

# PROPOSED REDEVELOPMENT SITE PLAN

AT

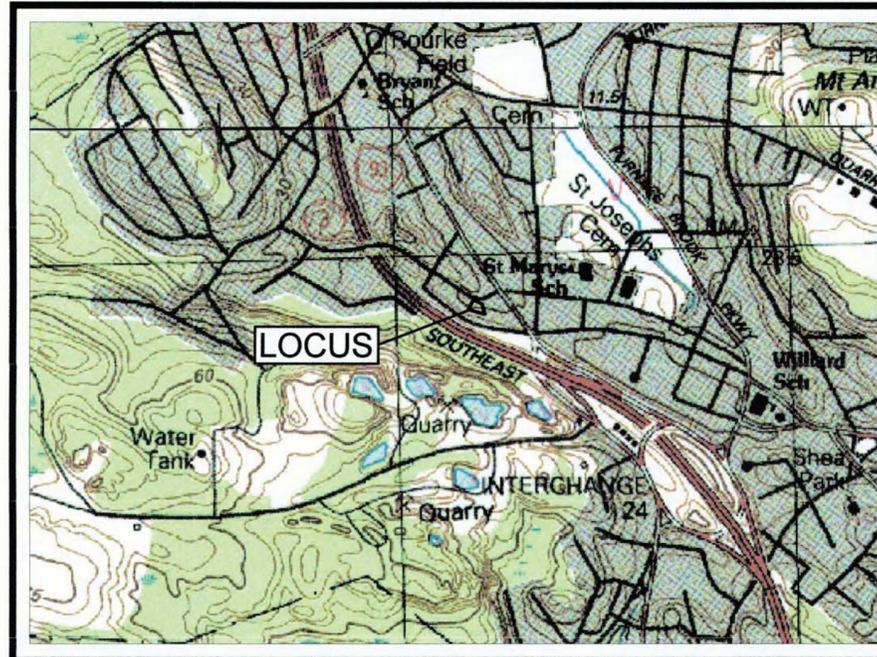
## 18 BATES AVENUE

### QUINCY, MASSACHUSETTS

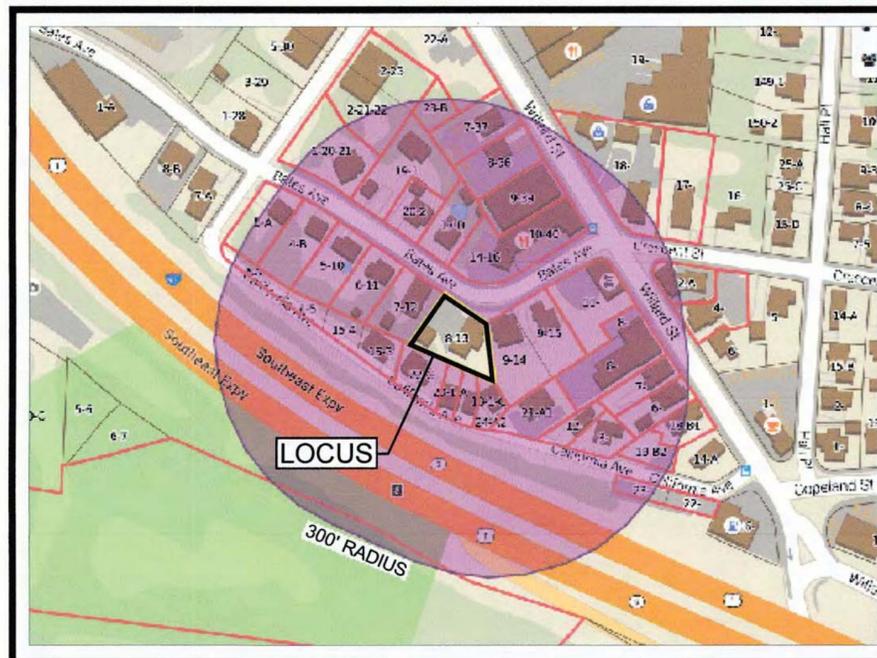
DATE: DECEMBER 18, 2014

#### LIST OF DRAWINGS

SHEET	TITLE
1	COVER SHEET
2	EXISTING CONDITIONS PLAN
3	LAYOUT PLAN
4	LANDSCAPING PLAN
5	GRADING, DRAINAGE & UTILITIES PLAN
6	EROSION CONTROL PLAN
7-11	DETAIL SHEETS



U.S.G.S. MAP  
SCALE 1" = 1000'



ASSESSOR'S MAP  
NOT TO SCALE

#### LEGEND

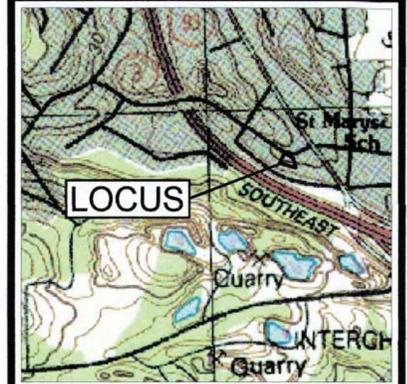
PROPOSED WATERLINE SERVICE	
EXISTING WATERLINE SERVICE	
PROPOSED OVERHEAD UTILITIES	
EXISTING OVERHEAD UTILITIES	
PROPOSED SEWER PIPE	
EXISTING SEWER PIPE	
PROPOSED GAS LINE	
EXISTING GAS LINE	
PROPOSED EXTERIOR LIGHT	
PROPOSED SPOT GRADE	
EXISTING SPOT GRADE	
PROPOSED CATCH BASIN	
EXISTING CATCH BASIN	
PROPOSED CONTOUR	
EXISTING CONTOUR	
EXISTING UTILITY POLE	
EXISTING GUYWIRE	

#### LOT ID

5-10  
19-1  
18  
22-C  
22A  
5-A  
11  
12  
18-B1  
8  
1-20-21  
1-5, 15-3, 15-4  
4  
19-1-B  
7-12  
21-A1  
3  
35-B  
17  
20-1-A  
23-B  
9-14, 9-15  
9-39  
2-A  
18-1-C  
4-B  
20-2  
8-36  
7-37  
19-B2  
6  
17-B  
2-21-22, 2-23  
7  
6-11  
22, 23  
10-40

#### ABUTTER

HARTE ANN M.  
TRAINOR FRANK  
DIBONA THOMAS M.  
LEE RAYMOND  
GALVIN COMMERCIAL  
SEITZ LEONARD  
FLEMING EDWARD J TREE  
GRIMALDI JOSEPH P.  
NGUYEN NHAN  
BBRF LTD  
WELCH MARY V.  
SILVA ARLINDO  
GORHAM WILLIAM J. ETAL TREES  
CHEN YAO RAN  
LE HUNG Q.  
MAK ELAINE ETAL  
FENELON CHRIS K.  
MASSACHUSETTS COMMONWEALTH OF  
HENRIKSEN MARK  
QUINONES MERCEDES C.  
257 WILLARD STREET LLC  
RECE MASSACHUSETTS LLC  
COMMONWEALTH STATE CORP  
GORHAM ROBERT M JR ETAL  
WILLIAMS PATRICIA G.  
LAU TOM & KATHY LU  
BLACK EVA E.  
COMMONWEALTH STATE CORP  
TRAINOR FRANK ETAL TREE MICHEL  
BIONDI JAMES V. TREE 15  
SANTOS JOSE A. &  
PETITTI JOSEPH J. & AGNES T.  
GALVIN RESIDENTIAL  
GOMATOS CAROLYN TREE WILLARD  
MANNING ALMA  
MASSACHUSETTS COMMONWEALTH  
IBRAHIM ZAKI TRUSTEE



LOCUS MAP  
SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE 5/2/16

### PROPOSED REDEVELOPMENT SITE PLAN

AT

## 18 BATES AVENUE

IN

### QUINCY, MASSACHUSETTS

(NORFOLK COUNTY)

#### COVERSHEET

#### REVISIONS:

No.	DATE	DESC.
1	5/2/16	REVIEW COMMENTS

PREPARED FOR:  
NAZIH B. ELKALLASSI, TR.  
BATES AVE. REALTY TRUST  
20 TOWER TERRACE  
WAREHAM, MA 02571

PREPARED BY:  
JC ENGINEERING, INC.  
2854 CRANBERRY HIGHWAY  
EAST WAREHAM, MA 02538  
508-273-0377

SCALE: 1" = 10'

DATE: FEBRUARY 26, 2016

FIELD: JO/BM

CALC./DESIGN: BMB

DRAWN: BMB

CHECK: JLC

JOB NO: 2448

SHEET 1 OF 11

PLANNING BOARD CASE NO. 2016-02

CITY OF QUINCY PLANNING BOARD

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- NOTES:**
- OWNER OF RECORD:  
NAZIH B. ELKALLASSI, TR.  
BATES AVENUE REALTY TRUST  
20 TOWER TERRACE  
WAREHAM, MA 02571
  - DEED REFERENCE:  
DEED BOOK 29103, PAGE 549
  - PLAN REFERENCES:  
PLAN BOOK 1574, PAGE 454  
PLAN BOOK 1763, PAGE 107  
PLAN BOOK 3315, PAGE 50  
PLAN NO. 690 OF 2001
  - ELEVATIONS BASED UPON QUINCY  
CITY BASE DATUM.

LOT 12  
N/F  
HUNG Q. LE

LOT 13  
9,059 S.F.

