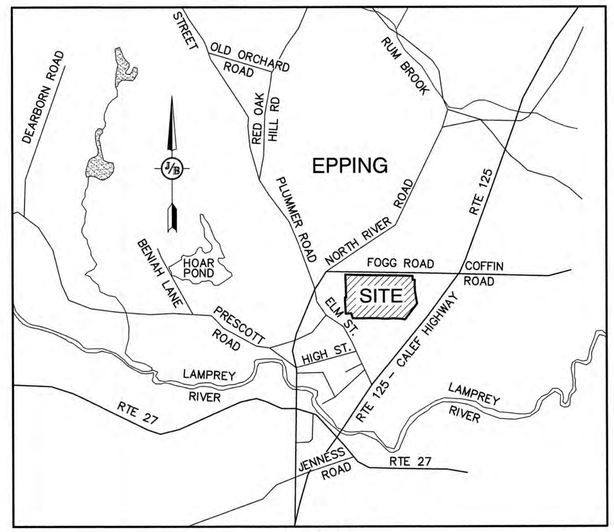
AGE RESTRICTED HOUSING DEVELOPMENT
SITE PLAN - "CANTERBURY COMMONS"
TAX MAP 22, LOT 82-1
FOGG ROAD, EPPING, NH

Know what's **below**
811 before you dig

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
		SETBACK LINES
		CENTERLINE
		FRESHWATER WETLANDS LINE
		TIDAL WETLANDS LINE
		STREAM CHANNEL
		TREE LINE
		STONEWALL
		BARBED WIRE
		FENCE
		STOCKADE FENCE
		SOIL BOUNDARY
		AQUIFER PROTECTION LINE
		FLOOD PLAIN LINE
		ZONELINE
		EASEMENT
100	100	MAJOR CONTOUR
98	98	MINOR CONTOUR
		EDGE OF PAVEMENT
VGC	VGC	VERTICAL GRANITE CURB
SGC	SGC	SLOPE GRANITE CURB
CCB	CCB	CAPE COD BERM
PCC	PCC	POURED CONCRETE CURB
X	X	SILT FENCE
D		DRAINAGE LINE
S	S	SEWER LINE
FM	FM	SEWER FORCE MAIN
G	G	GAS LINE
W	W	WATER LINE
WS	WS	WATER SERVICE
OHE	OHE	OVERHEAD ELECTRIC
UGE	UGE	UNDERGROUND ELECTRIC
		GUARDRAIL
UD	UD	UNDERDRAIN
F	F	FIRE PROTECTION LINE
	W	THRUST BLOCK
		IRON PIPE/IRON ROD
		DRILL HOLE
		IRON ROD/DRILL HOLE
		STONE/GRANITE BOUND
100x0	100x0	SPOT GRADE
x 100.00	x 100.00	PAVEMENT SPOT GRADE
x 100.00 / 99.50	x 100.00 / 99.50	CURB SPOT GRADE
		BENCHMARK (TBM)
		DOUBLE POST SIGN
		SINGLE POST SIGN
W TP1	W	WELL
TP1		TEST PIT
		FAILED TEST PIT
M	M	MONITORING WELL
PC		PERC TEST
1		PHOTO LOCATION
		TREES AND BUSHES
		UTILITY POLE
		LIGHT POLES
		DRAIN MANHOLE
		SEWER MANHOLE
		HYDRANT
		WATER GATE
		WATER SHUT OFF
		REDUCER
		SINGLE GRATE CATCH BASIN
		DOUBLE GRATE CATCH BASIN
		TRANSFORMER
		CULVERT W/WINGWALLS
		CULVERT W/FLARED END SECTION
		CULVERT W/STRAIGHT HEADWALL
		STONE CHECK DAM
		DRAINAGE FLOW DIRECTION
		4K SEPTIC AREA
		WETLAND IMPACT
		VEGETATED FILTER STRIP
		RIPRAP
		OPEN WATER
		FRESHWATER WETLANDS
		TIDAL WETLANDS
		STABILIZED CONSTRUCTION ENTRANCE
		CONCRETE
		GRAVEL
		SNOW STORAGE
		RETAINING WALL



LOCUS MAP
SCALE 1" = 2000'

SHEET INDEX

CS	COVER SHEET
C1	EXISTING CONDITIONS PLAN
OV1	OVERVIEW SITE PLAN
A1	EASEMENT PLAN
C2-C3	SITE PLAN
C4-C5	GRADING & DRAINAGE PLAN
C6-C7	UTILITY PLAN
P1-P4	ROADWAY PLAN AND PROFILE
L1-L2	LIGHTING PLAN
L3-L5	LANDSCAPING PLAN
T1	TRUCK TURNING PLAN
D1-D5	DETAIL SHEETS
E1	EROSION CONTROL DETAILS

CIVIL ENGINEER / SURVEYOR
JONES & BEACH ENGINEERS, INC.
85 PORTSMOUTH AVENUE
PO BOX 219
STRATHAM, NH 03885
(603) 772-4746
CONTACT: JOE CORONATI
JCORONATI@JONESANDBEACH.COM

WETLAND/ SOILS CONSULTANT
GOVE ENVIRONMENTAL SERVICES, INC.
8 CONTINENTAL DRIVE, UNIT H
PO BOX 219
EXETER, NH 03833
(603) 778-0644
CONTACT: JIM GOVE, CWS, CSS
JGOVE@GESINC.BIZ

LIGHTING CONSULTANT
CHARRON, INC.
PO BOX 4550
MANCHESTER, NH 03108
(604) 622-8418
CONTACT: KEN SWEENEY

LANDSCAPING CONSULTANT
LM LAND DESIGN, LLC
11 SOUTH ROAD
BRENTWOOD, NH 03833
(603 770-7728
CONTACT: LISE MCNAUGHTON

WATER AND SEWER
EPPING WATER AND SEWER COMMISSION
157 MAIN STREET
EPPING, NH 03042
(603) 679-5441
CONTACT: DENNIS KOCH

ELECTRIC
EVERSOURCE ENERGY
74 OLD DOVER ROAD
ROCHESTER, NH 03867
(603) 555 - 5334
CONTACT: NICKOLAI KOSKO

TELEPHONE
FAIRPOINT COMMUNICATIONS
100 TRI CITY ROAD
SOMERWORTH, NH 03878
(603) 743-1114
CONTACT: DAVE KESTNER

CABLE TV
COMCAST COMMUNICATION CORPORATION
334-B CALEF HIGHWAY
EPPING, NH 03042-2325
(603) 679-5695

PROJECT PARCEL
TOWN OF EPPING
TAX MAP 22, LOT 82-1
BK 5675 PG 1047

APPLICANT
CC AT FOGG ROAD, LLC
ATTN: ROB GRAHAM
142 PORTSMOUTH AVE
STRATHAM, NH 03885

TOTAL LOT AREA
2,043,553± SQ. FT.
46.9± ACRES

APPROVED - EPPING, NH
PLANNING BOARD

DATE:

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS NOTED	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

STATE OF NEW HAMPSHIRE
MICHAEL J. KERNAN
No. 9848
LICENSED
PROFESSIONAL ENGINEER
10/1/20

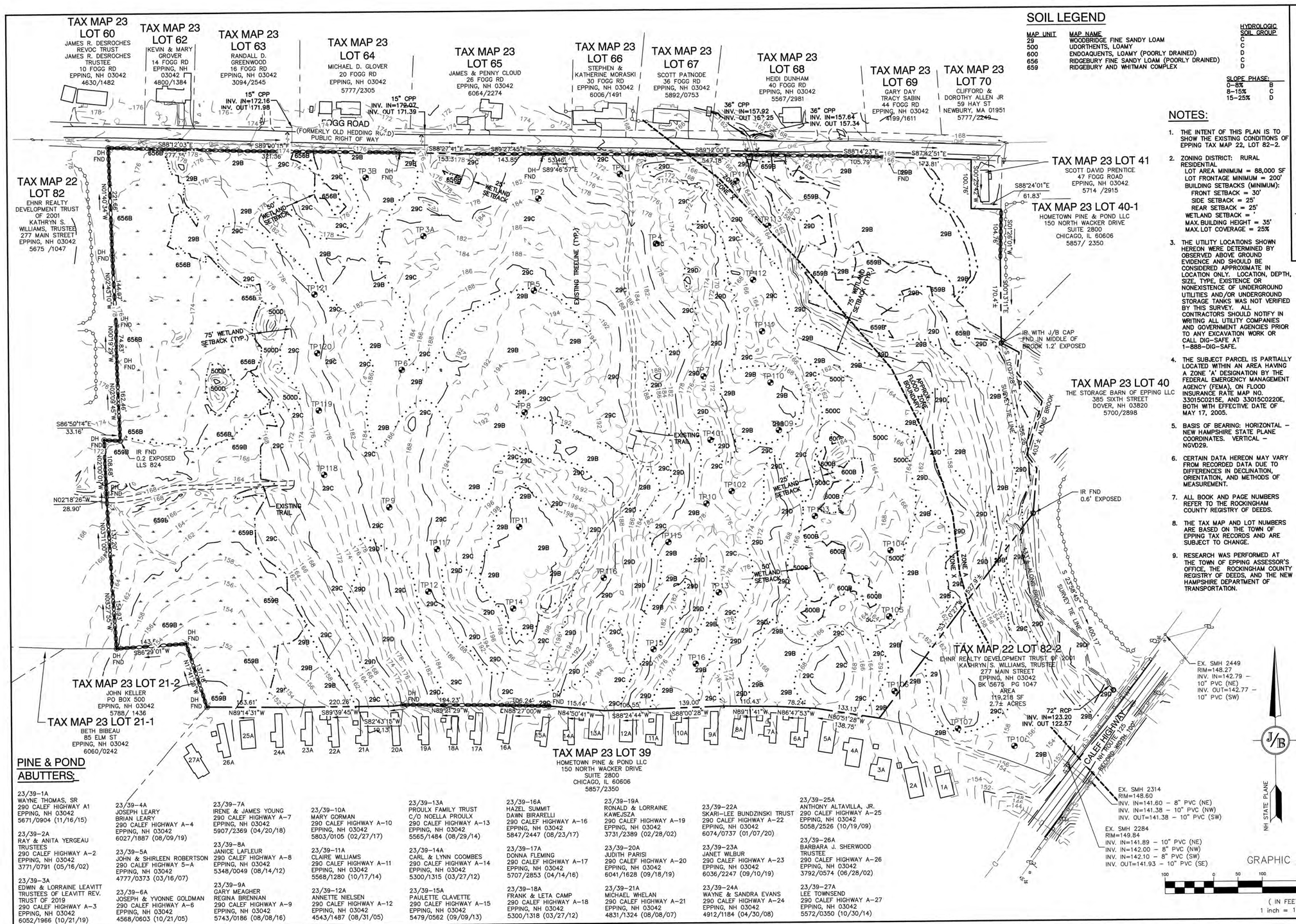
REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: COVER SHEET
Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE
Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
CS
SHEET 1 OF 26
JBE PROJECT NO. 16130

"HIGHLAND ESTATES" - FOGG ROAD, EPPING, NH
JBE # 16130 REVISION, 9/18/20



SOIL LEGEND

MAP UNIT	MAP NAME	HYDROLOGIC SOIL GROUP
29	WOODBRIDGE FINE SANDY LOAM	C
500	UDORTHENTS, LOAMY	C
600	ENDOAQUENTS, LOAMY (POORLY DRAINED)	D
656	RIDGEBURY FINE SANDY LOAM (POORLY DRAINED)	C
659	RIDGEBURY AND WHITMAN COMPLEX	D

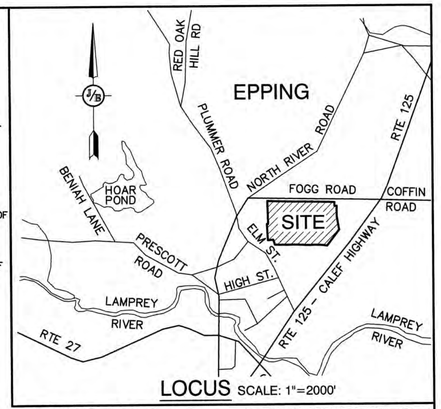
SLOPE PHASE:	
0–8%	B
8–15%	C
15–25%	D

NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF EPPING TAX MAP 22, LOT 82-2.
2. ZONING DISTRICT: RURAL RESIDENTIAL
   LOT AREA MINIMUM = 88,000 SF
   LOT FRONTAGE MINIMUM = 200'
   BUILDING SETBACKS (MINIMUM):
   FRONT SETBACK = 30'
   SIDE SETBACK = 25'
   REAR SETBACK = 25'
   WETLAND SETBACK = '
   MAX. BUILDING HEIGHT = 35'
   MAX. LOT COVERAGE = 25%
3. THE UTILITY LOCATIONS SHOWN HEREON WERE DETERMINED BY OBSERVED ABOVE GROUND EVIDENCE AND SHOULD BE CONSIDERED APPROXIMATE IN LOCATION ONLY. LOCATION, DEPTH, SIZE, TYPE, EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES AND/OR UNDERGROUND STORAGE TANKS WAS NOT VERIFIED BY THIS SURVEY. ALL CONTRACTORS SHOULD NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK OR CALL DIG–SAFE AT 1–888–DIG–SAFE.
4. THE SUBJECT PARCEL IS PARTIALLY LOCATED WITHIN AN AREA HAVING A ZONE 'A' DESIGNATION BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 33015C0215E, AND 33015C0220E, BOTH WITH EFFECTIVE DATE OF MAY 17, 2005.
5. BASIS OF BEARING: HORIZONTAL – NEW HAMPSHIRE STATE PLANE COORDINATES. VERTICAL – NGVD29.
6. CERTAIN DATA HEREON MAY VARY FROM RECORDED DATA DUE TO DIFFERENCES IN DECLINATION, ORIENTATION, AND METHODS OF MEASUREMENT.
7. ALL BOOK AND PAGE NUMBERS REFER TO THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
8. THE TAX MAP AND LOT NUMBERS ARE BASED ON THE TOWN OF EPPING TAX RECORDS AND ARE SUBJECT TO CHANGE.
9. RESEARCH WAS PERFORMED AT THE TOWN OF EPPING ASSESSOR'S OFFICE, THE ROCKINGHAM COUNTY REGISTRY OF DEEDS, AND THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
10. THIS SURVEY IS NOT A CERTIFICATION TO OWNERSHIP OR TITLE OF LANDS SHOWN. OWNERSHIP AND ENCUMBRANCES ARE MATTERS OF TITLE EXAMINATION NOT OF A BOUNDARY SURVEY. THE INTENT OF THIS PLAN IS TO RETRACE THE BOUNDARY LINES OF DEEDS REFERENCED HEREON. OWNERSHIP OF ADJOINING PROPERTIES IS ACCORDING TO ASSESSOR'S RECORDS. THIS PLAN MAY OR MAY NOT INDICATE ALL ENCUMBRANCES EXPRESSED, IMPLIED OR PRESCRIPTIVE.
11. ANY USE OF THIS PLAN AND OR ACCOMPANYING DESCRIPTIONS SHOULD BE DONE WITH LEGAL COUNSEL, TO BE CERTAIN THAT TITLES ARE CLEAR, THAT INFORMATION IS CURRENT, AND THAT ANY NECESSARY CERTIFICATES ARE IN PLACE FOR A PARTICULAR CONVEYANCE, OR OTHER USE.
12. THE LIMITS OF JURISDICTIONAL WETLANDS WERE DELINEATED BY GOVE ENVIRONMENTAL SERVICES IN FEBRUARY 2018 IN ACCORDANCE WITH THE FOLLOWING GUIDANCE DOCUMENTS:
    A. THE CORPS OF ENGINEERS FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS.
    B. THE NORTH CENTRAL & NORTHEAST REGIONAL SUPPLEMENT TO THE FEDERAL MANUAL.
    C. THE CURRENT VERSION OF THE FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND, AS PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION AND/OR THE CURRENT VERSION OF THE FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, AS PUBLISHED BY THE USDA, NRCS, AS APPROPRIATE.
    D. THE CURRENT NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS, AS PUBLISHED BY THE US FISH AND WILDLIFE SERVICE.
13. THIS PLAN IS THE RESULT OF A CLOSED TRAVERSE WITH A RAW, UNADJUSTED LINEAR ERROR OF CLOSURE GREATER THAN 1 IN 20,000.
14. SURVEY TIE LINES, AND ABUTTER LINES SHOWN HEREON ARE NOT BOUNDARY LINES. THEY SHOULD ONLY BE USED TO LOCATE THE PARCEL SURVEYED FROM THE FOUND MONUMENTS SHOWN AND LOCATED BY THIS SURVEY.
15. TOPOGRAPHY AND DETAIL SHOWN HEREON PROVIDED BY EASTERN TOPOGRAPHICS, AND BASED ON EXISTING LIBRARY IMAGERY DATED APRIL 26, 2005.
16. THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR INFILTRATION REQUIREMENTS BY THE NH DES ALTERATION OF TERRAIN BUREAU. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCES CONSERVATION SERVICE. THERE IS A REPORT THAT ACCOMPANIES THIS MAP.

    THE SITE SPECIFIC SOIL SURVEY WAS PRODUCED 08/18/2018, AND WAS PREPARED BY JAMES P. GOVE, CSS # 004, GOVE ENVIRONMENTAL SERVICES, INC. LOCATION: FOGG ROAD, EPPING, NH.

    SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE–WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE # 10, JANUARY 2011. THE NUMERIC LEGEND WAS AMENDED TO IDENTIFY THE CORRECT SOIL COMPONENTS OF THE COMPLEX.



PLAN REFERENCES:

1. LAND OF WILFRED CLOUTIER, ROUTE 125 & OLD HEDDING ROAD, EPPING, N.H." DATED APRIL 8, 1998. SCALE 1" = 60'. PREPARED BY BERRY SURVEYING & ENGINEERING. R.C.R.D. 26368.
2. "A SURVEY AND PLAT OF PROPERTY KNOWN AS PINE & POND MOBILE HOME PARK, OWNED BY WILFRED CLOUTIER AND SITUATED IN EPPING, N.H." DATED DECEMBER 28, 1981. SCALE 1" = 50'. PREPARED BY R.S.L. LAYOUT & DESIGN. R.C.R.D 12249.
3. "SUBDIVISION PLAN OF LAND FOR WCV, INC. AND ITS NOMINEE, EQUESTRIAN COUNTRY ESTATES, LLC." DATED AUGUST 5, 2004. SCALE 1" = 100'. PREPARED BY DOUCET SURVEY INC. R.C.R.D. 33506.
4. "CORRECTIVE SUBDIVISION PLAN, MAP 23, LOT 40, CALEF HIGHWAY, EPPING, NH." DATED OCTOBER 28, 2015. SCALE 1" = 60'. PREPARED BY JONES & BEACH ENGINEERS, INC.
5. "SUBDIVISION PLAN, TAX MAP 23, LOT 21, 81 ELM STREET, EPPING, NH." DATED DECEMBER 20, 2005. SCALE 1" = 30'. PREPARED BY JONES & BEACH ENGINEERS. R.C.R.D. 33566.
6. "CORRECTIVE PLAN, RESIDENTIAL DEVELOPMENT, ELM STREET, EPPING, NH." DATED AUGUST, 2014. SCALE 1" = 30'. PREPARED BY BEALS ASSOCIATES. R.C.R.D. 38406.
7. "PLANS OF PROPOSED FEDERAL AID SECONDARY PROJECT NO. S–274(5), CALEF ROAD." WITH RIGHT OF WAY MARKUPS. DATED MARCH 31, 1950. ON FILE WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.

PINE & POND ABUTTERS:

23/39–1A
WAYNE THOMAS, SR
290 CALEF HIGHWAY A1
EPPING, NH 03042
5671/0904 (11/16/15)

23/39–2A
RAY & ANITA YERGEAU TRUSTEES
290 CALEF HIGHWAY A–2
EPPING, NH 03042
3771/0791 (05/16/02)

23/39–3A
EDWIN & LORRAINE LEAVITT TRUSTEES OF LEAVITT REV. TRUST OF 2019
290 CALEF HIGHWAY A–3
EPPING, NH 03042
6052/1966 (10/21/19)

23/39–4A
JOSEPH LEARY
BRIAN LEARY
290 CALEF HIGHWAY A–4
EPPING, NH 03042
6027/1887 (08/09/19)

23/39–5A
JOHN & SHIRLEEN ROBERTSON
290 CALEF HIGHWAY 5–A
EPPING, NH 03042
4777/0373 (03/16/07)

23/39–6A
JOSEPH & YVONNE GOLDMAN
290 CALEF HIGHWAY A–6
EPPING, NH 03042
4568/0603 (10/21/05)

23/39–7A
IRENE & JAMES YOUNG
290 CALEF HIGHWAY A–7
EPPING, NH 03042
5907/2369 (04/20/18)

23/39–8A
JANICE LAFLEUR
290 CALEF HIGHWAY A–8
EPPING, NH 03042
5348/0049 (08/14/12)

23/39–9A
GARY MEAGHER
REGINA BRENNAN
290 CALEF HIGHWAY A–9
EPPING, NH 03042
5743/0186 (08/08/16)

23/39–10A
MARY GORMAN
290 CALEF HIGHWAY A–10
EPPING, NH 03042
5803/0105 (02/27/17)

23/39–11A
CLAIRE WILLIAMS
290 CALEF HIGHWAY A–11
EPPING, NH 03042
5568/1280 (10/17/14)

23/39–12A
ANNETTE NIELSEN
290 CALEF HIGHWAY A–12
EPPING, NH 03042
4543/1487 (08/31/05)

23/39–13A
PROULX FAMILY TRUST
C/O NOELLA PROULX
290 CALEF HIGHWAY A–13
EPPING, NH 03042
5565/1484 (08/29/14)

23/39–14A
CARL & LYNN COOMBES
290 CALEF HIGHWAY A–14
EPPING, NH 03042
5300/1315 (03/27/12)

23/39–15A
PAULETTE CLAVETTE
290 CALEF HIGHWAY A–15
EPPING, NH 03042
5479/0562 (09/09/13)

23/39–16A
HAZEL SUMMIT
DAWN BIRARELLI
290 CALEF HIGHWAY A–16
EPPING, NH 03042
5847/2447 (08/23/17)

23/39–17A
DONNA FLEMING
290 CALEF HIGHWAY A–17
EPPING, NH 03042
5707/2853 (04/14/16)

23/39–18A
FRANK & LETA CAMP
290 CALEF HIGHWAY A–18
EPPING, NH 03042
5300/1318 (03/27/12)

23/39–19A
RONALD & LORRAINE KAWEJSZA
290 CALEF HIGHWAY A–19
EPPING, NH 03042
3731/2389 (02/28/02)

23/39–20A
JUDITH PARISI
290 CALEF HIGHWAY A–20
EPPING, NH 03042
6041/1628 (09/18/19)

23/39–21A
MICHAEL WHELAN
290 CALEF HIGHWAY A–21
EPPING, NH 03042
4831/1324 (08/08/07)

23/39–22A
SKARI–LEE BUNDZINSKI TRUST
290 CALEF HIGHWAY A–22
EPPING, NH 03042
6074/0737 (01/07/20)

23/39–23A
JANET WILBUR
290 CALEF HIGHWAY A–23
EPPING, NH 03042
6036/2247 (09/10/19)

23/39–24A
WAYNE & SANDRA EVANS
290 CALEF HIGHWAY A–24
EPPING, NH 03042
4912/1184 (04/30/08)

23/39–25A
ANTHONY ALTAVILLA, JR.
290 CALEF HIGHWAY A–25
EPPING, NH 03042
5058/2526 (10/19/09)

23/39–26A
BARBARA J. SHERWOOD TRUSTEE
290 CALEF HIGHWAY A–26
EPPING, NH 03042
3792/0574 (06/28/02)

23/39–27A
LEE TOWNSEND
290 CALEF HIGHWAY A–27
EPPING, NH 03042
5572/0350 (10/30/14)

PROJECT PARCEL
TOWN OF EPPING
TAX MAP 22, LOT 82-1
BK 5675 PG 1047

APPLICANT
CC AT FOGG ROAD, LLC
ATTN: ROB GRAHAM
142 PORTSMOUTH AVE
STRATHAM, NH 03885

TOTAL LOT AREA
2,043,553± SQ. FT.
46.9± ACRES

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL J. KERIVAN No. 9848 LICENSED PROFESSIONAL ENGINEER 9/11/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

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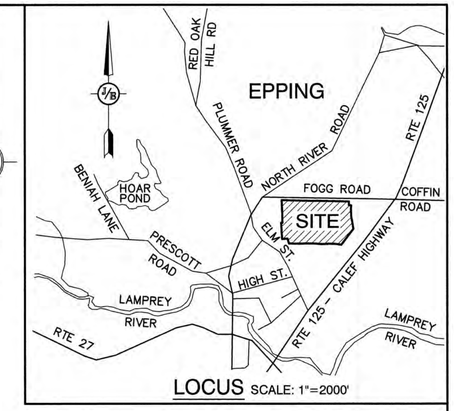
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **EXISTING CONDITIONS PLAN**

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
C1
SHEET 2 OF 26
JBE PROJECT NO. 16130



LOCUS SCALE: 1"=2000'

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3. "SUBDIVISION PLAN OF LAND FOR WCV, INC. AND ITS NOMINEE, EQUESTRIAN COUNTRY ESTATES, LLC." DATED AUGUST 5, 2004. SCALE 1" = 100'. PREPARED BY DOUCET SURVEY INC. R.C.R.D. 33506.
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NOTE:

1. SEE SHEET C3 FOR SITE PLAN NOTES.

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
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		TREE LINE
		EASEMENT
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5671/0904 (11/16/15)

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EPPING, NH 03042
6052/1966 (10/21/19)

23/39-4A
JOSEPH LEARY
BRIAN LEARY
290 CALEF HIGHWAY A-4
EPPING, NH 03042
6027/1887 (08/09/19)

23/39-5A
JOHN & SHIRLEEN ROBERTSON
290 CALEF HIGHWAY 5-A
EPPING, NH 03042
4777/0373 (03/16/07)

23/39-6A
JOSEPH & YVONNE GOLDMAN
290 CALEF HIGHWAY A-6
EPPING, NH 03042
4568/0603 (10/21/05)

23/39-7A
IRENE & JAMES YOUNG
290 CALEF HIGHWAY A-7
EPPING, NH 03042
5907/2369 (04/20/18)

23/39-8A
JANICE LAFLEUR
290 CALEF HIGHWAY A-8
EPPING, NH 03042
5348/0049 (08/14/12)

23/39-9A
GARY MEAGHER
REGINA BRENNAN
290 CALEF HIGHWAY A-9
EPPING, NH 03042
5743/0186 (08/08/16)

23/39-10A
MARY GORMAN
290 CALEF HIGHWAY A-10
EPPING, NH 03042
5803/0105 (02/27/17)

23/39-11A
CLAIRE WILLIAMS
290 CALEF HIGHWAY A-11
EPPING, NH 03042
5568/1280 (10/17/14)

23/39-12A
ANNETTE NIELSEN
290 CALEF HIGHWAY A-12
EPPING, NH 03042
4543/1487 (08/31/05)

23/39-13A
PROULX FAMILY TRUST
C/O NOELLA PROULX
290 CALEF HIGHWAY A-13
EPPING, NH 03042
5565/1484 (08/29/14)

23/39-14A
CARL & LYNN COOMBES
290 CALEF HIGHWAY A-14
EPPING, NH 03042
5300/1315 (03/27/12)

23/39-15A
PAULETTE CLAVETTE
290 CALEF HIGHWAY A-15
EPPING, NH 03042
5479/0562 (09/09/13)

23/39-16A
HAZEL SUMMIT
DAWN BIRARELLI
290 CALEF HIGHWAY A-16
EPPING, NH 03042
5847/2447 (08/23/17)

23/39-17A
DONNA FLEMING
290 CALEF HIGHWAY A-17
EPPING, NH 03042
5707/2853 (04/14/16)

23/39-18A
FRANK & LETA CAMP
290 CALEF HIGHWAY A-18
EPPING, NH 03042
5300/1318 (03/27/12)

23/39-19A
RONALD & LORRAINE KAWEJSZA
290 CALEF HIGHWAY A-19
EPPING, NH 03042
3731/2389 (02/28/02)

23/39-20A
JUDITH PARISI
290 CALEF HIGHWAY A-20
EPPING, NH 03042
6041/1628 (09/18/19)

23/39-21A
MICHAEL WHELAN
290 CALEF HIGHWAY A-21
EPPING, NH 03042
4831/1324 (08/08/07)

23/39-22A
SKARI-LEE BUNDZINSKI TRUST
290 CALEF HIGHWAY A-22
EPPING, NH 03042
6074/0737 (01/07/20)

23/39-23A
JANET WILBUR
290 CALEF HIGHWAY A-23
EPPING, NH 03042
6036/2247 (09/10/19)

23/39-24A
WAYNE & SANDRA EVANS
290 CALEF HIGHWAY A-24
EPPING, NH 03042
4912/1184 (04/30/08)

23/39-25A
ANTHONY ALTAVILLA, JR.
290 CALEF HIGHWAY A-25
EPPING, NH 03042
5058/2526 (10/19/09)

23/39-26A
BARBARA J. SHERWOOD TRUSTEE
290 CALEF HIGHWAY A-26
EPPING, NH 03042
3792/0574 (06/28/02)

23/39-27A
LEE TOWNSEND
290 CALEF HIGHWAY A-27
EPPING, NH 03042
5572/0350 (10/30/14)

PROJECT PARCEL
TOWN OF EPPING TAX MAP 22, LOT 82-1 BK 5675 PG 1047
APPLICANT
CC AT FOGG ROAD, LLC ATTN: ROB GRAHAM 142 PORTSMOUTH AVE STRATHAM, NH 03885
TOTAL LOT AREA
2,043,553± SQ. FT. 46.9± ACRES

