

SITE DEVELOPMENT PLANS

FOR

518 PLEASANT STREET FRAMINGHAM, MA

MARCH 31, 2014

SHEET INDEX					
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION	REVISIONS	
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2	OVERALL EXISTING CONDITIONS PLAN				
3	EXISTING CONDITIONS PLAN				
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6	GRADING & DRAINAGE PLAN				
7	UTILITY PLAN				
8	DETAIL SHEET				
9	DETAIL SHEET				
L1.0	LANDSCAPING PLAN				

APPLICANT:

WALDEN CENTER FOR EDUCATION AND RESEARCH, INC.
9 HOPE AVENUE, SUITE 500
WALTHAM, MA 02453

OWNER:

THE MARIST FATHERS OF BOSTON
27 ISABELLA STREET
BOSTON, MA 02116

CIVIL ENGINEERS:

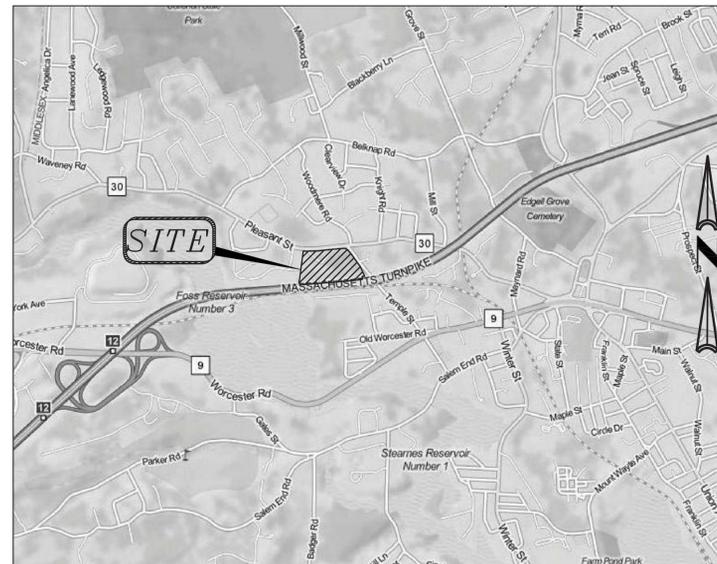
KELLY ENGINEERING GROUP, INC.
0 CAMPANELLI DRIVE
BRAintree, MA 02184

ARCHITECT:

GMI ARCHITECTS
45 NEWBURY STREET/503
BOSTON, MA 02116

LANDSCAPE ARCHITECT:

BIRCHWOOD DESIGN GROUP
46 DIKE STREET
PROVIDENCE RI 02909



LOCATION MAP

David Noel Kelly
David Noel Kelly
2014.04.01
12:24:39 -04'00'



SCALE NA	DISK REF NO. F:\P\2013-035
DATE 03/31/14	DRAWN BY C.L.
SHEET 1 OF 9	CHKD BY DAM
PLAN NO. 2013-035-TS00	APPD BY DNK

WALDEN CENTER FOR EDUCATION AND RESEARCH, INC.
FRAMINGHAM, MA
KELLY ENGINEERING GROUP, INC.
CIVIL ENGINEERING CONSULTANTS
0 CAMPANELLI DRIVE · BRAINTREE MA · 02184
PHONE: 781 843 4333 FAX: 781 843 0028

SHEET NO.

1

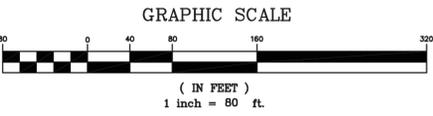
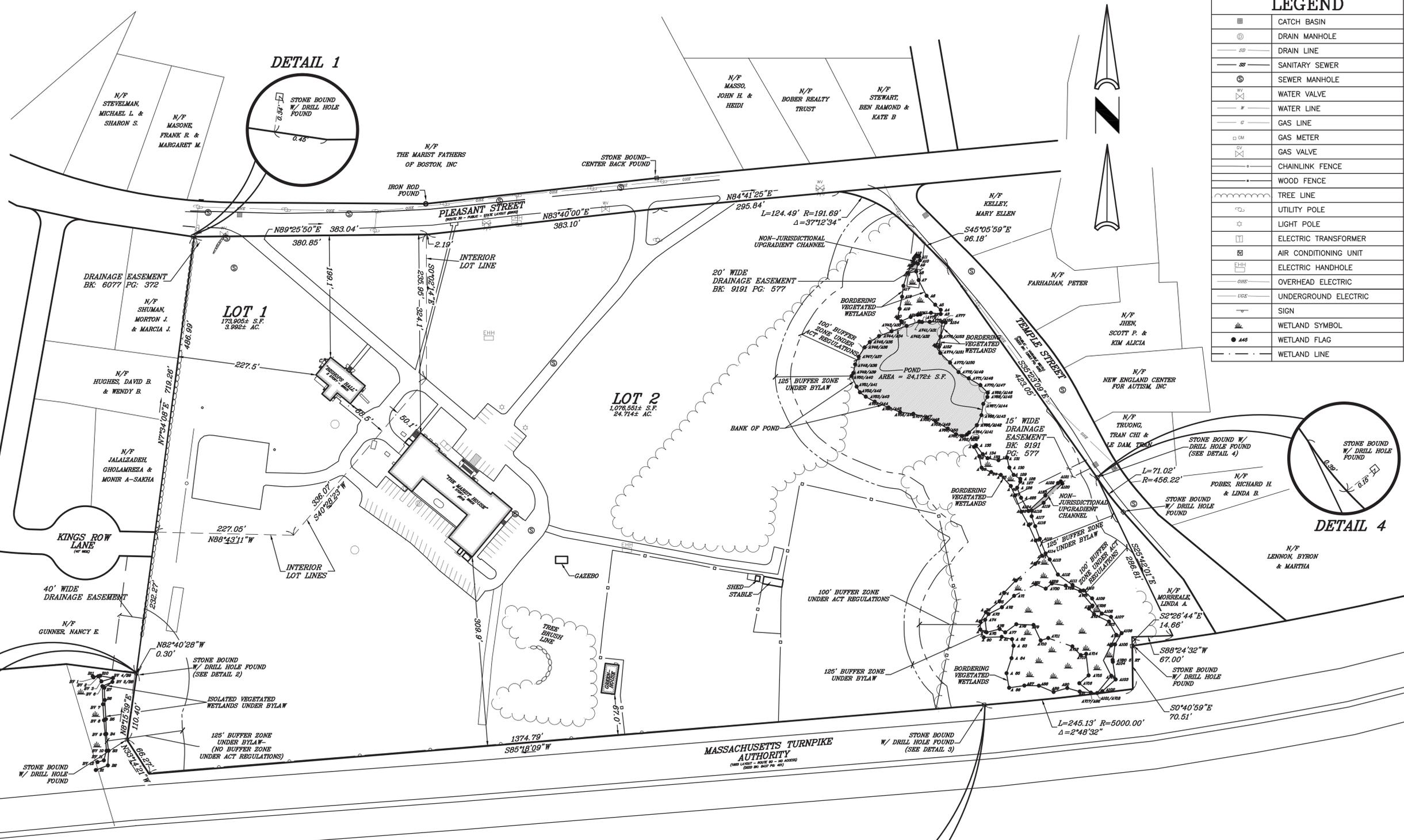
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TREE LEGEND	
TYPE/SIZE IN # INCHES	
NMA	NORWAY MAPLE
HMA	HICKORY
RAM	RED MAPLE
SMA	SUGAR MAPLE
APA	APPLE
CPA	COPPER BEECH
WPA	WEeping BEECH
BEA	BOX ELDER
CEA	CEDAR
RECA	RED CEDAR
WCA	WHITE CEDAR
HEMA	HEMLOCK
REPA	RED PINE
WPA	WHITE PINE
FPA	FIR
ROA	RED OAK
MOA	MULBERRY
WAA	WHITE ASH
ELMA	ELM
BCA	BLACK CHERRY
WACA	BLACK WALNUT
WOA	WHITE OAK
DCYA	DECIDUOUS TREE
SYCA	SYCAMORE
NSA	NORWAY SPRUCE
BSA	BLUE SPRUCE
RSA	RED SPRUCE
WSPA	WHITE SPRUCE

LEGEND	
	CATCH BASIN
	DRAIN MANHOLE
	DRAIN LINE
	SANITARY SEWER
	SEWER MANHOLE
	WATER VALVE
	WATER LINE
	GAS LINE
	GAS METER
	GAS VALVE
	CHAINLINK FENCE
	WOOD FENCE
	TREE LINE
	UTILITY POLE
	LIGHT POLE
	ELECTRIC TRANSFORMER
	AIR CONDITIONING UNIT
	ELECTRIC HANDHOLE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	SIGN
	WETLAND SYMBOL
	WETLAND FLAG
	WETLAND LINE



NOTES:

- UNDERGROUND FEATURES HAVE BEEN COMPILED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND KELLY ENGINEERING GROUP, INC. DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THIS SITE. THE EXISTENCE OF WHICH ARE UNKNOWN TO KELLY ENGINEERING GROUP, INC. THE SIZE, LOCATION, AND EXISTENCE OF ALL SUCH FEATURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION.
- THE ELEVATIONS SHOWN HEREON ARE BASED ON THE TOWN OF FRAMINGHAM SEWER DATUM.
- WETLAND FLAGS SHOWN WERE FLAGGED BY ECOTEC, INC., ON APRIL 26, 2013 AND WERE FIELD LOCATED BY KELLY ENGINEERING GROUP, INC.

