

SITE DEVELOPMENT PLANS

FOR

15 PLEASANT STREET CONNECTOR FRAMINGHAM AND SOUTHBOROUGH, MA

APPROVED:
TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE: _____

APPROVED:
TOWN OF FRAMINGHAM PLANNING BOARD

APPROVED DATE: 2/20/2014

JULY 26, 2013

SHEET INDEX			
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION REVISIONS
1	COVER SHEET	12/20/13	
2	VICINITY MAP	12/20/13	
3	EXISTING CONDITIONS PLAN	12/20/13	
4	LAYOUT PLAN	12/20/13	
5	GRADING PLAN	12/20/13	
6	SEWER, DRAINAGE & UTILITY PLAN	12/20/13	
7	DETAIL SHEET	12/20/13	
8	DETAIL SHEET	12/20/13	
9	DETAIL SHEET	12/20/13	

OWNER/APPLICANT:

NREF III PLEASANT LLC
C/O NORMANDY REAL ESTATE PARTNERS
99 SUMMER STREET
BOSTON, MA 02110

ARCHITECT

MARGULIES PERRUZZI ARCHITECTS
308 CONGRESS STREET
BOSTON, MA 02210

CIVIL ENGINEERS:

KELLY ENGINEERING GROUP, INC.
0 CAMPANELLI DRIVE
BRAintree, MA. 02184

TRAFFIC CONSULTANT

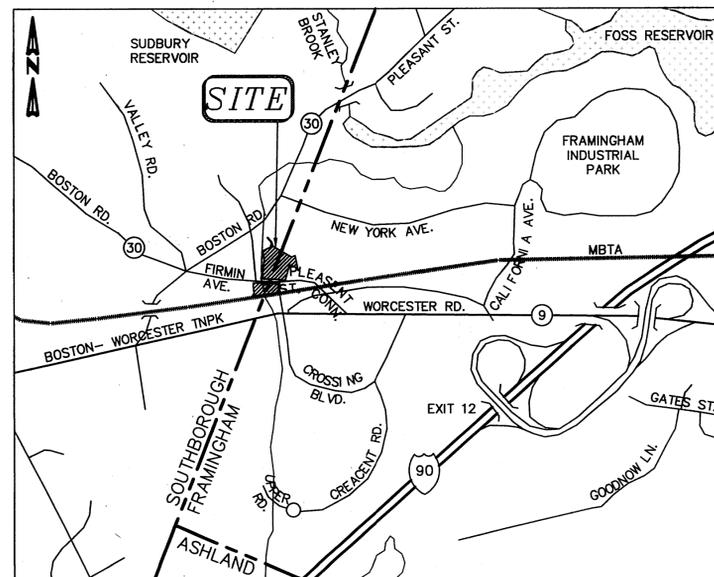
MDM TRANSPORTATION CONSULTANTS
28 LORD ROAD, SUITE 280
MARLBOROUGH, MA. 01752

LANDSCAPE ARCHITECT

HAWK DESIGN
39 PLEASANT STREET
SAGAMORE, MA. 02561

ATTORNEY:

BOWDITCH & DEWEY
175 CROSSING BLVD. STE. 500
FRAMINGHAM, MA 01702



FRAMINGHAM PARCEL ID 463.0-009-00750 & 462.0-0010-0001.0
SOUTHBOROUGH PARCEL ID MAP 46 LOT 22 & MAP 48 LOT 27

LOCATION MAP

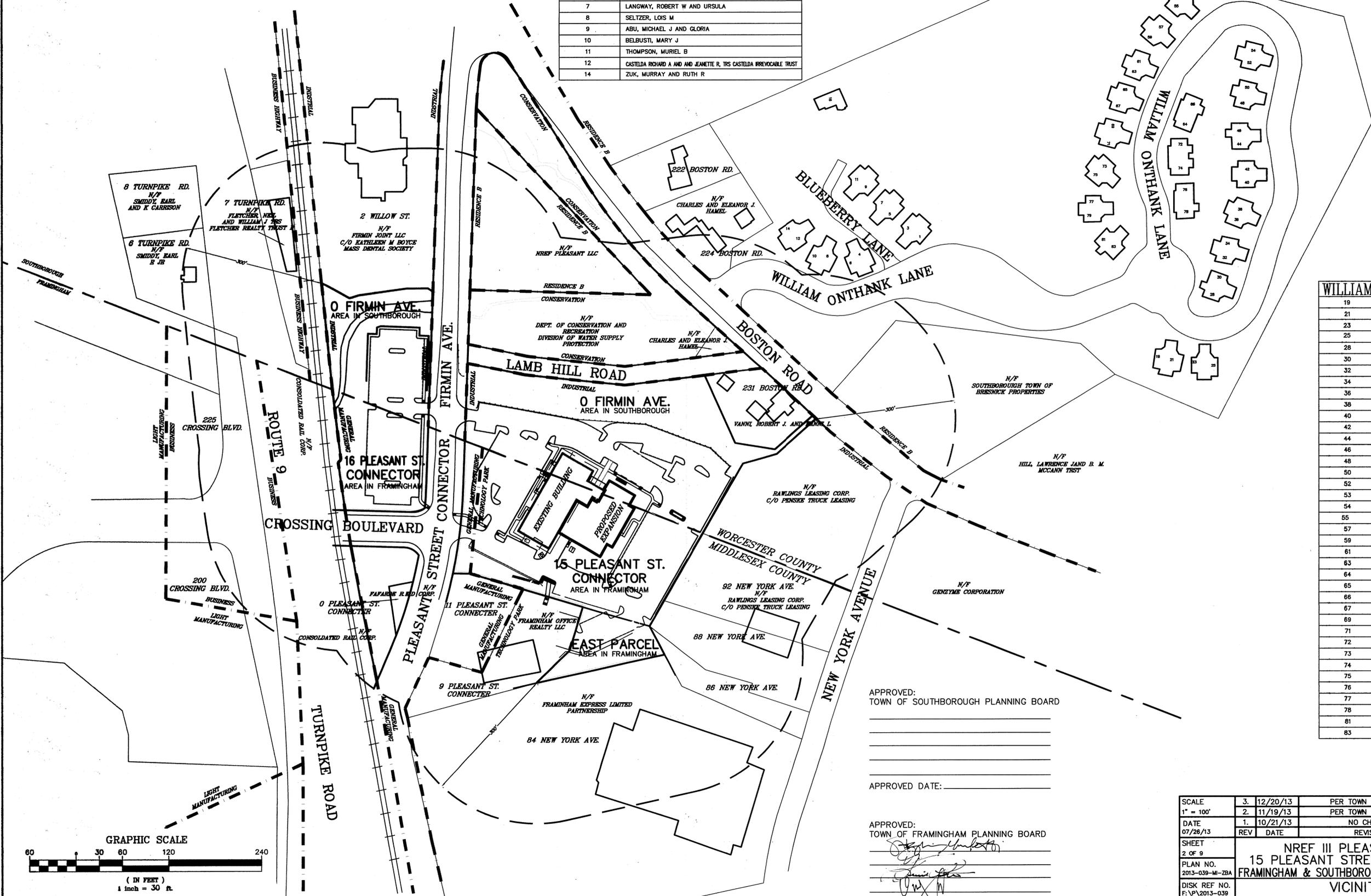
	SCALE	DISK REF. NO.	15 PLEASANT STREET CONNECTOR FRAMINGHAM AND SOUTHBOROUGH, MA KELLY ENGINEERING GROUP CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE BRAintree MA • 02184 PHONE: 781 843 4333 FAX: 781 843 0028	SHEET NO.
	DATE	DRAWN BY		1
	SHEET	CHKD BY		
	PLAN NO.	APPD BY		

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BLUEBERRY LANE ABUTTERS

1	NADEAU, STEPHEN AND THOMAS TRS
3	BLECHER, JACOB B AND SHERRY E TRS
4	DABOUL-HANNA, EMMA ABU
5	KEVILLE, EILEEN M TRUSTEE
6	BRODERICK, MARY
7	LANGWAY, ROBERT W AND URSULA
8	SELTZER, LOIS M
9	ABU, MICHAEL J AND GLORIA
10	BELBUSTI, MARY J
11	THOMPSON, MURIEL B
12	CASTEDA RICHARD A AND ANNETTE R, TRS CASTEDA IRREVOCABLE TRUST
14	ZUK, MURRAY AND RUTH R



WILLIAM ONTHANK LANE ABUTTERS

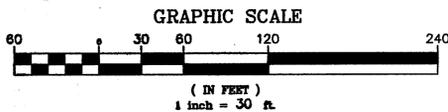
19	RATTIET, SHELLEY L
21	KROBBER, GEORGE H III AND CAROLY E
23	PATCHELL, MARK E. TRUSTEE AND JOHN M. PATCHELL IRREVOCABLE TRUST
25	MORAN, MARY F. C/O RICCIARDI, CAROL A. AND VICTOR
28	COLLATA, DOROTHY A. AND PETER J.
30	SCOTT, W. MARIE
32	BORGESON, GERTRUDE C.
34	VANGEL, JOANNE C. TRUSTEE
36	KELLY, PATRICIA
38	MALLIN, WILLIAM AND BEVERLY JTRS.
40	FERRARI, ARNOLD E.
42	MURPHY, PHILLIP AND CAROLE H.
44	ZARRILLI, MARY ELISE, ZARRILLI IRREVOCABLE TRUST 2001
46	HOGAN, RANDALL J.
48	HAUGHEY, CARLENE A.
50	MCCLOSKEY, JACK AND ETSUJKO K.
52	ROSE, AL AND BEVERLY
53	RUSKOWSKI, ALICE F.
54	MCDANIEL, DONNA L. TRUSTEE, DONNA MCDANIEL TRUST
55	ROBERT, JOAN TRUSTEEM, JOAN L. ROBERTS 2006 REVOC TRUST
57	AGOSTINELLI, DOLORES
59	FOLEY, ANN D.
61	CHANGE, RITA TRUSTEE, CHANGE NOMINEE TRUST
63	SPECHT, ALVIN AND CHERYLE E. HEIDEBRECHT
64	CANTOR, CAROL G.
65	KEY, ELDA B. TRUSTEE
66	BEYLIN, SIMON AND POLINA
67	BLOCH, RUTH W., C/OBLOCH, RUTH AND DEBRA J. ELLINGWOOD
69	ANGHINETTI, DAVID P.
71	CAPIZZI, SALVATORE AND BASLIA TRS, SABA 2 REALTY ESTATE TRUST
72	READY, JOAN M. TRS, JOAN M. READY IRREVOCABLE TRUST
73	LYNCH, JOHN AND IRENE
74	FERRERA, BARBARA AND ANGELO E., C/O TOBIN, ELLEN AND DAVID FERRERA TRS
75	KEAVENY, ROBERT. TRUSTEE
76	INGHAM, ANN M.
77	BAYON-PINSKY, JOAN TRUSTEEM, BAYON-PINSKEY REALTY TRUST
78	ALEA, JOSE M. TRUSTEE, MARIA JALEA HOME TRUST
81	WALKER, SALLY J.
83	BONFIGLIO, MARIE L.

APPROVED:
TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE: _____

APPROVED:
TOWN OF FRAMINGHAM PLANNING BOARD

APPROVED DATE: 2/20/2014



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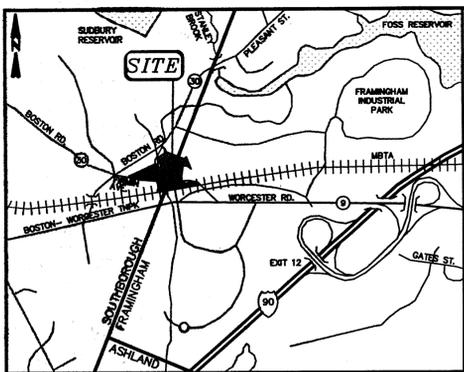
SCALE	3. 12/20/13	PER TOWN COMMENTS	
1" = 100'	2. 11/19/13	PER TOWN COMMENTS	
DATE	1. 10/21/13	NO CHANGE	SMH
07/28/13	REV	DATE	REVISION
SHEET	2 OF 9		
PLAN NO.	2013-039-M-ZBA		
DISK REF NO.	F:\P\2013-039		
DRAWN BY	GSH		
CHKD BY	DAM		
APPD BY	DNK		

NREF III PLEASANT LLC
15 PLEASANT STREET CONNECTOR
FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS
VICINITY MAP

220.14

SHEET NO. **2**

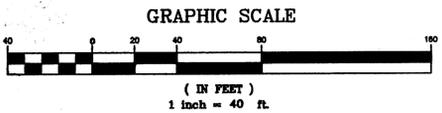
KELLY ENGINEERING GROUP, INC.
 CIVIL ENGINEERING CONSULTANTS
 8 CAMPANELLI DRIVE • BRAINTREE MA • 02184
 PHONE: 781 843 4333 FAX: 781 843 0028



LOCUS
(NOT TO SCALE)

- NOTES:**
- 1.) UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND BASED UPON FIELD LOCATIONS OF VISIBLE SURFACE FEATURES COMBINED WITH PLANS OF RECORD.
 - 2.) BOUNDARY INFORMATION AND TOPOGRAPHIC INFORMATION ARE COMPILED FROM RECORD INFORMATION, RECORD PLANS, AND INSTRUMENT SURVEY.
 - 3.) ELEVATIONS SHOWN HEREBY ARE BASED ON NGVD29.
 - 4.) WETLAND LINE SHOWN WAS DELINEATED BY SANFORD ECOLOGICAL SERVICES IN JANUARY 2004 AND FIELD LOCATED BY KELLY ENGINEERING GROUP, INC.
 - 5.) WETLAND FLAGS A1 THROUGH A20 WERE REESTABLISHED IN THE FIELD ON APRIL 14, 2008 BY KELLY ENGINEERING GROUP, INC.

