

CLIENT/OWNER
 RICHMOND PROPERTY GROUP
 333 N. ALABAMA STREET
 INDIANAPOLIS, IN 46204

CIVIL ENGINEER
 EMANUEL ENGINEERING, INC.
 118 PORTSMOUTH AVENUE, SUITE A202
 STRATHAM, NH 03885

LAND SURVEYOR
 DOUCET SURVEY, INC.
 102 KENT PLACE
 NEWMARKET, NH 03857

SOIL SCIENTIST
 GZA GEOENVIRONMENTAL
 5 COMMERCE PARK NORTH, SUITE 201
 BEDFORD, NH 03110

ARCHITECT
 KRITTENBRINK ARCHITECTURE
 119 W. MAIN STREET
 NORMAN, OK 73069

LIGHTING PLAN
 KRITTENBRINK ARCHITECTURE
 119 W. MAIN STREET
 NORMAN, OK 73069

GEOTECHNICAL ENGINEER
 S.W. COLE ENGINEERING, INC.
 10 CENTRE ROAD
 SOMERSWORTH, NH 03878

LANDSCAPE ARCHITECT
 WOODBURN & COMPANY
 103 KENT PLACE
 NEWMARKET, NH 03857

SITE PLAN FOR RICHMOND PROPERTY GROUP ALPHA TAU OMEGA FRATERNITY DURHAM TAX MAP 2 LOT 12-12 18 GARRISON AVENUE DURHAM, NH 03824

WAIVERS GRANTED BY THE TOWN OF DURHAM ZONING BOARD ON MARCH 17, 2020:

- ZONING ORDINANCE 175.62 - PARKING WITHIN WCOD
- ZONING ORDINANCE 175.11 - PARKING WITHIN FRONT COURT OF BUILDING



PROJECT DRAWING SET:

- COVER SHEET
- 1 EXISTING CONDITIONS PLAN (BY DOUCET SURVEY, INC.)
- C2 SITE PLAN
- C3 GRADING & DRAINAGE PLAN
- C4 PAVING & CURBING PLAN
- D1 - D2 NOTES
- D3 - D5 DETAILS
- CS1 CONSTRUCTION SEQUENCING PLAN
- SK1 SITE PLAN W/ AERIAL OVERLAY
- SK2 COLORED SITE PLAN
- E001 - E002 ELECTRICAL SITE PLAN
- L1 PRELIMINARY LANDSCAPE CONCEPT
- A201 - A203 FLOOR PLANS
- A301 - A302 EXTERIOR ELEVATIONS

PROJECT LOCUS PLAN

1" = 1,000'

APPROVED BY THE TOWN OF DURHAM PLANNING BOARD

CHAIRPERSON _____ DATE _____

SEAL:



Bruce D. Scamman 4/24/20

3	APR 24, 2020	FOR APPROVAL	
2	MAR 24, 2020	FOR APPROVAL	
1	MAR 11, 2020	FOR APPROVAL	

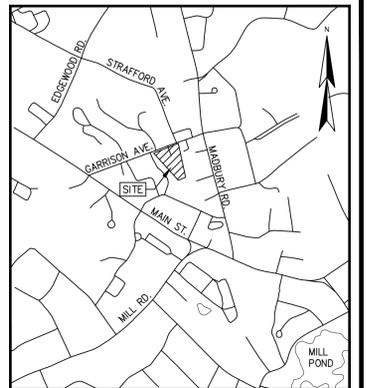
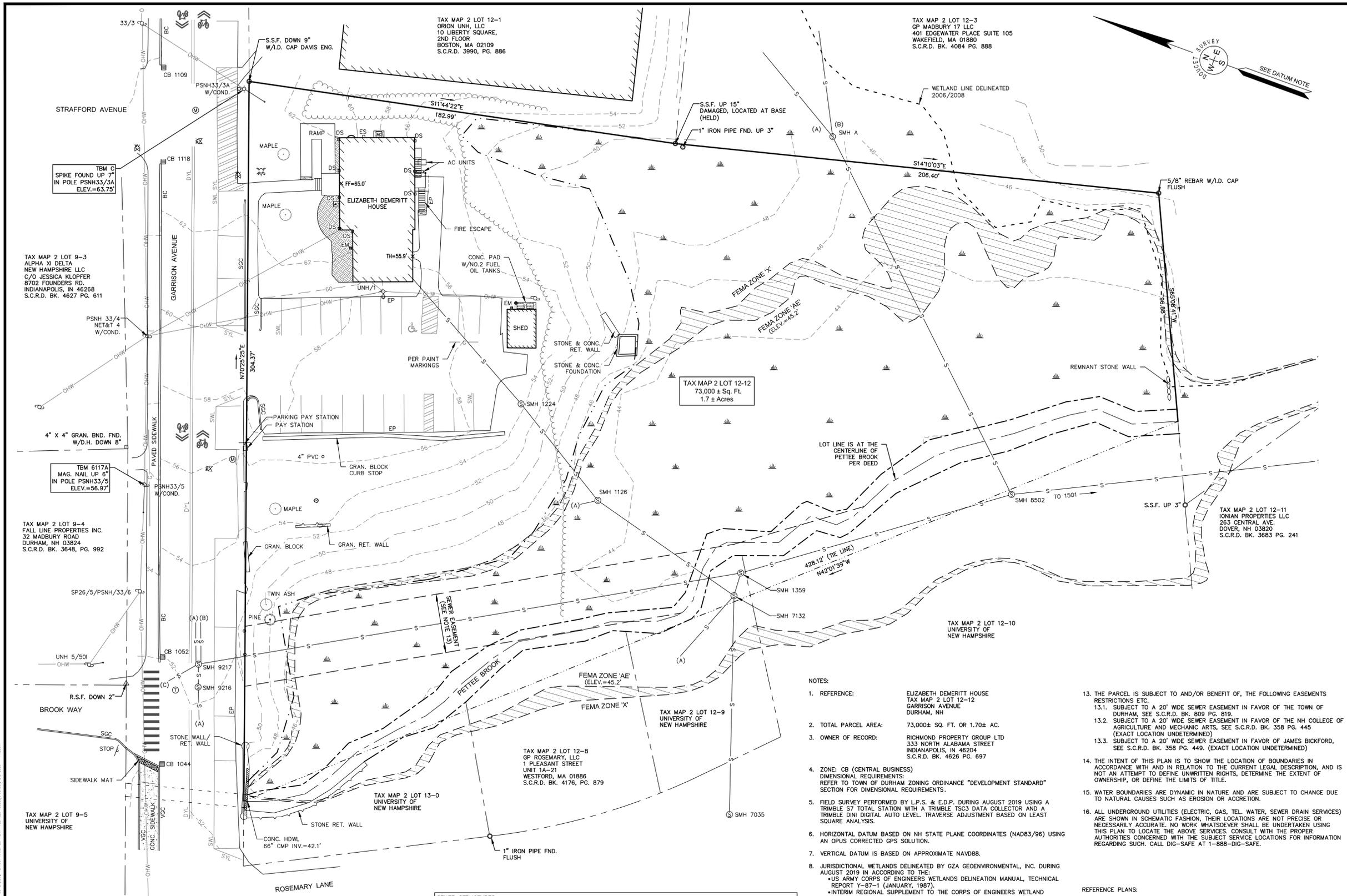
ISS. DATE:	DESCRIPTION OF ISSUE:	CHK:
DRAWN: JJM	DESIGN: JJM	
CHECKED: BDS	CHECKED: BDS	



CLIENT:
 RICHMOND PROPERTY GROUP
 333 N. ALABAMA ST.
 INDIANAPOLIS, IN 46204

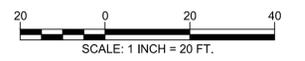
TITLE:
 COVER
 FOR
 RICHMOND PROPERTY GROUP
 ELIZABETH DEMERITT HOUSE
 18 GARRISON AVENUE (SITE)
 DURHAM, NH 03824

PROJECT:	SCALE:	SHEET:
19-083	AS SHOWN	COVER



LEGEND

---	LOT LINE
- - -	APPROXIMATE ABUTTERS LOT LINE
- - -	EXISTING EASEMENT LINE
- - -	APPROXIMATE CENTERLINE OF BROOK
- - -	RETAINING WALL
○	STONE WALL
○	OVERHEAD WIRE
○	SEWER LINE
○	DRAIN LINE
○	GAS LINE
○	MAJOR CONTOUR LINE
○	MINOR CONTOUR LINE
○	TREE LINE
○	EDGE OF DELINEATED WETLAND (2019)
○	EDGE OF DELINEATED WETLAND (2006/2008)
○	WETLAND AREA
○	CONCRETE
○	LANDSCAPED AREA
○	FEMA ZONE 'X' 0.2% ANNUAL CHANCE FLOOD HAZARD
○	UTILITY POLE & GUY WIRE
○	UTILITY POLE W/LIGHT
○	SIGN
○	IRON PIPE/ROD FOUND
○	FIRE HYDRANT
○	WATER GATE VALVE
○	CATCH BASIN
○	MANHOLE
○	TELEPHONE MANHOLE
○	SEWER MANHOLE
○	WOODED POST
○	BOLLARD
○	CONIFEROUS TREE
○	DECIDUOUS TREE
○	TYPICAL
○	STEEL STAKE FOUND
○	CONCRETE
○	GRANITE
○	HDWL
○	FINISHED FLOOR ELEVATION
○	THRESHOLD ELEVATION
○	EP
○	EDGE OF PAVEMENT
○	VGC
○	VERTICAL GRANITE CURB
○	SGC
○	SLOPED GRANITE CURB
○	EM
○	ELECTRIC METER
○	ES
○	ELECTRIC SWITCH
○	BC
○	BITUMINOUS CURB
○	SWL
○	SINGLE WHITE LINE
○	SYL
○	SINGLE YELLOW LINE
○	DYL
○	DOUBLE YELLOW LINE
○	DS
○	DOWN SPOUT
○	CC
○	CENTERLINE CHANNEL



EXISTING CONDITIONS PLAN
FOR
EMANUEL ENGINEERING
OF THE
ELIZABETH DEMERITT HOUSE
TAX MAP 2 LOT 12-12
18 GARRISON AVENUE
DURHAM, NEW HAMPSHIRE

NO.	DATE	DESCRIPTION	BY

DRAWN BY:	M.T.L.	DATE:	AUGUST 2019
CHECKED BY:	S.V.M.	DRAWING NO.:	6117A
JOB NO.:	6117	SHEET	1 OF 1

Serving Your Professional Surveying & Mapping Needs
102 Kent Place, Newmarket, NH 03857 (603) 659-6560
2 Commerce Drive (Suite 202) Bedford, NH 03110 (603) 614-0660
10 Storer Street (Riverview Site) Kennebunk, ME (207) 502-7005
http://www.doucetsurvey.com

NOTES:

- REFERENCE: ELIZABETH DEMERITT HOUSE TAX MAP 2 LOT 12-12 GARRISON AVENUE DURHAM, NH
- TOTAL PARCEL AREA: 73,000± SQ. FT. OR 1.70± AC.
- OWNER OF RECORD: RICHMOND PROPERTY GROUP LTD 333 NORTH ALABAMA STREET INDIANAPOLIS, IN 46204 S.C.R.D. BK. 4626 PG. 697
- ZONE: CB (CENTRAL BUSINESS) DIMENSIONAL REQUIREMENTS: REFER TO TOWN OF DURHAM ZONING ORDINANCE "DEVELOPMENT STANDARD" SECTION FOR DIMENSIONAL REQUIREMENTS.
- FIELD SURVEY PERFORMED BY L.P.S. & E.D.P. DURING AUGUST 2019 USING A TRIMBLE S7 TOTAL STATION WITH A TRIMBLE TSC3 DATA COLLECTOR AND A TRIMBLE DINI DIGITAL AUTO LEVEL. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS.
- HORIZONTAL DATUM BASED ON NH STATE PLANE COORDINATES (NAD83/96) USING AN OPUS CORRECTED GPS SOLUTION.
- VERTICAL DATUM IS BASED ON APPROXIMATE NAVD88.
- JURISDICTIONAL WETLANDS DELINEATED BY GZA GEOENVIRONMENTAL, INC. DURING AUGUST 2019 IN ACCORDANCE TO THE:
 - US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1 (JANUARY, 1987)
 - INTERIM REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION (OCTOBER 2009).
 - NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1), U.S. FISH AND WILDLIFE SERVICE (MAY 1988).
 - CODE OF ADMINISTRATIVE RULES, WETLANDS BOARD, STATE OF NEW HAMPSHIRE (CURRENT).
- FLOOD HAZARD ZONES: "X" & "AE", PER FIRM MAP #33017C0318E, DATED 9/15/15.
- PROPER FIELD PROCEDURES WERE FOLLOWED IN ORDER TO GENERATE CONTOURS AT 2' INTERVALS. ANY MODIFICATION OF THIS INTERVAL WILL DIMINISH THE INTEGRITY OF THE DATA, AND DOUCET SURVEY WILL NOT BE RESPONSIBLE FOR ANY SUCH ALTERATION PERFORMED BY THE USER.
- UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVED PHYSICAL EVIDENCE AND PAINT MARKS FOUND ON-SITE.
- THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES/TYPES IS SUBJECT TO NUMEROUS FIELD CONDITIONS, INCLUDING: THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS, MANHOLE CONFIGURATION, ETC.
- THE PARCEL IS SUBJECT TO AND/OR BENEFIT OF, THE FOLLOWING EASEMENTS RESTRICTIONS ETC.
 - SUBJECT TO A 20' WIDE SEWER EASEMENT IN FAVOR OF THE TOWN OF DURHAM, SEE S.C.R.D. BK. 809 PG. 819.
 - SUBJECT TO A 20' WIDE SEWER EASEMENT IN FAVOR OF THE NH COLLEGE OF AGRICULTURE AND MECHANIC ARTS, SEE S.C.R.D. BK. 358 PG. 445 (EXACT LOCATION UNDETERMINED)
 - SUBJECT TO A 20' WIDE SEWER EASEMENT IN FAVOR OF JAMES BICKFORD, SEE S.C.R.D. BK. 358 PG. 449. (EXACT LOCATION UNDETERMINED)
- THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH AND IN RELATION TO THE CURRENT LEGAL DESCRIPTION, AND IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP, OR DEFINE THE LIMITS OF TITLE.
- WATER BOUNDARIES ARE DYNAMIC IN NATURE AND ARE SUBJECT TO CHANGE DUE TO NATURAL CAUSES SUCH AS EROSION OR ACCRETION.
- ALL UNDERGROUND UTILITIES (ELECTRIC, GAS, TEL, WATER, SEWER DRAIN SERVICES) ARE SHOWN IN SCHEMATIC FASHION, THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. NO WORK WHATSOEVER SHALL BE UNDERTAKEN USING THIS PLAN TO LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.

REFERENCE PLANS:

- "PLAN OF LAND, LAND OF THE UNIVERSITY OF NEW HAMPSHIRE FOR GAMMA THETA CORPORATION, GARRISON AVENUE, (NO TAX MAP/LOT NUMBER ASSIGNED) DURHAM, NEW HAMPSHIRE, DATED JULY 11, 2014 BY DOUCET SURVEY, INC. S.C.R.D. PLAN 108-020.
- "EXISTING CONDITIONS PLAN OF 17 & 21 MADBURY ROAD FOR AG ARCHITECTS, PC" DATED MAY 11, 2008 BY DOUCET SURVEY, INC.
- "TOWN OF DURHAM SEWER EASEMENTS, PETTEE BROOK INTERCEPTOR" DATED NOVEMBER 1964 BY G.L. DAVIS & ASSOCIATES S.C.R.D. POCKET 4 FOLDER 4 PLAN 26.
- "RE-SUBDIVISION OF LAND IN DURHAM, NH PREPARED FOR THETA GAMMA OF DELTA ZETA HOUSE CORP." DATED AUGUST 4, 1980 BY JOHN W. DURGIN ASSOCIATES, INC. S.C.R.D. DRAWER 21, PLAN 86.
- "PLAN OF LAND FOR ERNEST CUTLER" DATED OCTOBER 1977 BY JOHN W. DURGIN ASSOCIATES, INC.
- "UNIVERSITY OF NEW HAMPSHIRE GARRISON AVENUE AREA" DATED SEPTEMBER 16, 1957 BY G.L. DAVIS & ASSOCIATES.

SEWER STRUCTURES

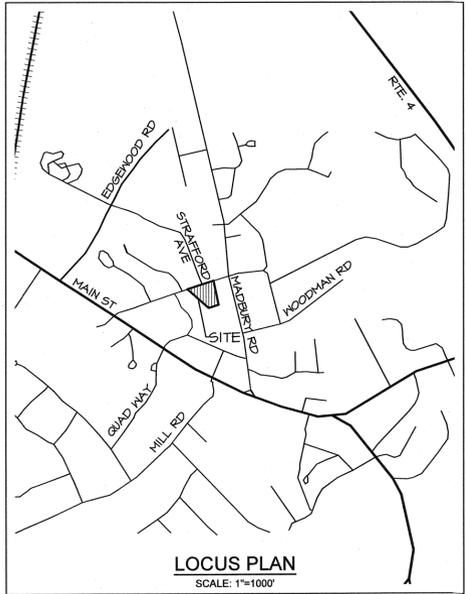
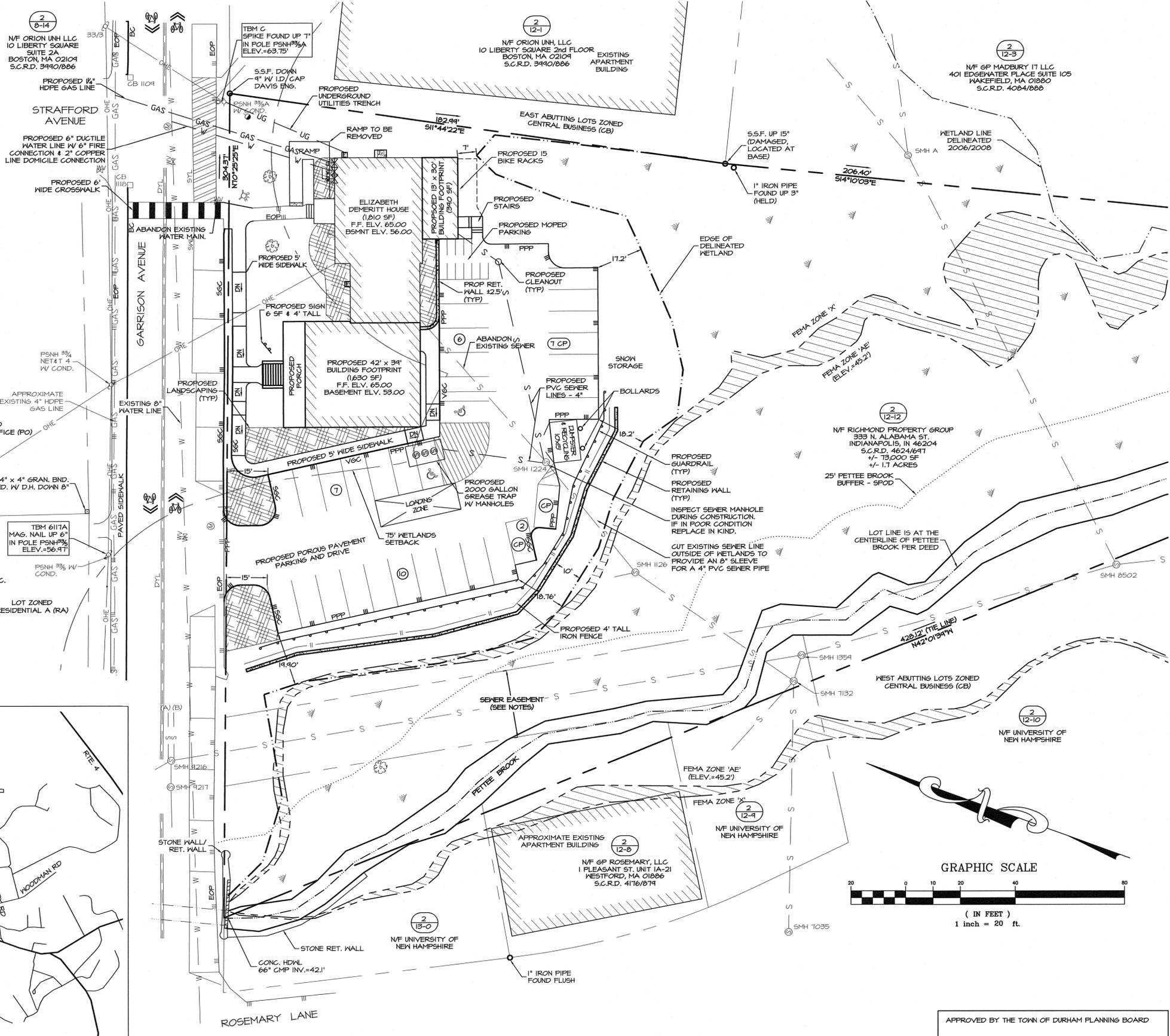
SMH A	SMH 1224	SMH 7132	SMH 9216
RIM ELEV.=46.3'	RIM ELEV.=54.6'	RIM ELEV.=45.3'	RIM ELEV.=52.3'
(A) 8" CIP INV.=42.2'	(BLDG) 6" PVC INV.=47.8'	(A) 8" PVC INV.=38.5'	(A) 8" UNK. INV.=39.6'
(B) 6" CIP INV.=42.5'	(1226) 6" PVC INV.=47.8'	(7035) 8" PVC INV.=38.5'	(9217) 8" UNK. INV.=39.6'
(8502) 8" CIP=42.2'		(1126) 8" PVC INV.=38.5'	
	SMH 1359	(1359) 10" UNK. INV.=38.5'	SMH 9217
	RIM ELEV.=44.6'		RIM ELEV.=52.5'
	(7132) 10" PVC INV.=36.4'	SMH 8502	(A) 8" CLAY INV.=45.7'
	(9217) 18" PVC INV.=35.6'	RIM ELEV.=42.9'	(B) 8" UNK. INV.=37.3'
(1224) 6" PVC=39.1'	(8502) 18" PVC INV.=35.6'	(SMH A) CC ELEV.=36.1'	(9216) 8" UNK. INV.=37.2'
(7132) 8" PVC=39.1'		(1359) CC ELEV.=35.1'	(C) 18" UNK. CC ELEV.=36.6'
		(1501) CC ELEV.=35.1'	(1359) 18" UNK. CC ELEV.=36.6'

PURSUANT TO RSA 676:18, III:
I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.
I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY ME OR BY THOSE UNDER MY DIRECT SUPERVISION AND FALLS UNDER THE URBAN SURVEY CLASSIFICATION OF THE NH CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. RANDOM TRAVERSE SURVEY BY TOTAL STATION, WITH A PRECISION GREATER THAN 1:15,000.
DATE _____ L.L.S. #916
THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEED REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.