LOT 22-C  
N/F  
RAYMOND LEE AND  
VAN KHANH LUONG

LOT 20-1-A  
N/F  
MERCEDES C. QUINONES

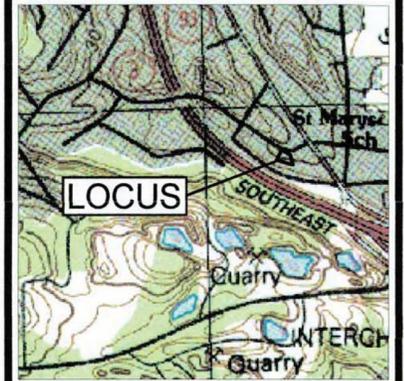
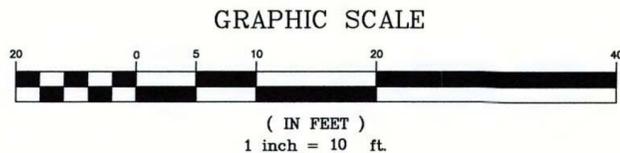
LOT 19-1-B  
N/F  
YAO RAN CHEN AND  
YU MEI ZHU CHEN

LOT 18-1-C  
N/F  
PATRICIA G. WILLIAMS

LOT 14  
N/F  
RECE MASSACHUSETTS LLC

Test Pit:  
Soil Evaluator:  
Bradley M. Bertolo, E.I.T., CSE.  
Date: April 4, 2016  
Grade @ Test Pit: 60.4'  
Groundwater @ 51.4'

DEPTH	ELEV.
0"	60.4'
48"	56.4'
72"	54.4'
108"	51.4'
120"	50.4'



LOCUS MAP  
SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.L.S. DATE

**PROPOSED REDEVELOPMENT SITE PLAN**  
AT  
**18 BATES AVENUE**  
IN  
**QUINCY, MASSACHUSETTS**  
(NORFOLK COUNTY)  
**EXISTING CONDITIONS PLAN**

**REVISIONS:**

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CHECK: JLC

JOB NO: 2448

PLAN NO. 690 OF 2001

**DIMENSIONAL REGULATIONS: RESIDENCE B**

	BYLAW(4-5 UNITS)	EXISTING	PROPOSED
NUMBER OF D.U.'S		3	5
MAX. FLOOR AREA RATIO	0.4	0.47	0.52
MIN. LOT AREA	6,750 S.F.	9,059 S.F.	9,059 S.F.
MIN. LOT AREA / D.U.	4,000 S.F.	3,019 S.F.	1,812 S.F.
MIN. FRONT YARD	25'	7.3'	8.1'
MIN. SIDE YARD	25'	2.0'	4.3'
MIN. REAR YARD	25'	9.0'	9.0'
MIN. LOT FRONTAGE	75'	79.8'	79.8'
GREEN OPEN SPACE / D.U.	700 S.F.	1,503 S.F.	813 S.F.
MAX. # OF STORIES	3	2.5	3

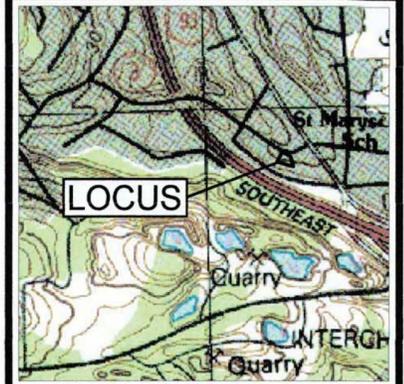
**PARKING REQUIREMENTS: RESIDENCE B**

2 PARKING SPACES PER DWELLING UNIT\*\* (SECTION 5.1.8)

PROPOSED NUMBER OF D.U.'S: 5

PARKING REQUIRED: 10 SPACES  
PARKING PROVIDED: 10 SPACES

\*\*2 SPACES PER UNIT CALCULATED FROM REQUIREMENT OF 1.75 SPACES PER UNIT PLUS 0.25 SPACES PER UNIT FOR GUEST PARKING



**LOCUS MAP**  
SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE

**PROPOSED REDEVELOPMENT SITE PLAN**  
AT  
**18 BATES AVENUE**  
IN  
**QUINCY, MASSACHUSETTS**  
(NORFOLK COUNTY)  
**LAYOUT PLAN**

**REVISIONS:**

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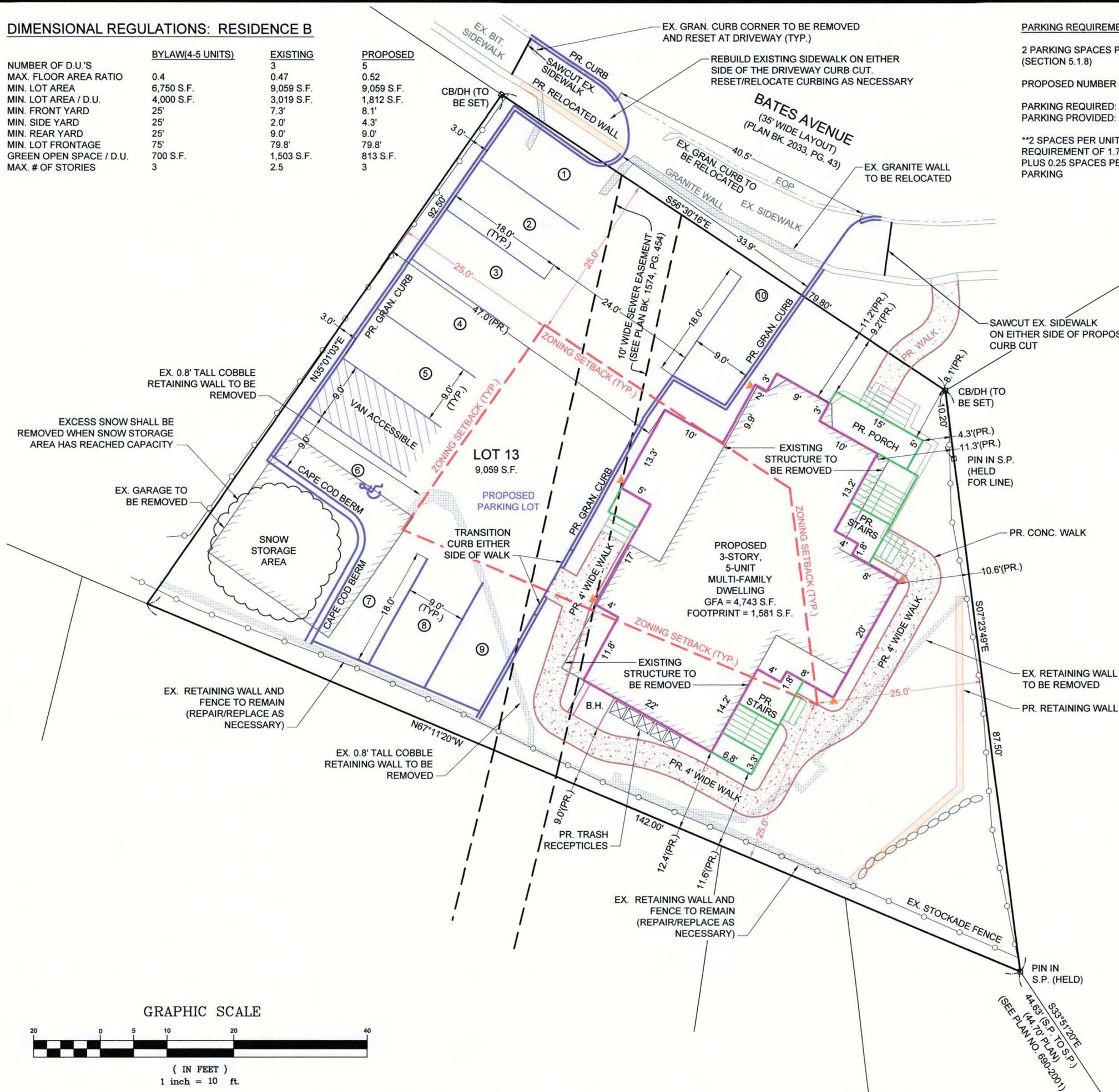
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CALC./DESIGN: BMB

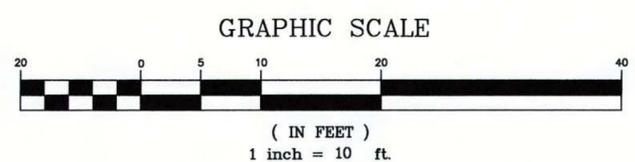
DRAWN: BMB

CHECK: JLC

JOB NO: 2448

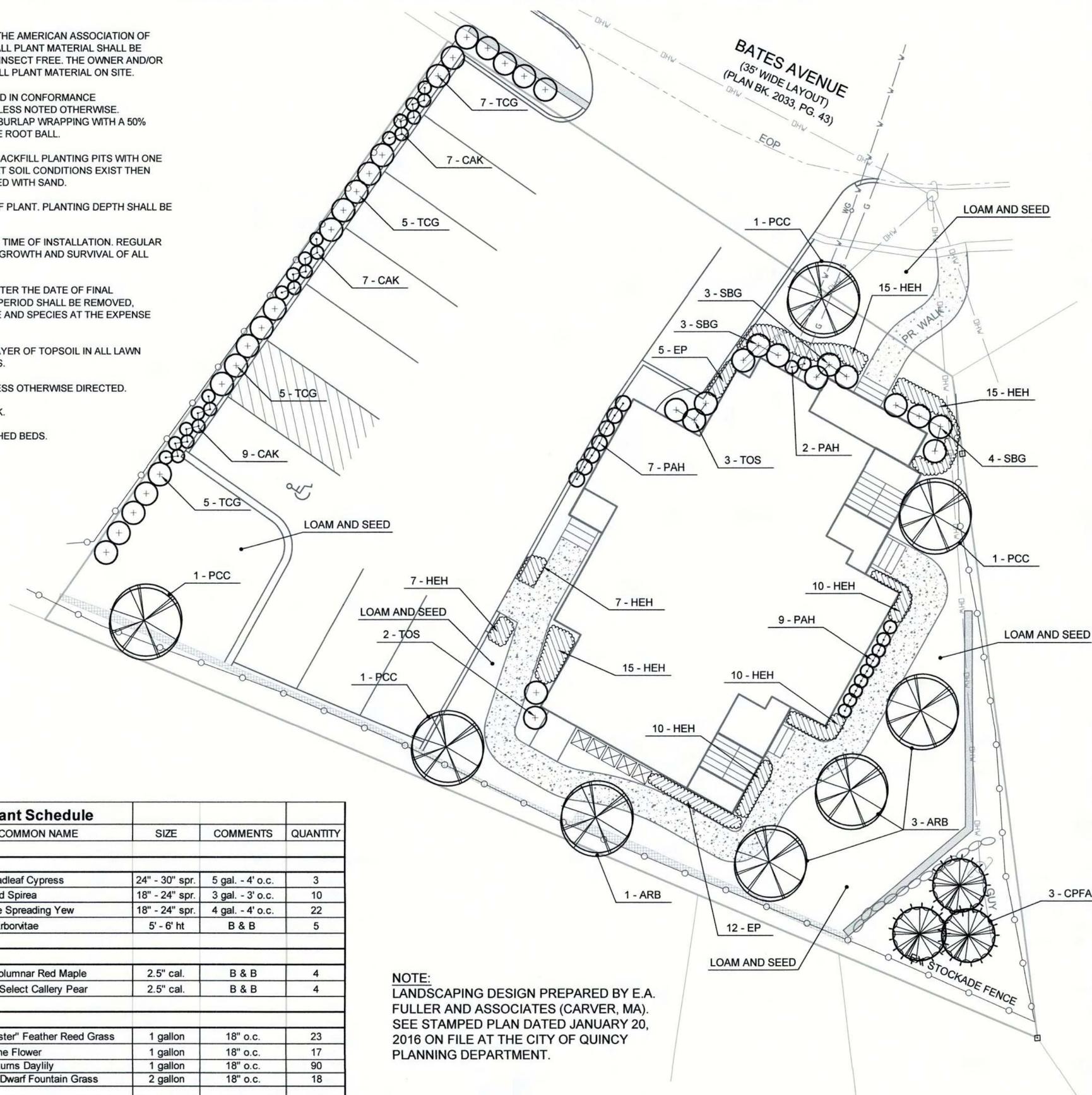


PLAN NO. 690 OF 2001



**GENERAL PLANTING NOTES**

- 1) ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE.
- 2) ALL PLANT MATERIAL SHALL BE PROPERLY STAKED AND PLANTED IN CONFORMANCE WITH THE SPECIFICATIONS. PROVIDE THREE STAKES PER TREE UNLESS NOTED OTHERWISE. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. PROVIDE BURLAP WRAPPING WITH A 50% OVERLAP. CUT AND REMOVE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL.
- 3) PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOPSOIL, PEAT MOSS AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH SAND.
- 4) NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN THE NURSERY.
- 5) NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL NEW PLANTS.
- 6) ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED BY A TREE OF SIMILAR SIZE AND SPECIES AT THE EXPENSE OF THE CONTRACTOR.
- 7) THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 6" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 2'-0" OF TOPSOIL IN ALL PLANTING AREAS.
- 8) ALL DISTURBED AREAS SHALL BE TOPSOILED AND SEEDED UNLESS OTHERWISE DIRECTED.
- 9) ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED PINE BARK.
- 10) ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.