LEGEND	
□	CATCH BASIN
⊙	DRAIN MANHOLE
—	DRAIN LINE
—	SEWER MANHOLE
—	SEWER LINE
⊙	MONITORING WELL
⊙	POST INDICATOR VALVE
⊙	WATER SHUT OFF
⊙	HYDRANT
—	WATER LINE
⊙	ELECTRIC MANHOLE
⊙	UTILITY POLE
⊙	TRAFFIC CONTROL BOX
—	ELECTRIC LINE
⊙	TELEPHONE MANHOLE
—	TELEPHONE LINE
⊙	TRANSFORMER
⊙	LIGHT POLE
—	GAS LINE
—	SIGN
VGC	VERTICAL GRANITE CURB
BCC	BITUMINOUS CONCRETE CURB
⊙	BOUND
SES B17	WETLANDS FLAG NUMBER
SES A41	BANK OF RIVER FLAG NUMBER
---	EDGE OF WETLANDS LINE
EASEMENTS	
FP	FLAG POLE
←	LIGHT
→	FLOW DIRECTION

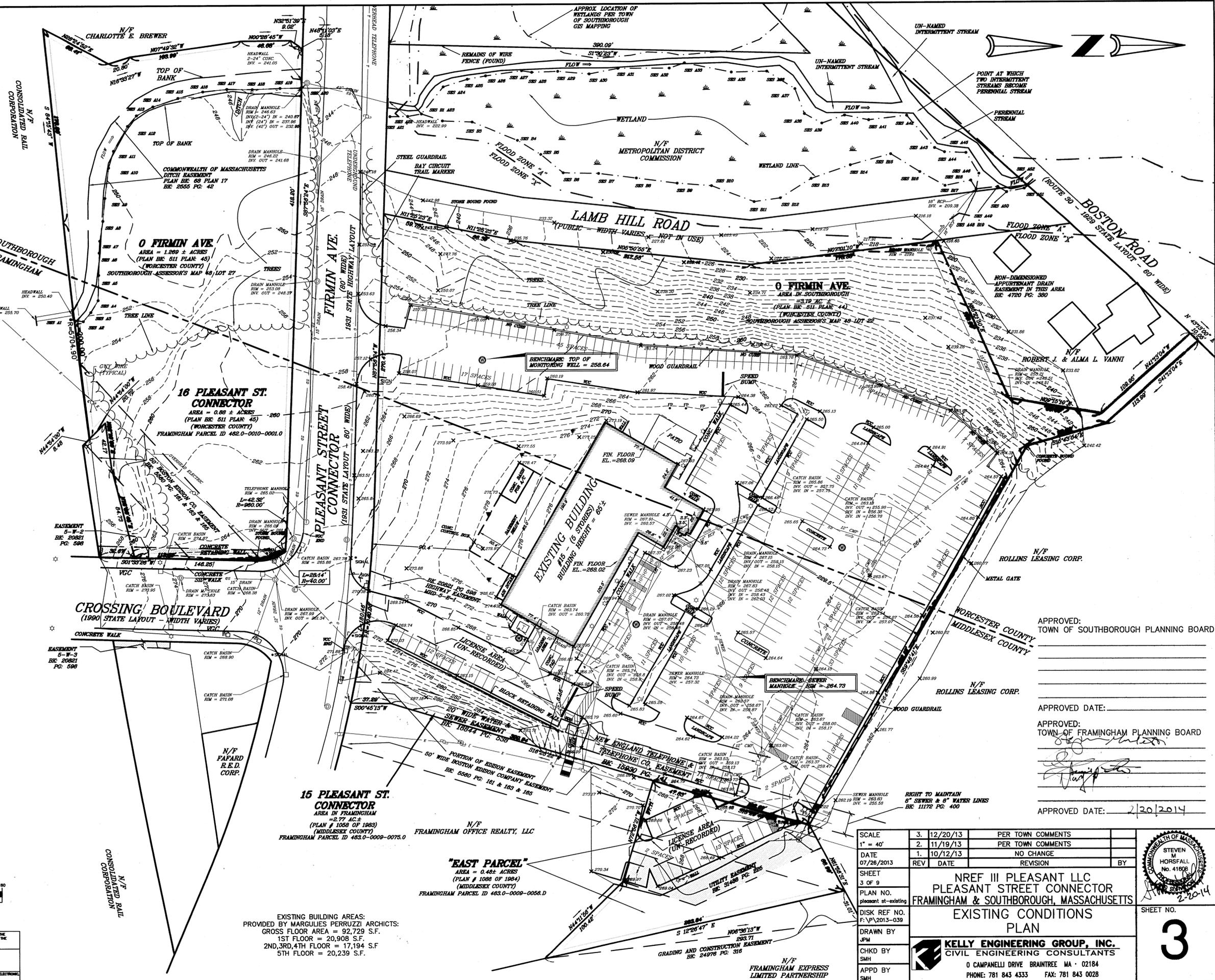


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APPROVED:
TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE:

APPROVED:
TOWN OF FRAMINGHAM PLANNING BOARD

APPROVED DATE: 2/20/2014

15 PLEASANT ST. CONNECTOR
AREA IN FRAMINGHAM
= 2.77 AC.
(PLAN # 1088 OF 1984)
(MIDDLESEX COUNTY)
FRAMINGHAM PARCEL ID 463.0-0009-0075.0

"EAST PARCEL"
AREA = 0.482 ACRES
(PLAN # 1088 OF 1984)
(MIDDLESEX COUNTY)
FRAMINGHAM PARCEL ID 463.0-0009-0056.D

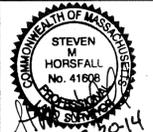
EXISTING BUILDING AREAS:
PROVIDED BY MARGULIES PERRUZZI ARCHITCTS:
GROSS FLOOR AREA = 92,729 S.F.
1ST FLOOR = 20,908 S.F.
2ND,3RD,4TH FLOOR = 17,194 S.F.
5TH FLOOR = 20,239 S.F.

SCALE	3. 12/20/13	PER TOWN COMMENTS	
1" = 40'	2. 11/19/13	PER TOWN COMMENTS	
DATE	1. 10/12/13	NO CHANGE	
07/28/2013	REV	DATE	REVISION
SHEET	3 OF 9		
PLAN NO.	pleasant-st-existing		
DISK REF NO.	F:\P\2013-039		
DRAWN BY	JPM		
CHKD BY	SMH		
APPD BY	SMH		

NREF III PLEASANT LLC
PLEASANT STREET CONNECTOR
FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS
EXISTING CONDITIONS
PLAN

KELLY ENGINEERING GROUP, INC.
CIVIL ENGINEERING CONSULTANTS
0 CAMPANELLI DRIVE BRAINTREE MA 02184
PHONE: 781 843 4333 FAX: 781 843 0028

SHEET NO. **3**



ZONING LEGEND			
SOUTHERN LOT (0 FIRMIN AVE. & 16 PLEASANT STREET CONNECTOR)			
SOUTHBOROUGH - INDUSTRIAL DISTRICT (ID) (ONLY APPLICABLE INFORMATION IS SHOWN)			
	REQUIRED	PROVIDED	COMPLIANCE
MIN. AREA	43,560 S.F.	93,775 S.F.±*	YES
MIN. FRONTAGE	50'	480' ±	YES
PARKING SIZE	9.5 x 18 (75%) 8 x 17 (25%)	NOTE 1	YES
IMPERVIOUS %	N/A	47% ±	YES
PARKING SETBACK			
FRONT	15'	15'	YES
SIDE/REAR	10'	15'	YES
aisle width	24'/22'	24'	YES

ZONING LEGEND			
SOUTHERN LOT (0 FIRMIN AVE. & 16 PLEASANT STREET CONNECTOR)			
FRAMINGHAM - GENERAL MANUFACTURING (M), HIGHWAY CORRIDOR OVERLAY (HC) (ONLY APPLICABLE INFORMATION IS SHOWN)			
	REQUIRED	PROVIDED	COMPLIANCE
MIN. AREA	6,000 S.F.	93,775 S.F.±*	YES
MIN. FRONTAGE	50'	480' ±	YES
PARKING SIZE	9' x 18'	NOTE 1	YES
MIN. LANDSCAPED SURFACE RATIO	20%	47% ±	YES
PARKING SETBACK			
FRONT (HC DISTRICT)	15'	15'	YES
SIDE	5'	14'	YES
aisle width	24'/22'	24'	YES

* TOTAL LOT AREA (PARCEL 1 AND PARCEL 2) AS SHOWN ON EXISTING CONDITIONS PLAN

NOTE: PLEASANT STREET AND CROSSING BOULEVARD ARE PRESUMED TO BE FRONT LOT LINES. ALL OTHER ARE SIDE LINES.

