Arbor View Apartments Residential Development
Application for Site Plan Amendment

ARBOR VIEW & THE PINES, LLC
145 LANG ROAD
Portsmouth, New Hampshire
Assessor's Parcel 287-01

Issued:

MAY 20, 2019 TECHNICAL ADVISORY COMMITTEE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

Owner/Applicant:

ARBOR VIEW &
THE PINES, LLC
145 LANG ROAD
PORTSMOUTH, NH 03801

c/o FOREST PROPERTIES
MANAGEMENT, INC.
625 MOUNT AUBURN STREET, SUITE 210
CAMBRIDGE, MA 02138
CONTACT: ANDERSON LIBERT
(617) 630-9560

Civil Engineer:

ALTUS
ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

Landscape Architect:

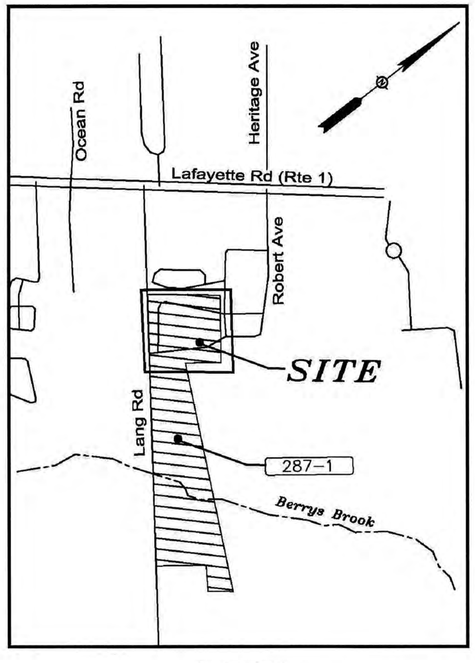
WOODBURN
&COMPANY
Landscape Architecture, LLC
103 Kent Place
Newmarket, NH 03857
Tel 603.659.5949
Fax: 603.659.5939

Architect:

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

Surveyor:

James Verra and
Associates, Inc.
LAND SURVEYORS
101 SHATTUCK WAY – SUITE 8
NEWINGTON, N.H. 03801– 7876
603–436–3557



Locus Map
Scale: Not to Scale

Sheet Index

Title	*Sheet No.:*	*Rev.*	*Date*
Limited Existing Conditions Plans (by James Verra and Associates, Inc.)	EC–1 to EC–5	3	04/05/19
General Notes	GN–1	0	05/20/19
Overall Site Plan	C–1	0	05/20/19
Demolition Plan	C–2	0	05/20/19
Site Plan	C–3	0	05/20/19
Grading and Drainage Plan	C–4	0	05/20/19
Utilities Plan	C–5	0	05/20/19
Conditional Use Parking Plan	CUP–1	0	05/20/19
Conditional Use Wetlands Plan	CUP–2	0	05/20/19
Landscape Plan (by Woodburn & Company)	L–1	0	05/20/19
Site Lighting Plan (by Visual Light)	1 of 1	0	05/13/19
Erosion Control Notes & Details	D–1	0	05/20/19
Detail Sheet	D–2	0	05/20/19
Detail Sheet	D–3	0	05/20/19
Detail Sheet	D–4	0	05/20/19
Detail Sheet	D–5	0	05/20/19
Detail Sheet	D–6	0	05/20/19
Detail Sheet	D–7	0	05/20/19
Pump Station Details	D–8	0	05/20/19
Bldg 1 Unit Plans (by McHenry Architecture)	A101 to A103	0	05/07/19
Bldg 2 Unit Plans (by McHenry Architecture)	A104 to A106	0	05/07/19
Building Rendering (by McHenry Architecture)	A300	0	05/07/19
Exterior Elevations (by McHenry Architecture)	A301 to A303	0	05/07/19

Permit Summary

Zoning Variances Granted on Nov. 20, 2018:

1) A variance from Section 10.521 to allow a lot area per dwelling unit of 8,321± s.f. where 10,000 s.f. is required
2) A variance from Section 10.522 to allow the building lengths of 225' & 170' for a multi–family dwelling where 160' is the maximum allowed.

NOTES:

1. OWNER OF RECORD..... ARBOR VIEW & THE PINES, LLC (65%)
   ADDRESS..... C/O FOREST PROPERTIES MANAGEMENT, INC.
   625 MOUNT AUBURN ST, SUITE 210
   CAMBRIDGE, MA 02138
   DEED REFERENCE..... 5934/837
   TAX MAP 286 LOTS..... 6 THRU 8, 10, 11, 13, 14, 24
   TAX MAP 287 LOTS..... 1, 1-A

2. ZONED:..... GA/MH — FRONT YARD SETBACK.... 30'
   MINIMUM LOT AREA 5 ACRES — SIDE YARD SETBACK.....25'
   FRONTAGE..... N/A — REAR YARD SETBACK.....25'

3. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE @ 1-888-DIG-SAFE.

4. THIS PLAN IS BASED ON A FIELD SURVEY 5/2016 & 2/2019 BY JAMES VERRA AND ASSOC., INC.

5. ELEVATION DATUM: NAVD 1988
   PRIMARY BM: CITY CONTROL POINT "ROBE"
   COORDINATE SYSTEM: LOCAL PROJECT BASED (NOT NH STATE PLANE COORDINATES)

   NOTE: FINAL PROJECT DATA TO BE DELIVERED IN DRAWING FORMAT TO CITY OF PORTSMOUTH REFERENCED TO NH STATE PLANE COORDINATE SYSTEM OF 1983 TO STATISFY CITY REQUIREMENTS.

6. CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE SETTING OR ESTABLISHMENT OF ANY GRADES/ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOC., INC.

7. PARCEL 287-1 & 287-1A ARE SUBJECT TO A UTILITY EASEMENT IN FAVOR OF PUBLIC SERVICE CO. OF NH & NEW ENGLAND TELEPHONE & TELEGRAPH, SEE RCRD BOOK 2528, PAGE 1362.

8. WETLANDS DELINEATION PERFORMED 4/1/2019, 4/2/2019 & 5/13/2019 BY MICHAEL CUOMO, 6 YORK POND RD, YORK, ME 03909, NHCWS# 4. WETLANDS FLAGS SURVEY LOCATED BY JAMES VERRA AND ASSOC., INC.

9. PORTION OF THE SUBJECT PARCEL (AS SHOWN ON SHEET EC-4) LIES IN SPECIAL FLOOD HAZARD AREA ZONE A (NO BASE FLOOD ELEVATIONS DETERMINED) AS SHOWN ON FLOOD INSURANCE RATE MAP 33015C0270E, EFFECTIVE DATE MAY 17, 2005, BY FEMA. THE ZONE LINE SHOWN HEREON WAS TAKEN FROM THE FEMA "DFIRM".

REFERENCE PLANS:

1. ALTA/ACSM LAND TITLE SURVEY, "COLONIAL PINES", PORTSMOUTH, N.H., OWNER: TGM BEECHSTONE, LLC, FOR: FOREST PROPERTIES MANAGEMENT, REVISED TO 7/10/2015, BY JAMES VERRA AND ASSOCIATES, INC., NOT RECORDED.
2. ALTA/ACSM LAND TITLE SURVEY, TAX MAP 287 LOT 1 & 1-A, PROPERTY OF TGM BEECHSTONE LLC, PORTSMOUTH, N.H., DATED 12/4/2014, BY MSC CIVIL ENGINEERS & LAND SURVEYORS, INC., NOT RECORDED.
3. LOT LINE REVISION PLAN, COLONIAL PINES APARTMENTS POOL & AMENITIES PROJECT, 35, 45 & 55 ANNE AVENUE, PORTSMOUTH, N.H., DATED 11/14/2016, RCRD PLAN D-40104.
4. LIMITED EXISTING CONDITIONS PLAN, PROPOSED GROUNDS IMPROVEMENTS, "ARBOR VIEW APARTMENTS", OFF JOAN & ROBERT AVENUES, PORTSMOUTH, N.H., DATED 6/3/2016, BY JAMES VERRA AND ASSOC., INC., NOT RECORDED.
5. REVISED AS BUILT PLAN FOR FORUM DEVELOPMENT, BEECHSTONE-PHASE II, OFF LANG ROAD, PORTSMOUTH, N.H., REVISED TO 2/20/1990, BY RICHARD P. MILLETTE AND ASSOC., NOT RECORDED.

ABUTTERS LIST

MAP-LOT	OWNER OF RECORD	DEED REF.
272-9-7	CEDARS CONDOMINIUM ASSOCIATION WHITE CEDARS BLVD, PORTMOUTH, NH 03801	DECL: 2566/2219
287-3	CITY OF PORTSMOUTH DPW 680 PEVERLY HILL RD, PORTSMOUTH, NH 03801	2230/277
288-1	CITY OF PORTSMOUTH 1 JUNKINS AVE, PORTSMOUTH, NH 03801	3278/1316
288-1-B	ERIN A. HAYES & JACOB B. WILSON 397 LANG RD, PORTSMOUTH, NH 03801	5953/482
288-7	KARA LAM & COLIN A. MCGEE 387 LANG RD, PORTSMOUTH, NH 03801	3285/2444
288-8	THERESA F. O'CALLAGHAN 379 LANG RD, PORTSMOUTH, NH 03801	5813/304
288-9	MICHAEL G. CORCORAN & SUSAN M. CORCORAN 365 LANG RD, PORTSMOUTH, NH 03801	4505/1454
288-10	LANA M. WOODCOCK & SCOTT B. WOODCOCK 359 LANG RD, PORTSMOUTH, NH 03801	5373/1142
291-1-1	SERVICE CREDIT UNION 3003 LAFAYETTE RD, PORTSMOUTH, NH 03801	N/A

SEWER & DRAIN TABLES

SMH# 5
RIM EL= 46.46
CL INV 8"PVC= 39.52

SMH# 6
RIM EL= 53.09
(1) INV OUT 8"PVC= 47.80

SMH# 7
RIM EL= 50.43
(1) INV IN 8"PVC= 41.15
(2) INV OUT 8"PVC= 40.93

SMH# 8
RIM EL= 49.79
(1) INV IN 8"PVC= 40.40
(2) INV OUT 8"PVC= 40.24

SMH# 9 (PAVED OVER)
RIM EL= N/A

SMH# 10
RIM EL= 44.18
(1) INV OUT 8"PVC= 38.60

SMH# 11
RIM EL= 52.45
(1) INV OUT 8"PVC= 47.93

SEWER PUMP STATION 1
RIM EL= 51.08
(1) INV IN 8"PVC= 44.68
(2) INV IN 8"PVC= 38.03
(3) INV OUT 6"PVC FM= 44.8±

SEWER PUMP STATION 2
RIM EL= 43.87
(1) INV IN 8"PVC= 37.12
(2) INV IN 8"PVC= 37.58
(3) INV OUT 4"PVC FM= 40.0±

CB# 5
RIM EL= 44.97
(1) INV IN 12"CMP= 41.57
(2) INV IN 12"CMP= 41.72
(3) INV OUT 18"CMP= 41.42

CB# 6
RIM EL= 45.88
(1) INV IN 12"CMP= 40.93 (CLOGGED)
(2) INV IN 18"CMP= 40.57
(3) INV IN 8"PVC= 40.60
(4) INV OUT 18"CMP= 40.83

NOTE: INVERTS IN (2) & (3) ARE LOWER THAN INVERT OUT (4) ...

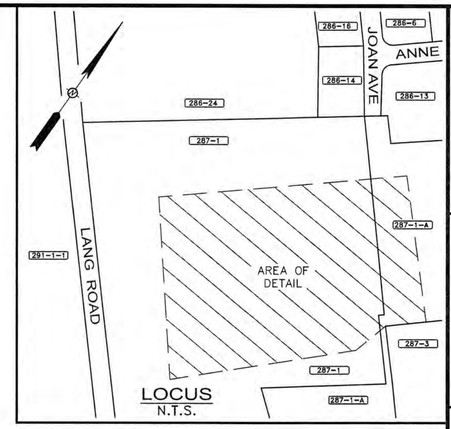
CB# 7
RIM EL= 52.00
(1) INV IN 12"CMP= 48.90
(2) INV IN 12"CMP= 48.72
(3) INV OUT 12"CMP= 48.82

CB# 8
RIM EL= 52.10
(1) INV OUT 12"CMP= 49.2±

CB# 9
RIM EL= 45.34
(1) INV IN 12"CMP= 42.27
(2) INV OUT 12"CMP= 42.03
NOTE: INVERTS RUSTED OUT ...