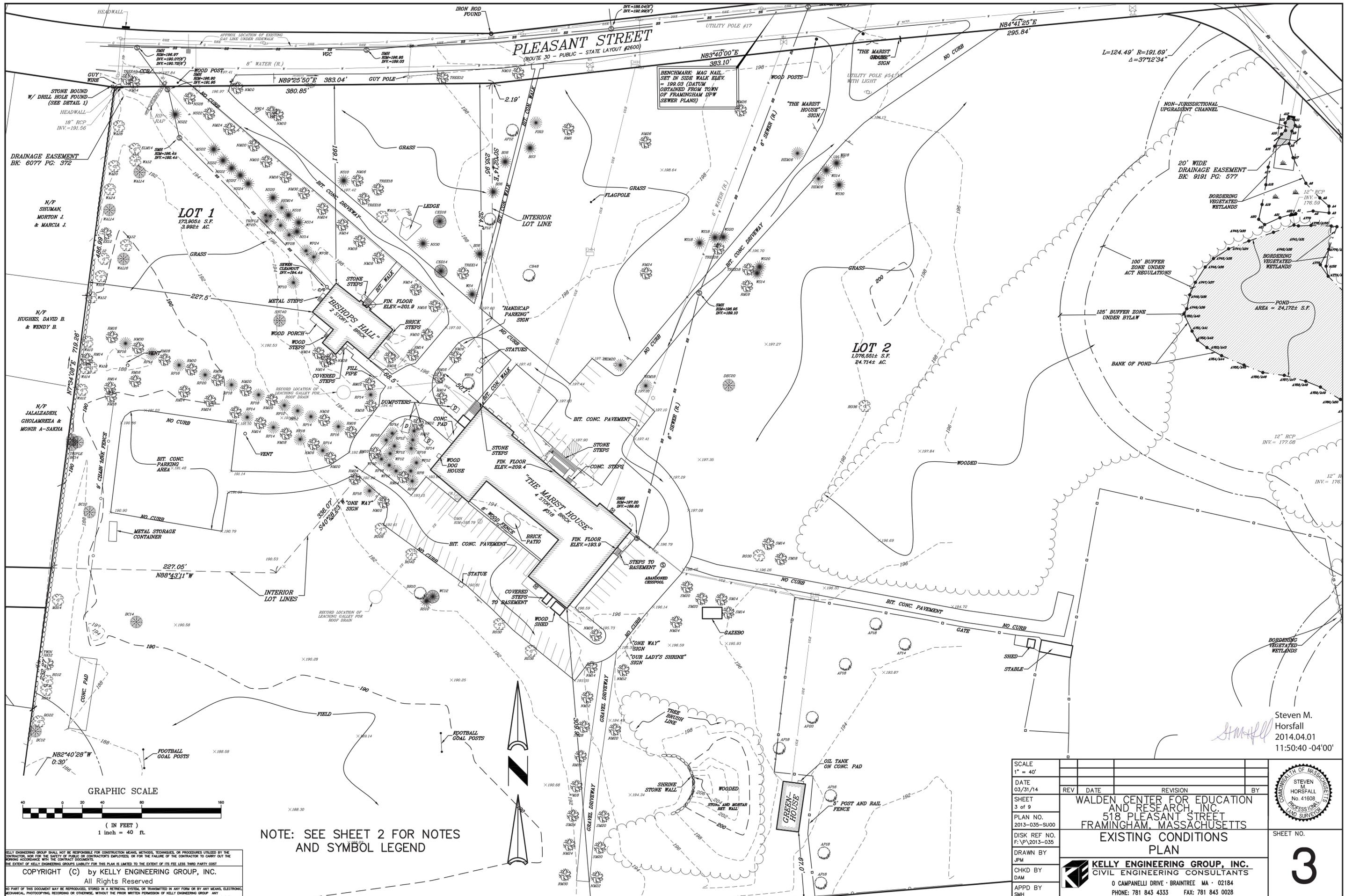
- PLAN REFERENCES:**
- PLAN OF LAND IN FRAMINGHAM, MASS., RECORDED AS PLAN NO. 428 OF 2007.
 - DEFINITIVE SUBDIVISION PLAN OF PLEASANT RUN IN FRAMINGHAM, MASS. RECORDED AS PLAN 456 OF 1981.
 - 1956 MASSACHUSETTS TURNPIKE LAYOUT RECORDED AS PLAN 512 OF 1955.
 - 1929 STATE HIGHWAY ALTERATION #2600 OF PLEASANT STREET.
 - PLAN OF RELOCATION AND WIDENING OF TEMPLE STREET RECORDED AS PLAN 785 OF 1974.
 - PLAN OF DRAIN EASEMENTS RECORDED AS PLAN NO. 950 OF 1958.

SCALE 1" = 80'	DATE 03/31/14	REV	DATE	REVISION	BY
SHEET 2 of 9	PLAN NO. 2013-035-SU00	WALDEN CENTER FOR EDUCATION AND RESEARCH, INC. 518 PLEASANT STREET FRAMINGHAM, MASSACHUSETTS EXISTING CONDITIONS PLAN			
DISK REF NO. F:\P\2013-035	DRAWN BY JPM				
APPD BY SMH	 KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE · BRAINTREE MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028	SHEET NO. <h1>2</h1>			

Steven M.
Horsfall
2014.04.01
11:46:50 -04'00'



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PLEASANT STREET
 (ROUTE 30 - PUBLIC - STATE LAYOUT #2600)

LOT 1
 173,906± S.F.
 3.992± AC.

LOT 2
 1,076,551± S.F.
 24.714± AC.

"BISHOP'S HALL"
 2 STORY BRICK
 FIN. FLOOR ELEV. = 201.9

"THE MARIST HOUSE"
 4 STORY BRICK
 FIN. FLOOR ELEV. = 193.9

GREEN HOUSE

20' WIDE DRAINAGE EASEMENT
 BK: 9191 PG: 577

100' BUFFER ZONE UNDER ACT REGULATIONS

125' BUFFER ZONE UNDER BYLAW

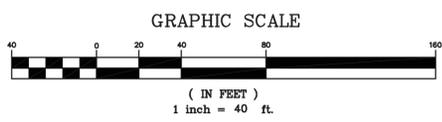
12" RCP
 INV. = 176.59

12" RCP
 INV. = 177.06

12" RCP
 INV. = 177.06

Steven M. Horsfall
 2014.04.01
 11:50:40 -04'00'

SMH



NOTE: SEE SHEET 2 FOR NOTES AND SYMBOL LEGEND

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SCALE 1" = 40'	DATE 03/31/14	REV	DATE	REVISION	BY
SHEET 3 of 9	PLAN NO. 2013-035-SU00	WALDEN CENTER FOR EDUCATION AND RESEARCH, INC. 518 PLEASANT STREET FRAMINGHAM, MASSACHUSETTS			
DISK REF NO. F:\P\2013-035	EXISTING CONDITIONS PLAN				
DRAWN BY JPM	KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE · BRAINTREE MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028				
CHKD BY DAM					
APPD BY SMH					
SHEET NO. 3					