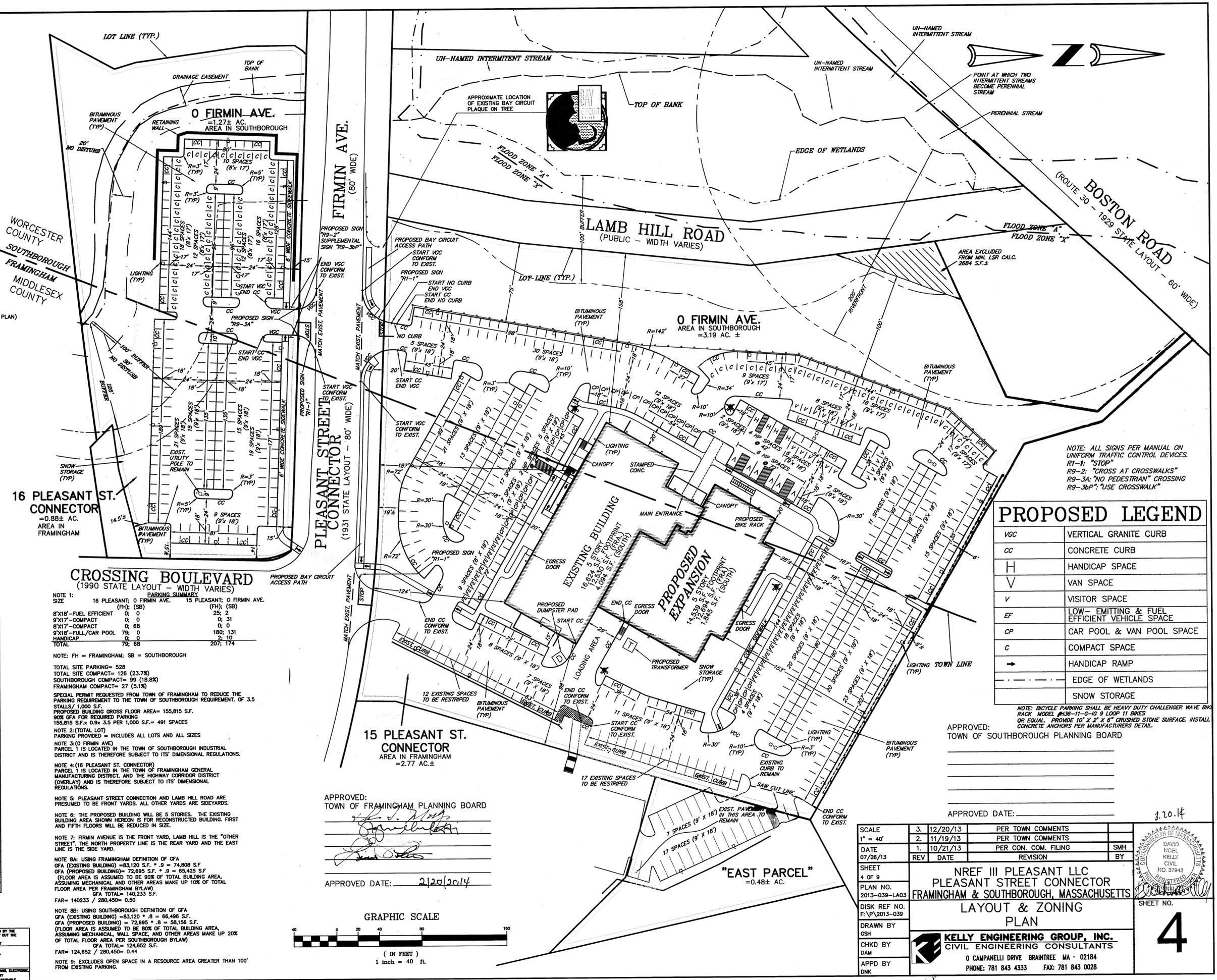
ZONING LEGEND			
NORTHERN LOT (0 FIRMIN AVE. & 15 PLEASANT STREET CONNECTOR)			
SOUTHBOROUGH - INDUSTRIAL DISTRICT (ID)			
	REQUIRED	PROVIDED	COMPLIANCE
MIN. AREA	43,560 S.F.	280,450 S.F.±*	YES
MIN. FRONTAGE	200'	451' ±	YES
MIN. YARD FRONT	50' (NOTE 7)	187' ±	YES
OTHER STREET	25'	158' ±	YES
SIDE	50'	N/A	YES
REAR	50'	167' ±	YES
MAX. STORIES	3	5 (NOTE 6)	BY VARIANCE
MAX. HEIGHT	45'	66' ±	BY VARIANCE
MAX FAR COVERAGE	0.6	0.44 (NOTE 8B)	YES
PARKING TOTAL	491 (NOTE 1)	528 (NOTE 1)	BY SPECIAL PERMIT
SIZE	9.5 x 18 (75%) 8 x 17 (25%)	(NOTE 1)	BY SPECIAL PERMIT
HANDICAP	11	12	YES
LOADING	2	2	YES
PARKING SETBACK			
FRONT	5'	20' ±	YES
OTHER STREET	5'	75' ±	YES
SIDE	5'	N/A	YES
REAR	5'	6'	YES
BUILDING	N/A	N/A	N/A
aisle width	22'	24'	YES
MIN. INTERIOR LANDSCAPING	N/A	>5% ±	YES

* INCLUDES TOTAL LOT ACREAGE LOT A-5 + THE EAST PARCEL.

ZONING LEGEND			
NORTHERN LOT (0 FIRMIN AVE. & 15 PLEASANT STREET CONNECTOR & EAST PARCEL)			
SOUTHBOROUGH - INDUSTRIAL DISTRICT (ID)			
	REQUIRED	PROVIDED	COMPLIANCE
MIN. AREA	43,560 S.F.	280,450 S.F.±*	YES
MIN. FRONTAGE	100'	451' ± (NOTE 5)	YES
MIN. YARD FRONT	30'	124' ± (NOTE 5)	YES
SIDE	15'	98' ± (NOTE 5)	YES
REAR	N/A	N/A	N/A
MAX. STORIES	6	5 (NOTE 6)	YES
MAX. HEIGHT	100'	66' ±	YES
FAR COVERAGE	0.4	0.50 (NOTE 8A)	BY SPECIAL PERMIT
PARKING TOTAL	491 (NOTE 1)	528 (NOTE 1)	BY SPECIAL PERMIT
SIZE	9' x 18 8' x 17' (BY S.P.)	NOTE 1	BY SPECIAL PERMIT
HANDICAP	11	12	YES
LOADING	3	2	BY SPECIAL PERMIT
MIN. LANDSCAPED SURFACE RATIO	25%	41% ± (NOTE 9)	YES
LOT WIDTH	360' ±	430' ±	YES
PARKING SETBACK			
FRONT	30'	19'	WAIVER
SIDE	5'	6'	YES
REAR	N/A (NOTE 5)	N/A (NOTE 5)	NOTE 5
BUILDING	N/A	15' ±	NA
aisle width	24'	24'	YES
DRIVEWAY WIDTH ONE-WAY	12'	N/A	N/A
DRIVEWAY WIDTH TWO-WAY	20'	24'	YES
MAX. DRIVEWAY WIDTH	30'	24'	YES

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CROSSING BOULEVARD
(1990 STATE LAYOUT - WIDTH VARIES)

NOTE 1:
16 PLEASANT; 0 FIRMIN AVE. 15 PLEASANT; 0 FIRMIN AVE.
SIZE (FH); (SB)

8'x18'-FUEL EFFICIENT	0;	25;
9'x17'-COMPACT	0;	31
8'x17'-COMPACT	68	0;
9'x18'-FULL/CAR POOL	0;	180;
HANDICAP	0;	131
TOTAL	79;	207;

NOTE: FH = FRAMINGHAM; SB = SOUTHBOROUGH

TOTAL SITE PARKING = 528
TOTAL SITE COMPACTS = 126 (23.7%)
SOUTHBOROUGH COMPACT = 98 (18.6%)
FRAMINGHAM COMPACT = 27 (5.1%)

SPECIAL PERMIT REQUESTED FROM TOWN OF FRAMINGHAM TO REDUCE THE PARKING REQUIREMENT TO THE TOWN OF SOUTHBOROUGH REQUIREMENT OF 3.5 STALLS/1,000 S.F.
PROPOSED BUILDING GROSS FLOOR AREA = 155,815 S.F.
80% GFA FOR REQUIRED PARKING
155,815 S.F. x 0.9% = 1,402.33 PER 1,000 S.F. = 491 SPACES

NOTE 2: (TOTAL LOT) PARKING PROVIDED = INCLUDES ALL LOTS AND ALL SIZES

NOTE 3: (0 FIRMIN AVE) PARCEL 1 IS LOCATED IN THE TOWN OF SOUTHBOROUGH INDUSTRIAL DISTRICT AND IS THEREFORE SUBJECT TO ITS DIMENSIONAL REGULATIONS.

NOTE 4: (16 PLEASANT ST. CONNECTOR) PARCEL 1 IS LOCATED IN THE TOWN OF FRAMINGHAM GENERAL MANUFACTURING DISTRICT, AND THE HIGHWAY CORRIDOR DISTRICT (OVERLAY) AND IS THEREFORE SUBJECT TO ITS DIMENSIONAL REGULATIONS.

NOTE 5: PLEASANT STREET CONNECTION AND LAMB HILL ROAD ARE PRESUMED TO BE FRONT YARDS. ALL OTHER YARDS ARE SIDEYARDS.

NOTE 6: THE PROPOSED BUILDING WILL BE 5 STORES. THE EXISTING BUILDING AREA SHOWN HEREON IS FOR RECONSTRUCTED BUILDING. FIRST AND FIFTH FLOORS WILL BE REDUCED IN SIZE.

NOTE 7: FIRMIN AVENUE IS THE FRONT YARD. LAMB HILL IS THE "OTHER STREET". THE NORTH PROPERTY LINE IS THE REAR YARD AND THE EAST LINE IS THE SIDE YARD.

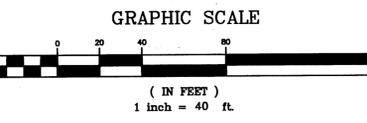
NOTE 8A: USING FRAMINGHAM DEFINITION OF GFA
GFA (EXISTING BUILDING) = 83,120 S.F. * 9 = 74,808 S.F.
GFA (PROPOSED BUILDING) = 72,695 S.F. * 9 = 65,425 S.F.
(FLOOR AREA IS ASSUMED TO BE 80% OF TOTAL BUILDING AREA, ASSUMING MECHANICAL AND OTHER AREAS MAKE UP 10% OF TOTAL FLOOR AREA PER FRAMINGHAM BYLAW)
GFA TOTAL = 140,233 S.F.
FAR = 140,233 / 280,450 = 0.50

NOTE 8B: USING SOUTHBOROUGH DEFINITION OF GFA
GFA (EXISTING BUILDING) = 83,120 * 8 = 66,496 S.F.
GFA (PROPOSED BUILDING) = 72,695 * 8 = 58,156 S.F.
(FLOOR AREA IS ASSUMED TO BE 80% OF TOTAL BUILDING AREA, ASSUMING MECHANICAL, WALL SPACE, AND OTHER AREAS MAKE UP 20% OF TOTAL FLOOR AREA PER SOUTHBOROUGH BYLAW)
GFA TOTAL = 124,652 S.F.
FAR = 124,652 / 280,450 = 0.44

NOTE 9: EXCLUDES OPEN SPACE IN A RESOURCE AREA GREATER THAN 10% FROM EXISTING PARKING.

APPROVED:
TOWN OF FRAMINGHAM PLANNING BOARD

APPROVED DATE: 2/20/2014



PROPOSED LEGEND

VGC	VERTICAL GRANITE CURB
CC	CONCRETE CURB
H	HANDICAP SPACE
V	VAN SPACE
V	VISITOR SPACE
EF	LOW-EMITTING & FUEL EFFICIENT VEHICLE SPACE
CP	CAR POOL & VAN POOL SPACE
C	COMPACT SPACE
→	HANDICAP RAMP
- - -	EDGE OF WETLANDS
□	SNOW STORAGE

NOTE: BICYCLE PARKING SHALL BE HEAVY DUTY CHALLENGER WAVE BIKERACK MODEL #38-11-0-10 3 LOOP 11 BIKES OR EQUAL. PROVIDE 10' x 2' x 6" CRUSHED STONE SURFACE. INSTALL CONCRETE ANCHORS PER MANUFACTURERS DETAIL.

APPROVED: TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE: 2.20.14

SCALE	3. 12/20/13	PER TOWN COMMENTS	
1" = 40'	2. 11/19/13	PER TOWN COMMENTS	
DATE	1. 10/21/13	PER CON. COM. FILING	SMH
07/26/13	REV	DATE	REVISION
			BY

SHEET 4 OF 9

PLAN NO. 2013-039-LA03

DISK REF NO. F:\P\2013-039

DRAWN BY GSH

CHKD BY DAM

APPD BY DNK

NREF III PLEASANT LLC
PLEASANT STREET CONNECTOR
FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS

LAYOUT & ZONING PLAN

KELLY ENGINEERING GROUP, INC.
CIVIL ENGINEERING CONSULTANTS
0 CAMPANELLI DRIVE BRAintree MA 02184
PHONE: 781 843 4333 FAX: 781 843 0028

REGISTERED PROFESSIONAL ENGINEER

DAVID NOEL
KELLY CIVIL
NO. 37942

SHEET NO. **4**

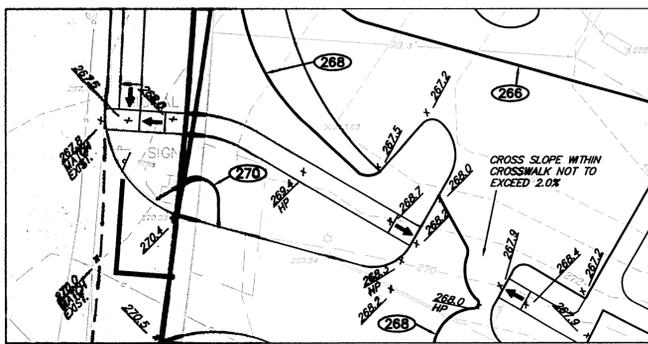
EXISTING LEGEND

□	CATCH BASIN
⊙	DRAIN MANHOLE
—	DRAIN LINE
⊙	SEWER MANHOLE
—	SEWER LINE
⊙	MONITORING WELL
⊙	POST INDICATOR VALVE
⊙	WATER SHUT OFF
⊙	HYDRANT
—	WATER LINE
⊙	ELECTRIC MANHOLE
⊙	UTILITY POLE
⊙	TRAFFIC CONTROL BOX
—	ELECTRIC LINE
⊙	TELEPHONE MANHOLE
—	TELEPHONE LINE
⊙	TRANSFORMER
⊙	LIGHT POLE
—	GAS LINE
—	SIGN
VGC	VERTICAL GRANITE CURB
BCC	BITUMINOUS CONCRETE CURB
□	BOUND
SES B17	WETLANDS FLAG NUMBER
SES A41	BANK OF RIVER FLAG NUMBER
—	EDGE OF WETLANDS LINE
—	EASEMENTS
⊙	FLAG POLE
—	LIGHT
→	FLOW DIRECTION
—	PROPERTY LINE

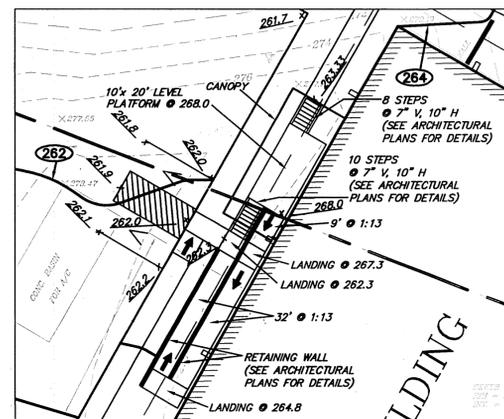
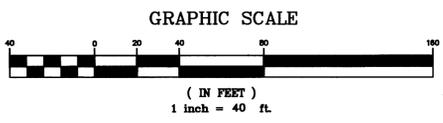
PROPOSED LEGEND

□	CATCH BASIN
—	TRENCH DRAIN
⊙	DRAIN MANHOLE
—	DRAIN LINE
—	SEWER LINE
⊙	GAS VALVE
—	GAS LINE
⊙	HYDRANT
⊙	WATER VALVE
—	WATER LINE
—	OVERHEAD ELECTRIC LINE
—	UNDERGROUND ELECTRIC LINE
—	CONTOUR LINE
⊙	SPOT GRADE
—	25' BUFFER ZONE
—	EROSION CONTROL LINE

NOTES:
1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.