CB# 10
RIM EL= 42.90
(1) INV IN 12"CMP= 39.47
(2) INV OUT 12"CMP= 39.35

CB# 11
RIM EL= 42.21
(1) INV IN 15"CMP= 39.12
(2) INV IN 12"CMP= 38.89
(3) INV OUT 12"CMP= 38.84



LEGEND:

- ..... STONE WALL
- ..... IRON ROD
- ..... BOUND as DESCRIBED
- ..... FENCE
- 110-5 ..... TAX SHEET - LOT NUMBER
- RCRD ..... ROCKINGHAM COUNTY REGISTRY OF DEEDS
- EOP..... EDGE OF PAVEMENT
- SGC..... SLOPED FACED GRANITE CURB
- RWS..... STONE RETAINING WALL
- RWW..... WOOD RETAINING WALL
- ..... SIGN
- ..... UTILITY POLE WITH ARM & LIGHT
- ..... GUY
- ..... ELECTRICAL CONDUIT
- ..... ELECTRICAL BOX
- E ..... ELECTRIC METER
- C ..... CABLE TV RISER
- T ..... TELEPHONE RISER
- F ..... FIRE ALARM RISER
- ..... GAS SHUT OFF
- ..... GAS VALVE
- ..... WATER GATE VALVE
- ..... WATER SHUT OFF VALVE
- ..... HYDRANT
- ..... CATCH BASIN
- ..... DRAIN MANHOLE
- S ..... SEWER MANHOLE
- ..... TREE LINE
- ..... BRUSH LINE
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- UGC ..... UNDERGROUND COMMUNICATIONS
- BW ..... BOILER WATER LINES
- ..... CEMENT CONCRETE
- ..... CRUSHED STONE
- ..... RETAINING WALL
- x12.5..... SPOT GRADE

20 0 20 40 60 80 FEET
10 0 10 20 METERS

STATE OF NEW HAMPSHIRE — LICENSED LAND SURVEYOR — NO. 625 — JAMES VERRA — SIGNATURE

P4787

SURVEYOR:
James Verra and Associates, Inc.
LAND SURVEYORS
101 SHATTUCK WAY - SUITE 8
NEWINGTON, N.H. 03801- 7876
603-436-3557
JOB NO: 23678
PLAN NO: 23678-2

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

ISSUED FOR:
ENGINEERING DESIGN

ISSUE DATE:
MARCH 15, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	ENGINEERING DESIGN	JV	3/15/19
2	ADD MISSING DRAIN LINE	JV	3/25/19
3	ADD WETLANDS, BUILDING, MARKED OUT GAS MAINS, DETAIL @ SNOW PILES & SHEET EC-4	JV	4/5/19
4	ADD SHEET EC-5	JV	5/16/19

DRAWN BY: JCS
APPROVED BY: JV
DRAWING FILE: 23678-2.DWG

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER/APPLICANT:
ARBOR VIEW & THE PINES, LLC
"ARBOR VIEW APARTMENTS"
fka "BEECHSTONE APARTMENTS"
PORTSMOUTH, N.H.
ASSESSOR'S PARCEL 287-1
c/o FOREST PROPERTIES MANAGEMENT, INC.
625 MOUNT AUBURN ST
SUITE 210
CAMBRIDGE, MA 02138
RCRD BK. 5934, PG. 837

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT PROJECT
JOAN AVENUE & LANG ROAD
PORTSMOUTH, N.H.
ASSESSOR'S PARCEL 287-1

TITLE:
LIMITED EXISTING CONDITIONS PLAN

SHEET NUMBER:
EC-1

LEGEND:

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PER REFERENCE PLAN 1

287–1

TBM 6
SURVEY NAIL SET
BASE OF 24"MAPLE
ELEV= 51.99
(1.0 ABOVE GND.)

INV OUT 12"CMP= 48.77

WOOD DECK

UGE/UGC

BRUSH

TESTPIT 3 (FUTURE)

BORE 3 (FUTURE)

BORE 4 (FUTURE)

BORE 6 (FUTURE)

BORE 2 (FUTURE)

TESTPIT 4 (FUTURE)

GRILL

SMH# 11

WOOD DECK EL= 45.7±

APARTMENTS

WOOD DECK EL= 45.7±

INV OUT 4"PVC=43.9± (EMPTIES INTO 4" PLASTIC FLEX PIPE WHICH TURNS DOWN INTO GROUND)

RAILING

CONCRETE PATIO EL= 43.6±

INV OUT 10"PVC= 42.62

CONCRETE PATIO EL= 43.6±

SEWER PUMP STATION 2

CRUSHED STONE 2'W

EDGE OF DELINEATED WETLAND

B 1 B 2 B 3 B 4

GAS SERVICE ATTACHED TO FOUNDATION

BOILER ROOM
FF CONCRETE EL= 47.84

MAINTENANCE
FF CONCRETE EL= 47.88

LAUNDRY
AL. THRESHOLD EL= 49.01

ENCLOSURE UNDER DECK

DECK

GAS MANIFOLD

RAILINGS

GENERATOR EXHAUST STACK

INV IN 12"CMP= 42.41

PET WASTE STATION

BERM

SGC

CB# 9

CB# 10

CB# 11

SMH# 10

SMH# 9 (PAVED OVER)

SMH# 8

TBM 5
BOLT W/ "X" CUT
TOP HYDRANT FLANGE
ELEV= 48.40

SHEET EC–2
MATCH LINE
SHEET EC–3

SHEET EC–2
MATCH LINE
SHEET EC–4

APARTMENTS

LANG ROAD
(A PUBLIC WAY)

EDGE OF DELINEATED WETLAND (TYP)

SNOW PILE

INV IN 15"CMP= 39.60

287–1

STATE OF NEW HAMPSHIRE — LICENSED LAND SURVEYOR
NO. 625
JAMES VERRA
SIGNATURE

20 0 20 40 60 80 FEET
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ISSUED FOR:
ENGINEERING DESIGN

ISSUE DATE:
MARCH 13, 2019

REVISIONS

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3	ADD WETLANDS, BUILDING, MARKED OUT GAS MAINS, DETAIL @ SNOW PILES & SHEET EC–4	JV	4/5/19

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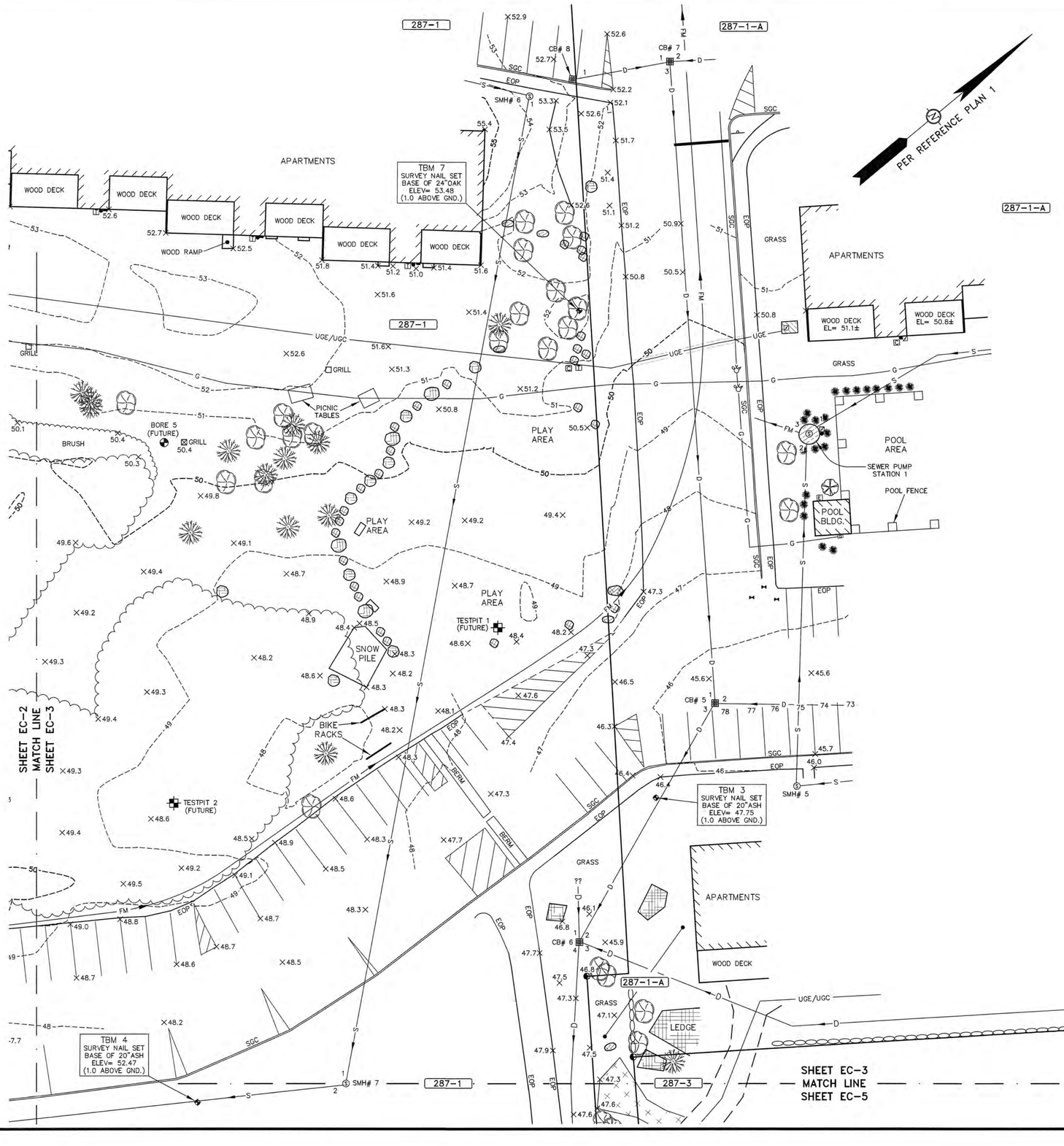
TITLE:
LIMITED EXISTING CONDITIONS PLAN

SHEET NUMBER:
EC-2



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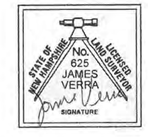

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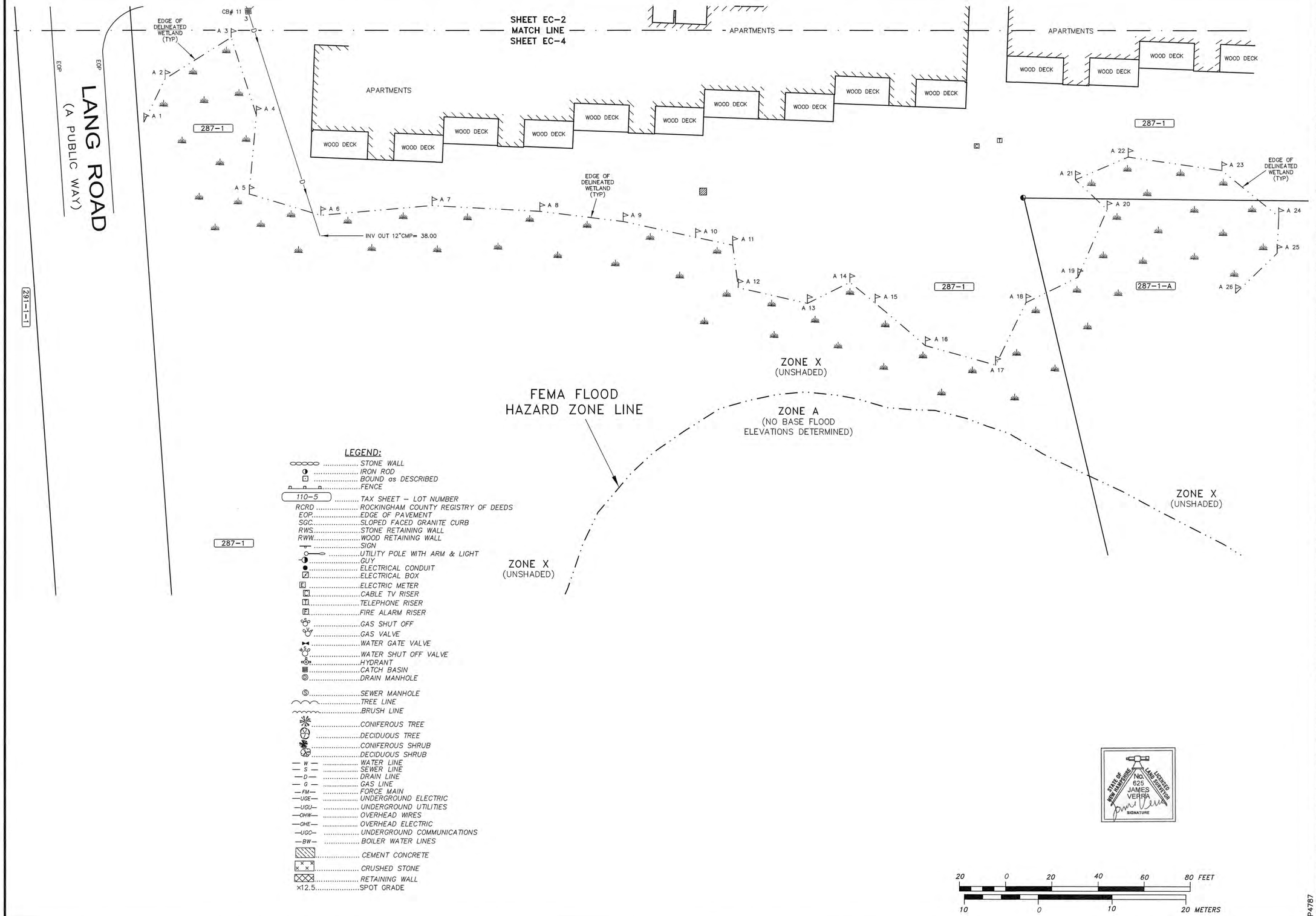

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- RCRD ..... ROCKINGHAM COUNTY REGISTRY OF DEEDS
- EOP ..... EDGE OF PAVEMENT
- SGC ..... SLOPED FACED GRANITE CURB
- RWS ..... STONE RETAINING WALL
- RWW ..... WOOD RETAINING WALL
- SIGN
- UTILITY POLE WITH ARM & LIGHT
- GUY
- ELECTRICAL CONDUIT
- ELECTRICAL BOX
- E ..... ELECTRIC METER
- C ..... CABLE TV RISER
- T ..... TELEPHONE RISER
- F ..... FIRE ALARM RISER
- GAS SHUT OFF
- GAS VALVE
- WATER GATE VALVE
- WATER SHUT OFF VALVE
- HYDRANT
- CATCH BASIN
- DRAIN MANHOLE
- S ..... SEWER MANHOLE
- TREE LINE
- BRUSH LINE
- CONIFEROUS TREE
- DECIDUOUS TREE
- CONIFEROUS SHRUB
- DECIDUOUS SHRUB
- W ..... WATER LINE
- S ..... SEWER LINE
- D ..... DRAIN LINE
- G ..... GAS LINE
- FM ..... FORCE MAIN
- UGE ..... UNDERGROUND ELECTRIC
- UGU ..... UNDERGROUND UTILITIES
- OHW ..... OVERHEAD WIRES
- OHE ..... OVERHEAD ELECTRIC
- UGC ..... UNDERGROUND COMMUNICATIONS
- BW ..... BOILER WATER LINES
- CEMENT CONCRETE
- CRUSHED STONE
- RETAINING WALL
- ×12.5 ..... SPOT GRADE

STATE OF NEW HAMPSHIRE — No. 625 JAMES VERRA — LICENSED LAND SURVEYOR — SIGNATURE

20 0 20 40 60 80 FEET

10 0 10 20 METERS

P4787

SURVEYOR:

James Verra and Associates, Inc.

