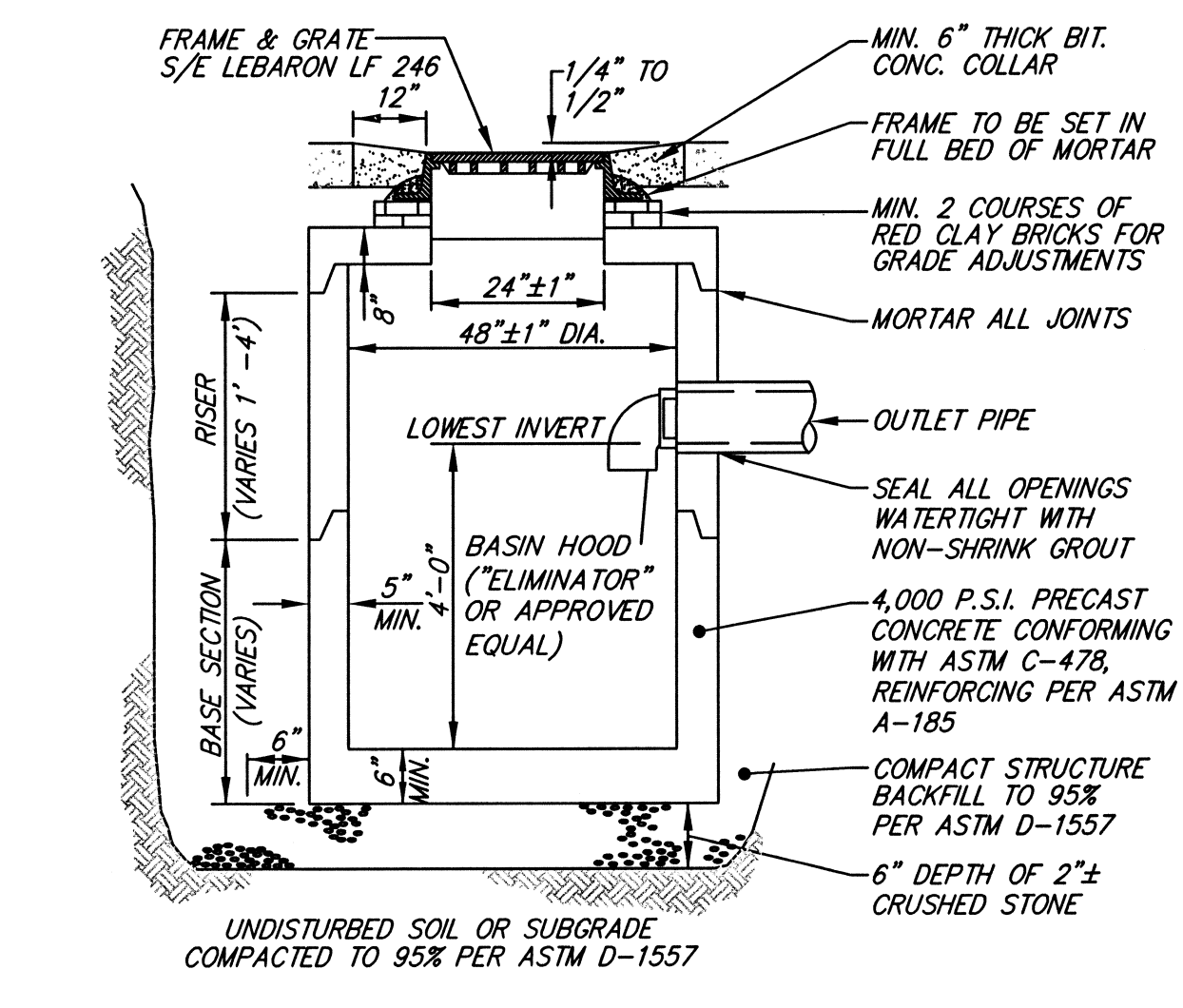




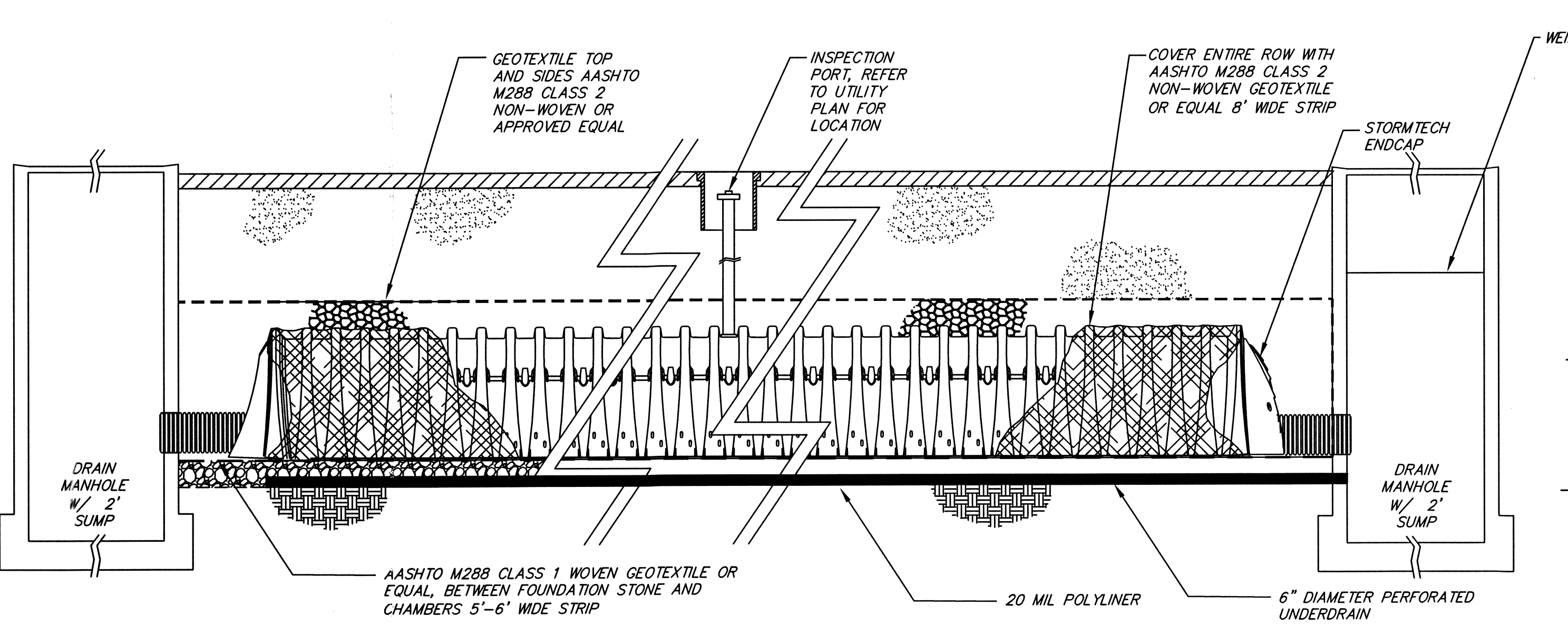
**DRAIN OUTLET AND APRON**  
TYPICAL CROSS SECTION  
NOT TO SCALE



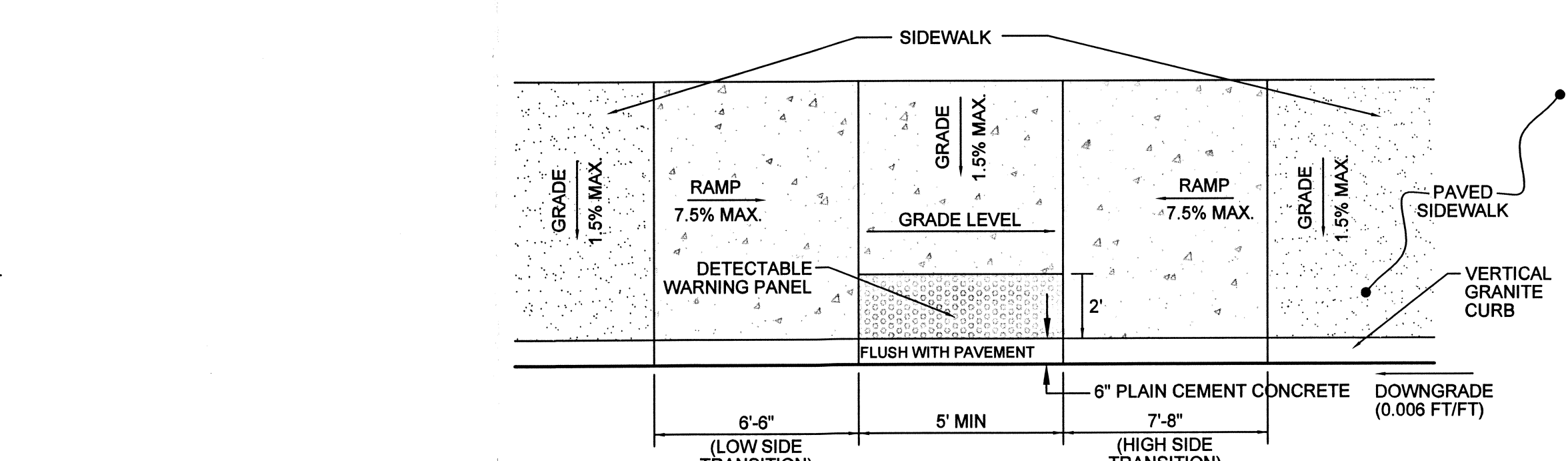