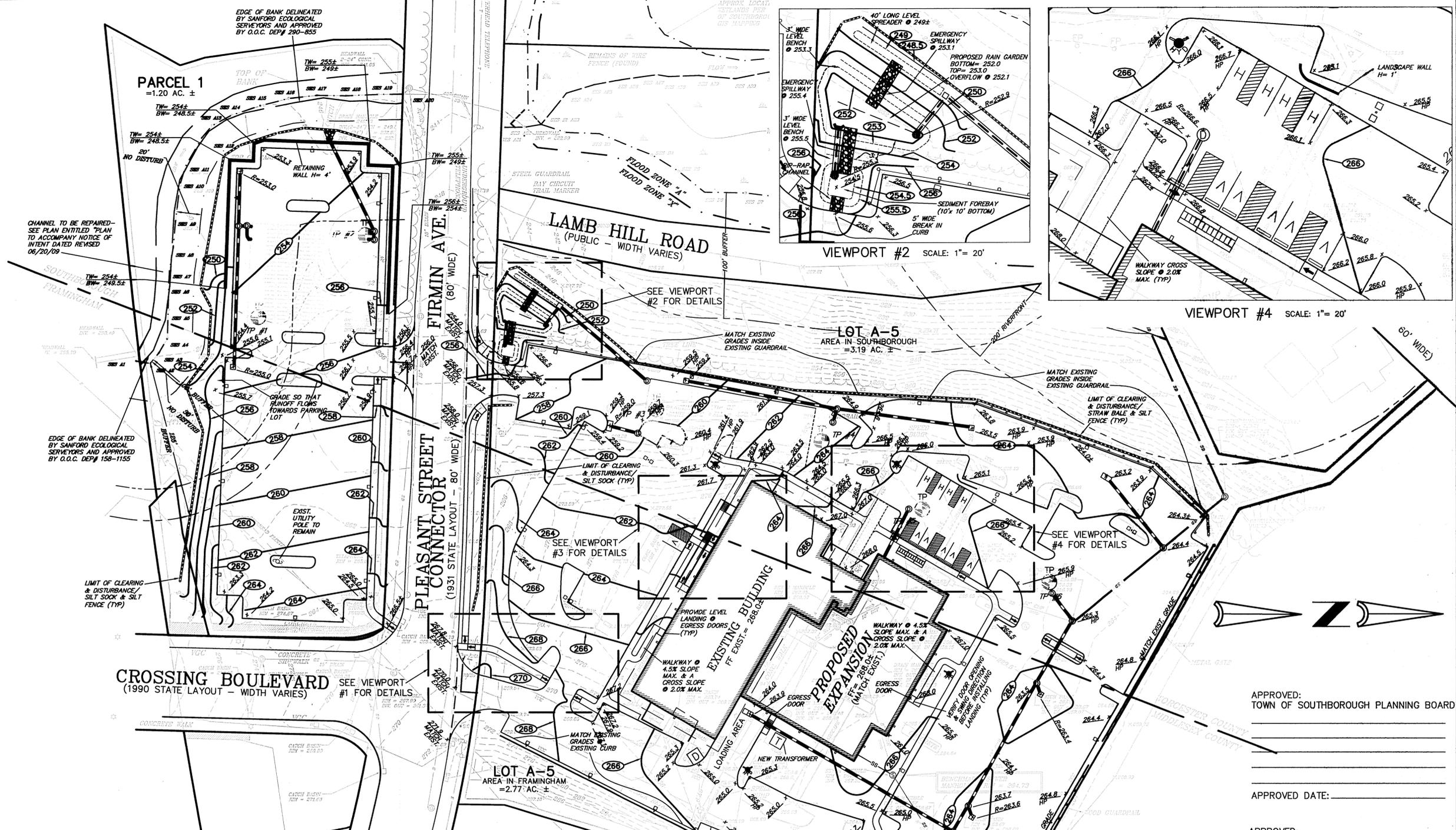


VIEWPORT #1 SCALE: 1" = 20'



VIEWPORT #3 SCALE: 1" = 20'

KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE OBLIGATIONS ASSUMED BY THE CONTRACTOR. THE LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS PROFESSIONAL DESIGN AND CONSULTING SERVICES.
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APPROVED:
TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE: _____

APPROVED:
TOWN OF FRAMINGHAM PLANNING BOARD

APPROVED DATE: 2/20/2014

SCALE	3. 12/20/13	PER TOWN COMMENTS	
1" = 40'	2. 11/19/13	PER TOWN COMMENTS	
DATE	1. 10/21/13	PER CON. COM. FILING	SMH
07/26/2013	REV	DATE	REVISION
SHEET	5 OF 9		
PLAN NO.	2013-039-0003		
DISK REF NO.	F:\2013-039		
DRAWN BY	C.H.		
CHKD BY	SMH		
APPD BY	SMH		
NREF III PLEASANT LLC PLEASANT STREET CONNECTOR FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS GRADING & DRAINAGE PLAN			
KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE, BRANTREE, MA 02184 PHONE: 781 843 4333 FAX: 781 843 0028			
SHEET NO.			5

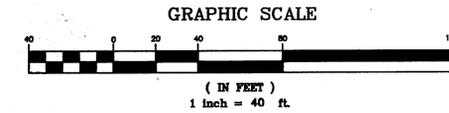
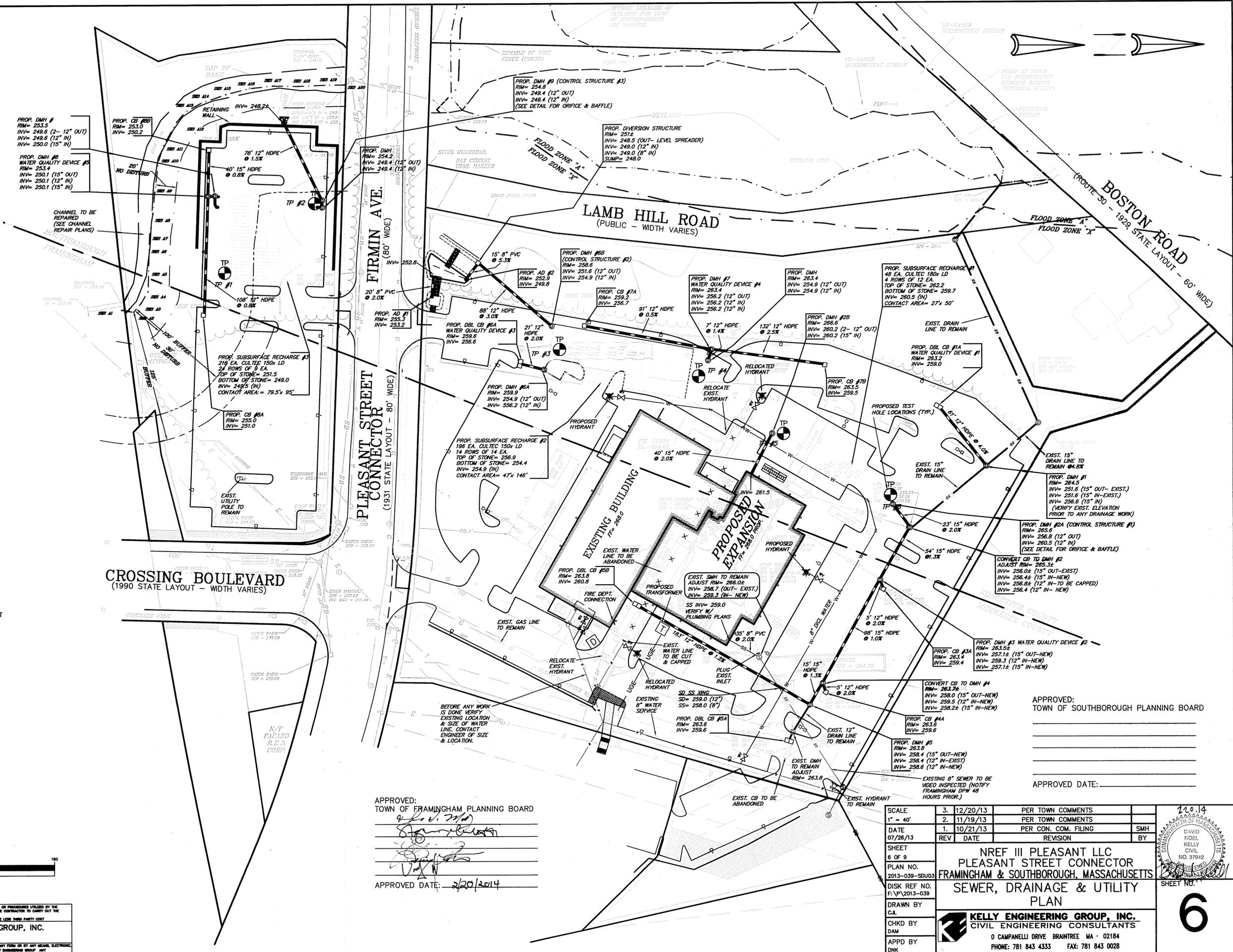
EXISTING LEGEND

	CATCH BASIN
	DRAIN MANHOLE
	DRAIN LINE
	SEWER MANHOLE
	SEWER LINE
	MONITORING WELL
	POST INDICATOR VALVE
	WATER SHUT OFF
	HYDRANT
	WATER LINE
	ELECTRIC MANHOLE
	UTILITY POLE
	TRAFFIC CONTROL BOX
	ELECTRIC LINE
	TELEPHONE MANHOLE
	TELEPHONE LINE
	TRANSFORMER
	GAS LINE
	SIGN
	VERTICAL GRANITE CURB
	BITUMINOUS CONCRETE CURB
	BOUND
	WETLANDS FLAG NUMBER
	BANK OF RIVER FLAG NUMBER
	EDGE OF WETLANDS LINE
EASEMENTS	
	FLAG POLE
	LIGHT
	FLOW DIRECTION
	PROPERTY LINE

PROPOSED LEGEND

	CATCH BASIN
	TRENCH DRAIN
	DRAIN MANHOLE
	DRAIN LINE
	EXIST. DRAIN LINE TO REMAIN
	SEWER LINE
	EXISTING SMH TO REMAIN
	EXISTING SEWER LINE TO REMAIN
	25' BUFFER ZONE

NOTES:
1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.