LAND SURVEYORS

101 SHATTUCK WAY – SUITE 8
NEWINGTON, N.H. 03801– 7876
603–436–3557
JOB NO: 23678
PLAN NO: 23678–2

ENGINEER:

ALTUS ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
(603) 433–2335 www.ALTUS–ENG.com

ISSUED FOR:

ENGINEERING DESIGN

ISSUE DATE:

MARCH 13, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	ENGINEERING DESIGN	JV	3/15/19
2	ADD MISSING DRAIN LINE	JV	3/25/19
3	ADD WETLANDS, BUILDING, MARKED OUT GAS MAINS, DETAIL @ SNOW PILES & SHEET EC–4	JV	4/5/19
4	ADD SHEET EC–5	JV	5/16/19

DRAWN BY: JCS
APPROVED BY: JV
DRAWING FILE: 23678–2.DWG

SCALE:
22" x 34" – 1" = 20'
11" x 17" – 1" = 40'

OWNER/APPLICANT:

ARBOR VIEW &
THE PINES, LLC

"ARBOR VIEW APARTMENTS"
fka "BEECHSTONE APARTMENTS"

PORTSMOUTH, N.H.
ASSESSOR'S PARCEL 287–1

c/o FOREST PROPERTIES
MANAGEMENT, INC.
625 MOUNT AUBURN ST
SUITE 210
CAMBRIDGE, MA 02138

RCRD BK. 5934, PG. 837

PROJECT:

ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT PROJECT

JOAN AVENUE & LANG ROAD
PORTSMOUTH, N.H.
ASSESSOR'S PARCEL 287–1

TITLE:

LIMITED EXISTING CONDITIONS PLAN

SHEET NUMBER:

EC-4

LEGEND:

- STONE WALL
- IRON ROD
- BOUND as DESCRIBED
- FENCE
- 110-5 ..... TAX SHEET – LOT NUMBER
- RCRD ..... ROCKINGHAM COUNTY REGISTRY OF DEEDS
- EOP..... EDGE OF PAVEMENT
- SGC..... SLOPED FACED GRANITE CURB
- RWS..... STONE RETAINING WALL
- RWW..... WOOD RETAINING WALL
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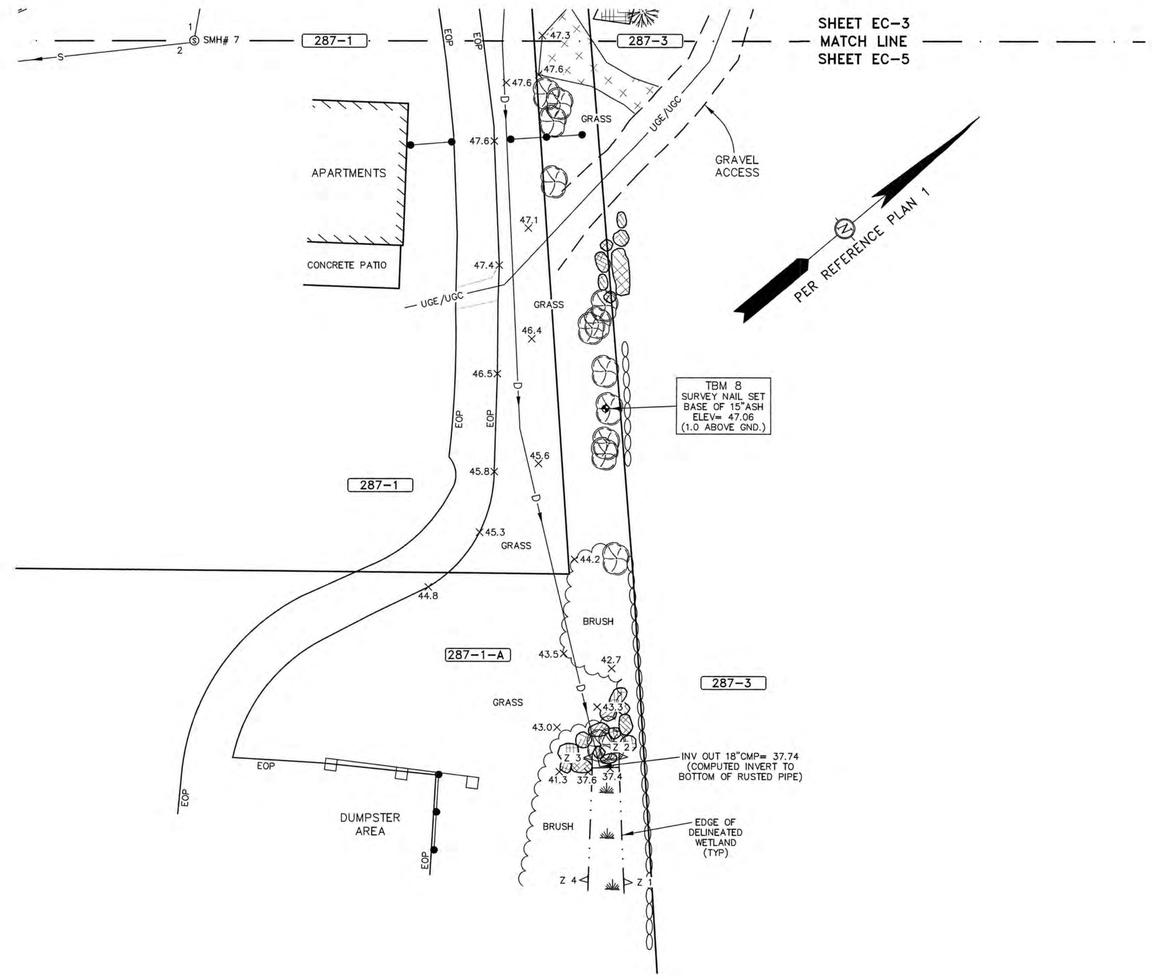

STATE OF NEW HAMPSHIRE
No. 625
JAMES VERRA
LICENSED LAND SURVEYOR
SIGNATURE

SURVEYOR:

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ASSESSOR'S PARCEL 287-1

c/o FOREST PROPERTIES MANAGEMENT, INC.
625 MOUNT AUBURN ST
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CAMBRIDGE, MA 02138

RCRD BK. 5934, PG. 837

PROJECT:

ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT PROJECT

JOAN AVENUE & LANG ROAD
PORTSMOUTH, N.H.
ASSESSOR'S PARCEL 287-1

TITLE:

LIMITED EXISTING CONDITIONS PLAN

SHEET NUMBER:

EC-5

P4787

DEMOLITION NOTES

1. CONTRACTOR SHALL SAFELY SECURE THE SITE WITH SECURITY FENCING. FENCING SHALL BE LOCKED DURING NON-WORK HOURS.
2. CITY DEMOLITION PERMIT REQUIRED PRIOR TO ANY DEMOLITION ACTIVITIES. CONTRACTOR IS NOTIFIED THAT THIS PERMIT PROCESS MAY REQUIRE A 30-DAY LEAD TIME.
3. CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES SCHEDULED TO REMAIN.
4. THIS DEMOLITION PLAN IS INTENDED TO PROVIDE MINIMUM GUIDELINES FOR THE DEMOLITION OF EXISTING SITE FEATURES. UNLESS OTHERWISE NOTED TO REMAIN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL PAVEMENT, CONCRETE, CURBING, SIGNS, POLES, UTILITIES, FENCES, VEGETATION AND OTHER EXISTING FEATURES AS NECESSARY TO FULLY CONSTRUCT THE PROJECT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY NOTIFICATION OF ALL PARTIES, CORPORATIONS, COMPANIES, INDIVIDUALS AND STATE AND LOCAL AUTHORITIES OWNING AND/OR HAVING JURISDICTION OVER ANY UTILITIES RUNNING TO, THROUGH OR ACROSS AREAS TO BE DISTURBED BY DEMOLITION AND/OR CONSTRUCTION ACTIVITIES WHETHER OR NOT SAID UTILITIES ARE SUBJECT TO DEMOLITION, RELOCATION, MODIFICATION AND/OR CONSTRUCTION.
6. ALL UTILITY DISCONNECTIONS/DEMOLITIONS/RELOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE PORTSMOUTH DEPARTMENT OF PUBLIC WORKS. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELATED EXCAVATION, TRENCHING AND BACKFILLING.
7. ALL STRUCTURES, CURBING, CONCRETE, PAVEMENT AND SUBBASE MATERIALS SHALL BE REMOVED FROM PROPOSED LANDSCAPE AREAS AND REPLACED WITH LOAM MATERIALS SUITABLE FOR LANDSCAPE AND/OR STORMWATER MANAGEMENT PURPOSES AND MEETING THE PROJECT SPECIFICATIONS.
8. WHERE SPECIFIED TO REMAIN, MANHOLE RIMS, CATCH BASIN GRATES, VALVE COVERS, HANDHOLES, MONITORING WELLS, ETC. SHALL BE ADJUSTED TO FINISH GRADE.
9. NO BURNING SHALL BE PERMITTED PER LOCAL REGULATIONS.
10. HAZARDOUS MATERIALS ENCOUNTERED DURING DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE ABATED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS.
11. SEE EROSION CONTROL PLANS FOR EROSION CONTROL REQUIREMENTS TO BE IN PLACE PRIOR TO START OF DEMOLITION ACTIVITIES, INCLUDING, BUT NOT LIMITED TO; SILT FENCING, STABILIZED CONSTRUCTION SITE EXITS, AND STORM DRAIN INLET PROTECTION.
12. ALL DEMOLISHED MATERIALS OR MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFIED.
13. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BE LEGALLY DISPOSED IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS AND CODES.
14. LEDGE REMOVAL MAY BE REQUIRED ON THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE CITY WITH A LEDGE REMOVAL PLAN. IF BLASTING IS TO BE PERFORMED, ALL STATE AND LOCAL REQUIREMENTS SHALL BE COMPLIED WITH. NO BLASTING IS ALLOWED WITHOUT A BLAST SURVEY BEING COMPLETED PRIOR TO.
16. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL DISCONNECTIONS/INSTALLATIONS WITH EVERSOURCE. CONTACT NICK KOSKO @ 603-332-4227, EXT. 5555334
17. CONTRACTOR SHALL COORDINATE ALL NATURAL GAS DISCONNECTIONS/INSTALLATIONS WITH UNITIL CORPORATION. CONTACT DAVID BEAULIEU @ 603-294-5144
18. CONTRACTOR SHALL COORDINATE ALL CABLE DISCONNECTIONS/INSTALLATIONS WITH COMCAST. CONTACT MIKE COLLINS @ 603-679-5695 EXT 1037
19. CONTRACTOR SHALL COORDINATE ALL TELE-COMMUNICATION DISCONNECTIONS AND INSTALLATION WITH CONSOLIDATED COMMUNICATIONS. CONTACT JOE CONSIONE @ 603-427-5255

SITE NOTES

1. ON NOVEMBER 20, 2018 THE PORTSMOUTH BOARD OF ADJUSTMENT GRANTED THE FOLLOWING:
   A VARIANCE FROM SECTION 10.521 TO PROVIDE ONE UNIT PER ±8,321 SF WHERE 10,000 SF IS REQUIRED;
   A VARIANCE FROM SECTION 10.522 TO ALLOW TWO NEW APARTMENT BUILDINGS OF 170 FEET± AND 225 FEET± IN LENGTH FOR A MULTY-FAMILY DWELLING WHERE 160-FEET IS THE MAXIMUM ALLOWED.
2. TWO BICYCLE RACKS WILL BE PROVIDED , ONE IN FRONT OF EACH BUILDING.
3. ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION.
4. ALL CONDITIONS OF THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
5. ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE CITY OF PORTSMOUTH & NHDOT'S STANDARD SPECIFICATIONS FOR ROAD & BRIDGE, LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
6. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH RS-1 IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
7. THE CONTRACTOR SHALL VERIFY ALL BENCHMARKS AND TOPOGRAPHY IN THE FIELD PRIOR TO CONSTRUCTION.
8. THE CONTRACTOR SHALL VERIFY ALL BUILDING DIMENSIONS WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PRIOR TO CONSTRUCTION. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR RESOLUTION.
9. AREA OF DISTURBANCE OVER 43,560 SF, COVERAGE UNDER EPA NPDES PHASE II CONSTRUCTION GENERAL PERMIT REQUIRED (NOI TO BE PREPARED AND SUBMITTED BY CONTRACTOR, SWPPP AND INSPECTIONS TO BE PREPARED AND PERFORMED BY CONTRACTOR). SITEWORK ACTIVITIES UNDER 100,000 SF. NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED.
10. SNOW SHALL BE STORED AT THE EDGE OF PAVEMENT, IN UPLAND AREAS SHOWN THEREON. NO SNOW STORAGE SHALL BE PROVIDED IN THE LANDSCAPED ISLAND BETWEEN THE DRIVEWAY ENTRANCE AND EXIT THAT WOULD RESTRICT SITE VEHICULAR AND PEDESTRIAN SIGHT DISTANCE. IF ADEQUATE ON-SITE SNOW STORAGE IS NOT AVAILABLE IN UPLAND AREAS, THE SNOW SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED.
11. PAVEMENT MARKINGS SHALL BE CONSTRUCTED USING WHITE, YELLOW, OR BLUE TRAFFIC PAINT (WHERE SPECIFIED) MEETING THE REQUIREMENTS OF AASHTO M248, TYPE F OR EQUAL. PAINTED ISLANDS AND LOADING ZONES SHALL BE 4"-WIDE DIAGONAL WHITE LINES 3'-0" O.C. BORDERED BY 4"-WIDE WHITE LINES. PARKING STALLS SHALL BE SEPARATED BY 4"-WIDE WHITE LINES. SEE DETAILS FOR HANDICAP SYMBOLS, SIGNS AND SIGN DETAILS. PAVEMENT MARKINGS SHALL BE INSTALLED AT LEAST 14-DAYS AFTER INSTALLATION OF WEARING COURSE PAVEMENT. CONTRACTOR SHALL APPLY TWO (2) COATS OF ALL PAVEMENT MARKINGS.
12. PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC DEVICES," "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" AND THE AMERICANS WITH DISABILITIES ACT (ADA), LATEST EDITIONS.
13. THE CONTRACTOR SHALL VERIFY ALL BUILDING DIMENSIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION. ANY AND ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF BOTH THE ARCHITECT AND CIVIL ENGINEER FOR RESOLUTION.
14. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
15. THE SITE PLAN PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
16. SITEWORK CONTRACTOR SHALL PREPARE A LICENSED LAND SURVEYOR (LLS) STAMPED AS-BUILT SITE PLAN & PROVIDE A DIGITAL (CAD FORMAT) COPY FOR THE CITY'S G.I.S. DATA BASE.
17. THE PROPOSED LIGHTING SHALL BE DARK SKY FRIENDLY.