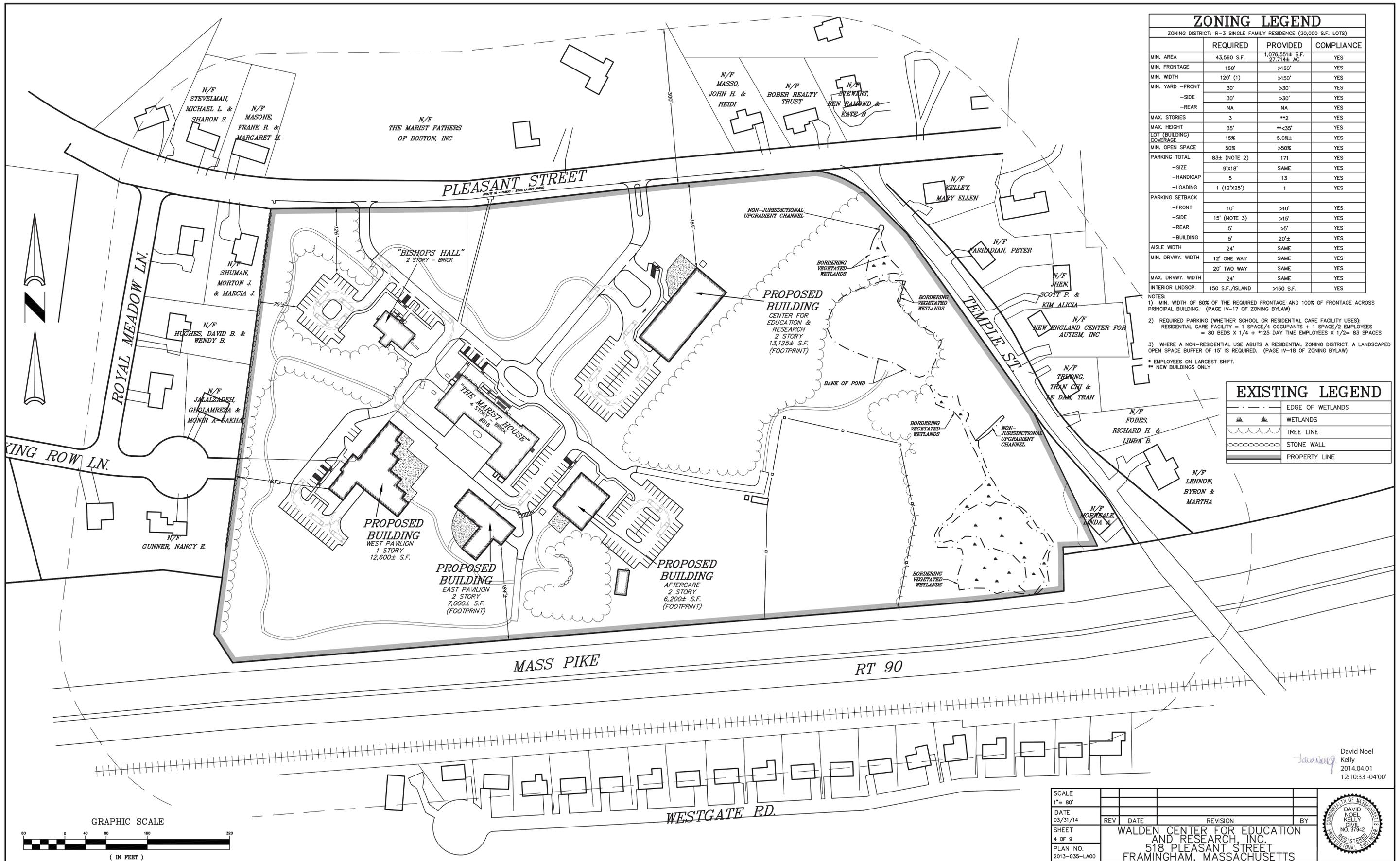
ZONING LEGEND

ZONING DISTRICT: R-3 SINGLE FAMILY RESIDENCE (20,000 S.F. LOTS)				
	REQUIRED	PROVIDED	COMPLIANCE	
MIN. AREA	43,560 S.F.	1,076,551± S.F. 27.71± AC	YES	
MIN. FRONTAGE	150'	>150'	YES	
MIN. WIDTH	120' (1)	>150'	YES	
MIN. YARD -FRONT	30'	>30'	YES	
	-SIDE	30'	>30'	YES
	-REAR	NA	NA	YES
MAX. STORIES	3	**2	YES	
MAX. HEIGHT	35'	**<35'	YES	
LOT (BUILDING) COVERAGE	15%	5.0%±	YES	
MIN. OPEN SPACE	50%	>50%	YES	
PARKING TOTAL	83± (NOTE 2)	171	YES	
	-SIZE	9'x18'	SAME	YES
	-HANDICAP	5	13	YES
PARKING SETBACK	-FRONT	10'	>10'	YES
	-SIDE	15' (NOTE 3)	>15'	YES
AISLE WIDTH	-REAR	5'	>5'	YES
	-BUILDING	5'	20'±	YES
MIN. DRWY. WIDTH	24'	SAME	YES	
	20' TWD WAY	SAME	YES	
MAX. DRWY. WIDTH	24'	SAME	YES	
INTERIOR LANDSCP.	150 S.F./ISLAND	>150 S.F.	YES	

- NOTES:
- MIN. WIDTH OF BOX OF THE REQUIRED FRONTAGE AND 100% OF FRONTAGE ACROSS PRINCIPAL BUILDING. (PAGE IV-17 OF ZONING BYLAW)
 - REQUIRED PARKING (WHETHER SCHOOL OR RESIDENTIAL CARE FACILITY USES):
RESIDENTIAL CARE FACILITY = 1 SPACE/4 OCCUPANTS + 1 SPACE/2 EMPLOYEES
= 80 BEDS X 1/4 + *125 DAY TIME EMPLOYEES X 1/2 = 83 SPACES
 - WHERE A NON-RESIDENTIAL USE ABUTS A RESIDENTIAL ZONING DISTRICT, A LANDSCAPED OPEN SPACE BUFFER OF 15' IS REQUIRED. (PAGE IV-18 OF ZONING BYLAW)
- * EMPLOYEES ON LARGEST SHIFT.
** NEW BUILDINGS ONLY.

EXISTING LEGEND

	EDGE OF WETLANDS
	WETLANDS
	TREE LINE
	STONE WALL
	PROPERTY LINE



David Noel
Kelly
2014.04.01
12:10:33 -0400'

SCALE 1" = 80'	REV	DATE	REVISION	BY
DATE 03/31/14				
SHEET 4 OF 9				
PLAN NO. 2013-035-LA00				
DISK REF NO. F:\P\2013-035				
DRAWN BY C.J.L.	WALDEN CENTER FOR EDUCATION AND RESEARCH, INC. 518 PLEASANT STREET FRAMINGHAM, MASSACHUSETTS OVERALL LAYOUT PLAN			
CHKD BY DAM				
APPD BY SMH				
KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE · BRAINTREE MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028				
SHEET NO.				4

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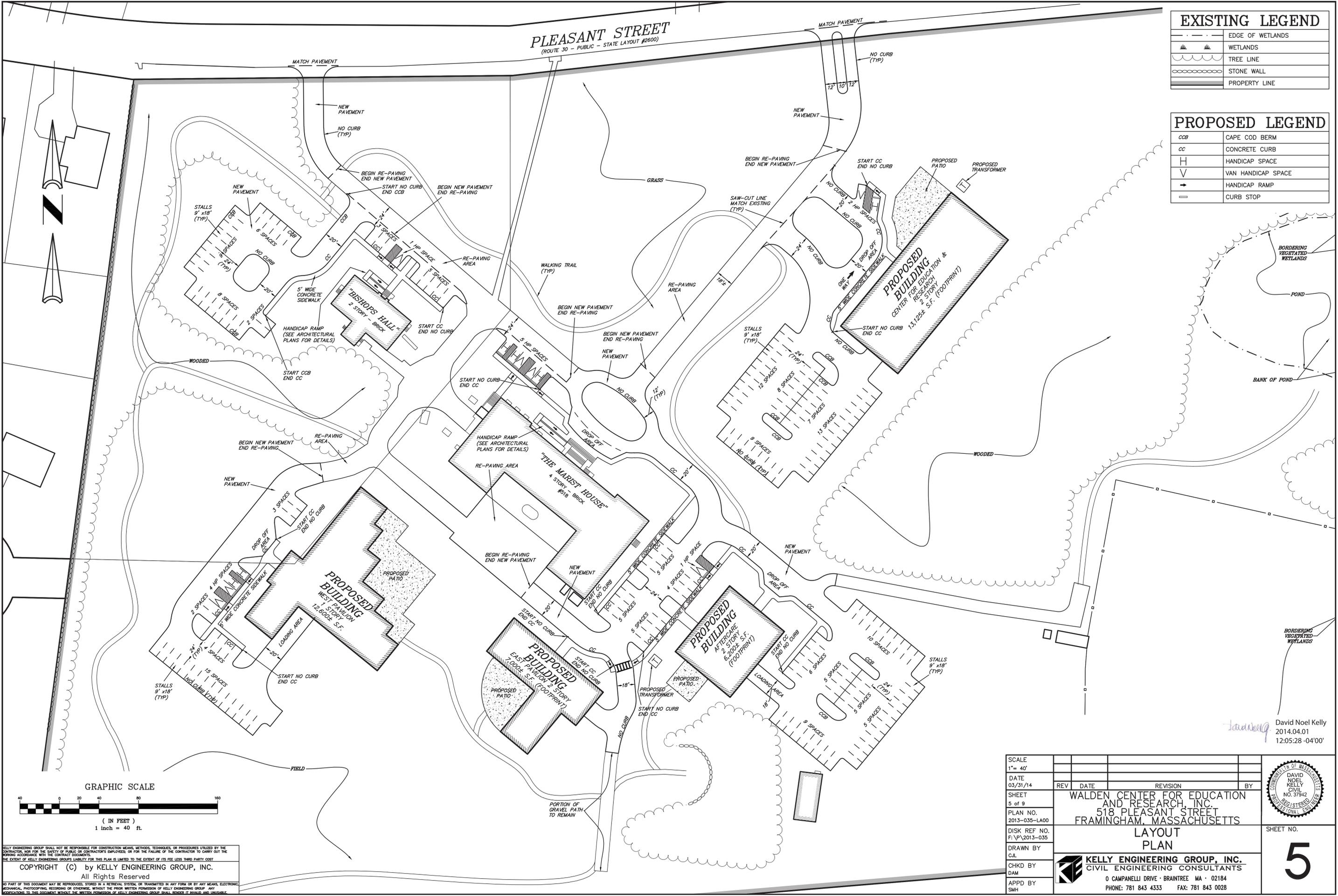
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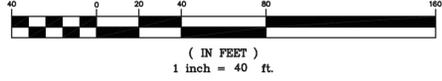
PLEASANT STREET
(ROUTE 30 - PUBLIC - STATE LAYOUT #2800)