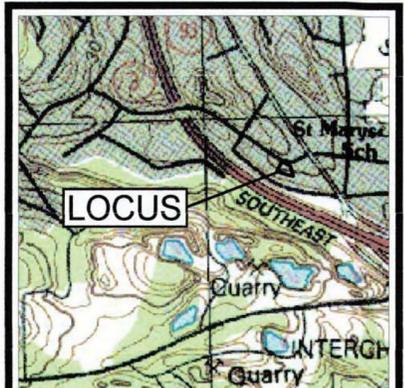
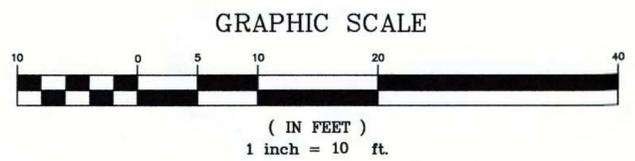


**NOTE:**  
 LANDSCAPING DESIGN PREPARED BY E.A. FULLER AND ASSOCIATES (CARVER, MA). SEE STAMPED PLAN DATED JANUARY 20, 2016 ON FILE AT THE CITY OF QUINCY PLANNING DEPARTMENT.

Plant Schedule					
SYMB.	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS	QUANTITY
<b>SHRUBS</b>					
CPFA	Chamaecyparis pis. fil. 'Aurea'	Gold Threadleaf Cypress	24" - 30" spr.	5 gal. - 4' o.c.	3
SBG	Spiraea x bumaldi 'Goldmound'	Goldmound Spirea	18" - 24" spr.	3 gal. - 3' o.c.	10
TCG	Taxus cuspidata 'Greenwave'	Greenwave Spreading Yew	18" - 24" spr.	4 gal. - 4' o.c.	22
TOS	Thuja occidentalis 'Smaragd'	Emerald Arborvitae	5' - 6' ht	B & B	5
<b>TREES</b>					
ARB	Acer rubrum 'Bowhall'	Bowhall Columnar Red Maple	2.5" cal.	B & B	4
PCC	Pyrus calleryana 'Chanticleer'	Cleveland Select Callery Pear	2.5" cal.	B & B	4
<b>GRASSES &amp; PERENNIALS</b>					
CAK	Calamagrostis acutiflora 'Karl Foerster'	"Karl Foerster" Feather Reed Grass	1 gallon	18" o.c.	23
EP	Echinacea purpurea	Purple Cone Flower	1 gallon	18" o.c.	17
HEH	Hemerocallis Happy Returns	Happy Returns Daylily	1 gallon	18" o.c.	90
PAH	Pennisetum alopecuroides 'Hamelin'	Hamelin's Dwarf Fountain Grass	2 gallon	18" o.c.	18

**18 Bates Ave  
 Quincy, Massachusetts**

**E. A. Fuller Associates - Landscape Architecture**  
 170 Plymouth Street North Carver, MA 02355



**LOCUS MAP**  
 SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE 5/2/16

**PROPOSED REDEVELOPMENT SITE PLAN**  
 AT  
**18 BATES AVENUE**  
 IN  
**QUINCY, MASSACHUSETTS**  
 (NORFOLK COUNTY)  
**LANDSCAPING PLAN**

**REVISIONS:**

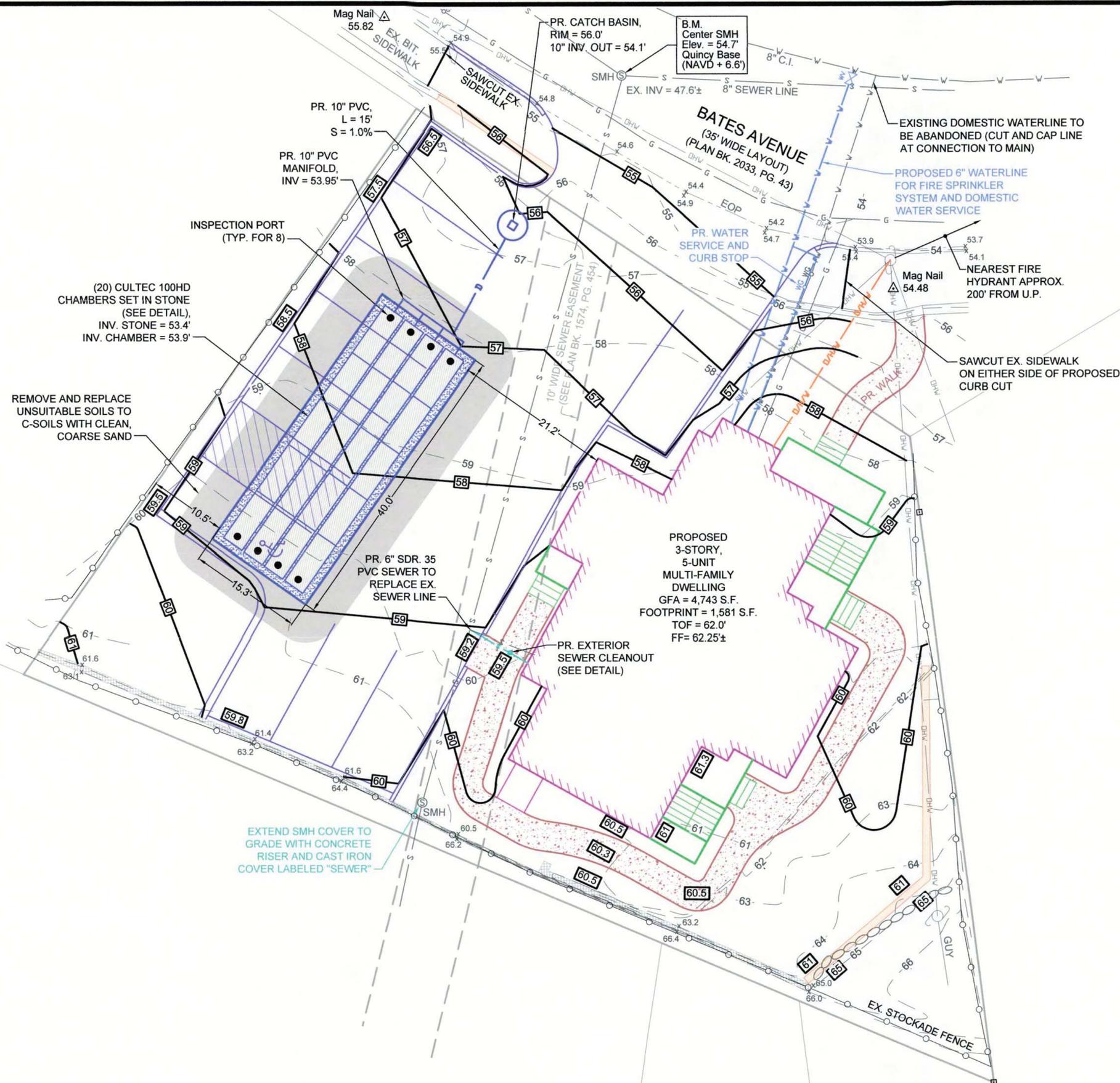
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 20 TOWER TERRACE  
 WAREHAM, MA 02571

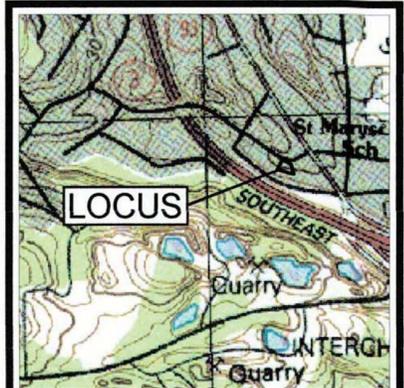
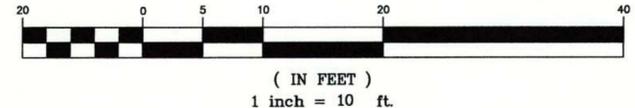
PREPARED BY:  
**JC ENGINEERING, INC.**  
 2854 CRANBERRY HIGHWAY  
 EAST WAREHAM, MA 02538  
 508-273-0377

SCALE: 1" = 10'  
 DATE: JANUARY 20, 2016  
 FIELD: JO/BM  
 CALC./DESIGN: BMB  
 DRAWN: BMB  
 CHECK: EAF  
 JOB NO: 2448

PLAN NO. 690 OF 2001



GRAPHIC SCALE



**LOCUS MAP**  
SCALE 1" = 1000'



5/2/16

JOHN L. CHURCHILL, JR., P.E. DATE

**PROPOSED REDEVELOPMENT SITE PLAN**  
AT  
**18 BATES AVENUE**  
IN  
**QUINCY, MASSACHUSETTS**  
(NORFOLK COUNTY)  
**GRADING, DRAINAGE, & UTILITIES**

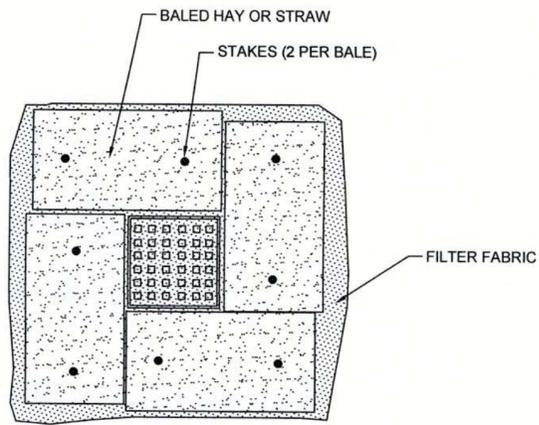
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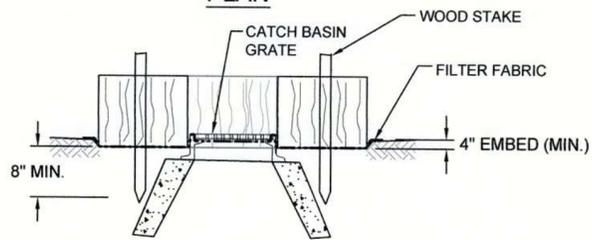
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**BATES AVE. REALTY TRUST**  
**20 TOWER TERRACE**  
**WAREHAM, MA 02571**