GRADING AND DRAINAGE NOTES

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SCHEDULED TO REMAIN.
2. ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL READ AND FAMILIARIZE THEMSELVES WITH THE PROJECT GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
4. DEWATERING ACTIVITIES SHALL BE DONE IN ACCORDANCE WITH EPA AND NHDES REGULATIONS AND GUIDELINES.
5. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES AREA SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATIONS DEGREE OF INSULATION AGAINST FREEZING.
6. IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
7. ALL STORM DRAIN PIPE SHALL BE ADS N-12 OR EQUAL AND APPROVED BY THE ENGINEER.
8. ALL CATCH BASIN, GATE VALVE COVERS, AND MANHOLE RIMS SHALL BE SET FLUSH WITH OR NO LESS THAN 0.1' BELOW FINISHED GRADE. ANY RIM OR VALVE COVER ABOVE SURROUNDING FINISHED GRADE WILL NOT BE ACCEPTED.
9. ALL CATCH BASINS SHALL BE PRECAST, LOCATED IN PAVEMENT AREAS, H-20 LOADING AND BE EQUIPPED WITH 4-FOOT DEEP MIN SEDIMENTATION SUMPS AND GREASE HOODS. (SEE DETAILS)
10. ALL SPOT GRADES ARE AT THE FINISH GRADE AND BOTTOM OF CURB WHERE APPLICABLE.
11. UNLESS OTHERWISE SPECIFIED, RETAINING WALL AND BUILDING PERIMETER DRAINS SHALL BE DIRECTED TO THE NEAREST DRAINAGE STRUCTURE. IF DEEMED APPROPRIATE, CONTRACTOR SHALL PROVIDE ADDITIONAL UNDERDRAINS AT THE DIRECTION OF THE ENGINEER.
12. CONTRACTOR SHALL PROTECT ALL RAINGARDENS FROM CONSTRUCTION STORMWATER RUNOFF. TEMPORARY SEDIMENT BASINS SHALL BE CONSTRUCTED DURING CONSTRUCTION. STORMWATER SHALL NOT BE DIRECTED TO THE RAINGARDENS UNTIL THE WATERSHED HAS BEEN STABILIZED.

UTILITY NOTES

1. ALL WATER MAIN INSTALLATIONS AND SERVICE CONNECTIONS SHALL CONFORM TO PORTSMOUTH WATER DEPARTMENT STANDARDS. WATER MAIN SHALL BE WRAPPED WITH A WATER TIGHT POLYETHYLENE WRAPPING. ALL JOINTS SHALL HAVE THREE (3) WEDGES PER JOINT.
2. ALL SEWER INSTALLATIONS AND SERVICE CONNECTIONS SHALL CONFORM TO PORTSMOUTH WATER AND SEWER DEPARTMENT STANDARDS. CONTRACTOR SHALL CONTACT PORTSMOUTH DPW FOR TESTING OF SEWER LINES.
3. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE, LOCAL, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL PERMIT CONDITIONS AND REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSTING OF ALL BONDS AND PAYMENT OF ALL TAP, TIE-IN AND CONNECTION FEES.
5. FIRE ALARM PANEL SHALL BE MONITORED THROUGH A THIRD-PARTY SECURITY COMPANY. CONTRACTOR SHALL COORDINATE ALL PANEL LOCATIONS AND INTERCONNECTIONS WITH FIRE DEPARTMENT.
6. THE APPLICANT SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATION DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE POLICE AND RADIO CONFIGURATION. IF THE SITE SURVEY INDICATES IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE APPLICANT SHALL BE REQUIRED TO PAY FOR THE SITE SURVEY WHETHER OR NOT THE SURVEY INDICATES A REPEATER IS NECESSARY. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY. THE SURVEY SHALL BE COMPLETED AND THE REPEATER, IF DETERMINED IT IS REQUIRED, SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
7. ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL CONFORM TO FEDERAL OSHA AND CITY REGULATIONS.
8. SITEWORK CONTRACTOR SHALL COORDINATE ALL WORK WITH MECHANICAL DRAWINGS.
9. SEE ARCHITECTURAL/MECHANICAL DRAWINGS FOR EXACT LOCATIONS & ELEVATIONS OF UTILITY CONNECTIONS AT BUILDINGS. COORDINATE ALL WORK WITHIN FIVE (5) FEET OF BUILDINGS WITH BUILDING CONTRACTOR AND ARCHITECTURAL/MECHANICAL DRAWINGS. ALL CONFLICTS AND DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY AND PRIOR TO COMMENCING RELATED WORK.
10. FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE ARCHITECT.
11. CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH FAIRPOINT COMMUNICATIONS.
12. CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST.
13. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL, 48-HOUR MINIMUM NOTICE REQUIRED.
14. TRANSFORMER SHALL BE PAD MOUNTED. COORDINATE WITH ARCHITECT & EVERSOURCE.
15. DETECTABLE WARNING TAPE SHALL BE PLACED OVER THE ENTIRE LENGTH OF ALL BURIED UTILITIES, COLORS PER THE RESPECTIVE UTILITY PROVIDERS.
16. CONTRACTOR SHALL CONTACT CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS AT 603-427-1530 TO COORDINATE INSPECTION OF SEWER WORK.
17. THE TESTING OF THE MUNICIPAL SEWER INFRASTRUCTURE IMPROVEMENTS SHALL BE UNDER THE SUPERVISION OF THE PORTSMOUTH DEPARTMENT OF PUBLIC WORKS (DPW).
18. DEPARTMENT OF PUBLIC WORKS WATER DEPARTMENT CONTACT JIM TOW AT 603-427-1530

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

GENERAL NOTES

1. THE INTENT OF THIS PLAN SET IS TO PROVIDE THE NECESSARY INFORMATION FOR THE REVIEW, PERMITTING AND REDEVELOPMENT OF 145 LANG ROAD. THESE PLANS PROVIDE DETAILED INFORMATION FOR THE SITE LAYOUT, GRADING, UTILITIES, STORMWATER MANAGEMENT, AND LANDSCAPE IMPROVEMENTS. THE PROJECT INTENDS TO IMPLEMENT TWO NEW 3-STORY MULTI-FAMILY BUILDINGS.
2. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE, LOCAL AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED. THE LANDOWNER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH LOCAL, STATE AND FEDERAL WETLAND PERMITTING REQUIREMENTS INCLUDING PROTECTION OF NATURAL RESOURCES AND THEIR BUFFERS.
3. CONTRACTOR SHALL CALL DIG SAFE AT 1 (800) DIG-SAFE AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO COMMENCING CONSTRUCTION.
4. CONTRACTOR SHALL NOTIFY CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN A TEMPORARY SECURITY FENCE AROUND THE PERIMETER OF THE WORK AREA THROUGHOUT CONSTRUCTION.
6. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY SEDIMENT AND EROSION CONTROL ITEMS TO PREVENT SEDIMENT FROM CONSTRUCTION ACTIVITIES FROM LEAVING THE SITE. CONTROLS SHALL BE INSPECTED ON A REGULAR BASIS AND AFTER ALL RAIN EVENTS OF 0.25 INCHES OR GREATER. ANY DEFICIENCIES IN THE CONTROLS SHALL BE ADDRESSED IMMEDIATELY AND BROUGHT TO THE ATTENTION OF THE OWNER. ALL STORMS DRAINS WITHIN OR ADJACENT TO THE WORK AREA, WITH THE POTENTIAL TO RECEIVE RUNOFF FROM EXPOSED CONSTRUCTION AREAS, SHALL RECEIVE STORM DRAIN INLET PROTECTION.
7. CONTRACTOR SHALL PREVENT TRACKING OF DIRT ONTO ANY PUBLIC OR PRIVATE ROADWAYS. IF TRACKING OF DIRT FROM CONSTRUCTION VEHICLES IS PRESENT ON THE OPEN STREETS, CONTRACTOR WILL BE REQUIRED TO SWEEP THE ROADWAY AT NO ADDITIONAL EXPENSE TO THE OWNER.

ZONING SUMMARY

ZONING DISTRICT GA/MH

LOT 287-01

	REQUIRED	EXISTING	PROPOSED
LOT AREA	5.0 Acres (217,800 SF)	35.53 Acres (1,547,700 SF)	35.53 Acres
LOT AREA PER DWELLING (DENSITY)	10,000 SF	10,673 SF	8,321± SF
NUMBER OF UNITS	154 (ALLOWED)	145	186*
MINIMUM YARDS DIMENSIONS			
FRONT	30 FT	71 FT	71 FT
SIDE/REAR	25 FT	25 FT	35 FT
MAXIMUM STRUCTURE DIMENSIONS			
HEIGHT	35 FT	NOT DETERMINED	33.5± FT
COVERAGE	20%	4.1%	5.0%
LENGTH (MULTI-FAMILY DWELLING)	160 FT	285 FT±	225 FT±*
OPEN SPACE	50%	87%±	85%±
PARKING CALCULATIONS			

PER ZONING REGULATION 10.1110 FOR MULTI-FAMILY BUILDINGS

1.3 STALLS PER UNIT	=	245 STALLS
VISITOR PARKING 1 STALL PER 5 UNIT	=	38 STALLS
MINIMUM STALLS ALLOWED ALLOWED	=	283 STALLS
MAXIMUM ALLOWABLE STALLS (120% MIN)	=	340 STALLS
PROVIDED	=	340 STALLS

* SEE SITE NOTE 1

4787

ENGINEER:

ALTUS ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE – CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER – 5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/20/19

DRAWN BY: RLH
APPROVED BY: EDW
DRAWING FILE: 4787-DETAILS.DWG

SCALE:
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11" x 17" – N.T.S.

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C/O FOREST PROPERTIES MGMT.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT. INC.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH
TAX MAP 287, LOT 01