DRAFT
1/21/20

LEGEND

□	BOUND FOUND
○	IRON PIPE FOUND
(TYP)	TYPICAL
PPP	PROP. POROUS PAVE.
PTP	PROP. TRAD. PAVE.
VGC	VERT. GRANITE CURB
SGC	SLOPED GRANITE CURB
BC	BITUMINOUS CURB
---	PROPERTY LINE
---	EDGE OF PAVE (EOP)
---	EOP WITH CURB
---	UNDERGROUND UTILITIES
---	OVERHEAD UTILITIES
---	WATER LINE
---	SEWER LINE
---	GAS LINE
---	IRON FENCE
---	GUARD RAIL
---	EDGE OF WETLANDS
---	UTILITY POLE
---	WETLANDS
---	BOLLARD
---	ELECTRICAL METER
---	SEWER MANHOLE
---	CATCH BASIN
---	SEWER CLEANOUT
---	WATER VALVE
---	TREE
---	PARKING SPACES IN ROW
---	COMPACT PARKING SPOT
---	LANDSCAPING
---	FEMA FLOOD ZONE X



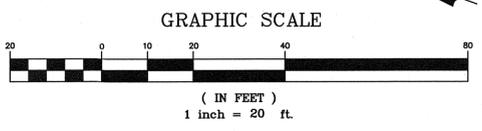
- NOTES:**
- OWNER OF RECORD: TAX MAP 2, LOT 12-12 RICHMOND PROPERTY GROUP 333 N. ALABAMA ST. INDIANAPOLIS, IN 46204 S.C.R.D. 4624/647
 - THE INTENT OF THIS PLAN IS TO SHOW A PRELIMINARY PROPOSED SITE PLAN FOR A FRATERNITY, DEPICTING BUILDING, DRIVEWAY, DRAINAGE, AND SITE IMPROVEMENTS.
 - PARCEL IS ZONED CENTRAL BUSINESS (CB) PER THE 2006 DURHAM ZONING DISTRICT MAP.
 - A PORTION OF THE PARCEL IS IN A FLOOD HAZARD ZONE, REFERENCE FLOOD INSURANCE RATE MAP 3301C0301B, DATED SEPTEMBER 30, 2015.
 - SURVEY FIELDWORK CONDUCTED BY DOUCET SURVEY, LLC IN AUGUST, 2014.
 - SOILS AND WETLANDS WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. DURING AUGUST, 2014.
 - PROPERTY TO BE SERVICED BY TOWN WATER AND SEWER.
 - ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
 - THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
 - BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 72 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-888-DIG-SAFE.
 - ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.
 - THIS PARCEL IS SUBJECT TO AND/OR BENEFIT OF EASEMENTS, RESTRICTIONS, ETC. FOR MORE INFORMATION, SEE EXISTING CONDITIONS PLAN BY DOUCET SURVEY, AS PART OF THIS PLAN SET.
- NOTES (CONT.):**
- THE FOLLOWING CB DISTRICT REQUIREMENTS ARE PER THE TOWN OF DURHAM'S SITE PLAN REGULATIONS AND ZONING ORDINANCE, DATED 2014:
 - 1) MINIMUM ONE PARKING SPACE PER RESIDENT (CB DISTRICT EXEMPT W/ FEES)
 - REQUIRED = 44 SPACES
 - PROPOSED = 32 SPACES
 - 2) MAXIMUM 30% OF PARKING ARE COMPACT SPACES
 - MAX = 4 SPACES
 - PROPOSED = 1 SPACES
 - 3) ONE HANDICAP PARKING SPACE PER 25 SPACES
 - REQUIRED = 2 SPACES
 - PROPOSED = 2 SPACES
 - 4) MINIMUM PARKING SPACE DIMENSIONS:
 - PERPENDICULAR = 9'x10'
 - PARALLEL = 8'x22'
 - COMPACT = 8'x16'
 - HANDICAP = 8'x10'
 - 5) PARKING LOTS AT THE SIDE OF PRINCIPLE BUILDINGS SHALL BE SET BACK AS FAR AS THE FRONT OF THE BUILDING OR IS 15 FT, WHICHEVER IS GREATER
 - REQUIREMENT NOT MET
 - VARIANCE GRANTED MARCH 17, 2020
 - 6) MINIMUM AMOUNT OF BIKE RACKS IS 1/3 OF REQUIRED PARKING SPACES
 - REQUIRED = 15 BIKE RACKS
 - 7) MAXIMUM BUILDING HEIGHT IS 30 FT
 - HEIGHT = 34.5'
 - 8) MINIMUM LOT FRONTAGE = 50 FT
 - PROVIDED = 304 FT
 - 9) MINIMUM LOT SIZE = 5,000 SF
 - PROVIDED = 13,000 SF
 - 10) WETLAND SETBACK(BUFFER) = 75 FT
 - PROVIDED < 75 FT
 - VARIANCE GRANTED MARCH 17, 2020, & CONDITIONAL USE APPLICATION IN PROCESS.

AREA CALCULATIONS

TOTAL AREA OF LOT*	EXISTING IMPERVIOUS AREA	PROPOSED IMPERVIOUS AREA**	PROPOSED POROUS PAVE. AREA
11,900 SF	4,501 SF	6,410 SF	10,070 SF

* - TOTAL AREA OF LOT IS MEASURED BY THE LINE, NOT PETTEE BROOK.
 ** - PROPOSED IMPERVIOUS AREA EXCLUDES POROUS PAVE. PARKING LOT & DRIVEWAY.

- REFERENCE PLANS:**
- "PLAN OF LAND, LAND OF THE UNIVERSITY OF NEW HAMPSHIRE FOR GAMMA THETA CORPORATION, GARRISON AVENUE, (NO TAX MAP/LOT NUMBER ASSIGNED) DURHAM, NEW HAMPSHIRE" DATED JULY 11, 2014 BY DOUCET SURVEY, INC. S.C.R.D. PLAN 108-020.
 - "EXISTING CONDITIONS PLAN OF 17 & 21 MADBURY ROAD FOR A6 ARCHITECTS, PC" DATED MAY 11, 2006 BY DOUCET SURVEY, INC.
 - "TOWN OF DURHAM SEWER EASEMENTS, PETTEE BROOK INTERCEPTOR" DATED NOVEMBER 1964 BY G.L. DAVIS & ASSOCIATES S.C.R.D. POCKET 4 FOLDER 4 PLAN 26.
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 - "PLAN OF LAND FOR ERNEST CUTTER" DATED OCTOBER 1917 BY JOHN W. DURGIN ASSOCIATES, INC.
 - "UNIVERSITY OF NEW HAMPSHIRE GARRISON AVENUE AREA" DATED SEPTEMBER 16, 1957 BY G.L. DAVIS & ASSOCIATES.



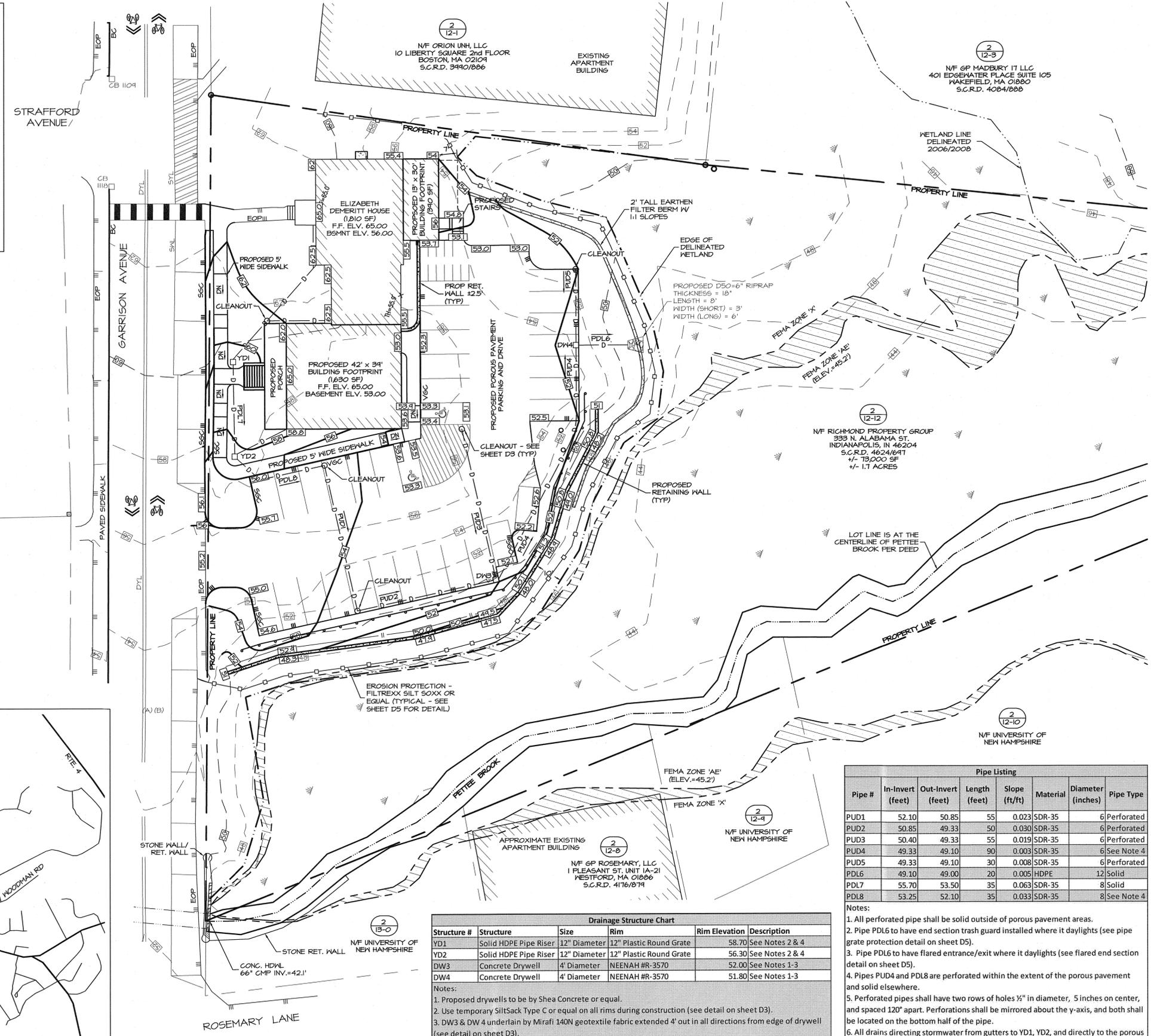
APPROVED BY THE TOWN OF DURHAM PLANNING BOARD
 CHAIRPERSON _____ DATE _____



2	APR 24, 2020	FOR APPROVAL	
1	MAR 24, 2020	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK.
DRAWN:	MCV	DESIGN:	MCV
CHECKED:	BDS	CHECKED:	BDS
 civil & structural consultants, land planners 118 PORTSMOUTH AVENUE, A202 STRATHAM, NH 03885 P: 603-772-4400 F: 603-772-4487 WWW.EMANUELENGINEERING.COM			
CLIENT:			
RICHMOND PROPERTY GROUP 333 N. ALABAMA ST. INDIANAPOLIS, IN 46204			
TITLE:			
SITE PLAN FOR RICHMOND PROPERTY GROUP ELIZABETH DEMERRIT HOUSE 18 GARRISON AVENUE (SITE) DURHAM, NH 03824			
PROJECT:	SCALE:	SHEET:	
19-083	1"=20'	C2	

LEGEND

□	BOUND FOUND
○	IRON PIPE FOUND
(TYP)	TYPICAL
PPP	PROPOSED POROUS PAVEMENT
FTF	PROPOSED TRAD. PAVEMENT
V6C	VERTICAL GRANITE CURB
S6C	SLOPED GRANITE CURB
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---	EOP WITH CURB
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---	WATER LINE
---	SEWER LINE
---	GAS LINE
---	CHAINLINK FENCE
---	GUARDRAIL
---	EDGE OF WETLANDS
---	UTILITY POLE
---	LIGHT POLE
---	WETLANDS
---	SEWER MANHOLE
---	CATCH BASIN
---	SEWER CLEANOUT
---	WATER VALVE
---	TREE
---	FEMA FLOODZONE X

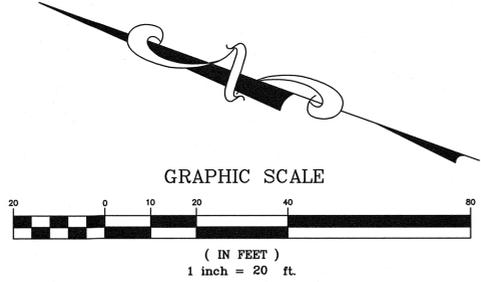


NOTES:

- OWNER OF RECORD: TAX MAP 2, LOT 12-12 RICHMOND PROPERTY GROUP 333 N. ALABAMA ST. INDIANAPOLIS, IN 46204 S.C.R.D. 4624/641
- THE INTENT OF THIS PLAN IS TO SHOW THE DRAINAGE STRUCTURES AND PROPOSED GRADING ASSOCIATED WITH THE SITE IMPROVEMENTS.
- PARCEL IS ZONED CENTRAL BUSINESS (CB) PER THE 2006 DURHAM ZONING DISTRICT MAP.
- A PORTION OF THE PARCEL IS IN A FLOOD HAZARD ZONE; REFERENCE FLOOD INSURANCE RATE MAP 3801TC0310E, DATED SEPTEMBER 30, 2015.
- SURVEY FIELDWORK CONDUCTED BY DOUCET SURVEY, LLC IN AUGUST, 2014.
- SOILS AND WETLANDS WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. DURING AUGUST, 2014.
- PROPERTY TO BE SERVICED BY TOWN WATER AND SEWER.
- ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
- THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLANS IS FOUND ON SITE.
- BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 12 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-800-DIG-SAFE.
- ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.
- HOUSE ROOF GUTTERS OR DRIP EDGES DRAIN INTO POROUS PAVEMENT. ALL DOWNSPOUT LEADERS TO HAVE A LEADER ADAPTER/GAP INSTALLED TO ALLOW FOR OVERFLOW AT THE SURFACE.

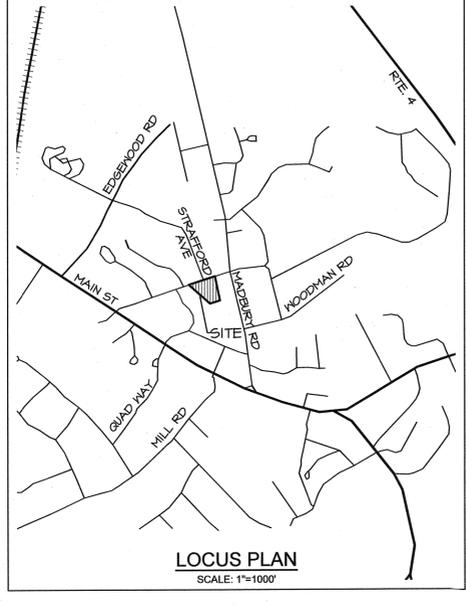
REFERENCE PLANS:

- "PLAN OF LAND, LAND OF THE UNIVERSITY OF NEW HAMPSHIRE FOR GAMMA THETA CORPORATION, GARRISON AVENUE, (NO TAX MAP/LOT NUMBER ASSIGNED) DURHAM, NEW HAMPSHIRE" DATED JULY 11, 2014 BY DOUCET SURVEY, INC. S.C.R.D. PLAN 108-020.
- "EXISTING CONDITIONS PLAN OF 17 & 21 MADBURY ROAD FOR AG ARCHITECTS, PC" DATED MAY 11, 2006 BY DOUCET SURVEY, INC.
- "TOWN OF DURHAM SEWER EASEMENTS, PETTEE BROOK INTERCEPTOR" DATED NOVEMBER 1964 BY G.L. DAVIS & ASSOCIATES S.C.R.D. POCKET 4 FOLDER 4 PLAN 26.
- "RE-SUBDIVISION OF LAND IN DURHAM, NH PREPARED FOR THETA GAMMA OF DELTA ZETA HOUSE CORP." DATED AUGUST 4, 1980 BY JOHN N. DURGIN ASSOCIATES, INC. S.C.R.D. DRAWER 21, PLAN 86.
- "PLAN OF LAND FOR ERNEST CUTTER" DATED OCTOBER 1977 BY JOHN N. DURGIN ASSOCIATES, INC.
- "UNIVERSITY OF NEW HAMPSHIRE GARRISON AVENUE AREA" DATED SEPTEMBER 16, 1951 BY G.L. DAVIS & ASSOCIATES.



2
4-3
N/F ALPHA XI DELTA
NEW HAMPSHIRE LLC
C/O JESSICA KLOPPER
8702 FOUNDERS RD.
INDIANAPOLIS, IN 46268
S.C.R.D. 4621/611

2
4-4
N/F FALL LINE PROPERTIES INC.
32 MADBURY RD.
DURHAM, NH 03824
S.C.R.D. 3648/442



Drainage Structure Chart

Structure #	Structure	Size	Rim	Rim Elevation	Description
YD1	Solid HDPE Pipe Riser	12" Diameter	12" Plastic Round Grate	58.70	See Notes 2 & 4
YD2	Solid HDPE Pipe Riser	12" Diameter	12" Plastic Round Grate	56.30	See Notes 2 & 4
DW3	Concrete Drywell	4' Diameter	NEENAH #R-3570	52.00	See Notes 1-3
DW4	Concrete Drywell	4' Diameter	NEENAH #R-3570	51.80	See Notes 1-3

- Notes:
- Proposed drywells to be by Shea Concrete or equal.
 - Use temporary SiltSack Type C or equal on all rims during construction (see detail on sheet D3).
 - DW3 & DW 4 underlain by Mirafi 140N geotextile fabric extended 4' out in all directions from edge of drywell (see detail on sheet D3).
 - Risers are constructed with a 12" HDPE tee fitting into the proposed 12" HDPE perforated underdrain with a solid HDPE pipe extending to the surface with a grate set in the end of the pipe (see detail on sheet D4).

Pipe Listing

Pipe #	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	Material	Diameter (inches)	Pipe Type
PUD1	52.10	50.85	55	0.023	SDR-35	6	Perforated
PUD2	50.85	49.33	50	0.030	SDR-35	6	Perforated
PUD3	50.40	49.33	55	0.019	SDR-35	6	Perforated
PUD4	49.33	49.10	90	0.003	SDR-35	6	See Note 4
PUD5	49.33	49.10	30	0.008	SDR-35	6	Perforated
PDL6	49.10	49.00	20	0.005	HDPE	12	Solid
PDL7	55.70	53.50	35	0.063	SDR-35	8	Solid
PDL8	53.25	52.10	35	0.033	SDR-35	8	See Note 4

- Notes:
- All perforated pipe shall be solid outside of porous pavement areas.
 - Pipe PDL6 to have end section trash guard installed where it daylight (see pipe grate protection detail on sheet D5).
 - Pipe PDL6 to have flared entrance/exit where it daylight (see flared end section detail on sheet D5).
 - Pipes PUD4 and PDL8 are perforated within the extent of the porous pavement and solid elsewhere.
 - Perforated pipes shall have two rows of holes 1/2" in diameter, 5 inches on center, and spaced 120" apart. Perforations shall be mirrored about the y-axis, and both shall be located on the bottom half of the pipe.
 - All drains directing stormwater from gutters to YD1, YD2, and directly to the porous pavement shall be 6" diameter, solid, SDR-35 pipe. Field locate elevation, providing 18 inches of cover (minimum) over top of pipe.