EXISTING LEGEND	
	EDGE OF WETLANDS
	WETLANDS
	TREE LINE
	STONE WALL
	PROPERTY LINE

PROPOSED LEGEND	
	CAPE COD BERM
	CONCRETE CURB
	HANDICAP SPACE
	VAN HANDICAP SPACE
	HANDICAP RAMP
	CURB STOP



GRAPHIC SCALE



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David Noel Kelly
2014.04.01
12:05:28 -04'00'

SCALE 1" = 40'	REV	DATE	REVISION	BY
DATE 03/31/14				
SHEET 5 of 9	WALDEN CENTER FOR EDUCATION AND RESEARCH, INC. 518 PLEASANT STREET FRAMINGHAM, MASSACHUSETTS LAYOUT PLAN			
PLAN NO. 2013-035-LA00				
DISK REF NO. F:\P\2013-035	DRAWN BY C.J.L. CHKD BY DAM APPD BY SMH			
KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE · BRAINTREE MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028				
SHEET NO. 				5

PLEASANT STREET
(ROUTE 30 - PUBLIC - STATE LAYOUT #2600)

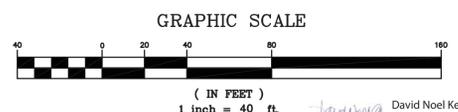
EXISTING LEGEND

	CATCH BASIN
	DRAIN MANHOLE
	DRAIN LINE
	SANITARY SEWER
	SEWER MANHOLE
	WATER VALVE
	WATER LINE
	GAS LINE
	GAS METER
	GAS VALVE
	CHAINLINK FENCE
	WOOD FENCE
	TREE LINE
	UTILITY POLE
	LIGHT POLE
	ELECTRIC TRANSFORMER
	AIR CONDITIONING UNIT
	ELECTRIC HANDHOLE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	SIGN
	WETLAND SYMBOL
	WETLAND FLAG *
	WETLAND LINE

PROPOSED LEGEND

	RIP RAP
	FLARED END SECTION
	WATER QUALITY INLET
	DRAIN MANHOLE
	DRAIN CLEAN OUT
	DRAIN LINE
	ROOF DRAIN LINE
	SEWER MANHOLE
	SEWER LINE
	SEWER FORCE MAIN
	CONTOUR LINE
	SPOT GRADE
	SILT SOCK
	SILT SACK

- NOTES**
1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.
 2. WITHIN REPAVING AREAS EXISTING PAVEMENT TO BE PULVERIZED. GRADE PULVERIZED AREA TO PROVIDED POSITIVE FLOW TO DRAINAGE SYSTEM. REPAVE PER DETAIL. ADJUST RIMS, GATES & OTHER UTILITY APPURTENANCES TO FINISH GRADE.
 3. ALL EXISTING PAVEMENT OUTSIDE OF THE NEW PAVEMENT & RE-PAVING AREAS IS TO BE REMOVED AND REPLACED WITH LOAM & SEED.

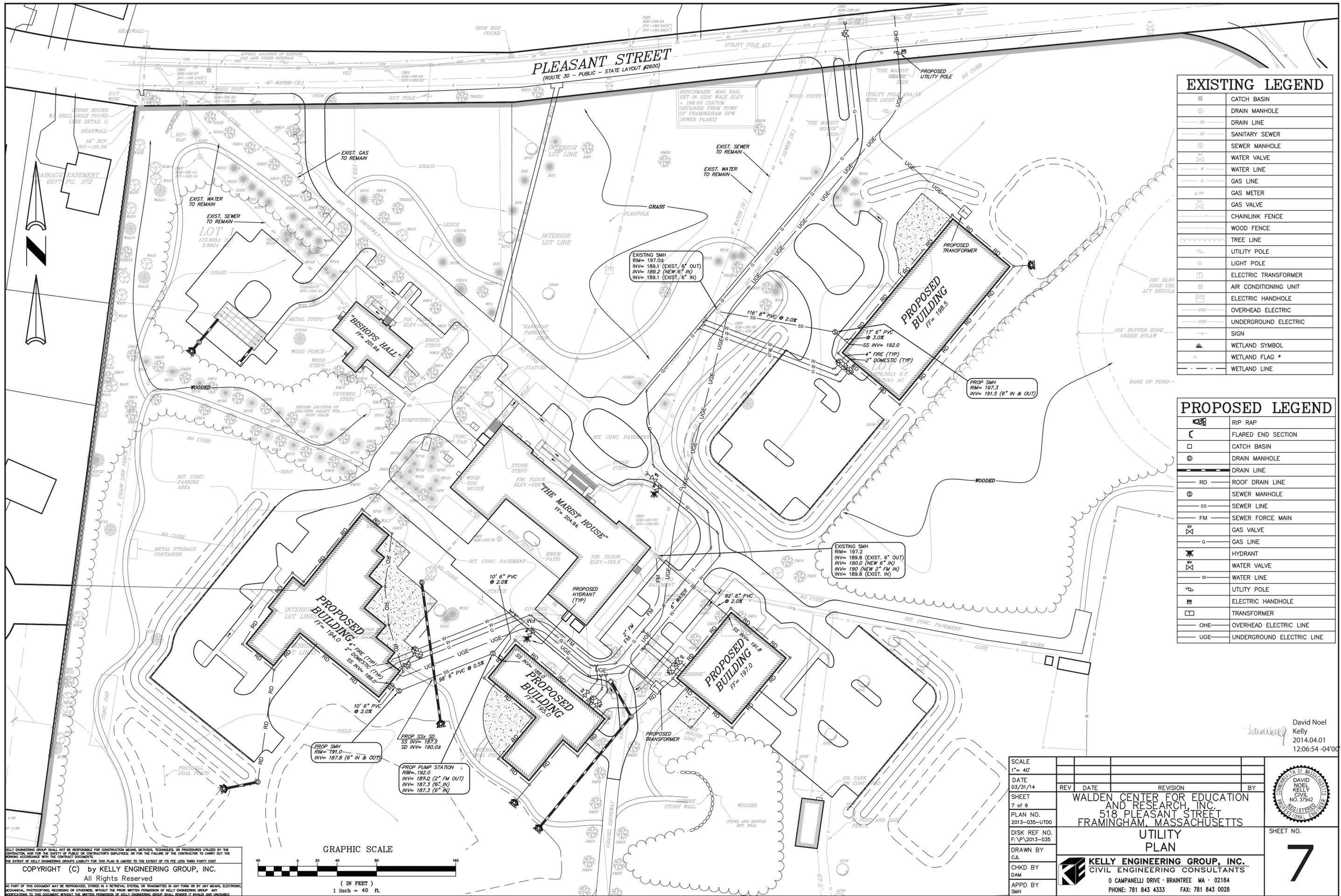


SCALE 1" = 40'	DATE 03/31/14	REV	DATE	REVISION	BY
SHEET 5 of 9	PLAN NO. 2013-035-GD00	WALDEN CENTER FOR EDUCATION AND RESEARCH, INC. 518 PLEASANT STREET FRAMINGHAM, MASSACHUSETTS GRADING & DRAINAGE PLAN			
DISK REF NO. F:\P\2013-035	DRAWN BY C.J.L.				
CHKD BY DAM	APPD BY SMH	DAVID NOEL KELLY CIVIL NO. 37942 REGISTERED PROFESSIONAL ENGINEER			
SHEET NO. <div style="font-size: 2em; font-weight: bold; text-align: center;">6</div>		KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE • BRAintree MA • 02184 PHONE: 781 843 4333 FAX: 781 843 0028			

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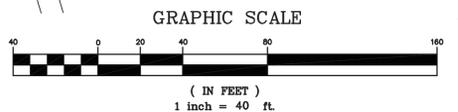
EXISTING LEGEND	
[Symbol]	CATCH BASIN
[Symbol]	DRAIN MANHOLE
[Symbol]	DRAIN LINE
[Symbol]	SANITARY SEWER
[Symbol]	SEWER MANHOLE
[Symbol]	WATER VALVE
[Symbol]	WATER LINE
[Symbol]	GAS LINE
[Symbol]	GAS METER
[Symbol]	GAS VALVE
[Symbol]	CHAINLINK FENCE
[Symbol]	WOOD FENCE
[Symbol]	TREE LINE
[Symbol]	UTILITY POLE
[Symbol]	LIGHT POLE
[Symbol]	ELECTRIC TRANSFORMER
[Symbol]	AIR CONDITIONING UNIT
[Symbol]	ELECTRIC HANDHOLE
[Symbol]	OVERHEAD ELECTRIC
[Symbol]	UNDERGROUND ELECTRIC
[Symbol]	SIGN
[Symbol]	WETLAND SYMBOL
[Symbol]	WETLAND FLAG *
[Symbol]	WETLAND LINE