TITLE:
GENERAL NOTES

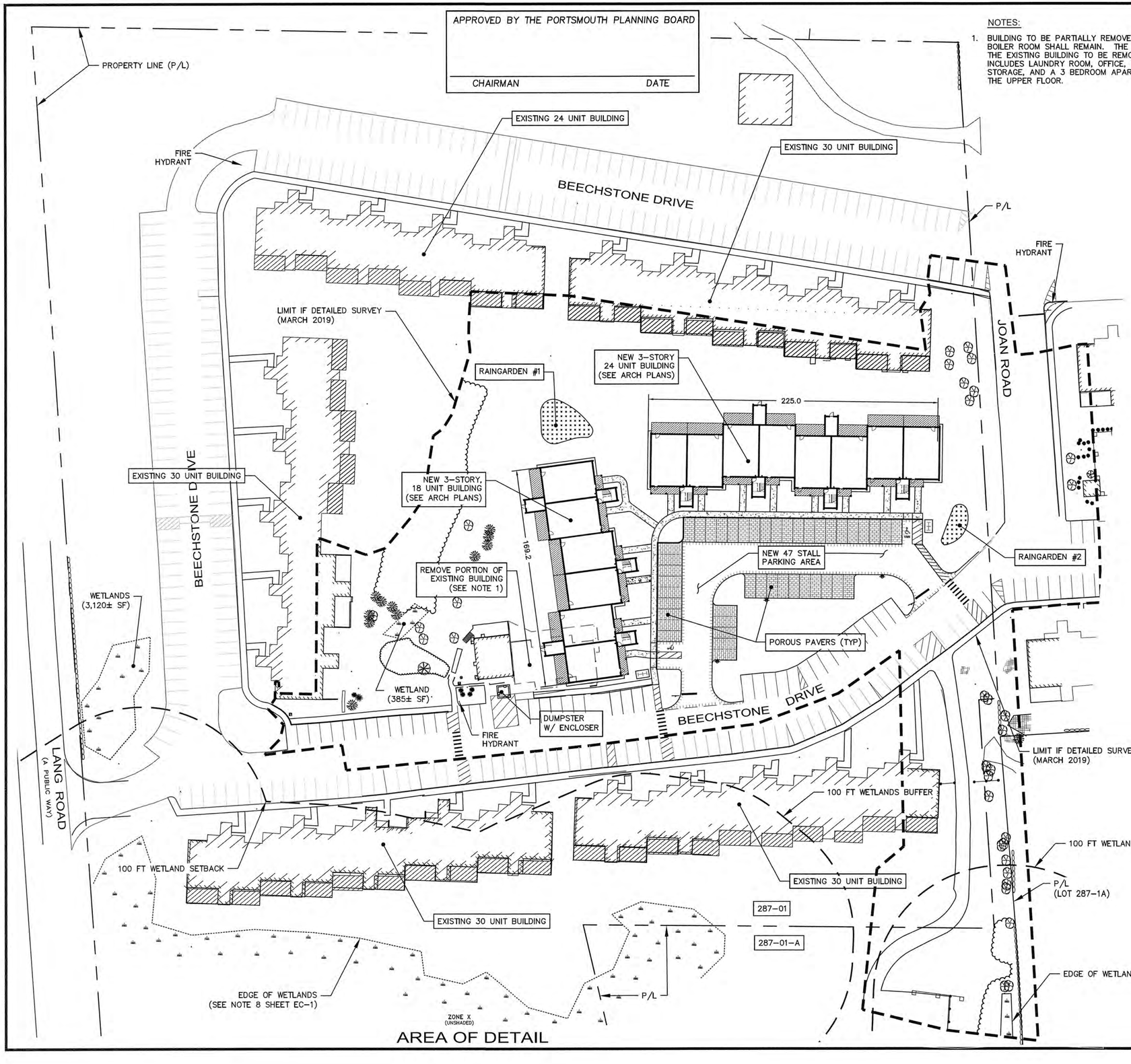
SHEET NUMBER:
GN-1

APPROVED BY THE PORTSMOUTH PLANNING BOARD

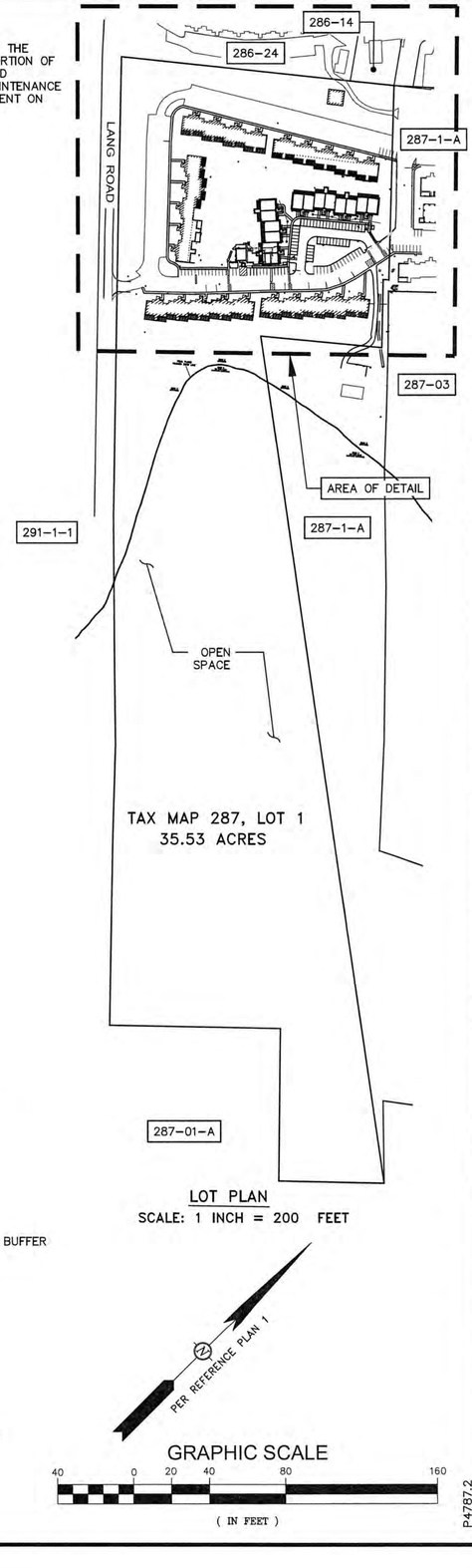
CHAIRMAN DATE

NOTES:

1. BUILDING TO BE PARTIALLY REMOVED. THE BOILER ROOM SHALL REMAIN. THE PORTION OF THE EXISTING BUILDING TO BE REMOVED INCLUDES LAUNDRY ROOM, OFFICE, MAINTENANCE STORAGE, AND A 3 BEDROOM APARTMENT ON THE UPPER FLOOR.



AREA OF DETAIL



LOT PLAN

SCALE: 1 INCH = 200 FEET

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

P4787.2

ENGINEER:

ALTUS ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE - CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER

5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/20/19

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4787.2.DWG

SCALE:

22" x 34" - 1" = 40'
11" x 17" - 1" = 80'

OWNER OF RECORD:

ARBOR VIEW & THE PINES LLC.
C/O FOREST PROPERTIES MGMT
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

APPLICANT:

FOREST PROPERTIES MGMT INC.
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

PROJECT:

ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT

145 LANG ROAD
PORTSMOUTH, NH

TAX MAP 287, LOT 01

TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

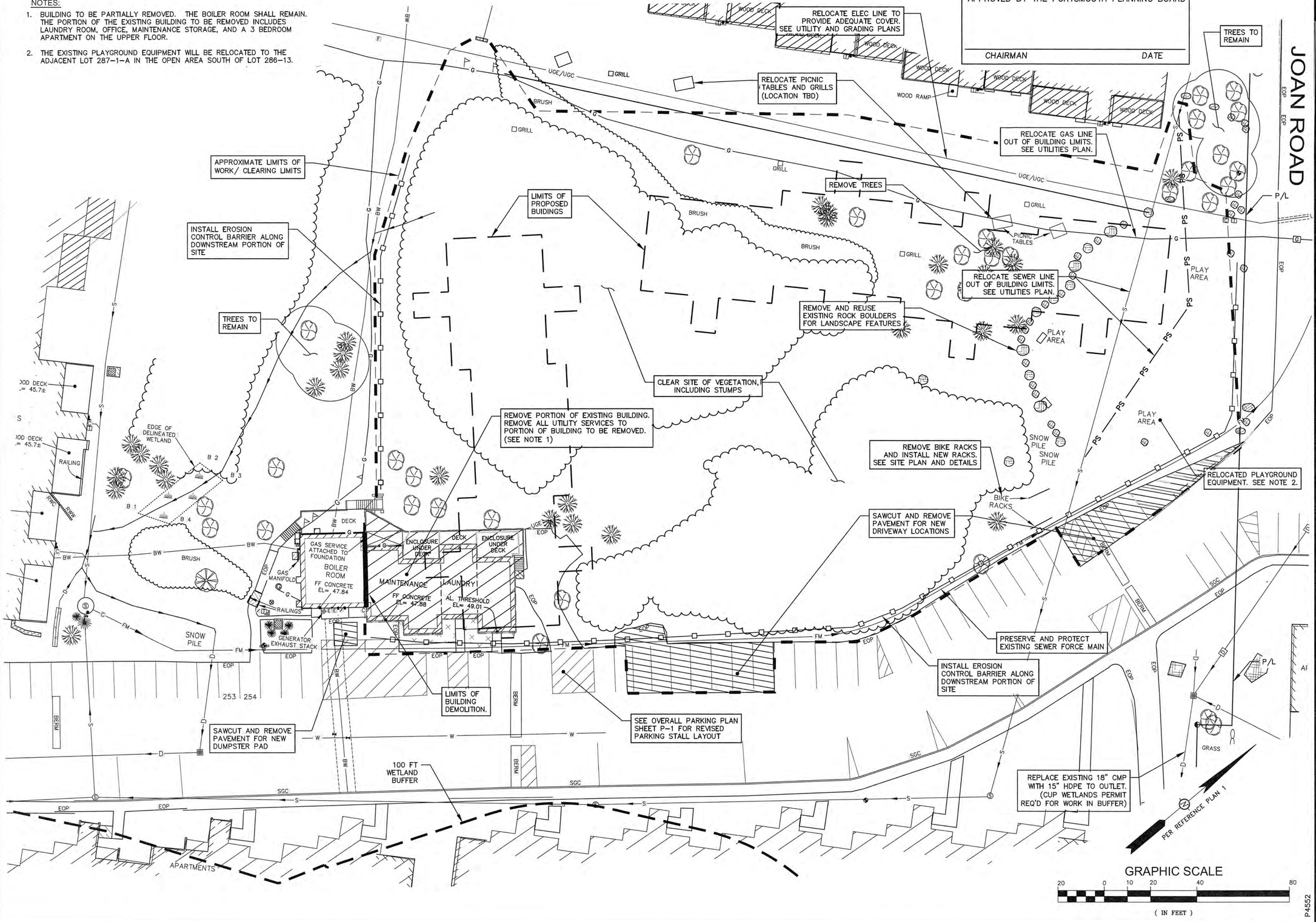
C-1

NOTES:

1. BUILDING TO BE PARTIALLY REMOVED. THE BOILER ROOM SHALL REMAIN. THE PORTION OF THE EXISTING BUILDING TO BE REMOVED INCLUDES LAUNDRY ROOM, OFFICE, MAINTENANCE STORAGE, AND A 3 BEDROOM APARTMENT ON THE UPPER FLOOR.
2. THE EXISTING PLAYGROUND EQUIPMENT WILL BE RELOCATED TO THE ADJACENT LOT 287-1-A IN THE OPEN AREA SOUTH OF LOT 286-13.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

P4552

ENGINEER:

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SCALE:
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CAMBRIDGE, MA 02138

PROJECT:

ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT

145 LANG ROAD
PORTSMOUTH, NH

TAX MAP 287, LOT 01

TITLE:

DEMOLITION PLAN

SHEET NUMBER:

C-2

ZONING SUMMARY:

SEE GENERAL NOTES SHEET GN–1 FOR ZONING TABLE

THE FOLLOWING VARIANCES WERE GRANTED BY THE ZONING BOARD OF ADJUSTMENT IN NOVEMBER 20, 2018:

1. SECTION 10.521– TO PROVIDE ONE UNIT PER 8,321 SF WHERE 10,000 IS REQUIRED. DENSITY CALCULATIONS BASED ON PARCEL SIZE OF 35.53 ACRES. NUMBER OF UNITS REQUESTED IS 186.
2. SECTION 10.522 – CONSTRUCT A NEW 225 FT AND 170 FOOT LENGTH MULTI–FAMILY BUILDING WHERE 160 FEET IS ALLOWED. FOUR OF THE EXISTING MULTI–FAMILY BUILDINGS ON SITE ARE 285 FEET IN LENGTH.

PARKING CALCULATIONS:

PER ZONING REGULATION 10.1110 FOR MULTI–FAMILY BUILDINGS

186 UNITS X 1.3 STALLS PER UNIT	=	245 STALLS
VISITOR PARKING 1 STALL PER 5 UNIT	=	38 STALLS
MINIMUM STALLS ALLOWED	=	283 STALLS
MAXIMUM ALLOWABLE STALLS (120% MIN)	=	340 STALLS
TOTAL STALLS PROVIDED	=	340 STALLS

* SEE OVERALL PARKING PLAN, SHEET P–1 FOR SITE LAYOUT

BICYCLE PARKING:

TWO VISITOR BICYCLE RACKS ARE PROVIDED AT EACH BUILDING. PER SECTION 10.1116, ONE BICYCLE PARKING SPACE PER 5 UNITS. 9 BICYCLE SPACES REQUIRED, 10 SPACES PROVIDED.

THE SOLE PURPOSE OF THIS PLAN IS TO DEPICT THE LOCATION OF EXISTING AND PROPOSED IMPROVEMENTS ON THE SITE. RECORDING OF THIS PLAN WAS A REQUIREMENT OF THE PORTSMOUTH PLANNING BOARD AS PART OF THEIR APPROVAL.

FOR JAMES VERRA & ASSOCIATES, INC.

DATE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

JOAN ROAD

BEECHSTONE DRIVE

WOOD DECK
WOOD DECK
WOOD DECK
WOOD DECK
WOOD DECK
WOOD DECK
WOOD DECK
WOOD RAMP
GRILL
RELOCATE GRILL AND PICNIC TABLES (FINAL LOCATION TBD IN FIELD, TYP)
WOOD DECKS (TYP)
RAINGARDEN #1
24" WIDE STONE DRIP EDGE (TYP)
BUILDING #2 3 STORY – 24 UNIT MULTI–FAMILY BUILDING
32.2
MECHANICAL ROOM (TYP)
25.7
EXISTING TREE LINE (TYP)
RELOCATE BOULDERS (FINAL LOCATION TBD IN FIELD)
RAINGARDEN #2
BIKE RACK
SNOW STORAGE
VGC
FLUSH CURB AND TIPDOWN
VAN
ADA AND VAN ACCESSIBLE STALLS (SEE DETAILS)
5 FT WIDE CONCRETE SIDEWALK (TYP)
BUILDING #1 3 STORY – 18 UNIT MULTI–FAMILY BUILDING
EXISTING BUILDING AND DECK TO BE REMOVED (SEE DEMOLITION PLAN)
24.0
62.0
21
10
11
5
8.5
19.0
R=25
R1–1 STOP SIGN AND 12" STOP BAR
SWL
15.0
R=10
P/L
NEW CROSSWALK
WOOD DECK EL= 45.7±
WOOD DECK EL= 45.7±
B 1
B 2
B 3
B 4
BOILER ROOM TO REMAIN
CONSTRUCT NEW WALL SEE ARCHITECTURAL PLANS
DECK
UGE
BOILER ROOM FF CONCRETE EL= 47.84
25.0
FLUSH CURB AND TIPDOWNS
ADA ACCESSIBLE STALL (SEE DETAILS)
LIGHT POLE (TYP)
PERMEABLE PAVERS (TYP, SEE DETAILS)
MEET AND MATCH EXISTING DRIVE
BIKE RACK (6, TYP)
R=3 (TYP)
R=15 (TYP)
SNOW STORAGE
MATCHLINE (SEE BELOW)
PROPOSED DUMPSTER PAD WITH ENCLOSER (SEE DETAILS)
CONSTRUCT 5 FT WIDE BITUMINOUS SW W/ BIT CURB
NEW CROSSWALK
MEET AND MATCH EXISTING PAVEMENT
CONSTRUCT 5 FT WIDE BITUMINOUS SW W/ BIT CURB
CROSSWALK (8' WIDE W/12" BARS @ 3' O.C., TYP)
MEET AND MATCH EXISTING DRIVE
R1–1 STOP SIGN AND 12" STOP BAR
CRUSHED STONE 2'W
EOP
MEET AND MATCH EXISTING BIT SIDEWALK
MATCHLINE (SEE ABOVE)
APARTMENTS
PER REFERENCE PLAN 1

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

P4787.2

ENGINEER:
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133 COURT STREET PORTSMOUTH, NH 03801
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STATE OF NEW HAMPSHIRE – CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER
5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

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DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4787.2_SITE.DWG

SCALE:
22" x 34" – 1" = 20'
11" x 17" – 1" = 40'

OWNER OF RECORD:
ARBOR VIEW & THE PINES LLC.
C/O FOREST PROPERTIES MGMT
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT INC.
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH

TAX MAP 287, LOT 01

TITLE:
SITE PLAN

SHEET NUMBER:
C-3

NOTES

- SEDIMENT TRAPS AND/OR BASINS SHALL BE BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
- STORMWATER PONDS AND SWALES MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- FINAL LOCATION OF YARD DRAINS TO BE DETERMINED IN FIELD. FOUNDATIONS DRAINS TO TIE INTO COLLECTION SYSTEM.