**DRAIN MANHOLE**  
TYPICAL CROSS SECTION  
NOT TO SCALE



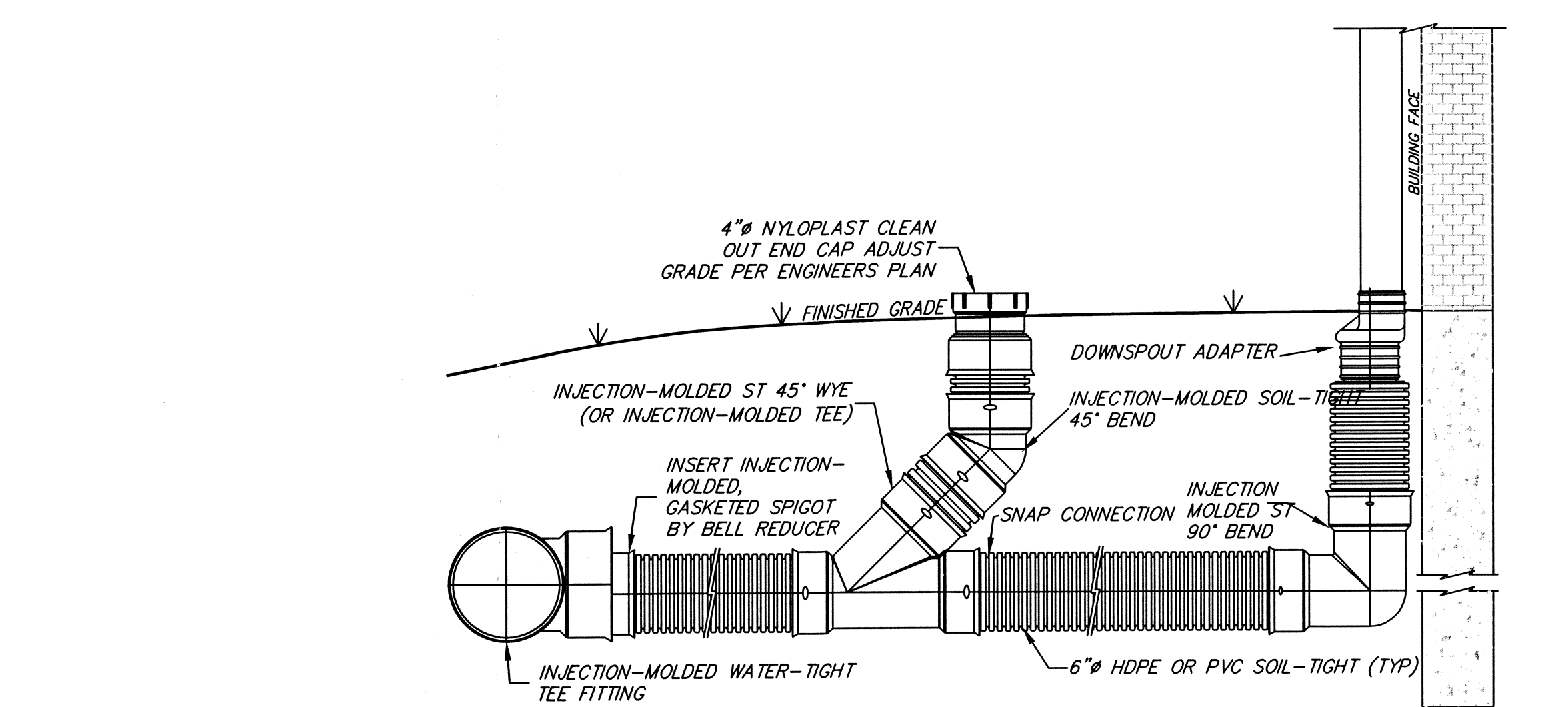
**CATCH BASIN WITH HOOD**  
TYPICAL CROSS SECTION  
NOT TO SCALE



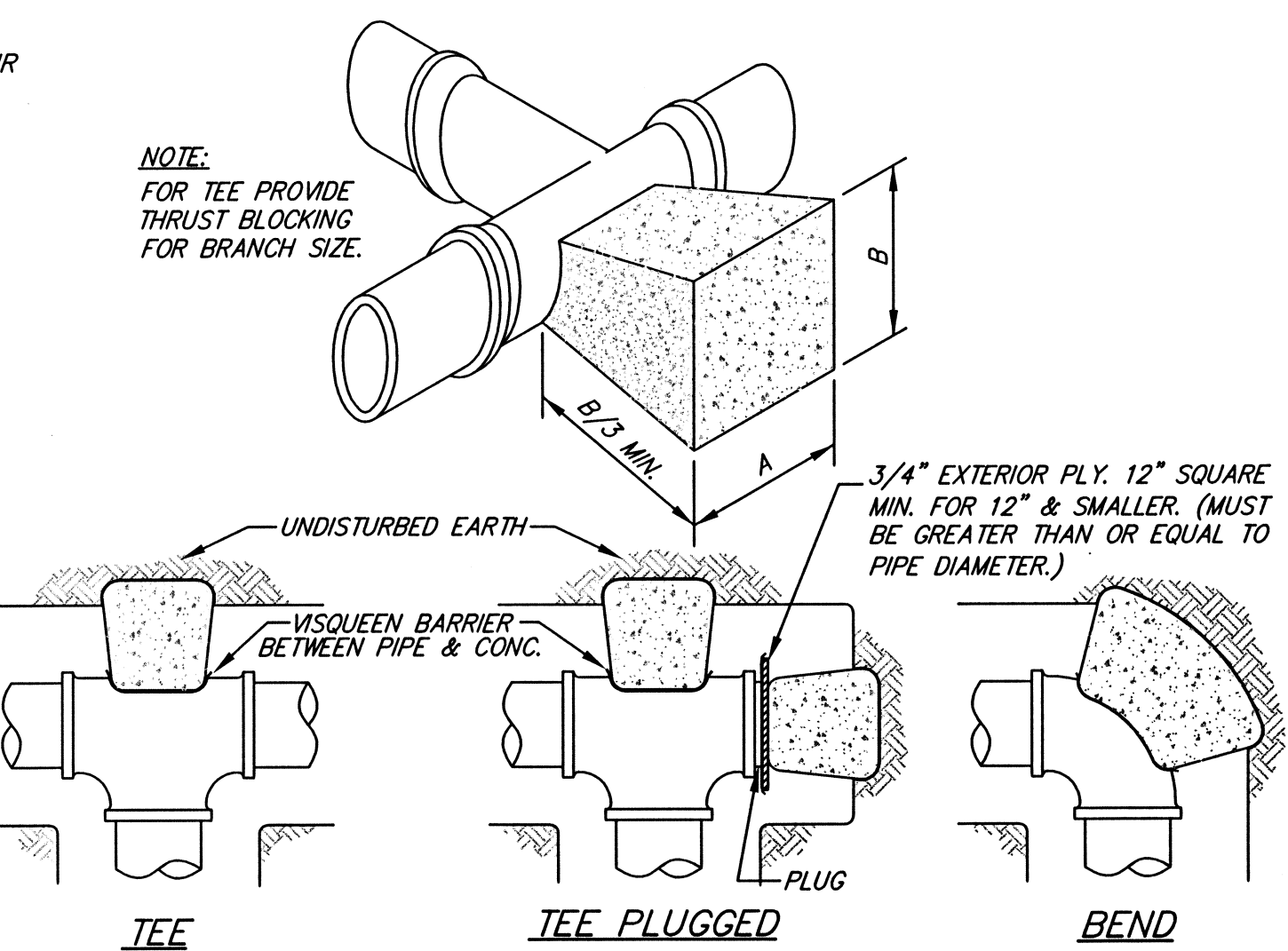