KELLY ENGINEERING GROUP SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.
THE EXTENT OF KELLY ENGINEERING GROUP'S LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS LESS THIRD PARTY COST.
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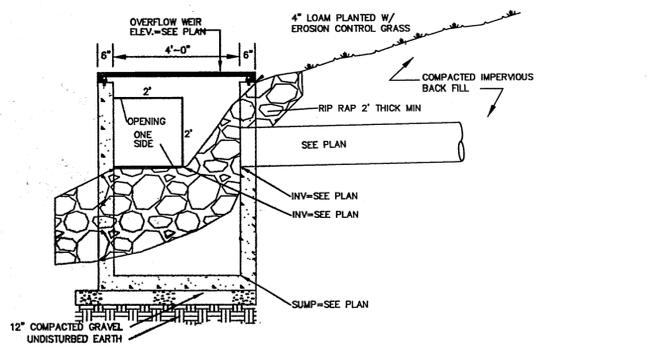
APPROVED:
TOWN OF FRAMINGHAM PLANNING BOARD
[Signature]
APPROVED DATE: 2/20/2014

APPROVED:
TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE: _____

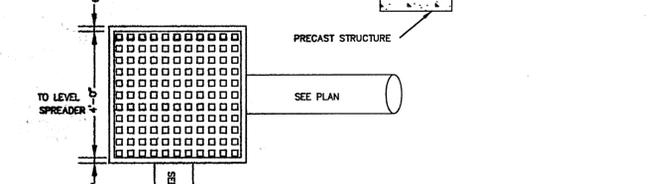
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1" = 40'	2. 11/19/13	PER TOWN COMMENTS	
DATE	1. 10/21/13	PER CON. COM. FILING	SMH
07/26/13	REV	DATE	BY
SHEET	NREF III PLEASANT LLC PLEASANT STREET CONNECTOR FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS SEWER, DRAINAGE & UTILITY PLAN		
6 OF 9	DRAWN BY C.L.		
PLAN NO.	CHKD BY DAM		
2013-039-SDU03	APPD BY DNK		
DISK REF NO.	KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE BRAINTREE MA 02184 PHONE: 781 843 4333 FAX: 781 843 0028		
F:\P\2013-039	SHEET NO. 6		

220.14
DAVID NOEL KELLY CIVIL NO. 37942
REGISTERED PROFESSIONAL ENGINEER
STATE OF MASSACHUSETTS
SHEET NO. 6

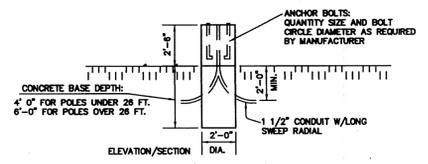


NOTE: CONTRACTOR TO CONSTRUCT HEAVY DUTY WELDED GALVANIZED STEEL GRATE (19-W-4.1 1/2X1/8 MAIN BAR W/4" CROSS BAR SPACING) BY DHD GRATING INC. OR EQUAL AS SUPPLIED BY MELVILLE GRANT ASSOCIATES, NEEDHAM, MA.

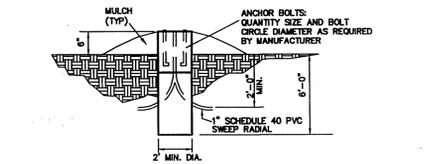
NOTE: PRECAST STRUCTURE IS THE BOTTOM HALF OF A MODIFIED PRECAST PUMP CHAMBER #PC 434 BY ROSTON & SONS INC. BEHOBOTH, MA. OPENINGS OF INLET & OUTLET ARE TO BE FORM CAST AT THE PLANT.



DISTRIBUTION STRUCTURE
NOT TO SCALE (DETEN-BAS-OUT-DT) KELLY ENGINEERING GROUP, INC.



LIGHT POLE DETAIL (PAVED AREAS)
NOT TO SCALE KELLY ENGINEERING GROUP, INC.



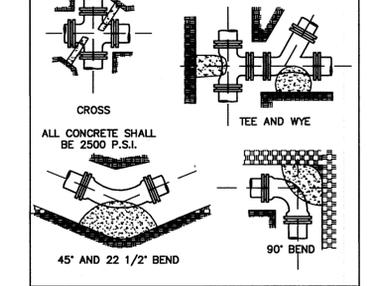
LIGHT POLE DETAIL (LANDSCAPED AREAS)
NOT TO SCALE KELLY ENGINEERING GROUP, INC.

THRUST BLOCK SCHEDULE

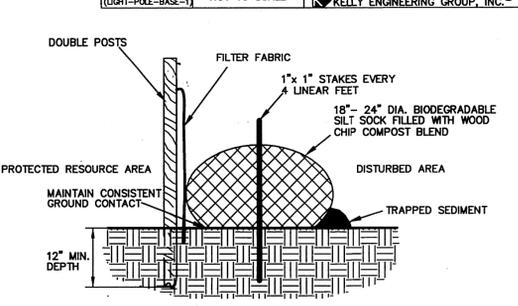
TABLE OF MINIMUM BEARING AREA IN SQ. IN. AGAINST UNDISTURBED SOIL FOR 8 IN. DIA. PIPE

SOIL BEARING CAPACITY (PSF)	90 DEGREE BEND	TEE	45 DEGREE BEND
1000	945	674	516
1500	630	450	344
2000	473	337	258
3000	315	225	172

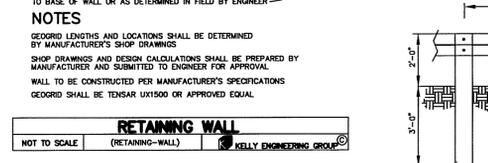
NOTE: FOR FITTINGS W/LESS THAN 45° DEFLECTION USE BEARING AREA FOR 45° BEND BASED ON INTERNAL BEARING OF 80 PSI



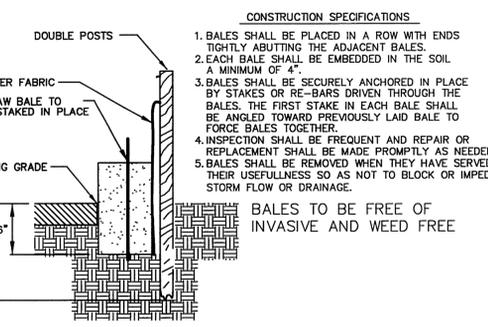
THRUST BLOCK
NOT TO SCALE KELLY ENGINEERING GROUP, INC.



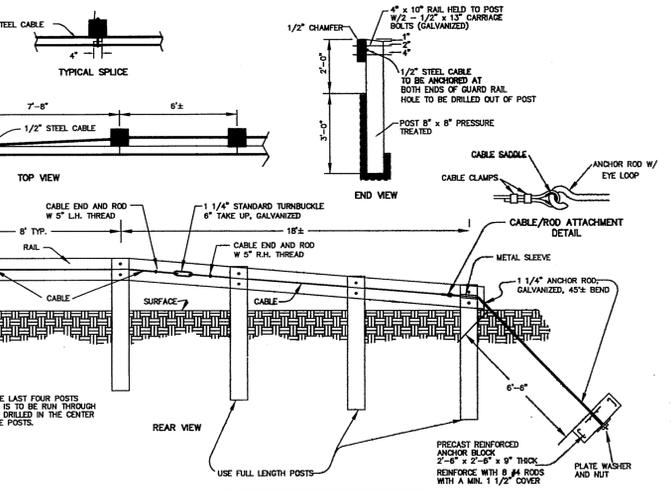
EROSION CONTROL LINE DETAIL (NORTH SIDE)
NOT TO SCALE KELLY ENGINEERING GROUP, INC.



RETAINING WALL
NOT TO SCALE (RETAINING-WALL) KELLY ENGINEERING GROUP, INC.



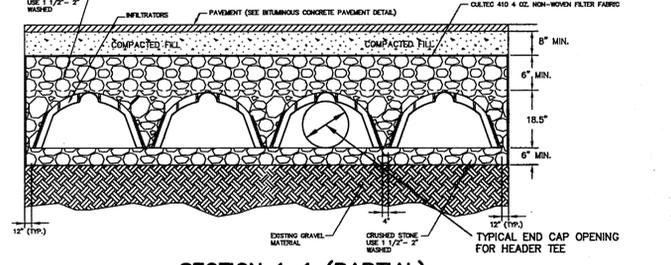
EROSION CONTROL LINE DETAIL (SOUTH SIDE)
NOT TO SCALE (MAY-BALE-DETAIL-2) KELLY ENGINEERING GROUP, INC.



WOOD POST & RAIL DETAIL
NOT TO SCALE (WO-POST-RL-DETAIL) KELLY ENGINEERING GROUP, INC.

SUBSURFACE RECHARGE AREA (INFILTRATION TO BE CULTEC OR APPROVED EQUAL)

*SEE CULTEC RECHARGER 150HD STORMWATER MANAGEMENT SYSTEM DESIGN FOR INSTALLATION INSTRUCTIONS PROPRIETARY SHOP DRAWINGS TO BE PROVIDED PRIOR TO INSTALLATION, ACCESS PORTS, AND DETAILS. EACH SYSTEM WILL HAVE INTERNAL MANHOLES EQUAL TO THE NUMBER OF 12" INLET PIPES. (H-20 LOAD RATING)



SECTION 1-1 (PARTIAL)

NOTE: EXTREME CARE SHALL BE TAKEN DURING CONSTRUCTION TO AVOID SILTATION DURING THE CONSTRUCTION PROCESS. SILT CAGES AND HAYBALE DIKES SHALL BE INSPECTED DAILY AND REPLACED IF NECESSARY.

STORMWATER MANAGEMENT SYSTEM CONSTRUCTION OPERATION + MAINTENANCE NOTES:

- EXTREME CARE SHALL BE TAKEN DURING CONSTRUCTION TO AVOID SILTATION DURING THE CONSTRUCTION PROCESS. SILT CAGES AND HAYBALE DIKES SHALL BE INSPECTED DAILY AND REPLACED IF NECESSARY.
- EXTREME CARE SHALL BE TAKEN TO PREVENT COMPACTION OF UNDISTURBED SOILS BENEATH RECHARGE SYSTEM.
- THERE SHALL BE NO DISCHARGE OF WATER FOR CONSTRUCTION DEWATERING ACTIVITIES INTO THE STORMWATER MANAGEMENT SYSTEM.
- THERE SHALL BE NO DISCHARGE OF STORMWATER INTO THE RECHARGE SYSTEM UNTIL THE SITE HAS BEEN STABILIZED.

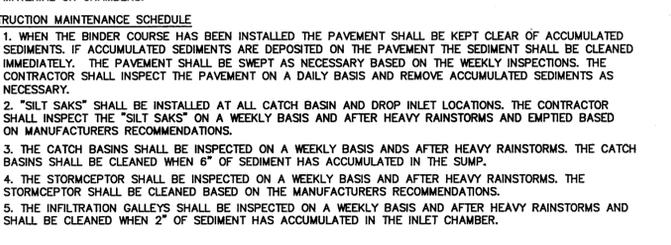
CONSTRUCTION INSPECTION AND MAINTENANCE SCHEDULE:

CONSTRUCTION INSPECTION SCHEDULE

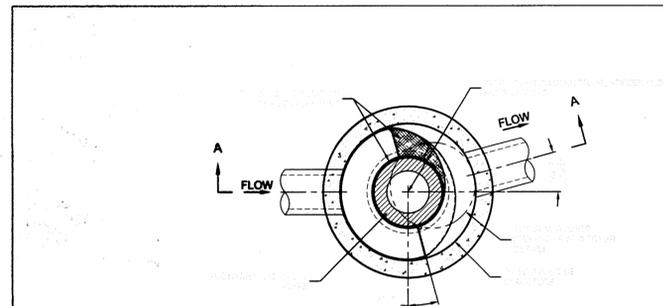
- WEEKLY INSPECTIONS SHALL BE PERFORMED BY THE APPLICANTS ENGINEER AND A REPRESENTATIVE FROM THE TOWN'S ENGINEERING DEPARTMENT.
- INSPECTIONS SHALL INCLUDE THE PAVEMENT TO DETERMINE IF ACCUMULATED SEDIMENT IS TO BE REMOVED, OF THE CATCH BASINS TO DETERMINE DEPTH OF SEDIMENTS AND REQUIRED CLEANING, INSPECTION OF THE STORMCEPTOR TO DETERMINE IF CLEANING IS NECESSARY AND INSPECTION OF THE LEACHING SYSTEM SHALL BE CONDUCTED BY THE ENGINEER AND THE TOWN'S ENGINEERING DEPARTMENT.
- AN INSPECTION OF THE EXCAVATION OF THE LEACHING SYSTEM SHALL BE CONDUCTED BY THE ENGINEER AND A REPRESENTATIVE OF THE TOWN'S ENGINEERING DEPARTMENT PRIOR TO PLACEMENT OF ANY MATERIAL OR CHAMBERS.