DRAINAGE STRUCTURES

PDMH #1
RIM = 48.50
8" INV. IN=43.20 (YD2)
12" INV. IN=43.20 (OS2)
6" INV. IN= 43.70 (UD)
12" INV. OUT=43.10 (CB5)

YARD DRAIN (YD) #1
RIM = 49.5
6" INV. IN(2)= 43.70 (RD)
8" INV. OUT= 46.50

YARD DRAIN (YD) #2
RIM = 47.25
6" INV. IN = 43.75 (UD)
8" INV. OUT= 43.50

STORMWATER PRACTICES

RAINGARDEN #1

BOTTOM AREA=1000 SF
BOTTOM ELEV = 46.0
BERM ELEV = 48.0
OVERFLOW WEIR, ELEV = 47.5

SEDIMENT FOREBAY
BOTTOM AREA = 175 SF
BOTTOM ELEV = 47.5
BERM ELV = 49.0
OVERFLOW WEIR, ELEV = 48.5

RAINGARDEN #2

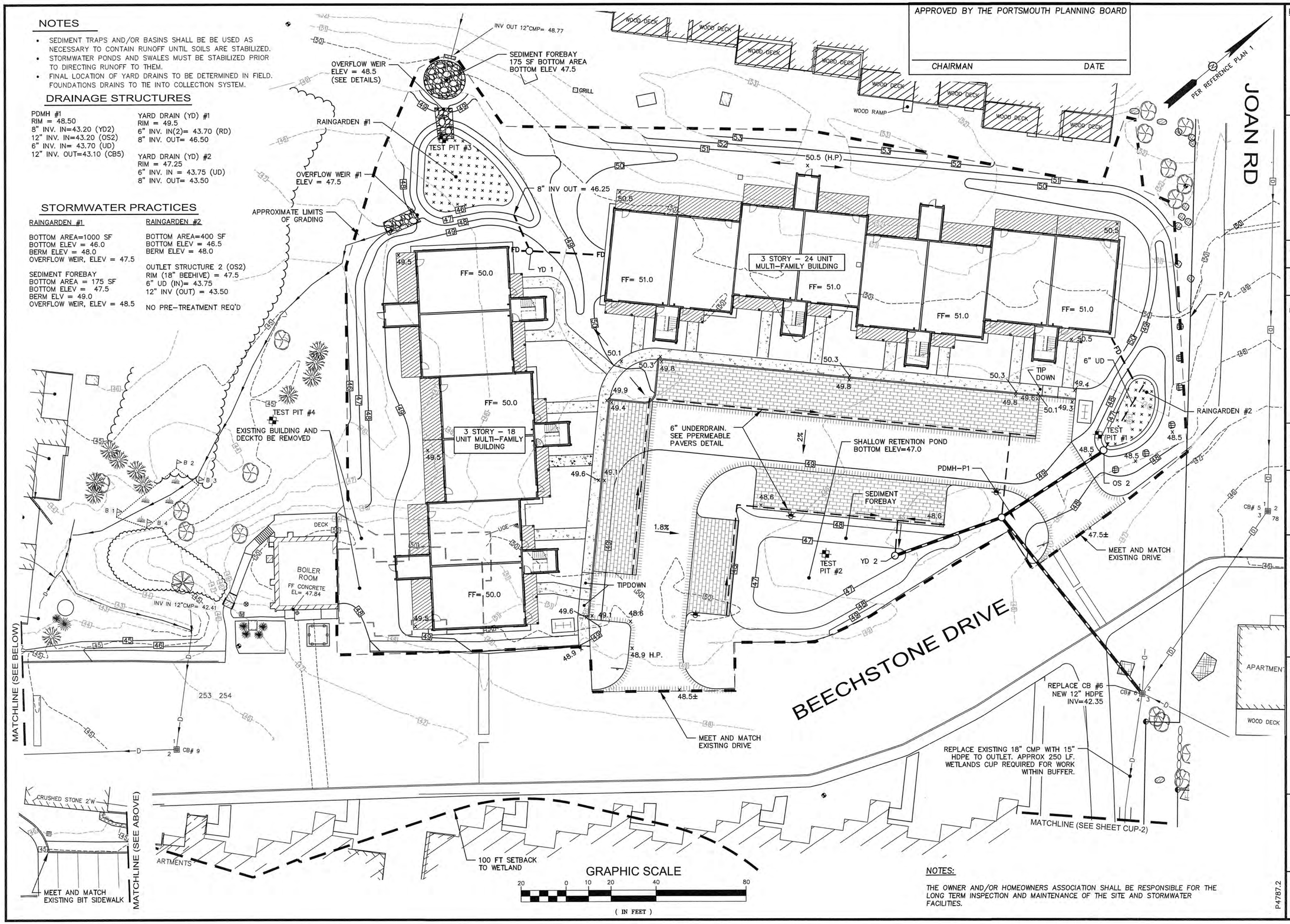
BOTTOM AREA=400 SF
BOTTOM ELEV = 46.5
BERM ELEV = 48.0

OUTLET STRUCTURE 2 (OS2)
RIM (18" BEEHIVE) = 47.5
6" UD (IN)= 43.75
12" INV (OUT) = 43.50

NO PRE-TREATMENT REQ'D

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE



GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

NOTES:

THE OWNER AND/OR HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR THE LONG TERM INSPECTION AND MAINTENANCE OF THE SITE AND STORMWATER FACILITIES.

P4787.2

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ALTUS ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
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STATE OF NEW HAMPSHIRE
CORY D. BELDEN
No. 14239
LICENSED PROFESSIONAL ENGINEER
5/20/19

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C/O FOREST PROPERTIES MGMT
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT INC.
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

PROJECT:

ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT

145 LANG ROAD
PORTSMOUTH, NH

TITLE:

GRADING AND DRAINAGE PLAN

SHEET NUMBER:

C-4

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

SEWER STRUCTURES

PROPOSED SEWER MH #1
RIM = 52.1
8" INV. IN = 46.70 (VIF)
8" INV. OUT= 46.20

PROPOSED SEWER MH #2
RIM = 50.2
8" INV. IN = 45.10
8" INV. OUT= 45.00

PROPOSED SEWER MH #3
RIM = 49.2
8" INV. IN = 44.0
8" INV. OUT= 43.45 (VIF)

RELOCATE GASE AND ELECTRIC LINES OUT OF STORMWATER TREATMENT AREAS.

RAINGARDEN #1

VERIFY LOCATION OF EXISTING GAS LINE AND RELOCATE AS REQUIRED.

MECHANICAL ROOM (ELECTRIC/HVAC)

PROPOSED GAS SERVICES FROM EXISTING CROSS COUNTRY GAS (TYP)

PROPOSED ELECTRICAL TO MECHANICAL ROOMS (TYP)

EXISTING HOT WATER FROM BOILER ROOM (BW)

MECHANICAL ROOM (WATER AND SPRINKLER)

3 STORY – 24 UNIT MULTI-FAMILY BUILDING

3 STORY – 18 UNIT MULTI-FAMILY BUILDING

6" SEWER INV. ELEV = 43.0

6" SEWER INV. ELEV = 43.5

MECHANICAL ROOM (ELECTRIC/HVAC)

MECHANICAL ROOM (WATER AND SPRINKLER)

BOILER ROOM
FF CONCRETE ELEV = 47.84

DECK

FIRE HYDRANT

NEW TRANSFORMER TO SERVICE TWO NEW BUILDINGS

6" X 10" TEE WITH 6" GATE VALVE FOR FIRE SUPPESSSION SERVICE. VERIFY SIZE OF MAIN PRIOR TO CONSTRUCTION.

6" FIRE SUPPRESSION WATER SERVICE

PROPOSED 2" DIA DOMESTIC WATER SERVICE AND CORP STOP. VERIFY SIZE W/ MECHANICAL DWGS.

EXISTING 10" WATER MAIN CONFIRM SIZE AND LOCATION IN FIELD PRIOR TO CONSTRUCTION.

6" PVC SDR 35 SEWER (S = 0.005)

6" PVC SDR 35 SEWER (S = 0.020) AND 4" PVC VENT PIPE (TANK TO BLDG)

SEWER PUMP STATION (SEE DETAILS)

LIGHT POLE (TYP) SEE SITE LIGHTING PLAN

6" X 10" TEE FOR FIRE SUPPESSSION SERVICE. VERIFY SIZE OF MAIN PRIOR TO CONSTRUCTION.

6" FIRE SUPPRESSION SERVICE AND 6" GATE VALVE.

PSMH 1

PROPOSED 8" SEWER (SDR 35) (S = 0.014)

PROPOSED 2" DIA DOMESTIC WATER SERVICE W/ CORP STOP. VERIFY SIZE WITH MECHANICAL DWGS.

PSMH 3

PROPOSED 8" SEWER (SDR 35) (S = 0.013)

3" SEWER FORCE MAIN TO CONNECT TO GRAVITY SEWER MH AT JOAN RD/JOAN AVE INTERSECTION.

MEET AND MATCH EXISTING DRIVE

JOAN RD

BEECHSTONE DRIVE

APARTMENTS

WOOD DECK

WOOD RAMP

SMH# 11

SMH# 8

SMH# 7

SMH# 6

PER REFERENCE PLAN 1

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

P4787.2

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APPLICANT:
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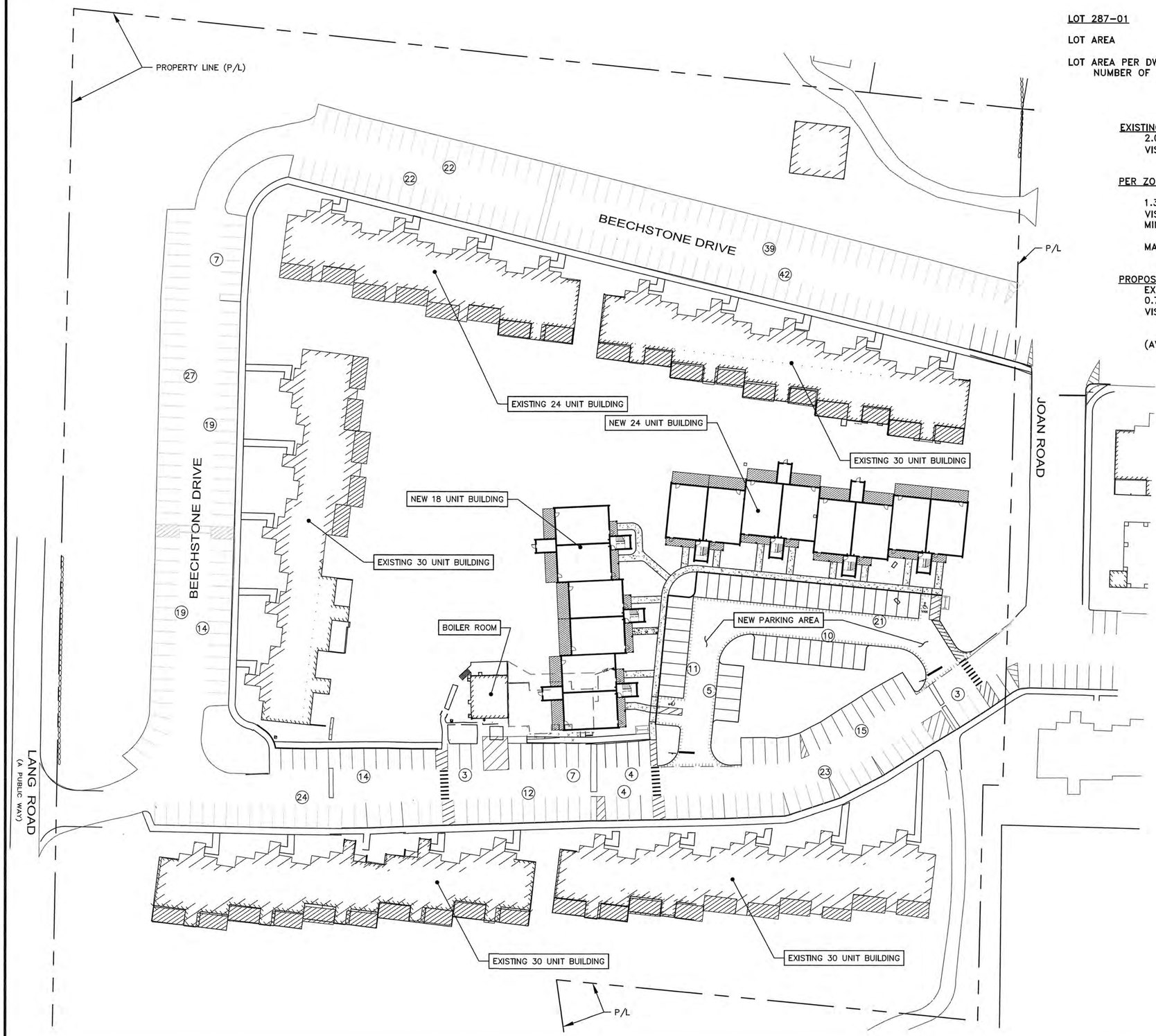
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH

TITLE:
UTILITIES PLAN

SHEET NUMBER:
C-5



PARKING CALCULATIONS

ZONING DISTRICT GA/MH

LOT 287-01

	REQUIRED	EXISTING	PROPOSED
LOT AREA	5.0 Acres	35.53 Acres	35.53 Acres
LOT AREA PER DWELLING (DENSITY)	10,000 SF	10,673 SF	8,321± SF
NUMBER OF UNITS	154 (ALLOWED)	145	186*

EXISTING (145 UNITS)