**STORMTECH CHAMBERS - ISOLATOR ROW**  
NOT TO SCALE



**CONCRETE HANDICAP RAMP AT CROSSWALK**  
NOT TO SCALE



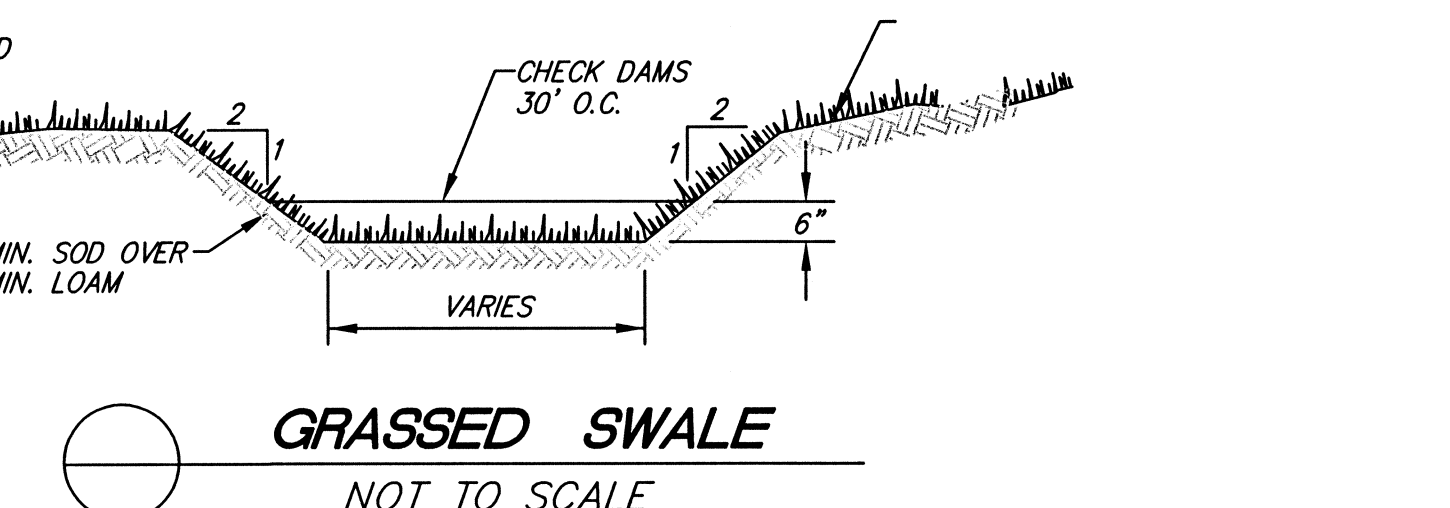
**ROOF DRAIN DETAIL WITH CLEANOUT**  
NOT TO SCALE