PROPOSED LEGEND	
[Symbol]	RIP RAP
[Symbol]	FLARED END SECTION
[Symbol]	CATCH BASIN
[Symbol]	DRAIN MANHOLE
[Symbol]	DRAIN LINE
[Symbol]	ROOF DRAIN LINE
[Symbol]	SEWER MANHOLE
[Symbol]	SEWER LINE
[Symbol]	SEWER FORCE MAIN
[Symbol]	GAS VALVE
[Symbol]	GAS LINE
[Symbol]	HYDRANT
[Symbol]	WATER VALVE
[Symbol]	WATER LINE
[Symbol]	UTILITY POLE
[Symbol]	ELECTRIC HANDHOLE
[Symbol]	TRANSFORMER
[Symbol]	OVERHEAD ELECTRIC LINE
[Symbol]	UNDERGROUND ELECTRIC LINE

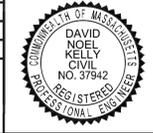
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1 inch = 40 ft

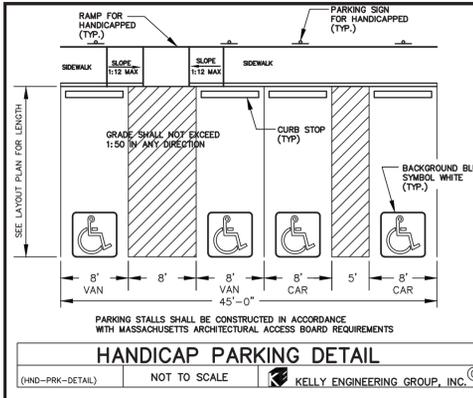


SCALE 1" = 40'	DATE 03/31/14	REV	DATE	REVISION	BY
SHEET 7 of 9	PLAN NO. 2013-035-UT00	WALDEN CENTER FOR EDUCATION AND RESEARCH, INC. 518 PLEASANT STREET FRAMINGHAM, MASSACHUSETTS UTILITY PLAN			
DISK REF NO. F:\P\2013-035	DRAWN BY C.J.L.				
CHKD BY DAM	APPD BY SMH	DAVID NOEL KELLY 2014.04.01 12:06:54 - 04'00"			
KELLY ENGINEERING GROUP, INC. CIVIL ENGINEERING CONSULTANTS 0 CAMPANELLI DRIVE · BRAINTREE MA · 02184 PHONE: 781 843 4333 FAX: 781 843 0028		SHEET NO. 7			

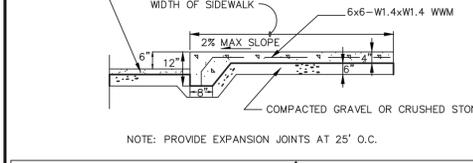


CONSTRUCTION NOTES

- A1. 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 UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.
- A2. THE CONTRACTOR SHALL NOTIFY THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
- A3. 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.
- A4. ALL WORK SHALL CONFORM TO A SITE PLAN REVIEW TO BE ISSUED BY THE TOWN OF FRAMINGHAM PLANNING BOARD.
- A5. FOR ANY PROJECT THAT INVOLVES 1 ACRE OR MORE OF DISTURBANCE CONTRACTOR SHALL SECURE A NPDES PERMIT PRIOR TO BEGINNING ANY GRADING ACTIVITIES.
- A6. 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 SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR 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.
- A7. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
- A8. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSION AND DOOR LOCATIONS.
- A9. BENCHMARK ELEVATION IS 199.03 LOCATED AS SHOWN ON SHEET 3. DATUM IS NAVD.
- B1. REFER TO PLUMBING PLANS FOR EXACT SIZE AND LOCATION OF SANITARY AND WATER CONNECTIONS.
- B2. REFER TO ELECTRICAL PLANS FOR THE LIGHTING CIRCUITS, FIXTURE DETAIL AND BUILDING CONNECTION LOCATION.
- B3. ALL H.D.P.E. 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 III.
- B4. 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.
- C1. WALKS SHALL BE 4" THICK AND SHALL BE CONSTRUCTED ON 6" OF COMPACTED BANK GRAVEL. CONCRETE FOR WALKS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 4,000 PSI. WALKS SHALL BE REINFORCED WITH W/M 6x6 W1.4/W1.4 CONFORMING TO ASTM A1184.
- C2. BASE MATERIAL SHALL BE CLEAN BANK RUN GRAVEL, CONFORMING TO M.D.P.W. M1.031.1, 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 WET DURING ROLLING TO BIND THE MATERIAL. ALL STONES OF 4" DIAMETER OR LARGER SHALL BE REMOVED FROM THE SUB-BASE PRIOR TO PLACING BASE MATERIAL.
- C3. TRANSFORMER PAD SHALL BE INSTALLED PER PROVIDERS SPECIFICATIONS.
- C4. 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 I-1.
- C5. THE AGGREGATE SHALL BE COMPOSED, MIXED AND LAID HOT IN TWO COURSES AS SPECIFIED IN THE "COMMONWEALTH OF MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES", 1988 EDITION, SECTION 460 FOR CLASS I BITUMINOUS CONCRETE PAVEMENT, AS SPECIFICALLY SET FORTH IN SECTION 460.20 AND 460.82.
- D1. 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.
- D2. ALL LANDSCAPED AREAS TO BE LOAMED AND SEEDED SHALL HAVE THE FOLLOWING MIX:
 PERENNIAL RYE 25%
 KENTUCKY BLUE 25%
 CREEPING RED FESCUE OR PENNLAWN FESCUE 50%
 SEED AT THE RATE OF 5#/1,000 S.F.
- D3. ALL AREAS INDICATED TO BE LOAMED AND SEEDED SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL SPREAD EVENLY THROUGHOUT. PROVIDE EROSION CONTROL MEASURES AS NECESSARY TO PROVIDE SLOPE STABILITY UNTIL VEGETATION IS ESTABLISHED.
- E1. 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.
- E2. 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 HAY BALE DIKES AROUND DRAINAGE INLETS, MULCHING AND PLANTING OF DISTURBED AREAS.
- E3. AFTER INSTALLATION OF EACH DRAINAGE INLET A SILT SACK SHALL BE INSTALLED IN EACH INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
- E4. AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
- E5. DURING CONSTRUCTION THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
- F1. 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:
 (A) 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.
 (B) BLOCK DRAINAGE INLETS SHALL BE GRATE AND FRAMED REMOVED AND THE STORM DRAIN PLUGGED AS IN (A) ABOVE. THE STRUCTURE SHALL THEN BE CRUSHED, BACKFILLED AND COMPACTED.
- F2. ALL STORM DRAINS TO BE ABANDONED WHICH ARE WITHIN 3' OF FINISHED GRADE SHALL BE REMOVED. ALL OTHERS SHALL BE PLUGGED AT EACH END.



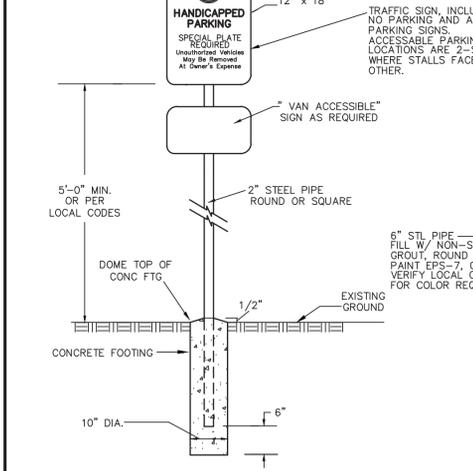
HANDICAP PARKING DETAIL
 (HND-PRK-DETAIL) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



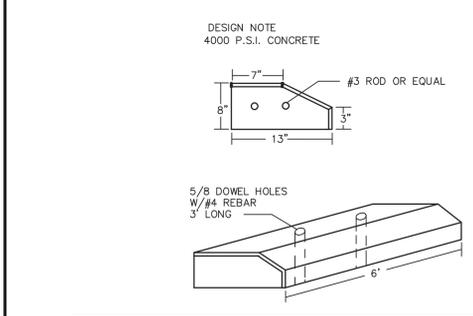
CONCRETE WALK DETAIL
 (CON-WALK-DETAIL) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



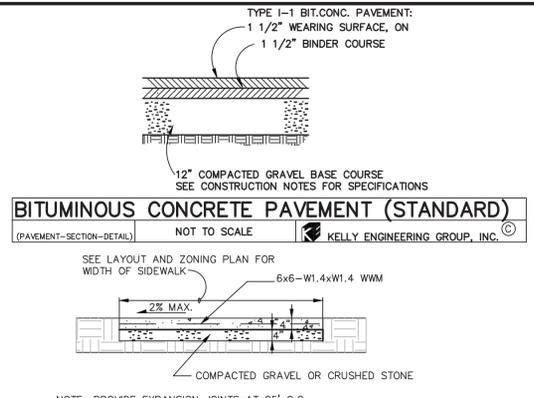
INTEGRAL SIDEWALK/ CURB DETAIL
 (INTEGRAL-SIDEWALK-CURB) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