APPROVED - EPPING, NH
PLANNING BOARD

DATE:

Design: JAC | Draft: PSL | Date: 4/25/18
Checked: JAC | Scale: AS SHOWN | Project No.: 16130
Drawing Name: 16130-PLAN.dwg

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

STATE OF NEW HAMPSHIRE
MICHAEL J. KERIVAN
No. 9345
LICENSED
PROFESSIONAL ENGINEER
6/11/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

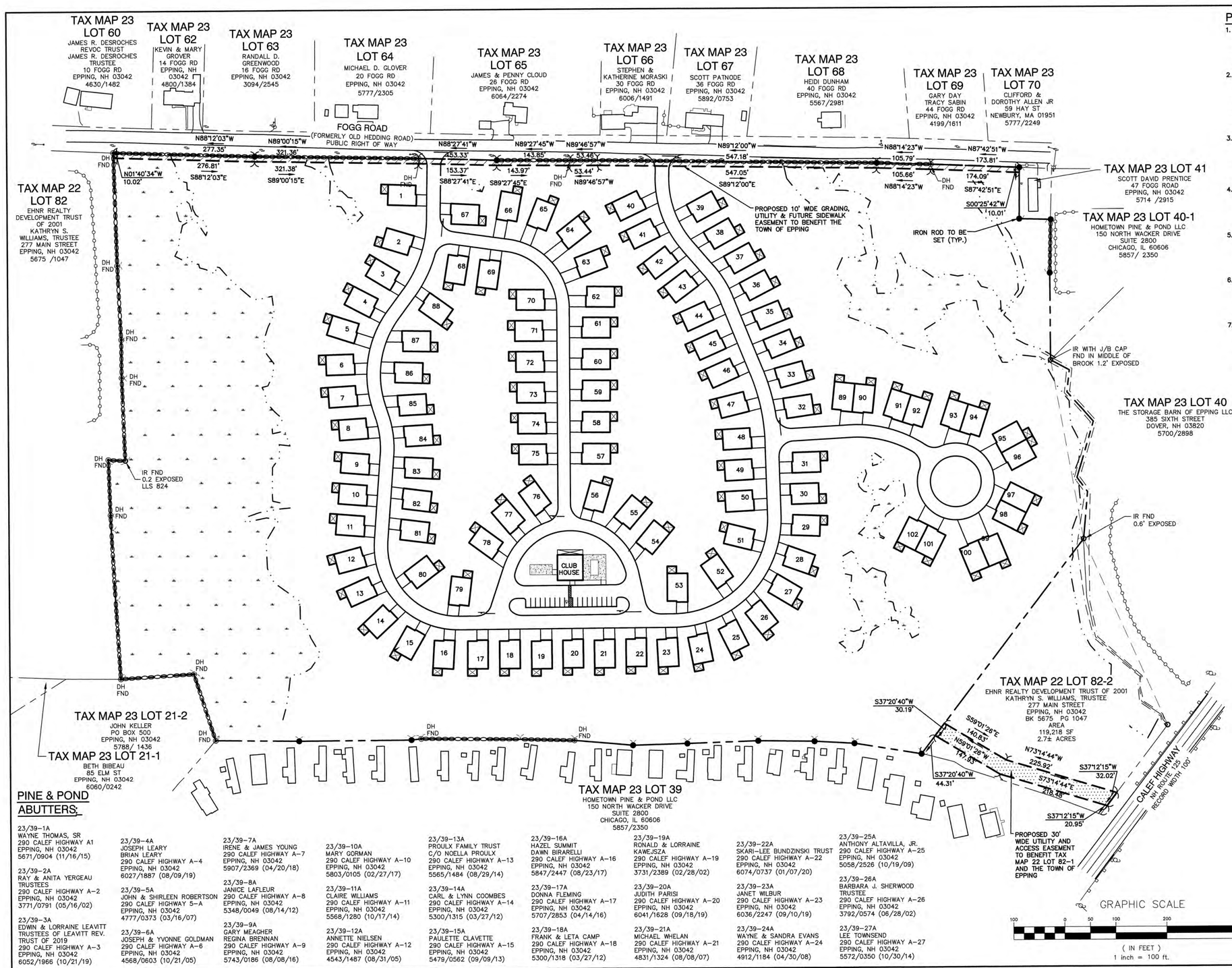
Designed and Produced in NH
Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: OVERVIEW SITE PLAN

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

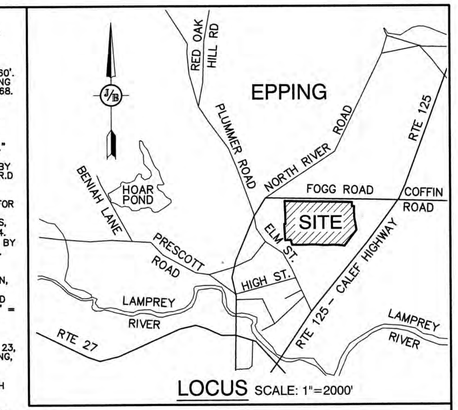
Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
OV1
SHEET 3 OF 26
JBE PROJECT NO. 16130



PLAN REFERENCES:

1. LAND OF WILFRED CLOUTIER, ROUTE 125 & OLD HEDDING ROAD, EPPING, N.H." DATED APRIL 8, 1998. SCALE 1" = 60'. PREPARED BY BERRY SURVEYING & ENGINEERING. R.C.R.D. 26368.
2. "A SURVEY AND PLAT OF PROPERTY KNOWN AS PINE & POND MOBILE HOME PARK, OWNED BY WILFRED CLOUTIER AND SITUATED IN EPPING, N.H." DATED DECEMBER 28, 1981. SCALE 1" = 50'. PREPARED BY R.S.L. LAYOUT & DESIGN. R.C.R.D 12249.
3. "SUBDIVISION PLAN OF LAND FOR WCV, INC. AND ITS NOMINEE, EQUESTRIAN COUNTRY ESTATES, LLC." DATED AUGUST 5, 2004. SCALE 1" = 100'. PREPARED BY DOUCET SURVEY INC. R.C.R.D. 33506.
4. "CORRECTIVE SUBDIVISION PLAN, MAP 23, LOT 40, CALEF HIGHWAY, EPPING, NH." DATED OCTOBER 28, 2015. SCALE 1" = 60'. PREPARED BY JONES & BEACH ENGINEERS, INC.
5. "SUBDIVISION PLAN, TAX MAP 23, LOT 21, 81 ELM STREET, EPPING, NH." DATED DECEMBER 20, 2005. SCALE 1" = 30'. PREPARED BY JONES & BEACH ENGINEERS. R.C.R.D. 33566.
6. "CORRECTIVE PLAN, RESIDENTIAL DEVELOPMENT, ELM STREET, EPPING, NH." DATED AUGUST, 2014. SCALE 1" = 30'. PREPARED BY BEALS ASSOCIATES. R.C.R.D. 38406.
7. "PLANS OF PROPOSED FEDERAL AID SECONDARY PROJECT NO. S-274(5), CALEF ROAD." WITH RIGHT OF WAY MARKUPS. DATED MARCH 31, 1950. ON FILE WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.



LOCUS SCALE: 1"=2000'

NOTES:

1. THE INTENT OF THIS PLAN IS TO PROPOSED EASEMENTS ON THE PROPERTY.
2. ALL SEWER & WATER INFRASTRUCTURE WITHIN & ADJACENT TO THE ROADWAY AND CROSS COUNTRY TO BE OWNED AND MAINTAINED BY THE TOWN OF EPPING. BLANKET EASEMENTS ARE HEREBY PROVIDED TO THE TOWN FOR THE NECESSARY MAINTENANCE THE CONDO ASSOCIATION SHALL OWN AND MAINTAIN FROM THE WATER SHUTOFFS AND SEWER CLEANOUTS TO THE HOUSES.

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
		SETBACK LINES
		CENTERLINE
		FRESHWATER WETLANDS LINE
		STREAM CHANNEL
		TREE LINE
		EASEMENT
		EDGE OF PAVEMENT
SGC	SGC	SLOPE GRANITE CURB
		IRON PIPE/IRON ROD
		DRILL HOLE
		IRON ROD/DRILL HOLE
		STONE/GRANITE BOUND
		SINGLE POST SIGN
		UTILITY POLE
		LIGHT POLES
		FRESHWATER WETLANDS
		CONCRETE
		SNOW STORAGE
		RETAINING WALL

CERTIFICATION:

I CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN UNADJUSTED LINEAR ERROR OF CLOSURE THAT EXCEED BOTH THE MINIMUM OF 1:10,000 AS DEFINED IN SECTION 503.04 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES AND THE MINIMUM OF 1:15,000 AS DEFINED IN SECTION 4.2 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

THIS SURVEY CONFORMS TO A CATEGORY 1 CONDITION 1 SURVEY AS DEFINED IN SECTION 4.1 OF THE N.H.L.S.A. ETHICS AND STANDARDS.

STATE OF NEW HAMPSHIRE No. 892 DAVID M. COLLIER LICENSED LAND SURVEYOR

SIGNATURE

10/1/2020

DAVID M. COLLIER, LLS 892 DATE:
ON BEHALF OF JONES & BEACH ENGINEERS, INC.

PINE & POND ABUTTERS:

23/39–1A
WAYNE THOMAS, SR
290 CALEF HIGHWAY A1
EPPING, NH 03042
5671/0904 (11/16/15)

23/39–2A
RAY & ANITA YERGEAU TRUSTEES
290 CALEF HIGHWAY A–2
EPPING, NH 03042
3771/0791 (05/16/02)

23/39–3A
EDWIN & LORRAINE LEAVITT TRUSTEES OF LEAVITT REV. TRUST OF 2019
290 CALEF HIGHWAY A–3
EPPING, NH 03042
6052/1966 (10/21/19)

23/39–4A
JOSEPH LEARY
BRIAN LEARY
290 CALEF HIGHWAY A–4
EPPING, NH 03042
6027/1887 (08/09/19)

23/39–5A
JOHN & SHIRLEEN ROBERTSON
290 CALEF HIGHWAY 5–A
EPPING, NH 03042
4777/0373 (03/16/07)

23/39–6A
JOSEPH & YVONNE GOLDMAN
290 CALEF HIGHWAY A–6
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23/39–7A
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290 CALEF HIGHWAY A–7
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23/39–8A
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EPPING, NH 03042
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GARY MEAGHER
REGINA BRENNAN
290 CALEF HIGHWAY A–9
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5743/0186 (08/08/16)

23/39–10A
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23/39–12A
ANNETTE NIELSEN
290 CALEF HIGHWAY A–12
EPPING, NH 03042
4543/1487 (08/31/05)

23/39–13A
PROULX FAMILY TRUST
C/O NOELLA PROULX
290 CALEF HIGHWAY A–13
EPPING, NH 03042
5565/1484 (08/29/14)

23/39–14A
CARL & LYNN COOMBES
290 CALEF HIGHWAY A–14
EPPING, NH 03042
5300/1315 (03/27/12)

23/39–15A
PAULETTE CLAVETTE
290 CALEF HIGHWAY A–15
EPPING, NH 03042
5479/0562 (09/09/13)

23/39–16A
HAZEL SUMMIT
DAWN BIRARELLI
290 CALEF HIGHWAY A–16
EPPING, NH 03042
5847/2447 (08/23/17)

23/39–17A
DONNA FLEMING
290 CALEF HIGHWAY A–17
EPPING, NH 03042
5707/2853 (04/14/16)

23/39–18A
FRANK & LETA CAMP
290 CALEF HIGHWAY A–18
EPPING, NH 03042
5300/1318 (03/27/12)

23/39–19A
RONALD & LORRAINE KAMEJSZA
290 CALEF HIGHWAY A–19
EPPING, NH 03042
3731/2389 (02/28/02)

23/39–20A
JUDITH PARISI
290 CALEF HIGHWAY A–20
EPPING, NH 03042
6041/1628 (09/18/19)

23/39–21A
MICHAEL WHELAN
290 CALEF HIGHWAY A–21
EPPING, NH 03042
4831/1324 (08/08/07)

23/39–22A
SKARI–LEE BUNDZINSKI TRUST
290 CALEF HIGHWAY A–22
EPPING, NH 03042
6074/0737 (01/07/20)

23/39–23A
JANET WILBUR
290 CALEF HIGHWAY A–23
EPPING, NH 03042
6036/2247 (09/10/19)

23/39–24A
WAYNE & SANDRA EVANS
290 CALEF HIGHWAY A–24
EPPING, NH 03042
4912/1184 (04/30/08)

23/39–25A
ANTHONY ALTAVILLA, JR.
290 CALEF HIGHWAY A–25
EPPING, NH 03042
5058/2526 (10/19/09)

23/39–26A
BARBARA J. SHERWOOD TRUSTEE
290 CALEF HIGHWAY A–26
EPPING, NH 03042
3792/0574 (06/28/02)

23/39–27A
LEE TOWNSEND
290 CALEF HIGHWAY A–27
EPPING, NH 03042
5572/0350 (10/30/14)

PROJECT PARCEL
TOWN OF EPPING TAX MAP 22, LOT 82-1 BK 5675 PG 1047
APPLICANT
CC AT FOGG ROAD, LLC ATTN: ROB GRAHAM 142 PORTSMOUTH AVE STRATHAM, NH 03885
TOTAL LOT AREA
2,043,553± SQ. FT. 46.9± ACRES

APPROVED - EPPING, NH PLANNING BOARD

DATE:

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

STATE OF NEW HAMPSHIRE MICHAEL J. KERVAN No. 9640 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

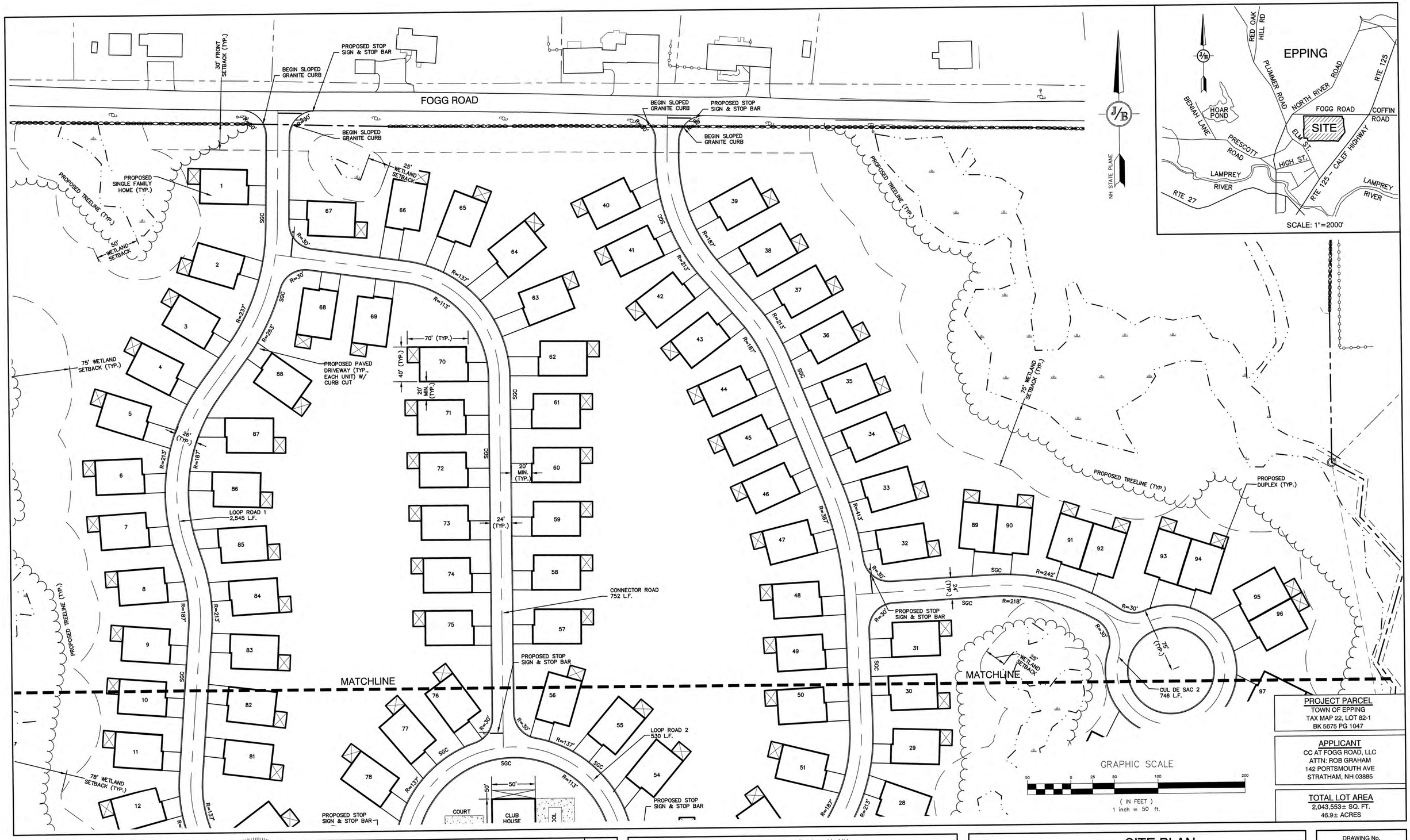
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: EASEMENT PLAN

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
A1
SHEET 4 OF 26
JBE PROJECT NO. 16130



PROJECT PARCEL
TOWN OF EPPING
TAX MAP 22, LOT 82-1
BK 5675 PG 1047

APPLICANT
CC AT FOGG ROAD, LLC
ATTN: ROB GRAHAM
142 PORTSMOUTH AVE
STRATHAM, NH 03885

TOTAL LOT AREA
2,043,553± SQ. FT.
46.9± ACRES

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE — MICHAEL J. KERVAN No. 9849 — LICENSED PROFESSIONAL ENGINEER — 5/21/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH

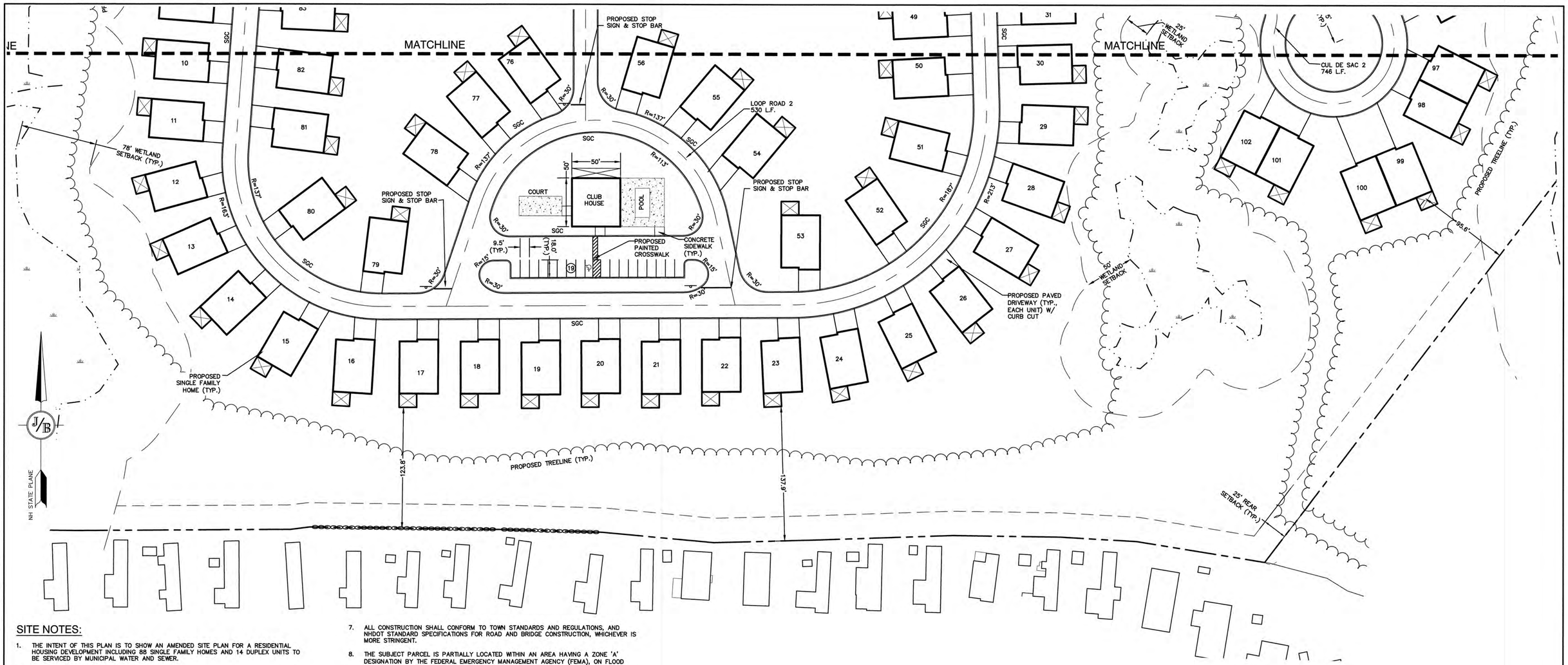
Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **SITE PLAN**

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
C2
SHEET 5 OF 26
JBE PROJECT NO. 16130



SITE NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW AN AMENDED SITE PLAN FOR A RESIDENTIAL HOUSING DEVELOPMENT INCLUDING 88 SINGLE FAMILY HOMES AND 14 DUPLEX UNITS TO BE SERVICED BY MUNICIPAL WATER AND SEWER.

2. ZONING DISTRICT: RURAL RESIDENTIAL
   LOT AREA MINIMUM = 88,000 SF
   LOT FRONTAGE MINIMUM = 200'
   BUILDING SETBACKS (MINIMUM):
   FRONT SETBACK = 30'
   SIDE SETBACK = 25'
   REAR SETBACK = 25'
   WETLAND SETBACK = SAME AS SIDE SETBACK FOR UNDERLYING ZONE OR 15', WHICHEVER IS GREATER; 50' FOR WETLANDS GREATER THAN 10,000 S.F.; 75' FOR WETLANDS GREATER THAN 1 ACRE.
   MAX. BUILDING HEIGHT = 35' OR 40' INCLUDING ARCHITECTURAL DETAILS.
   MAX. LOT COVERAGE = 25%

3. ON JUNE 25, 2020, THE TOWN OF EPPING PLANNING BOARD VOTED TO GRANT THE FOLLOWING WAIVERS FROM THE TOWN OF EPPING SUBDIVISION REGULATIONS – ADDENDUM A – ROAD DESIGN AND CONSTRUCTION SPECIFICATIONS:

   a. STREET CONSTRUCTION STANDARDS – MINIMUM SHOULDER WIDTH
   b. STREET CONSTRUCTION STANDARDS – MINIMUM TANGENT LENGTH SEPARATING REVERSE CURVATURE
   c. STREET CONSTRUCTION STANDARDS – MINIMUM CENTERLINE HORIZONTAL RADIUS
   d. SECTION D.1. – NO SINGLE POINT OF ACCESS ROADWAY NETWORK SHALL SERVE A DEVELOPMENT WITH MORE THAN 12 DWELLING UNITS.

4. THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ONSITE OR OFFSITE TO ENSURE SAFETY AND OBEY THE LAW.

7. ALL CONSTRUCTION SHALL CONFORM TO TOWN STANDARDS AND REGULATIONS, AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.

8. THE SUBJECT PARCEL IS PARTIALLY LOCATED WITHIN AN AREA HAVING A ZONE 'A' DESIGNATION BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 33015C0215E, AND 33015C0220E, BOTH WITH EFFECTIVE DATE OF MAY 17, 2005.

9. LANDOWNERS ARE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING PERMITTING REQUIRED UNDER THESE REGULATIONS.

10. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.

11. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.

12. ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE TOWN ZONING REGULATIONS, UNLESS A VARIANCE IS OTHERWISE REQUESTED.

13. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND NHDOT STANDARDS AND SPECIFICATIONS (NON-REFLECTORIZED PAVEMENT MARKINGS), UNLESS OTHERWISE NOTED.

14. ALL STOP BARS SHALL BE 18" IN WIDTH IN A COLOR OF WHITE; ALL TRAFFIC ARROWS SHALL BE PAINTED IN A COLOR OF WHITE.

15. ALL CURBING TO BE SLOPED GRANITE WITH A MINIMUM RADIUS OF 2', UNLESS OTHERWISE NOTED.

16. SNOW TO BE STORED AT EDGE OF PAVEMENT AND IN AREAS SHOWN ON THE PLANS, OR TRUCKED OFFSITE TO AN APPROVED SNOW DUMPING LOCATION.

17. TOTAL NUMBER OF UNITS = 102

18. TOTAL ROAD LENGTH = 4,573 L.F.

19. NHDES ALTERATION OF TERRAIN PERMIT NO. , DATED :
    NHDES SEWER CONNECTION PERMIT NO. , DATED :

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

PROJECT PARCEL
TOWN OF EPPING
TAX MAP 22, LOT 82-1
BK 5675 PG 1047

APPLICANT
CC AT FOGG ROAD, LLC
ATTN: ROB GRAHAM
142 PORTSMOUTH AVE
STRATHAM, NH 03885

TOTAL LOT AREA
2,043,553± SQ. FT.
46.9± ACRES

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE – MICHAEL J. KERIVAN No. 9649 – LICENSED PROFESSIONAL ENGINEER – 10/12/22

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

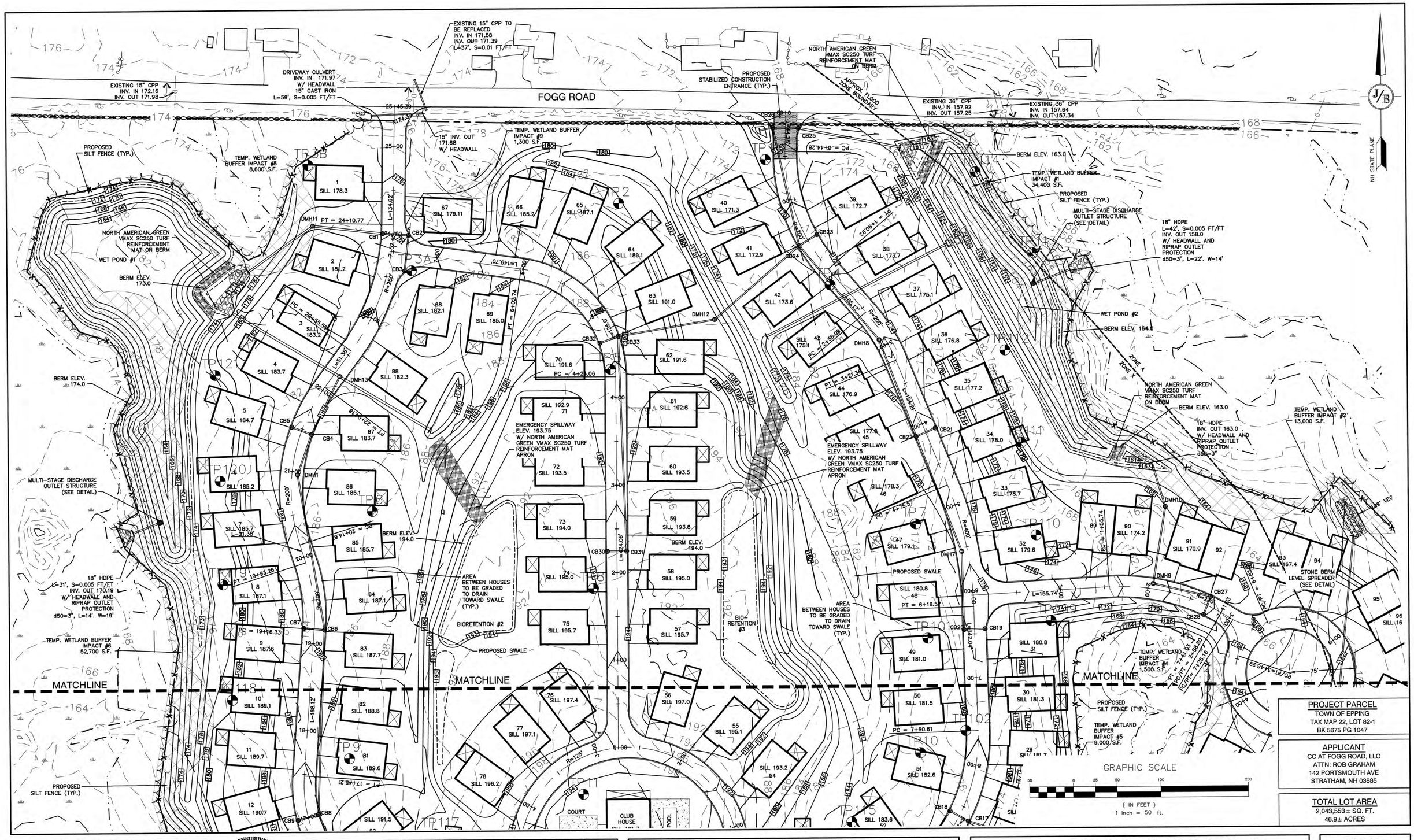
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
Civil Engineering Services
603-772-4746 FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: SITE PLAN

Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.
C3
SHEET 6 OF 26
JBE PROJECT NO. 16130



PROJECT PARCEL
TOWN OF EPPING
TAX MAP 22, LOT 82-1
BK 5675 PG 1047

APPLICANT
CC AT FOGG ROAD, LLC
ATTN: ROB GRAHAM
142 PORTSMOUTH AVE
STRATHAM, NH 03885

TOTAL LOT AREA
2,043,553± SQ. FT.
46.9± ACRES

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE — MICHAEL J. KERIVAN No. 9848 — LICENSED PROFESSIONAL ENGINEER — 10/1/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

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PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **GRADING & DRAINAGE PLAN**

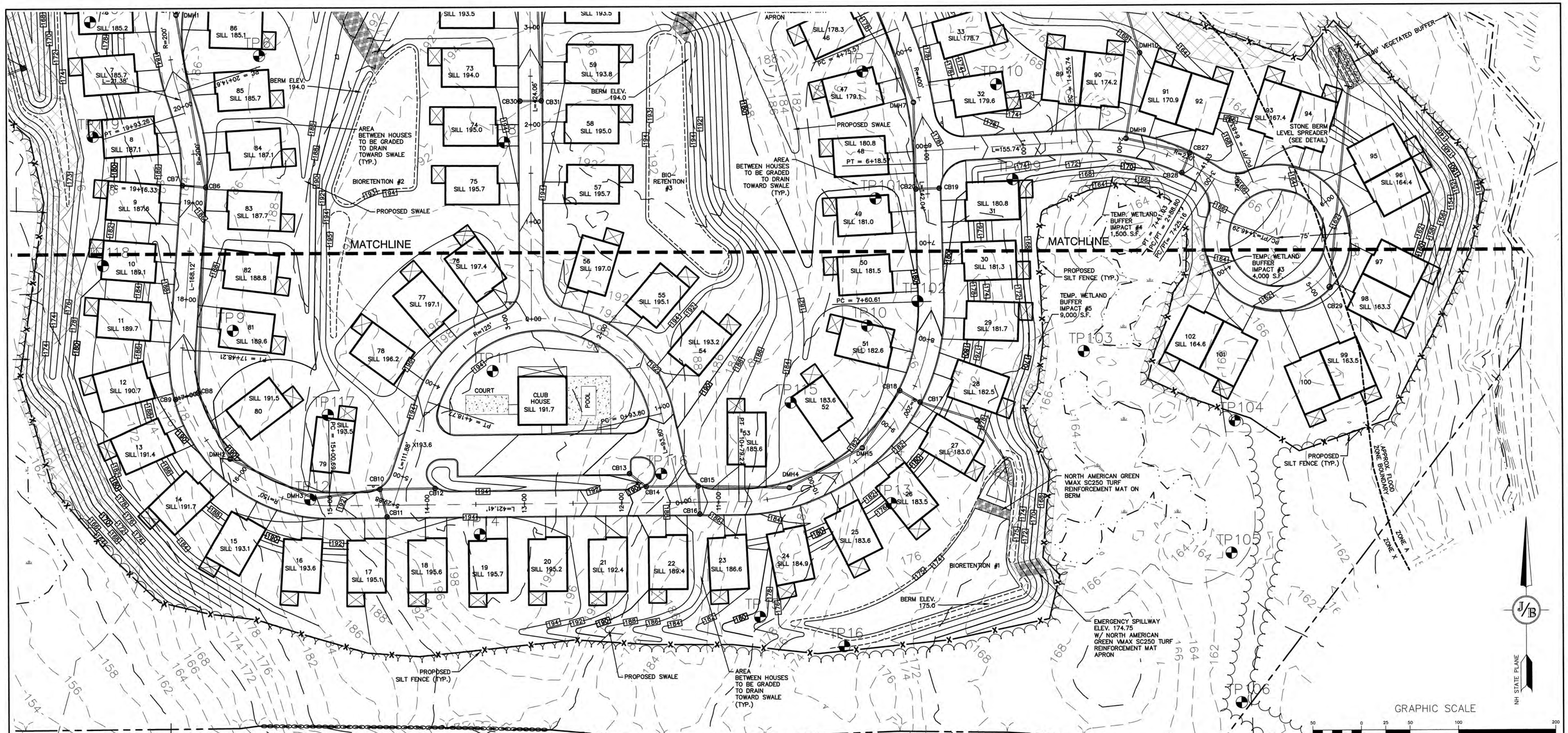
Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.