CONSTRUCTION MAINTENANCE SCHEDULE

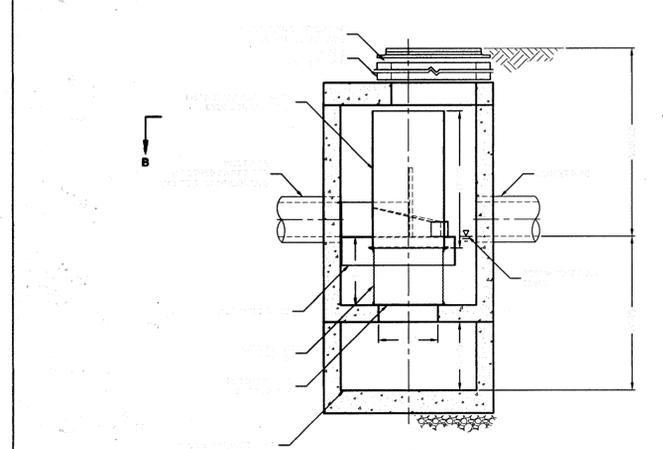
- WHEN THE BINDER COURSE HAS BEEN INSTALLED THE PAVEMENT SHALL BE KEPT CLEAR OF ACCUMULATED SEDIMENTS. IF ACCUMULATED SEDIMENTS ARE DEPOSITED ON THE PAVEMENT THEY SHALL BE CLEANED IMMEDIATELY. THE PAVEMENT SHALL BE SWEEP AS NECESSARY BASED ON THE WEEKLY INSPECTIONS. THE CONTRACTOR SHALL INSPECT THE PAVEMENT ON A DAILY BASIS AND REMOVE ACCUMULATED SEDIMENTS AS NECESSARY.
- "SILT SAKS" SHALL BE INSTALLED AT ALL CATCH BASIN AND DROP INLET LOCATIONS. THE CONTRACTOR SHALL INSPECT THE "SILT SAKS" ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND EMPTIED BASED ON MANUFACTURERS RECOMMENDATIONS.
- THE CATCH BASINS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS. THE CATCH BASINS SHALL BE CLEANED WHEN 6" OF SEDIMENT HAS ACCUMULATED IN THE SUMP.
- THE STORMCEPTOR SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS. THE STORMCEPTOR SHALL BE CLEANED BASED ON THE MANUFACTURERS RECOMMENDATIONS.
- THE INFILTRATION GALLEYS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND SHALL BE CLEANED WHEN 2" OF SEDIMENT HAS ACCUMULATED IN THE INLET CHAMBER.



INFILTRATOR SUBSURFACE DETENTION AREA CROSS SECTION VIEW
NOT TO SCALE (INFIL-SUB-DET) KELLY ENGINEERING GROUP, INC.



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

CDS2015-4-C DESIGN NOTES

CDS2015-4-C RATED TREATMENT CAPACITY IS 1.4 CFS, OR PER LOCAL REGULATIONS.

THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES



HAYBALE DIKE DETAIL
NOT TO SCALE (MAY-BALE-INSTALL-DETAIL) KELLY ENGINEERING GROUP, INC.



FRAME AND COVER
(DIAMETER VARIES) N.T.S.

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH (A) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH CONSTRUCTION PRODUCTS REPRESENTATIVE. www.contech-csl.com
- CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO H20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
- PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

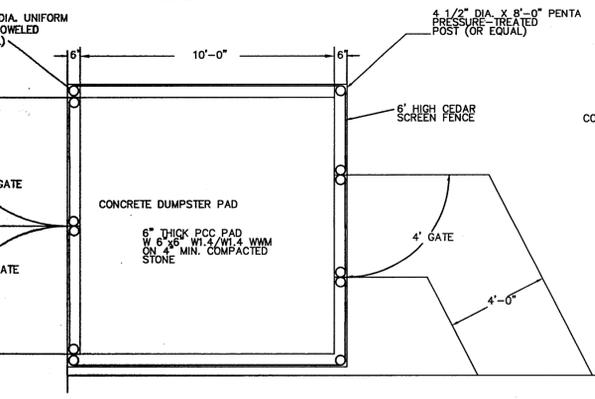
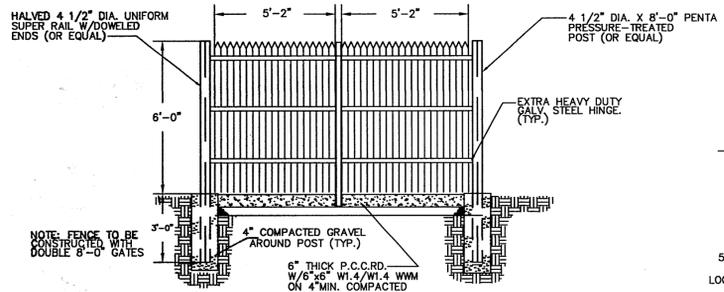
APPROVED:
TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE:

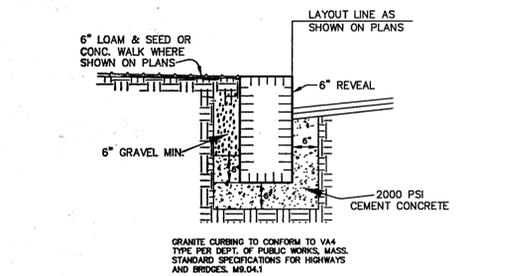
APPROVED:
TOWN OF FRAMINGHAM PLANNING BOARD

APPROVED DATE:

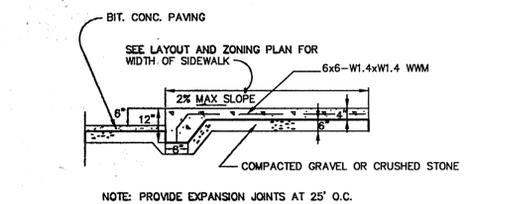
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NA	2.	10/19/13	PER TOWN COMMENTS	
DATE	1.	10/21/13	NO CHANGE	SMH
07/26/2013	REV	DATE	REVISION	BY
SHEET	7 OF 9			
PLAN NO.	2013-039-DT03			
DISK REF NO.	F:\2013-039			
DRAWN BY	CUL			
CHKD BY	DAM			
APPD BY	DNK			
NREF III PLEASANT LLC PLEASANT STREET CONNECTOR FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS				
DETAIL SHEET				
KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE BRAintree MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028				
SHEET NO.				7



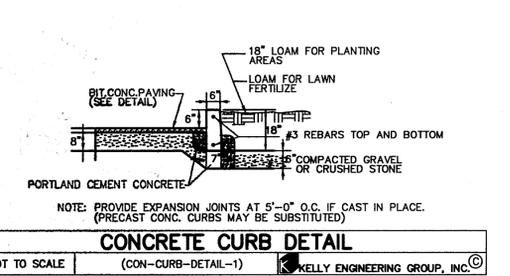
CEDAR SCREEN GATE /DUMPSTER PAD DETAIL
NOT TO SCALE (DUMPSTER-DETAIL) KELLY ENGINEERING GROUP, INC. ©



VERTICAL GRANITE CURB DETAIL
NOT TO SCALE (VERT-GRANITE-CURB-DETAIL-1) KELLY ENGINEERING GROUP, INC. ©

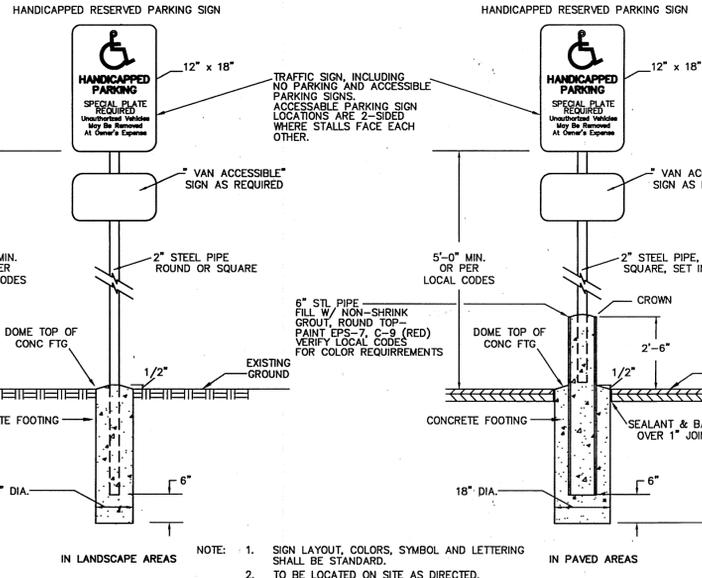


INTEGRAL SIDEWALK/ CURB DETAIL
NOT TO SCALE (INTEGRAL-SIDEWALK-CURB) KELLY ENGINEERING GROUP, INC. ©

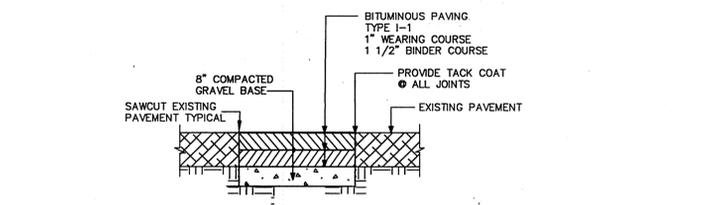


CONCRETE CURB DETAIL
NOT TO SCALE (CON-CURB-DETAIL-1) KELLY ENGINEERING GROUP, INC. ©

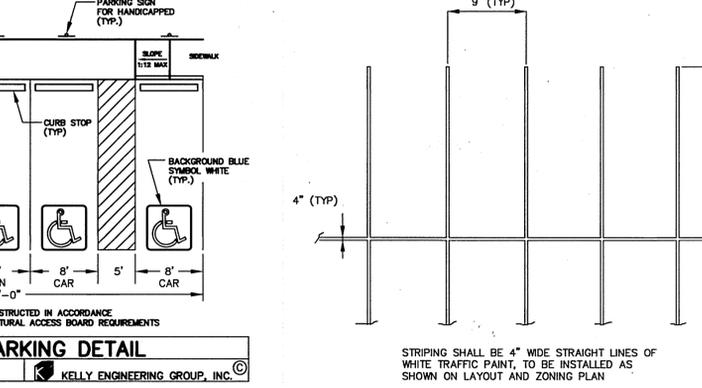
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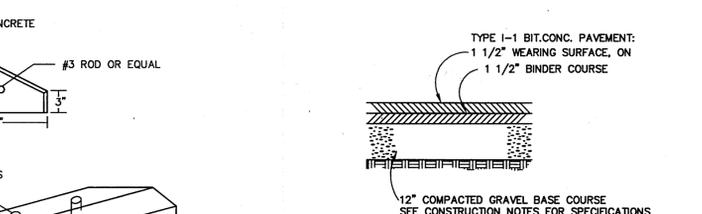
HANDICAP SIGN DETAIL
NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



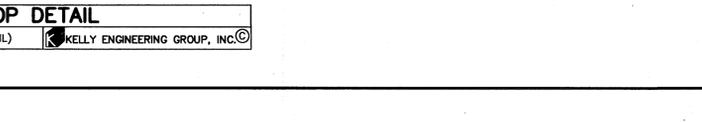
PAVEMENT MATCH SAWCUT DETAIL
NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



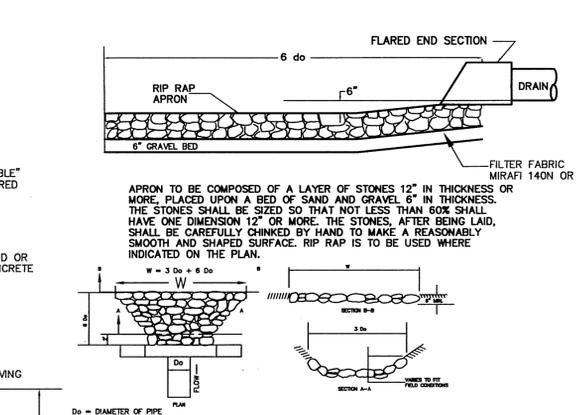
HANDICAP PARKING DETAIL
NOT TO SCALE (HAND-PARK-DETAIL) KELLY ENGINEERING GROUP, INC. ©