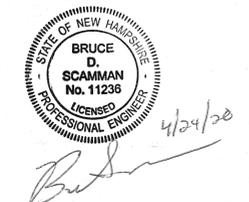
2	APR 24, 2020	FOR APPROVAL	
1	MAR 24, 2020	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK.
DRAWN: JUM		DESIGN: JUM	
CHECKED: BDS		CHECKED: BDS	



CLIENT:
RICHMOND PROPERTY GROUP
333 N. ALABAMA ST.
INDIANAPOLIS, IN 46204

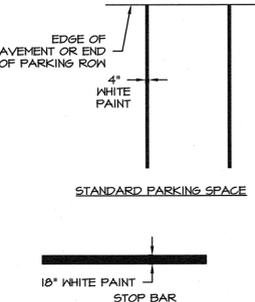
TITLE:
GRADING & DRAINAGE PLAN
FOR
RICHMOND PROPERTY GROUP
ELIZABETH DEMERITT HOUSE
18 GARRISON AVENUE (SITE)
DURHAM, NH 03824

PROJECT:	SCALE:	SHEET:
19-083	1"=20'	C3



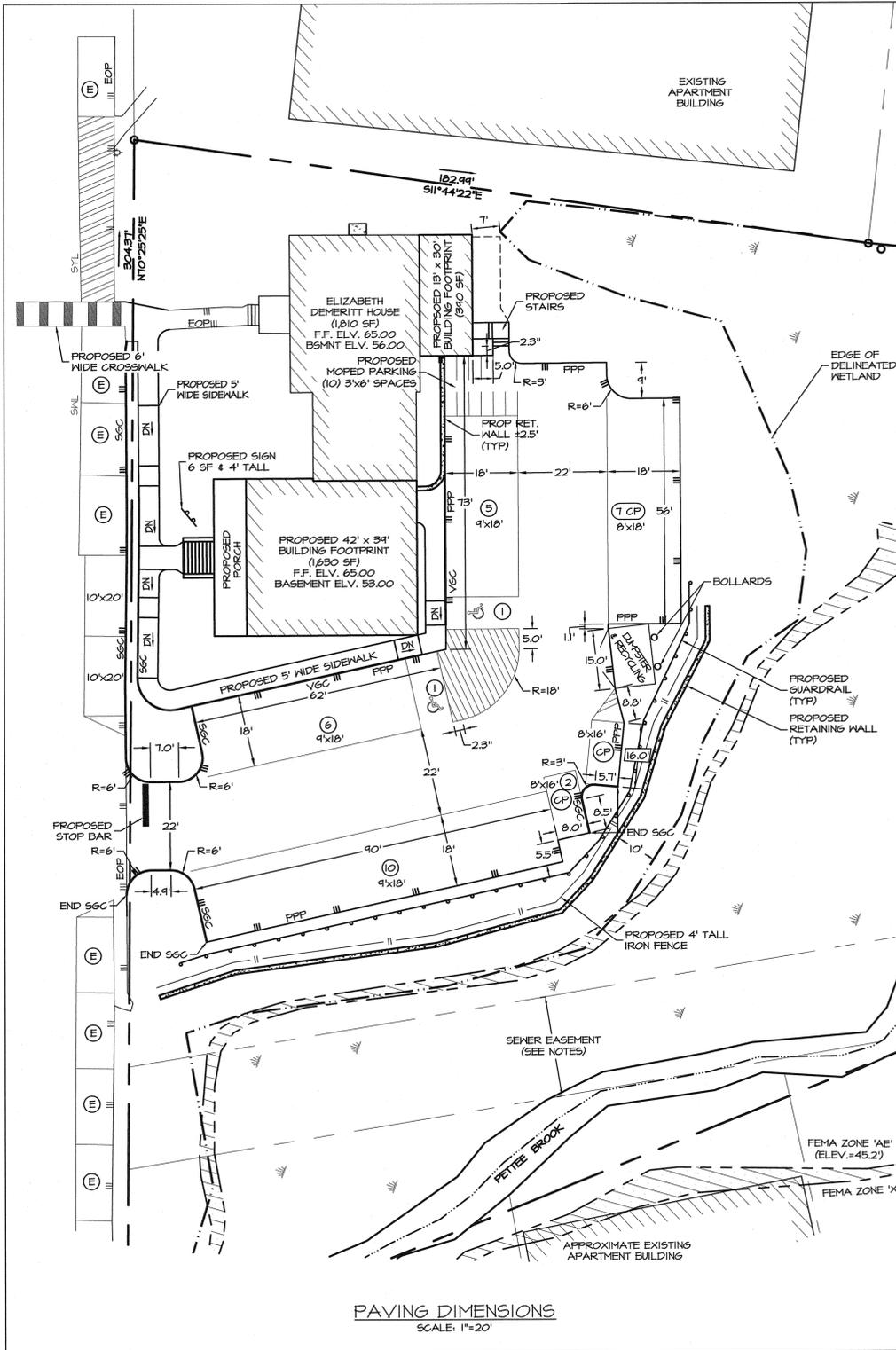
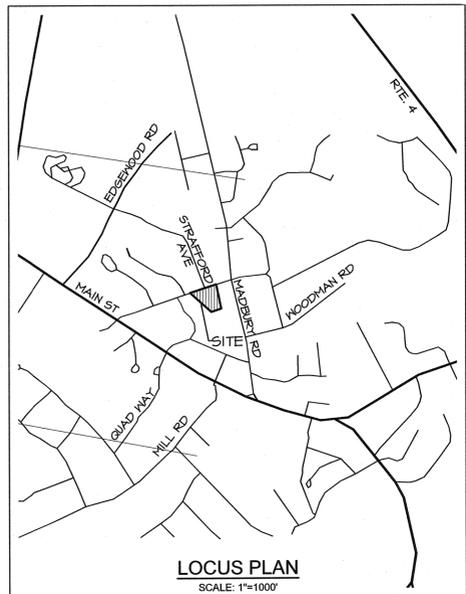
LEGEND

- BOUND FOUND
- IRON PIPE FOUND
- (TYP) TYPICAL
- PPP PROPOSED POROUS PAVEMENT
- PTP PROPOSED TRAD. PAVEMENT
- VGC VERTICAL GRANITE CURB
- SGC SLOPED GRANITE CURB
- BG BITUMINOUS CURB
- PROPERTY LINE
- EDGE OF PAVEMENT (EOP)
- EOP WITH CURB
- UNDERGROUND UTILITIES
- OVERHEAD UTILITIES
- WATER LINE
- SEWER LINE
- GAS LINE
- IRON FENCE
- GUARD RAIL
- EDGE OF WETLANDS
- UTILITY POLE
- LIGHT POLE
- WETLANDS
- BOLLARD
- ELECTRICAL METER
- SEWER MANHOLE
- CATCH BASIN
- SEWER CLEANOUT
- WATER VALVE
- TREE
- PARKING SPACES IN ROW
- COMPACT PARKING SPOT
- LANDSCAPING
- FEMA FLOOD ZONE X

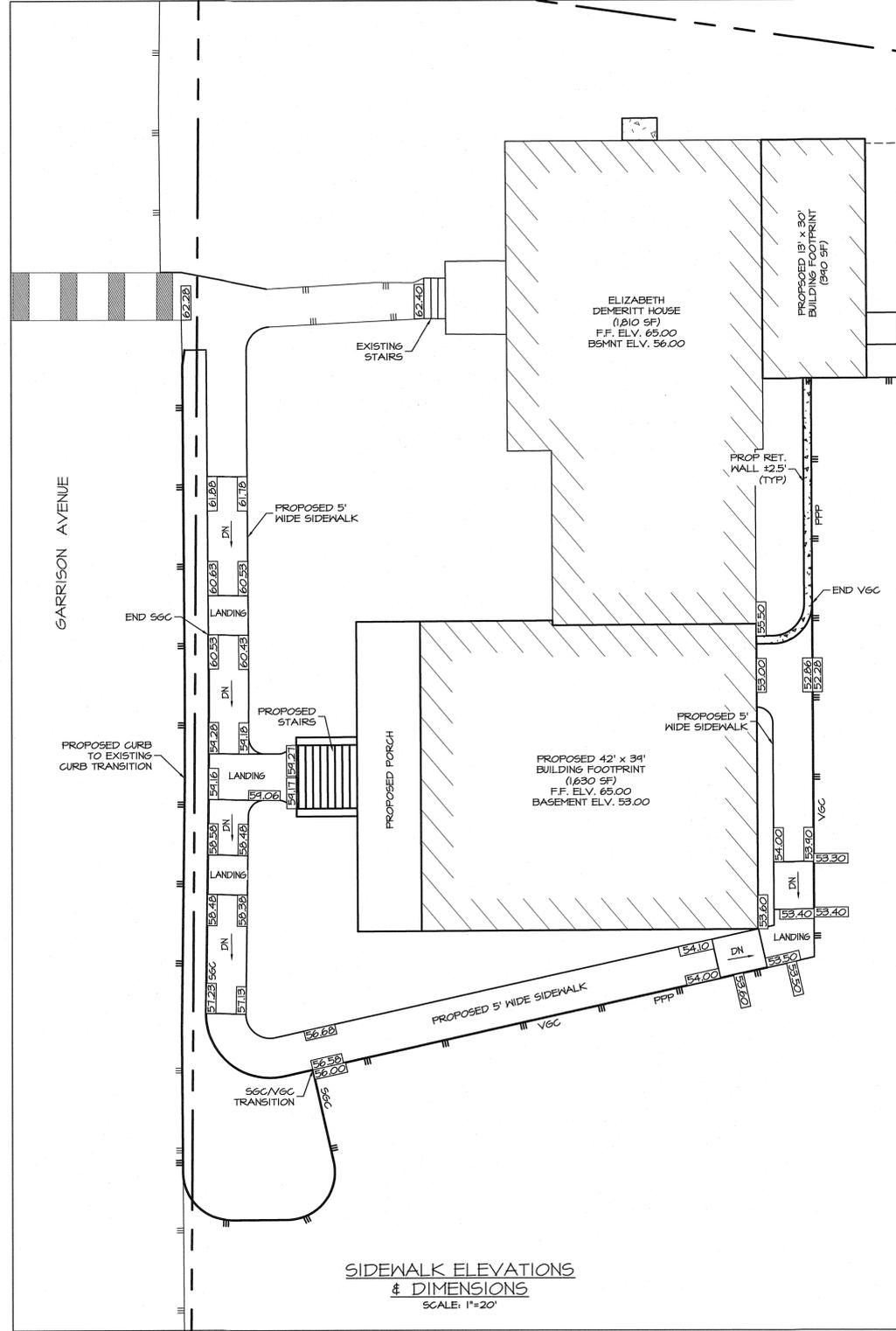


- PAINTING NOTES:**
1. ALL PAINTING TO BE REFLECTIVE.
 2. SEE SHEET D4 FOR DETAILS ON PARKING STALLS FOR THE PHYSICALLY CHALLENGED.
 3. SEE PLAN FOR STANDARD AND COMPACT PARKING STALL DIMENSIONS.

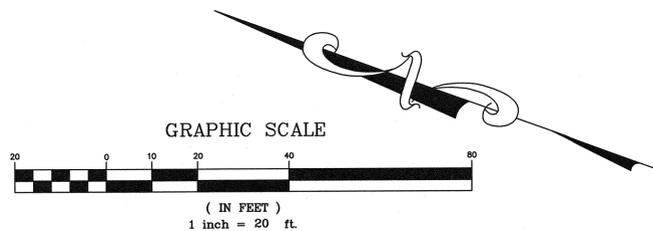
PAINT STRIPING DETAILS
NOT TO SCALE



PAVING DIMENSIONS
SCALE: 1"=20'



SIDEWALK ELEVATIONS & DIMENSIONS
SCALE: 1"=20'



- NOTES:**
1. OWNER OF RECORD:
TAX MAP 2, LOT 12-12
RICHMOND PROPERTY GROUP
333 N. ALABAMA ST.
INDIANAPOLIS, IN 46204
SCRD BK 4626 PG 647
 2. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION, SIZE, PAVING, AND RADII OF THE DRIVEWAY, PARKING LOT, CURBING, AND SIDEWALKS WITHIN THE SITE.
 3. PARCEL IS ZONED CENTRAL BUSINESS (CB) PER THE 2006 DURHAM ZONING DISTRICT MAP.
 4. A PORTION OF THE PARCEL IS IN A FLOOD HAZARD ZONE, REFERENCE FLOOD INSURANCE RATE MAP 3301TC0318E, DATED SEPTEMBER 30, 2015.
 5. SURVEY FIELDWORK CONDUCTED BY DOUCET SURVEY, LLC IN AUGUST, 2019.
 6. SOILS AND WETLANDS WERE DELINEATED BY GZA GEONVIRONMENTAL, INC. DURING AUGUST, 2019.
 7. PROPERTY TO BE SERVICED BY TOWN WATER AND SEWER.
 8. ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
 9. THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
 10. BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 12 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-888-DIG-SAFE.
 11. ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.
- REFERENCE PLANS:**
1. "PLAN OF LAND, LAND OF THE UNIVERSITY OF NEW HAMPSHIRE FOR GAMMA THETA CORPORATION, GARRISON AVENUE, (NO TAX MAP/LOT NUMBER ASSIGNED) DURHAM, NEW HAMPSHIRE" DATED JULY 11, 2014 BY DOUCET SURVEY, INC. S.C.R.D. PLAN 108-020.
 2. "EXISTING CONDITIONS PLAN OF IT & 21 MADBURY ROAD FOR AG ARCHITECTS, P.C." DATED MAY 11, 2006 BY DOUCET SURVEY, INC.
 3. "TOWN OF DURHAM SEWER EASEMENTS, PETTEE BROOK INTERCEPTOR" DATED NOVEMBER 1964 BY G.L. DAVIS & ASSOCIATES S.C.R.D. POCKET 4 FOLDER 4 PLAN 26.
 4. "RE-SUBDIVISION OF LAND IN DURHAM, NH PREPARED FOR THETA GAMMA OF DELTA ZETA HOUSE CORP." DATED AUGUST 4, 1980 BY JOHN W. DURGIN ASSOCIATES, INC. S.C.R.D. DRAWER 21, PLAN 86.
 5. "PLAN OF LAND FOR ERNEST CUTLER" DATED OCTOBER 1911 BY JOHN W. DURGIN ASSOCIATES, INC.
 6. "UNIVERSITY OF NEW HAMPSHIRE GARRISON AVENUE AREA" DATED SEPTEMBER 16, 1951 BY G.L. DAVIS & ASSOCIATES.

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CLIENT:
RICHMOND PROPERTY GROUP
333 N. ALABAMA ST.
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TITLE:
PAVING & CURBING PLAN
FOR
RICHMOND PROPERTY GROUP
ELIZABETH DEMERITT HOUSE
18 GARRISON AVENUE (SITE)
DURHAM, NH 03824

PROJECT:	SCALE:	SHEET:
19-083	AS SHOWN	C4



SECTION IV - POROUS ASPHALT PAVING (POROUS ASPHALT PAVEMENTS)

DR. ROBERT ROSEN OF WATERSTONE ENGINEERING, INC. (OR EQUAL) SHALL REVIEW ALL TESTS OF PREPARATION, INSTALLATION AND TESTING FOR THE POROUS PAVEMENT SECTIONS. PHONE: (603) 686-2486

- PART 1**
1.01 SCHEDULING
 A. SCHEDULE THE PAVING OPERATIONS SUCH THAT ALL PAVING NECESSARY TO PROVIDE SAFE AND ADEQUATE MAINTENANCE AND PROTECTION OF TRAFFIC OR PROTECTION OF PREVIOUSLY LAID COURSES IS COMPLETED WITHIN THE WEATHER AND SEASONAL LIMITATIONS.
 1. SUCH SCHEDULING SHALL INCLUDE EXPEDITING CONSTRUCTION OPERATIONS TO PERMIT PAVING BEFORE THE SEASONAL LIMITATIONS OR BY LIMITING THE LENGTH OF WORK TO THAT WHICH CAN BE COMPLETED BEFORE THE SEASONAL WIDOW.
 2. THE COST OF SCHEDULING AND SEQUENCING OF WORK TO CONFORM TO THE SEASONAL LIMITATIONS SHALL BE REFLECTED IN THE BID PRICES FOR THE RELATED CONTRACT ITEMS.

- PART 2 PRODUCTS**
2.01 ASPHALT CONCRETE
 A. BINDER COURSE - THE PAVEMENT BINDER COURSE SHALL BE CONSTRUCTION OF THE FINISHING TYPE AND TO THE WIDTHS AND DEPTHS AS SHOWN ON THE DRAWINGS.
 1. THIS BINDER COURSE SHALL BE IN ACCORDANCE WITH NHDOT SPECIFICATION FOR BITUMINOUS CONCRETE.
 B. PAVEMENT WEARING COURSE (SURFACE COURSE) - PAVEMENT WEARING COURSE SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT AND TO THE WIDTH AND DEPTH AS SHOWN ON THE DRAWINGS.
 1. THIS WEARING COURSE SHALL BE IN ACCORDANCE WITH NHDOT SPECIFICATION FOR BITUMINOUS CONCRETE.
 C. PAINTED TRAFFIC MARKINGS - CONTRACTOR SHALL REPLACE ALL MARKINGS IN ACCORDANCE WITH LOCAL, COUNTY, OR STATE SPECIFICATIONS (DEPENDING ON JURISDICTION).

- 2.02 POROUS ASPHALT**
 A. THIS IS A PERFORMANCE SPECIFICATION. ALTERNATIVES CAN BE USED IF THE MIX DESIGN MEETS THE MINIMUM GC PERFORMANCE CRITERIA FOR GRADATION, ASPHALT CONCRETE (AC) CONTENT, PERCENT (%) VOID SPACE, & DRAIN DOWN, RETAINED TENSILE STRENGTH (TSR), AND CANTABRO WEAR TEST AND ACCEPTED IN WRITING BY THE ENGINEER.
 B. POLYMER MODIFIED PERFORMANCE GRADED ASPHALT BINDER AND MIX DESIGNS
 1. POROUS ASPHALT WEARING COURSE, GRADATION, AC CONTENT, % VOID SPACE, & DRAIN DOWN, TSR, CANTABRO AS INDICATED IN TABLE 3. THE ASPHALT BINDER SHALL BE AS SPECIFIED IN THE MIX DESIGN. THE ASPHALT BINDER SHALL BE A TERMINAL BLENDED P616-29 MODIFIED WITH A STYRENE BUTADIENE STYRENE.
 2. POROUS ASPHALT BINDER COURSE, GRADATION, AC CONTENT, % VOID SPACE, & DRAIN DOWN, RETAINED TENSILE STRENGTH (TSR), AND CANTABRO WEAR TEST AND ACCEPTED IN WRITING BY THE ENGINEER.
 3. POROUS ASPHALT MIX DESIGNS. THE CONTRACTOR SHALL SIZE, UNIFORMLY GRADE, AND COMBINE THE AGGREGATE FRACTIONS IN PROPORTIONS THAT PROVIDE A MIXTURE MEETING THE REQUIREMENTS SPECIFIED.

- PART 3 EXECUTION**
3.01 PREPARATION - RESET MANHOLE FRAMES
 A. PRIOR TO PLACING WEARING (TOP) COURSE, MAKE FINAL ADJUSTMENTS OF MANHOLE BENCHES, CATCH BASIN FRAMES, VALVE BOXES AND ANY OTHER UTILITY STRUCTURES LOCATED IN THE PAVEMENT IN RELATION TO FINISHED GRADE.
 1. MANHOLE BENCHES, VALVE BOXES, ETC. TO SET 1/2 INCH BELOW FINISHED GRADE AND PARALLEL TO FINISHED CROWN.
 2. CATCH BASIN FRAMES TO SET 1 INCH BELOW FINISHED GRADE AND PARALLEL TO FINISHED CROWN.
 a. BEVEL SLOPE OF WEARING COURSE (FOR 6-INCH WIDTH) AROUND CATCH BASIN FRAME.