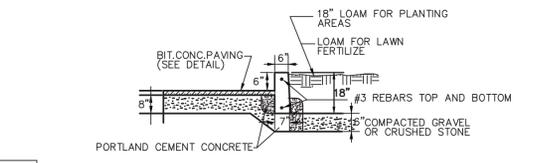
HANDICAP SIGN DETAIL
 (HND-PARK-DETAIL) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



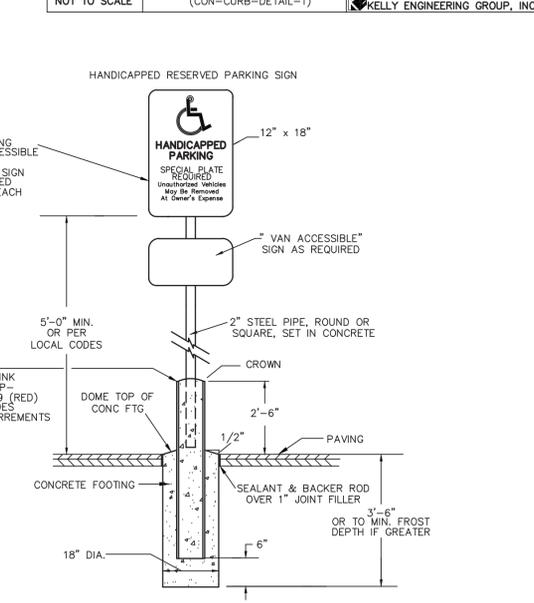
CURB STOP DETAIL
 (CURB-STOP-DETAIL) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



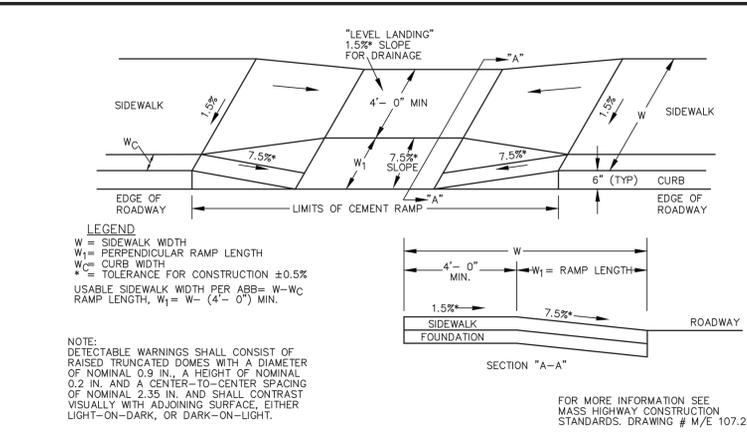
BITUMINOUS CONCRETE PAVEMENT (STANDARD)
 (PAVEMENT-SECTION-DETAIL) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



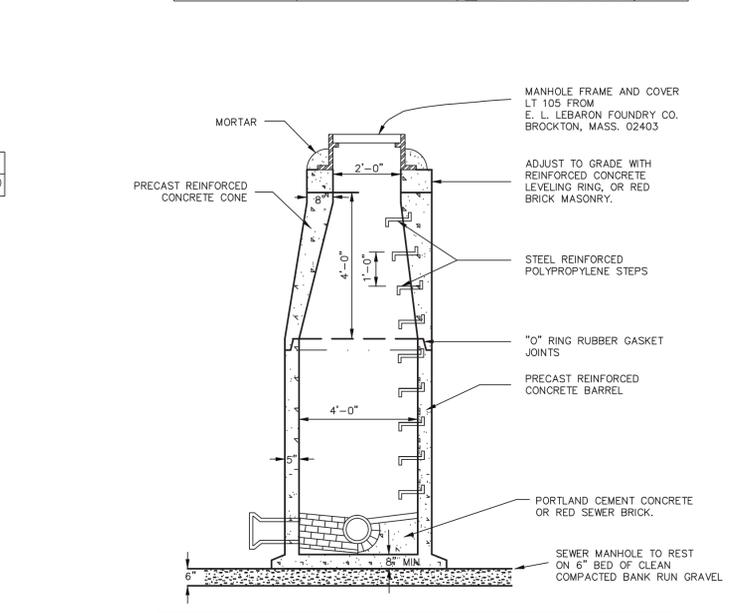
CONCRETE CURB DETAIL
 (CON-CURB-DETAIL-1) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



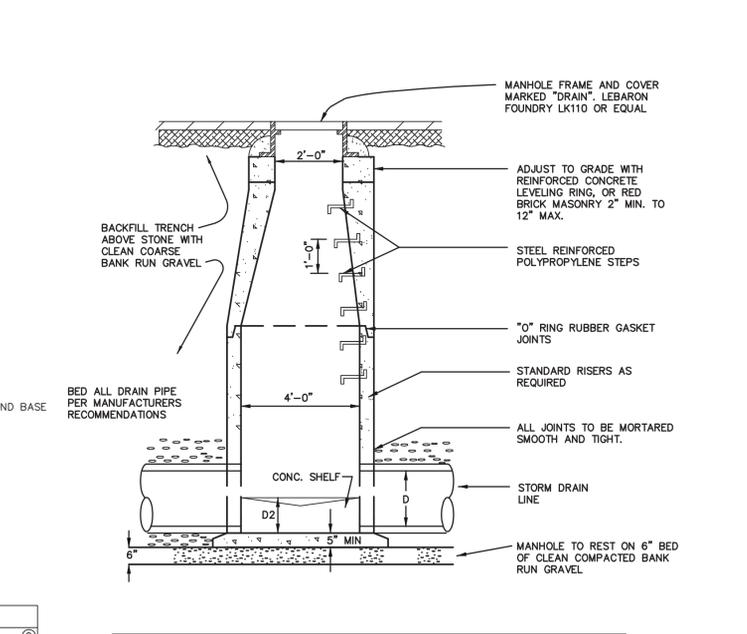
CAPE COD BERM DETAIL
 (CAP COD BERM DETAIL) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



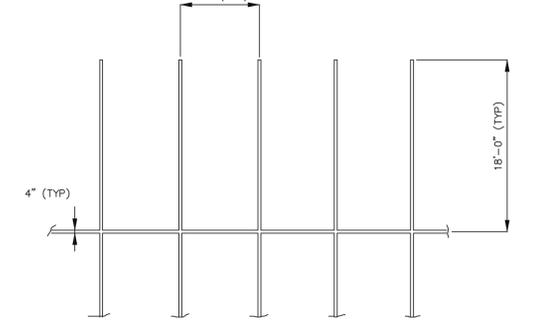
WHEELCHAIR RAMPS
 (WALK-RAMP-DETAIL) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



SEWER MANHOLE DETAIL
 (SEWER-MANHOLE) NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



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



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

SCALE	N/A
DATE	03/31/14
SHEET	8 of 9
PLAN NO.	2013-035-DT00
DISK REF NO.	F:\P\2013-035
DRAWN BY	C.L.
CHKD BY	DAM
APPD BY	DNK

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 CIVIL ENGINEERING CONSULTANTS
 0 CAMPANELLI DRIVE • BRAINTREE MA • 02184
 PHONE: 781 843 4333 FAX: 781 843 0028

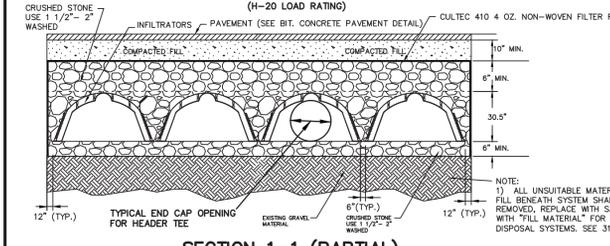


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TYPICAL SUBSURFACE RECHARGE AREA (CULTEC 330XLHD) PLAN VIEW (INFILTRATION TO BE CULTEC OR APPROVED EQUAL)

*SEE CULTEC RECHARGER 330XLHD STORMWATER MANAGEMENT SYSTEM DESIGN FOR INSTALLATION INSTRUCTIONS PROPRIETARY SHOP DRAWINGS TO BE PROVIDED PRIOR TO INSTALLATION



SECTION 1-1 (PARTIAL)



INFILTRATOR SUBSURFACE DETENTION AREA PLAN VIEW

NOT TO SCALE (INFIL-SUB-DET) KELLY ENGINEERING GROUP, INC.

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:

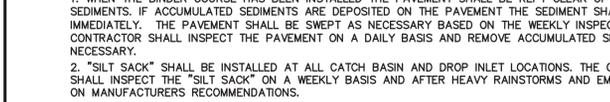
CONSTRUCTION INSPECTION SCHEDULE

- WEEKLY INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR.