2.07 STALLS PER UNIT	= 300 STALLS
VISITOR PARKING (1 STALL PER 5 UNITS)	= 29 STALLS
TOTAL EXISTING STALLS	= 329 STALLS

PER ZONING REGULATION 10.1110 FOR MULTI-FAMILY BUILDINGS:

1.3 STALLS PER UNIT	= 242 STAALS
VISITOR PARKING (1 STALL PER 5 UNITS)	= 38 STALLS
MINIMUM STALLS ALLOWED	= 280 STALLS
MAXIMUM ALLOWABLE STALLS (120% MIN)	= 336 STALLS

PROPOSED (186 UNITS)

EXISTING RESIDENTIAL PARKING STALLS	= 300 STALLS
0.7 STALLS PER 42 NEW UNITS	= 29 STALLS
VISITOR PARKING (1 STALL PER 5 UNITS)	= 38 STALLS
PROVIDED	= 367 STALLS

(AVE 1.77 STALLS PER UNIT + 1 VISITOR STALL PER 5 UNITS)

PER REFERENCE PLAN 1

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

P4787.2

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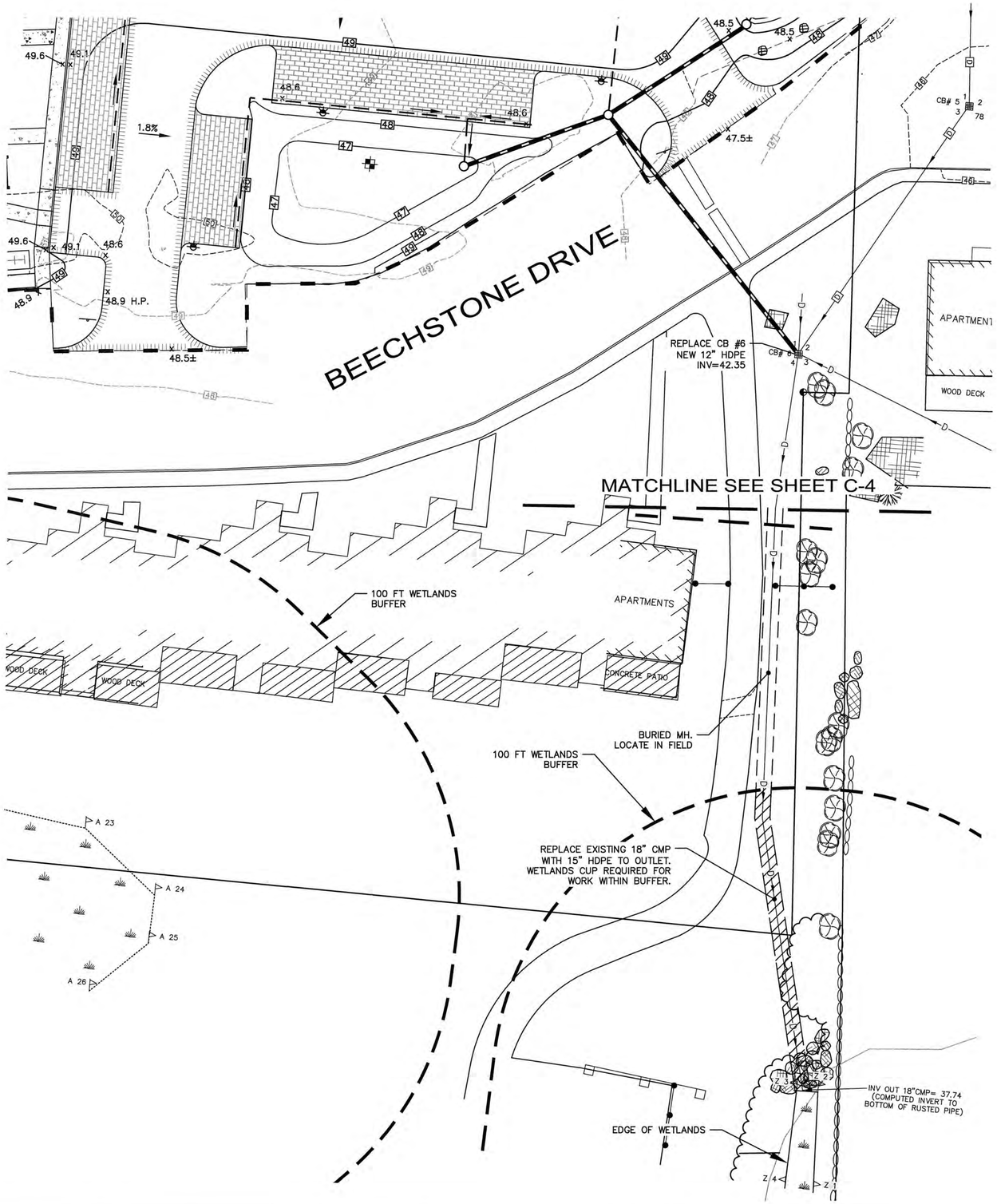
PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH

TITLE:
CONDITIONAL USE PARKING PLAN

SHEET NUMBER:
CUP-1



CHAIRMAN DATE

SUMMARY

THE PROPOSED PROJECT WILL IMPACT APPROXIMATELY 500 SF OF WETLANDS BUFFER AREA. THIS IMPACT IS WITHIN AN ALREADY DEVELOPED AREA AND IS FOR THE REPLACEMENT OF A CORRODED 18" CORRUGATED METAL PIPE (CMP) THAT WAS INSTALLED IN THE 1980'S. THE 18" CMP WILL BE REPLACED WITH A 15" HDPE PIPE, WHICH WILL HAVE APPROXIMATELY THE SAME HYDRAULIC CAPACITY DUE TO THE REDUCTION IN FRICTION FACTOR. A DRAINAGE STUDY HAS BEEN PREPARED FOR THE PROPOSED ARBOR VIEW APARTMENTS DEVELOPMENT THAT SHOWS THE POST-DEVELOPMENT FLOWS WILL NOT BE INCREASED AT THIS LOCATION.

WETLANDS IMPACT TABLE

DIRECT IMPACT TO WETLANDS = 0 SF

IMPACT TO WETLANDS BUFFER = 500 SF

PER REFERENCE PLAN 1

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

P4787.2

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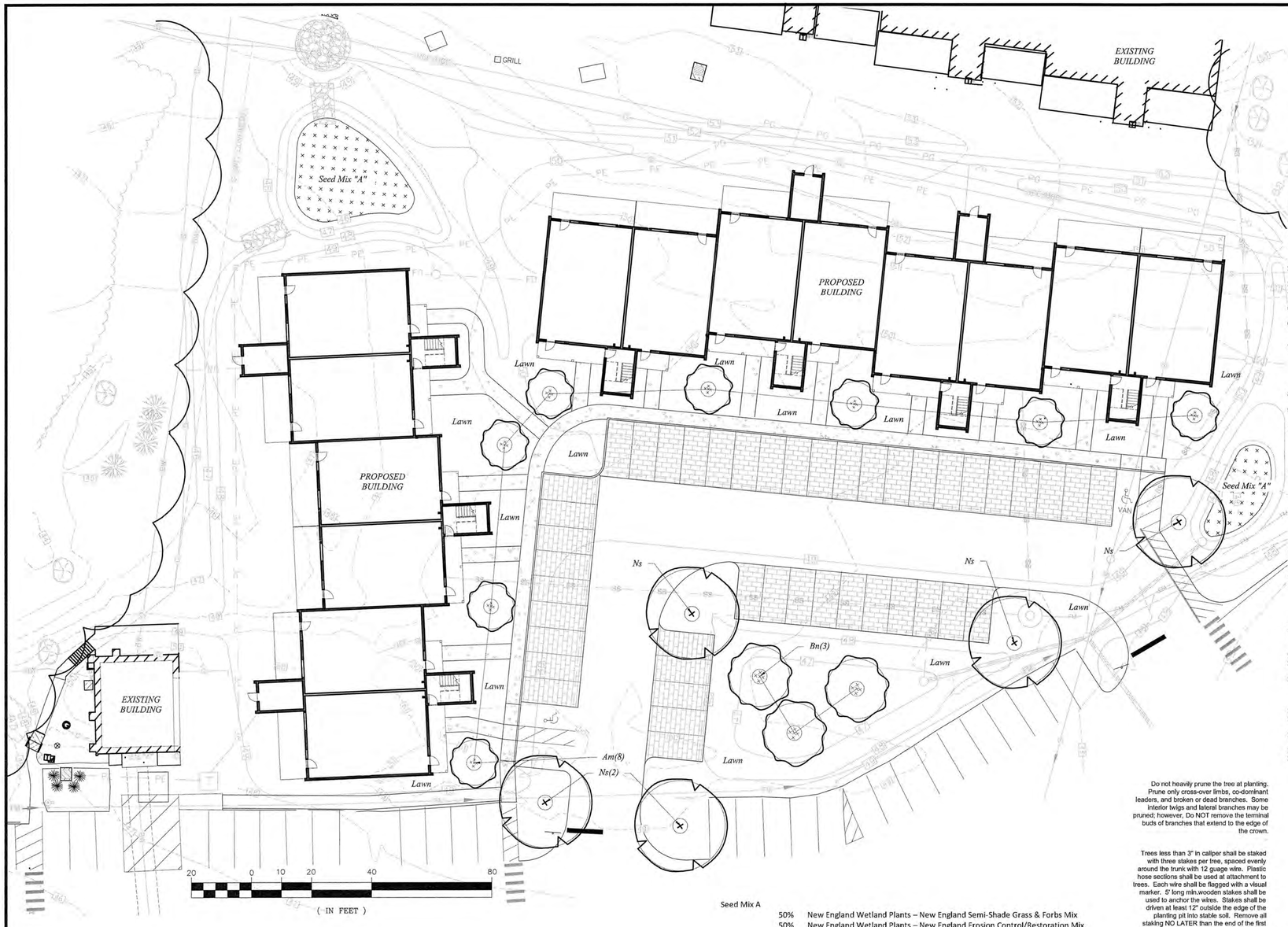
PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT

145 LANG ROAD
PORTSMOUTH, NH

TITLE:
CONDITIONAL USE WETLANDS PLAN

SHEET NUMBER:
CUP-2



Seed Mix A

50%	New England Wetland Plants – New England Semi-Shade Grass & Forbs Mix
50%	New England Wetland Plants – New England Erosion Control/Restoration Mix for Detention Basins & Moist Sites

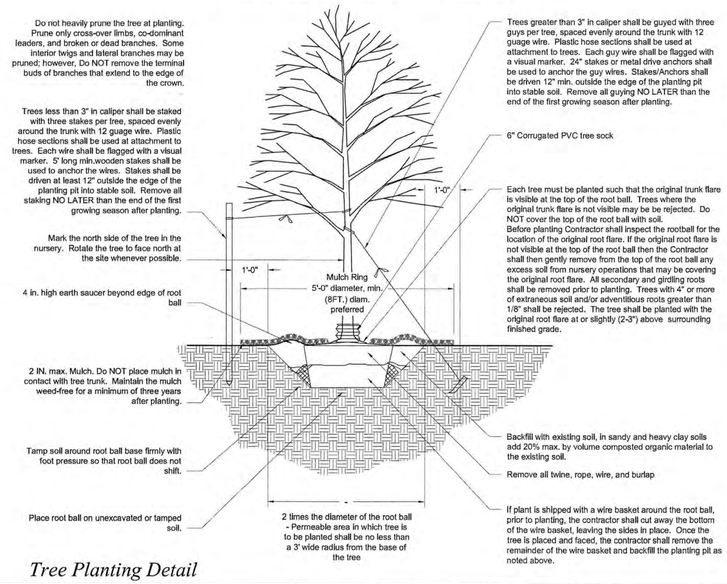
Plant List

TREES

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Ns	*Nyssa Sylvatica*	Black Tupelo	5	2.5-3" Cal	B&B
Am	*Amelanchier x grandiflora 'Robin Hill'*	Robin Hill Serviceberry	8	8-10' Ht	Multi-Stem B&B
Bn	*Betula nigra 'Heritage'*	Heritage River Birch	3	8-10' Ht	Multi-Stem B&B

Landscape Notes

1. Design is based on drawings by Altus Engineering and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
5. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
6. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
7. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. In the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with either of the following
    a. An underground sprinkling system
    b. An outside hose attachment within 150 feet
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
22. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
23. Drip strip shall extend to 6" beyond roof overhang and shall be edged with 3/16" thick metal edger.
24. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
25. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 8' to allow clear and safe passage of vehicles and pedestrians under tree canopy.
26. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
27. Landscape Architect is not responsible for the means and methods of the contractor.



Tree Planting Detail

P4787.2

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS:

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	VM	05/20/19

DRAWN BY: VM
APPROVED BY: RW
DRAWING FILE: 4787.2_SITE.DWG

SCALE:
22" x 34" – 1" = 20'
11" x 17" – 1" = 40'

OWNER OF RECORD:
ARBOR VIEW & THE PINES LLC.
C/O FOREST PROPERTIES MGMT
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT INC.
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH

TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L-1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	S3	2	Lithonia Lighting	DSX0 LED P3 40K T3M MVOLT SPA DDBXD with SSS 16 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 16ft	LED	1	DSX0_LED_P3_40K_T3M_MVOLT.ies	8205	0.9	71
	S5	1	Lithonia Lighting	DSX0 LED P3 40K T5M MVOLT SPA DDBXD with SSS 16 4C DM19AS DDBXD	DSX0 LED Area Fixture; mounted at 16ft	LED	1	DSX0_LED_P3_40K_T5M_MVOLT.ies	8770	0.9	71
	W4	7	Lithonia Lighting	WST LED P2 40K VF MVOLT	WST LED Wallpack; mounted at 16ft	LED	1	WST_LED_P2_40K_VF_MVOLT.ies	3469	0.9	25

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Outside of Parking Lot	+	0.5 fc	5.3 fc	0.0 fc	N/A	N/A
Parking Lot	+	1.3 fc	3.5 fc	0.4 fc	8.8:1	3.3:1

ARBOR VIEW APARTMENTS
Site Lighting Layout

Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842

Date
5/13/2019

Scale
1"=20'

Drawing No.