- 3.02 POROUS ASPHALT BINDER COURSE INSTALLATION**
A. TEST STRIP (OPTIONAL)
 1. AN OPTIONAL TEST STRIP SHALL BE CONDUCTED TO DETERMINE OPTIMAL COMPACTION PROCEDURES FOR THE BINDER COURSE AT A THICKNESS AS INDICATED IN THE DRAWINGS. THE TEST STRIP WILL BE CONSTRUCTED IN A PORTION OF THE SITE TO ESTABLISH AND ENSURE THE PROPER MIX DESIGN, PRODUCTION AND PLACEMENT.
 2. THE TEST STRIP SHALL BE OVERSEEN BY THE ENGINEER.
 3. TWO MIX SAMPLES SHALL BE COLLECTED AT THE ASPHALT PLANT BY A 3RD PARTY QC TECHNICIAN DURING BINDER COURSE PRODUCTION FROM EACH TEST STRIP FOR ASPHALT CONTENT, AND GRADATION.
 4. FIELD TESTING OF INFILTRATION CAPACITY SHALL BE PERFORMED ON THE TEST STRIP FOR INFILTRATION BY THE ENGINEER.
 5. TWO CORES SHALL BE COLLECTED FROM EACH TEST STRIP AND EVALUATED FOR COMPACTION, DENSITY, AND POROSITY.
 6. THESE CRITERIA ONCE ESTABLISHED WILL BE APPLIED TO ALL POROUS ASPHALT INSTALLATIONS.
 7. CONDITIONING OF EXISTING SURFACE
 1. THE CONTRACTOR SHALL THOROUGHLY CLEAN THE SURFACE UPON WHICH THE BINDER COURSE IS TO BE PLACED OF ALL OBSTRUCTIONABLE MATERIAL.
 C. PREPARATION OF AGGREGATES
 1. THE CONTRACTOR SHALL DRY AND HEAT THE AGGREGATES FOR THE BINDER COURSE TO THE REQUIRED TEMPERATURE.
 D. MIXING
 1. THE CONTRACTOR SHALL COMBINE THE DRIED AGGREGATE IN THE MIXER IN THE AMOUNT OF EACH FRACTION OF AGGREGATE REQUIRED TO MEET THE SPECIFICATIONS. ONCE MIXED THE BINDER COURSE SHALL BE PLACED AS SOON AS POSSIBLE.

- E. SPREADING AND FINISHING**
 1. ON AREAS WHERE IRREGULARITIES OR UNAVOIDABLE OBSTACLES MAKE THE USE OF MECHANICAL SPREADING AND FINISHING IMPRACTICABLE, THE CONTRACTOR SHALL SPREAD AND FINISH THE BINDER COURSE WITH HAND TOOLS TO PROVIDE THE REQUIRED COMPACTED THICKNESS.
 2. SOLVENT BASED AGENTS DEVELOPED TO STIFF ASPHALTS IN THE EVENT THIS WILL NOT BE ALLOWED AS A RELEASE AGENT.
 3. JOINTS SHALL BE FULLY COATED WITH ROAD 16-28 JUST PRIOR TO THE PLACEMENT OF THE BINDER COURSE. AREAS THAT BECOME CONTAMINATED OR STRIPPED OF ASPHALT COATING WILL BE RETREATED WITH ASPHALT PRIOR TO PLACING THE ADJOINING COURSE.
F. COMPACTION
 1. THE ACTUAL METHODS AND EQUIPMENT USED TO COMPACT THE BINDER COURSE WILL BE DETERMINED DURING THE PLACEMENT AND COMPACTION OF THE TEST STRIP AND AS TABLE 2.
 2. IMMEDIATELY AFTER THE ASPHALT TREATED PERMEABLE BASE HAS BEEN SPREAD, STRIP OR OTHER TESTS TO DETERMINE IRREGULARITIES ADJUSTED, THE CONTRACTOR SHALL THOROUGHLY AND UNIFORMLY COMPACT THE BINDER COURSE TO THE THICKNESS AS DESCRIBED IN SECTION 3.01.
 3. THE BINDER COURSE SHALL BE COMPACTED BY A MAXIMUM OF THREE COMPLETE PASSES OF A STEEL ROLLER HAVING A MINIMUM WEIGHT OF 12 TONS OPERATED IN STATIC MODE, OR 10 TONS IF EQUIPPED WITH OSCILLATORY COMPACTION AND OPERATED IN LOW FREQUENCY, LOW AMPLITUDE MODE, AND/OR BY OTHER MEANS APPROVED BY THE ENGINEER. PNEUMATIC ROLLERS WILL NOT BE USED TO COMPACT THE BINDER COURSE.
 4. THE CONTRACTOR SHALL ROLL THE SURFACE UNTIL THE PROPER CONDITION AND WHEN THE ROLLING DOES NOT CAUSE UNDU DISPLACEMENT, CRACKING, OR SHOVING, THE CONTRACTOR SHALL PREVENT ADHESION OF THE BINDER COURSE TO THE ROLLERS OR VIBRATING COMPACTORS WITHOUT THE USE OF FUEL OIL OR OTHER PETROLEUM, OR SOLVENT BASED RELEASE AGENTS. SOLVENTS DESIGNED TO STRIP ASPHALT BINDERS FROM SURFACE AGGREGATES WILL NOT BE PERMITTED AS RELEASE AGENTS ON EQUIPMENT, TOOLS OR BINDER COURSE SURFACES.
 5. THE CONTRACTOR SHALL IMMEDIATELY CORRECT ANY DISPLACEMENT OCCURRING AS A RESULT OF THE REVERSING OF THE DIRECTION OF A ROLLER OR FROM OTHER CAUSES TO THE SATISFACTION OF THE ENGINEER.
 6. ANY OPERATION THAT RESULTS IN BREAKDOWN OF THE AGGREGATE SHALL BE STOPPED IMMEDIATELY.
G. TRAFFIC
 1. AFTER A 24 HOUR CURING PERIOD OF THE BINDER COURSE, LIMITED TRAFFIC MAY BE ALLOWED OVER THE BINDER COURSE SURFACE, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. CONSTRUCTION EQUIPMENT, AND TRAFFIC SHALL BE LIMITED TO TRAVELING OVER THE BINDER COURSE SURFACE UNTIL THE ENTIRE PAVEMENT STRUCTURE IS IN PLACE.
 2. DAMAGE TO THE BINDER COURSE LAYER CAUSED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE REMEDIATED BY COMPLETE REMOVAL REPLACEMENT OF THE DAMAGED AREA TO THE LIMITS DETERMINED BY THE ENGINEER. THERE WILL BE NO ADDITIONAL PAYMENT FOR REPAIRS, OR ASSOCIATED WORK.

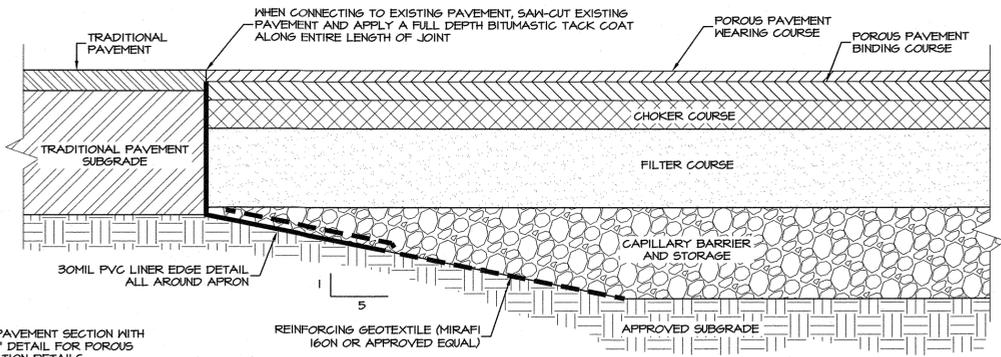
- 3.03 PLACEMENT OF POROUS ASPHALT BINDER COURSE**
 A. INSTALL THE BINDER COURSE COURSE AT A THICKNESS AS INDICATED IN THE DRAWINGS.
 B. INSTALL FRAME, GRATES, AND LANDSCAPING. SPECIAL CARE IS TO BE TAKEN TO PROTECT FRESH BINDER COURSE.
 C. ALL TRUCKS (INCLUDING CONCRETE TRUCKS) SHALL BE STOPPED PRIOR TO ENTERING THE SITE AND INSTRUCTED AS TO SPECIAL CONCERNS FOR PAVEMENT DURABILITY.
 D. WASHOUT AREA FOR ALL CONCRETE TRUCKS SHALL BE DESIGNATED OUTSIDE OF POROUS PAVEMENT AREA ON THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN OR ON DETAIL SHEET.
 E. POROUS PAVEMENT SURFACE SHALL BE PROTECTED ON HOT DAYS DURING THE PAVEMENT CURE PERIOD (2-3 DAYS). SURFACE TEMPERATURES CAN QUICKLY RISE OVER 145°F IN DIRECT SUN.
 F. A TEMPERATURE GUN SHALL BE AVAILABLE ONSITE TO ASSESS PAVEMENT SURFACE TEMPERATURES. PAVEMENT TEMPERATURES GREATER THAN 100°F SHOULD BE OBSERVED CAREFULLY FOR PAVEMENT DURABILITY. AS NEEDED, COOLING OF PAVEMENT SURFACE BY APPLICATION OF WATER FROM A WATER TRUCK SHALL OCCUR WHEN HEAVY VEHICULAR TRAFFIC IS EXPECTED SUCH AS CONCRETE TRUCKS FOR DRY WELL FRAME AND GRATE INSTALLATION. IN THE EVENT THIS IS INEFFECTIVE TO COOLING AND PAVEMENT DEFORMATION IS STILL OBSERVED, THE USE OF 3/4" PLYWOOD UNDER LARGE VEHICLE WHEELS MAY BE REQUIRED.
 G. TRAFFIC AND OTHER CONSTRUCTION TRAFFIC WILL NOT BE ALLOWED TO ACCESS THE SITE WHILE THE PAVEMENT IS EXCESSIVELY HOT >130°F.
 H. NO STOCKPILING OF MATERIALS (E.G. SOIL, STONE, LANDSCAPING MATERIALS) WILL BE ALLOWED ON POROUS PAVEMENTS.
 I. MATERIALS EXCAVATED FOR FINISH WORKS SHALL BE PLACED OUTSIDE OF POROUS PAVEMENT AREAS.
 J. VACUUMING THROUGHOUT CONSTRUCTION MAY BE NECESSARY FOR SURROUNDING PAVED AREAS TO PREVENT RUN-ON OR TRACKING OF POROUS PAVEMENTS. FREQUENCY SHALL BE ADJUSTED AS NEEDED.

- 3.04 INSPECTION, CORRECTIVE ACTION, REMOVAL AND REPAIR OF BINDER COURSE**
 A. PRIOR TO INSTALLATION OF THE POROUS ASPHALT WEARING COURSE, THE BINDER COURSE WILL BE INSPECTED FOR DAMAGE AND DEFICIENCIES. THE CONTRACTOR SHALL CORRECTED BY VACUUM AND PRESSURE WASHING TO THE SATISFACTION OF THE ENGINEER.
 B. BINDER COURSE AREAS WILL BE REMOVED AND REPLACED IN AREAS WHERE STRUCTURAL DAMAGE OR INFILTRATION CAPACITY IS DEFICIENT. THE CONTRACTOR SHALL BE AT THE DISCRETION OF THE ENGINEER TO REMOVE ADJACENT TO THE PAVEMENT, SUCH AS GUARDRAIL, CLEANUP, AND TURF ESTABLISHMENT, IS COMPLETED PRIOR TO PLACING THE WEARING COURSE. WHEN THIS WORK COULD CAUSE DAMAGE TO THE PAVEMENT.
 6. COMPACTION
 1. PLACING MIX IN AN APPROPRIATE AMBIENT TEMPERATURE AND ON A SURFACE SUFFICIENTLY WARM TO MINIMIZE THE RISK OF EXCESSIVE COOLING BEFORE COMPACTION. THE CONTRACTOR SHALL HOLD THE ENTIRE PAVEMENT STRUCTURE IS IN PLACE.
 2. DAMAGE TO THE BINDER COURSE LAYER CAUSED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE REMEDIATED BY COMPLETE REMOVAL AND REPLACEMENT OF THE DAMAGED AREA TO THE LIMITS DETERMINED BY THE ENGINEER.
 3. OTHER COMBINATIONS OF ROLLERS AND/OR METHODS OF COMPACTING MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT FROM VEHICULAR TRAFFIC UNTIL COMPACTION IS COMPLETED.

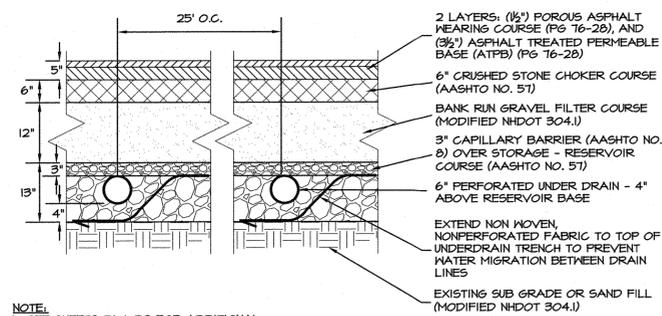
- 3.05 POROUS ASPHALT WEARING COURSE INSTALLATION**
A. GENERAL
 1. VERIFY BINDER COURSE CONDITION AND PREPARATION FOLLOWING CONSTRUCTION OF THE BINDER COURSE. THE ASPHALT WEARING COURSE AS DESCRIBED IN SECTION 3.01.
 2. THE ENGINEER SHALL BE NOTIFIED AND INSPECT THE BINDER COURSE AT THEIR DISCRETION PRIOR TO PAVING THE POROUS ASPHALT WEARING COURSE.
 3. TEMPORARY CONSTRUCTION FENCING WILL BE USED TO PREVENT TRAFFIC FROM ENTERING AREAS TO CONSTRUCTION TRAFFIC AFTER PAVING DURING PROJECT COMPLETION.
B. TEST STRIP
 1. A TEST STRIP SHALL BE CONDUCTED TO DETERMINE OPTIMAL COMPACTION PROCEDURES OF THE POROUS ASPHALT AT A THICKNESS AS INDICATED IN THE DRAWINGS. THE TEST STRIP WILL BE CONSTRUCTED IN A PORTION OF THE SITE TO ESTABLISH AND ENSURE THE PROPER MIX DESIGN, PRODUCTION AND PLACEMENT.
 2. THE TEST STRIP SHALL BE OVERSEEN BY THE ENGINEER.
 3. TWO MIX SAMPLES SHALL BE COLLECTED AT THE ASPHALT PLANT BY A 3RD PARTY QC TECHNICIAN DURING PRODUCTION FROM EACH TEST STRIP FOR ASPHALT CONTENT, GRADATION, AND CANTABRO WEAR.
 4. FIELD TESTING OF INFILTRATION CAPACITY SHALL BE PERFORMED ON THE TEST STRIP FOR INFILTRATION BY THE ENGINEER.
 5. TWO CORES SHALL BE COLLECTED FROM EACH TEST STRIP AND EVALUATED FOR COMPACTION, DENSITY, AND POROSITY.
 6. THESE CRITERIA ONCE ESTABLISHED WILL BE APPLIED TO ALL POROUS ASPHALT INSTALLATIONS.
C. ROLLERS
 1. ROLLERS OR OSCILLATING VIBRATORY ROLLERS, RANGING FROM 8-12 TONS, SHALL BE USED FOR COMPACTION, AND 1-2 TONS ROLLER FOR FINISHING. THE NUMBER, MASS (WEIGHT), AND FINISHING CAPABILITY SHALL BE SUFFICIENT TO OBTAIN THE REQUIRED COMPACTION WHILE THE MIXTURE IS IN A WORKABLE CONDITION. GENERALLY, ONE BREAK-DOWN ROLLER WILL BE NEEDED FOR EACH PAVEMENT USED IN THE SPREADING OPERATION.
 2. ADDITIONAL ROLLING MAY BE EXCESSIVE, CAUSING A BREAK IN THE BOND OF ASPHALT BETWEEN AGGREGATE PARTICLES, PARTICULARLY AFTER THE MIX HAS COOLED.
 3. TO PREVENT ADHESION OF THE MIXTURE TO ROLLERS, ROLLERS SHALL BE KEPT MOIST WITH WATER OR WATER MIXED WITH VERY SMALL QUANTITIES OF DETERGENT OR OTHER APPROVED MATERIAL. EXCESS LIQUID WILL NOT BE ALLOWED.
 4. OTHER COMBINATIONS OF ROLLERS AND/OR METHODS OF COMPACTING MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER.
 5. ALL TRUCKS (INCLUDING CONCRETE TRUCKS) SHALL BE STOPPED PRIOR TO ENTERING THE SITE AND INSTRUCTED AS TO SPECIAL CONCERNS FOR PAVEMENT DURABILITY.
 6. WASHOUT AREA FOR ALL CONCRETE TRUCKS SHALL BE DESIGNATED OUTSIDE OF POROUS PAVEMENT AREA ON THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN OR ON DETAIL SHEET.
 7. POROUS PAVEMENT SURFACE SHALL BE PROTECTED ON HOT DAYS DURING THE PAVEMENT CURE PERIOD (2-3 DAYS). SURFACE TEMPERATURES CAN QUICKLY RISE OVER 145°F IN DIRECT SUN.
 8. A TEMPERATURE GUN SHALL BE AVAILABLE ONSITE TO ASSESS PAVEMENT SURFACE TEMPERATURES. PAVEMENT TEMPERATURES GREATER THAN 100°F SHOULD BE OBSERVED CAREFULLY FOR PAVEMENT DURABILITY. AS NEEDED, COOLING OF PAVEMENT SURFACE BY APPLICATION OF WATER FROM A WATER TRUCK SHALL OCCUR WHEN HEAVY VEHICULAR TRAFFIC IS EXPECTED SUCH AS CONCRETE TRUCKS FOR DRY WELL FRAME AND GRATE INSTALLATION. IN THE EVENT THIS IS INEFFECTIVE TO COOLING AND PAVEMENT DEFORMATION IS STILL OBSERVED, THE USE OF 3/4" PLYWOOD UNDER LARGE VEHICLE WHEELS MAY BE REQUIRED.
 9. TRAFFIC AND OTHER CONSTRUCTION TRAFFIC WILL NOT BE ALLOWED TO ACCESS THE SITE WHILE THE PAVEMENT IS EXCESSIVELY HOT >130°F.
 10. STOCKPILING OF MATERIALS (E.G. SOIL, STONE, LANDSCAPING MATERIALS) WILL BE ALLOWED ON POROUS PAVEMENTS.
 11. MATERIALS EXCAVATED FOR FINISH WORKS SHALL BE PLACED OUTSIDE OF POROUS PAVEMENT AREAS.
 12. VACUUMING THROUGHOUT CONSTRUCTION MAY BE NECESSARY FOR SURROUNDING PAVED AREAS TO PREVENT RUN-ON OR TRACKING OF POROUS PAVEMENTS. FREQUENCY SHALL BE ADJUSTED AS NEEDED.

- F. SPREADING AND FINISHING**
 1. THE POROUS ASPHALT WEARING COURSE SHALL BE PLACED IN ONE APPLICATION TO A THICKNESS AS INDICATED ON THE DRAWINGS.
 2. THE CONTRACTOR SHALL PROTECT ALL EXPOSED SURFACES THAT ARE NOT TO BE TREATED FROM DAMAGE DURING ALL PHASES OF THE PAVEMENT OPERATION.
 3. MATERIAL PLACED UNTIL THE MATERIAL HAS BEEN THOROUGHLY COMPACTED AND HAS BEEN PERMITTED TO COOL TO BELOW 32° C (90° F). THE ENGINEER RESERVES THE RIGHT TO REQUIRE THAT ALL WORK ADJACENT TO THE PAVEMENT, SUCH AS GUARDRAIL, CLEANUP, AND TURF ESTABLISHMENT, IS COMPLETED PRIOR TO PLACING THE WEARING COURSE. WHEN THIS WORK COULD CAUSE DAMAGE TO THE PAVEMENT.
 6. COMPACTION
 1. PLACING MIX IN AN APPROPRIATE AMBIENT TEMPERATURE AND ON A SURFACE SUFFICIENTLY WARM TO MINIMIZE THE RISK OF EXCESSIVE COOLING BEFORE COMPACTION. THE CONTRACTOR SHALL HOLD THE ENTIRE PAVEMENT STRUCTURE IS IN PLACE.
 2. DAMAGE TO THE BINDER COURSE LAYER CAUSED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE REMEDIATED BY COMPLETE REMOVAL AND REPLACEMENT OF THE DAMAGED AREA TO THE LIMITS DETERMINED BY THE ENGINEER.
 3. OTHER COMBINATIONS OF ROLLERS AND/OR METHODS OF COMPACTING MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT FROM VEHICULAR TRAFFIC UNTIL COMPACTION IS COMPLETED.