- 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 WATER QUALITY DEVISE 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

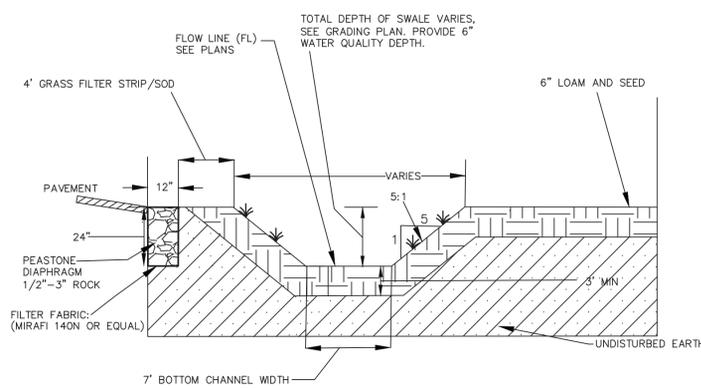
- WHEN THE BINDER COURSE HAS BEEN INSTALLED THE PAVEMENT SHALL BE KEPT CLEAR OF ACCUMULATED SEDIMENTS. IF ACCUMULATED SEDIMENTS ARE DEPOSITED ON THE PAVEMENT THE SEDIMENT SHALL BE CLEANED IMMEDIATELY. THE PAVEMENT SHALL BE SWEEP AS NECESSARY BASED ON THE WEEKLY INSPECTIONS. THE CONTRACTOR SHALL INSPECT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



CONTROL STRUCTURE MANHOLE

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

NOTE: FOR OTHER NOTES AND DETAILS SEE TYPICAL DRAIN MANHOLE DETAIL.

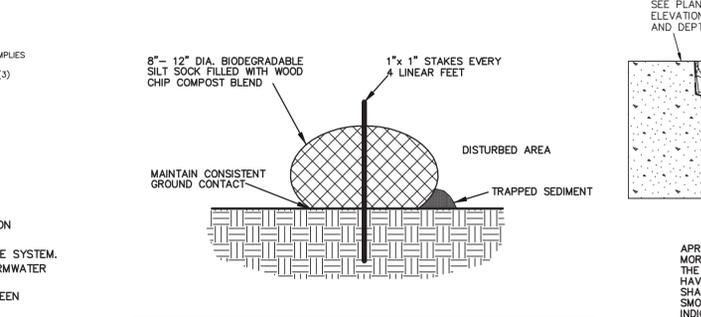


BIOFILTER SWALE DETAIL

NOT TO SCALE (SWALE-DETAIL) KELLY ENGINEERING GROUP

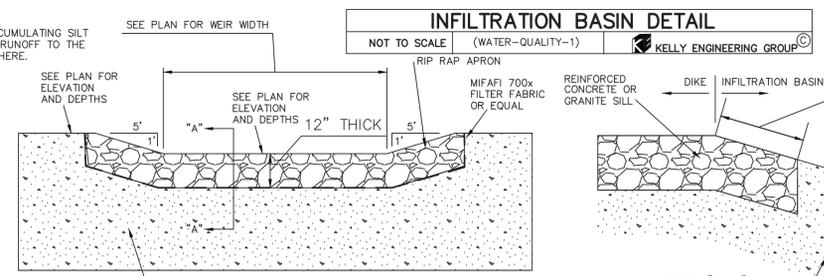
CONSTRUCTION:

- DURING CONSTRUCTION, AVOID EXCESSIVELY COMPACTING SOILS AROUND THE BIOFILTER SWALE AND ACCUMULATING SILT AROUND THE INFILTRATION SYSTEM. TO MINIMIZE SEDIMENT LOADING IN THE INFILTRATION SYSTEM, DIRECT RUNOFF TO THE BIOFILTER SWALE ONLY FROM AREAS THAT ARE STABILIZED; ALWAYS DIVERT CONSTRUCTION RUNOFF ELSEWHERE.



SILT SOCK LINE DETAIL

NOT TO SCALE KELLY ENGINEERING GROUP, INC.



INFILTRATION BASIN DETAIL

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

APRON TO BE COMPOSED OF A LAYER OF STONES 12" IN THICKNESS OR MORE, PLACED UPON A BED OF SAND AND GRAVEL 6" IN THICKNESS. THE STONES SHALL BE SIZED SO THAT NOT LESS THAN 60% SHALL HAVE ONE DIMENSION 12" OR MORE. THE STONES, AFTER BEING LAID, SHALL BE CAREFULLY CHINKED BY HAND TO MAKE A REASONABLY SMOOTH AND SHAPED SURFACE. RIP RAP IS TO BE USED WHERE INDICATED ON THE PLAN.

WEIR DETAIL

NOT TO SCALE (HEADWALL-DETAIL-FLARED-END) KELLY ENGINEERING GROUP, INC.

VORTSENTRY HS DESIGN NOTES

RATED TREATMENT CAPACITY IS SHOWN IN THE TABLE BELOW. OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY VARIES. CONTACT YOUR CONTECH REPRESENTATIVE FOR ADDITIONAL INFORMATION.

THE STANDARD SOLID COVER CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW.

CONFIGURATION OPTION DESCRIPTION	
GRATE INLET (NO INLET PIPE)	
GRATE INLET WITH INLET PIPE	

VORTSENTRY HS GENERAL INFORMATION

Model	Manhole Diameter (ID)	Total Treatment Flow Rate		Typical Total Distance Rim to Outside Bottom		Typical Distance Rim to Invert		Typical Depth Below Invert (inside)		Approximate Minimum Distance Rim to Invert		Maximum Pipe Diameter (ID)		
		FT	mm	FT	m	FT	m	FT	mm	FT	m	IN	mm	
HS36	3	900	0.55	15.6	10.16	3.10	4.08	1.24	5.58	1702	3.00	0.91	18	450
HS48	4	1200	1.20	34.0	13.25	4.04	6.00	1.83	6.75	2057	4.00	1.22	24	600
HS60	5	1500	2.20	62.3	15.13	4.61	6.50	1.98	7.96	2426	4.82	1.47	30	750
HS72	6	1800	3.70	104.8	16.56	5.05	6.75	2.06	9.15	2788	5.59	1.70	36	900
HS84	7	2100	5.60	158.6	18.85	5.75	7.75	2.36	10.35	3156	5.00	1.52	42	1050
HS96	8	2400	8.10	229.4	20.87	6.36	8.50	2.59	11.54	3518	6.91	2.11	48	1200

SITE SPECIFIC DATA REQUIREMENTS

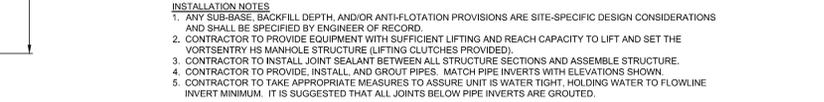
STRUCTURE ID	
WATER QUALITY FLOW RATE (CFS)	-
PEAK FLOW RATE (CFS)	-
RETURN PERIOD OF PEAK FLOW (YRS)	-
PIPE DATA:	
INLET PIPE 1	I.E. MATERIAL DIAMETER
OUTLET PIPE	" " " " " "
RIM ELEVATION	
ANTI-FLOTATION BALLAST	WIDTH HEIGHT
NOTES/SPECIAL REQUIREMENTS:	
	* PER ENGINEER OF RECORD

GENERAL NOTES:

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
- VORTSENTRY HS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO HS20 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.

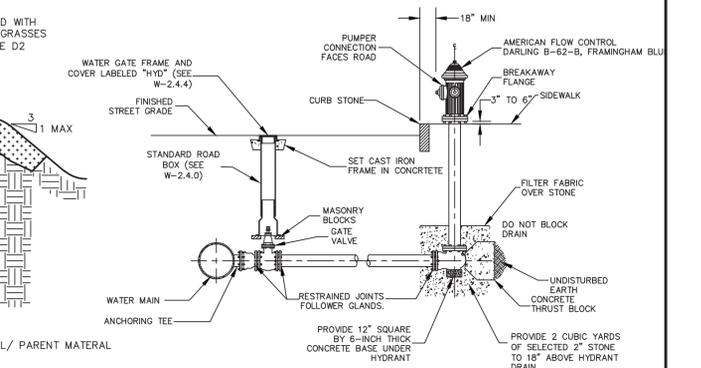
INSTALLATION NOTES:

- 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 VORTSENTRY HS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO INSTALL 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.



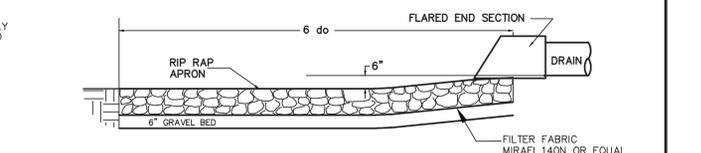
VORTSENTRY HS STANDARD DETAIL

CONTECH ENGINEERED SOLUTIONS LLC
 www.contechES.com
 9025 Centre Pointe Dr., Suite 100, West Chester, OH 45389
 800-338-1122 513-645-7000 513-645-7993 FAX



HYDRANT SETTING DETAIL

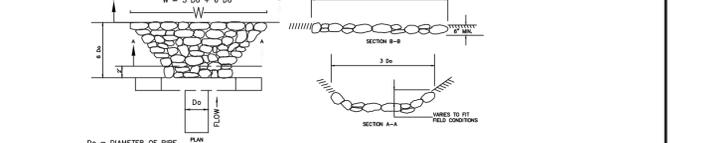
NOT TO SCALE FRAMINGHAM DETAIL



RIP-RAP APRON DETAIL AT F.E.S.