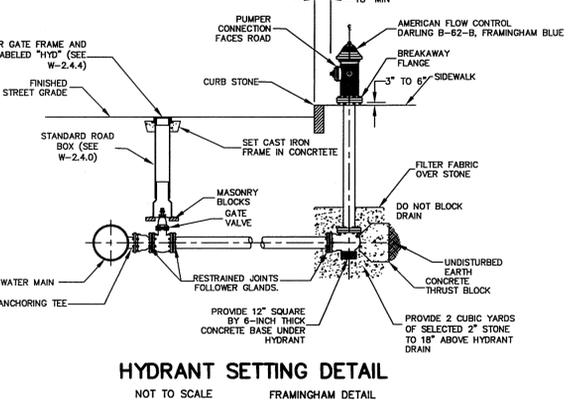
TYPICAL STRIPING DETAIL
NOT TO SCALE (90-STALLS) KELLY ENGINEERING GROUP, INC. ©



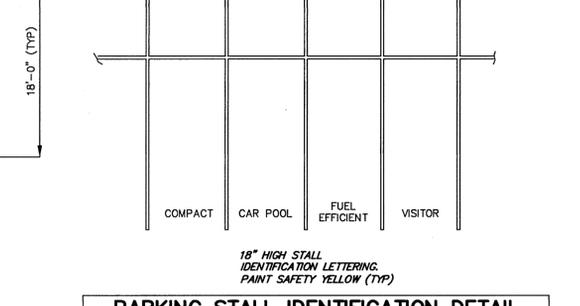
CURB STOP DETAIL
NOT TO SCALE (CURB-STOP-DETAIL) KELLY ENGINEERING GROUP, INC. ©



RIP-RAP APRON DETAIL AT F.E.S.
NOT TO SCALE (HEADWALL-DETAIL-FLARED-END) KELLY ENGINEERING GROUP, INC. ©



HYDRANT SETTING DETAIL
NOT TO SCALE FRAMINGHAM DETAIL



PARKING STALL IDENTIFICATION DETAIL
NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©

APPROVED: TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE:

APPROVED: TOWN OF FRAMINGHAM PLANNING BOARD

APPROVED DATE: 2/20/2014

CONSTRUCTION NOTES

- THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER OF ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE REFINED, REVISED AND APPROVED BY THE OWNER AND THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY THE TOWN OF FRAMINGHAM AND SOUTHBOROUGH DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
- IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING AT ALL TIMES ALL NECESSARY SAFETY DEVICES AND PERSONNEL, WARNING LIGHTS, BARRICADES, AND POLICE OFFICERS.
- ANY WORK SHALL CONFORM TO A SPECIAL PERMIT TO BE ISSUED BY THE TOWN OF FRAMINGHAM AND SOUTHBOROUGH.
- FOR ANY PROJECT THAT INVOLVES 1 ACRE OR MORE OF DISTURBANCE, CONTRACTOR SHALL SECURE A NPDES PERMIT PRIOR TO BEGINNING ANY GRADING ACTIVITIES.
- ALL WORK SHALL CONFORM TO AN ORDER OF CONDITIONS TO BE ISSUED BY THE TOWN OF FRAMINGHAM AND SOUTHBOROUGH.
- ALL WORK SHALL CONFORM TO THE GEOTECHNICAL REPORT BY OTHERS DATED.
- THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPERVISED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THE INFORMATION THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTRACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-888-344-7233.
- THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
- REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSION AND DOOR LOCATIONS.
- BENCHMARK ELEVATION IS FINISHED FLOOR LOCATED AT 268.2. DATUM IS NVD OF 1929.
- REFER TO PLUMBING PLANS FOR EXACT SIZE AND LOCATION OF SANITARY AND WATER CONNECTIONS.
- REFER TO ELECTRICAL PLANS FOR THE LIGHTING CIRCUITS, FIXTURE DETAIL AND BUILDING CONNECTION LOCATION.
- ALL CULP HIGH DENSITY POLYETHYLENE PIPE SHALL BE ADS N-12 OR APPROVED EQUAL. SEWER SHALL BE SDR 35 WITH RUBBER RING JOINTS. WATER LINES SHALL BE CL 52 D.I.P. (DUCTILE IRON PIPE), REINFORCED CONCRETE PIPE RCP SHALL BE CLASS II. CONTACT TOWN FOR INSPECTION.
- NO LEDGE, Boulders, OR OTHER UNYIELDING MATERIALS ARE TO BE LEFT WITHIN 6" OF THE SEWER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST 12" ABOVE THE PIPES.
- WALKS SHALL BE 4" THICK AND SHALL BE CONSTRUCTED ON 6" OF COMPACTED BANK GRAVEL. CONCRETE FOR WALKS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. WALKS SHALL BE REINFORCED WITH W#4 @ 6" W/4" CONFORMING TO ASTM A186.
- BASE MATERIAL SHALL BE CLEAN BANK RUN GRAVEL, CONFORMING TO M.D.P.W. M.0.31, WITH NO STONES LARGER THAN THREE (3) INCHES IN DIAMETER AND SHALL BE PLACED AND ROLLED WITH AT LEAST A TEN TON ROLLER. THE SURFACES SHALL BE SET WITHIN ROLLING. ALL STONES OF 4" DIAMETER OR LARGER SHALL BE REMOVED FROM THE SUB-BASE PRIOR TO PLACING BASE MATERIAL. PULVERIZED MATERIAL MAY BE USED AS BASE MATERIAL PROVIDING IT MEETS THIS SPECIFICATIONS. AREAS TO BE REPAVED SHALL BE PULVERIZED AND REGRADED TO PROVIDE POSITIVE FLOW TO DRAINAGE AND AWAY FROM BUILDING. PAVE WITH 1 1/2" WEARING COURSE ON 1 1/2" BINDER COURSE. ALL VALVES, BOXES, MANHOLES AND OTHER UTILITIES APPURTENANCES SHALL BE ADJUSTED TO CONFORM TO FINAL GRADE.
- TRANSFORM PADS SHALL BE INSTALLED PER PROVIDER'S SPECIFICATIONS. GENERATOR PADS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- PAVEMENT AREA SHALL BE PAVED TO A THICKNESS AS SHOWN ON THE PLANS MEASURED AFTER COMPACTION, WITH A BINDER COURSE AND TOP COURSE OF CLASS I BITUMINOUS CONCRETE PAVEMENT, TYPE 1-1.
- THE AGGREGATE SHALL BE COMPOSED, MIXED AND LAID HOT IN TWO COURSES AS SPECIFIED IN THE "COMPACTION" SECTION OF MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 EDITION, SECTION 460 FOR CLASS I BITUMINOUS CONCRETE PAVEMENT, AS SPECIFICALLY SET FORTH IN SECTIONS 450.20 AND 460.82.
- DUMPSTER PAD SHALL BE 8" THICK REINFORCED CONCRETE SLAB WITH CONTROL JOINTS EVERY 10'. THE PAD SHALL BE CONSTRUCTED OVER 6" OF GRAVEL BASE. COMPACT TO 80% REINFORCEMENT SHALL BE W#6 @ 6" W/4 PLACED AT THE CENTER OF THE SLAB. THE FRONT END OF COMPACTOR PAD SHALL HAVE EMBEDDED A 6" x 6" x 3/8" STEEL ANGLE.
- THE DOLLY PADS SHALL BE 6" THICK REINFORCED CONCRETE SLABS WITH CONTROL JOINTS EVERY 10' AND ISOLATION JOINTS WHERE SLAB ABUTS BUILDING. THE PADS SHALL BE CONSTRUCTED OVER 12" OF GRAVEL BASE COMPACTED TO 80% REINFORCEMENT SHALL BE W#6 @ 6" W/4 PLACED AT CENTER OF SLAB.
- ALL EXISTING PAVING TO BE DISTURBED SHALL BE CUT ALONG A STRAIGHT LINE THROUGH ITS ENTIRE THICKNESS, BUT NEW PAVING INTO THE EXISTING PAVEMENT TO REMAIN AND TACK COAT THE JOINT.
- ANY PAVED REMOVED FOR UTILITY TRENCH EXCAVATION OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH A PAVEMENT SECTION CONSISTING OF 1 1/2" WEARING COURSE OVERLAYING A 1 1/2" BINDER COURSE OVERLAYING A 12" COMPACTED GRAVEL BASE COURSE.
- ALL AREAS TO BE PLANTED WITH GRASS SHALL BE TREATED WITH 100 POUNDS OF GROUND LIMESTONE PER 1,000 S.F. OF AREA PLANTED. ALL AREAS TO BE PLANTED WITH GRASS SHALL BE FERTILIZED WITH 10-10-10 AT THE RATE OF 1,000 POUNDS PER ACRE OR AS REQUIRED BY SOIL TEST. 40% OF THE NITROGEN SHALL BE ORGANIC FORM.
- ALL LANDSCAPED AREAS TO BE LOADED AND SEEDED SHALL HAVE THE FOLLOWING MIX:

PERENNIAL RYE	25%
KENTUCKY BLUE	25%
GREENING FESCUE OR PENNLAWN FESCUE	50%

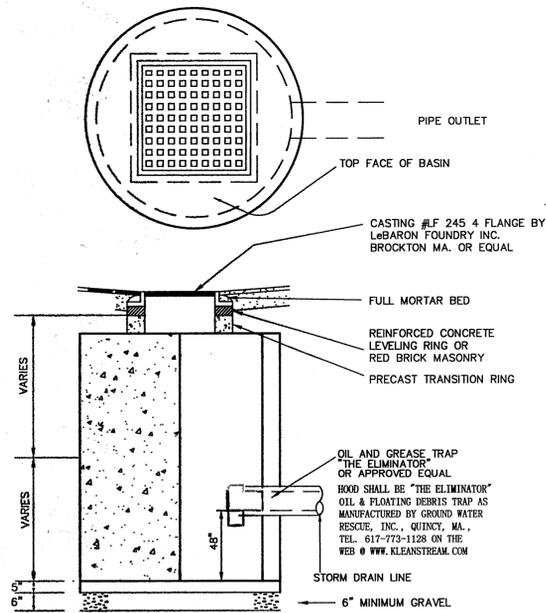
 SEED AT THE RATE OF 5#/1,000 S.F.
- THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEANUP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE BAY BALE BARRIERS AROUND DRAINAGE INLETS, MULCHING AND PLANTING OF DISTURBED AREAS.
- PRIOR TO THE COMMENCEMENT OF ANY OTHER WORK A SILT SACK SHALL BE INSTALLED IN EACH EXISTING DRAINAGE INLET.
- AFTER INSTALLATION OF EACH DRAINAGE INLET A SILT SACK SHALL BE INSTALLED IN EACH INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
- AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
- DURING CONSTRUCTION THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/4" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
- STABILIZATION MEASURES (SEEDING OR PLANTING, APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT) OF EXPOSED SOILS SHALL BE AS SOON AS PRACTICABLE AND IMMEDIATELY AFTER EARTH-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED. STABILIZATION TO BE COMPLETED WITHIN 14 DAYS.
- SILT SOCKS SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF ALL STOCK PILES.
- SPARE EROSION/SEDIMENT CONTROL MATERIALS SHALL BE AVAILABLE ON SITE FOR USE IN CONTINGENCY CONDITIONS OR AT THE DIRECTION OF HANOVER'S CODE ENFORCEMENT PERSONNEL.
- STORMWATER POLLUTION PREVENTION PLAN FOR POST CONTROL MEASURES.
- ALL STORM DRAIN INLETS SHOWN TO BE ABANDONED SHALL BE ABANDONED AS FOLLOWS SUCH THAT THE TOPS ARE NO LESS THAN 3" FROM FINISHED GRADE:
 - PRECAST DRAINAGE INLETS SHALL HAVE THE GRATE, FRAME AND CONE SECTION REMOVED. THE STORM DRAIN PIPE SHALL BE PLUGGED USING BRICK AND MORTAR AND THE REMAINING STRUCTURE SHALL BE BACK FILLED AND COMPACTED, OR THE ENTIRE STRUCTURE SHALL BE REMOVED AND REMAINING VOID SHALL BE BACKFILLED AND COMPACTED.
 - BLOCK DRAINAGE INLETS SHALL BE GRATE AND FRAMED REMOVED AND THE STORM DRAIN PLUGGED AS IN (A) ABOVE. THE STRUCTURE SHALL THEN BE CRUSHED, BAKETTED AND COMPACTED.
- ALL STORM DRAINS TO BE ABANDONED SHALL BE WITHIN 3" OF FINISHED GRADE SHALL BE REMOVED. ALL OTHERS WHICH ARE PLUGGED AT EACH END.