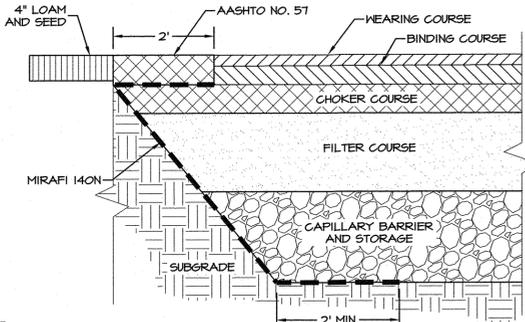
- 3.06 DRIVEWAYS AND PARKING AREAS**
A. PAVING MATERIALS, TYPE OF PAVING, DEPTH OF VARIOUS COURSES, ETC., SHALL BE AS SHOWN ON THE DRAWINGS.
 1. THE DRIVEWAYS AND PARKING AREAS SHALL BE CUT BACK 12 INCHES FROM OUTSIDE DISTURBED OR DAMAGED AREAS AS DESCRIBED ABOVE. THE MINIMUM DEPTH OF SUBBASE SHALL BE AS INDICATED ON THE DRAWINGS AND NHDOT AGGREGATE SPECIFICATIONS.
 2. THE WORK SHALL INCLUDE PROPER COMPACTION OF ANY NECESSARY SUBBASE, BASE COURSE AND FINISH COURSE.
 3. BITUMINOUS SURFACES SHALL BE RESTORED WITH ASPHALT CONCRETE MATCHING EXISTING, BUT IN NO CASE SHALL BE LESS THAN 2 INCHES OF BINDER AND 1 INCH OF TOP COURSE AS SPECIFIED IN THE APPLICABLE ARTICLES OF THIS SECTION.
 4. NON-BITUMINOUS SURFACES - WHERE SHOWN ON THE DRAWINGS, CONSTRUCTION DRIVEWAYS AND PARKING AREAS OR RESTORE EXISTING DRIVEWAYS AND PARKING AREAS AS FOLLOWS:
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 2. CRUSHED STONE SURFACES SHALL BE RESTORED MATCHING EXISTING STONE, BUT IN NO CASE SHALL BE LESS THAN 2 INCHES OF BINDER AND 1 INCH OF TOP COURSE AS SPECIFIED IN THE APPLICABLE ARTICLES OF THIS SECTION.
 3. NON-BITUMINOUS SURFACES - WHERE SHOWN ON THE DRAWINGS, CONSTRUCTION DRIVEWAYS AND PARKING AREAS OR RESTORE EXISTING DRIVEWAYS AND PARKING AREAS AS FOLLOWS:
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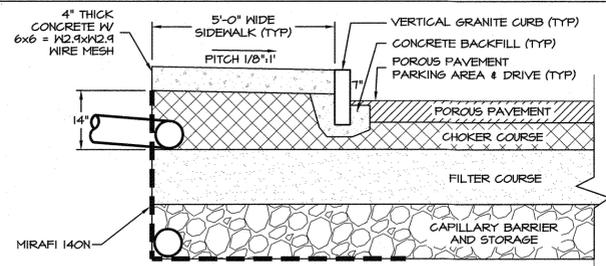
POROUS PAVEMENT TRANSITION TO TRADITIONAL PAVEMENT OR CONCRETE DETAIL
N.T.S.



POROUS PAVEMENT SECTION WITH UNDER DRAINS
N.T.S.

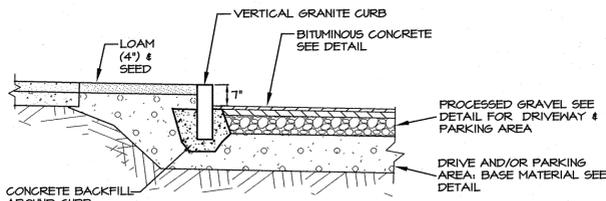


POROUS PAVEMENT EDGE DETAIL
N.T.S.

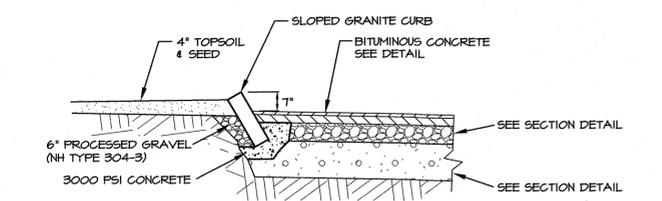


TYPICAL CONCRETE SIDEWALK DETAIL
N.T.S.

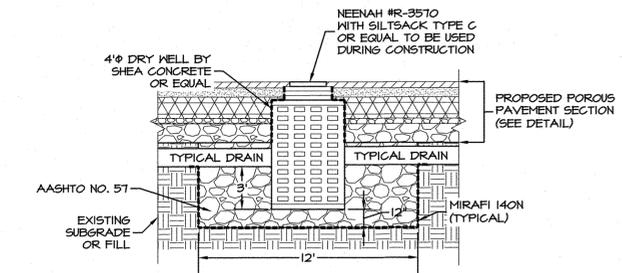
CONCRETE NOTES:
1. CONCRETE WORK SHALL CONFORM TO THE FOLLOWING NOTES AND SPECIFICATIONS.
* "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" - ACI 301-05.
* "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" - ACI 318-05.
2. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 4000 PSI AFTER 28 DAYS WITH 5 - 1% AIR ENTRAINMENT, M.R. GRACE "ECLIPSE PLUS" SHRINKAGE ADMIXTURE, AND M.R. GRACE "DCI-5" CORROSION INHIBITOR, AND A MIDRANGE WATER REDUCER.
3. FINISH CONCRETE W/ BROOM FINISH, TOOLED CONTROL JOINTS @ 5'-0" MAX SPACING, AND TOOLED JOINT ALONG ALL EDGES OF SIDEWALK.
4. SLAB SHALL BE WATER CURED FOR A MINIMUM OF 5 DAYS USING WET BURLAP.



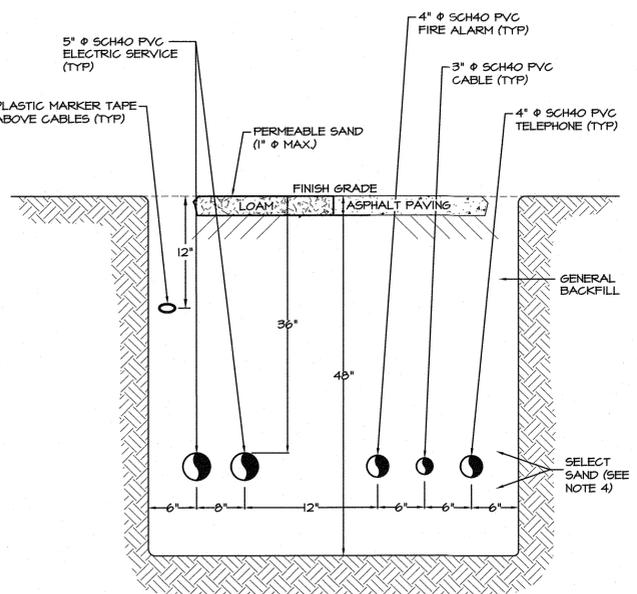
VERTICAL CURB DETAIL
N.T.S.



SLOPED CURB DETAIL
N.T.S.

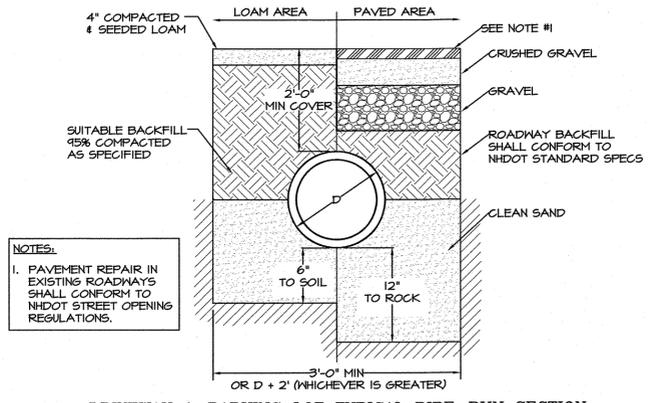


TYPICAL DRYWELL SECTION
N.T.S.

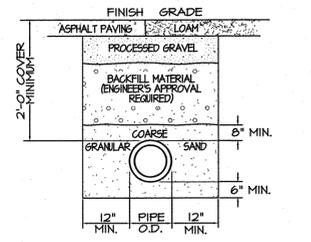


TYPICAL UTILITY TRENCH DETAIL
N.T.S.

NOTES:
VERIFY NUMBER OF CONDUIT RUNS AND TYPES OF CONDUITS REQUIRED WITH ELECTRICAL AND MECHANICAL DESIGNERS BEFORE INSTALLATION
1. ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.
2. SERVICE BOX CONNECTIONS SHALL BE "FLUSH MOUNT" TO GREATEST EXTENT POSSIBLE AND LOCATED AT PROPERTY LINE CORNERS.
3. PIPE SIZES ARE MINIMUM SIZES TO BE INSTALLED.
4. BACKFILL SHALL BE SELECTED SAND, 100% SHALL PASS THROUGH 1/4" SCREEN, UP TO 1% MAY BE ROUNDED PEBBLES UP TO 3/8" IN SIZE.
5. TRENCH WIDTH IS TO BE 12" MINIMUM, DEPENDING ON NUMBER OF UTILITIES IN TRENCH, UNLESS CALL IS FLOWED IN.
6. UTILITIES ARE TO BE LOCATED IN ROAD SHOULDERS AND ROWS AS DETERMINED BY PLANS. ALL WORK TO BE COORDINATED WITH UTILITY COMPANIES.
7. THERE MAY BE MORE OR LESS SERVICES TO BE INSTALLED IN TRENCH VERIFY WITH UTILITIES PLAN.
8. VERIFY & REFER TO PROJECT ELECTRICAL DRAWINGS AND DETAILS FOR SPECIFICS.

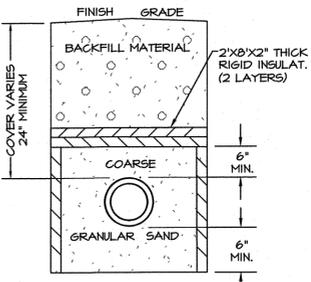


DRIVEWAY & PARKING LOT TYPICAL PIPE-RUN SECTION
N.T.S.



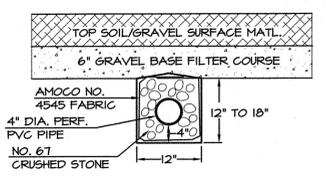
SEWER LINE INSTALLATION
N.T.S.

NOTES:
1. ALL CONSTRUCTION AND CONNECTIONS TO BE IN ACCORDANCE WITH LOCAL STANDARDS.
2. SEE MECHANICAL DRAWINGS FOR PIPE SIZES, SCHEDULES, AND PITCH REQUIREMENTS.



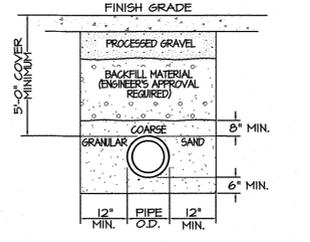
PIPE INSTALLATION DETAIL
N.T.S.

NOTES:
1. INSULATE SEWER OR FORCE MAIN WHERE PIPE WILL BE LESS THAN 6' BELOW FLOWED AREAS OR LESS THAN 4' BELOW AREAS RUNNING CROSS COUNTRY.
2. GAPS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2x2x2" PIECE OF INSULATION CENTERED OVER GAP.



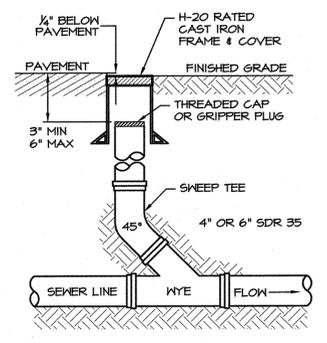
SUBSOIL DRAIN DETAIL
N.T.S.

NOTE:
1. SUB DRAINS SHALL DRAIN TO DRAINAGE STRUCTURE OR TO DAYLIGHT.

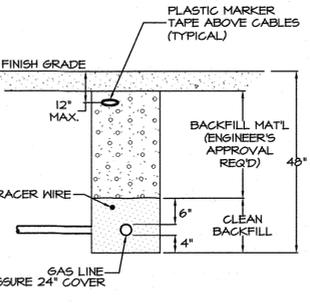


WATERLINE INSTALLATION
N.T.S.

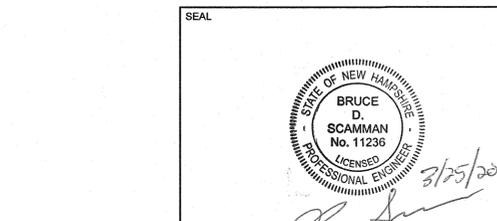
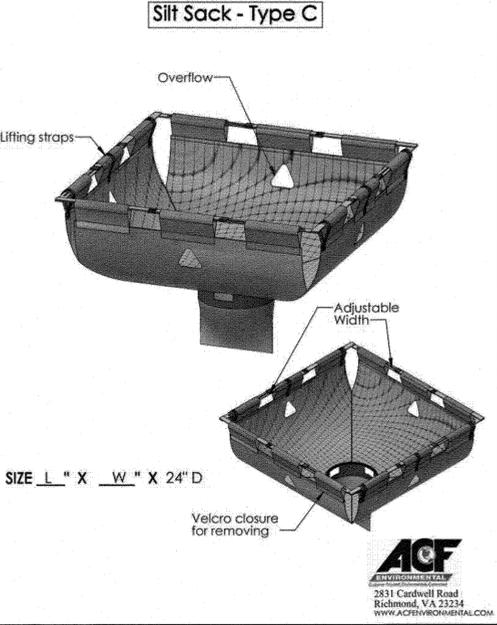
NOTE:
1. SEE SITE PLAN FOR PIPE SIZES AND SERVICES.



SERVICE CLEANOUT DETAIL
N.T.S.



GAS LINE INSTALLATION
N.T.S.



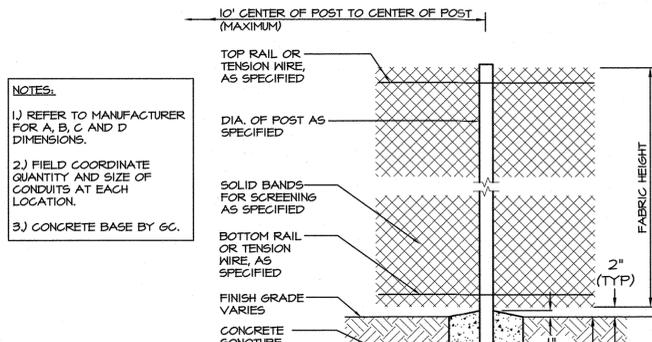
2	MAR 24, 2020	FOR APPROVAL	
1	MAR 11, 2020	PRELIMINARY	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK.
DRAWN:	MCV	DESIGN:	MCV
CHECKED:	BDS	CHECKED:	BDS

EMANUEL ENGINEERING
civil & structural consultants, land planners
118 PORTSMOUTH AVENUE, A202
SEATTLE, WA 98101
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
RICHMOND PROPERTY GROUP
333 N. ALABAMA ST.
INDIANAPOLIS, IN 46204

TITLE:
DETAILS FOR RICHMOND PROPERTY GROUP
ELIZABETH DEMERITT HOUSE
18 GARRISON AVENUE (SITE)
DURHAM, NH 03824

PROJECT: 19-083 SCALE: AS SHOWN SHEET: D3



NOTES:

- REFER TO MANUFACTURER FOR A, B, C AND D DIMENSIONS.
- FIELD COORDINATE QUANTITY AND SIZE OF CONDUITS AT EACH LOCATION.
- CONCRETE BASE BY GC.

GATE POST

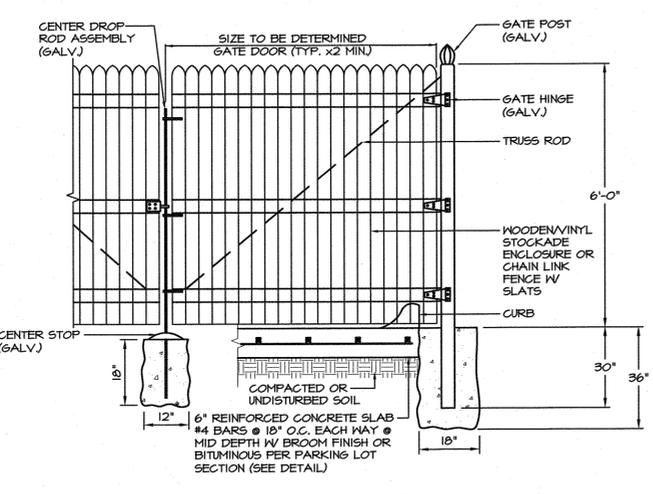
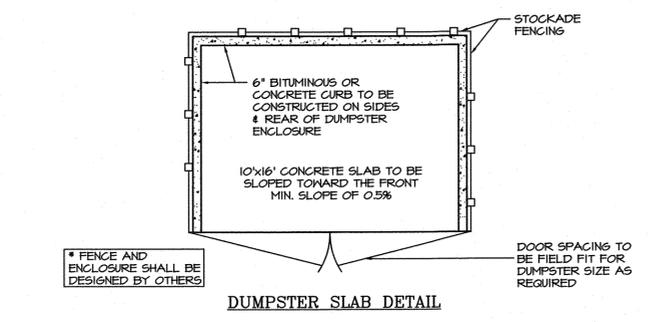
GATE LEAF WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIA.	"B" DEPTH	"C" POST EMBED.
3' TO 6'	2.875'	3' TO 5'	12"	38"	36"
		6' TO 9'	14"	42"	40"
7' TO 12'	4.000'	6' TO 9'	16"	46"	44"
		10' TO 12'	18"	46"	44"
13'	6.625'	8'-0"	18"	42"	40"

LINE AND TERMINAL POSTS

FABRIC HEIGHT	TYPE POST	"A" DIAM.	"B" DEPTH	"C" POST EMBEDMENT
3'-0" TO 4'-0"	LINE	6"	26"	24"
	TERMINAL	10"	32"	30"
5'-0"	LINE	8"	32"	30"
	TERMINAL	10"	32"	30"
6'-0" TO 9'-0"	LINE	12"	38"	36"
	TERMINAL	12"	38"	36"
10'-0" TO 12'-0"	LINE	18"	38"	36"
	TERMINAL	18"	38"	36"
13'-0" TO 18'-0"	LINE	24"	42"	40"
	TERMINAL	24"	42"	40"

NOTE: TERMINAL POSTS INCLUDE END, CORNER, AND FULL POSTS

CHAIN LINK FENCE FOUNDATION
N.T.S.



STOCKADE DUMPSTER ENCLOSURE DETAIL
N.T.S.

PARKING & PASSENGER LOADING ZONES

TOTAL # PARKING SPACES	STAND.	VAN	TOTAL
1 - 25	0	1	1
26 - 50	1	1	2
51 - 75	2	1	3
76 - 100	3	1	4
101 - 150	4	1	5
151 - 200	5	1	6
201 - 300	6	1	7
301 - 400	7	1	8
401 - 500	8	2	10
501 - 550	9	2	11
551 - 600	10	2	12
601 - 650	11	2	13

4" SCH. 40 GALVANIZED STEEL PIPE BOLLARD PAINTED OSHA YELLOW FILLED WITH CONCRETE

ULTIMATE 12ga. STEEL A563 HOT DIP GALV. CONFORMING TO COATING DESIGNATION G-40 FOR EXCELLENT CORROSION PREVENTION.