C4

SHEET 7 OF 26
JBE PROJECT NO. 16130



GRADING NOTES:

1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER JONES & BEACH ENGINEERS, INC., NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE (888-344-7233).
2. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
3. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE CONSTRUCTION SEQUENCE ON SHEET E1.
4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO HAVE THE PROJECT'S LAND SURVEYOR STAKE OR FLAG CLEARING LIMITS. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.
6. ALL SWALES AND DETENTION PONDS ARE TO BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
7. PROPOSED RIM ELEVATIONS OF DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
8. ALL SWALES AND ANY SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER), UNLESS OTHERWISE SPECIFIED.
9. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS. CATCH BASINS SHALL HAVE 3' DEEP SUMPS WITH GREASE HOODS, UNLESS OTHERWISE NOTED.
10. ALL DRAINAGE STRUCTURES SHALL BE PRECAST, UNLESS OTHERWISE SPECIFIED.
11. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC H20 LOADING AND SHALL BE INSTALLED ACCORDINGLY.
12. IMMEDIATELY APPLY AND COMPACT STONE BASE FOR BUILDING PAD TO +/-½" PRIOR TO EXCAVATING INTERIOR AND PERIMETER FOOTINGS.
13. IN AREAS WHERE CONSTRUCTION IS PROPOSED ADJACENT TO ABUTTING PROPERTIES, THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCING ALONG PROPERTY LINES IN ALL AREAS WHERE SILT FENCING IS NOT REQUIRED.
14. ALL DRAINAGE PIPE SHALL BE NON-PERFORATED ADS N-12 OR APPROVED EQUAL.
15. STONE INLET PROTECTION SHALL BE PLACED AT ALL CATCH BASINS. SEE DETAIL WITHIN THE DETAIL SHEETS.
16. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY ALL GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE EPA SWPPP DURING CONSTRUCTION OPERATIONS.
17. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
18. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING.
19. SHOULD CONSTRUCTION STOP FOR LONGER THAN 3 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED.
20. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN EVENT OF 0.25" OR GREATER IN A 24 HOUR PERIOD AND AT LEAST ONCE A WEEK.
21. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
22. CONSTRUCTION VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION.
23. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
24. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
25. SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT BASINS BEFORE THEY ARE 25% FULL.
26. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
27. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER AND/OR REGULATORY OFFICIALS.
28. SEE ALSO EROSION AND SEDIMENT CONTROL SPECIFICATIONS ON SHEET E1.
29. TEMPORARY WETLAND BUFFER IMPACTS = 126,300 S.F.
30. VERTICAL DATUM – NGVD29.

PROJECT PARCEL
TOWN OF EPPING
TAX MAP 22, LOT 82-1
BK 5675 PG 1047

APPLICANT
CC AT FOGG ROAD, LLC
ATTN: ROB GRAHAM
142 PORTSMOUTH AVE
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TOTAL LOT AREA
2,043,553± SQ. FT.
46.9± ACRES

Design: JAC	Draft: PSL	Date: 4/25/18
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Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL J. KERIVAN No. 9648 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
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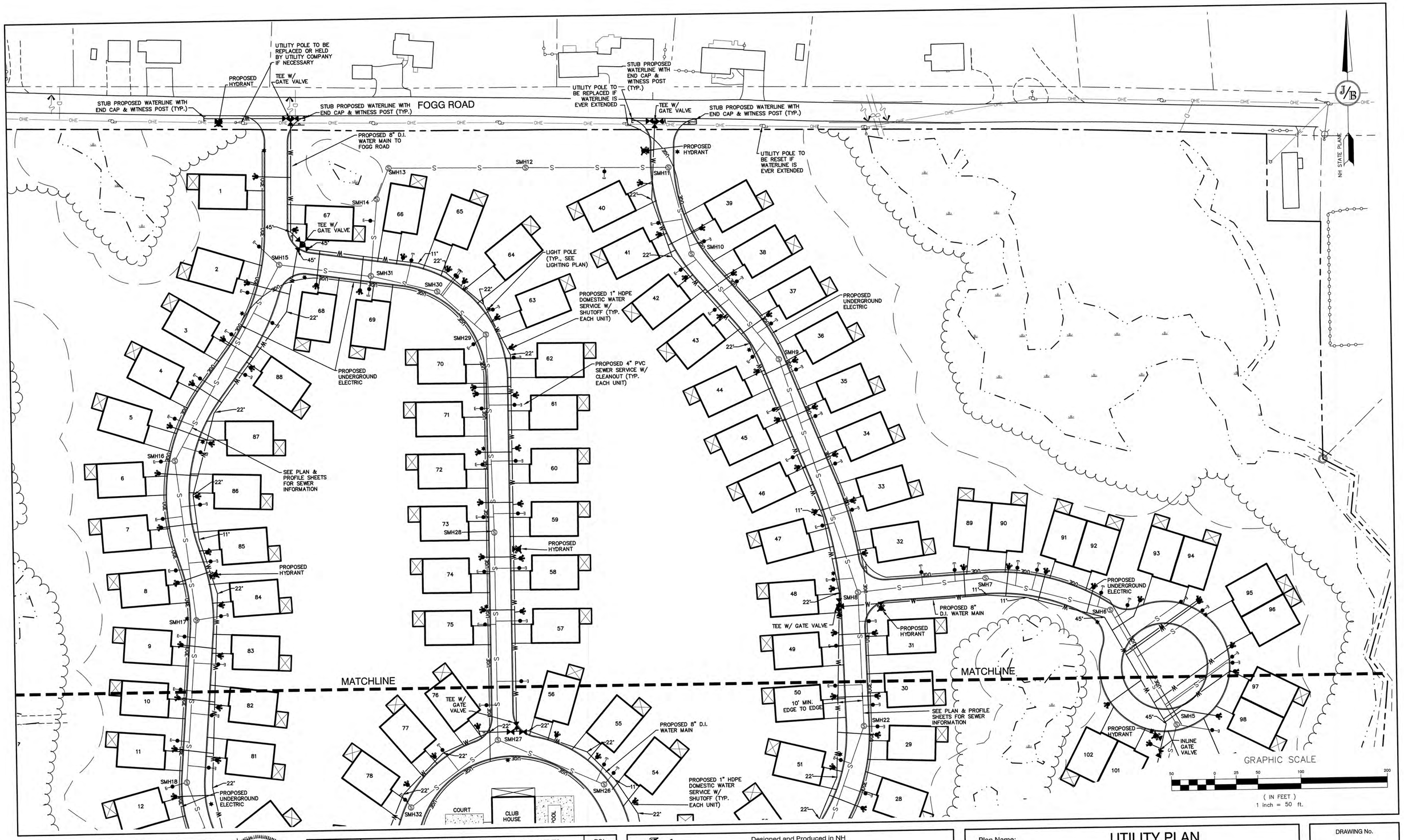
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: GRADING & DRAINAGE PLAN

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
C5
SHEET 8 OF 26
JBE PROJECT NO. 16130



Design: JAC	Draft: PSL	Date: 4/25/18
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Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE — MICHAEL J. KERMAN No. 9346 — LICENSED PROFESSIONAL ENGINEER — 10/1/20

REV.	DATE	REVISION	BY
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5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
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Designed and Produced in NH

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Civil Engineering Services

85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885

603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: UTILITY PLAN

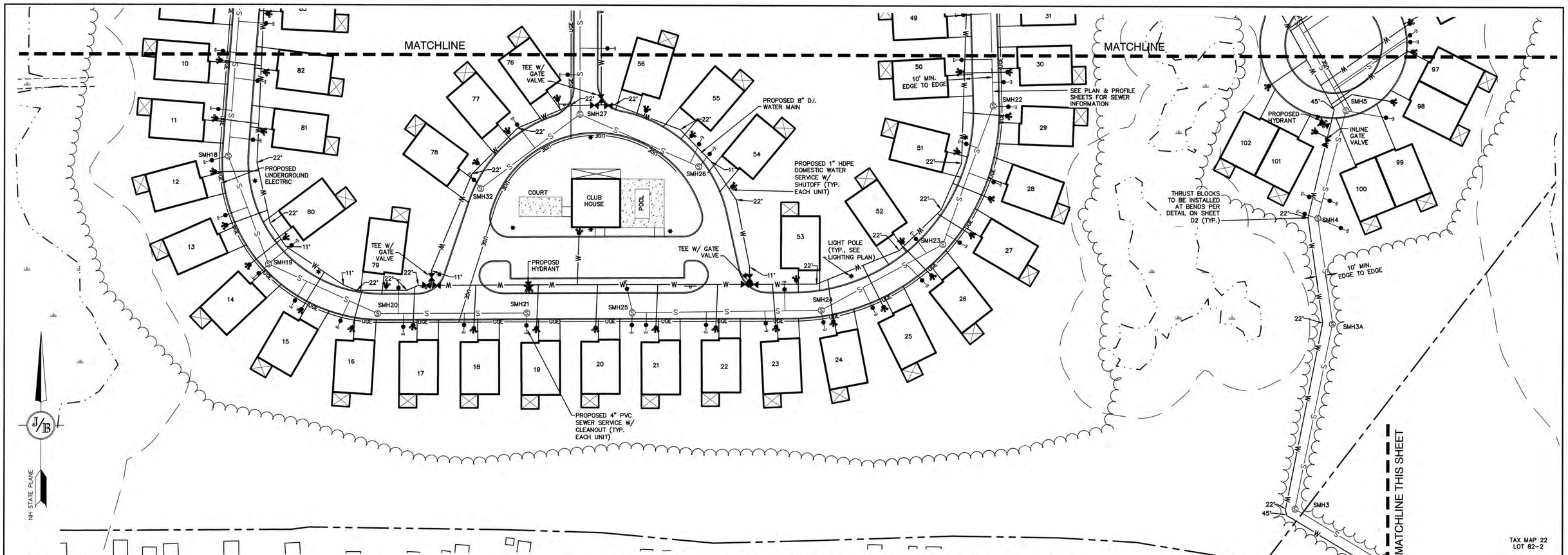
Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

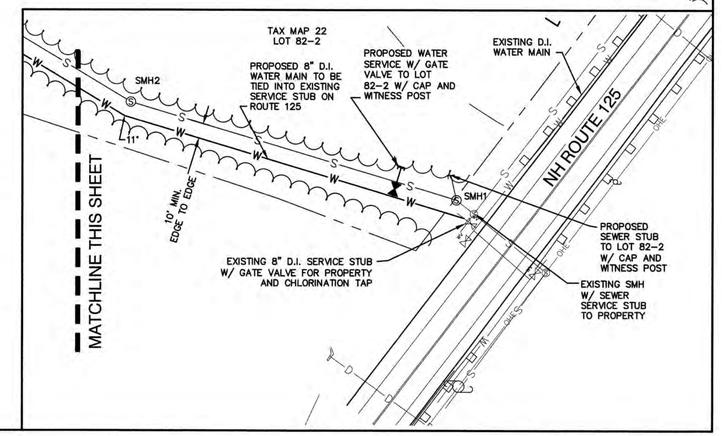
Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.

C6

SHEET 9 OF 26
JBE PROJECT NO. 16130





UTILITY NOTES:

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, CONNECTION FEES AND BONDS.
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM NOTICE OF FOURTEEN (14) DAYS TO ALL CORPORATIONS, COMPANIES AND/OR LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
3. THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE TELEVISION, FIRE ALARM, GAS, WATER, AND SEWER).
4. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL PROJECT-RELATED UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
5. ALL CONSTRUCTION SHALL CONFORM TO THE TOWN STANDARDS AND REGULATIONS, AND NHDES STANDARDS AND SPECIFICATIONS, WHICHEVER ARE MORE STRINGENT, UNLESS OTHERWISE SPECIFIED.
6. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
7. BUILDING TO BE SERVICED BY UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITY STUBS PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ENGINEER TO BE NOTIFIED.
9. AS-BUILT PLANS SHALL BE SUBMITTED TO DEPARTMENT OF PUBLIC WORKS.
10. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION. THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE THROUGH CHANNEL UNDERLAYMENT OF INVERT, AND SHELF SHALL CONSIST OF BRICK MASONRY.
11. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30 INCH DIA, CLEAR OPENING. THE WORD "SEWER" OR DRAIN" SHALL BE CAST INTO THE CENTER OF THE UPPER FACE OF EACH COVER WITH RAISED, 3" LETTERS.
12. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H20 LOADS.
13. CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED RED PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS, SERVICES, AND FORCE MAINS.
14. SANITARY SEWER FLOW CALCULATIONS:
    TOTAL UNITS - 102
    20% (21) 3 BEDROOM UNITS @ 150 GPD/BEDROOM = 9,450 GPD
    80% (81) 2 BEDROOM AGE RESTRICTED UNITS @ 125 GPD/UNIT = 10,125 GPD
    TOTAL FLOW = 19,575 GPD
15. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS.
16. PROPOSED RIM ELEVATIONS OF DRAINAGE AND SANITARY MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISH GRADE AS SHOWN ON THE GRADING AND DRAINAGE PLAN. CROSS COUNTRY SEWER MANHOLES TO BE LEFT A MINIMUM OF 6" ABOVE GRADE IN THE WOODED AREA.
17. ALL WATER MAINS AND SERVICE PIPES SHALL HAVE A MINIMUM 12" VERTICAL AND 24" HORIZONTAL SEPARATION TO DRAIN MANHOLES, OR CONTRACTOR SHALL INSTALL BOARD INSULATION FOR FREEZING PROTECTION.
18. WATER MAINS SHALL BE HYDROSTATICALLY PRESSURE TESTED FOR LEAKAGE PRIOR TO ACCEPTANCE. WATERMAINS SHALL BE TESTED AT 1.5 TIMES THE WORKING PRESSURE OR 150 PSI, WHICH EVER IS GREATER. TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 4 OF AWWA STANDARD C 600. WATERMAINS SHALL BE DISINFECTED AFTER THE ACCEPTANCE OF THE PRESSURE AND LEAKAGE TESTS ACCORDING TO AWWA STANDARD C 651.
19. ALL WATER AND SANITARY LEADS TO BUILDING(S) SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLANS AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AND WITNESS AT END.
20. IF THE BUILDING IS REQUIRED TO HAVE A SPRINKLER SYSTEM, A PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, OWNER, ARCHITECT AND THE LOCAL FIRE DEPARTMENT PRIOR TO THE INSTALLATION.
21. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, MECHANICAL JOINTS AND FIRE HYDRANTS.
22. DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.
23. REFER TO FIRE PROTECTION SHEETS FOR LOCATION AND DETAIL OF FIRE LINE LEAD IN TO BUILDING.
24. FIRE LINE SHALL BE STUBBED UP 1' ABOVE FINISH FLOOR ELEVATION IN SPRINKLER ROOM.
25. AN APPROVED AUTOMATIC SPRINKLER SYSTEM SHALL BE INSTALLED IN THE BUILDING ONLY IN ACCORDANCE WITH 101 LIFE SAFETY CODE/NFPA 1 AND LOCAL REGULATIONS. FIRE DEPARTMENT CONNECTION SHALL BE FIELD VERIFIED BY LOCAL FIRE DEPARTMENT TO ENSURE OPTIMUM PLACEMENT.
26. THE CONTRACTOR SHALL HAVE THE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER FIRE PROTECTION SYSTEM PRIOR TO INSTALLATION.
27. CONTRACTOR TO FURNISH SHOP DRAWINGS FOR UTILITY RELATED ITEMS TO ENSURE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SHOULD BE SENT IN TRIPLICATE TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
28. EXISTING UTILITIES SHALL BE DIGSAFED BEFORE CONSTRUCTION.
29. ALL WATER LINES SHALL HAVE TESTABLE BACKFLOW PREVENTERS AT THE ENTRANCE TO EACH BUILDING.
30. ALL GRAVITY SEWER PIPE, MANHOLES, AND FORCE MAINS SHALL BE TESTED ACCORDING TO NHDES STANDARDS OF DESIGN AND CONSTRUCTION FOR SEWAGE AND WASTEWATER TREATMENT FACILITIES, CHAPTER ENV-WQ 700.
31. ENV-WQ 704.06 GRAVITY SEWER PIPE TESTING: GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY USE OF LOW-PRESSURE AIR TESTS CONFORMING WITH ASTM F1417-92(2005) OR UNI-BELL PVC PIPE ASSOCIATION UNI-B-6. LINES SHALL BE CLEANED AND VISUALLY INSPECTED AND TRUE TO LINE AND GRADE. DEFLECTION TESTS SHALL TAKE PLACE AFTER 30 DAYS FOLLOWING INSTALLATION AND THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% OF AVERAGE INSIDE DIAMETER. THE ENGINEER RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO PERFORM CTV INSPECTION OF THE SEWER LINES INCIDENTAL TO THE PROJECT.
32. ENV-WQ 704.17 SEWER MANHOLES: SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST PRIOR TO BACKFILLING AND PLACEMENT OF SHELVES AND INVERTS.
33. ENV-WQ 704.19(a) PROTECTION OF WATER LINES: SANITARY SEWER LINES SHALL BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM AN EXISTING OR PROPOSED WATER LINE. UNLESS OTHERWISE REFLECTED ON PLANS APPROVED BY NHDES, SEWER SHALL BE LOCATED BELOW A WATER MAIN WITH A MINIMUM VERTICAL SEPARATION OF NO LESS THAN 18" AND SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.
34. ENV-WQ 704.04(b) DESIGN & CONSTRUCTION OF GRAVITY SEWERS: SEWERS SHALL BE BURIED TO A MINIMUM DEPTH OF 6 FEET BELOW GRADE IN ALL ROADWAY LOCATIONS, AND TO A MINIMUM DEPTH OF 4 FEET BELOW GRADE IN ALL CROSS-COUNTRY LOCATIONS. PROVIDE TWO-INCHES OF R-10 FOAM BOARD INSULATION THE WIDTH OF THE SEWER TRENCH TO BE INSTALLED 12-INCHES OVER SEWER PIPE (ABOVE SEWER BLANKET) IN AREAS WHERE DEPTH IS NOT ACHIEVED. A WAIVER FROM THE DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER ENGINEERING BUREAU IS REQUIRED PRIOR TO INSTALLING SEWER AT LESS THAN MINIMUM COVER.
35. THE CONTRACTOR SHALL MINIMIZE THE DISRUPTIONS TO THE EXISTING SEWER FLOWS AND THOSE INTERRUPTIONS SHALL BE LIMITED TO FOUR (4) HOURS OR LESS AS DESIGNATED BY THE TOWN SEWER DEPARTMENT.
36. LIGHTING CONDUIT SHALL BE SCHEDULE 40 PVC, AND SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRIC CODE. CONTRACTOR SHALL PROVIDE EXCAVATION AND BACKFILL.
37. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
38. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 5'-0" FROM HYDRANT.
39. ALL DUCTILE IRON PIPE SHALL BE CLASS 52, DOUBLE CEMENT LINED. ALL PIPE SHALL BE PUSH ON JOINT WITH MECHANICAL JOINT FITTINGS.
40. DISINFECTION OF WATER MAINS SHALL BE CARRIED OUT IN STRICT ACCORDANCE WITH AWWA STANDARD C651, LATEST EDITION.
41. AN EXCAVATION PERMIT FROM NHDOT SHALL BE OBTAINED FOR UTILITY WORK IN THE NH ROUTE 125 RIGHT OF WAY.
42. WATER SERVICES SHALL BE LOCATED MIN. 10' HORIZONTALLY AND MIN. 18" VERTICALLY FROM SEWER SERVICES.
43. PERMANENT WITNESS MARKERS TO BE INSTALLED ALONG CROSS COUNTRY WATER MAIN AT BENDS.
44. THE TOWN OF EPPING RESERVES THE RIGHT TO SPECIFY ALLOWABLE CONTRACTORS TO INSTALL THE WATER MAIN PER THE TOWN OF EPPING STANDARD REGULATIONS AND SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER, SEWER AND ROAD INFRASTRUCTURE.

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE - MICHAEL J. KERNAN No. 9848 - LICENSED PROFESSIONAL ENGINEER

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Civil Engineering Services
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E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: UTILITY PLAN

Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

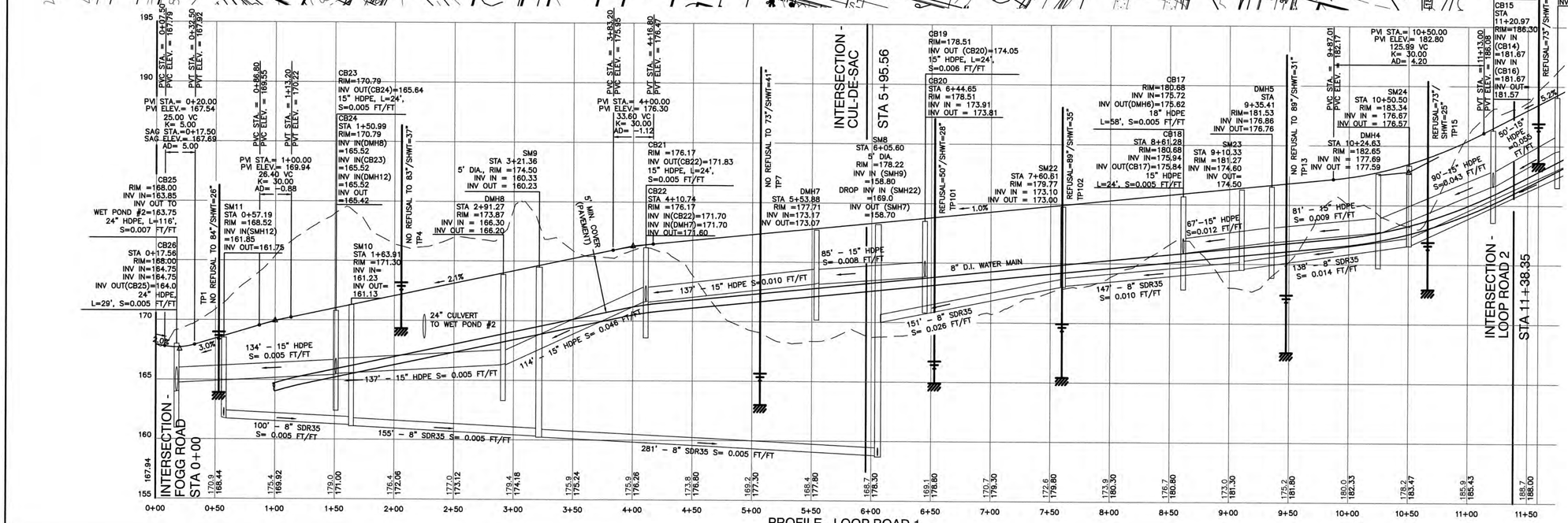
Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

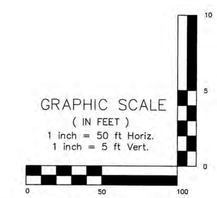
DRAWING No. C7

SHEET 10 OF 26
JBE PROJECT NO. 16130

NOTES:

1. THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE CONSTRUCTION SITE. THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH SHALL REMAIN ON SITE AND BE MADE ACCESSIBLE TO THE PUBLIC. THE CONSTRUCTION SITE OPERATOR SHALL SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA REGIONAL OFFICE SEVEN DAYS PRIOR TO COMMENCEMENT OF ANY WORK ON SITE. EPA WILL POST THE NOI AT HTTP://CFPUB1.EPA.GOV/NPDES/STORMWATER/NOI/NOISEARCH.CFM. AUTHORIZATION IS GRANTED UNDER THE PERMIT ONCE THE NOI IS SHOWN IN "ACTIVE" STATUS ON THIS WEBSITE. A COMPLETED NOTICE OF TERMINATION SHALL BE SUBMITTED TO THE NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET:
   A. FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE; OR
   A. ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED. PROVIDE DPW WITH A COPY OF THE NOTICE OF TERMINATION (NOT).
2. ALL ROAD AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR THE TOWN, AND NHDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
3. DEVELOPER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.
4. CONTRACTOR TO COORDINATE AND COMPLETE ALL WORK REQUIRED FOR THE RELOCATION AND/OR INSTALLATION OF ELECTRIC, CATV, TELEPHONE, AND FIRE ALARM PER UTILITY DESIGN AND STANDARDS. LOCATIONS SHOWN ARE APPROXIMATE. LOW PROFILE STRUCTURES SHALL BE USED TO THE GREATEST EXTENT POSSIBLE.
5. THIS PLAN HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC. FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON-SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON-SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
6. SILTATION AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN UNTIL SITE HAS BEEN STABILIZED WITH PERMANENT VEGETATION. SEE DETAIL SHEET E1 FOR ADDITIONAL NOTES ON EROSION CONTROL.
7. ALL DISTURBED AREAS NOT STABILIZED BY NOVEMBER 1st SHALL BE COVERED WITH AN EROSION CONTROL BLANKET. PRODUCT TO BE SPECIFIED BY THE ENGINEER.
8. FINAL DRAINAGE, GRADING AND EROSION PROTECTION MEASURES SHALL CONFORM TO REGULATIONS OF THE PUBLIC WORKS DEPARTMENT.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES AND TO NOTIFY ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
10. ROADWAY INTERSECTIONS WITH SLOPE GRANITE CURB SHALL EXTEND AROUND RADIUS WITH 6' STRAIGHT PIECE ALONG TANGENT.
11. 6" PERFORATED ADS UNDER DRAIN PLACEMENT TO BE DETERMINED BY THE ENGINEER DURING TIME OF SUBGRADE INSPECTION. CONTRACTOR TO ADJUST LOCATION IN THE FIELD ONLY WITH PRIOR APPROVAL OF PROJECT ENGINEER OR PUBLIC WORKS DEPARTMENT. CONTRACTOR TO INCLUDE 3000 LF IN BID PRICE.
12. ALL DRIVEWAYS TO BE CONSTRUCTED MAXIMUM 10% SLOPE. SEE DETAIL SHEET. ALL DRIVEWAYS TO HAVE CULVERTS UNLESS APPROVED BY THE TOWN ROAD AGENT.
13. COMPACTION TESTING SERVICES (I.E. NUCLEAR DENSITY TESTS) ARE TO BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR FOR ROADWAY CONSTRUCTION, AND ON THE FOUNDATION OF THE BERM AND ON EVERY LIFT OF NEWLY PLACED MATERIAL.
14. ORNAMENTAL STREET LIGHTING SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE HOME OWNER'S ASSOCIATION.
15. SLOPED GRANITE CURB TO BE TIPPED DOWN AT ALL DRIVEWAY ENTRANCES BY THE CONTRACTOR.





Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE — MICHAEL J. KERVAN No. 9946 — LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: ROADWAY PLAN AND PROFILE

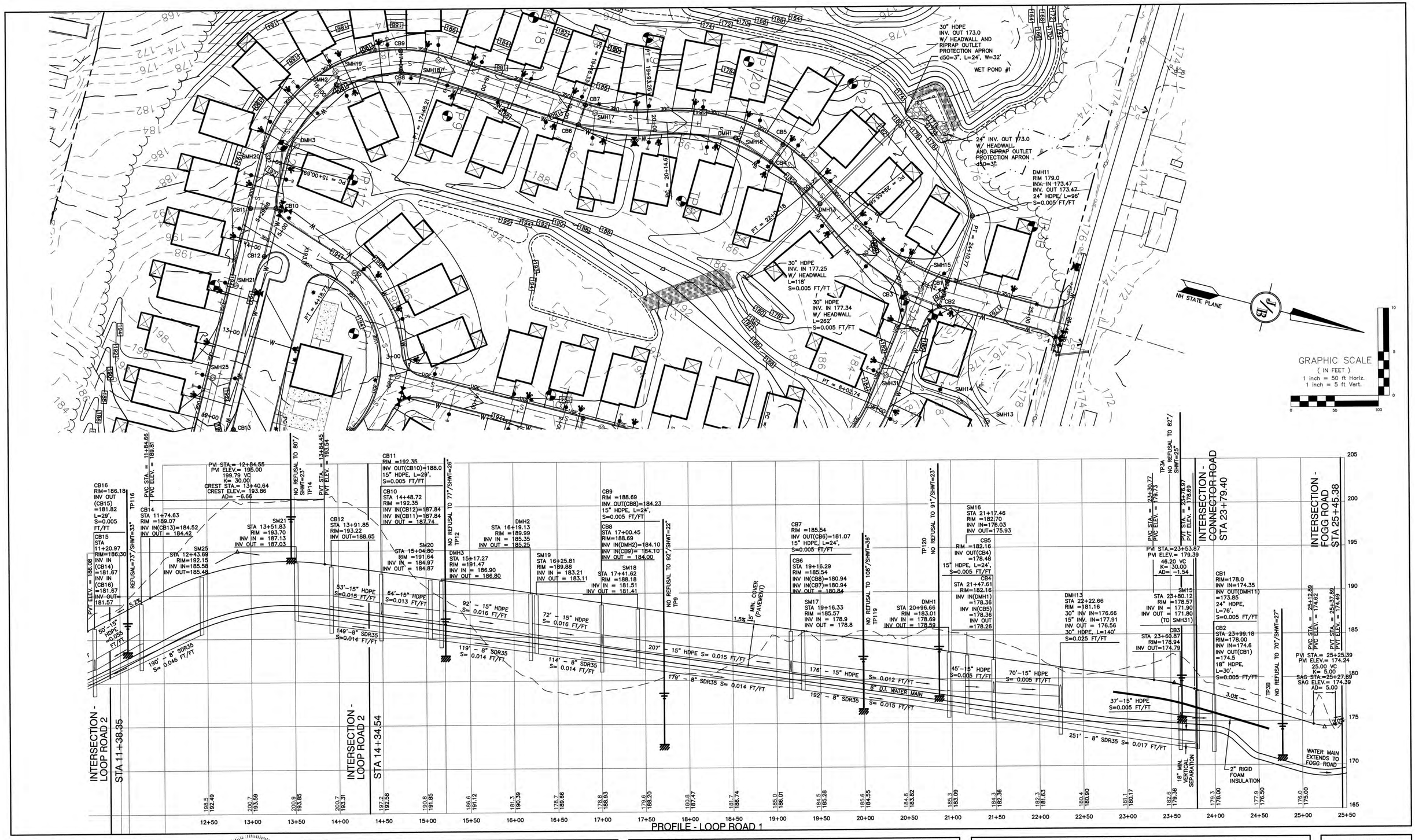
Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.

P1

SHEET 11 OF 26
JBE PROJECT NO. 16130



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STATE OF NEW HAMPSHIRE MICHAEL J. KERIVAN No. 9848 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
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Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: ROADWAY PLAN AND PROFILE

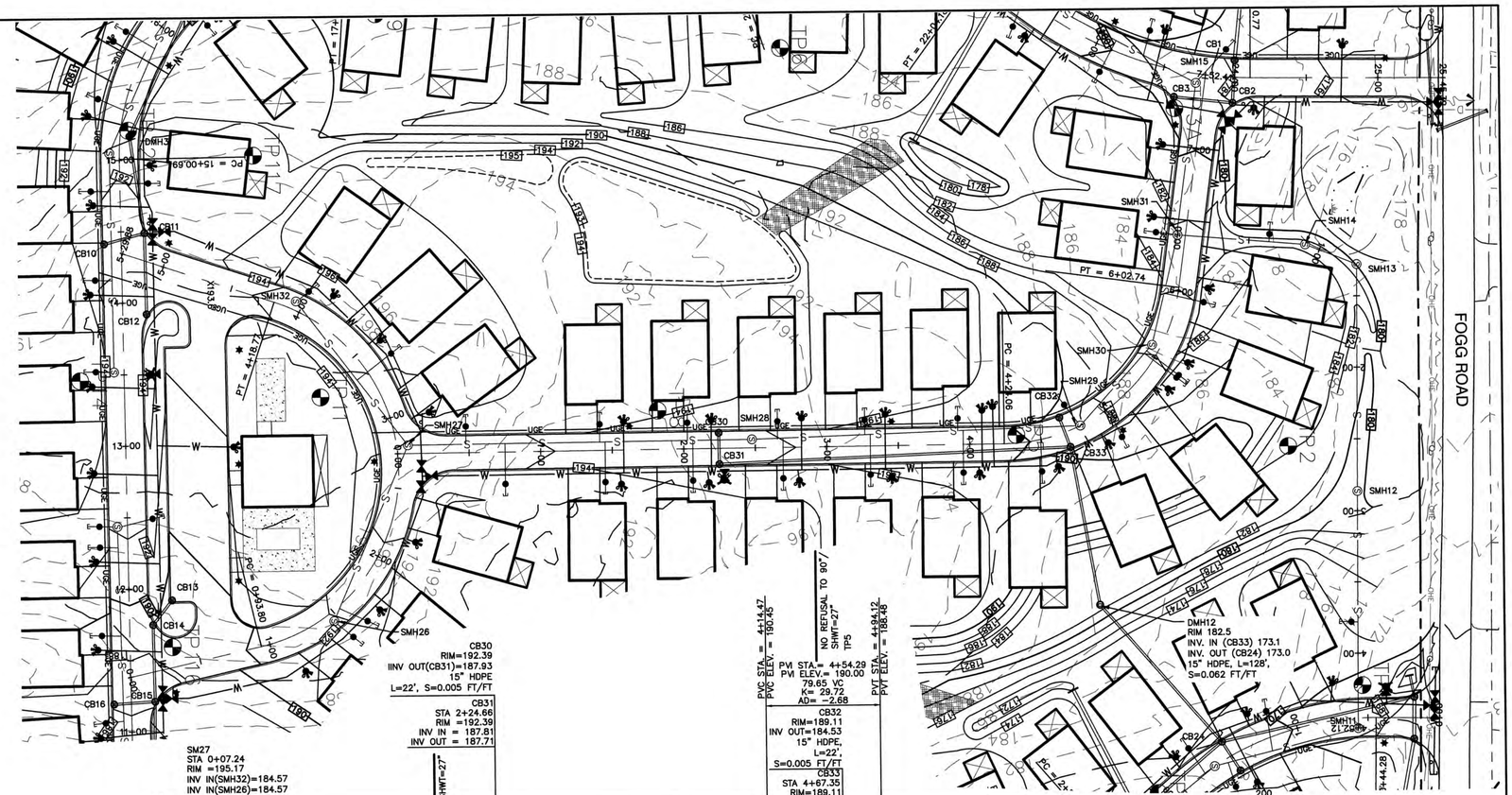
Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

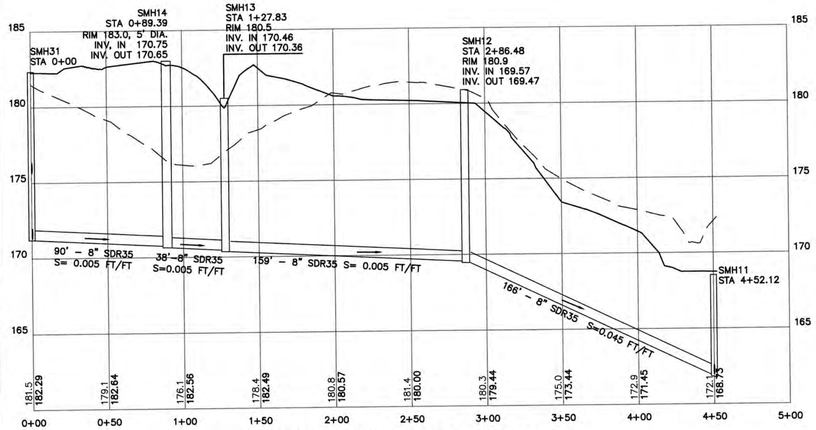
Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
P2

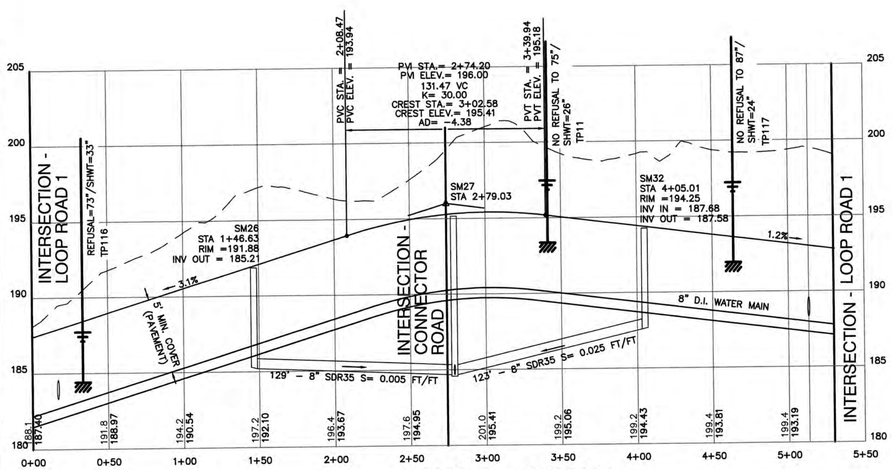
NH STATE PLANE

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft Horiz.
1 inch = 5 ft Vert.

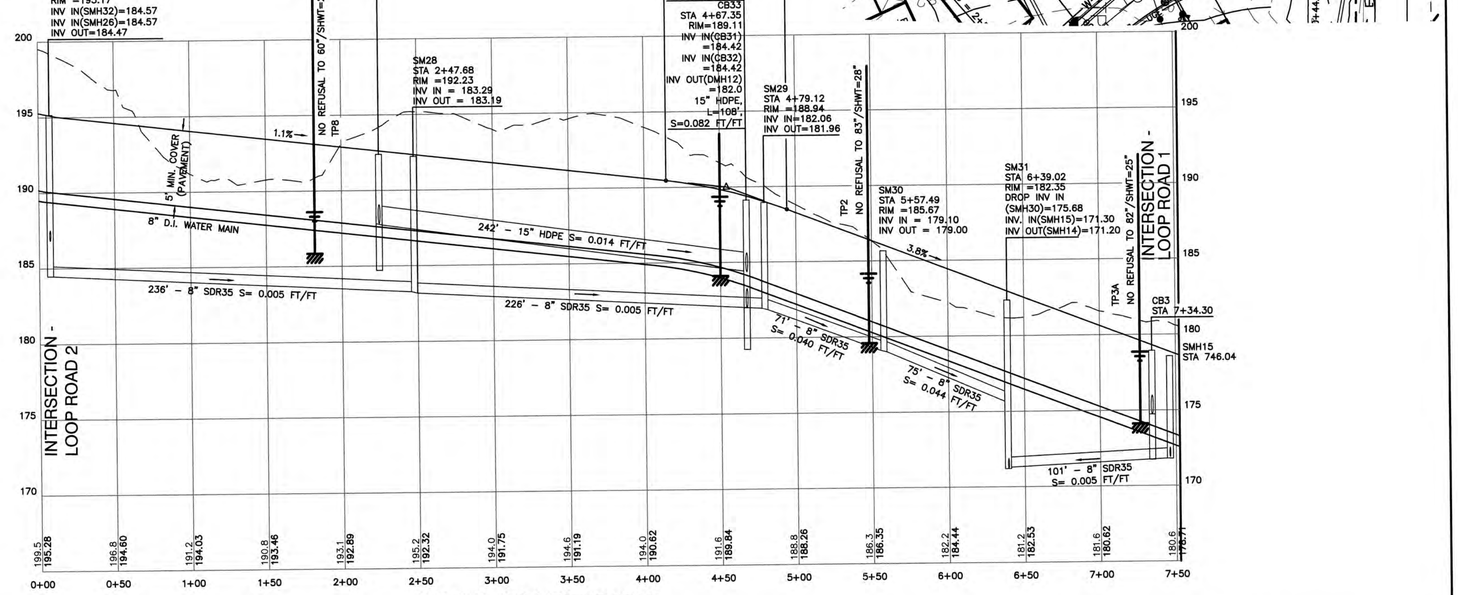




PROFILE - CROSS COUNTRY SEWER



PROFILE - LOOP ROAD 2



PROFILE - CONNECTOR ROAD

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE
MICHAEL J. KERIVAN
No. 9649
LICENSED
PROFESSIONAL ENGINEER
4/25/18

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
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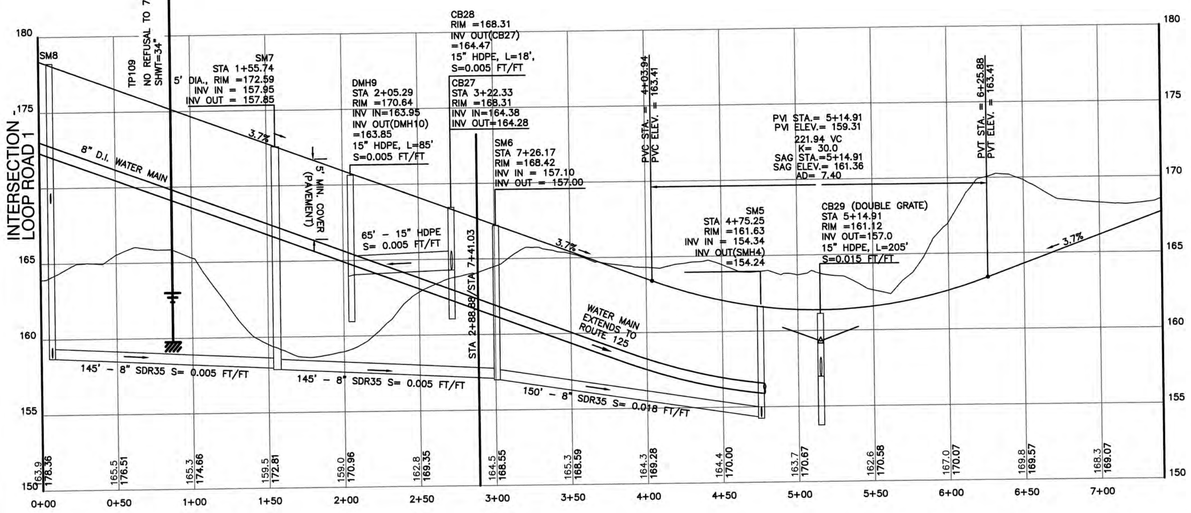
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: ROADWAY PLAN AND PROFILE

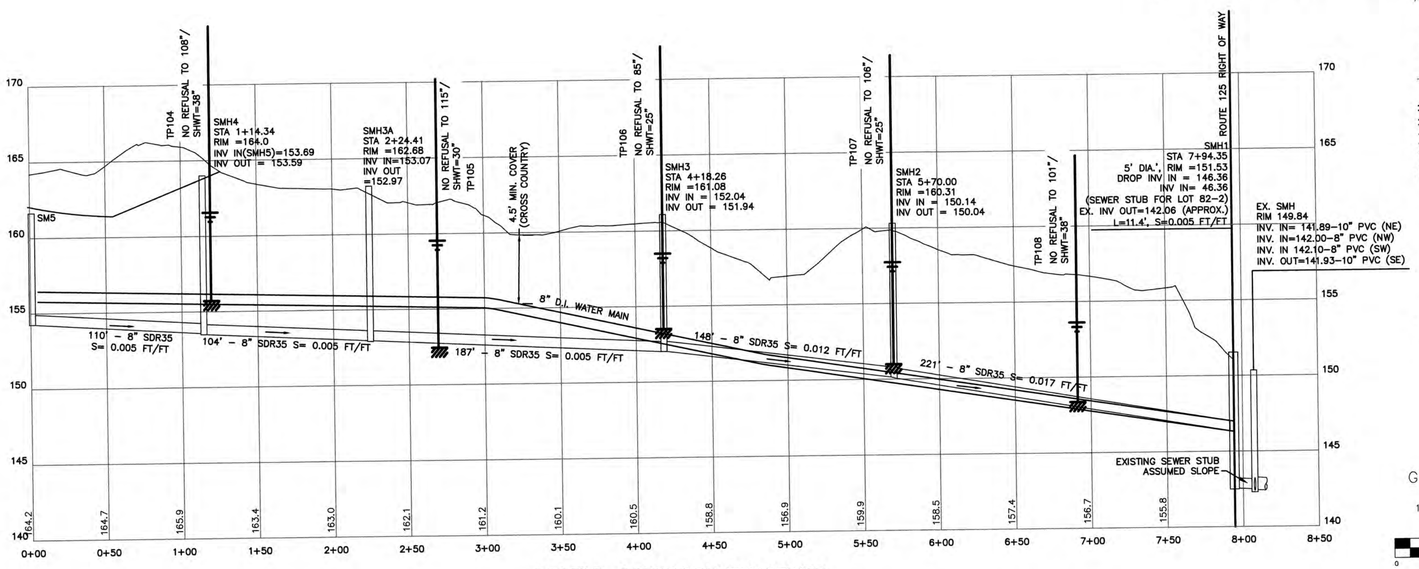
Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

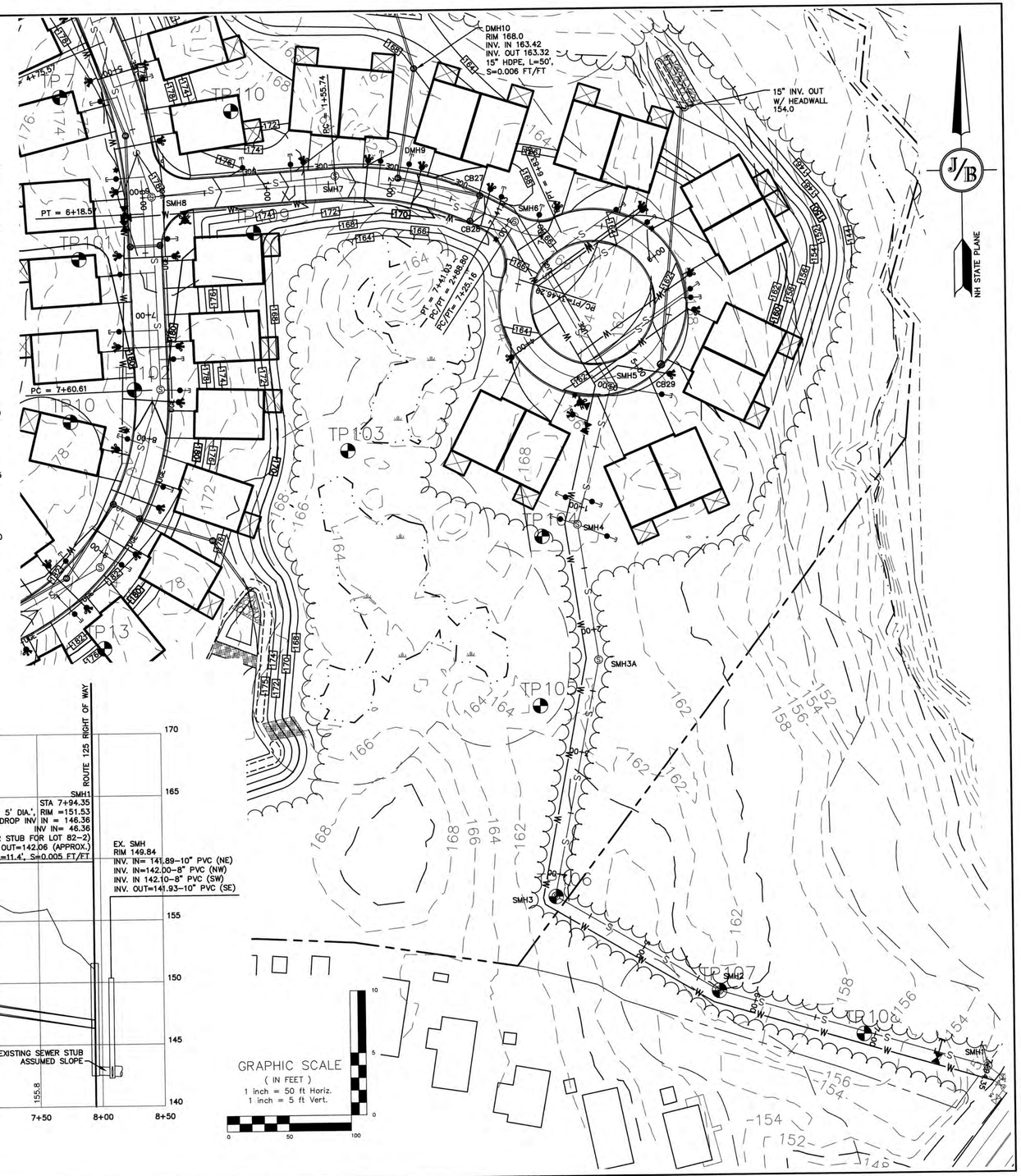
DRAWING No.
P3



PROFILE - CUL-DE-SAC



PROFILE - CROSS COUNTRY SEWER



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Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE
MICHAEL J. KERIVAN No. 9945
LICENSED
PROFESSIONAL ENGINEER
10/1/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

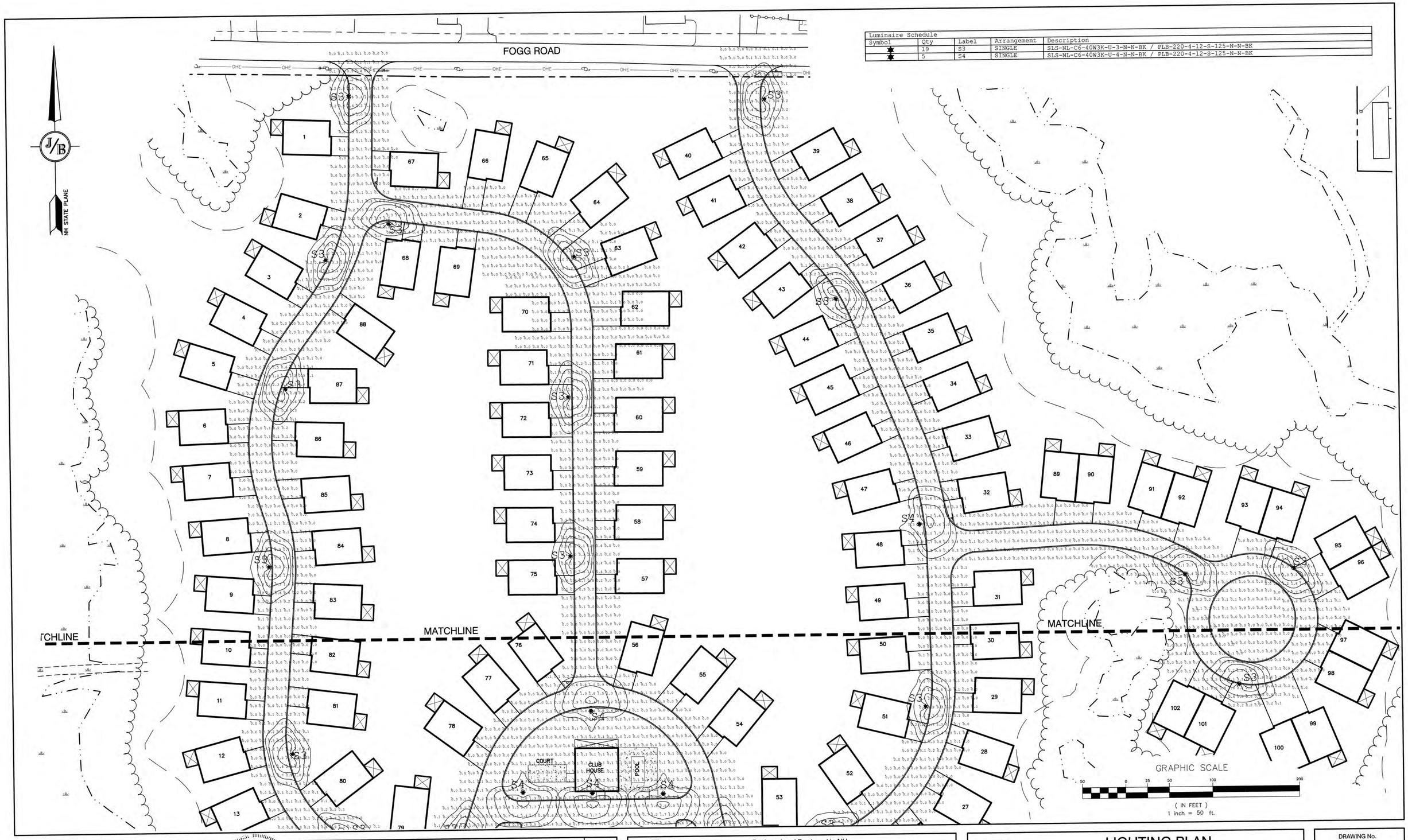
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: ROADWAY PLAN AND PROFILE

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
P4



Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	19	S3	SINGLE	SLS-NL-C6-40W3K-U-3-N-N-BK / PLB-220-4-12-S-125-N-N-BK
	5	S4	SINGLE	SLS-NL-C6-40W3K-U-4-N-N-BK / PLB-220-4-12-S-125-N-N-BK

Design: JAC	Draft: PSL	Date: 4/25/18
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Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL J. KERWAN No. 9949 LICENSED PROFESSIONAL ENGINEER 9/11/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

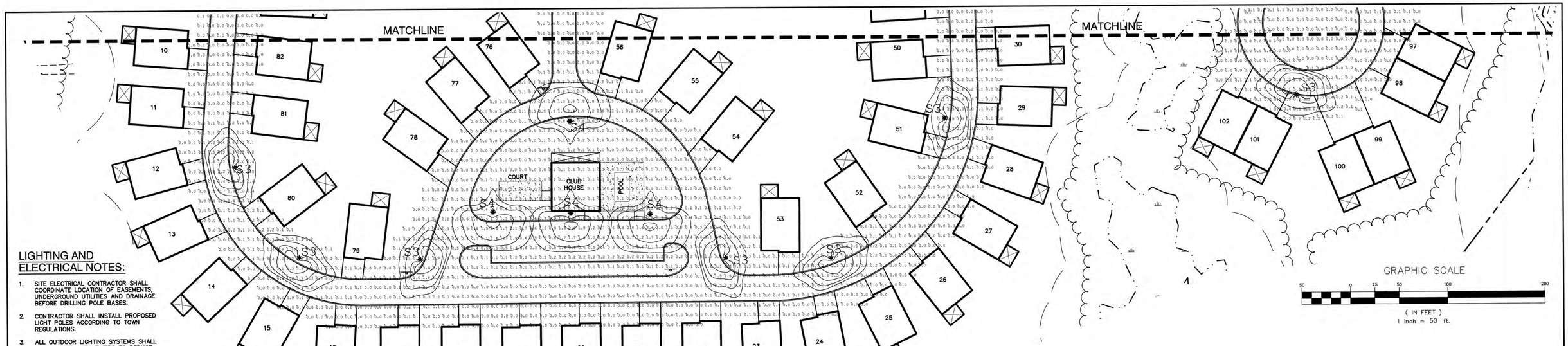
Plan Name: LIGHTING PLAN

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
L1

SHEET 15 OF 26
JBE PROJECT NO. 16130

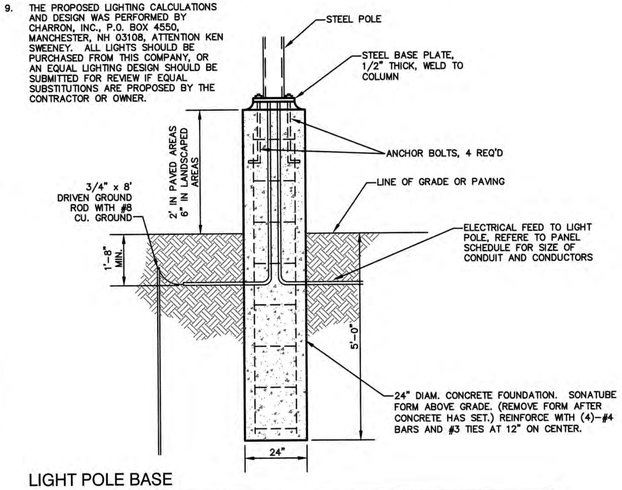


LIGHTING AND ELECTRICAL NOTES:

1. SITE ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
2. CONTRACTOR SHALL INSTALL PROPOSED LIGHT POLES ACCORDING TO TOWN REGULATIONS.
3. ALL OUTDOOR LIGHTING SYSTEMS SHALL BE EQUIPPED WITH TIMERS TO REDUCE ILLUMINATION LEVELS TO NON-OPERATIONAL VALUES PER TOWN REGULATIONS.
4. LIGHTING CONDUIT SHALL BE SCHEDULE 40 PVC, AND SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL PROVIDE EXCAVATION AND BACKFILL.
5. ILLUMINATION READINGS SHOWN ARE BASED ON A TOTAL LLF OF 0.75 AT GRADE. ILLUMINATION READINGS SHOWN ARE IN UNITS OF FOOT-CANDLES.
6. LIGHTING CALCULATIONS SHOWN ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM AND SAFETY.
7. ALL LIGHTING FIXTURES SHALL BE FULL CUT-OFF DARK-SKY COMPLIANT, UNLESS OTHERWISE NOTED.
8. NL INDICATES THAT THIS LUMINAIRE SHALL BE ON A NIGHT LIGHT CIRCUIT. FL INDICATES THAT THIS LUMINAIRE SHALL BE A FLOOD LIGHT FIXTURE. MOUNTING BRACKET FOR THIS FL FIXTURE SHALL BE MOUNTED 25' ABOVE BOTTOM OF POLE BASE FOR ALL LIGHT POLES CLOSEST TO STOREFRONT. THESE DESIGNATIONS INDICATE WHAT PHASE LIGHTS ARE WIRED TO (TYP).
9. THE PROPOSED LIGHTING CALCULATIONS AND DESIGN WAS PERFORMED BY CHARRON, INC., P.O. BOX 4550, MANCHESTER, NH 03108, ATTENTION KEN SWENEY. ALL LIGHTS SHOULD BE PURCHASED FROM THIS COMPANY, OR AN EQUAL LIGHTING DESIGN SHOULD BE SUBMITTED FOR REVIEW IF EQUAL SUBSTITUTIONS ARE PROPOSED BY THE CONTRACTOR OR OWNER.