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**508-273-0377**

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DATE:	FEBRUARY 26, 2016
FIELD:	JO/BM
CALC./DESIGN:	BMB
DRAWN:	BMB
CHECK:	JLC
JOB NO:	2448



PLAN

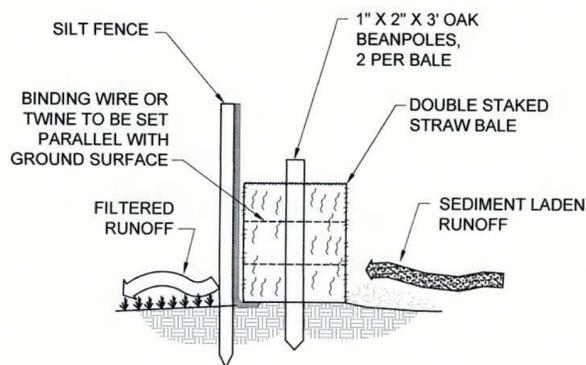


SECTION VIEW

- NOTES:
1. ENCLOSE STRUCTURE WITH HAYBALES IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
  2. GRATE TO BE PLACED OVER FILTER FABRIC.
  3. BALES SHALL BE INSPECTED PERIODICALLY AFTER ALL STORM EVENTS AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

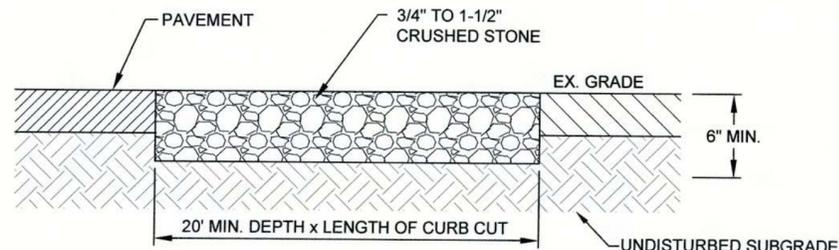
**EROSION CONTROL DURING CONSTRUCTION**

NOT TO SCALE



CROSS SECTION OF HAYBALE LINE

NOT TO SCALE



CRUSHED STONE TRACKING PAD

NOT TO SCALE

HAYBALES TO BE SET AROUND CATCH BASIN RIM UNTIL SITE IS STABILIZED (SEE DETAIL)

PROPOSED 1-1/2" CRUSHED STONE TRACKING PAD (20' MIN. DEPTH x FULL WIDTH OF CURB CUT)

NOTE: CONTRACTOR TO REMOVE ALL PAVEMENT, CURBING, AND GRANITE WALL AND REPLACE WITH 6" OF CRUSHED STONE (FLUSH WITH ROADWAY PAVEMENT)

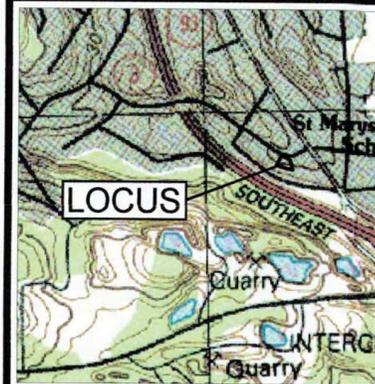
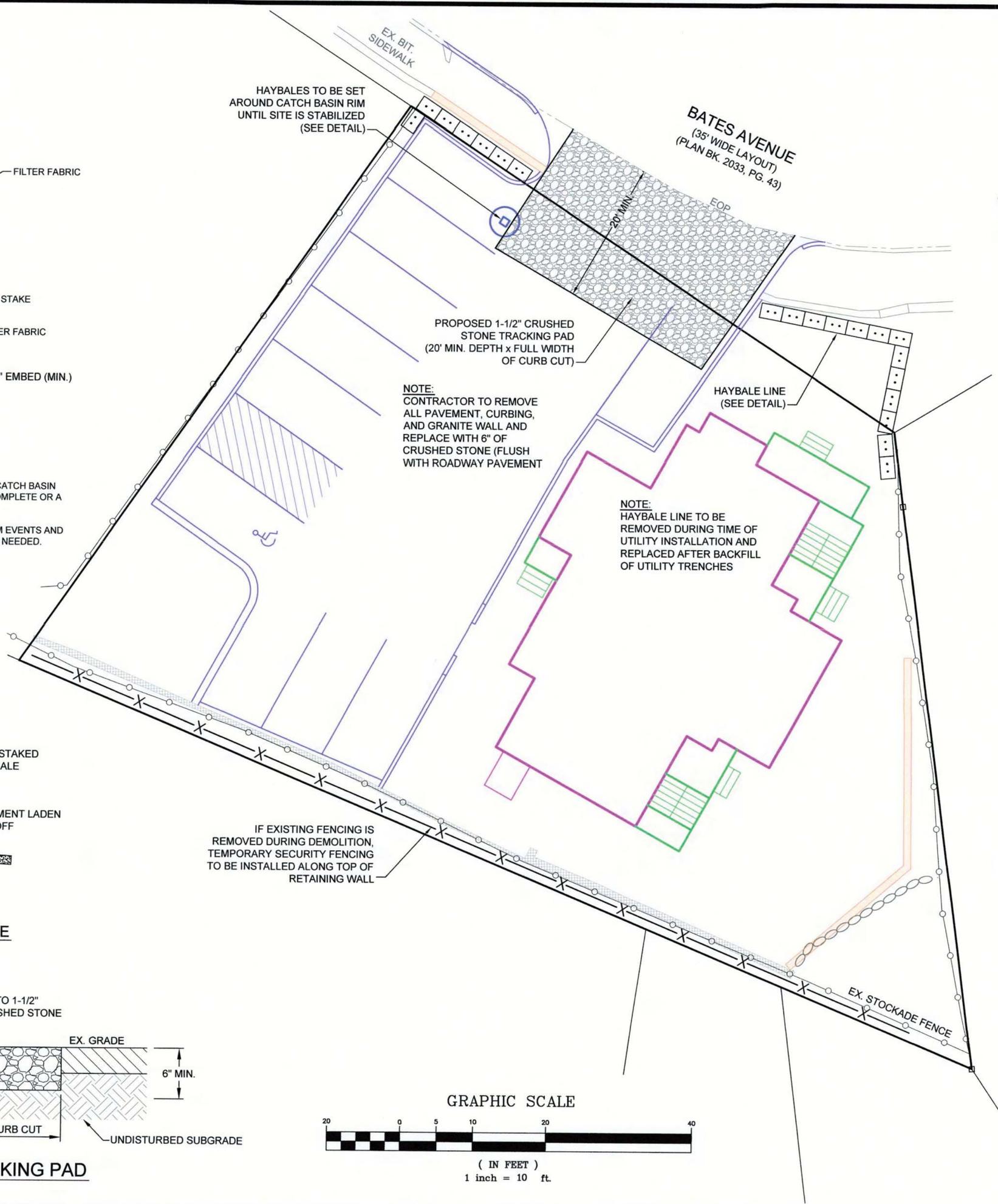
NOTE: HAYBALE LINE TO BE REMOVED DURING TIME OF UTILITY INSTALLATION AND REPLACED AFTER BACKFILL OF UTILITY TRENCHES

IF EXISTING FENCING IS REMOVED DURING DEMOLITION, TEMPORARY SECURITY FENCING TO BE INSTALLED ALONG TOP OF RETAINING WALL

GRAPHIC SCALE



( IN FEET )  
1 inch = 10 ft.



LOCUS MAP  
SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE 5/2/16

**PROPOSED REDEVELOPMENT SITE PLAN AT 18 BATES AVENUE IN QUINCY, MASSACHUSETTS (NORFOLK COUNTY) EROSION CONTROL PLAN**

REVISIONS:

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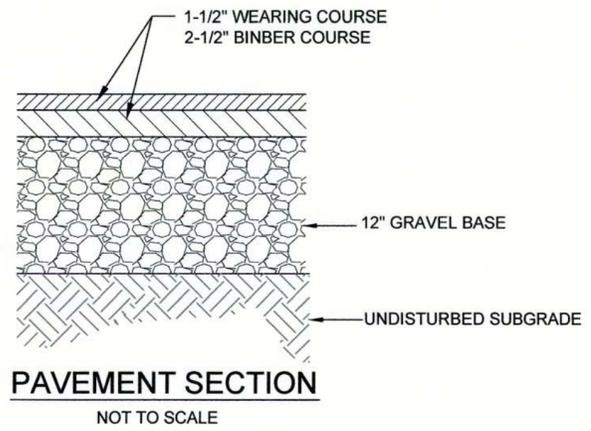
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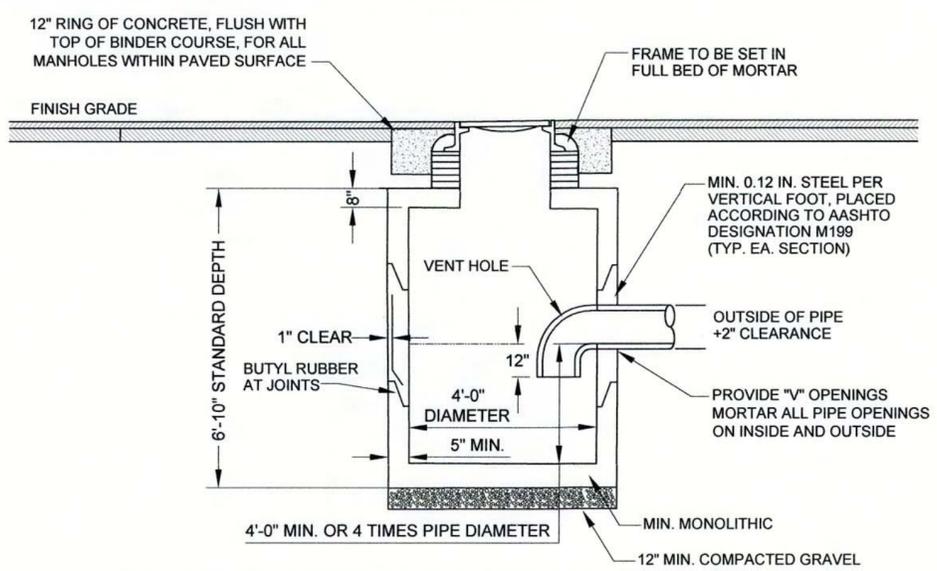
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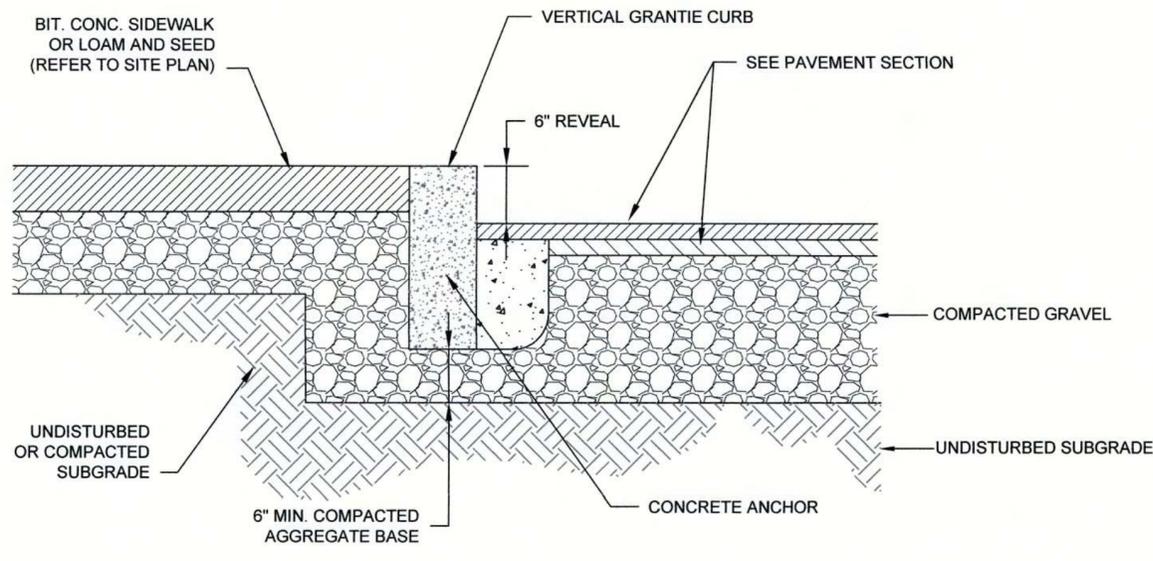
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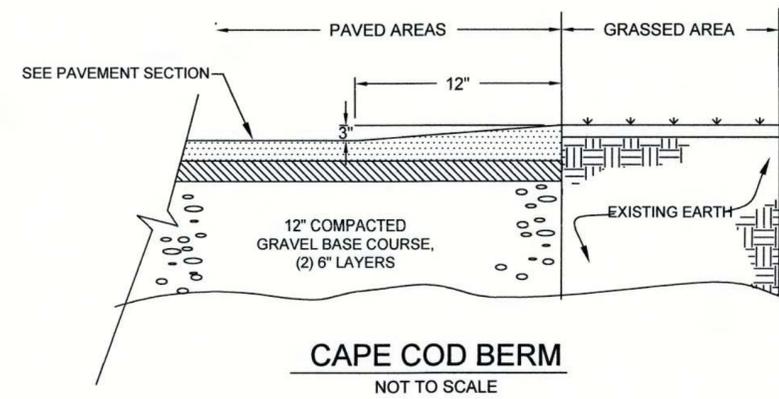
**PAVEMENT SECTION**  
NOT TO SCALE