WHEELCHAIR RAMPS
NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©

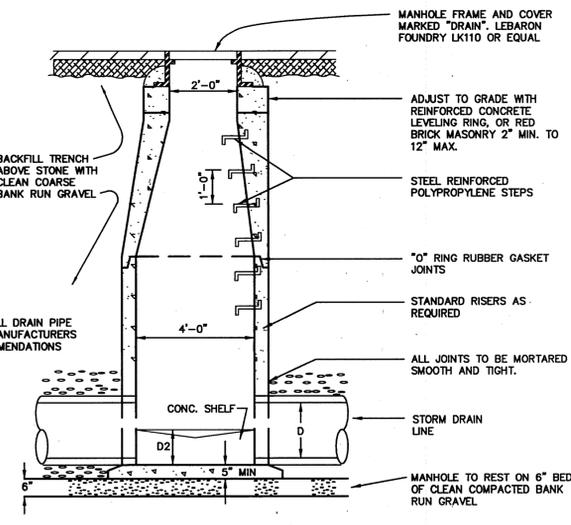
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NA	2. 10/19/13	PER TOWN COMMENTS	
DATE	1. 10/21/13	NO CHANGE	SMH
07/26/2013	REV. DATE	REVISION	BY
SHEET	7 OF 9		
PLAN NO.	NREF III PLEASANT LLC PLEASANT STREET CONNECTOR FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS		
DISK REF NO.	DETAIL SHEET		
F:\2013-039	KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS		
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CHKD BY	PHONE: 781 843 4333 FAX: 781 843 0028		
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APPD BY			
DNK			



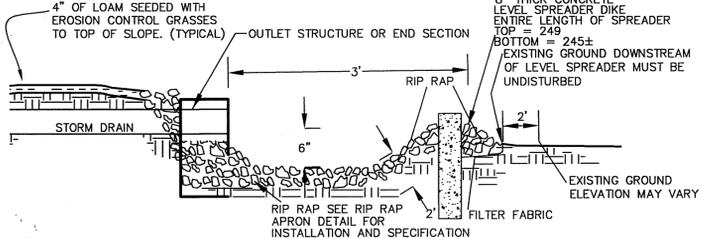
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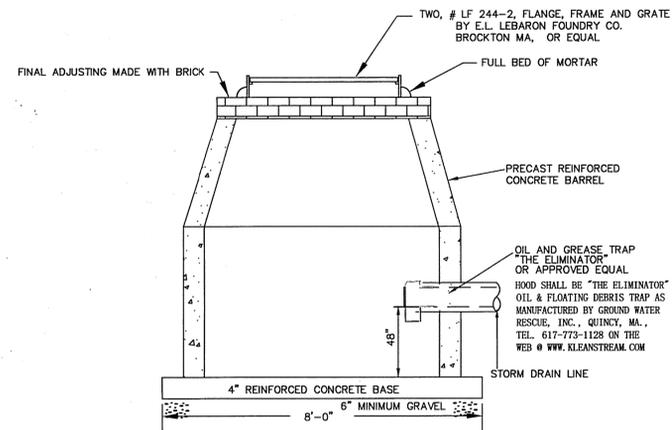
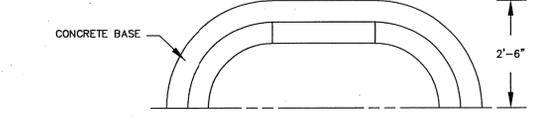
PRECAST CATCH BASIN DETAIL
NOT TO SCALE (PRCST-CTCH-BASIN-DETAIL) KELLY ENGINEERING GROUP, INC.



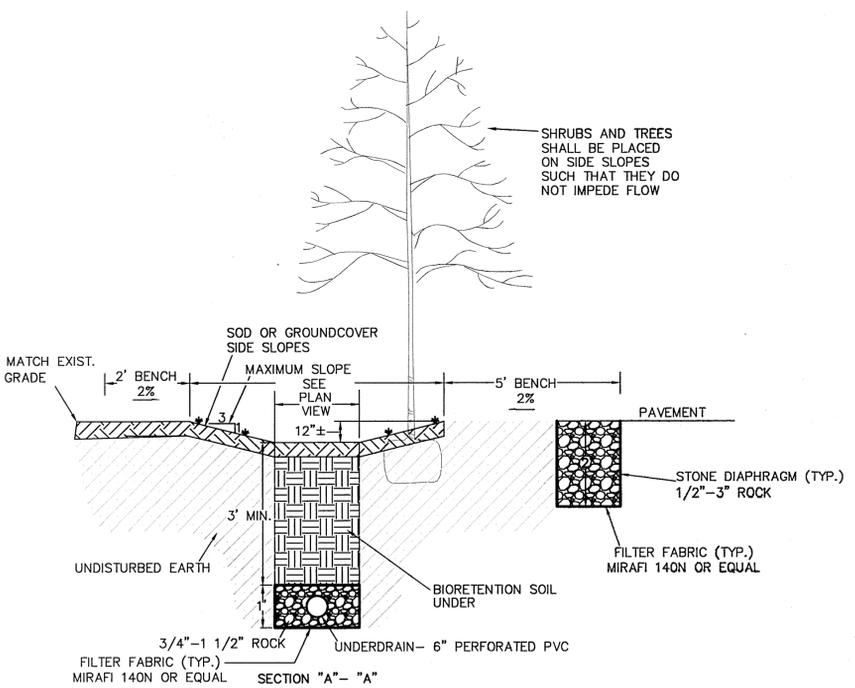
PRECAST DRAIN MANHOLE DETAIL
NOT TO SCALE (PRECAST-DRAIN-MANHOLE) KELLY ENGINEERING GROUP, INC.



LEVEL SPREADER DETAIL
NOT TO SCALE (LEVEL-SPREADER) KELLY ENGINEERING GROUP

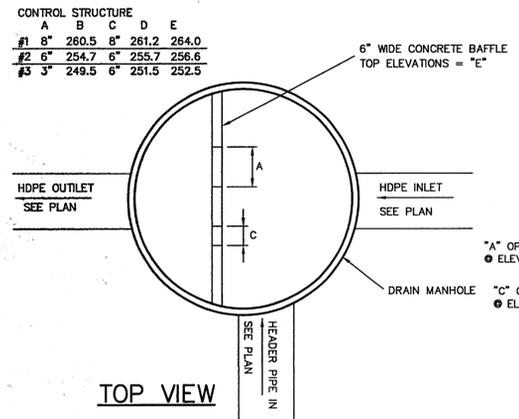


PRECAST DOUBLE CATCH BASIN
NOT TO SCALE (PRCST-DBL-CATCH-BASIN) KELLY ENGINEERING GROUP, INC.

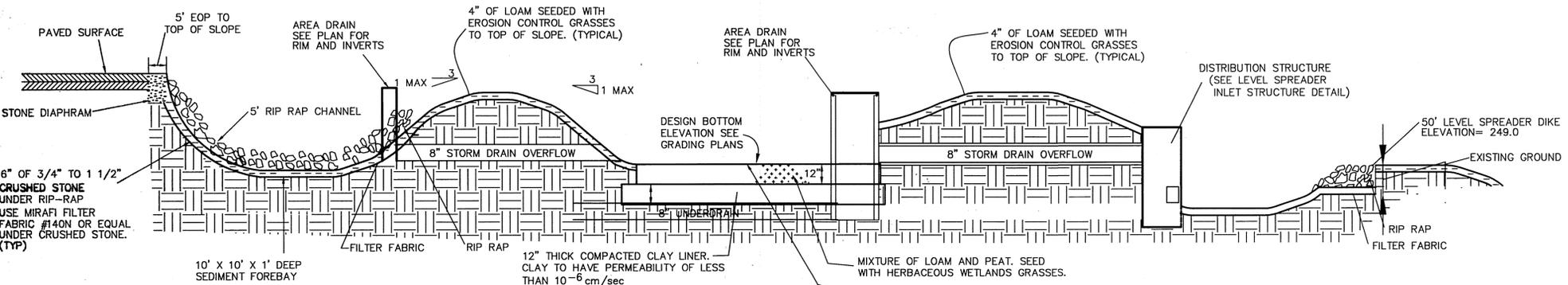


BIORETENTION SWALE/ RAIN GARDEN DETAIL
NOT TO SCALE (SWAL-DETAIL) KELLY ENGINEERING GROUP

- CONSTRUCTION:**
- DURING CONSTRUCTION, AVOID EXCESSIVELY COMPACTING SOILS AROUND THE BIORETENTION AREAS AND ACCUMULATING SILT AROUND THE DRAIN FIELD. TO MINIMIZE SEDIMENT LOADING IN THE TREATMENT AREA, DIRECT RUNOFF TO THE BIORETENTION AREA ONLY FROM AREAS THAT ARE STABILIZED; ALWAYS DIVERT CONSTRUCTION RUNOFF ELSEWHERE.
 - TO AVOID COMPACTION OF THE PARENT MATERIAL, WORK FROM THE EDGE OF THE AREA PROPOSED AS THE LOCATION OF AN EXFILTRATING BIORETENTION CELL. NEVER DIRECT RUNOFF TO THE CELL AND THE CONTRIBUTING DRAINAGE AREAS ARE FULLY STABILIZED.
 - PLACE PLANTING SOILS IN 1-FOOT TO 2-FOOT LIFTS AND COMPACT WITH MINIMAL PRESSURE UNTIL DESIRED ELEVATION IS REACHED. BIORETENTION SOIL SHALL BE PLACED AND GRADED USING LOW GROUND-CONTACT PRESSURE EQUIPMENT.
 - PLANTINGS SHOULD NOT REQUIRE FERTILIZERS AND PESTICIDES.
 - CONSTRUCTION RELATED RUNOFF OR WATER FROM DEWATERING ACTIVITIES IS PROHIBITED FROM DISCHARGING INTO THE BIORETENTION AREAS AT ANY POINT DURING OR AFTER INSTALLATION.
- BIORETENTION SOIL MIX:**
- BIORETENTION SOIL MIX SHOULD BE A MIXTURE OF 40% SAND, 20-30% TOPSOIL, AND 30-40% COMPOST.
 - THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN 2-INCHES. THE CLAY CONTENT SHALL NOT EXCEEDING 5%.
 - SOIL PH SHOULD BE BETWEEN 5.5-6.5.
 - SOILS SHOULD BE 1.5%-3% ORGANIC CONTENT AND A MAXIMUM 500 ppm CONCENTRATION OF SOLUBLE SALTS.
 - THE SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D 422
- | SIEVE SIZE | PERCENT PASSING |
|-------------|-----------------|
| 2-INCH | 100 |
| 3/4-INCH | 70-100 |
| 1/4-INCH | 50-80 |
| U.S. No.40 | 15-40 |
| U.S. No.200 | 0-3 |
- THE TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE.
 - THE COMPOST COMPONENT MUST BE PROCESSED FROM YARD WASTE IN ACCORDANCE WITH MASSDEP GUIDELINES (SEE WWW.MASS.GOV/DEP/RECYCLE/REDUCE/LEAFGUID.DOC). THE COMPOST SHALL NOT CONTAIN BIOSOLIDS.



CONTROL STRUCTURE MANHOLE
NOT TO SCALE (BYPASS-MANHOLE) KELLY ENGINEERING GROUP, INC.



WATER QUALITY AREA
NOT TO SCALE (WATER-QUALITY-1) KELLY ENGINEERING GROUP

RECOMMENDED BIORETENTION AREA PLANTINGS

PLANTINGS SHOULD NOT REQUIRE FERTILIZERS AND PESTICIDES.

GRASSES
SWITCH GRASS, LITTLE BLUE STEM, PRAIRIE DROPSEED, WOOD OATS

FLOWERS
WILD LUPINE, BUTTERFLY SEED, BLACKEYED SUSAN, PALE PURPLE CONEFLOWER, ASTER, COLUMBINE, GOLDEN ALEXANDER

SHRUBS
INKBERRY, WINTERBERRY, RED OSLER DOGWOOD, SILKY DOGWOOD

TREES
RED MAPLE, RIVER BIRCH, GRAY BIRCH

SCALE	DATE	NO CHANGE	BY
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			BY

NREF III PLEASANT LLC
PLEASANT STREET CONNECTOR
FRAMINGHAM & SOUTHBOROUGH, MASSACHUSETTS

DETAIL SHEET

KELLY ENGINEERING GROUP, INC.
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7.20.14

DAVID NOEL
KELLY
CIVIL
NO. 37542
REGISTERED PROFESSIONAL ENGINEER

SHEET NO. **9**

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APPROVED: TOWN OF FRAMINGHAM PLANNING BOARD
APPROVED: TOWN OF SOUTHBOROUGH PLANNING BOARD

APPROVED DATE: 2/20/2014