J/B

NH STATE PLANE



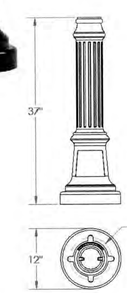
LIGHT POLE BASE

NOT TO SCALE

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	19	S3	SINGLE	SLS-NL-C6-40W3K-U-3-N-N-BK / PLB-220-4-12-S-125-N-N-BK
	5	S4	SINGLE	SLS-NL-C6-40W3K-U-4-N-N-BK / PLB-220-4-12-S-125-N-N-BK

PEMCO Est. 1962 LIGHTING PRODUCTS A QSSI COMPANY — PLB220

DECORATIVE ALUMINUM POLES



Specifications and Features:

- 4' – 6' to 14' standard heights
- Straight or tapered, smooth or fluted poles. TAPERED FLUTED POLES - Contact Factory (expect extended lead time)

Shaft
Smooth or fluted tubing uses 6065-T5 aluminum alloy while tapered poles use 6061 aluminum alloy.

Structural Base
A356 alloy sand cast aluminum, four bolt base. An extra large access cover is included. A grounding lug is also provided.

Tenons
T300=Standard for post top (2 7/8" OD x 3" tall)
T355=Standard for shepherd's crooks arms (2 7/8" OD x 5.5" tall)
SLV=Male sleeve welded to pole; ready for extension/arm set-up (consult factory)
CAP=No tenon, removable cap
PF_=Decorative pole top finial (optional adder)

Anchor Bolts
Standard with each pole: includes four 3/4–10 x 25" steel hot dip galvanized anchor bolts each with two nuts, two flat washers and one lock washer.

Accessories
GFIC=Weatherproof GFI in-use cover, cast aluminum (must indicate location)
GFIP=Weatherproof GFI in-use cover, plastic (must indicate location)
DBS=Direct burial shaft to convert pole to embedded/burial installation. 48" shaft with anti-rotational fins included.
USB=Dual USB Port (must indicate location)

Finish - Super Durable Polyester TGIC Powder Coat
- Standard finishes: high gloss black, textured black, high gloss white, medium bronze, dark bronze, green, gray, silver metallic
- Premium finishes (adder): Verde patina, pewter patina, silver sparkle, semi-gloss or matte black
- Custom and Marine-grade finishes are available. All RAL colors are available to match (adder).

PEMCO Est. 1962 LIGHTING PRODUCTS A QSSI COMPANY — SALINAS

POST TOP LUMINAIRES

EPA: 2.5
WEIGHT: 38 lbs (max.)

Specifications and Features:

Radiant™ LED
- Full Cutoff
- Conformal Coating LED light engine
- CCT: 2700K, 3000K, 4000K, 5000K
- IP66

Optical
- Types II, III, IV, V

Electrical
- 0-10V Electronic Driver, 120-277V, 50/60Hz or 347/480V, 50/60Hz
- Dimmable Driver
- Surge Protection included
  - surge protection device meets IEEE C62.41 2002 C High 10kA

Options (Adder)
- Button eye photo control (PC)

Housing
- Spun aluminum roof, sand cast arms and capital

Finish
- Super durable polyester powder coat finish. Custom finishes available, including patinas and all RAL colors.

Listings & Ratings
- ETL listed to UL 1598 standard for wet location and IP66

Warranty
- 5 year limited warranty

ORDERING FORMAT Example: SLS-NL-C6-70W4K-U-5-N-N-BK

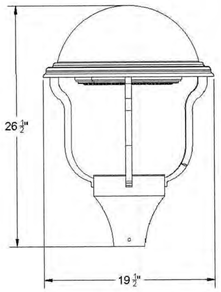
SLS	NL	C6		
Model	Globe/Lens	Capital	LED Module	Voltage
SLS=Salinas Radiant™	NL=No Secondary Lens	C6=PLC6	See Chart - LED Light Engine Specifications.	U=120-277V H=347/480V

		N		
Distribution	Options	Finial	Finish	
2=Type II 3=Type III 4=Type IV 5=Type V	FS=Fuse, Single PC=Button eye photo control N=None	N=No Finial	Standard Colors BK=Black BZ=Bronze DBZ=Dark Bronze WH=White	Standard Colors GR=Green BM=Silver Metallic GY=Light Gray TBK=Textured Black CC=Custom (Consult Factory)

PEMCO Est. 1962 LIGHTING PRODUCTS A QSSI COMPANY — SALINAS

POST TOP LUMINAIRES

12" Radiant™ 8" Radiant™



Lumen Output for Salinas

No Secondary Lens						
CCT	LED Module	Input Watts	Type 2	Type 3	Type 4	Type 5
5K	40W5K	40	4036	4110	4178	4288
	50W5K	50	5047	5091	5175	5312
	60W5K	60	6008	6060	6160	6323
	70W5K	70	7068	7130	7247	7439
	80W5K	80	8072	8142	8276	8496
	90W5K	90	9083	9162	9313	9559
	105W5K	105	10573	10463	10635	11159
	120W5K	120	11672	11773	11967	12751
4K	40W4K	40	3844	3877	3941	4046
	50W4K	50	4807	4848	4928	5059
	60W4K	60	5722	5772	5867	6022
	70W4K	70	6732	6790	6902	7085
	80W4K	80	7688	7755	7882	8091
	90W4K	90	8650	8726	8869	9104
	105W4K	105	9879	9965	10129	10628
	120W4K	120	11116	11212	11397	12144
3K	40W3K	40	3680	3722	3784	3884
	50W3K	50	4614	4654	4731	4856
	60W3K	60	5493	5541	5632	5781
	70W3K	70	6463	6519	6626	6802
	80W3K	80	7380	7444	7567	7767
	90W3K	90	8304	8377	8515	8740
	105W3K	105	9484	9566	9724	10202
	120W3K	120	10671	10764	10941	11658
27K	40W27K	40	3460	3490	3547	3641
	50W27K	50	4326	4364	4435	4553
	60W27K	60	5150	5195	5280	5420
	70W27K	70	6059	6111	6212	6377
	80W27K	80	6919	6979	7094	7282
	90W27K	90	7785	7853	7982	8194
	105W27K	105	8891	8968	9116	9565
	120W27K	120	10004	10091	10257	10929

Design: JAC	Draft: PSL	Date: 4/25/18
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STATE OF NEW HAMPSHIRE MICHAEL J. KERIVAN No. 9846 LICENSED PROFESSIONAL ENGINEER 12/11/19

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

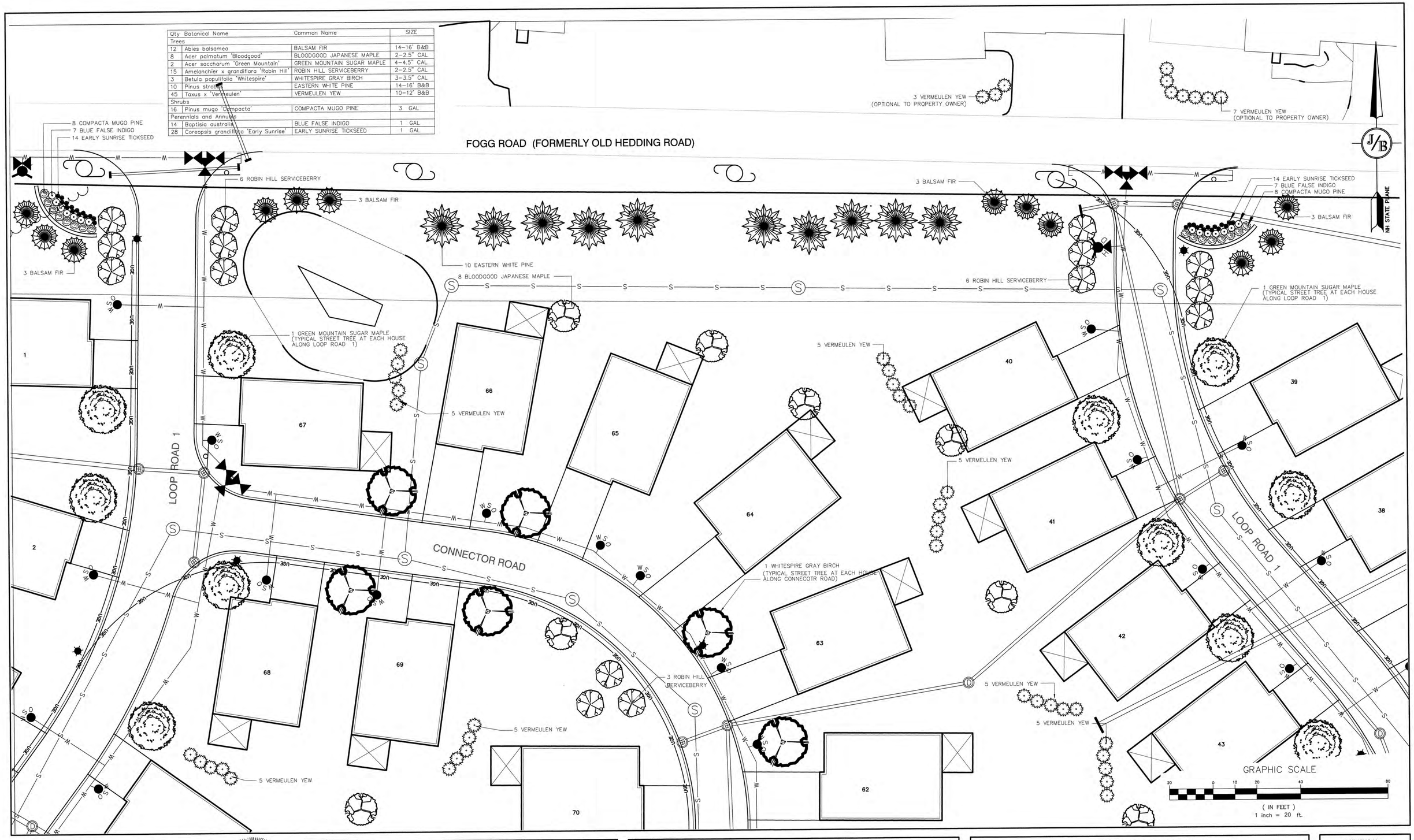
Plan Name: LIGHTING PLAN

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
L2
SHEET 16 OF 26
JBE PROJECT NO. 16130

Qty	Botanical Name	Common Name	SIZE
Trees			
12	Abies balsamea	BALSAM FIR	14–16' B&B
8	Acer palmatum 'Bloodgood'	BLOODGOOD JAPANESE MAPLE	2–2.5" CAL
2	Acer saccharum 'Green Mountain'	GREEN MOUNTAIN SUGAR MAPLE	4–4.5" CAL
15	Amelanchier x grandiflora 'Robin Hill'	ROBIN HILL SERVICEBERRY	2–2.5" CAL
3	Betula populifolia 'Whitespire'	WHITESPIRE GRAY BIRCH	3–3.5" CAL
10	Pinus strobus	EASTERN WHITE PINE	14–16' B&B
45	Taxus x 'Vermeulen'	VERMEULEN YEW	10–12' B&B
Shrubs			
16	Pinus mugo 'Compacta'	COMPACTA MUGO PINE	3 GAL
Perennials and Annuals			
14	Baptisia australis	BLUE FALSE INDIGO	1 GAL
28	Coreopsis grandiflora 'Early Sunrise'	EARLY SUNRISE TICKSEED	1 GAL



Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL J. KERNAN No. 9546 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

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Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

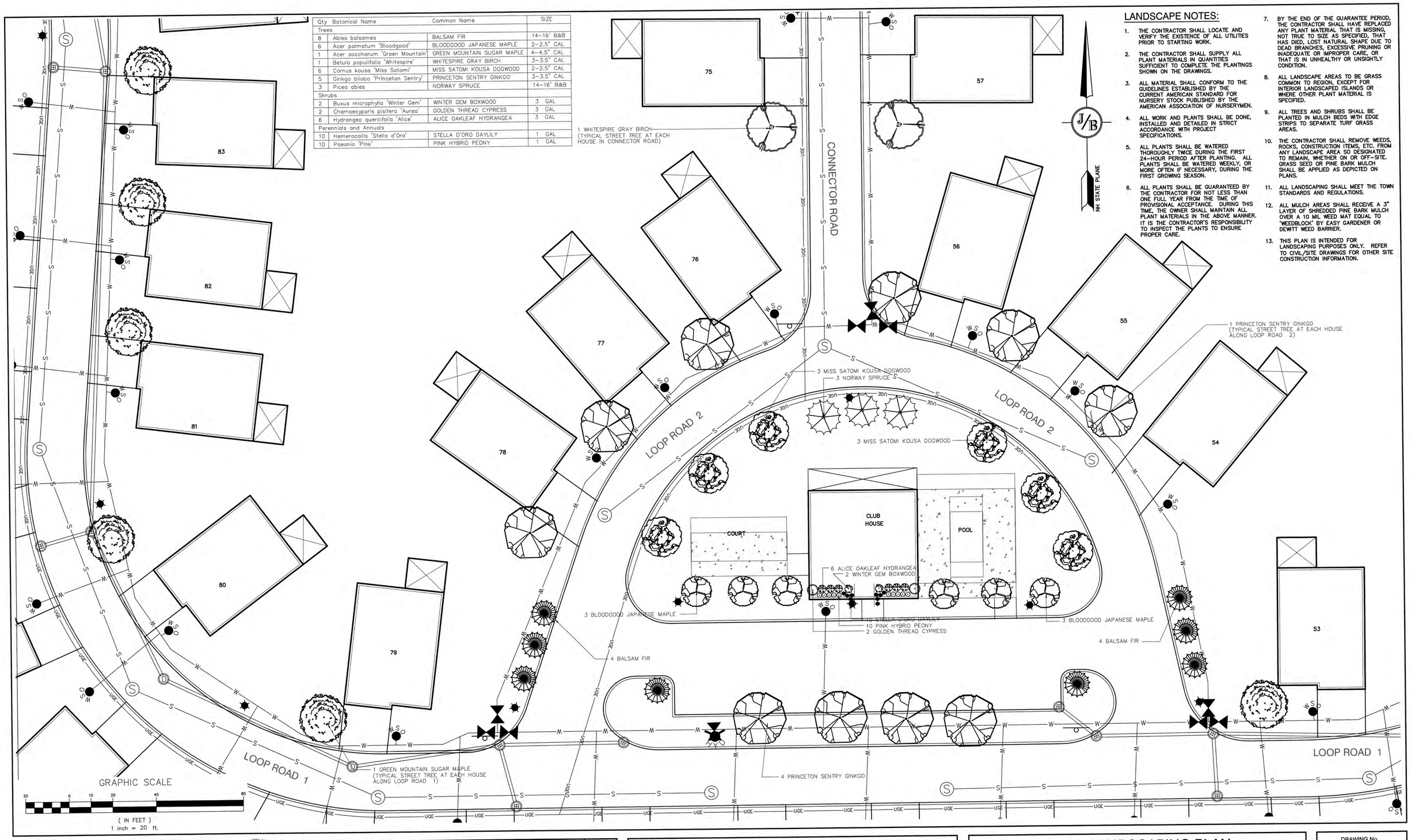
Plan Name: LANDSCAPING PLAN

Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
L3
SHEET 17 OF 26
JBE PROJECT NO. 16130

Qty	Botanical Name	Common Name	SIZE
Trees			
8	Abies balsamea	BALSAM FIR	14–16' B&B
6	Acer palmatum 'Bloodgood'	BLOODGOOD JAPANESE MAPLE	2–2.5" CAL
1	Acer saccharum 'Green Mountain'	GREEN MOUNTAIN SUGAR MAPLE	4–4.5" CAL
1	Betula populifolia 'Whitespire'	WHITESPIRE GRAY BIRCH	3–3.5" CAL
6	Cornus kousa 'Miss Satomi'	MISS SATOMI KOUSA DOGWOOD	2–2.5" CAL
5	Ginkgo biloba 'Princeton Sentry'	PRINCETON SENTRY GINKGO	3–3.5" CAL
3	Picea abies	NORWAY SPRUCE	14–16' B&B
Shrubs			
2	Buxus microphylla 'Winter Gem'	WINTER GEM BOXWOOD	3 GAL
2	Chamaecyparis pisifera 'Aurea'	GOLDEN THREAD CYPRESS	3 GAL
6	Hydrangea quercifolia 'Alice'	ALICE OAKLEAF HYDRANGEA	3 GAL
Perennials and Annuals			
10	Hemerocallis 'Stella d'Oro'	STELLA D'ORO DAYLILY	1 GAL
10	Paeonia 'Pink'	PINK HYBRID PEONY	1 GAL



LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL WORK AND PLANTS SHALL BE DONE, INSTALLED AND DETAILED IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
5. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24–HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN IF NECESSARY, DURING THE FIRST GROWING SEASON.
6. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NOT LESS THAN ONE FULL YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE.
7. BY THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAS DIED, LOST NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESSIVE PRUNING OR INADEQUATE OR IMPROPER CARE, OR THAT IS IN UNHEALTHY OR UNSIGHTLY CONDITION.
8. ALL LANDSCAPE AREAS TO BE GRASS COMMON TO REGION, EXCEPT FOR INTERIOR LANDSCAPED ISLANDS OR WHERE OTHER PLANT MATERIAL IS SPECIFIED.
9. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS WITH EDGE STRIPS TO SEPARATE TURF GRASS AREAS.
10. THE CONTRACTOR SHALL REMOVE WEEDS, ROCKS, CONSTRUCTION ITEMS, ETC. FROM ANY LANDSCAPE AREA SO DESIGNATED TO REMAIN, WHETHER ON OR OFF–SITE. GRASS SEED OR PINE BARK MULCH SHALL BE APPLIED AS DEPICTED ON PLANS.
11. ALL LANDSCAPING SHALL MEET THE TOWN STANDARDS AND REGULATIONS.
12. ALL MULCH AREAS SHALL RECEIVE A 3" LAYER OF SHREDDED PINE BARK MULCH OVER A 10 MIL WEED MAT EQUAL TO 'WEEDBLOCK' BY EASY GARDENER OR DEWITT WEED BARRIER.
13. THIS PLAN IS INTENDED FOR LANDSCAPING PURPOSES ONLY. REFER TO CIVIL/SITE DRAWINGS FOR OTHER SITE CONSTRUCTION INFORMATION.

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE – MICHAEL J. KERIVAN No. 9646 – LICENSED PROFESSIONAL ENGINEER – 10/22/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
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2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

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Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: LANDSCAPING PLAN

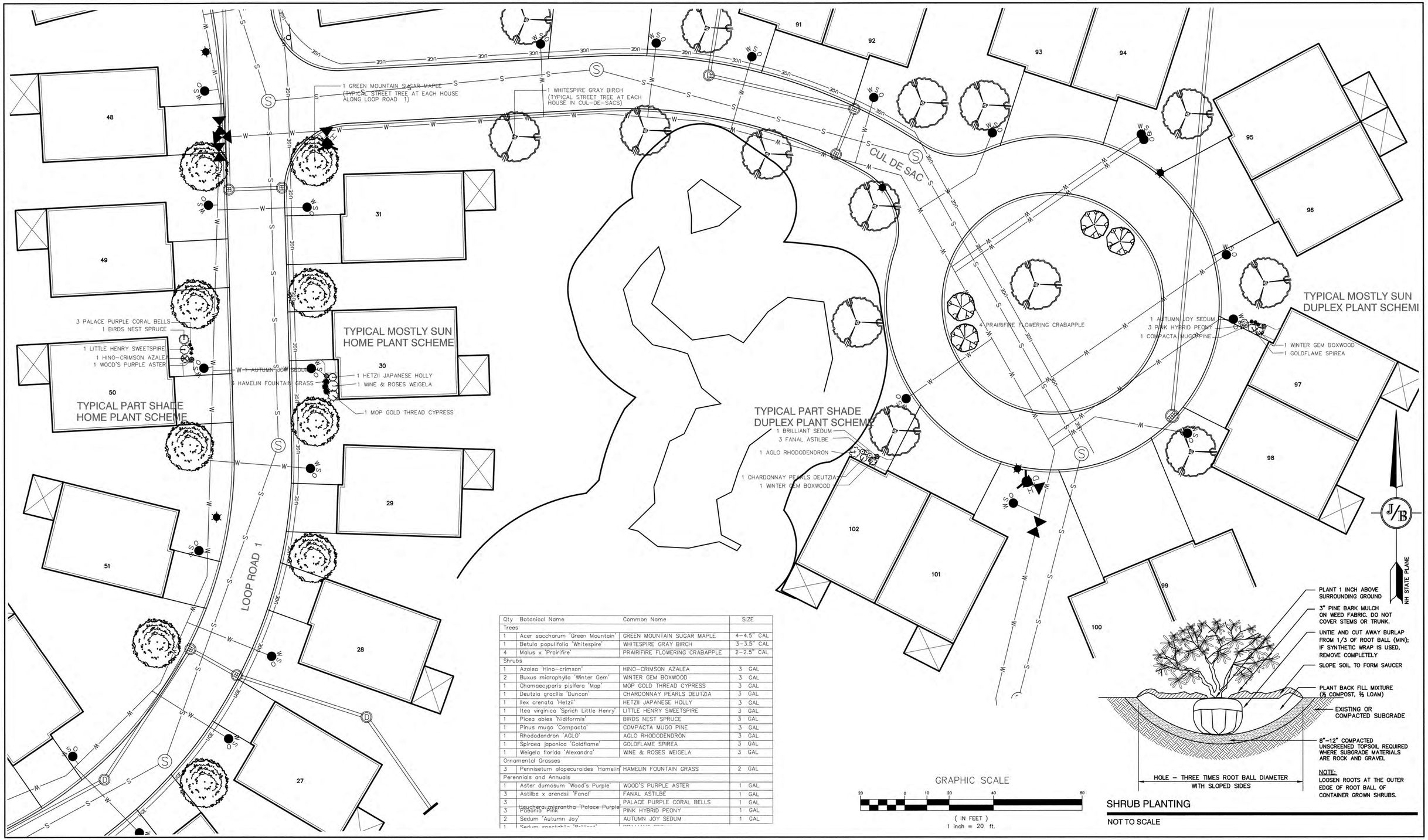
Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.

L4

SHEET 18 OF 26
JBE PROJECT NO. 16130



Qty	Botanical Name	Common Name	SIZE
Trees			
1	Acer saccharum 'Green Mountain'	GREEN MOUNTAIN SUGAR MAPLE	4-4.5" CAL
1	Betula populifolia 'Whitespire'	WHITESPIRE GRAY BIRCH	3-3.5" CAL
4	Malus x 'Prairifire'	PRAIRIFIRE FLOWERING CRABAPPLE	2-2.5" CAL
Shrubs			
1	Azalea 'Hino-crimson'	HINO-CRIMSON AZALEA	3 GAL
2	Buxus microphylla 'Winter Gem'	WINTER GEM BOXWOOD	3 GAL
1	Chamaecyparis pisifera 'Mop'	MOP GOLD THREAD CYPRESS	3 GAL
1	Deutzia gracilis 'Duncan'	CHARDONNAY PEARLS DEUTZIA	3 GAL
1	Ilex crenata 'Hetzii'	HETZII JAPANESE HOLLY	3 GAL
1	Itea virginica 'Sprich Little Henry'	LITTLE HENRY SWEETSPIRE	3 GAL
1	Picea abies 'Nidiformis'	BIRDS NEST SPRUCE	3 GAL
1	Pinus mugo 'Compacta'	COMPACTA MUGO PINE	3 GAL
1	Rhododendron 'AGLO'	AGLO RHODODENDRON	3 GAL
1	Spiraea japonica 'Goldflame'	GOLDFLAME SPIREA	3 GAL
1	Weigela florida 'Alexandra'	WINE & ROSES WEIGELA	3 GAL
Ornamental Grasses			
3	Pennisetum alopecuroides 'Hamelin'	HAMELIN FOUNTAIN GRASS	2 GAL
Perennials and Annuals			
1	Aster dumosum 'Wood's Purple'	WOOD'S PURPLE ASTER	1 GAL
3	Astilbe x arendsii 'Fanal'	FANAL ASTILBE	1 GAL
3	Heuchera micrantha 'Palace Purple'	PALACE PURPLE CORAL BELLS	1 GAL
3	Paeonia 'Pink'	PINK HYBRID PEONY	1 GAL
2	Sedum 'Autumn Joy'	AUTUMN JOY SEDUM	1 GAL
1	Sedum spectabile 'Brilliant'	BRILLIANT SEDUM	

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL A. KERVAN No. 9848 LICENSED PROFESSIONAL ENGINEER 10/1/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
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85 Portsmouth Ave.
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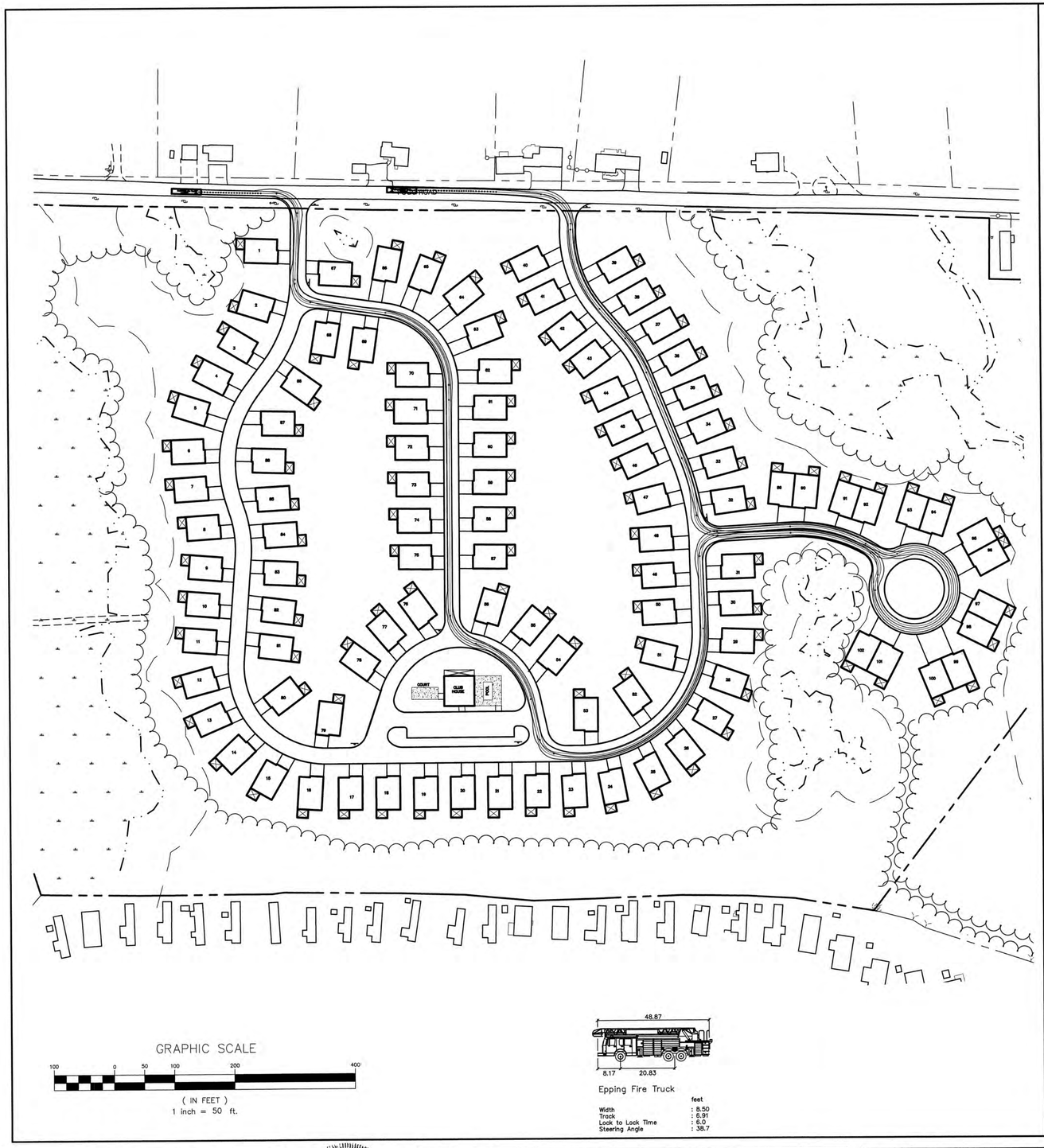
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