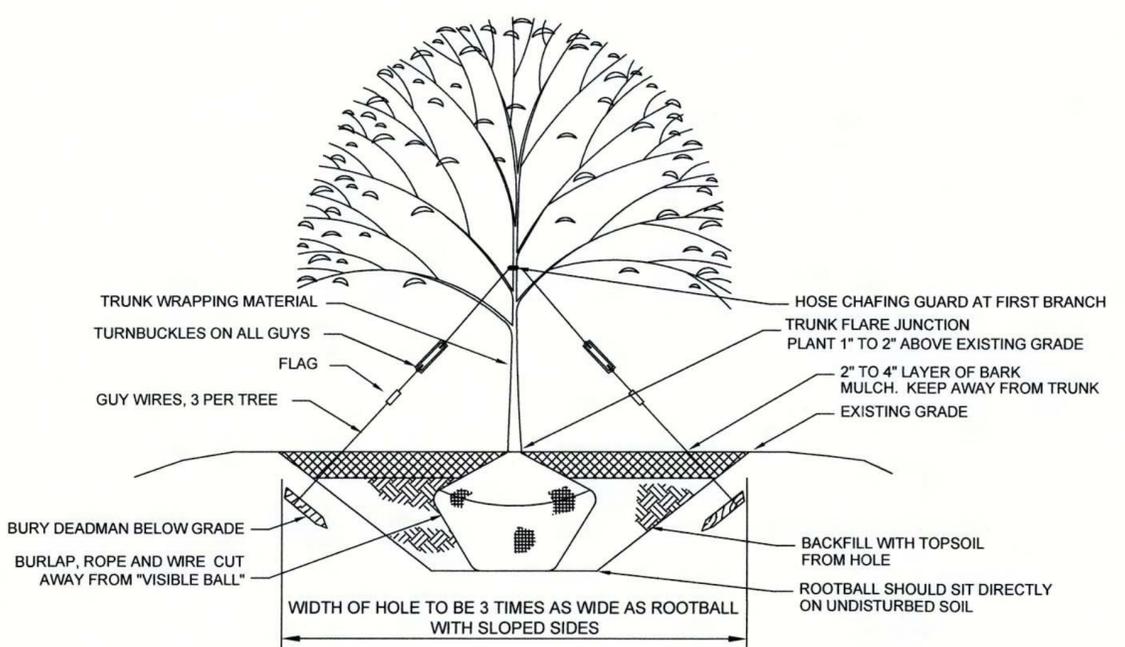
**PRECAST CONCRETE CATCH BASIN (H-20)**  
NOT TO SCALE



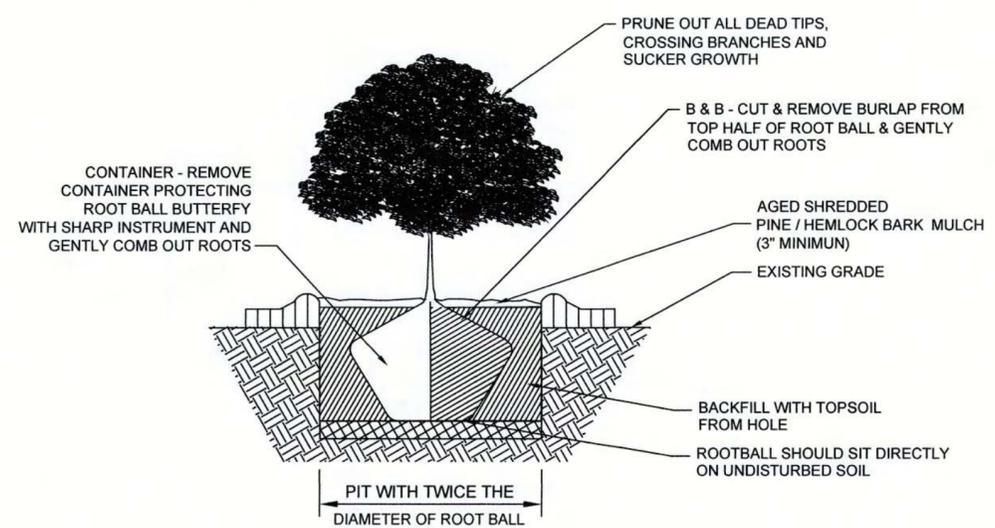
**VERTICAL GRANITE CURB**  
NOT TO SCALE



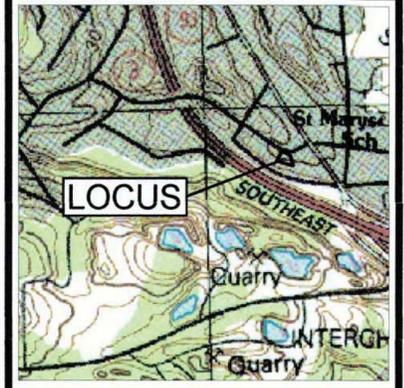
**CAPE COD BERM**  
NOT TO SCALE



**TREE PLANTING**  
NOT TO SCALE



**SHRUB PLANTING**  
NOT TO SCALE



**LOCUS MAP**  
SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE 5/2/16

**PROPOSED REDEVELOPMENT SITE PLAN**  
AT  
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(NORFOLK COUNTY)  
**DETAIL SHEET 1**

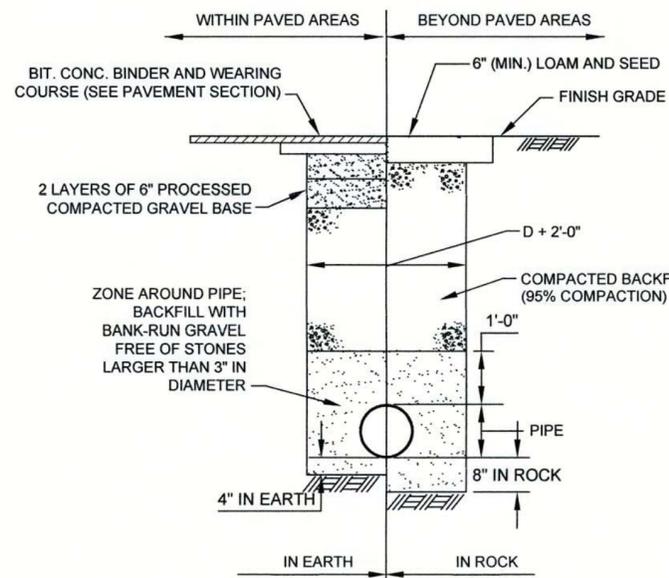
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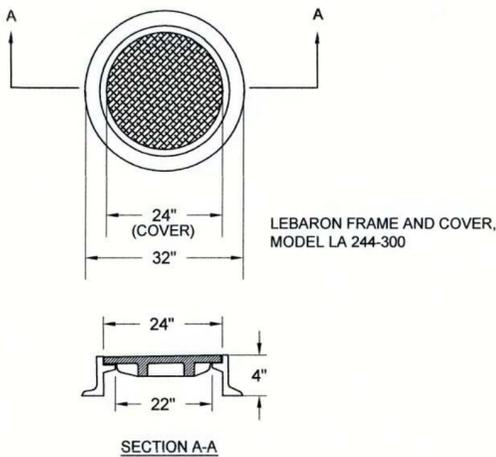
PREPARED FOR:  
**NAZIH B. ELKALLASSI, TR.**  
BATES AVE. REALTY TRUST  
20 TOWER TERRACE  
WAREHAM, MA 02571