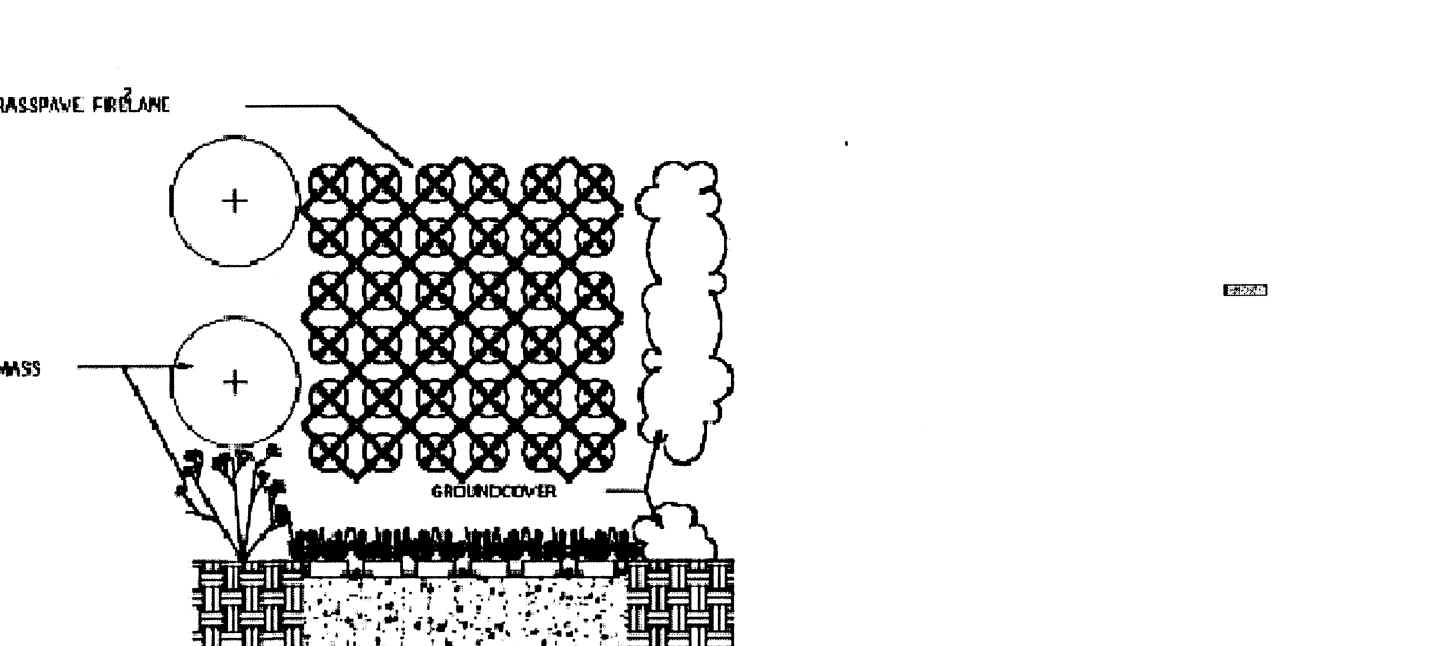
**DIMENSION FOR THRUST BLOCKING**

FITTING	TEES & PLUGS		90° BENDS		45° BENDS & "Y"s		22 1/2° BENDS	
SIZES	A	B	A	B	A	B	A	B
4"	1'-6"	1'-6"	1'-6"	1'-9"	1'-3"	0'-6"	1'-0"	0'-6"
6"	2'-0"	1'-0"	2'-0"	2'-0"	1'-3"	1'-6"	1'-0"	1'-5"
8"	2'-0"	1'-6"	2'-3"	2'-3"	1'-8"	1'-8"	1'-0"	1'-3"
10"	2'-6"	2'-3"	2'-9"	2'-10"	2'-3"	1'-10"	1'-3"	2'-0"
12"	3'-0"	2'-9"	3'-6"	3'-3"	2'-6"	2'-4"	2'-0"	1'-6"
14"	3'-5"	3'-0"	4'-0"	3'-8"	3'-6"	2'-4"	2'-0"	2'-3"

1. THIS TABLE IS BASED ON 200 P.S.I. MAIN PRESSURE AND 2000 P.S.F. SOIL-BEARING PRESSURE. ADJUST BEARING AREAS IN ACCORDANCE WITH SOIL CONDITIONS AND PRESSURES ENCOUNTERED.
2. USE VISQUEEN BARRIER BETWEEN PIPE AND CONCRETE AS SHOWN IN DETAIL ABOVE.
3. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
4. BLOCKING SIZE/FREQUENCY SHALL BE INCREASED IF REQUIRED BY ENGINEER.



**GRASSPAVE2 FIRELANE**  
NOT TO SCALE



**GRASSPAVE2 FIRELANE**  
NOT TO SCALE

**tat**  
the architectural team

The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
www.architecturalteam.com  
©2008 The Architectural Team, Inc.

Consultant:

**HANCOCK ASSOCIATES**

Civil Engineers  
Land Surveyors  
Wetland Scientists

315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
www.hancockassociates.com

Revision:

**THE COOLIDGE AT SUDBURY 2**

187-189 BOSTON POST RD  
SUDBURY, MA

Drawn: JTL  
Checked: JP  
Scale: AS NOTED  
Key Plan:

Sheet Name:

**DETAILS**

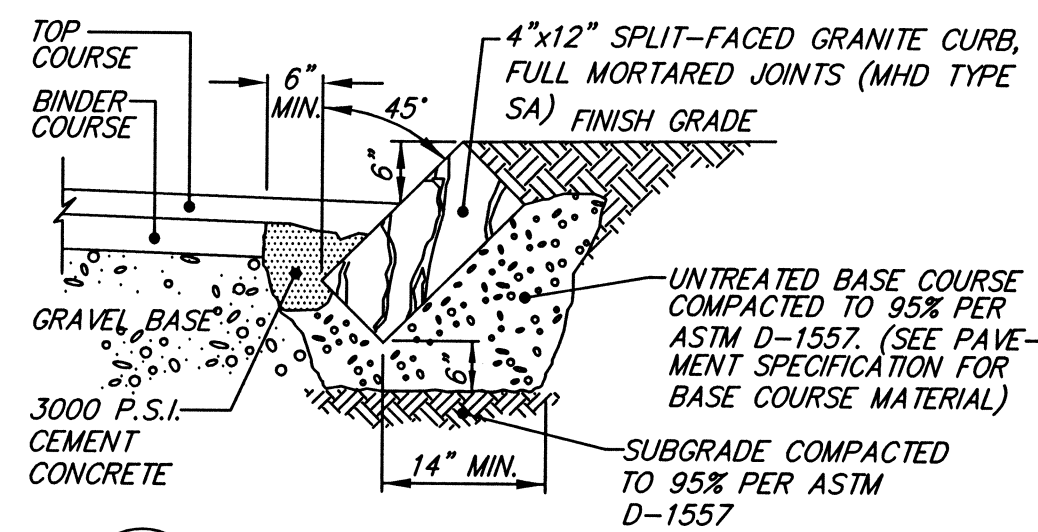
Project Number: 15526  
Project Name:

Issue Date: JUNE 29, 2016  
Revision Date: JANUARY 17, 2016

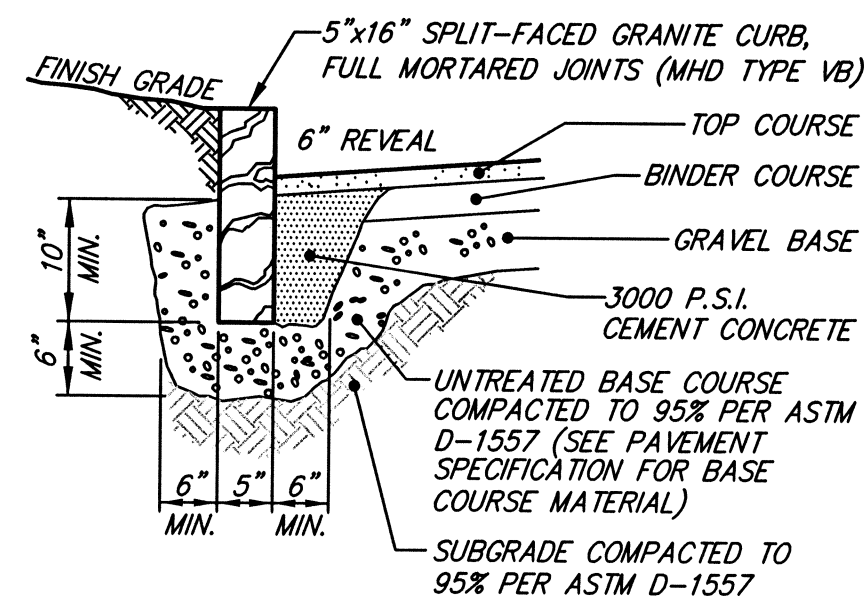
Sheet Number:

**D1**

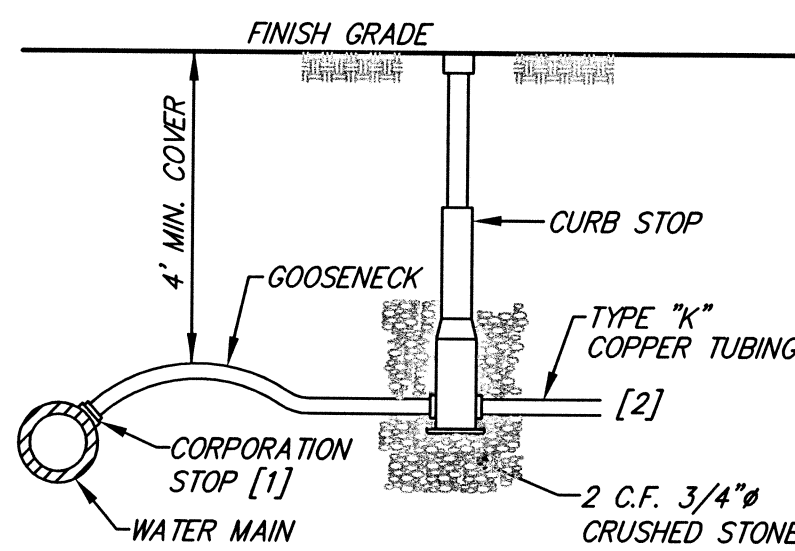




**SLOPED GRANITE CURB**  
CROSS SECTION  
NOT TO SCALE

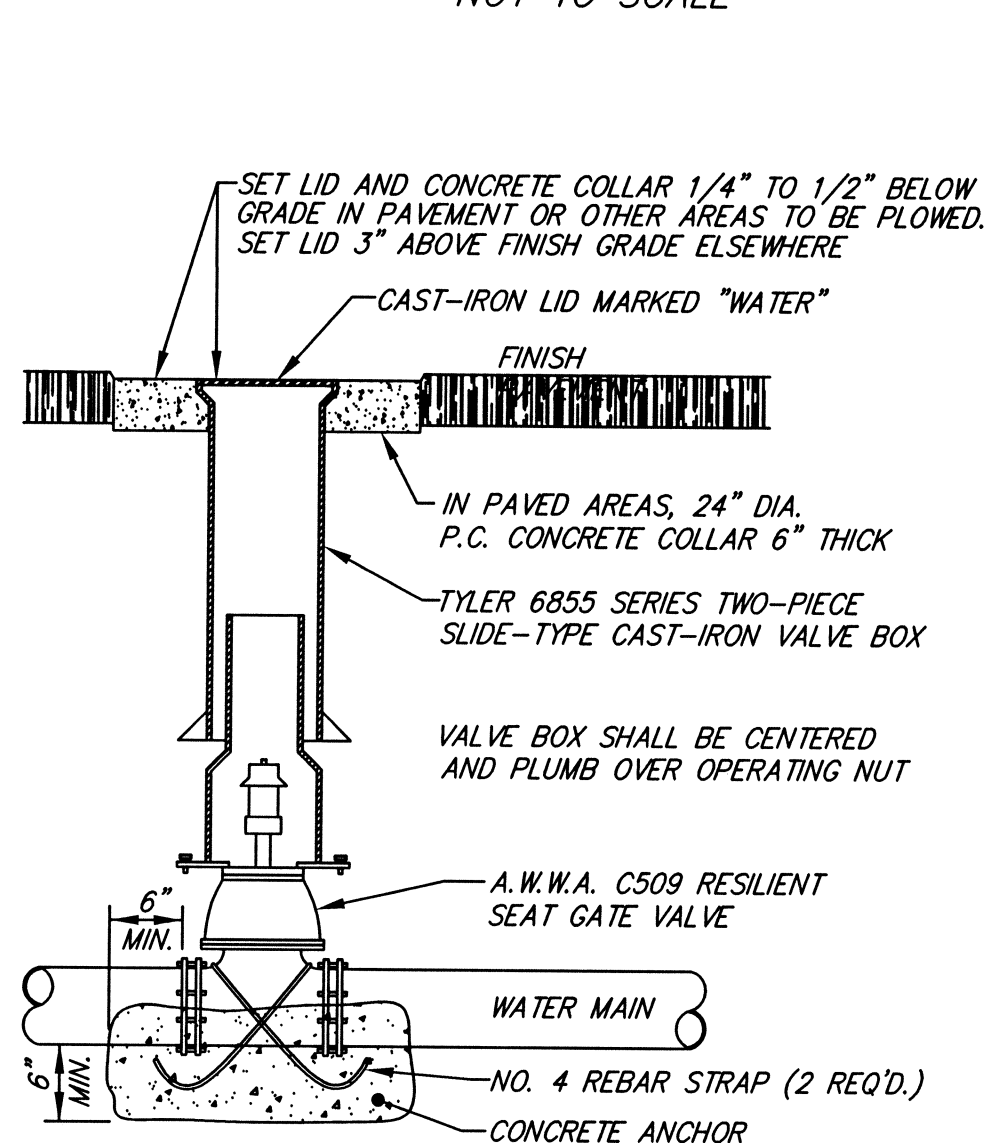


**VERTICAL GRANITE CURB**  
CROSS SECTION  
NOT TO SCALE

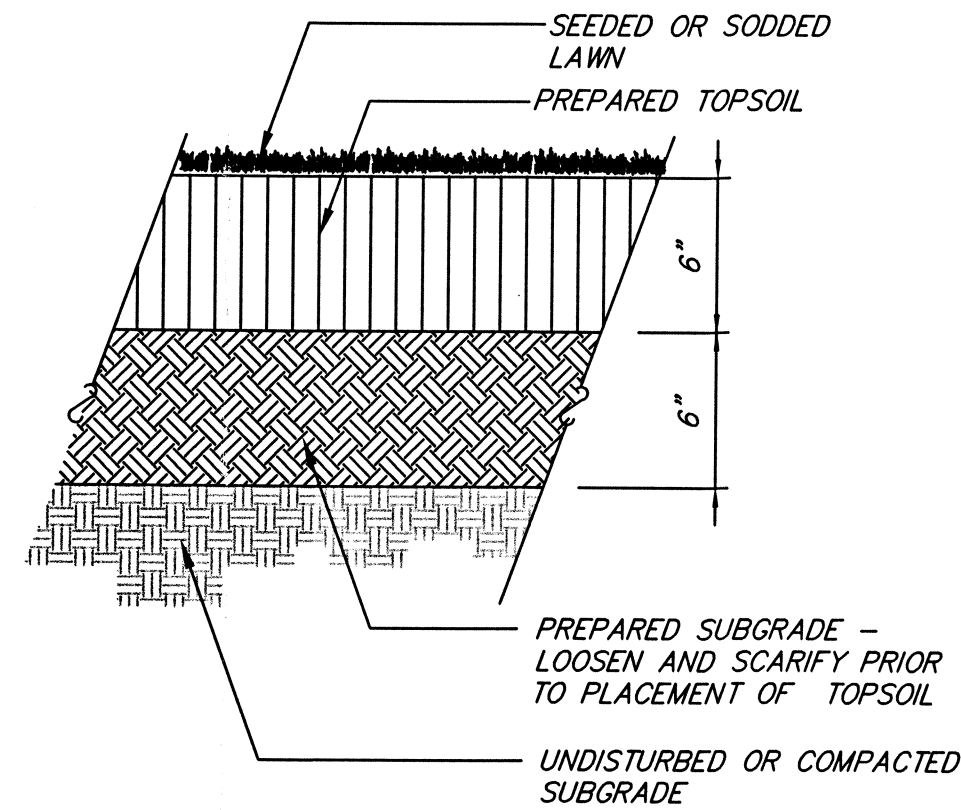