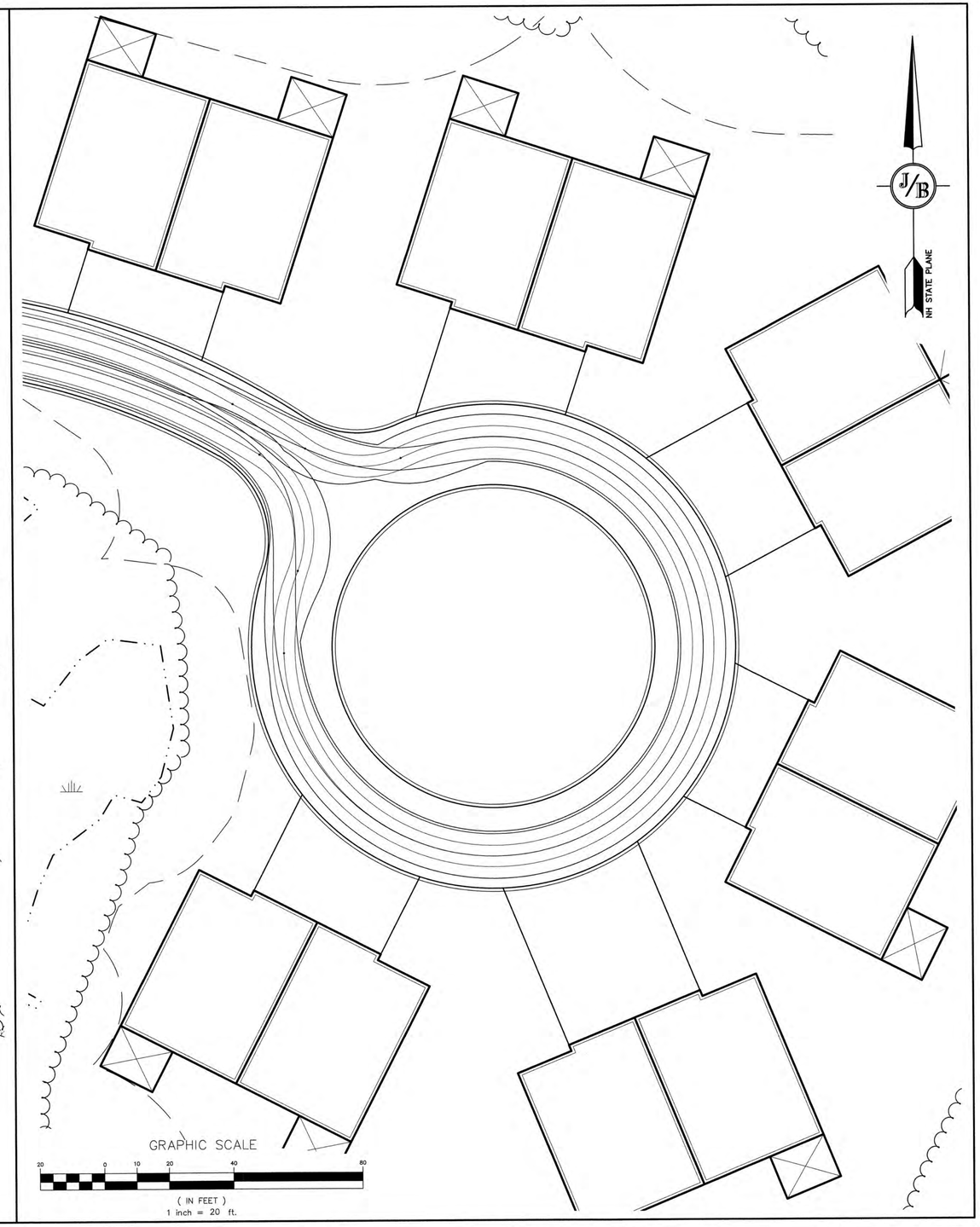
Plan Name: LANDSCAPING PLAN

Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.
L5
SHEET 19 OF 26
JBE PROJECT NO. 16130





Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS SHOWN	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE
MICHAEL J. KERIVAN
No. 9848
LICENSED
PROFESSIONAL ENGINEER
10/1/2020

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

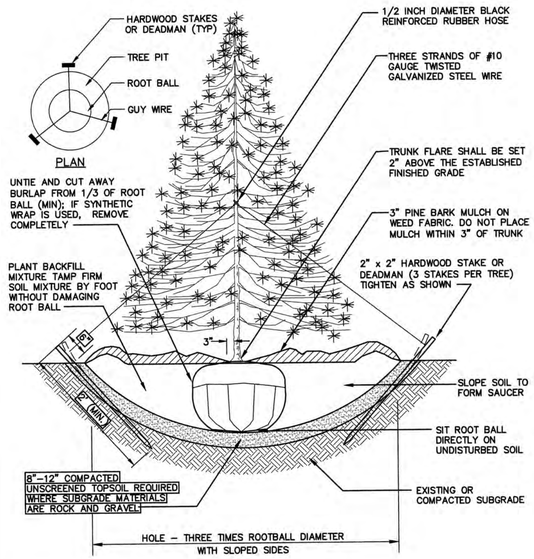
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: TRUCK TURNING PLAN

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

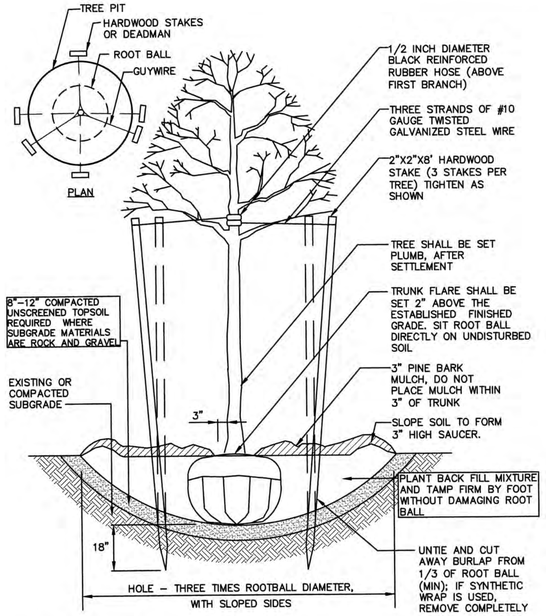
Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
T1
SHEET 20 OF 26
JBE PROJECT NO. 16130



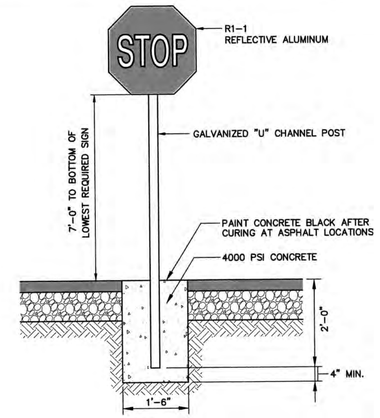
EVERGREEN PLANTING

NOT TO SCALE



TREE PLANTING (FOR TREES UNDER 4" CALIPER)

NOT TO SCALE



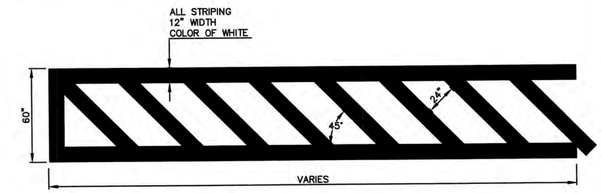
STOP SIGN (R1-1)

NOT TO SCALE

NOTES:
1. ALL STOP BARS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE.

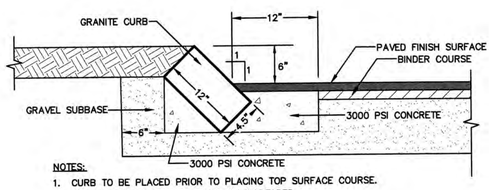
STOP BAR

NOT TO SCALE



PAINTED CROSSWALK DETAIL

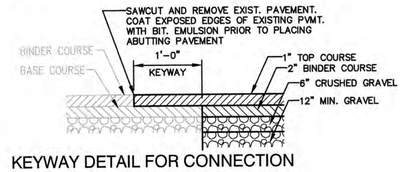
NOT TO SCALE



NOTES:
1. CURB TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.
2. JOINTS BETWEEN STONES SHALL BE MORTARED.

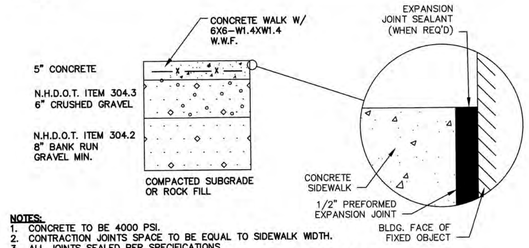
SLOPED GRANITE CURB

NOT TO SCALE



KEYWAY DETAIL FOR CONNECTION TO EXISTING PAVEMENT

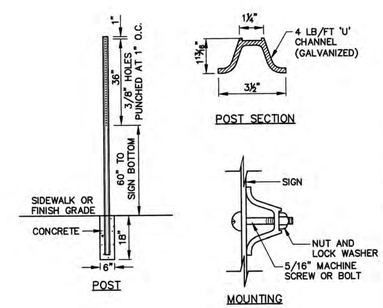
NOT TO SCALE



NOTES:
1. CONCRETE TO BE 4000 PSI.
2. CONTRACTION JOINTS SPACE TO BE EQUAL TO SIDEWALK WIDTH.
3. ALL JOINTS SEALED PER SPECIFICATIONS.
4. PROVIDE A 1/2" NON-EXTRUDING EXPANSION JOINT AGAINST STRUCTURE AND EVERY 16' ALONG SIDEWALK.

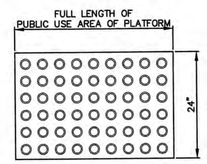
CONCRETE SIDEWALK

NOT TO SCALE



HANDICAP SIGN DETAILS

NOT TO SCALE



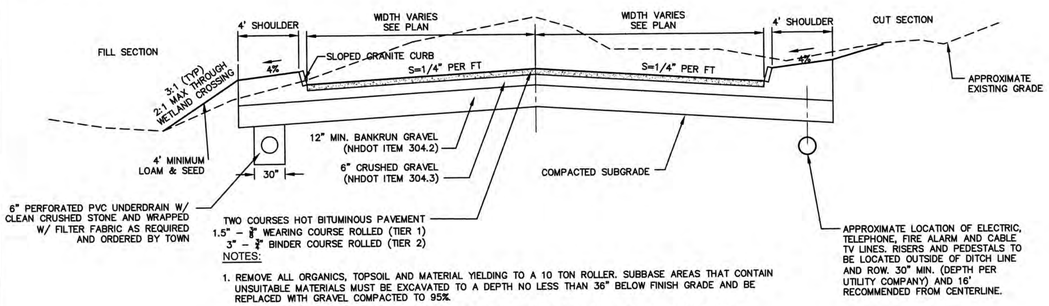
DETECTABLE WARNINGS SHALL CONSIST OF A SURFACE OF TRUNCATED DOMES AND SHALL COMPLY WITH THE FOLLOWING:

A. TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9" (MIN.) AND 1.4" (MAX.), A TOP DIAMETER OF 50% OF THE BASE DIAMETER MINIMUM TO 65% OF THE BASE DIAMETER MAXIMUM, AND A HEIGHT OF 0.2".
B. TRUNCATED DOMES SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6" MINIMUM AND 2.4" MAXIMUM, AND A BASE-TO-BASE SPACING OF .65" MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
C. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.

TRUNCATED DOMES TO BE PLACED IN SIDEWALK BASE IN PUBLIC TRAFFIC AREAS.

ACCESSIBLE CURB RAMP TRUNCATED DOMES

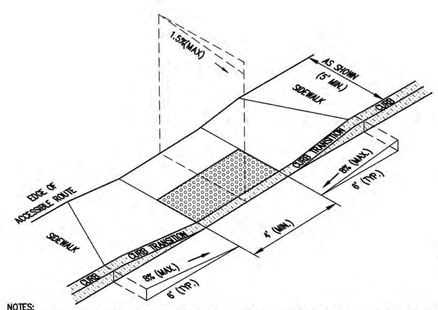
NOT TO SCALE



NOTES:
1. REMOVE ALL ORGANICS, TOPSOIL AND MATERIAL YIELDING TO A 10 TON ROLLER. SUBBASE AREAS THAT CONTAIN UNSUITABLE MATERIALS MUST BE EXCAVATED TO A DEPTH NO LESS THAN 36" BELOW FINISH GRADE AND BE REPLACED WITH GRAVEL COMPACTED TO 95%.
2. ALL MATERIALS TO BE AS SPECIFIED PER TOWN STANDARDS AND NHDOT, WHICHEVER IS MOST STRINGENT. GRADATION AND COMPACTION TEST RESULTS (95% MIN.) SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
3. TOWN MAY REQUIRE UNDERDRAIN, ADDITONAL GRAVEL AND/OR ADDITIONAL DRAINAGE IF SOIL CONDITIONS WARRANT.
4. WOVEN GEOTEXTILE FABRIC SHALL BE PLACED ABOVE SUBGRADE AT ALL WETLAND CROSSINGS.

TYPICAL ROADWAY SECTION W/CURBING - MAIN ROAD

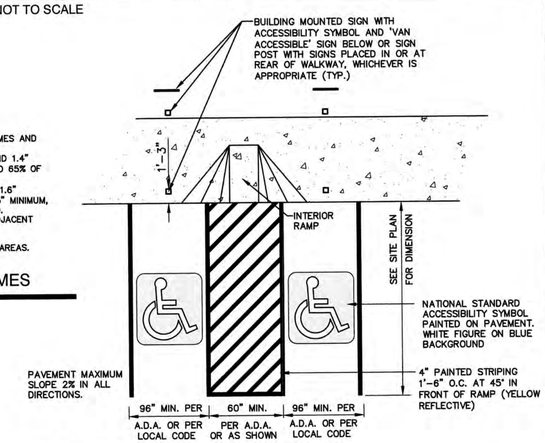
NOT TO SCALE



NOTES:
1. THE MAXIMUM ALLOWABLE CROSS SLOPE OF ACCESSIBLE ROUTE (SIDEWALK) AND CURB SHALL BE 1.5%.
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE (SIDEWALK) CURB RAMPS SHALL BE 8%.
4. A MINIMUM OF 4 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (i.e., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. BASE OF RAMP SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SECTION FOR RAMP CONSTRUCTION.

ACCESSIBLE CURB RAMP (TYPE 'A')

NOT TO SCALE



HANDICAP PARKING LAYOUT

NOT TO SCALE

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS NOTED	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE — MICHAEL J. KERWAN No. 9946 — LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
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Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

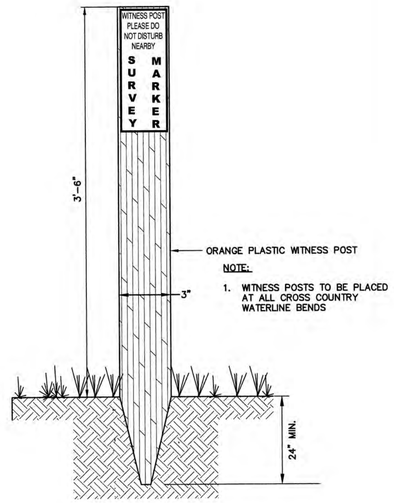
Plan Name: DETAIL SHEET

Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No. D1

SHEET 21 OF 26
JBE PROJECT NO. 16130



WITNESS POST

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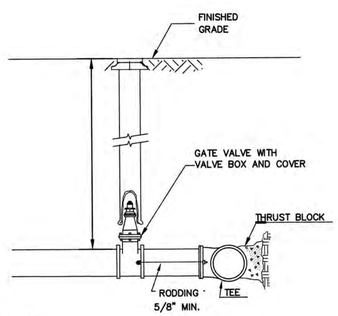
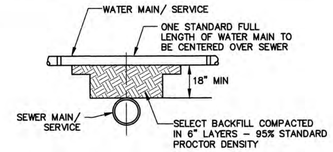


NOTES:

1. GATE VALVES SHALL BE RESILIENT WEDGE–TYPE, MEETING OR EXCEEDING THE REQUIREMENTS OF AWWA C 509 LATEST EDITION. ALL GATE VALVES SHALL OPEN LEFT.
2. VALVE BODIES SHALL BE CAST OR DUCTILE IRON CONFORMING TO AWWA C 509. INTERIOR AND EXTERIOR SURFACES SHALL BE FUSION BOND EPOXY COATED IN COMPLIANCE WITH AWWA C 550 AND NSF 61. VALVES SHALL HAVE MECHANICAL JOINTS.
3. THE OPERATING NUT SHALL BE 2–INCH SQUARE. THE STEM SHALL BE BRONZE, NON–RISING, WITH TWO (2) REPLACEABLE O–RINGS ABOVE THE THRUST COLLAR.
4. THE WEDGE SHALL BE CAST OR DUCTILE IRON FULLY ENCAPSULATED WITH RESILIENT ELASTOMERIC MATERIAL CONFORMING TO AWWA C 509. THE WEDGE SHALL BE SYMMETRICAL AROUND THE CENTER LINE, WITH WEDGE GUIDES MAINTAINING ALIGNMENT DURING OPERATION.
5. THE RESILIENT SEAT GATE VALVES SHALL HAVE STAINLESS STEEL OR ZINC–PLATED BONNET NUTS AND BOLTS. THE VALVES SHALL MEET OR EXCEED AWWA C 509 SPECIFICATIONS FOR 200 PSI WORKING PRESSURE AND 400 PSI TEST PRESSURE. THE VALVES SHALL BE UL/FM APPROVED.
6. RESILIENT SEAT GATE VALVES SHALL BE MUELLER 2360 SERIES, AFC SERIES 500 OR APPROVED EQUAL.
7. VALVES AND VALVE BOXES SHALL CONFORM TO EPPING WATER DEPARTMENT SPECIFICATIONS.

BURIED GATE VALVE DETAIL

NOT TO SCALE

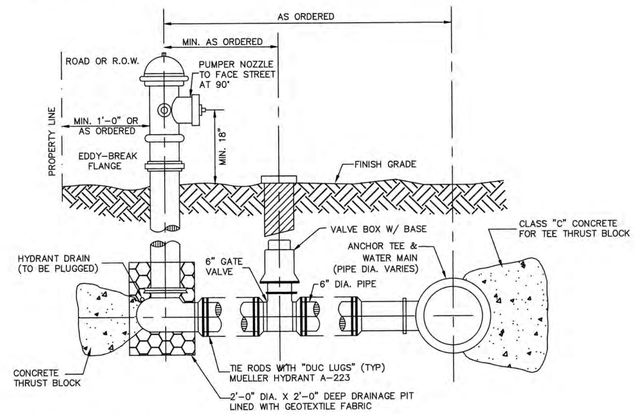


SEPARATION NOTES:

1. WATER MAINS/SERVICES SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER MAINS/SERVICES. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
2. WATER MAINS/SERVICES CROSSING SEWERS MAINS/SERVICES AND SEWER MAINS/SERVICES CROSSING WATER MAINS/SERVICES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN PIPES WITH WATER OVER SEWER. SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLLY FROM THE WATER MAIN.

TYPICAL WATER / SEWER SEPARATION

NOT TO SCALE



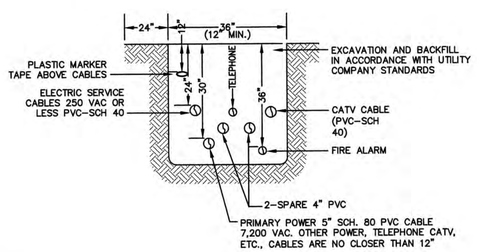
NOTES

1. HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF AWWA STANDARD FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, DESIGNATION C502, AND ALL ADDENDA THERETO. HYDRANTS SHALL BE EQUIPPED WITH 5–1/4 INCH MAIN VALVES, AS SIZED BY SEAT RING INTERNAL OPENING. THE PIPE CONNECTION SHALL BE 6 INCHES. THE GATE VALVE SHALL BE HEREIN BEFORE SPECIFIED.
2. THE HYDRANTS SHALL HAVE ONE (1) – 4.5–INCH NATIONAL STANDARD PUMPER AND TWO (2) – 2.5–INCH HOSE CONNECTIONS. THREAD STANDARDS SHALL BE AS APPROVED BY THE COMMISSION.
3. FOR PURPOSES OF STANDARDIZATION, HYDRANTS SHALL BE MUELLER (WITH BREAK–AWAY CONSTRUCTION).

   HYDRANTS SHALL BE THOROUGHLY CLEANED AND GIVEN TWO SHOP COATS OF PAINT IN ACCORDANCE WITH THE ABOVE MENTIONED AWWA SPECIFICATION C502–73. PAINT COLOR SHALL BE THE STANDARD HYDRANT COLOR OF THE TOWN.
4. HYDRANTS SHALL OPEN LEFT.
5. HYDRANTS SHALL CONFORM TO EPPING WATER DEPARTMENT SPECIFICATIONS.

HYDRANT INSTALLATION

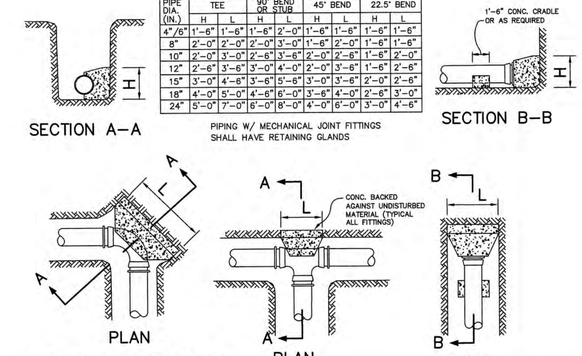
NOT TO SCALE



NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.

UTILITY TRENCH

NOT TO SCALE

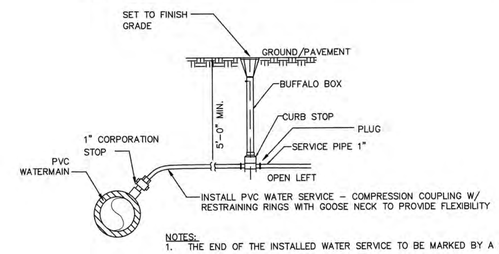


CONCRETE THRUST BLOCK DIMENSIONS								
PIPE DIA. (IN.)	TEE		90° BEND OR STUB		45° BEND		22.5° BEND	
	H	L	H	L	H	L	H	L
4"/6"	1'-6"	1'-6"	1'-6"	2'-0"	1'-6"	1'-6"	1'-6"	1'-6"
8"	2'-0"	2'-0"	2'-0"	3'-0"	1'-6"	2'-0"	1'-6"	1'-6"
10"	2'-0"	3'-0"	2'-6"	3'-6"	2'-0"	2'-6"	1'-6"	2'-0"
12"	2'-6"	3'-6"	3'-0"	4'-0"	2'-0"	3'-6"	1'-6"	2'-6"
15"	3'-0"	4'-6"	3'-6"	5'-6"	3'-0"	3'-6"	2'-0"	2'-6"
18"	4'-0"	5'-0"	4'-6"	6'-0"	3'-6"	4'-0"	2'-6"	3'-0"
24"	5'-0"	7'-0"	6'-0"	8'-0"	4'-0"	6'-0"	3'-0"	4'-6"

PIPING W/ MECHANICAL JOINT FITTINGS SHALL HAVE RETAINING GLANDS

THRUST BLOCK DETAILS

NOT TO SCALE

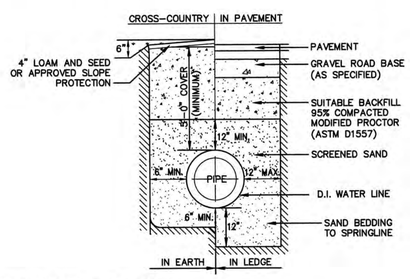


NOTES:

1. THE END OF THE INSTALLED WATER SERVICE TO BE MARKED BY A 2X4.
2. ALL WORK TO BE IN ACCORDANCE WITH EPPING WATER DEPARTMENT INSTALLATION PROCEDURES AND SPECIFICATIONS.

TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE



WATER SYSTEM TRENCH

NOT TO SCALE

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS NOTED	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE – MICHAEL J. KERIVAN No. 9846 – LICENSED PROFESSIONAL ENGINEER – 10/1/20

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
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Civil Engineering Services
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PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: DETAIL SHEET

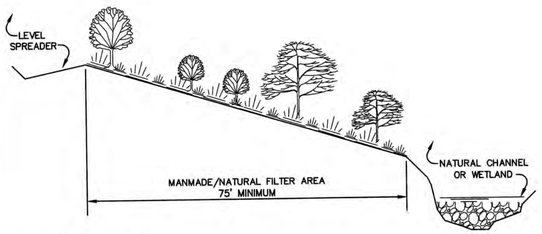
Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.

D2

SHEET 22 OF 26
JBE PROJECT NO. 16130

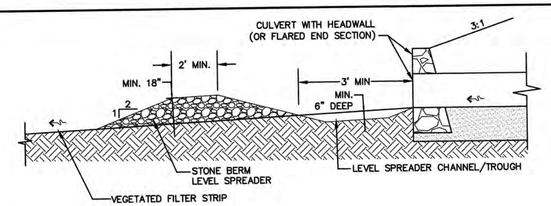


MAINTENANCE:

1. FILTER STRIPS SHOULD BE MAINTAINED AS NATURAL AREAS ONCE THE VEGETATION IS ESTABLISHED. ANY DEBRIS SHOULD BE REMOVED FROM A NATURAL FILTER STRIP PRIOR TO DIRECTING RUNOFF TO IT. THE FILTER STRIP SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ON SITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO COMPLETE THE VEGETATION OF THE STRIP, SINCE MOST SPECIES TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
2. THE FILTER STRIP SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR RAINFALL TO DETERMINE IF THE ENTRANCE CONDITIONS ARE STILL UNIFORM AND LEVEL AND TO SEE IF EROSION OR RILLS HAVE FORMED. ANY PROBLEM AREAS SHOULD BE REPAIRED PROMPTLY TO PREVENT FURTHER DETERIORATION.

VEGETATED FILTER STRIP

NOT TO SCALE

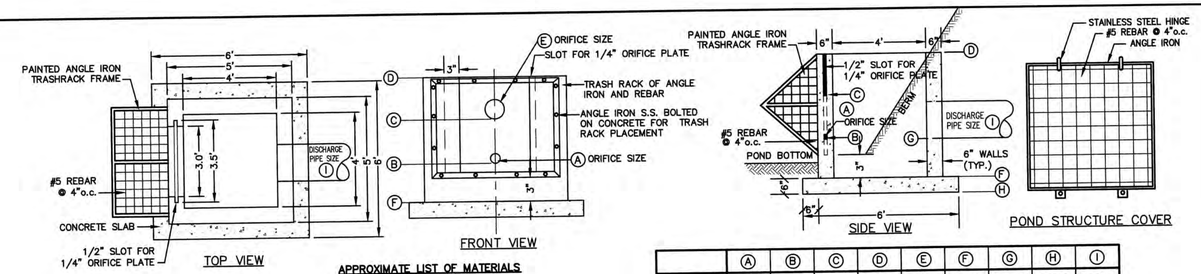


NOTES:

1. CONSTRUCT LEVEL SPREADER LIP ON ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
2. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER MUST NOT RECONCENTRATE IMMEDIATELY BELOW THE SPREADER.
3. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PERFORMED.
4. MAINTENANCE: LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE SPREADER HAS BEEN DAMAGED. SEDIMENT DEEPER THAN FOUR INCHES ACCUMULATION SHOULD BE REMOVED. IF RILLING HAS TAKEN PLACE ON LIP, THEN DAMAGE SHOULD BE REPAIRED AND REVEGETATED. VEGETATION SHOULD BE MOWED OCCASIONALLY TO CONTROL WEEDS AND ENCROACHMENT OF WOODY VEGETATION. CLIPPINGS SHOULD BE REMOVED AND DISPOSED OF OUTSIDE SPREADER AND AWAY FROM OUTLET AREA. FERTILIZATION SHOULD BE DONE AS NECESSARY TO KEEP VEGETATION HEALTHY AND DENSE.

STONE BERM LEVEL SPREADER

NOT TO SCALE



APPROXIMATE LIST OF MATERIALS

1. 3 C.Y. – 5000 PSI CONCRETE
2. 15 ANGLE IRONS @ 4' LENGTH
3. REQUIRED S.S. BOLTS AND FASTENERS
4. 1/4" STEEL PLATE WITH DRILLED ORIFICES
5. 1 C.Y. – CRUSHED STONE FOR BASE
6. 48 #5 REBARS @ 1', 2' AND 3' LENGTHS
7. 32 #4 REBARS @ 4.5' LENGTH

	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ	Ⓘ
WET POND #1	4"	170.35	171.50	173.5	18"	163.75	170.35	163.25	18"
WET POND #2	3"	158.25	160.9	163.5	18"	151.75	158.25	151.25	18"

NOTES:

1. REINFORCING STEEL SHALL CONSIST OF A SINGLE LAYER OF HORIZONTAL AND VERTICAL PLACED #4 REBAR @ 12" O.C.
2. CONCRETE BOX TO BE CONSTRUCTED OR PRECAST OF EQUAL DIMENSIONS AND REINFORCING.
3. CONCRETE SLAB TO BE CONSTRUCTED ALONG WITH BASE. FOR PRECAST BOX, A SLOTTED CONCRETE SLAB TO BE USED.
4. SECTION JOINTS AND PIPE OPENING SHALL BE SEALED WATERTIGHT WITH MORTAR BY CONTRACTOR.
5. ALL EXPOSED REBAR TO BE PAINTED WITH RUST-RESISTANT PAINT, COLOR AT CONTRACTOR'S DISCRETION.
6. TO BE SUPPLIED BY CAPITAL CONCRETE PRODUCTS OF HENNIKER, N.H., (1-603-428-3218) OR EQUAL.
7. STRUCTURE TO HAVE TEMPORARY PLYWOOD INSTALLED IN THE ORIFICE PLATE SLOT UNTIL THE SITE IS STABLIZED.
8. STRUCTURE IS TO BE DESIGNED FOR H20 LOADING.
9. SOIL UNDERLYING THE STRUCTURE IS TO BE COMPACTED TO 95% MODIFIED PROCTOR.