PREPARED BY:  
**JC ENGINEERING, INC.**  
2854 CRANBERRY HIGHWAY  
EAST WAREHAM, MA 02538  
508-273-0377

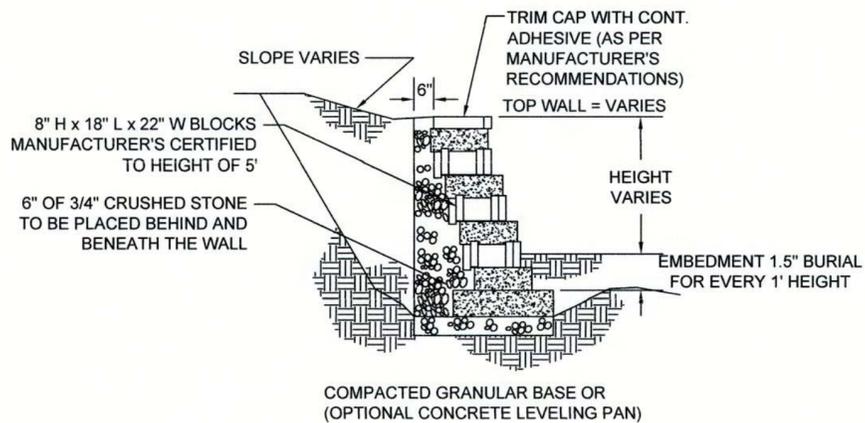
SCALE:	AS NOTED
DATE:	FEBRUARY 26, 2016
FIELD:	JO/BM
CALC./DESIGN:	BMB
DRAWN:	BMB
CHECK:	JLC
JOB NO:	2448



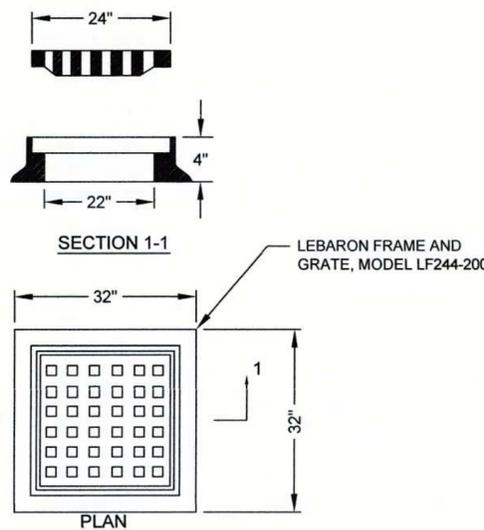
**TRENCH DETAIL**  
NOT TO SCALE



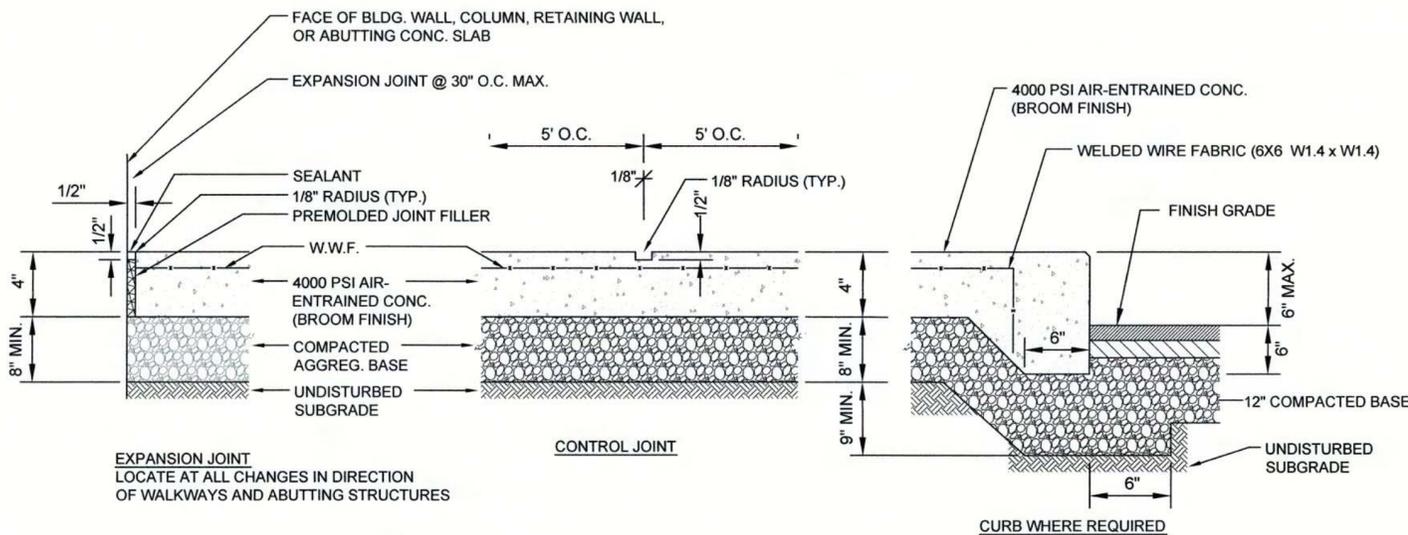
**MANHOLE FRAME & COVER (H-20)**  
NOT TO SCALE



**KEYSTONE® RETAINING WALL**  
NOT TO SCALE



**CATCH BASIN FRAME & GRATE (H-20)**  
NOT TO SCALE



**CONCRETE SIDEWALK**  
NOT TO SCALE

**CONSTRUCTION PERIOD POLLUTION PREVENTION**

THE CONTRACTOR MUST INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND DETAILS PRIOR TO STARTING ANY OTHER WORK ON THE SITE CONSTRUCTION. EROSION CONTROL MUST BE INSTALLED AT EVERY INLET STRUCTURE AND INLET SWALE AND MAINTAINED FOR THE DURATION OF THE PROJECT. SILT FENCE AND/OR HAYBALES AS SHOWN ON PLANS SHALL BE INSPECTED, REPAIRED AND/OR MAINTAINED BY THE CONTRACTOR WEEKLY AND WITHIN 12 HOURS OF EACH STORM EVENT.

SEDIMENT SHALL BE CONTAINED WITHIN THE CONSTRUCTION SITE AND SHALL BE REMOVED WHEN THEY REACH A DEPTH OF 6 INCHES.

STABILIZE SLOPES STEEPER THAN 3:1 (HORIZONTAL TO VERTICAL) WITH SEED, SECURED GEOTEXTILE FABRIC, OR ROCK RIP-RAP AS REQUIRED TO PREVENT EROSION DURING CONSTRUCTION.

CLEAN OUT CATCH BASINS, DRAIN MANHOLES AND STORM DRAIN PIPES AFTER COMPLETION OF CONSTRUCTION.

NO STORMWATER SHALL BE ALLOWED TO ENTER THE STRUCTURES UNTIL ALL CATCHBASINS, DRAIN MANHOLES AND STORM DRAIN PIPES HAVE BEEN CLEANED, THE BINDER COURSE IS INSTALLED AND ALL DISTURBED AREAS ARE STABILIZED.

IF THE BINDER COURSE IS IN PLACE FOR MORE THAN 3 MONTHS WITHOUT A WEARING COURSE, THE CONTRACTOR SHALL SET THE RIM ELEVATION OF THE DRAINAGE STRUCTURES LEVEL WITH THE BINDER COURSE. THE RIM ELEVATIONS SHALL BE RESET JUST PRIOR TO PLACING THE WEARING COURSE.

THE CONTRACTOR IS RESPONSIBLE FOR ALL STORMWATER BEST MANAGEMENT PRACTICES BEING IN PLACE TO CONTAIN STORMWATER IN THE EVENT THAT DRAINAGE STRUCTURES ARE NOT AT PAVEMENT GRADE DURING A STORM EVENT, AND ALL CLEANUP IN THE EVENT THAT SUCH MEASURES FAIL DURING SAID STORM EVENT.

TEMPORARY SURFACES SHOULD BE STABILIZED WITH AS SOON AS ACTIVE GRADING IS SUSPENDED. TEMPORARY MEASURES INCLUDE SEEDING WITH GRASS, JUTE NETTING, OR STRAW MULCH. PERMANENT STABILIZATION SHOULD BE ESTABLISHED EARLY IN THE FALL TO ALLOW GOOD COVER BEFORE COLD WEATHER COMES.

A RIP-RAP CONSTRUCTION ENTRANCE CONSISTING OF 1.5\"/>

UPON ESTABLISHMENT OF PERMANENT VEGETATION OVER DISTURBED AREAS, REMOVE AND DISPOSE OF HAYBALES, STAKES AND SILT FENCE.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND SUPPLEMENT THE SPECIFIED SEDIMENTATION CONTROLS. AS NECESSARY TO PREVENT SEDIMENTATION OF OFF-SITE AREAS AND/OR ANY REGULATED RESOURCE AREAS. FAILURE BY THE CONTRACTOR TO CONTROL EROSION, POLLUTION AND/OR SILTATION SHALL BE CAUSE FOR THE OWNER TO EMPLOY OUTSIDE ASSISTANCE OR TO USE HIS OWN FORCES TO PROVIDE THE NECESSARY CORRECTIVE MEASURES, THE COST OF SUCH ASSISTANCE PLUS PROJECT ENGINEERING COSTS WILL BE THE CONTRACTOR'S RESPONSIBILITY.

HAYBALES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:  
TOE OF SLOPE OF EMBANKMENT CONSTRUCTION, TOE OF TEMPORARY EARTHWORK STOCKPILES.

**STORMWATER OPERATIONS AND MAINTENANCE PLAN**

**OWNER AND RESPONSIBLE PARTY:**  
NAZIH B. ELKALLASSI, TR.  
BATES AVE. REALTY TRUST  
20 TOWER TERRACE  
WAREHAM, MA 02571

**ILLICIT DISCHARGES**

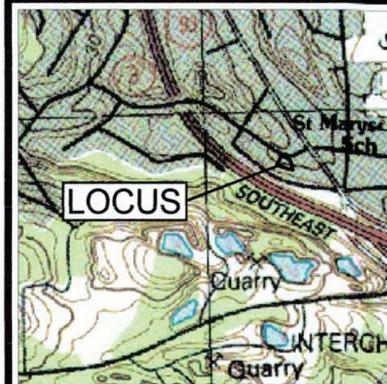
ALL ILLICIT DISCHARGES TO THE STORMWATER MANAGEMENT SYSTEM ARE PROHIBITED.

**DEEP SUMP CATCH BASINS**

CATCH BASIN SHALL BE INSPECTED BY THE OWNER/OPERATOR ON A QUARTERLY BASIS OR AFTER A MAJOR STORM EVENT. CATCH BASIN SUMP WILL BE CLEANED ANNUALLY DURING THE EARLY SPRING OR WHEN THE SEDIMENT RISES TO WITHIN HALF THE AVAILABLE SUMP HEIGHT OF THE CATCH BASIN, WHICHEVER COMES FIRST.

**INFILTRATION SYSTEMS**

ONCE THE SYSTEM IS OPERATIONAL, INSPECTIONS OF THE LEACHING STRUCTURES SHOULD OCCUR AFTER EVERY MAJOR STORM EVENT FOR THE FIRST FEW MONTHS. AFTER THE SYSTEM IS IN OPERATION, INSPECTIONS SHOULD BE EVERY SIX MONTHS. SPECIAL ATTENTION SHOULD BE DIRECTED TOWARDS THE DEPTH OF SEDIMENT IN THE LEACHING STRUCTURES. THERE SHOULD BE NO ACCUMULATION OF SEDIMENT WITHIN THE LEACHING STRUCTURES. ALL SEDIMENT SHALL BE REMOVED IF ANY HAS ACCUMULATED.