7/16" HOLES W/3/8"x3" Lg HEX HEAD STEEL BOLT WITH NUT WASHER

4000 PSI CONCRETE

5'-0" MIN TO BOTTOM OF SIGN

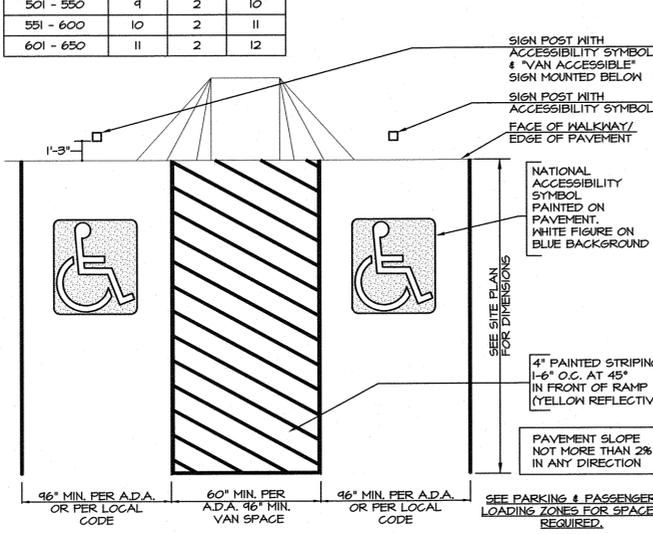
3'-0"

2'-0"

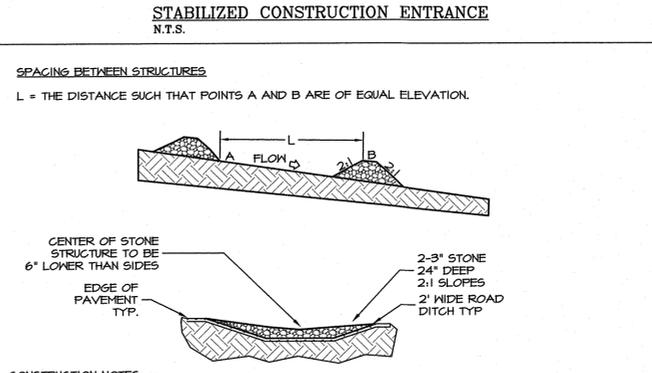
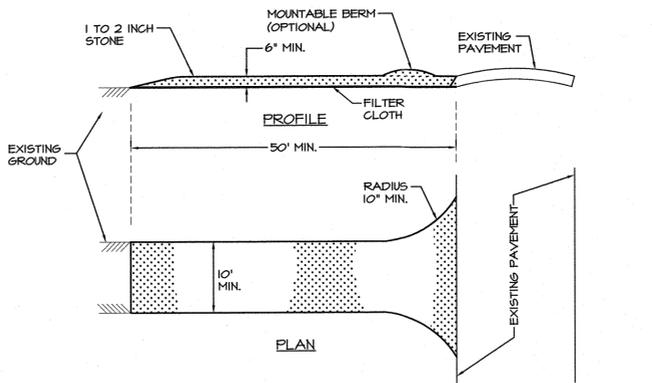
6"

RT-B PROVIDE RT-BP FOR VAN ACCESSIBLE SPACES

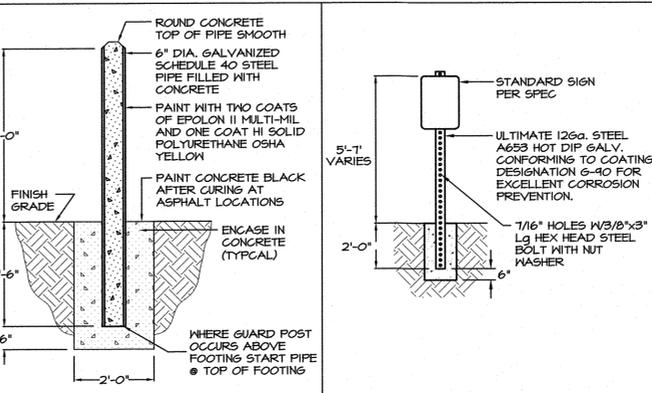
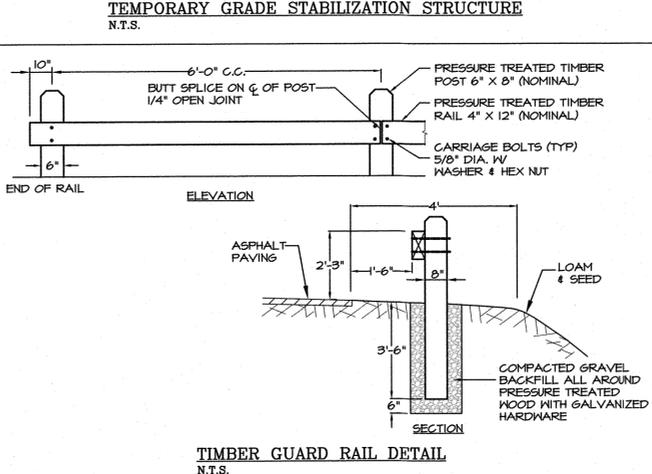
ACCESSIBILITY SIGN MOUNTING DETAIL



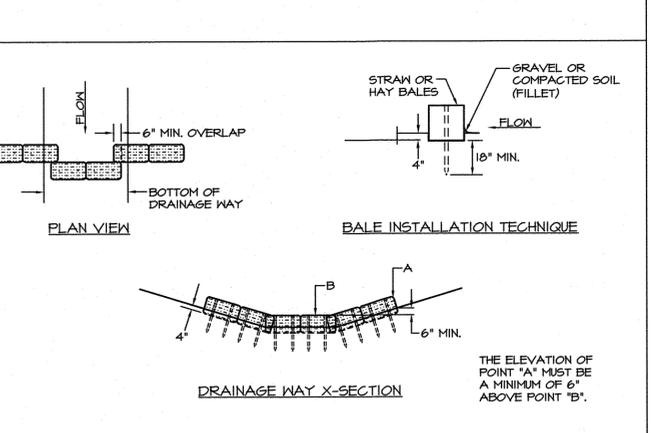
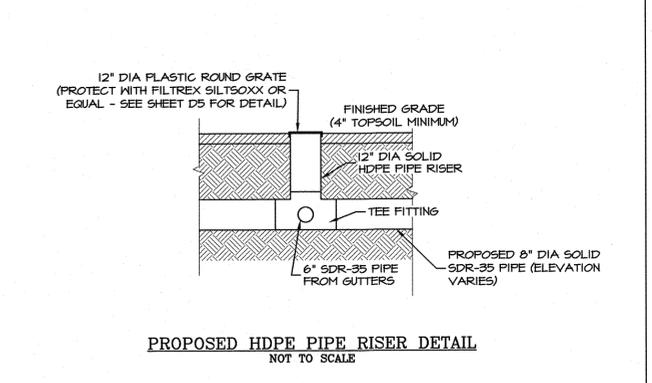
PARKING STALL FOR THE PHYSICALLY CHALLENGED
N.T.S.



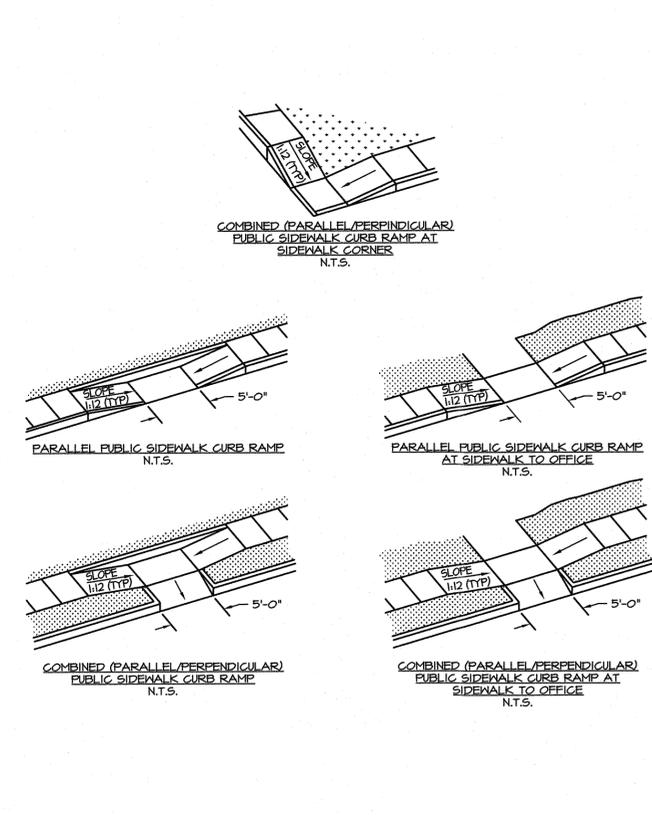
TEMPORARY GRADE STABILIZATION STRUCTURE
N.T.S.



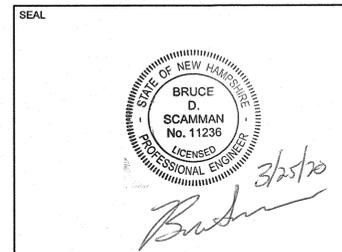
BOLLARD DETAIL
N.T.S.



STRAW OR HAY BALE GRADE STABILIZATION STRUCTURE
N.T.S.

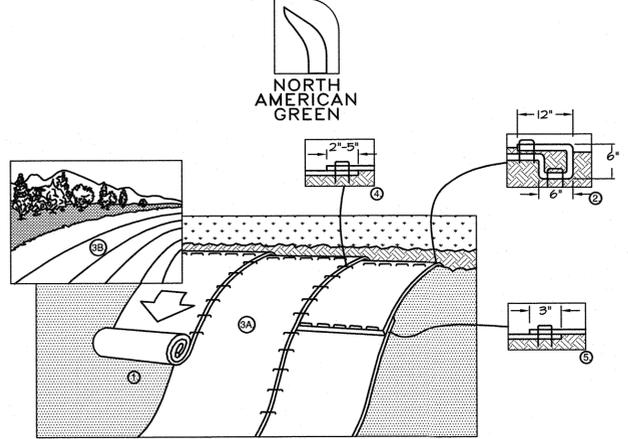


ACCESSIBILITY RAMP DETAILS
N.T.S.



2	MAR 24, 2020	FOR APPROVAL
1	MAR 11, 2020	PRELIMINARY
ISS. DATE:	MCV	CHK.
DESIGN: MCV	DESIGN: MCV	
CHECKED: BDS	CHECKED: BDS	
CLIENT: RICHMOND PROPERTY GROUP 333 N. ALABAMA ST. INDIANAPOLIS, IN 46204		
TITLE: DETAILS FOR RICHMOND PROPERTY GROUP ELIZABETH DEMERRITT HOUSE 18 GARRISON AVENUE (SITE) DURHAM, NH 03824		
PROJECT:	SCALE:	SHEET:
19-083	AS SHOWN	D4

SLOPE INSTALLATION



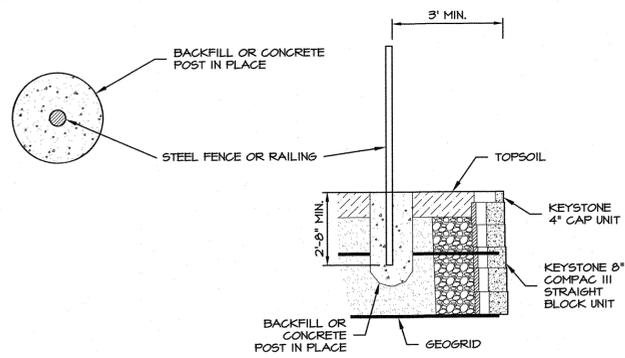
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
 * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

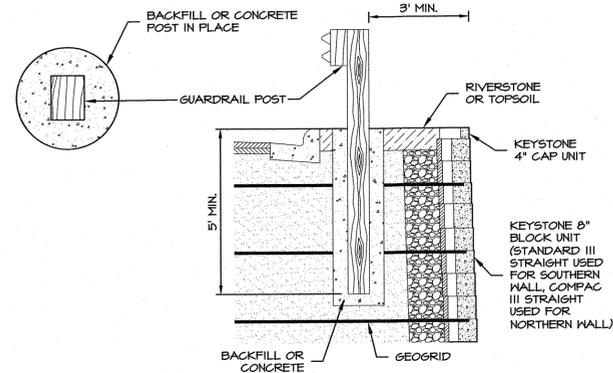
CRITICAL POINTS
 A. OVERLAPS AND SEAMS
 B. PROTECTED WATER LINE
 C. CHANNEL BOTTOMSIDE SLOPE VERTICES

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
 * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS IN EXCESS OF 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

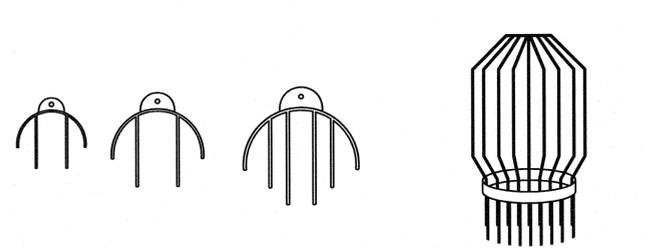
14644 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47125
 USA 1-800-712-2040 CANADA 1-800-449-2040
 www.nagreen.com



TYPICAL FENCE POST OFFSET
N.T.S.

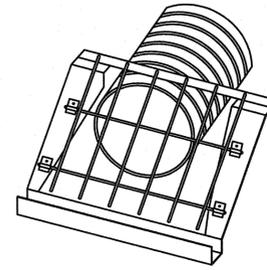


TYPICAL GUARD RAIL CROSS-SECTION
N.T.S.



ANIMAL GUARD GRATE
(FINGER STYLE)
STANDARD SIZES:
4", 6", 8", 10", 12", 15", 18", 24",
30", 36" & 42"

INLET BAR GUARD/GRATE
STANDARD SIZES:
4", 6", 8", 10", 12", 15", 18", 24",
30" & 36"

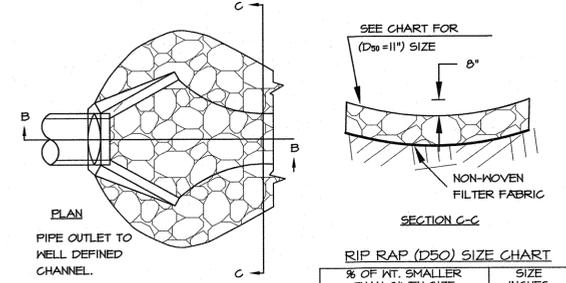
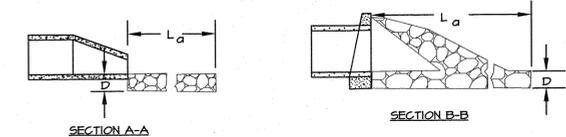
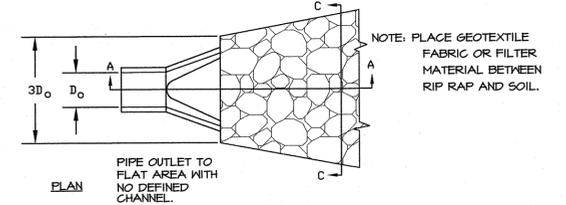


END SECTION TRASH GUARD/GRATE
STANDARD SIZES:
12", 15", 18", 24", 30", & 36"

NOTES:

- 1) PRODUCTS SHOWN MANUFACTURED BY ADVANCE DRAINAGE SYSTEM INC. WWW.ADS-PIPE.COM
- 2) USE ADVANCE DRAINAGE SYSTEM INC. OR EQUAL
- 3) FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS

PIPE GRATE PROTECTION DETAIL
N.T.S.



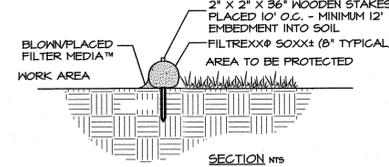
% OF WT. SMALLER THAN GIVEN SIZE	SIZE INCHES
100	15.4-21.2
85	13.2-19.1
50	10.6-15.4
15	3.2-5.3

CONSTRUCTION SPECIFICATIONS:

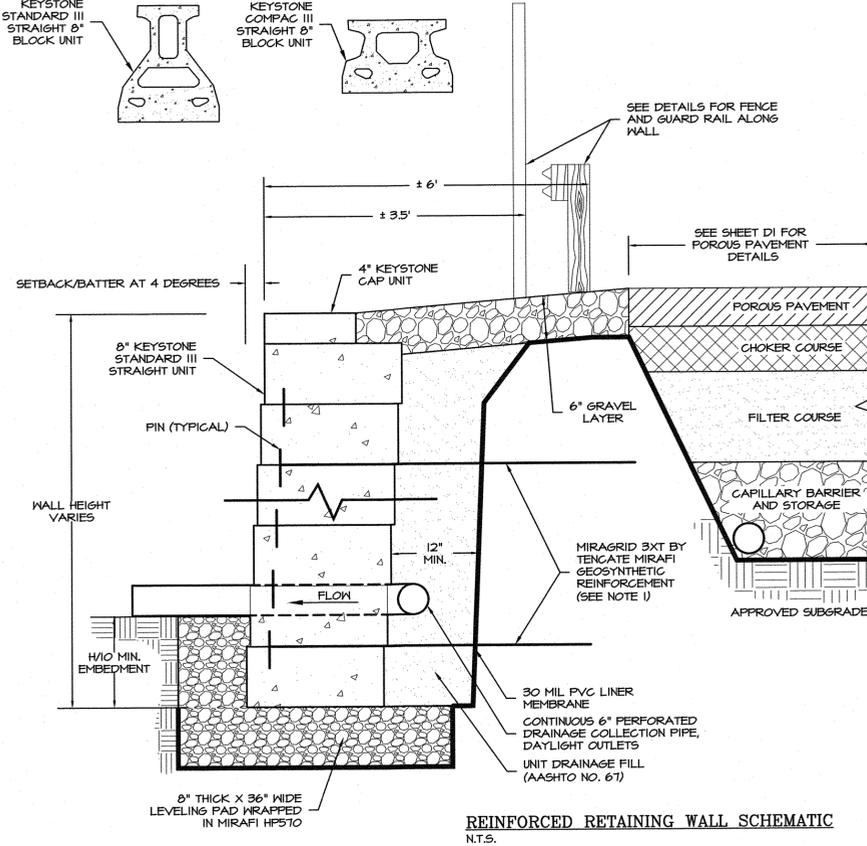
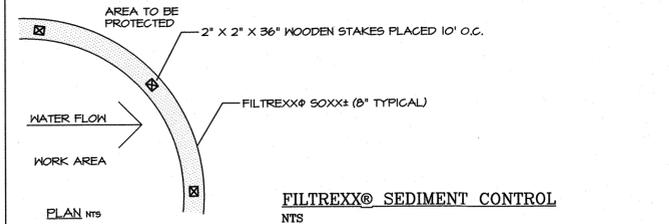
1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OF GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIPRAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

PIPE OUTLET PROTECTION
N.T.S.

- NOTES:**
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
 2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
 3. COMPOST MATERIAL TO BE DISPersed ON SITE, AS DETERMINED BY ENGINEER.
 7. ADDITIONAL INFO AVAILABLE AT [HTTP://WWW.FILTREXX.COM](http://WWW.FILTREXX.COM)



FILTREXX® SEDIMENT CONTROL
N.T.S.

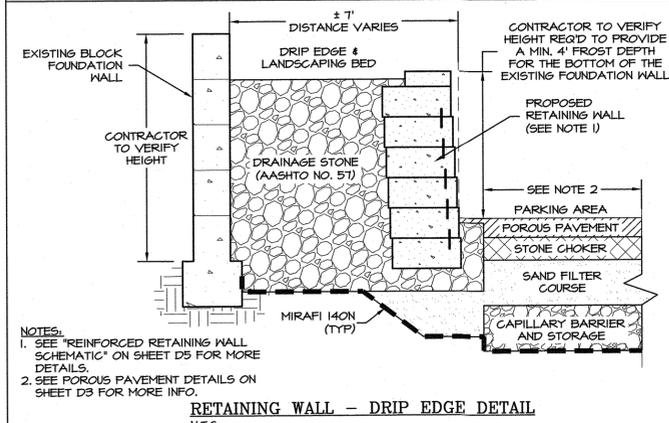
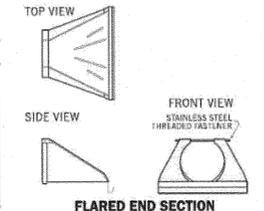


REINFORCED RETAINING WALL SCHEMATIC
N.T.S.

NOTES:

1. RETAINING WALL DESIGN BY OTHER. COORDINATE WITH MANUFACTURER ON USE AND LOCATION OF REINFORCEMENT.
2. WALL HEIGHT (H) IS THE TOTAL HEIGHT FROM TOP OF LEVELING PAD TO TOP OF WALL.
3. MINIMUM WALL EMBEDMENT IS 12 INCHES FROM TOP OF LEVELING PAD.
4. SUBSURFACE SOILS MUST BE CAPABLE OF SUPPORTING WALL SYSTEM.
5. UNIT DRAINAGE FILL IS 3/8 INCH CLEAN WASHED CRUSHED STONE. FILL ALL OPEN SPACES BETWEEN UNITS AND OPEN CAVITIES/CORES WITH SAME UNIT DRAINAGE MATERIALS EXCEPT WHERE FENCE POSTS ARE PRESENT. VOIDS IN BLOCKS HOLDING FENCE POSTS SHALL BE FILLED WITH NON-SHRINK GROUT, AND LOCATIONS SHALL BE VERIFIED WITH THE FENCE COMPANY.
6. LEVELING PAD IS CRUSHED STONE BASE MATERIAL.
7. ALL BACKFILL MATERIALS ARE COMPACTED IN 8" LIFTS TO 95% STANDARD PROCTOR DENSITY OR 92% MODIFIED PROCTOR DENSITY.
8. GEOGRIDS MUST BE OF APPROPRIATE TYPE AND LENGTH PER DESIGN.
9. FINISHED GRADE MUST PROVIDE POSITIVE DRAINAGE.
10. STEP THE LEVELING PAD IN 8" INCREMENTS AT THE APPROPRIATE ELEVATION CHANGE IN THE FOUNDATION.
11. REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL DETAILS INCLUDING CORNERS AND CURVES.
12. REFER TO TENGATE MIRAFI INSTALLATION GUIDELINES FOR ORIENTATION OF GEOGRID AND CONNECTION OF PANELS.