NOTES:  
[1] WATER SERVICES LARGER THAN ONE INCH ARE TO BE RESTRAINED TO MAIN WITH APPROVED SADDLE.  
[2] COORDINATE BUILDING CONNECTION WITH PLUMBING DRAWINGS.

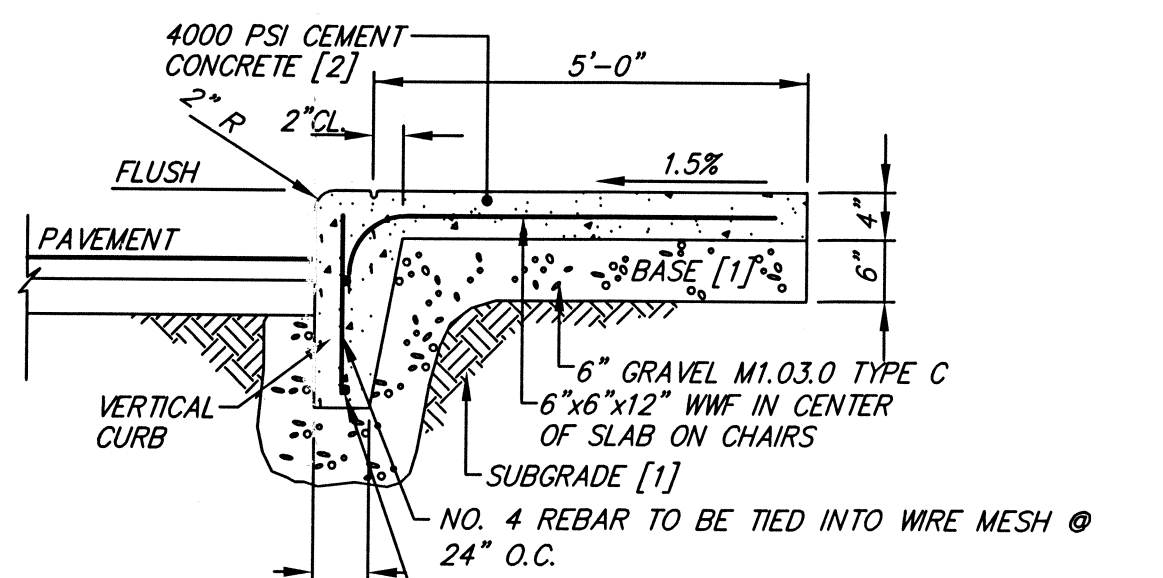
**WATER SERVICE**  
TYPICAL PROFILE  
NOT TO SCALE