**LOCUS MAP**  
SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE 5/2/16

**PROPOSED REDEVELOPMENT SITE PLAN**  
AT  
**18 BATES AVENUE**  
IN  
**QUINCY, MASSACHUSETTS**  
(NORFOLK COUNTY)  
**DETAIL SHEET 2**

**REVISIONS:**

No.	DATE	DESC.
1	5/2/16	REVIEW COMMENTS

PREPARED FOR:

NAZIH B. ELKALLASSI, TR.  
BATES AVE. REALTY TRUST  
20 TOWER TERRACE  
WAREHAM, MA 02571

PREPARED BY:

JC ENGINEERING, INC.  
2854 CRANBERRY HIGHWAY  
EAST WAREHAM, MA 02538  
508-273-0377

SCALE: AS NOTED

DATE: FEBRUARY 26, 2016

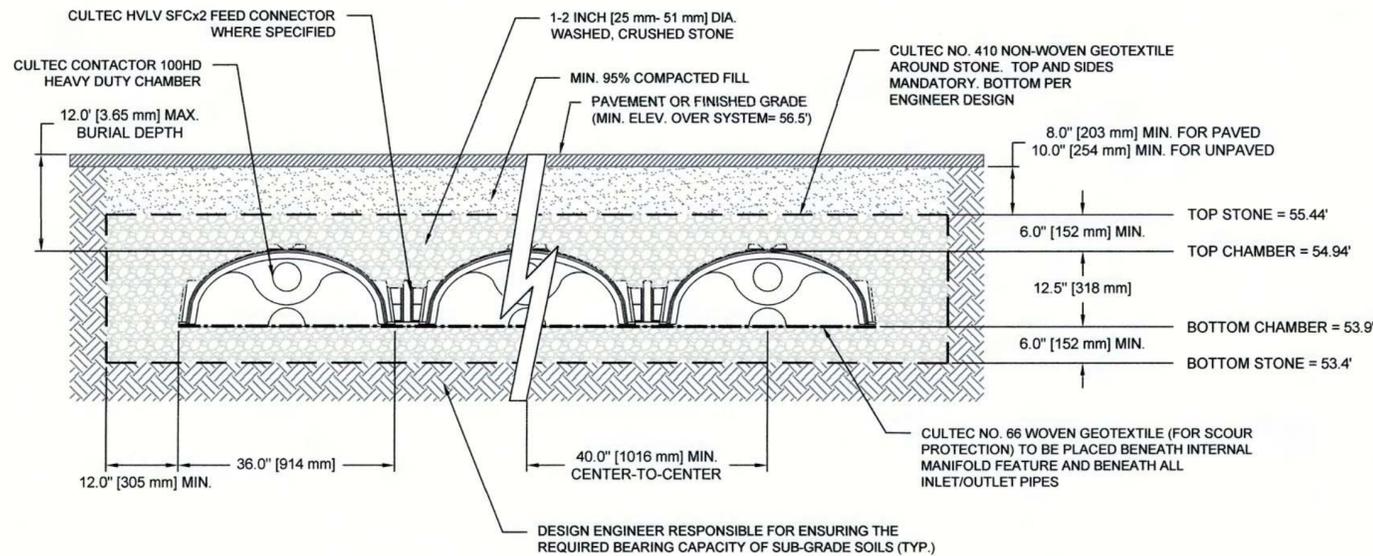
FIELD: JO/BM

CALC./DESIGN: BMB

DRAWN: BMB

CHECK: JLC

JOB NO: 2448

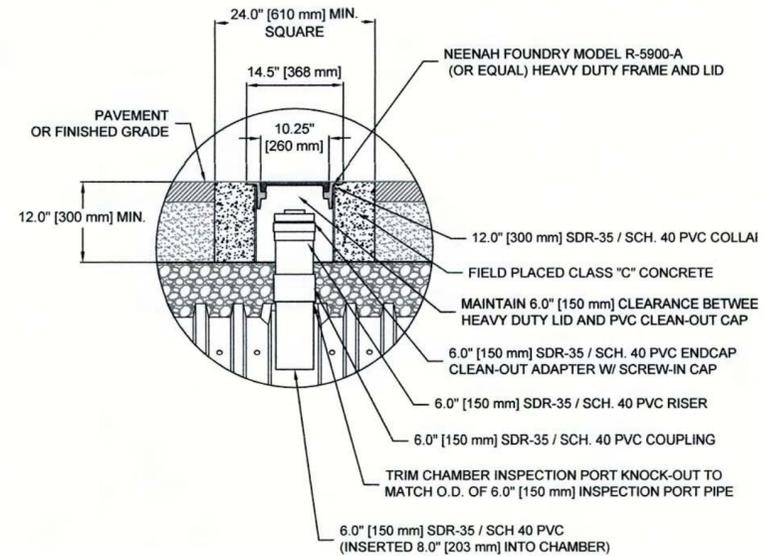


**GENERAL NOTES**  
 CONTACTOR 100HD BY CULTEC, INC. OF BROOKFIELD, CT.  
 STORAGE PROVIDED = 3.84 CF/FT [0.82 M<sup>3</sup>/3] PER DESIGN UNIT.  
 REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.  
 MAXIMUM ALLOWED COVER ON TOP OF UNIT SHALL BE 12.0' [3.66 m] THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS

WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS ALL CONTACTOR 100HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER. ALL CONTACTOR 100 CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