MULTI-STAGE DISCHARGE OUTLET STRUCTURE (MSDOS)

NOT TO SCALE

BIORETENION AREA ELEVATIONS

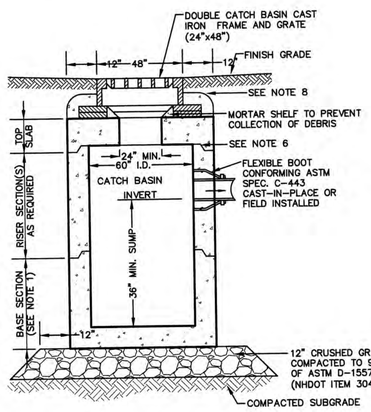
RAIN GARDEN	SIZE	ELEV. A	ELEV. B	ELEV. C	ELEV. D	SHWT ELEV. E
1	10,000 S.F.	174.00	172.50	172.25	171.50	171.50
2	10,000 S.F.	193.00	191.50	191.25	190.50	190.25
3	8,000 S.F.	193.00	191.50	191.25	190.50	190.25

SAND SPECIFICATION

SIEVE SIZE	% BY WEIGHT
3"	100
#4	95–100
#8	80–100
#16	50–85
#30	25–60
#60	10–30
#100	2–10
#200	0–5

TOPSOIL SPECIFICATION
LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15 TO 25% FINES PASSING THE #200 SIEVE.

MULCH SPECIFICATION
MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE.

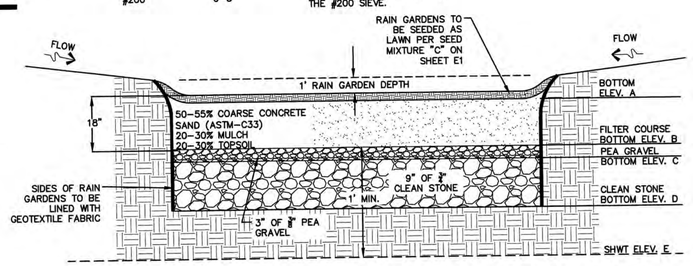


NOTES:

1. BASE SECTION SHALL BE MONOLITHIC WITH 60" INSIDE DIAMETER.
2. ALL SECTIONS SHALL BE DESIGNED FOR H20 LOADING.
3. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE II CEMENT.
4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR H20 LOADING.
5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS SO AS TO BE WATERTIGHT.
6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
7. ALL DOUBLE CATCH BASIN FRAMES AND GRATES SHALL BE NHDOT CATCH BASIN TYPE B, OR NEENAH R-3571 (3 FLANGE) OR APPROVED EQUAL (24"x48" TYPICAL).
8. STANDARD DOUBLE CATCH BASIN FRAME AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM), OR PRECAST CONCRETE 'DONUTS'.
9. ALL CATCH BASINS ARE TO BE FITTED WITH GREASE HOODS.

DOUBLE GRATE CATCH BASIN

NOT TO SCALE



DESIGN CONSIDERATIONS

1. DO NOT PLACE BIORETENTION SYSTEMS INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUN-OFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

MAINTENANCE REQUIREMENTS:

1. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
2. PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
3. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
4. AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
5. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
6. RAIN GARDENS TO REMAIN AS LAWN AREAS AND SHOULD MOWED REGULARLY.
7. NO BUSHES OR TREES SHOULD BE PLANTED IN THE RAIN GARDEN, AREA TO REMAIN AS GRASS.

BIORETENTION AREA DETAIL

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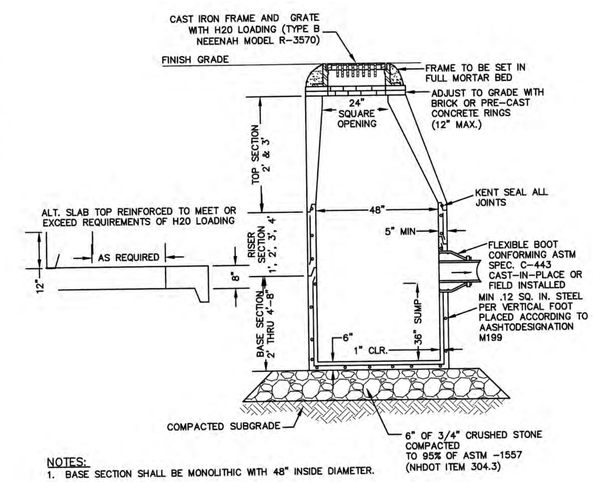
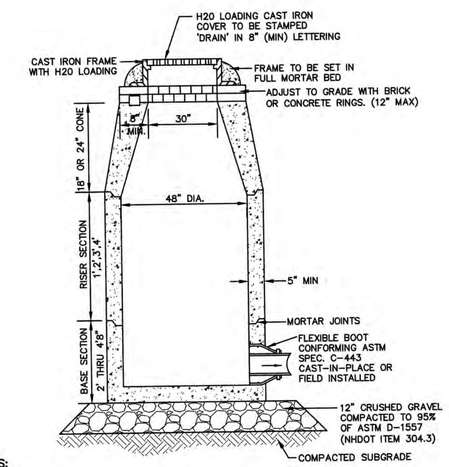


NOTES:

1. BASE SECTION SHALL BE MONOLITHIC WITH 48" INSIDE DIAMETER.
2. ALL SECTIONS SHALL BE DESIGNED FOR H20 LOADING.
3. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE II CEMENT.
4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR H20 LOADING
5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS SO AS TO BE WATERTIGHT.
6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
7. ALL CATCH BASIN FRAMES AND GRATES SHALL BE NHDOT CATCH BASIN TYPE ALTERNATE 1 OR NEENAH R-3570 OR APPROVED EQUAL (24"x24" TYPICAL).
8. STANDARD CATCH BASIN FRAME AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM, BUT NO MORE THAN 12"), OR PRECAST CONCRETE 'DONUTS'.

CATCH BASIN

NOT TO SCALE



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5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS SO AS TO BE WATERTIGHT.
6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
7. ALL DRAIN MANHOLE FRAMES AND GRATES SHALL BE NHDOT TYPE MH-1, OR NEENAH R-1798 OR APPROVED EQUAL (30" DIA. TYPICAL).
8. STANDARD FRAME(S) AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM, BUT NO MORE THAN 12"), OR PRECAST CONCRETE 'DONUTS'.

DRAIN MANHOLE

NOT TO SCALE

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS NOTED	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL J. KERVAN No. 9045 LICENSED PROFESSIONAL ENGINEER

10/1/2020

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
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PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: DETAIL SHEET

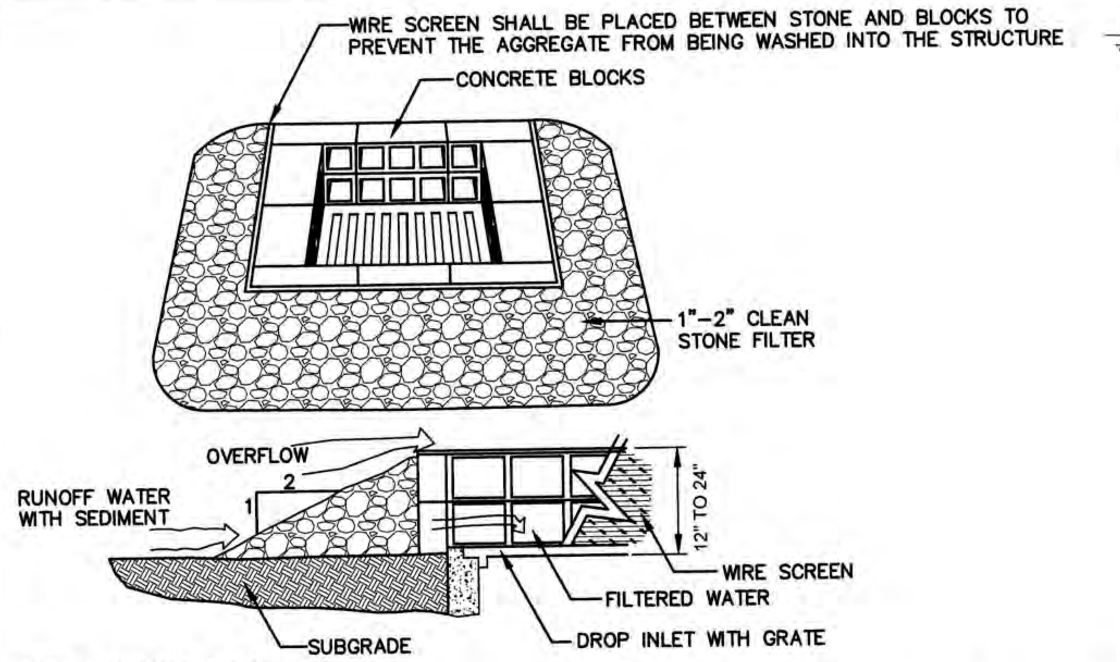
Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.

D3

SHEET 23 OF 26
JBE PROJECT NO. 16130

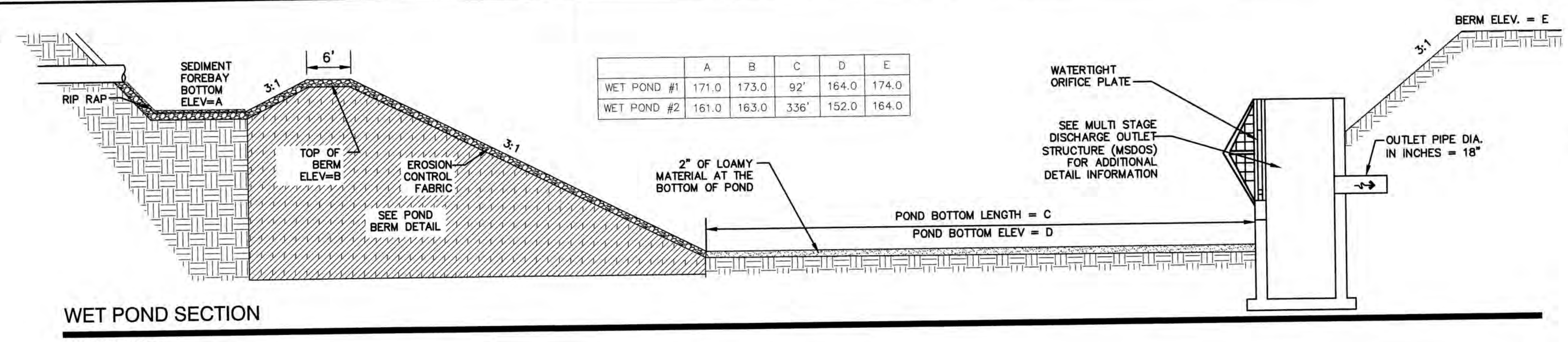


MAINTENANCE NOTE:

1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED IN A SUITABLE UPLAND AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

TEMPORARY CATCH BASIN INLET PROTECTION
(Block and Gravel Drop Inlet Sediment Filter)

NOT TO SCALE



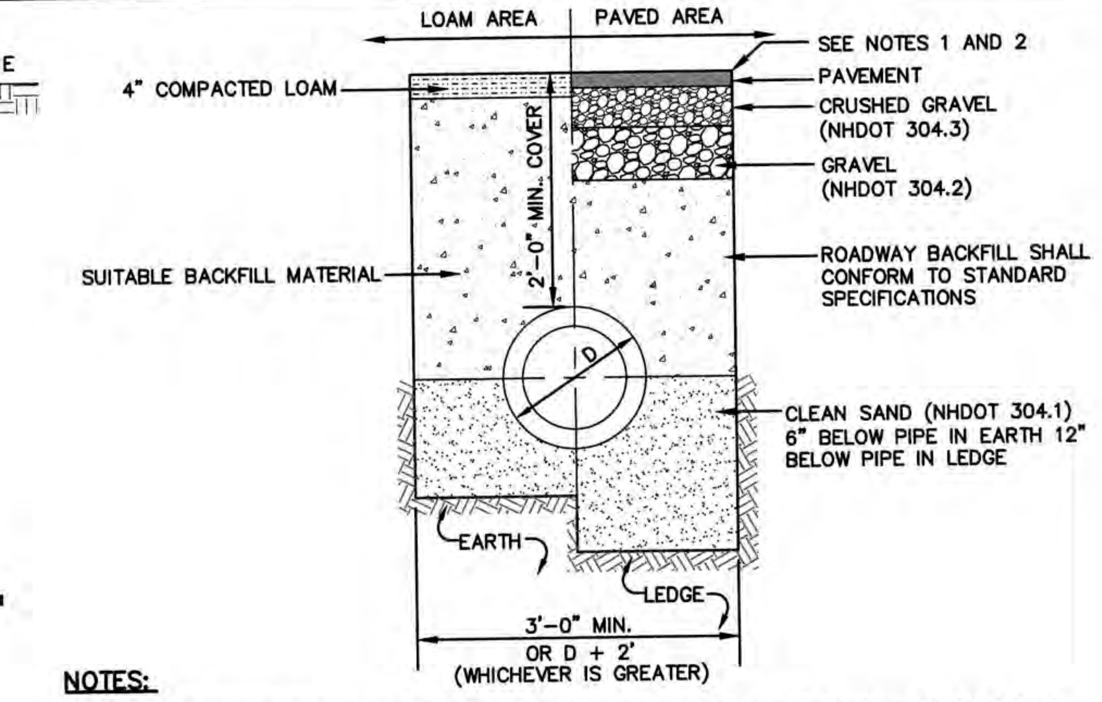
	A	B	C	D	E
WET POND #1	171.0	173.0	92'	164.0	174.0
WET POND #2	161.0	163.0	336'	152.0	164.0

WET POND SECTION

NOT TO SCALE

WET POND CONSTRUCTION CRITERIA

1. FOUNDATION PREPARATION -- THE FOUNDATION AREA SHALL BE CLEARED OF TREES LOGS, STUMPS, ROOTS, BRUSH, BOULDERS, SOD, AND RUBBISH. IF NEEDED TO ESTABLISH VEGETATION, THE TOPSOIL AND SOD SHALL BE STOCKPILED AND SPREAD ON THE COMPLETED DAM AND SPILLWAYS. FOUNDATION SURFACES SHALL BE SLOPED NO STEEPER THAN 1:1. THE FOUNDATION AREA SHALL BE THOROUGHLY SCARIFIED BEFORE PLACEMENT OF THE MATERIAL. THE SURFACE SHALL HAVE MOISTURE ADDED OR IT SHALL BE COMPACTED, IF NECESSARY, SO THAT THE FIRST LAYER OF FILL MATERIAL CAN BE COMPACTED AND BONDED TO THE FOUNDATIONS. THE CUTOFF TRENCH AND ANY OTHER REQUIRED EXCAVATIONS SHALL BE DUG TO THE LINES AND GRADES SHOWN ON THE PLANS OR AS STAKED IN THE FIELD. IF THEY ARE SUITABLE, EXCAVATED MATERIALS SHALL BE USED IN THE PERMANENT FILL. EXISTING STREAM CHANNELS IN THE FOUNDATION AREA SHALL BE SLOPED NO STEEPER THAN 1:1 AND DEEPENED AND WIDENED AS NECESSARY TO REMOVE ALL STONES, GRAVEL, SAND, STUMPS, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND TO ACCOMMODATE COMPACTION EQUIPMENT. FILL PLACEMENT -- THE MATERIAL PLACED IN THE FILL SHALL BE FREE OF DETRIMENTAL AMOUNTS OF SOD, ROOTS, FROZEN SOIL, STONES MORE THAN 6 INCHES IN DIAMETER (EXCEPT FOR ROCK FILLS), AND OTHER OBJECTIONABLE MATTER.
2. SELECTED BACK FILL MATERIAL SHALL BE PLACED AROUND STRUCTURES, PIPE CONDUITS AND ANTI SEEP COLLARS AT ABOUT THE SAME RATE ON ALL SIDES, TO PREVENT DAMAGE FROM UNEQUAL LOADING. THE PLACING AND SPREADING OF FILL MATERIAL SHALL BE STARTED AT THE LOWEST POINT OF THE FOUNDATION AND THE FILL BROUGHT UP IN HORIZONTAL LAYERS OF SUCH THICKNESS THAT THE REQUIRED COMPACTION CAN BE OBTAINED. THE FILL SHALL BE CONSTRUCTED IN CONTINUOUS HORIZONTAL LAYERS EXCEPT WHERE OPENINGS OR SECTIONALIZED FILLS ARE REQUIRED. IN THOSE CASES, THE SLOPE OF THE BONDING SURFACES BETWEEN THE EMBANKMENT IN PLACE AND THE EMBANKMENT TO BE PLACED SHALL NOT BE STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL. THE BONDING SURFACE SHALL BE TREATED THE SAME AS THAT SPECIFIED FOR THE FOUNDATION SO AS TO INSURE A GOOD BOND WITH THE NEW FILL. THE DISTRIBUTION AND GRADATION OF MATERIALS SHALL BE SUCH THAT NO LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFER SUBSTANTIALLY IN TEXTURE OF GRADATION FROM THE SURROUNDING MATERIAL. IF IT IS NECESSARY TO USE MATERIALS OF VARYING TEXTURE AND GRADATION, THE MORE IMPERVIOUS MATERIAL SHALL BE PLACED IN THE CENTER AND UPSTREAM PARTS OF THE FILL. IF ZONED FILLS OF SUBSTANTIALLY DIFFERING MATERIALS ARE SPECIFIED, THE ZONES SHALL BE PLACED ACCORDING TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. THE COMPLETE WORK SHALL CONFORM TO THE LINES, GRADES, AND ELEVATIONS SHOWN ON THE DRAWINGS OR AS STAKED IN THE FIELD.
3. MOISTURE CONTROL -- THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADEQUATE FOR OBTAINING THE REQUIRED COMPACTION. MATERIAL THAT IS TOO WET SHALL BE DRIED TO MEET THIS REQUIREMENT, AND MATERIAL THAT IS TOO DRY SHALL HAVE WATER ADDED AND MIXED UNTIL THE REQUIREMENT IS MET.
4. COMPACTION -- CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER THE AREAS OR EACH LAYER OF FILL TO INSURE THAT THE REQUIRED COMPACTION IS OBTAINED. SPECIAL EQUIPMENT SHALL BE USED IF NEEDED TO OBTAIN THE REQUIRED COMPACTION. IF A MINIMUM REQUIRED DENSITY IS SPECIFIED, EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY. FILL ADJACENT TO STRUCTURES, PIPE CONDUITS, AND ANTI SEEP COLLARS SHALL BE COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING FILL BY MEANS OF HAND TAMPING OR MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS. FILL ADJACENT TO CONCRETE STRUCTURES SHALL NOT BE COMPACTED UNTIL THE CONCRETE IS STRONG ENOUGH TO SUPPORT THE LOAD.
5. PROTECTION -- A PROTECTIVE COVER OF VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, AND BORROW AREA IF SOIL AND CLIMATIC CONDITIONS PERMIT. IF SOIL OR CLIMATIC CONDITIONS PRECLUDE THE USE OF VEGETATION AND PROTECTION IS NEEDED, NON-VEGETATIVE MEANS SUCH AS MULCHES OR GRAVEL MAY BE USED. IN SOME PLACES, TEMPORARY VEGETATION MAY BE USED UNTIL CONDITIONS PERMIT ESTABLISHMENT OF PERMANENT VEGETATION. THE EMBANKMENT AND SPILLWAY SHALL BE FENCED IF NECESSARY TO PROTECT THE VEGETATION.
6. SEEDBED PREPARATION, SEEDING, FERTILIZING, AND MULCHING SHALL COMPLY WITH THE APPROPRIATE VEGETATIVE BMP'S.
7. CONCRETE -- THE MIX DESIGN AND TESTING OF CONCRETE SHALL BE CONSISTENT WITH THE STRENGTH REQUIREMENTS OF THE JOB. MIX REQUIREMENTS OR NECESSARY STRENGTH SHALL BE SPECIFIED. THE TYPE OF CEMENT, AIR ENTRAPMENT, SLUMP, AGGREGATE, OR OTHER PROPERTIES SHALL BE SPECIFIED IF NECESSARY. ALL CONCRETE IS TO CONSIST OF A WORKABLE MIX THAT CAN BE PLACED AND FINISHED IN AN ACCEPTABLE MANNER. NECESSARY CURING SHALL BE SPECIFIED. REINFORCING STEEL SHALL BE PLACED AS INDICATED ON THE PLANS AND SHALL BE HELD SECURELY IN PLACE DURING CONCRETE PLACEMENT. SUB GRADES AND FORMS SHALL BE INSTALLED TO LINE AND GRADE, AND THE FORMS SHALL BE MORTAR TIGHT AND UNYIELDING AS THE CONCRETE IS PLACED.
8. THE CONTRACTOR WILL NOTIFY JONES AND BEACH ENGINEERS AFTER EACH OF THE GRAVEL WETLAND PONDS HAVE BEEN EXCAVATED TO THE BOTTOM OF THE SYSTEM FOR A MANDATORY INSPECTION PRIOR TO BUILDING BERMS, PLACING STONE OR INSTALLING PIPE SYSTEM.
9. BERMS AND WEIRS SEPARATING THE FOREBAY AND TREATMENT CELLS SHOULD BE CONSTRUCTED WITH CLAY, OR NON-CONDUCTIVE SOILS, AND/OR A FINE GEOTEXTILE, OR SOME COMBINATION THEREOF, TO AVOID WATER SEEPAGE AND SOIL PIPING THROUGH THESE EARTHEN DIVIDERS.

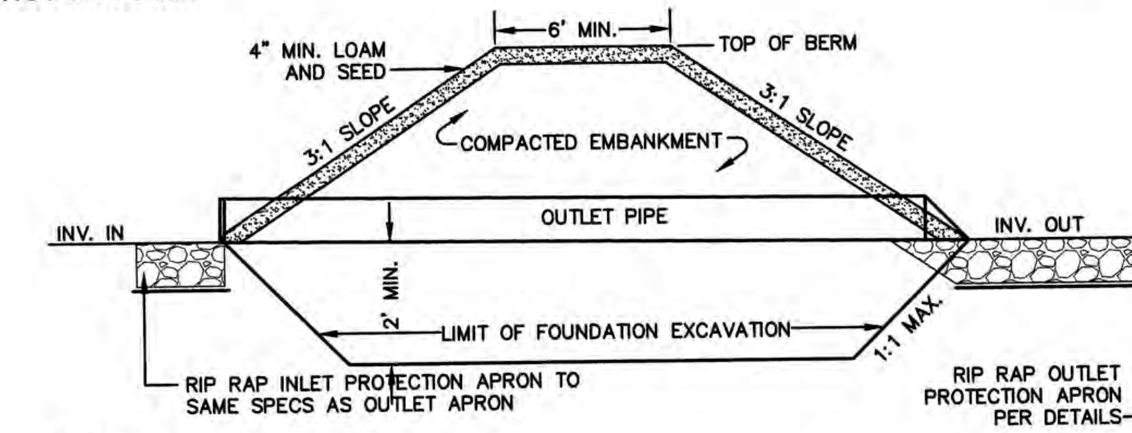


NOTES:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM WITH PROJECT AND TOWN SPECIFICATIONS.
3. ALL MATERIALS ARE TO BE COMPACTED TO 95% OF ASTM D-1557.

DRAINAGE TRENCH

NOT TO SCALE

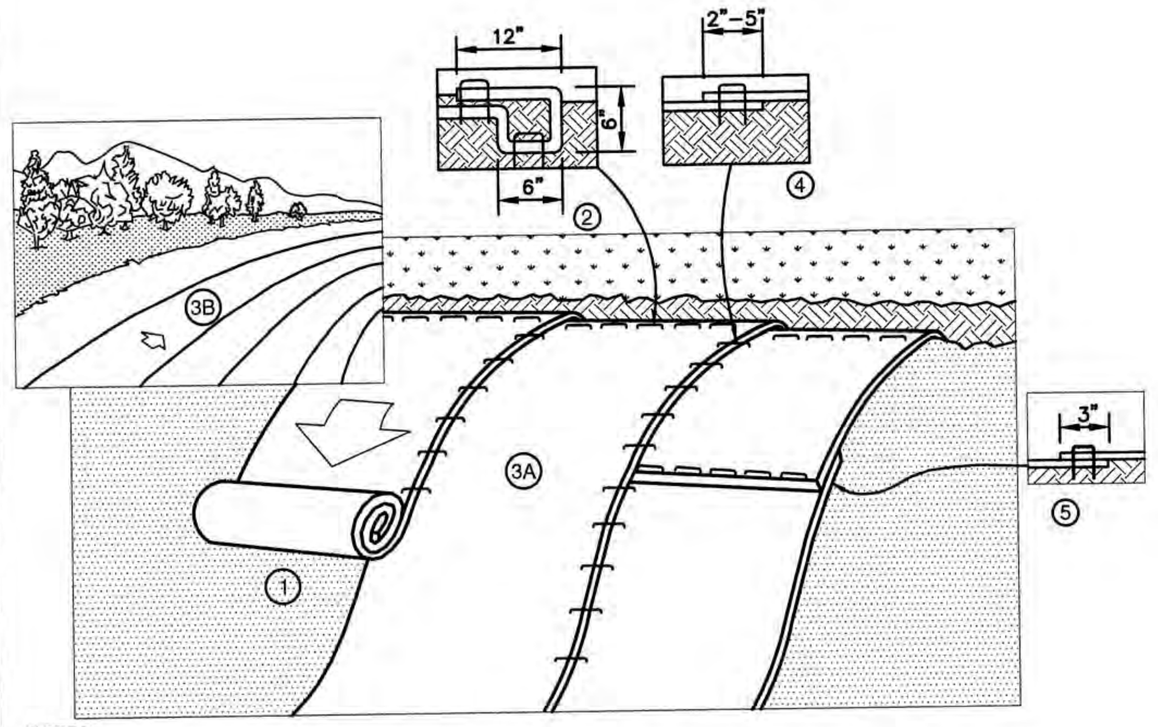


NOTES:

1. THE ENTIRE EMBANKMENT AREA OF THE POND SHALL BE EXCAVATED A MINIMUM 2' BELOW BOTTOM INVERTS OF PIPE, STRIPPED OF ALL ORGANIC MATERIALS, COMPACTED TO AT LEAST 92% OF ASTM D-1557, AND SCARIFIED PRIOR TO THE PLACEMENT OF THE EMBANKMENT MATERIAL. PLACEMENT AND COMPACTION SHOULD OCCUR AT A MOISTURE CONTENT OF OPTIMUM PLUS OR MINUS 3%, AND NO FROZEN OR ORGANIC MATERIAL SHOULD BE PLACED FOR ANY REASON.
2. EMBANKMENT MATERIAL FOR THE BERM SHALL BE CLEAN SILTY-CLAY BORROW FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETERIOUS SUBSTANCES, AND SHALL CONTAIN NO ROCKS OR LUMPS OVER THREE INCHES (3") IN DIAMETER. THIS MATERIAL SHOULD BE INSTALLED IN 6" LIFTS AND COMPACTED TO 92% OF ASTM D-1557, AND SHOULD MEET THE FOLLOWING SPECIFICATIONS: 6" PASSING 100%, #4 SIEVE 95-100%, #40 SIEVE 60-90%, #100 SIEVE 40-60%, #200 SIEVE 25-45% (OF THE FRACTION PASSING THE #4 SIEVE). THE CLAY COMPONENT SHALL HAVE A PLASTICITY INDEX OF AT LEAST 10 AND A HYDRAULIC CONDUCTIVITY OF 10 TO THE -6 CM/SEC.
3. EMBANKMENT IS TO BE BROUGHT TO SPECIFIED GRADES PRIOR TO THE ADDITION OF LOAM (4" MINIMUM) SO AS TO ALLOW FOR THE NATURAL COMPACTION OF THE STRUCTURE OVER TIME WHILE MAINTAINING THE PROPER BERM ELEVATION.
4. COMPACTION AND MATERIALS TESTING SERVICES ARE TO BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

POND BERM AND PRINCIPAL OUTLET

NOT TO SCALE



NOTES:

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" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" 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" 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" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