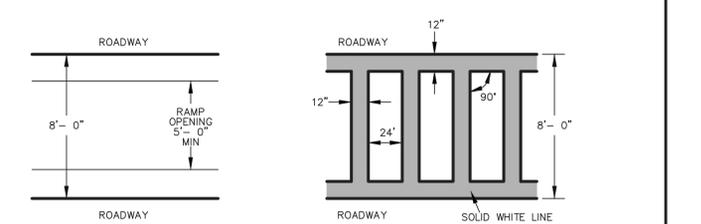
NOT TO SCALE (HEADWALL-DETAIL) KELLY ENGINEERING GROUP, INC.

APRON TO BE COMPOSED OF A LAYER OF STONES 12" IN THICKNESS OR MORE, PLACED UPON A BED OF SAND AND GRAVEL 6" IN THICKNESS. RIP-RAP SHALL CONFORM TO MASS HIGHWAY STANDARD FOR HIGHWAYS AND BRIDGES "SECTION M2.02.3 AS FOLLOWS: STONE FOR PIPE ENDS SHALL BE SOUND, DURABLE ROCK WHICH IS ANGULAR IN SHAPE, ROUNDED STONE, BOULDERS, SANDSTONE OR SIMILAR STONE OR RELATIVELY THIN SLABS WILL NOT BE ACCEPTABLE. EACH STONE SHALL WEIGH NOT LESS THAN 50 POUNDS NOT MORE THAN 125 POUNDS AND AT LEAST 75% OF THE VOLUME SHALL CONSIST OF STONES WEIGHING NOT LESS THAN 75 POUNDS EACH. THE REMAINDER OF THE STONE SHALL BE SO GRADED THAT WHEN PLACED WITH THE LARGER STONES THE ENTIRE MASS WILL BE COMPACT.



CROSSWALK STRIPING DETAIL

NOT TO SCALE KELLY ENGINEERING GROUP, INC.



CONTROL STRUCTURE MANHOLE

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

NOTE: FOR OTHER NOTES AND DETAILS SEE TYPICAL DRAIN MANHOLE DETAIL.

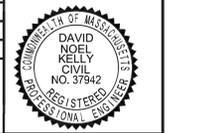
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DATE	03/31/14
SHEET	9 OF 9
PLAN NO.	2013-035-DT00
DISK REF NO.	F:\P\2013-035
DRAWN BY	C.L.
CHKD BY	DAM
APPD BY	DNK

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DETAIL SHEET

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

David Noel Kelly
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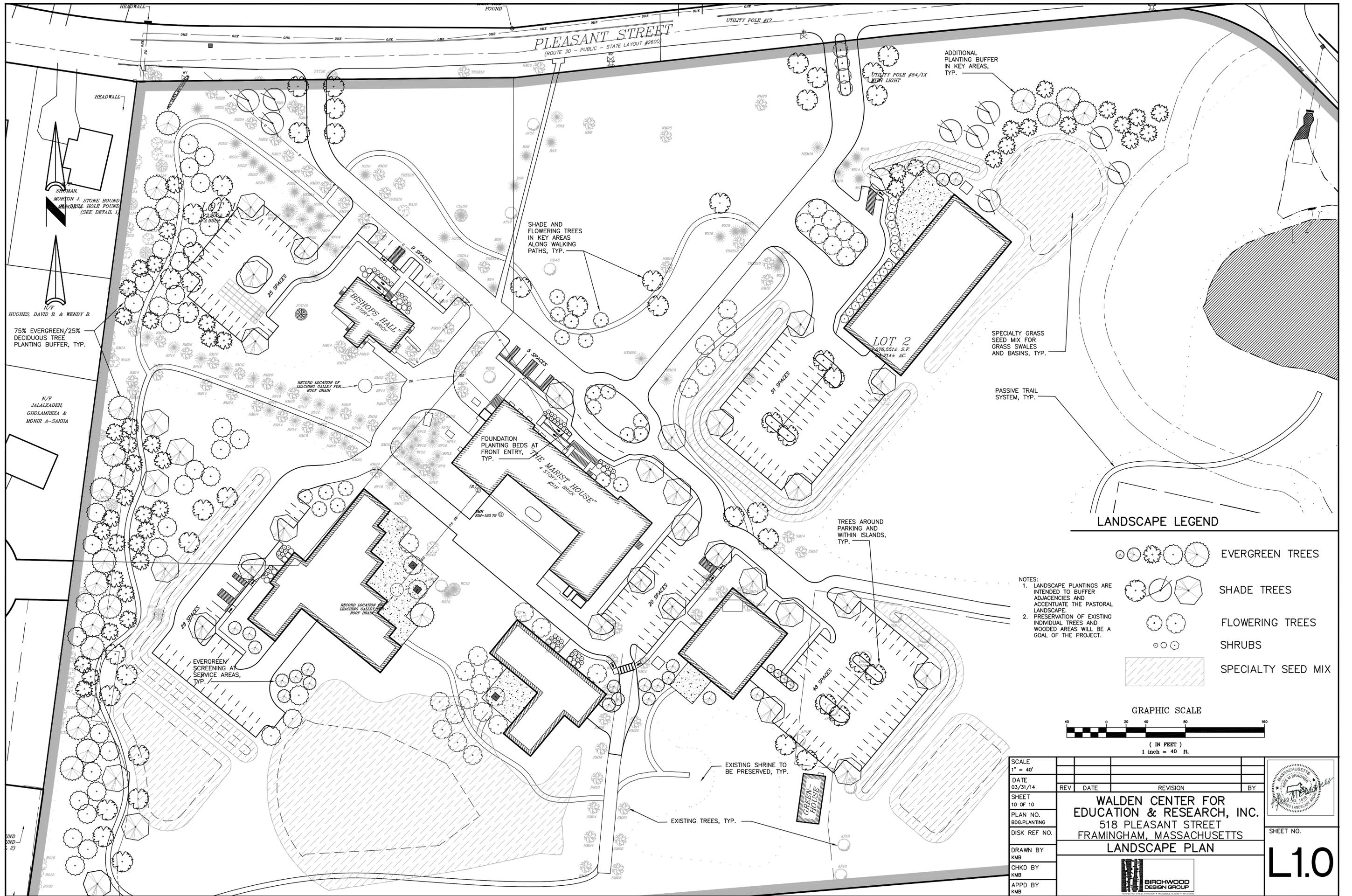
9

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PLEASANT STREET
 (ROUTE 30 - PUBLIC - STATE LAYOUT #2600)

ADDITIONAL
 PLANTING BUFFER
 IN KEY AREAS,
 TYP.

SHADE AND
 FLOWERING TREES
 IN KEY AREAS
 ALONG WALKING
 PATHS, TYP.

SPECIALTY GRASS
 SEED MIX FOR
 GRASS SWALES
 AND BASINS, TYP.

PASSIVE TRAIL
 SYSTEM, TYP.

FOUNDATION
 PLANTING BEDS AT
 FRONT ENTRY,
 TYP.

TREES AROUND
 PARKING AND
 WITHIN ISLANDS,
 TYP.

EVERGREEN
 SCREENING AT
 SERVICE AREAS,
 TYP.

EXISTING SHRINE TO
 BE PRESERVED, TYP.

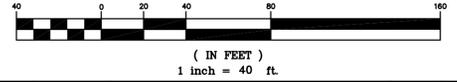
EXISTING TREES, TYP.

LANDSCAPE LEGEND

- EVERGREEN TREES
- SHADE TREES
- FLOWERING TREES
- SHRUBS
- SPECIALTY SEED MIX

NOTES:
 1. LANDSCAPE PLANTINGS ARE INTENDED TO BUFFER ADJACENCIES AND ACCENTUATE THE PASTORAL LANDSCAPE.
 2. PRESERVATION OF EXISTING INDIVIDUAL TREES AND WOODED AREAS WILL BE A GOAL OF THE PROJECT.

GRAPHIC SCALE



SCALE	1" = 40'		
DATE	03/31/14	REV	DATE
SHEET	10 OF 10	REVISION	BY
PLAN NO.	BDG. PLANTING		
DISK REF NO.			
DRAWN BY	KMB		
CHKD BY	KMB		
APPD BY	KMB		

**WALDEN CENTER FOR
 EDUCATION & RESEARCH, INC.**
 518 PLEASANT STREET
 FRAMINGHAM, MASSACHUSETTS
LANDSCAPE PLAN



SHEET NO.

L1.0

SHEMAN,
 MORTON J. STONE BOUND
 MARDRILL HOLE FOUND
 (SEE DETAIL 1)

HUGHES, DAVID B. & WENDY B.

75% EVERGREEN/25%
 DECIDUOUS TREE
 PLANTING BUFFER, TYP.

N/P
 JALALZADEH,
 GHOLAMREZA &
 MONIR A-SAKHA

END