**CULTEC CONTACTOR 100HD HEAVY DUTY TYPICAL CROSS SECTION**

NOT TO SCALE



**INSPECTION PORT - ZOOM DETAIL**

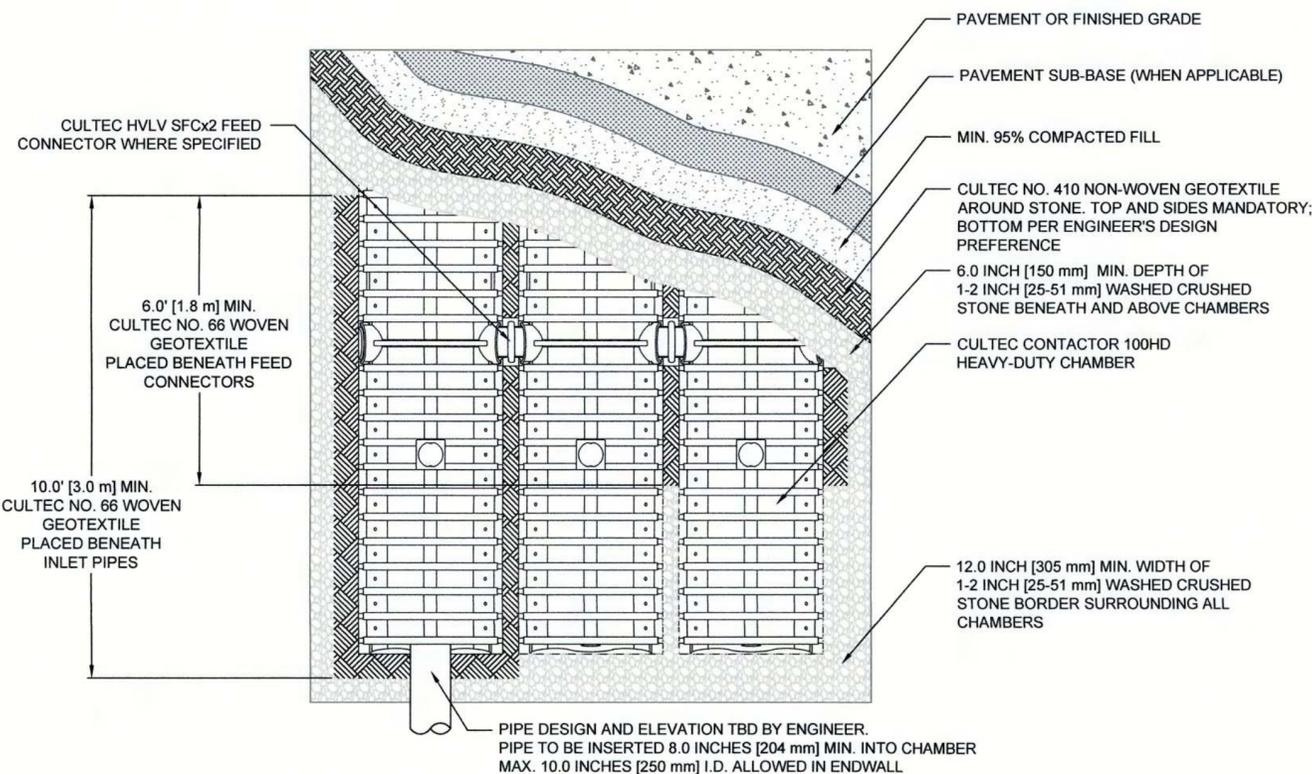
NOT TO SCALE

**CULTEC CONTACTOR® 100HD CHAMBER PRODUCT SPECIFICATIONS**

**GENERAL**  
 CULTEC CONTACTOR 100HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

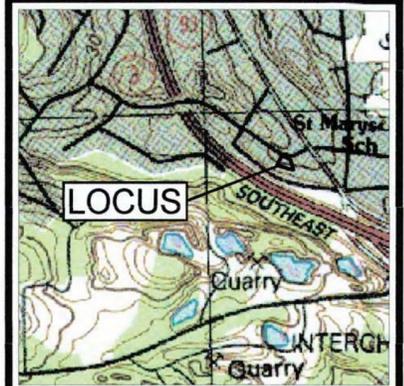
**CHAMBER PARAMETERS**

1. THE CHAMBERS WILL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT (203-775-4416 OR 1-800-428-5832).
2. THE CHAMBER WILL BE VACUUM THERMOFORMED OF BLACK POLYETHYLENE.
3. THE CHAMBER WILL BE ARCHED IN SHAPE.
4. THE CHAMBER WILL BE OPEN-BOTTOMED.
5. THE CHAMBER WILL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS OR SEPARATE END WALLS.
6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC CONTACTOR 100HD SHALL BE 12.5 INCHES (318 mm) TALL, 36 INCHES (914 mm) WIDE AND 8 FEET (2.44 m) LONG. THE INSTALLED LENGTH OF A JOINED CONTACTOR 100HD SHALL BE 7.5 FEET (2.29 m).
7. MAXIMUM INLET OPENING ON THE CHAMBER END WALL IS 10 INCHES (250 mm).
8. THE CHAMBER WILL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® SFCX2 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. THE NOMINAL INSIDE DIMENSIONS OF EACH SIDE PORTAL WILL BE 5.75 INCHES (146 mm) HIGH BY 7.5 INCHES (191 mm) WIDE. MAXIMUM ALLOWABLE OUTER DIAMETER (O.D.) PIPE SIZE IN THE SIDE PORTAL IS 6.9 INCHES (175 mm).
9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV SFCX2 FEED CONNECTOR SHALL BE 7.6 INCHES (194 mm) TALL, 12 INCHES (305 mm) WIDE AND 19.7 INCHES (500 mm) LONG.
10. THE NOMINAL STORAGE VOLUME OF THE CONTACTOR 100HD CHAMBER WILL BE 1.866 FT<sup>3</sup> / FT (0.173 m<sup>3</sup> / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED CONTACTOR 100HD SHALL BE 13.995 FT<sup>3</sup> / UNIT (0.396 m<sup>3</sup> / UNIT) - WITHOUT STONE.
11. THE NOMINAL STORAGE VOLUME OF THE HVLV SFCX2 FEED CONNECTOR WILL BE 0.294 FT<sup>3</sup> / FT (0.027 m<sup>3</sup> / m) - WITHOUT STONE.
12. THE CONTACTOR 100HD CHAMBER WILL HAVE FIFTY-SIX DISCHARGE HOLES BORED INTO THE SIDE WALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF WATER.
13. THE CONTACTOR 100HD CHAMBER SHALL HAVE 16 CORRUGATIONS.
14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, WILL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS UNIT.
15. THE CONTACTOR 100RHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS.
16. THE CONTACTOR 100EHD MIDDLE/END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL END WALL AND ONE FULLY OPEN END WALL AND HAVING NO SEPARATE END PLATES OR END WALLS.
17. THE HVLV SFCX2 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE CONTACTOR 100HD AND ACT AS CROSS FEED CONNECTIONS.
18. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS.
19. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
20. HEAVY DUTY UNITS ARE DESIGNATED BY A COLORED STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER.
21. THE CHAMBER WILL HAVE A RAISED INTEGRAL CAP LOCATED ON TOP OF THE ARCH IN THE CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR CLEAN-OUT.
22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
23. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.
24. MAXIMUM ALLOWED COVER ON TOP OF UNIT SHALL BE 12 FEET [3.66 m]



**CULTEC CONTACTOR 100HD HEAVY DUTY PLAN VIEW**

NOT TO SCALE



**LOCUS MAP**  
 SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE

**PROPOSED REDEVELOPMENT SITE PLAN**  
 AT  
**18 BATES AVENUE**  
 IN  
**QUINCY, MASSACHUSETTS**  
 (NORFOLK COUNTY)  
**DETAIL SHEET 3**

**REVISIONS:**

No.	DATE	DESC.
1	5/2/16	REVIEW COMMENTS

PREPARED FOR:  
**NAZIH B. ELKALLASSI, TR.**  
 BATES AVE. REALTY TRUST  
 20 TOWER TERRACE  
 WAREHAM, MA 02571

PREPARED BY:  
**JC ENGINEERING, INC.**  
 2854 CRANBERRY HIGHWAY  
 EAST WAREHAM, MA 02538  
 508-273-0377

SCALE: AS NOTED

DATE: FEBRUARY 26, 2016

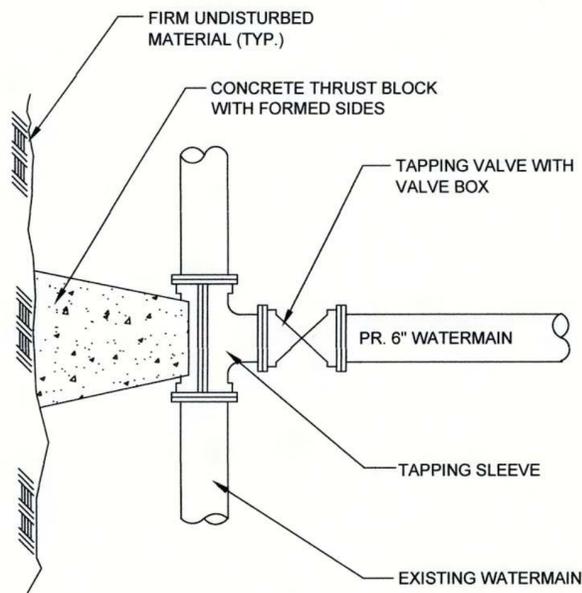
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CALC./DESIGN: BMB

DRAWN: BMB

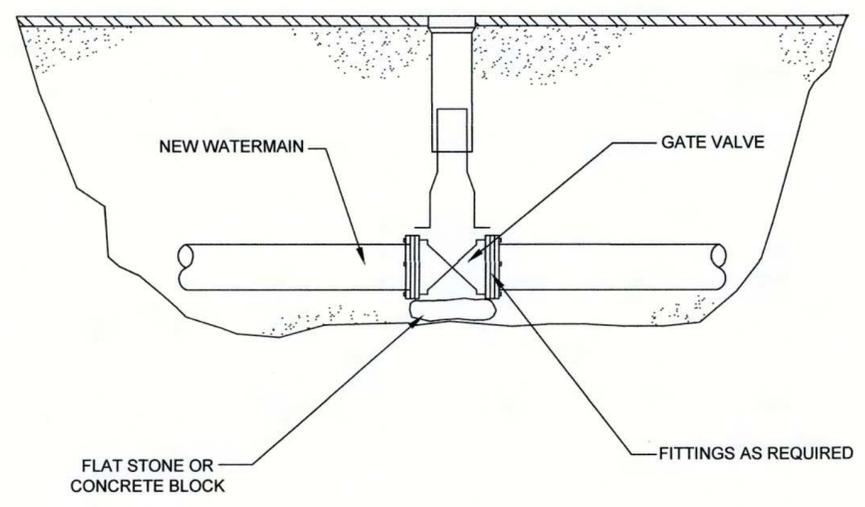
CHECK: JLC

JOB NO: 2448

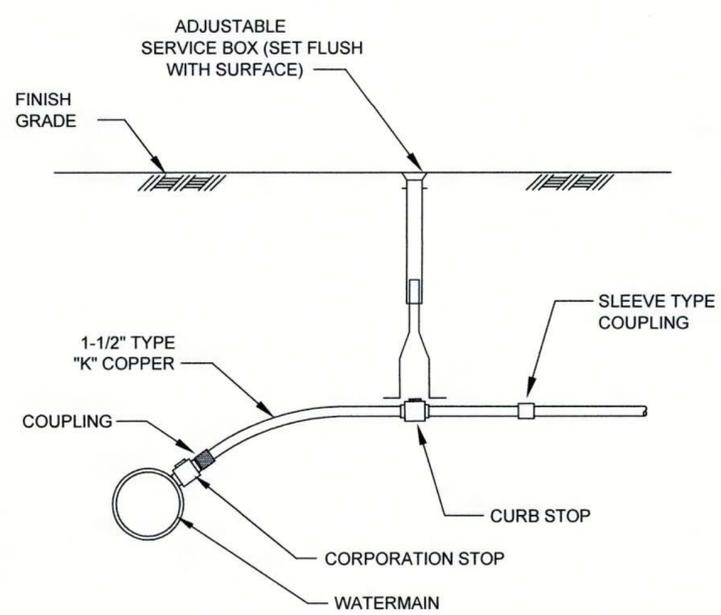


NOTE: CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING MAIN.

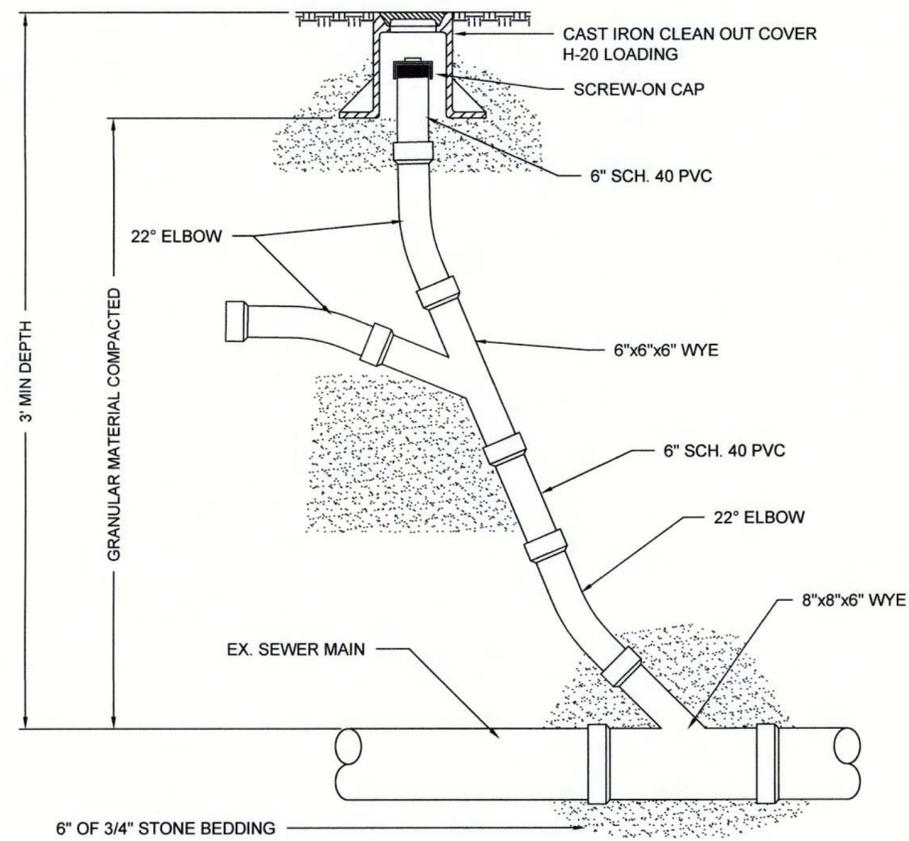
**TAPPING SLEEVE & VALVE DETAIL**  
NOT TO SCALE



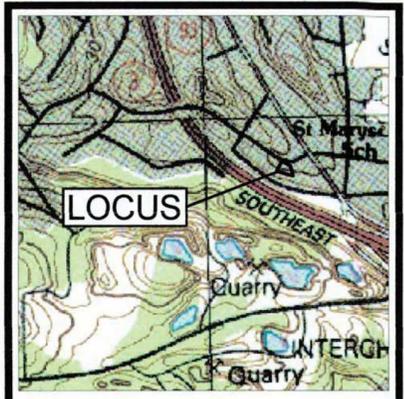
**TYPICAL VALVE INSTALLATION DETAIL**  
NOT TO SCALE



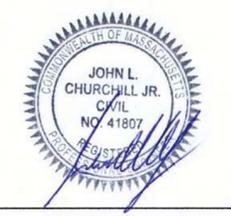
**WATER SERVICE CONNECTION**  
NOT TO SCALE



**SEWER CLEANOUT**  
NOT TO SCALE



**LOCUS MAP**  
SCALE 1" = 1000'



JOHN L. CHURCHILL, JR., P.E. DATE 5/2/16

**PROPOSED REDEVELOPMENT SITE PLAN**  
AT  
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**DETAIL SHEET 4**

**REVISIONS:**

No.	DATE	DESC.
1	5/2/16	REVIEW COMMENTS

PREPARED FOR:  
**NAZIH B. ELKALLASSI, TR.**  
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