**GATE VALVE**  
TYPICAL CROSS SECTION  
NOT TO SCALE

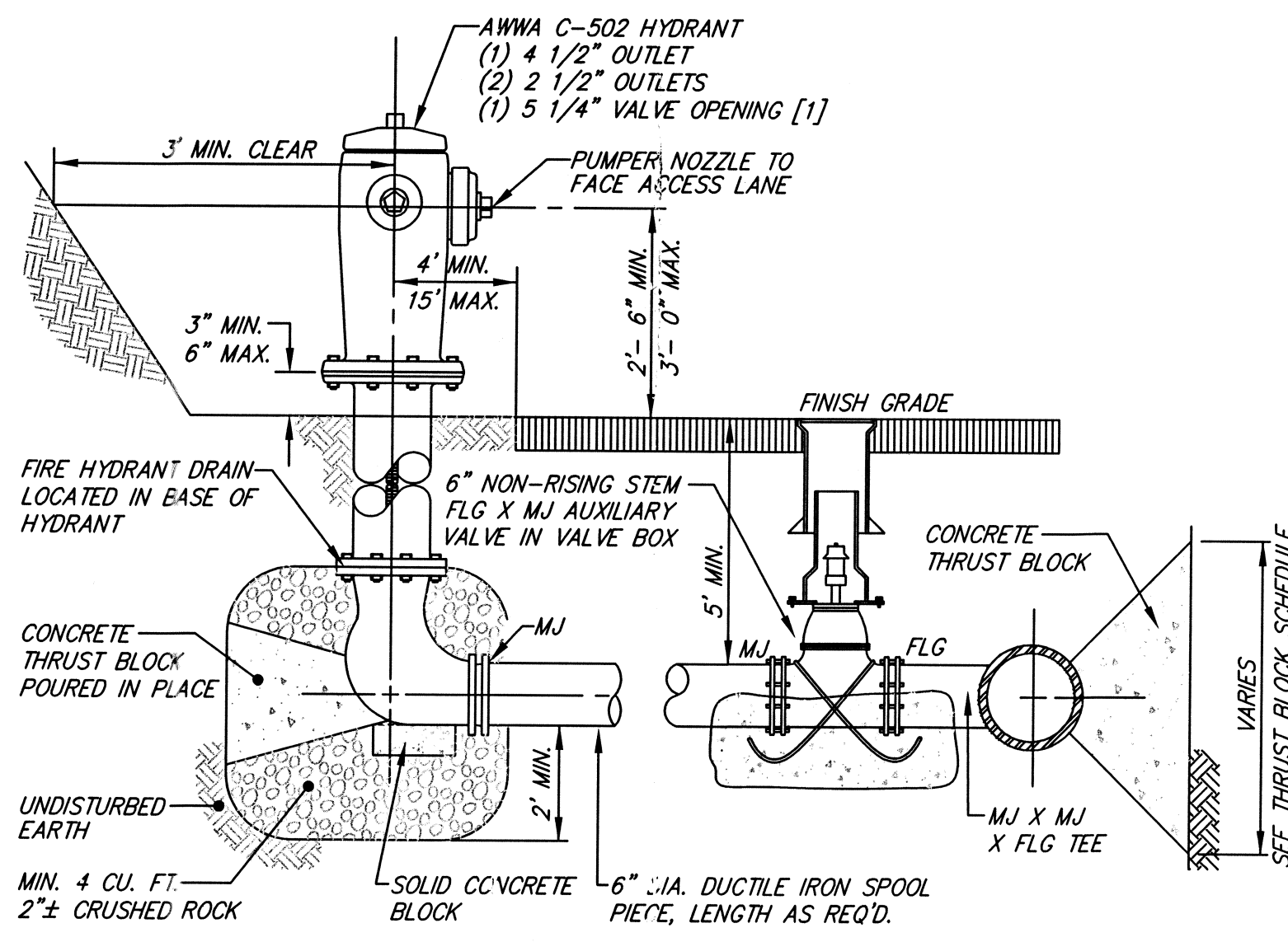


**LOAM AND SEED**  
NOT TO SCALE



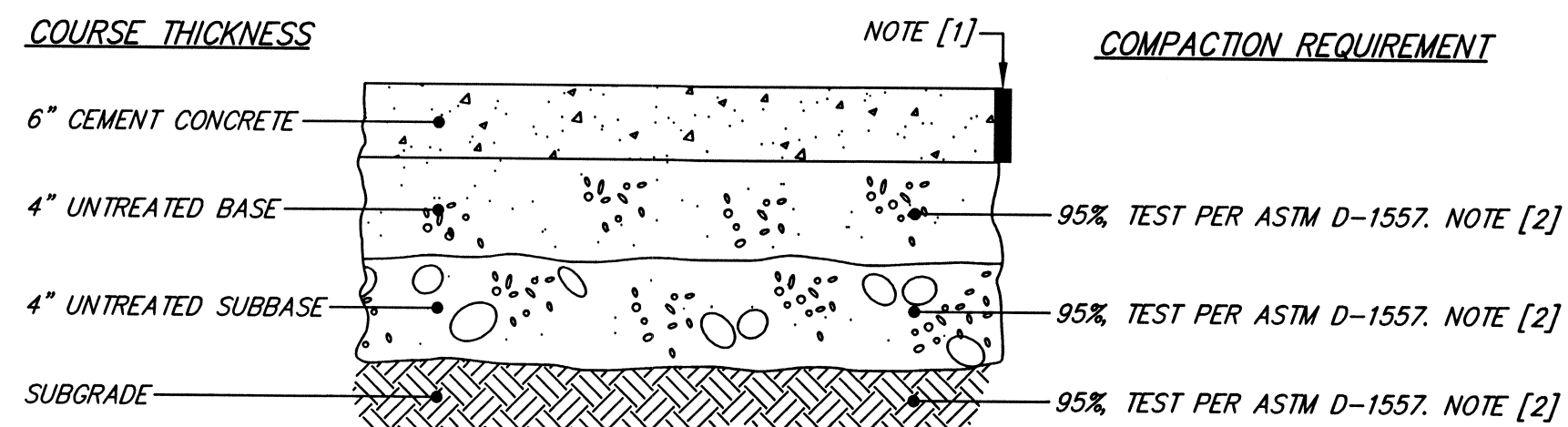
NOTES:  
[1] COMPACT TO 95% PER ASTM D-1557  
[2] CONTROL JOINT EVERY 5 LF, EXPANSION JOINT EVERY 30 LF.

**SIDEWALK WITH INTEGRATED CURB**  
CROSS SECTION  
NOT TO SCALE



NOTES:  
[1] DANVERS STANDARD: DARLING B-84-B

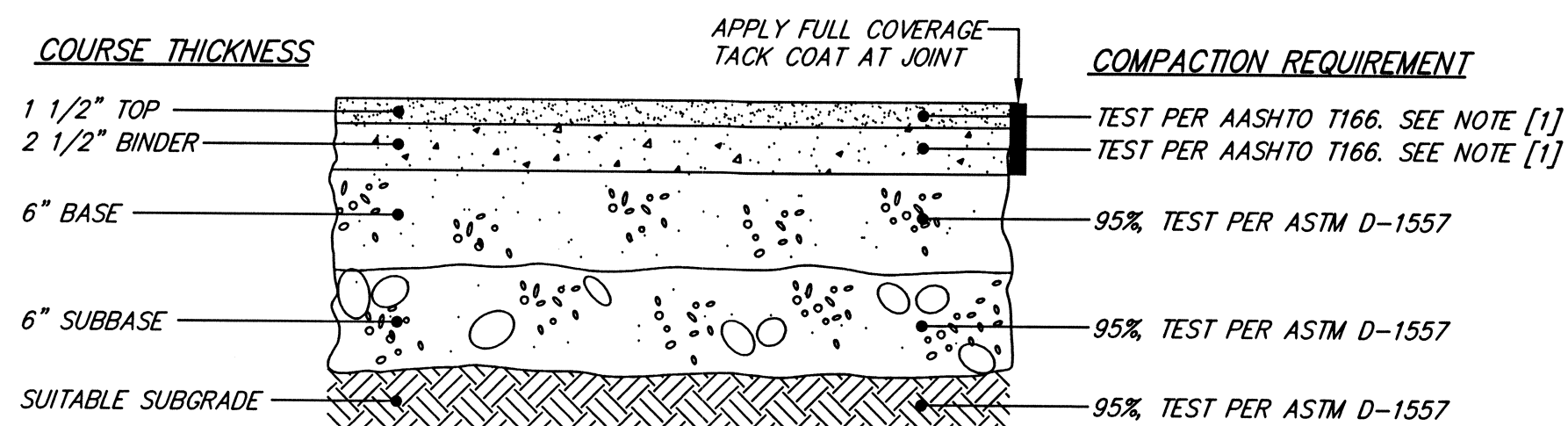
**FIRE HYDRANT ASSEMBLY**  
TYPICAL CROSS SECTION



NOTES:  
[1] CONTROL JOINT EVERY 10 FEET, EXPANSION JOINT EVERY 50 FEET.  
[2] COMPACT TO TEST AVERAGE OF 95% NO TEST LOWER THAN 93%

MATERIAL	SPECIFICATION	MAXIMUM AGGREGATE OR PARTICLE SIZE (IN.)
TOP - CEMENT CONCRETE	MHD M4.02.00 4000 PSI AT 28 DAYS	3/4
BASE - SAND BORROW	MHD M1.04.0 TYPE b	3/8
SUBBASE - GRAVEL BORROW	MHD M1.03.0 TYPE c	2
UNSUITABLE SUBGRADE - ORDINARY BORROW	MHD M1.01.0	12