NORTH AMERICAN GREEN
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EROSION CONTROL BLANKET SLOPE INSTALLATION
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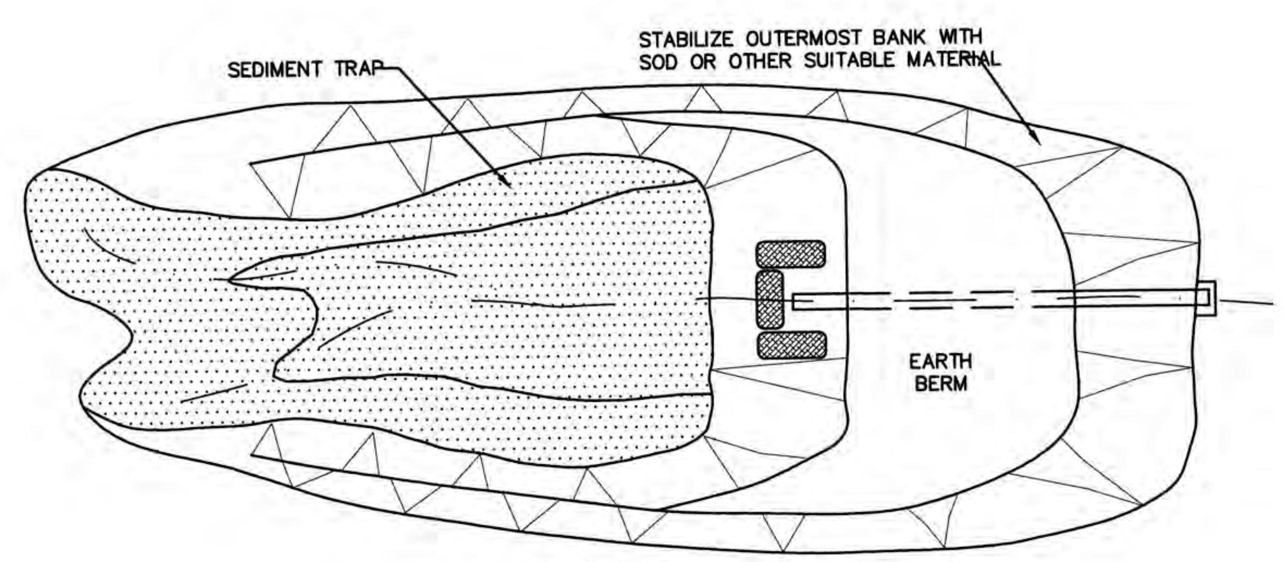
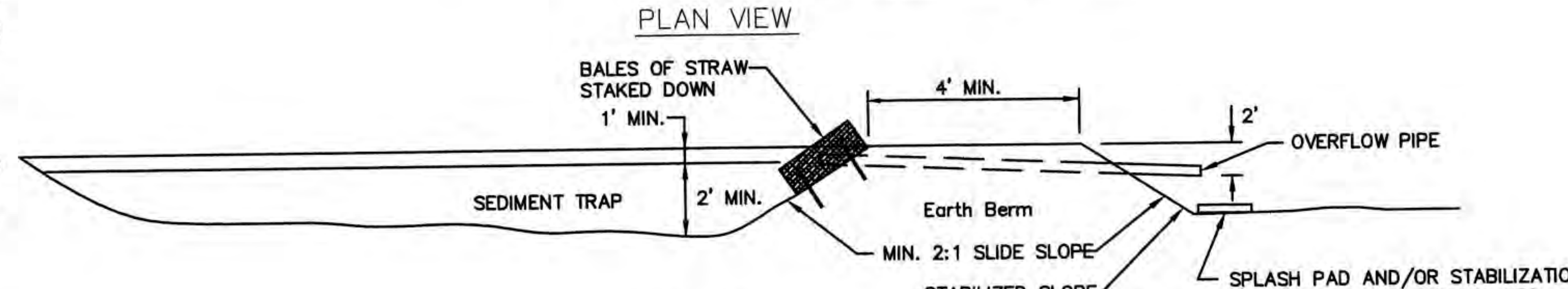


PLAN VIEW



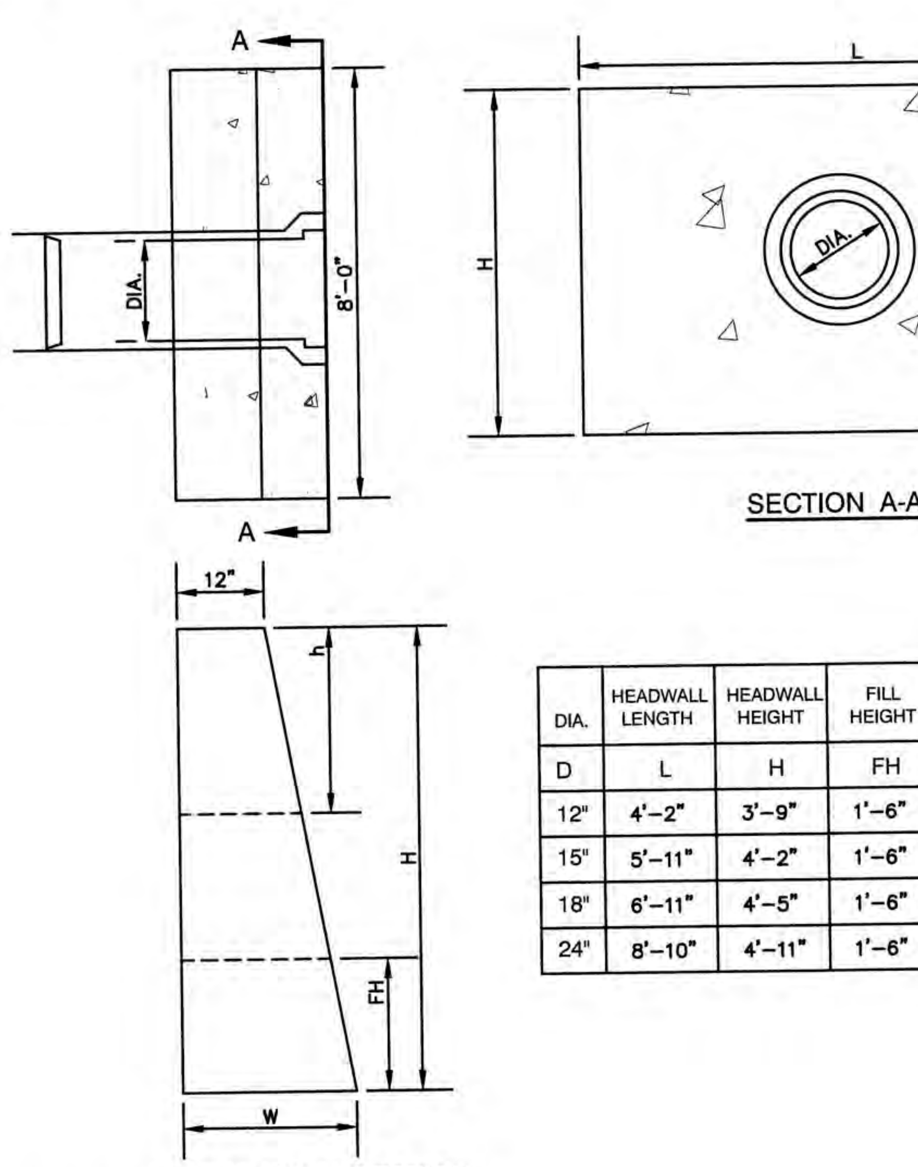
CROSS SECTION

NOTES:

1. SEDIMENT TRAPS AND/OR BASINS SHOULD BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL THE PERMANENT BASINS/PONDS ARE STABILIZED.
2. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION, ROOTS, AND DEBRIS.
3. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS, WOODY VEGETATION, STONES OVER 6" SIZE, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIALS. THE FILL SHALL BE COMPACTED BY ROUTING CONSTRUCTION EQUIPMENT OVER IT SO THAT THE ENTIRE AREA OF THE FILL IS TRAVERSED BY AT LEAST ONE WHEEL OR TREAD TRACK OF THE EQUIPMENT.
4. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
5. THE MAXIMUM CONRIBUTING DRAINAGE AREA SHALL BE LESS THAN 5 ACRES.
6. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
7. ALL CUT AND FILL SLOPES SHALL BE 3:1 (H:V) OR FLATTER.
8. THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
9. THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
10 THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

TEMPORARY SEDIMENT TRAP

NOT TO SCALE



SECTION A-A

LONGITUDINAL SECTION

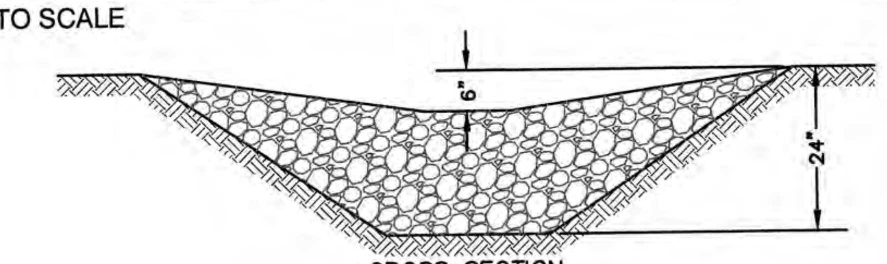
DIA.	HEADWALL LENGTH	HEADWALL HEIGHT	FILL HEIGHT	PIPE COVER	HEADWALL BOTTOM WIDTH
D	L	H	FH	h	W
12"	4'-2"	3'-9"	1'-6"	1'-3"	1'-11"
15"	5'-11"	4'-2"	1'-6"	1'-5"	2'-0"
18"	6'-11"	4'-5"	1'-6"	1'-5"	2'-1"
24"	8'-10"	4'-11"	1'-6"	1'-5"	2'-3"

NOTES:

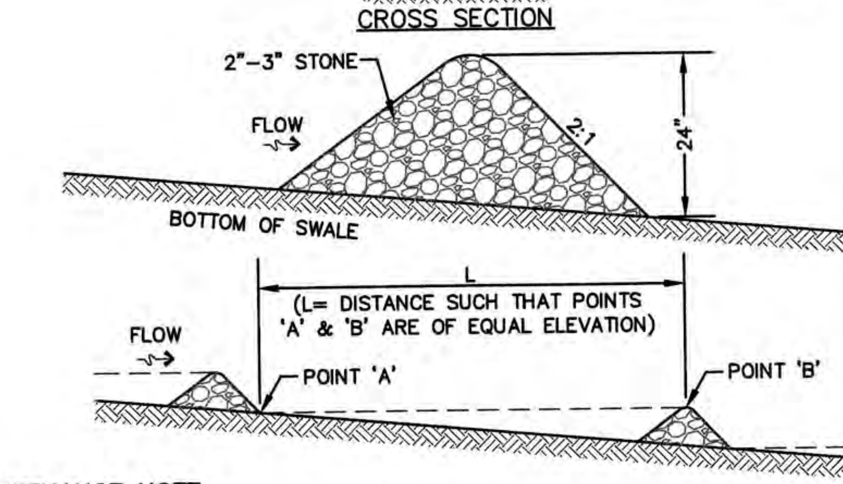
1. ALL DIMENSIONS GIVEN IN FEET & INCHES.
2. PROVIDE BELL END AT INLET HEADWALL, AND SPIGOT END AT OUTLET END HEADWALL.
3. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS. CEMENT TO BE TYPE III PER ASTM C-150. REINFORCING TO MEET OR EXCEED ASTM A-615 GRADE 60 DEFORMED BARS.
4. 1" THREADED INSERTS PROVED FOR FINAL ATTACHMENT IN FIELD BY OTHERS.

PRECAST CONCRETE HEADWALL

NOT TO SCALE



CROSS SECTION



MAINTENANCE NOTE:

1. STONE CHECK DAMS SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

STONE CHECK DAM

NOT TO SCALE

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS NOTED	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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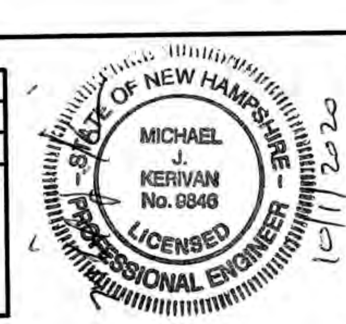

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

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Plan Name: DETAIL SHEET

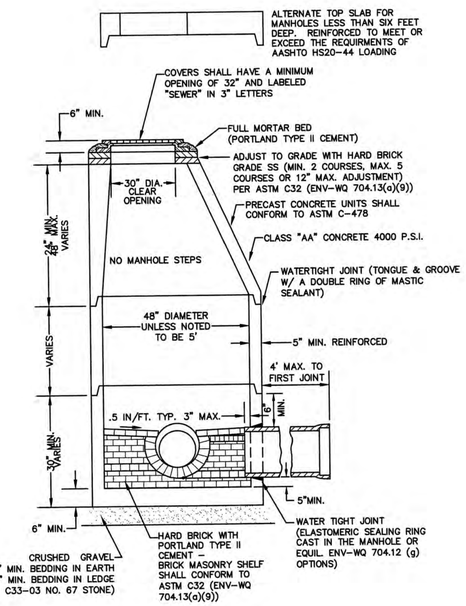
Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No.

D4

JBE PROJECT NO. 16130

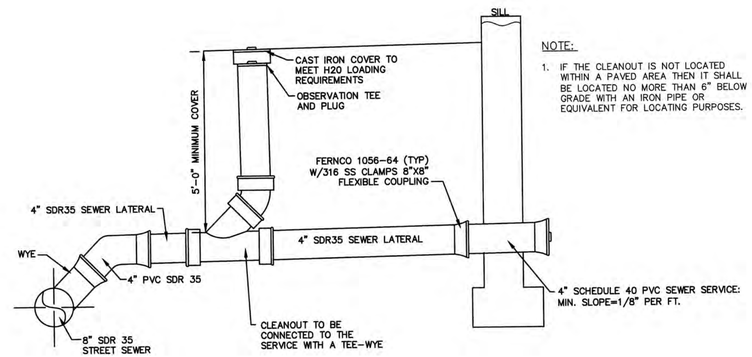


NOTES:

1. PER NHDES ENV-WQ 704.13(C), MORTAR USED IN MANHOLE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:
   (1) MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION
   (2) PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE PER TABLE 704-4:
      A. 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR
      B. 4.5 PARTS SAND, ONE PART CEMENT AND 0.5 PART HYDRATED LIME;
   (3) CEMENT SHALL BE TYPE II PORTLAND CEMENT THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C150/C150M STANDARD IN EFFECT AT THE TIME THE CEMENT WAS MANUFACTURED
   (4) HYDRATED LIME SHALL BE TYPE S THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C207 STANDARD IN EFFECT AT THE TIME THE HYDRATED LIME WAS PROCESSED
   (5) SAND SHALL CONSIST OF INERT NATURAL SAND THAT IS CERTIFIED BY ITS SUPPLIER AS CONFORMING TO THE ASTM C33 STANDARD IN EFFECT AT THE TIME THE SAND IS PROCESSED BY 'STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES
   (6) CONCRETE FOR DROP SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS AAA CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S 'STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS AVAILABLE AT: HTTP://WWW.NH.GOV/DOT/ORG/PROJECTDEVELOPMENT/HIGHWAYDESIGN/SPECIFICATIONS/INDEX.HTM
2. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL IN ACCORDANCE WITH ENV-WQ 704.12 (K).
3. ALL MANHOLES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH ENV-WQ 704.17 (a) THROUGH (e).
4. SEWER MANHOLE COVERS SHALL CONFORM TO ASTM A48/48M WITH A CASTING EQUAL TO CLASS 30 IN ACCORDANCE WITH ENV-WQ 704.13 (a) (8).
5. ALL PRECAST SECTIONS SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING IN ACCORDANCE WITH ENV-WQ 704.12 (J).
6. ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL PER Env-Wq 704.12(i).
7. SEWER MANHOLE'S 7, 8, 9 & 14 TO BE 5' DIAMETER.

SEWER MANHOLE

NOT TO SCALE

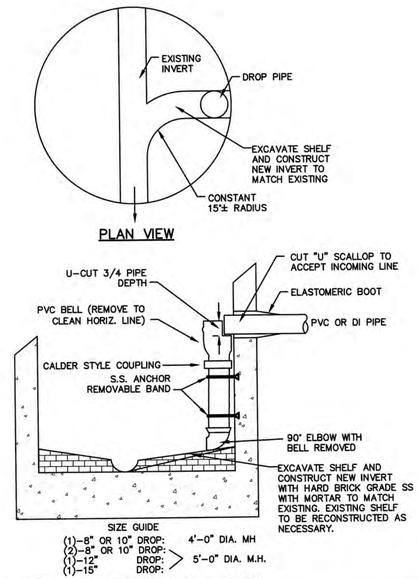


NOTE:

1. IF THE CLEANOUT IS NOT LOCATED WITHIN A PAVED AREA THEN IT SHALL BE LOCATED NO MORE THAN 6" BELOW GRADE WITH AN IRON PIPE OR EQUIVALENT FOR LOCATING PURPOSES.

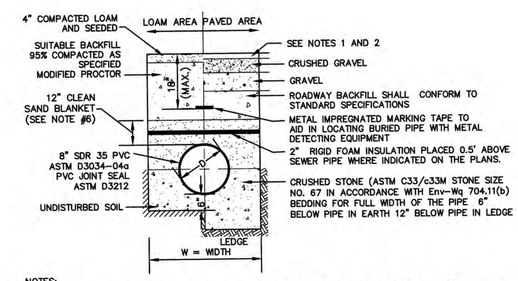
SEWER SERVICE

NOT TO SCALE



MANHOLE WITH INSIDE DROP

NOT TO SCALE

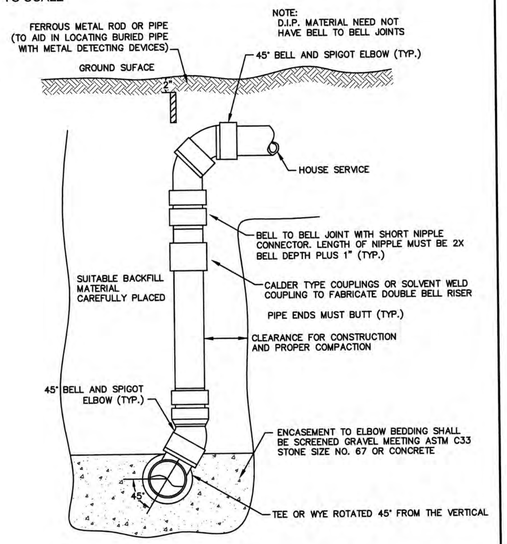


NOTES:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECIFICATIONS.
3. TRENCH BACKFILL SHALL CONFORM WITH ENV. Wq 704.11(h) AND BE FREE OF DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE OR ROCKS OVER SIX INCHES.
4. W= MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12" INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36"; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
5. RIGID FOAM INSULATION TO BE PROVIDED WHERE COVER IN THE ROADWAY IS LESS THAN 6' AND CROSS COUNTRY IS LESS THAN 4', PURSUANT TO DES WAIVER BEING ISSUED.
6. PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND, FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 100% PASSES A 1/2 " SIEVE AND A MAXIMUM OF 15% PASSES A #200 SIEVE IN ACCORDANCE WITH Env-Wq 704.11(b).
7. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM D3212 STANDARD IN EFFECT WHEN THE JOINT SEALS WERE MANUFACTRED, AND SHALL BE PUSH-ON, BELL-AND-SPIGOT TYPE PER Env-Wq 704.05 (e).
8. CLAY CHECK DANS TO BE INSTALLED EVERY 100' WHERE SEWER MAIN IS BELOW WATER TABLE. REFERENCE PROFILE SHEETS.

SEWER TRENCH

NOT TO SCALE



NOTE:
IF THE VERTICAL DROP INTO A SEWER IS GREATER THAN 4 FT. A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION (A SLOPING CONNECTION OF 45° FROM THE SEWER TO THE PROPERTY MAY BE PERMITTED IN LIEU OF A VERTICAL DROP OR CHIMNEY.

P.V.C. CHIMNEY

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Checked: JAC	Scale: AS NOTED	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL J. KERVAN No. 9848 LICENSED PROFESSIONAL ENGINEER 10/11/22

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

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Plan Name: DETAIL SHEET

Project: "CANTERBURY COMMONS"
FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE
277 MAIN STREET, EPPING, NH

DRAWING No.
D5
SHEET 25 OF 26
JBE PROJECT NO. 16130

TEMPORARY EROSION CONTROL NOTES

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. AT NO TIME SHALL AN AREA IN EXCESS OF 5 ACRES BE EXPOSED AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
3. ALL DISTURBED AREAS (INCLUDING POND AREAS BELOW THE PROPOSED WATERLINE) SHALL BE RETURNED TO PROPOSED GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH SEED MIXTURE 'C' AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).
4. SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.25" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
5. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
6. AREAS MUST BE SEEDED AND MULCHED OR OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
7. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER) ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
8. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
9. AFTER OCTOBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
10. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    a. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    b. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    c. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
    d. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
11. FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
12. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER SHALL BE SUBMITTED TO DES VIA EMAIL (SEE BELOW).
13. PRIOR TO CONSTRUCTION, A PHASING PLAN THAT DELINEATES EACH PHASE OF THE PROJECT SHALL BE SUBMITTED. ALL TEMPORARY SEDIMENT BASINS THAT WILL BE NEEDED FOR DEWATERING WORK AREAS SHALL BE LOCATED AND IDENTIFIED ON THIS PLAN.
14. IN ORDER TO ENSURE THE STABILITY OF THE SITE AND EFFECTIVE IMPLEMENTATION OF THE SEDIMENT AND EROSION CONTROL MEASURES SPECIFIED IN THE PLANS FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL BE IN STRICT COMPLIANCE WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS IN ADDITION TO THOSE CALLED FOR IN THE SWPPP:
    a. A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL OR A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE ("MONITOR") SHALL BE EMPLOYED TO INSPECT THE SITE FROM THE START OF ALTERATION OF TERRAIN ACTIVITIES UNTIL THE SITE IS IN FULL COMPLIANCE WITH THE SITE SPECIFIC PERMIT ("PERMIT").
    b. DURING THIS PERIOD, THE MONITOR SHALL INSPECT THE SUBJECT SITE AT LEAST ONCE A WEEK, AND IF POSSIBLE, DURING ANY ½ INCH OR GREATER RAIN EVENT (I.E. ½ INCH OF PRECIPITATION OR MORE WITHIN A 24 HOUR PERIOD). IF UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THIS EVENT.
    c. THE MONITOR SHALL PROVIDE TECHNICAL ASSISTANCE AND RECOMMENDATIONS TO THE CONTRACTOR ON THE APPROPRIATE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROLS REQUIRED TO MEET THE REQUIREMENTS OF RSA 485 A:17 AND ALL APPLICABLE DES PERMIT CONDITIONS.
    d. WITHIN 24 HOURS OF EACH INSPECTION, THE MONITOR SHALL SUBMIT A REPORT TO DES VIA EMAIL (RIDGELY MAUCK AT: RIDGELY.MAUCK@DES.NH.GOV).
    e. THE MONITOR SHALL MEET WITH DES TO DECIDE UPON A REPORT FORMAT. THE REPORT FORMAT SHALL BE REVIEWED AND APPROVED BY DES PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION SEQUENCE

1. PRIOR TO THE START OF ANY ACTIVITY, IT IS THE RESPONSIBILITY OF THE SITE'S SITE DEVELOPER (OR OWNER) TO FILE A NOTICE OF INTENT (NOI) FORM WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) IN ORDER TO GAIN COVERAGE UNDER THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. A PRE CONSTRUCTION MEETING IS TO BE HELD WITH ALL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION.
2. WETLAND BOUNDARIES ARE TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION. AT LEAST A TEMPORARY CULVERT OR ROADBED TO BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.
3. CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED.
4. INSTALL SILT FENCING, HAY BALES AND CONSTRUCTION ENTRANCES PRIOR TO THE START OF CONSTRUCTION. THESE ARE TO BE MAINTAINED UNTIL THE FINAL PAVEMENT SURFACING AND LANDSCAPING AREAS ARE ESTABLISHED.
5. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
6. CONSTRUCT AND/OR INSTALL TEMPORARY OR PERMANENT SEDIMENT AND/OR DETENTION BASIN(S) AS REQUIRED. THESE FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING RUN-OFF TO THEM.
7. STRIP LOAM AND PAVEMENT, OR RECLAIM EXISTING PAVEMENT WITHIN LIMITS OF WORK PER THE RECOMMENDATIONS OF THE PROJECT ENGINEER AND STOCKPILE EXCESS MATERIAL. STABILIZE STOCKPILE AS NECESSARY.
8. PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS, INCLUDING THE CONSTRUCTION OF ANY RETAINING WALLS AND SOUND WALLS.
9. PREPARE BUILDING PAD(S) TO ENABLE BUILDING CONSTRUCTION TO BEGIN.
10. INSTALL THE SEWER AND DRAINAGE SYSTEMS FIRST, THEN ANY OTHER UTILITIES IN ACCORDANCE WITH THE PLAN AND DETAILS. ANY CONFLICTS BETWEEN UTILITIES ARE TO BE RESOLVED WITH THE INVOLVEMENT AND APPROVAL OF THE ENGINEER.
11. INSTALL INLET PROTECTION AT ALL CATCH BASINS AS THEY ARE CONSTRUCTED IN ACCORDANCE WITH DETAILS.
12. ALL SWALES AND DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
13. STORMWATER FLOWS ARE NOT TO BE DIRECTED TO TREATMENT PRACTICES UNTIL ALL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
14. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE DITCHES, CHECK DAMS, SEDIMENT TRAPS, ETC., TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS AND/OR PROPERTY.
15. PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF 'SELECT' SUBGRADE MATERIALS.
16. PAVE ALL PARKING LOTS AND ROADWAYS WITH INITIAL 'BASE COURSE'.
17. PERFORM ALL REMAINING SITE CONSTRUCTION (i.e. BUILDING, CURBING, UTILITY CONNECTIONS, ETC.).
18. LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (i.e. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
19. FINISH PAVING ALL ROADWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
20. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
21. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
22. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
23. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE BEEN 75%-85% ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
24. CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRIS.
25. INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
26. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY QUARTER-INCH OF RAINFALL.
27. UPON COMPLETION OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ANY RELEVANT PERMITTING AGENCIES THAT THE CONSTRUCTION HAS BEEN FINISHED IN A SATISFACTORY MANNER.

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED).
   B. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LIME MIXED INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. TYPES AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
   AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT.
   NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.
   PHOSPHATE(P205), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
   POTASH(K20), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
   (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10.)
   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT, TREFOIL AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20th OR FROM AUGUST 10th TO SEPTEMBER 1st.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	GOOD	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT	2/
	F	FAIR	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE BELOW.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

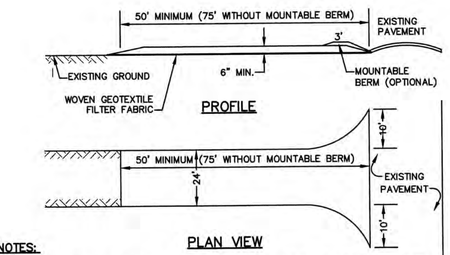
NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT YET COMPLETE.

SEEDING GUIDE

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
* C. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDS FOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

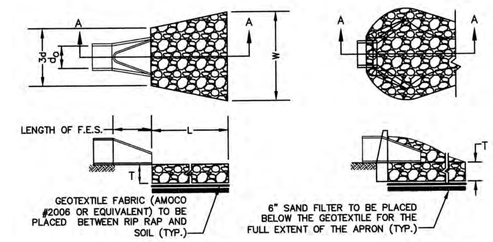
SEEDING RATES



NOTES:

1. STONE FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, 75' WITHOUT A MOUNTABLE BERM, AND EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER FABRIC IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A STONE BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

STABILIZED CONSTRUCTION ENTRANCE



SECTION A-A
PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

SECTION A-A
PIPE OUTLET TO WELL-DEFINED CHANNEL

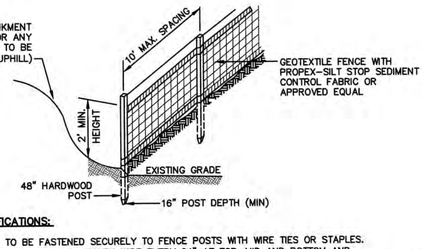
TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES		
THICKNESS OF RIP RAP = 1.5 FEET		
d50 SIZE= 0.50 FEET 6 INCHES		
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM	TO
100%	9	12
85%	8	11
50%	6	9
15%	2	3

NOTES:

1. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP. 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 RIP RAP 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.
5. OUTLETS TO A DEFINED CHANNEL SHALL HAVE 2:1 OR FLATTER SIDE SLOPES AND SHOULD BEGIN AT THE TOP OF THE CULVERT AND TAPER DOWN TO THE CHANNEL BOTTOM THROUGH THE LENGTH OF THE APRON.
6. MAINTENANCE: THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO OUTLET PROTECTION.

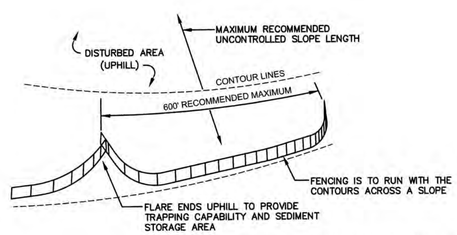
RIP RAP OUTLET PROTECTION APRON

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. WOVEN FABRIC FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP, MID AND BOTTOM AND EMBEDDED IN THE GROUND A MINIMUM OF 8" AND THEN COVERED WITH SOIL.
2. THE FENCE POSTS SHALL BE A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED 6", FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED AND PROPERLY DISPOSED OF WHEN IT IS 6" DEEP OR VISIBLE 'BULGES' DEVELOP IN THE SILT FENCE.
5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.



6. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND REVEGETATED.

MAINTENANCE:

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE DONE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS THAT ARE REMOVED, OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED, SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

SILT FENCE

NOT TO SCALE

Design: JAC	Draft: PSL	Date: 4/25/18
Checked: JAC	Scale: AS NOTED	Project No.: 16130
Drawing Name: 16130-PLAN.dwg		

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STATE OF NEW HAMPSHIRE MICHAEL J. KERVAN No. 9848 LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
6	10/1/20	REVISED PER TOWN ENGINEER & NHDES COMMENTS	PSL
5	9/10/20	REVISED SEWER FLOW CALCULATIONS	PSL
4	8/18/20	ADDED DRAINAGE DESIGN	PSL
3	8/5/20	REVISED PER PLANNING BOARD COMMENTS	PSL
2	5/21/20	REVISED FOR PLANNING BOARD SUBMISSION	PSL

Designed and Produced in NH
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Plan Name: EROSION AND SEDIMENT CONTROL DETAILS

Project: "CANTERBURY COMMONS" FOGG ROAD, EPPING, NEW HAMPSHIRE

Owner of Record: EHNR REALTY DEVELOPMENT TRUST OF 2001, KATHRYN S. WILLIAMS, TRUSTEE 277 MAIN STREET, EPPING, NH

DRAWING No. E1

SHEET 26 OF 26
JBE PROJECT NO. 16130