SIZE	PRODUCT CODE
10" (250mm)	1015NP
12" (300mm) / 15" (375mm)	1215NP
18" (450mm)	1810NP
24" (600mm)	2410NP
30" (750mm)	3015NP
36" (900mm)	3615NP



RETAINING WALL - DRIP EDGE DETAIL
N.T.S.

2	MAR 24, 2020	FOR APPROVAL
1	MAR 11, 2020	PRELIMINARY
ISS. DATE:	DESCRIPTION OF ISSUE:	CHK.
DRAWN: MCV	DESIGN: MCV	
CHECKED: BDS	CHECKED: BDS	

EMANUEL ENGINEERING
 civil & structural consultants, land planners
 118 PORTSMOUTH AVENUE, A202
 STRATHAM, NH 03885
 P: 603-772-4460 F: 603-772-4487
 WWW.EMANUELENGINEERING.COM

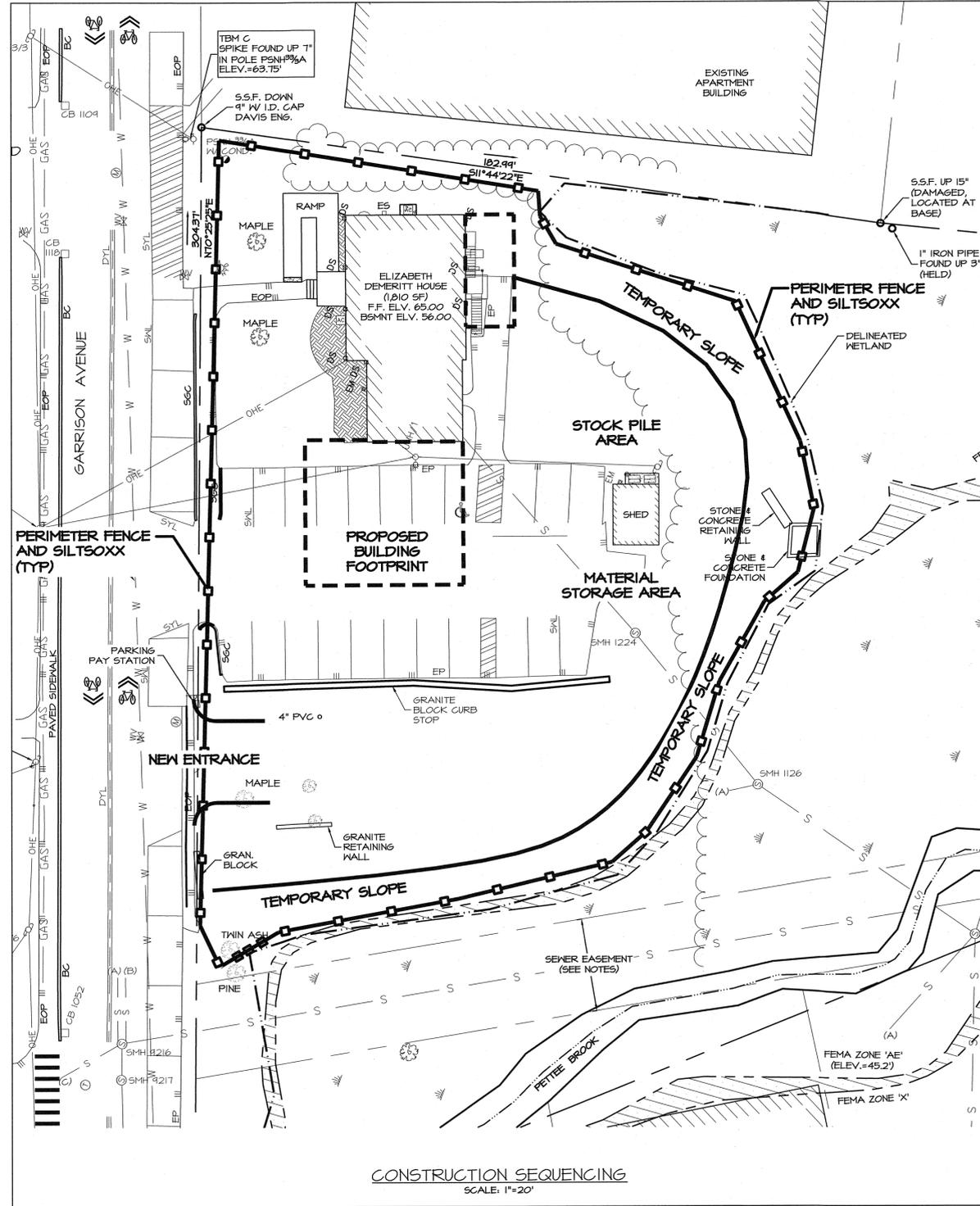
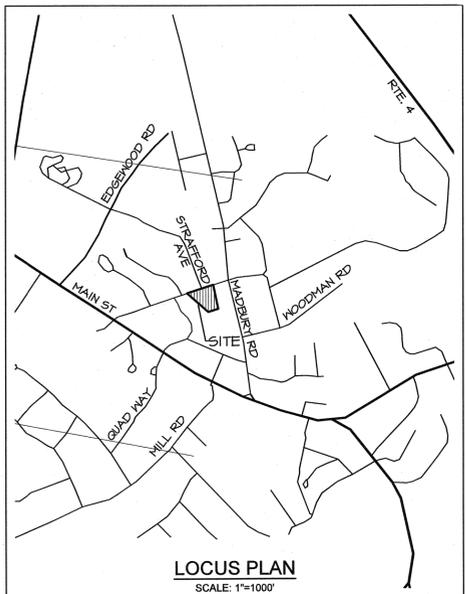
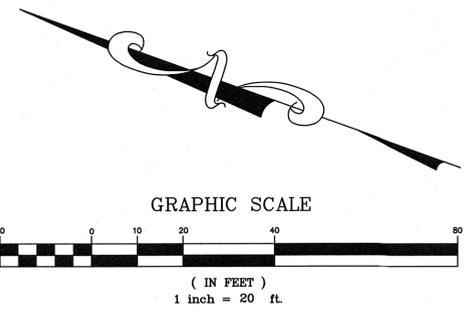
CUSTOMER:
RICHMOND PROPERTY GROUP
 333 N. ALABAMA ST.
 INDIANAPOLIS, IN 46204

TITLE:
DETAILS FOR RICHMOND PROPERTY GROUP
 ELIZABETH DEMERITT HOUSE
 18 GARRISON AVENUE (SITE)
 DURHAM, NH 03824

PROJECT: 19-083 SCALE: AS SHOWN SHEET: D5

LEGEND

- BOUND FOUND
- IRON PIPE FOUND
- (TYP) TYPICAL
- PTP PROPOSED POROUS PAVEMENT
- PTP PROPOSED TRAD. PAVEMENT
- VGC VERTICAL GRANITE CURB
- SGC SLOPED GRANITE CURB
- BC BITUMINOUS CURB
- PROPERTY LINE
- EDGE OF PAVEMENT (EOP)
- EOP WITH CURB
- UNDERGROUND UTILITIES
- OHE OVERHEAD UTILITIES
- W WATER LINE
- S SEWER LINE
- GAS GAS LINE
- I IRON FENCE
- GUARD RAIL
- EDGE OF WETLANDS
- UTILITY POLE
- METLANDS
- BOLLARD
- ELECTRICAL METER
- SEWER MANHOLE
- CATCH BASIN
- SEWER CLEANOUT
- WATER VALVE
- TREE
- PARKING SPACES IN ROW
- COMPACT PARKING SPOT
- LANDSCAPING
- FEMA FLOOD ZONE X



CONSTRUCTION SEQUENCE:

1. INSTALL PROTECTIVE FENCING AROUND EXISTING TREES TO REMAIN, PER LANDSCAPING PLAN.
2. REMOVE VEGETATION TO INSTALL FENCING AND SILT/SOXX AROUND SITE PERIMETER.
3. REMOVE REMAINING VEGETATION IN AREAS TO BE DISTURBED AND PER LANDSCAPING PLAN.
4. REMOVE SHED, AND CONCRETE FOUNDATION & WALL ABUTTING EDGE OF WETLANDS.
5. REMOVE PAVEMENT.
6. LEVEL SITE TO CREATE LAY-DOWN AREA.
7. CONSTRUCT NEW SITE ENTRANCE TO LATER BE NEW POROUS PAVEMENT DRIVEWAY.
8. EXCAVATE NEW FOUNDATION FOOTPRINT.
9. BUILD NEW STRUCTURE.
10. DO NOT CONSTRUCT PARKING AREA UNTIL SITE IS STABILIZED AND EXTERIOR OF NEW STRUCTURE IS COMPLETE (NO SILTING OF BASE MATERIALS OR PAVEMENT.)
11. PAVEMENT CONSTRUCTION TO BE REVIEWED/MONITORED BY DR. ROBERT ROSENER OR EQUAL. CONTACT: 603-686-2488
12. CONTRACTOR IS RESPONSIBLE FOR CLEANING POROUS PAVEMENT WHEN CONSTRUCTION IS FINISHED.

NOTES:

1. OWNER OF RECORD: TAX MAP 2, LOT 12-12, RICHMOND PROPERTY GROUP, 333 N. ALABAMA ST., INDIANAPOLIS, IN 46204, SCRD BK 4626 PG 647
2. THE INTENT OF THIS PLAN IS TO SHOW CONSTRUCTION SEQUENCING NOTES AND LOCATION OF SAID NOTES WITHIN THE SITE.
3. PARCEL IS ZONED CENTRAL BUSINESS (CB) PER THE 2006 DURHAM ZONING DISTRICT MAP.
4. A PORTION OF THE PARCEL IS IN A FLOOD HAZARD ZONE, REFERENCE FLOOD INSURANCE RATE MAP 3801TC0318E, DATED SEPTEMBER 30, 2015.
5. SURVEY FIELDWORK CONDUCTED BY DOUCET SURVEY, LLC IN AUGUST, 2014.
6. SOILS AND WETLANDS WERE DELINEATED BY GZA ENVIRONMENTAL, INC. DURING AUGUST, 2014.
7. PROPERTY TO BE SERVICED BY TOWN WATER AND SEWER.
8. ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
9. THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
10. BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 72 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-888-DIG-SAFE.
11. ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.

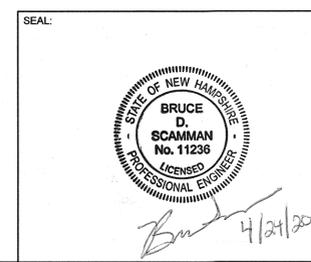
REFERENCE PLANS:

1. "PLAN OF LAND, LAND OF THE UNIVERSITY OF NEW HAMPSHIRE FOR GAMMA THETA CORPORATION, GARRISON AVENUE, (NO TAX MAP/LOT NUMBER ASSIGNED) DURHAM, NEW HAMPSHIRE" DATED JULY 11, 2014 BY DOUCET SURVEY, INC. S.C.R.D. PLAN 108-020.
2. "EXISTING CONDITIONS PLAN OF 17 & 21 MADBURY ROAD FOR AS ARCHITECTS, PC" DATED MAY 11, 2006 BY DOUCET SURVEY, INC.
3. "TOWN OF DURHAM SEWER EASEMENTS, PETTEE BROOK INTERCEPTOR" DATED NOVEMBER 1964 BY G.L. DAVIS & ASSOCIATES S.C.R.D. POCKET 4 FOLDER 4 PLAN 26.
4. "RE-SUBDIVISION OF LAND IN DURHAM, NH PREPARED FOR THETA GAMMA OF DELTA ZETA HOUSE CORP." DATED AUGUST 4, 1980 BY JOHN W. DURGIN ASSOCIATES, INC. S.C.R.D. DRAWER 21, PLAN 86.
5. "PLAN OF LAND FOR ERNEST CUTTER" DATED OCTOBER 1971 BY JOHN W. DURGIN ASSOCIATES, INC.
6. "UNIVERSITY OF NEW HAMPSHIRE GARRISON AVENUE AREA" DATED SEPTEMBER 16, 1951 BY G.L. DAVIS & ASSOCIATES.

1	APR 24, 2020	FOR APPROVAL	
ISS. DATE:		DESCRIPTION OF ISSUE:	CHK:
DRAWN:	MCV	DESIGN:	MCV
CHECKED:	BDS	CHECKED:	BDS

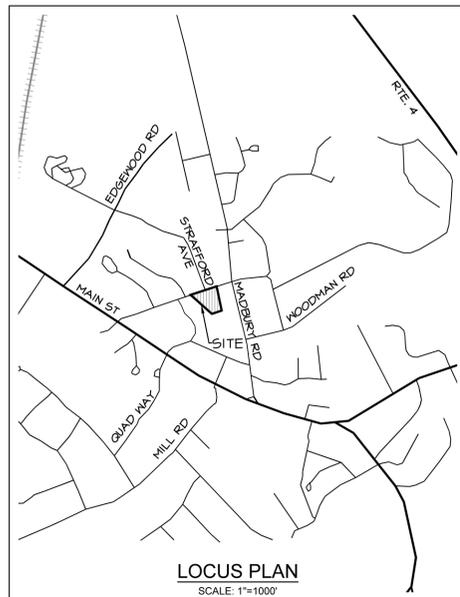
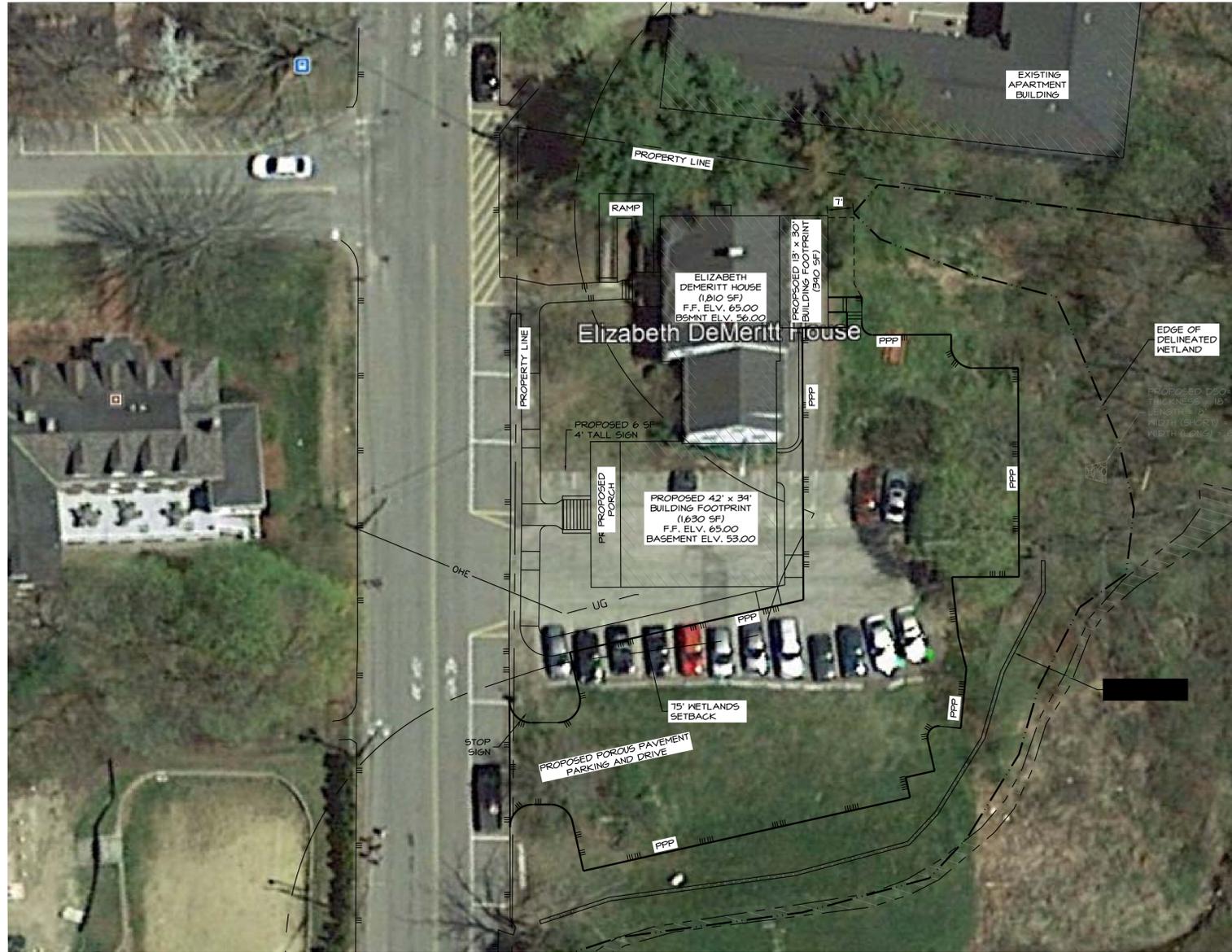


CLIENT:
RICHMOND PROPERTY GROUP
333 N. ALABAMA ST.
INDIANAPOLIS, IN 46204



TITLE:
CONSTRUCTION SEQUENCING PLAN
FOR
RICHMOND PROPERTY GROUP
ELIZABETH DEMERRITT HOUSE
18 GARRISON AVENUE (SITE)
DURHAM, NH 03824

PROJECT:	SCALE:	SHEET:
19-083	AS SHOWN	CS1

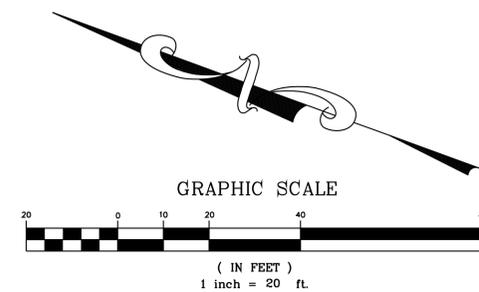


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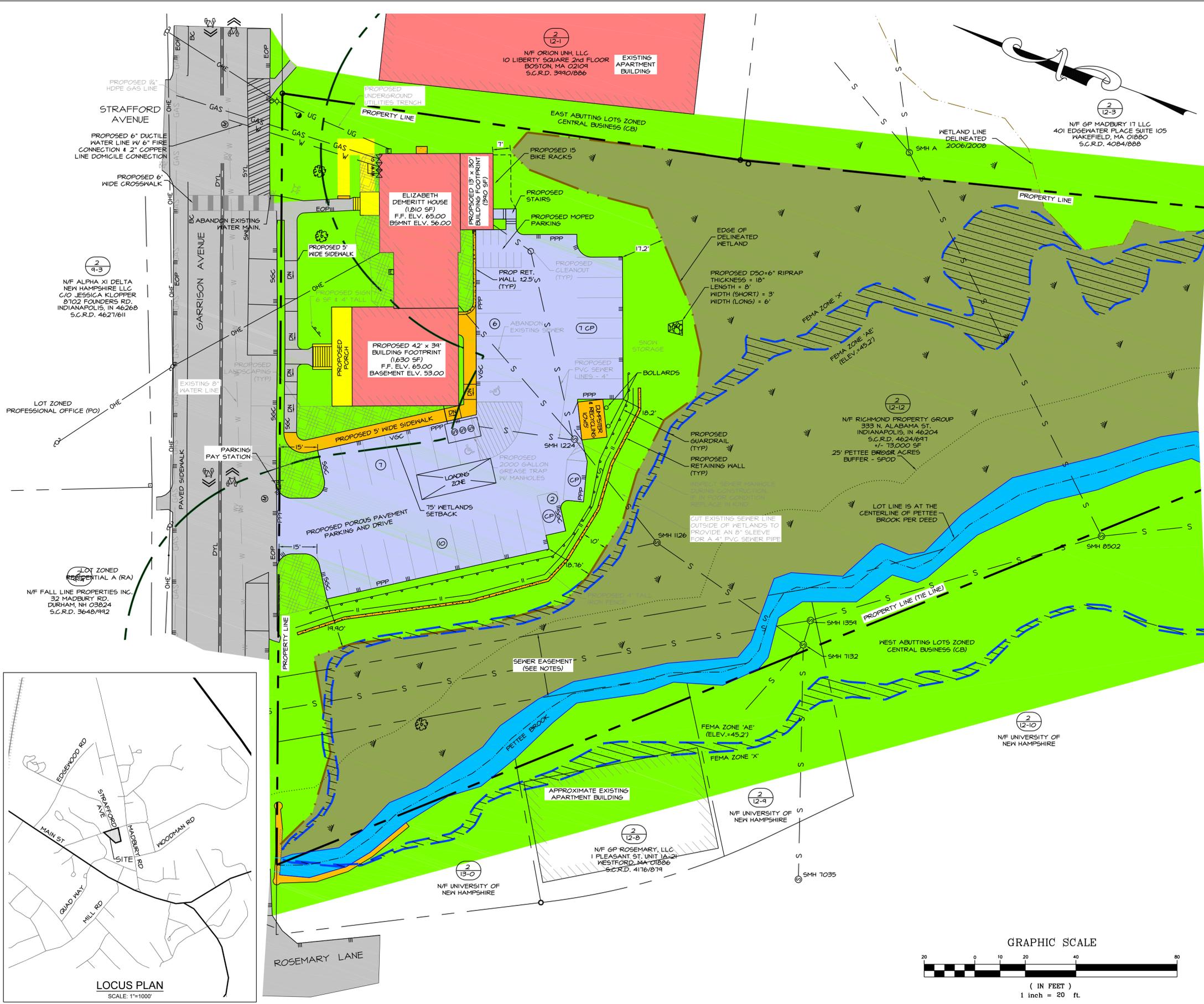
1. OWNER OF RECORD:
TAX MAP 2, LOT 12-12
RICHMOND PROPERTY GROUP
333 N. ALABAMA ST.
INDIANAPOLIS, IN 46204
SCRD BK 4626 PG 69T
2. THE INTENT OF THIS PLAN IS TO SHOW
PROPOSED SITE CONDITIONS FOR A
FRATERNITY, DEPICTING BUILDING, DRIVEWAY,
DRAINAGE, AND SITE IMPROVEMENTS IN
RELATION TO AN OVERLAY OF THE EXISTING
SITE.
3. PARCEL IS ZONED CENTRAL BUSINESS (CB) PER
THE 2006 DURHAM ZONING DISTRICT MAP.
4. A PORTION OF THE PARCEL IS IN A FLOOD
HAZARD ZONE; REFERENCE FLOOD INSURANCE
RATE MAP 3301TC0318E, DATED SEPTEMBER
30, 2015.
5. SURVEY FIELDWORK CONDUCTED BY DOUCET
SURVEY, LLC IN AUGUST, 2019.
6. SOILS AND WETLANDS WERE DELINEATED BY
GZA GEOTECHNICAL, INC. DURING AUGUST,
2019.