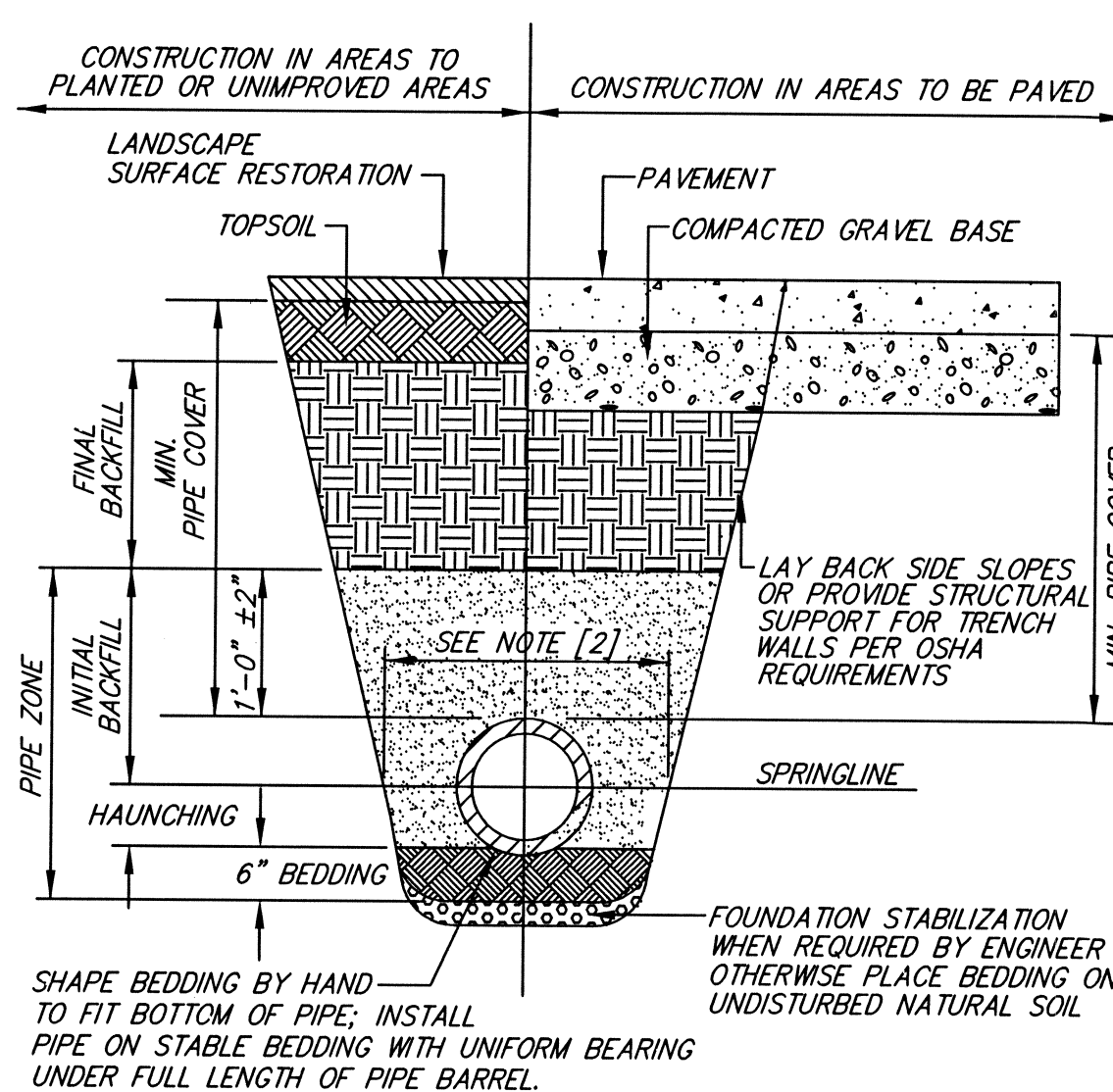
**CEMENT CONCRETE PAVEMENT**  
TYPICAL CROSS SECTION  
NOT TO SCALE



NOTES:  
[1] COMPACT TO TEST AVERAGE OF 96% NO TEST LOWER THAN 94%

MATERIAL	SPECIFICATION	MAXIMUM AGGREGATE OR PARTICLE SIZE (IN.)
TOP - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1/2
BINDER - BITUMINOUS CONCRETE	MHD M3.11.03 CLASS I, TYPE I-1	1
BASE - DENSE GRADED CRUSHED STONE	MHD M2.01.7	1 1/2
SUBBASE - GRAVEL BORROW	MHD M1.03.0 TYPE C	2

**BITUMINOUS CONCRETE PAVEMENT**  
TYPICAL CROSS SECTION  
NOT TO SCALE



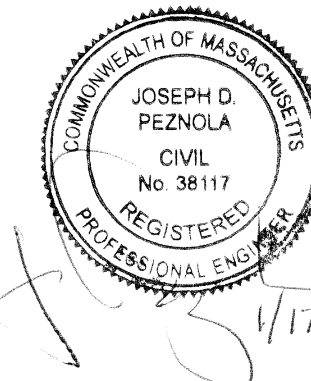
FOUNDATION, BEDDING, & BACKFILL MATERIALS	HDP, PVC	RC, DI
PIPE MATERIAL	[6]	[6]
FOUNDATION STABILIZATION	[1]	[1]
BEDDING	[1]	[1]
HAUNCHING	[1]	[1]
INITIAL BACKFILL	[1]	[1]
FINAL BACKFILL	[4]	[4]
MIN. PIPE COVER	[5]	[5]

NOTES:  
[1] PLACE 3/4 inch GRADED GRANULAR BACKFILL AT OPTIMUM MOISTURE IN HORIZONTAL, 8 inch DEEP, LOOSE LAYERS; COMPACT TO 95% PER ASTM D-1557.  
[2] MINIMUM WIDTH OF TRENCH MEASURED AT THE SPRINGLINE OF THE PIPE, INCLUDING ANY NECESSARY SHEATHING.

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

[6] FOR FOUNDATION STABILIZATION, USE 2 inch CRUSHED STONE.

**PIPE TRENCH**  
TYPICAL CROSS SECTION  
NOT TO SCALE



**tat**  
the architectural team

The Architectural Team, Inc.  
50 Commandant's Way at Admiral's Hill  
Chelsea MA 02150  
T 617.889.4402  
F 617.884.4329  
www.architecturalteam.com  
©2008 The Architectural Team, Inc.

Consultant:  
**HANCOCK ASSOCIATES**  
Civil Engineers  
Land Surveyors  
Wetland Scientists  
315 Elm Street, Marlborough, MA 01752  
Voice (508) 460-1111, Fax (508) 460-1121  
www.hancockassociates.com

Revision:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**THE COOLIDGE AT SUDBURY 2**

187-189 BOSTON POST RD  
SUDBURY, MA

Drawn: JTL  
Checked: JP  
Scale: AS NOTED  
Key Plan:

Sheet Name:

**DETAILS**

Project Number: 15526  
Project Name:

Issue Date:  
JUNE 29, 2016  
Revision Date:  
JANUARY 17, 2016

Sheet Number:

**D2**