REFERENCE PLANS:

1. "PLAN OF LAND, LAND OF THE UNIVERSITY OF
NEW HAMPSHIRE FOR GAMMA THETA
CORPORATION, GARRISON AVENUE, (NO TAX
MAP/LOT NUMBER ASSIGNED) DURHAM, NEW
HAMPSHIRE" DATED JULY 11, 2014 BY DOUCET
SURVEY, INC. S.C.R.D. PLAN 108-020.
2. "EXISTING CONDITIONS PLAN OF 17 & 21
MADBURY ROAD FOR AG ARCHITECTS, PC"
DATED MAY 11, 2006 BY DOUCET SURVEY, INC.
3. "TOWN OF DURHAM SEWER EASEMENTS, PETTEE
BROOK INTERCEPTOR" DATED NOVEMBER
1964 BY G.L. DAVIS & ASSOCIATES S.C.R.D.
POCKET 4 FOLDER 4 PLAN 26.
4. "RE-SUBDIVISION OF LAND IN DURHAM, NH
PREPARED FOR THETA GAMMA OF DELTA
ZETA HOUSE CORP." DATED AUGUST 4, 1980
BY JOHN W. DURGIN ASSOCIATES, INC. S.C.R.D.
DRAWER 21, PLAN 86.
5. "PLAN OF LAND FOR ERNEST CUTTER" DATED
OCTOBER 1917 BY JOHN W. DURGIN
ASSOCIATES, INC.
6. "UNIVERSITY OF NEW HAMPSHIRE GARRISON
AVENUE AREA" DATED SEPTEMBER 16, 1957 BY
G.L. DAVIS & ASSOCIATES.



2	MAR 25, 2020	FOR APPROVAL	
1	MAR 9, 2020	PRELIMINARY	
ISS. DATE:	DESCRIPTION OF ISSUE:		CHK.
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CHECKED:	BDS	CHECKED:	BDS
 <small>civil & structural consultants, land planners</small> 118 PORTSMOUTH AVENUE, A202 STRATHAM, NH 03885 P: 603-772-4400 F: 603-772-4487 WWW.EMANUELENGINEERING.COM			
CLIENT:			
RICHMOND PROPERTY GROUP 333 N. ALABAMA ST. INDIANAPOLIS, IN 46204			
TITLE:			
SITE PLAN W/ AERIAL OVERLAY FOR RICHMOND PROPERTY GROUP ELIZABETH DEMERRIT HOUSE 18 GARRISON AVENUE (SITE) DURHAM, NH 03824			
PROJECT:	SCALE:	SHEET:	
19-083	1"=20'	SK1	



REFERENCE PLANS:

- "PLAN OF LAND, LAND OF THE UNIVERSITY OF NEW HAMPSHIRE FOR GAMMA THETA CORPORATION, GARRISON AVENUE, (NO TAX MAP/LOT NUMBER ASSIGNED) DURHAM, NEW HAMPSHIRE" DATED JULY 11, 2014 BY DOUGET SURVEY, INC. S.C.R.D. PLAN 108-020.
- "EXISTING CONDITIONS PLAN OF 17 & 21 MADBURY ROAD FOR AG ARCHITECTS, PC" DATED MAY 11, 2006 BY DOUGET SURVEY, INC.
- "TOWN OF DURHAM SEWER EASEMENTS, PETTEE BROOK INTERCEPTOR" DATED NOVEMBER 1964 BY G.L. DAVIS & ASSOCIATES S.C.R.D. POCKET 4 FOLDER 4 PLAN 26.
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- "PLAN OF LAND FOR ERNEST CUTTER" DATED OCTOBER 1917 BY JOHN W. DURGIN ASSOCIATES, INC.
- "UNIVERSITY OF NEW HAMPSHIRE GARRISON AVENUE AREA" DATED SEPTEMBER 16, 1951 BY G.L. DAVIS & ASSOCIATES.

NOTES:

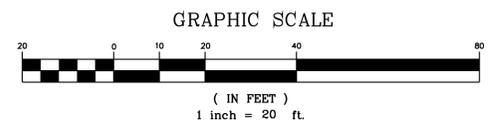
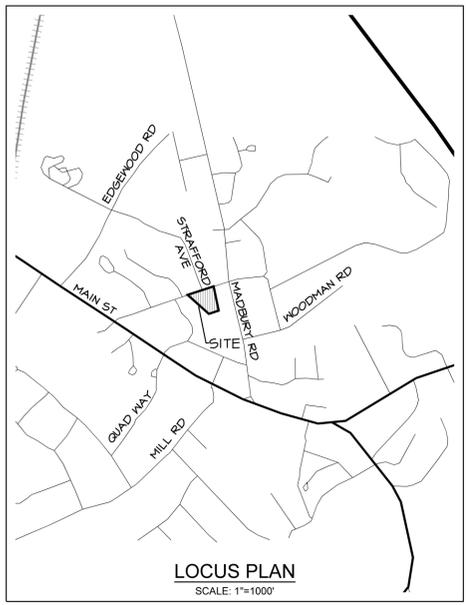
- OWNER OF RECORD: TAX MAP 2, LOT 12-12 RICHMOND PROPERTY GROUP 333 N. ALABAMA ST. INDIANAPOLIS, IN 46204 S.C.R.D. BK 4626 PG 647
- THE INTENT OF THIS PLAN IS TO SHOW PROPOSED SITE CONDITIONS FOR A FRATERNITY, DEPICTING BUILDING, DRIVEWAY, DRAINAGE, AND SITE IMPROVEMENTS.
- PARCEL IS ZONED CENTRAL BUSINESS (CB) PER THE 2006 DURHAM ZONING DISTRICT MAP.
- A PORTION OF THE PARCEL IS IN A FLOOD HAZARD ZONE; REFERENCE FLOOD INSURANCE RATE MAP 3301C038E, DATED SEPTEMBER 30, 2015.
- SURVEY FIELDWORK CONDUCTED BY DOUGET SURVEY, LLC IN AUGUST, 2019.
- SOILS AND WETLANDS WERE DELINEATED BY GZA GEOENVIRONMENTAL, INC. DURING AUGUST, 2019.
- PROPERTY TO BE SERVICED BY ON-SITE WELL AND SEPTIC.
- ALL CONSTRUCTION SHOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STANDARDS AND REGULATIONS.
- THIS PLAN WAS PREPARED WITH ON-SITE FIELD SURVEY AND EXISTING PLANS. THE CONTRACTOR SHOULD NOTIFY EMANUEL ENGINEERING, INC. DURING CONSTRUCTION IF ANY DISCREPANCY TO THE PLAN IS FOUND ON SITE.
- BEFORE ANY EXCAVATION, DIG SAFE AND ALL UTILITY COMPANIES SHOULD BE CONTACTED 12 HOURS BEFORE COMMENCING BY THE CONTRACTOR. CALL DIG SAFE @ 811 OR 1-888-DIG-SAFE.
- ALL UTILITIES SHALL BE LOCATED UNDERGROUND EXCEPT AS NOTED ON PLAN APPROVED BY THE PLANNING BOARD.
- PARKING REQUIREMENTS (PER TOWN OF DURHAM SITE PLAN REGULATIONS, DATED 2019):
 - ONE SPACE PER RESIDENT (CB DISTRICT EXEMPT WITH FEE)
 - ONE HANDICAP SPACE PER TWENTY-FIVE SPACES
 - FRONT SETBACK = 15' OR BEHIND FRONT OF BUILDING; WHICHEVER IS GREATER
- PARKING SPACE DIMENSIONAL REQUIREMENTS:
 - 4'x8' PERPENDICULAR TO DRIVEWAY
 - 8'x22' PARALLEL TO DRIVEWAY
- THIS PARCEL IS SUBJECT TO AND/OR BENEFIT OF EASEMENTS RESTRICTIONS ETC. SEE EXISTING CONDITIONS PLAN BY DOUGET SURVEY, AS PART OF THIS PLAN SET, FOR MORE INFORMATION.

LEGEND:

- REBAR FOUND
- IRON PIPE FOUND
- VGC VERTICAL GRANITE CURB
- SOC SLOPED GRANITE CURB
- PPP PROPOSED POROUS PAVEMENT
- PTP PROPOSED TRADITIONAL PAVEMENT
- EDGE OF PAVEMENT
- OHE OVERHEAD UTILITIES
- SEWER LINE
- GUARD RAIL
- UTILITY POLE
- LIGHT POLE
- WETLANDS
- PROPERTY LINE
- EDGE OF WETLANDS
- 15' WETLANDS SETBACK
- FEMA ZONE 'X'
- FEMA ZONE 'AE'
- PROPOSED POROUS PAVEMENT

2
9-3
N/F ALPHA XI DELTA NEW HAMPSHIRE LLC
C/O JESSICA KLOPPER
8102 FOUNDERS RD.
INDIANAPOLIS, IN 46268
S.C.R.D. 4627/611

LOT ZONED RESIDENTIAL A (RA)
N/F FALL LINE PROPERTIES INC.
32 MADBURY RD.
DURHAM, NH 03824
S.C.R.D. 3648/912



2	APR 24, 2020	FOR APPROVAL	
1	MAR 24, 2020	FOR APPROVAL	
ISS. DATE:	DESCRIPTION OF ISSUE:		CHK.
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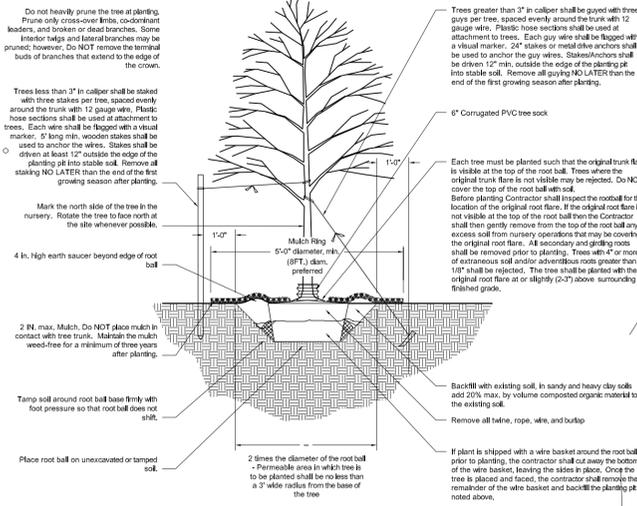
EMANUEL ENGINEERING
civil & structural consultants, land planners
118 PORTSMOUTH AVENUE, A202
STRATHAM, NH 03885
P: 603-772-4400 F: 603-772-4487
WWW.EMANUELENGINEERING.COM

CLIENT:
RICHMOND PROPERTY GROUP
333 N. ALABAMA ST.
INDIANAPOLIS, IN 46204

TITLE:
COLORED SITE PLAN
FOR
RICHMOND PROPERTY GROUP
ELIZABETH DEMERITT HOUSE
18 GARRISON AVENUE (SITE)
DURHAM, NH 03824

PROJECT:	SCALE:	SHEET:
19-083	1"=20'	SK2

Tree Planting Detail

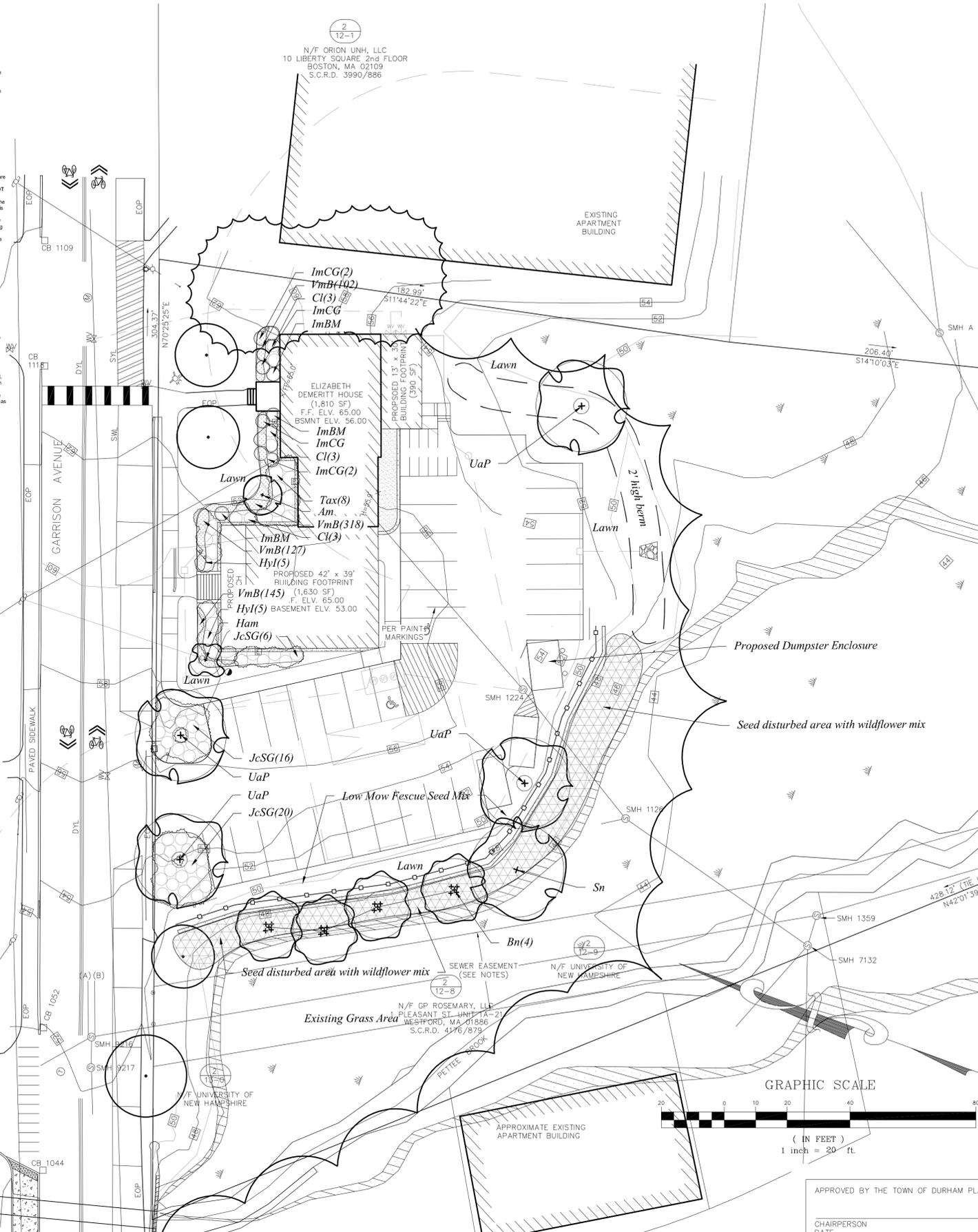
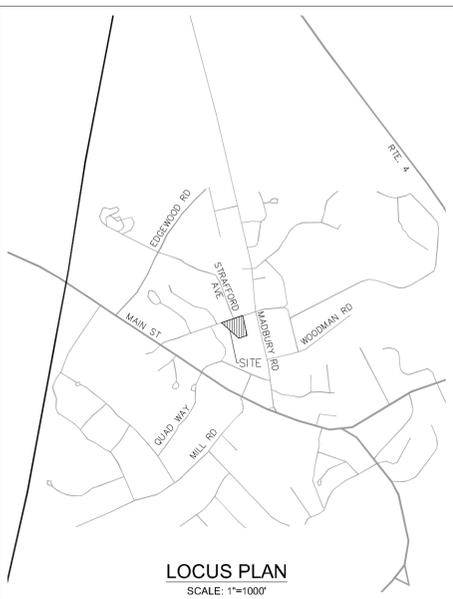


Plant List

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Am	<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	Autumn Brilliance Serviceberry	1	8-10' ht.	multistemmed B&B
Bh	<i>Betula nigra</i> 'Heritage'	Heritage River Birch	4	10-12' ht.	multistemmed B&B
Ham	<i>Hamamelis x intermedia</i> 'Arnold promise'	Arnold Promise Witchhazel	1	7-8' ht.	multistemmed B&B
Sn	<i>Salix nigra</i>	Black Willow	1	2.5-3" cal.	BB
UaP	<i>Ulmus americana</i> 'Princeton'	Princeton American Elm	4	2.5-3" cal.	BB

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cl	<i>Clethra alnifolia</i> 'Hummingbird'	Hummingbird Compact Summersweet	9	3 gal.	
Hyl	<i>Hydrangea arborescens</i> 'Incrediball'	Incrediball Hydrangea	10	7 gal.	full
ImBM	<i>Ilex meservee</i> 'Blue Mist'	Blue Mist Holly (female conical)	3	4-5' ht.	BB
ImCG	<i>Ilex meservee</i> 'China Girl'	China Girl Holly	6	2.5-3"	BB
JcSG	<i>Juniperus chinensis</i> 'Sagegreen'	Sagegreen Juniper	42	7-8 ft.	BB
Tax	<i>Taxus media</i> 'Ever-Low'	Ever-Low Yew	8	15-24" wide	BB

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
VmB	<i>Vincia minor</i> 'Bowles'	Bowles Periwinkle	692	2.25" pots	



Landscape Notes

- Design is based on drawings by Emanuel Engineering, Inc. dated April 16, 2020 and may require adjustment due to actual field conditions.
- The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
- Erosion Control shall be in place prior to construction.
- Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
- The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
- It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
- Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portables within the tree protection area.
- This plan is for review purposes only, NOT for Construction. Construction Documents will be provided upon request.
- Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
- The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
- The Contractor shall procure any required permits prior to construction.
- Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
- Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
- The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the local area of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
- A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
- All plants shall be legibly tagged with proper botanical name.
- The Contractor shall guarantee all plants for not less than one year from time of acceptance.
- Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
- No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
- All landscaping shall be provided with the following:
 - Outside hose attachments spaced a maximum of 150 feet apart, and
 - An underground irrigation system, or
 - A temporary irrigation system designed for a two-year period of plant establishment.
- If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
- The contractor is responsible for all plant material from the time their work commences until final acceptance. This includes but is not limited to maintaining all plants in good condition, the security of the plant material once delivered to the site, and watering of plants. Plants shall be appropriately watered prior to, during and after planting. It is the contractor's responsibility to provide clean water suitable for plant health from off site, should it not be available on site.
- All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
- Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and 1/2" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
- Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
- In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
- Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy. Within the sight distance triangles at vehicle intersections the canopies shall be raised to 8' min.
- Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
- Landscape Architect is not responsible for the means and methods of the contractor.

Seeding Specifications

Lawn Areas: Pennington Smart Seed Tri-Fescue Mix or approved equal. Seed at specified rates.
Wildflower mix: New England Wetland Plants - New England Showy Wildflower Mix. Seed at 30 lbs/acre.

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ISS. DATE:	DESCRIPTION OF ISSUE:	CHK.
2 APR 24, 2020	REVISIONS	
1 MAR 24, 2020	FOR APPROVAL	
DRAWN: LF	DESIGN: RW	
CHECKED: RW	CHECKED: RW	

CUSTOMER:	RICHMOND PROPERTY GROUP 333 N. ALABAMA ST. INDIANAPOLIS, IN 46204				
TITLE:	LANDSCAPE PLAN FOR RICHMOND PROPERTY GROUP ELIZABETH DEMERITT HOUSE 18 GARRISON AVENUE (SITE) DURHAM, NH 03824				
PROJECT:	19-083	SCALE:	1"=20'	SHEET:	C3