Summary

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

Owner:
ARBOR VIEW & THE PINES, LLC
C/O FOREST PROPERTIES MANAGEMENT, INC.
625 MT. AUBURN STREET, SUITE 210
CAMBRIDGE, MA 02138

LATITUDE: 043° 01' 31" N
LONGITUDE: 070° 47' 10" W

DESCRIPTION

The project consists of the expansion of a previously disturbed and partially developed area within the "Arbor View" complex consisting of two 3–story residential buildings with 42 residential units total, reconfiguration of parking and access, grading, storm drainage improvements, underground utilities installation, landscaping and associated site improvements.

DISTURBED AREA

The total area to be disturbed on the parcel and for the buildings, driveway, parking area, drainage, and utility construction is approximately 83,000 SF± (1.9 acres±). The combined disturbed area exceeds 43,560 SF (1 acre), thus a SWPPP will be required for compliance with the USEPA–NPDES Construction General Permit.

NPDES CONSTRUCTION GENERAL PERMIT

Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) is accordance with federal storm water permit requirements (see "Developing Your Stormwater Pollution Prevention Plan", EPA 833–R–060–4). The SWPPP must be prepared in a format acceptable to the Owner and provided to the City at least fourteen (14) days prior to initiating construction. Contractor is responsible for all cost associated with preparation and implementation of SWPPP including any temporary erosion control measures (whether indicated or not on these drawings) as required for the contractor's sequence of activities.

The Contractor and Owner shall each file a Notice of Intent (NOI) with the U.S.E.P.A. under the NPDES Construction General Permit. (U.S.E.P.A., 1200 Pennsylvania Avenue NW, Washington, DC 20460) All work shall be in accordance with NPDES General Permit: NHG07000, including NOI requirements, effluent limitations, standards and management for construction. The Contractor shall be responsible for obtaining a USEPA Construction Dewatering Permit, if required.

SEQUENCE OF MAJOR ACTIVITIES

1. Prepare SWPPP and file NPDES Notice of Intent, prior to any construction activities (Required).
2. Hold a pre–construction meeting with City & stake holders.
3. Install temporary erosion control measures, including silt fences and stabilized construction entrance.
4. Protect specified trees (see plans).
5. Terminate & relocate existing utilities as required. Demolish portion of existing building. See Demolition Plan.
6. Clear and Grub vegetated areas per plan; Strip and stockpile loam. Stockpiles shall be temporarily stabilized with hay bales, mulch and surrounded by a hay bale or silt fence barrier until material is removed and final grading is complete. Remove debris.
7. Remove ledge.
8. Construct swales and utility infrastructure. Rough grade lot to prepare for site development. Construct temporary sediment control basins. Stabilize swales prior to directing flow to them.
9. Construct building foundations. Construct bituminous concrete pavement & driveway access.
10. Loam and seed disturbed areas.
11. Construct raingardens & landscaping after site is stabilized.
12. When all construction activity is complete and site is stabilized, remove all hay bales, stone check dams (if applicable), silt fences and temporary structures and sediment that has been trapped by these devices.
13. File a Notice of Termination (N.O.T.) with U.S.E.P.A. (Required)

NAME OF RECEIVING WATER

The majority of the site connects to the stormwater collection system and eventually discharging to Berry's Brook.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 – 3", issued December 2008, as amended. As indicated in the sequence of Major Activities, the silt fences shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area, silt fences and any earth/dikes will be removed once permanent measures are established.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through hay bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with hay bale filters or stone check dams. Stone rip rap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

Stabilize all ditches, swales, stormwater ponds, level spreaders and their contributing areas prior to directing flow to them.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the plan:

1. The smallest practical portion of the site shall be denuded at one time, but in no case shall it exceed 5 acres at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.5 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built–up sediment shall be removed from silt fence or other barriers when it has reached one–third the height of the fence or bale, or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. All roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.
9. All cut and fill slopes shall be seeded/loamed within 72 hours of achieving finished grade.
10. An area shall be considered stable if one of the following has occurred:
    a. Base coarse gravels have been installed in areas to be paved;
    b. A minimum of 85% vegetated growth as been established;
    c. A minimum of 3 inches of non–erosive material such as stone of riprap has been installed;
    – or –
    d. Erosion control blankets have been properly installed.
11. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

1. Timing – In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
    a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
    b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

2. Guidelines for Winter Mulch Application –

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrub plantings.
Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1–1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	* The organic matter content is between 80 and 100%, dry weight basis. * Particle size by weight is 100% passing a 6" screen and a minimum of 70 %, maximum of 85%, passing a 0.75" screen. * The organic portion needs to be fibrous and elongated. * Large portions of silts, clays or fine sands are not acceptable in the mix. * Soluble salts content is less than 4.0 mmhos/cm. * The pH should fall between 5.0 and 8.0.

3. Maintenance – All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

C. TEMPORARY GRASS COVER

1. Seedbed Preparation –
Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.

2. Seeding –
    a. Utilize annual rye grass at a rate of 40 lbs/acre.
    b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
    c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance –
Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

D. FILTERS

1. Tubular Sediment Barrier
    a. See detail.
    b. Install per manufacturer's requirements.

2. Silt Fence (if used)
    a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

Physical Property	Test	Requirements
Filtering Efficiency	VTM–51	75% minimum
Tensile Strength at 20% Maximum Elongation*	VTM–52	Extra Strength 50 lb/lin in (min) Standard Strength 30 lb/lin in (min)
Flow Rate	VTM–51	0.3 gal/sf/min (min)

* Requirements reduced by 50 percent after six (6) months of installation.

Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizer to provide a minimum of six (6) months of expected usable construction life at a temperature range of 0 degrees F to 120° F.

    b. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location or as recommended by the manufacturer and driven securely into the ground (minimum of 16 inches).

    c. A trench shall be excavated approximately six (6) inches wide and eight (8) inches deep along the line of posts and upslope from the barrier.

    d. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire shall extend no more than 36 inches above the original ground surfaces.

    e. The "standard strength" filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

    f. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item (g) applying.

    g. The trench shall be backfilled and the soil compacted over the filter fabric.

    h. Silt fences shall be removed when they have served their useful purpose but not before the upslope areas has been permanently stabilized.

3. Sequence of Installation –
Sediment barriers shall be installed prior to any soil disturbance of the contributing upslope drainage area.

4. Maintenance –
    a. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water, the sediment barriers shall be replaced with a temporary stone check dam.

    b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.

    c. Sediment deposits must be removed when deposits reach approximately one–third (1/3) the height of the barrier.

    d. Any sediment deposits remaining in place after the silt fence or other barrier is no longer required shall be removed. The area shall be prepared and seeded.

    e. Additional stone may have to be added to the construction entrance, rock barrier and riprap lined swales, etc., periodically to maintain proper function of the erosion control structure.

E. PERMANENT SEEDING –

1. Bedding – stones larger than 1½", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.

2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds 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 @ 100 lbs. per 1,000 s.f.
    10–20–20 fertilizer @ 12 lbs. per 1,000 s.f.

3. Seed Mixture (See Landscape Drawings for additional information):

    3.1. Lawn seed mix shall be a fresh, clean new seed crop. The Contractor shall furnish a dealer's guaranteed statement of the composition of the mixture and the percentage of purity and germination of each variety.
    3.2. Seed mixture shall consist of
        a. 1/3 Kentucky blue,
        b. 1/3 perennial rye, and
        c. 1/3 fine fescue.
    3.1. Turf type tall fescue is unacceptable.

4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

WINTER CONSTRUCTION NOTES

1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. 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;

2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and

3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.

WINTER CONSTRUCTION NOTES

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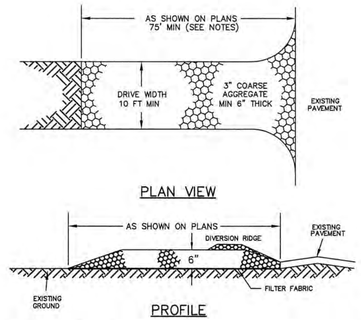
Long Term Inspection & Maintenance Schedule

	Spring	Fall or Yearly	After Major Storm	Every Few Years
Vegetated Areas				
Inspect all slopes and embankments	x		x	
Replant bare areas or areas with sparse growth	x		x	
Armor areas with rill erosion with an appropriate lining or divert the erosive flows to on–site areas able to withstand concentrated flows.	x		x	
Stormwater Channels				
Inspect ditches, swales and other open stormwater channels	x	x	x	
Remove any obstructions and accumulated sediments or debris	x	x		
Control vegetated growth and woody vegetation		x		
Repair any erosion of the ditch lining		x		
Mow vegetated ditches		x		
Remove woody vegetation growing through riprap		x		
Repair any slumping side slopes		x		
Replace riprap where underlying filter fabric or underdrain gravel is exposed or where stones have been dislodged		x		
Culverts				
Remove accumulated sediments and debris at inlet, outlet and within the conduit	x	x	x	
Repair any erosion damage at the culvert's inlet and outlet	x	x	x	
Remove woody vegetation growing through riprap		x		
Roadways and Parking Surfaces				
Remove accumulated winter sand along roadways	x			
Sweep pavement to remove sediment	x			
Grade road shoulders and remove excess sand either manually or by a front–end loader	x			
Grade gravel roads and gravel shoulders	x			
Clean out sediment contained in water bars or open–top culverts	x			
Ensure that stormwater is not impeded by accumulations of material or false ditches in the roadway shoulder	x			
Runoff Infiltration Facilities				
Remove dead vegetation and any accumulated sediment (normally at the entrance to the garden) to allow for new growth	x			
Weed; add additional hardwood mulch to suppress weeds	x	x		
Mow turf three (3) times a growing season				
Aerate area with deep tines, if water ponds on the surface for more than 24 hours during the first year or for a length of 72 hours		x		
Vegetative Swale				
Mow grass swales monthly				
Inspect swale following significant rainfall event	x	x	x	
Control vegetated growth and woody vegetation	x	x		
Repair any erosion of the ditch	x	x		
Remove debris and liter as necessary				

NOTE:
ALL FACILITIES SHOULD BE INSPECTED ON AN ANNUAL BASIS AT A MINIMUM. IN ADDITION, ALL FACILITIES SHOULD BE INSPECTED AFTER A SIGNIFICANT PRECIPITATION EVENT TO ENSURE THE FACILITY IS DRAINING APPROPRIATELY AND TO IDENTIFY ANY DAMAGE THAT OCCURRED AS A RESULT OF THE INCREASED RUNOFF. FOR THE PURPOSE OF THIS STORMWATER MANAGEMENT PROGRAM, A SIGNIFICANT RAINFALL EVENT IS CONSIDERED AN EVENT OF THREE (3) INCHES IN A 24–HOUR PERIOD OR 0.5 INCHES IN A ONE–HOUR PERIOD. IT IS ANTICIPATED THAT A SHORT, INTENSE EVENT IS LIKELY TO HAVE A HIGHER POTENTIAL OF EROSION FOR THIS SITE THAN A LONGER, HIGH VOLUME EVENT.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

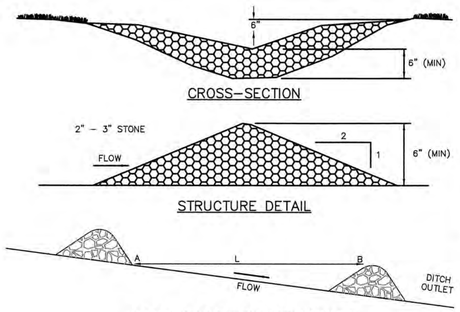
CHAIRMAN DATE



CONSTRUCTION SPECIFICATIONS

1. REFERENCE NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3 (LATEST EDITION), SECTION 4.2 "TEMPORARY CONSTRUCTION EXIT" REQUIREMENTS AND BMP DETAIL.
2. STONE SIZE – 3" COARSE AGGREGATE
3. THICKNESS – SIX (6) INCHES (MINIMUM).
4. LENGTH – 75 FOOT MINIMUM, OR 50 FOOT ALLOWED WHEN DIVERSION RIDGE IS PROVIDED.
5. WIDTH – 1/2 OF DRIVEWAY (10 FOOT MINIMUM).
6. FILTER FABRIC – MIRAFI 600X OR APPROVED EQUAL.
7. SURFACE WATER CONTROL – ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
8. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
9. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION EXIT NOT TO SCALE



1. L = DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

2. CHECK DAM SHALL BE CONSTRUCTED OF 2" TO 3" STONE WITH COMPLETE COVERAGE OF DITCH OR SWALE TO INSURE THAT THE CENTER OF THE STRUCTURE IS LOWER THAN THE EDGES.

MAINTENANCE

TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. 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.

CONSTRUCTION SPECIFICATIONS

1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATE VEGETATIVE BMP.
4. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

STONE CHECK DAM NOT TO SCALE

4787

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STATE OF NEW HAMPSHIRE
CORY D. BELDEN
No. 14239
LICENSED PROFESSIONAL ENGINEER
5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
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DRAWN BY: RLH
APPROVED BY: EDW
DRAWING FILE: 4787–DETAILS.DWG

SCALE:
22" x 34" – N.T.S.
11" x 17" – N.T.S.

OWNER OF RECORD:
ARBOR VIEW & THE PINES, LLC
C/O FOREST PROPERTIES MGMT.
625 MOUNT AUBURN STREET
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APPLICANT:
FOREST PROPERTIES MGMT. INC.
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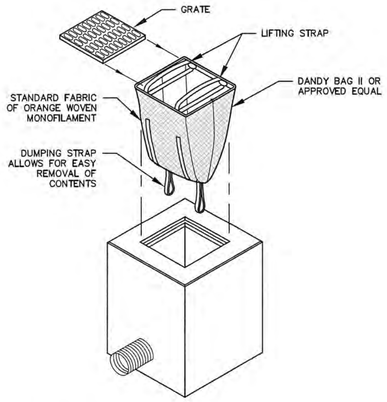
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH
TAX MAP 287, LOT 01

TITLE:
EROSION CONTROL NOTES & DETAILS

SHEET NUMBER:
D-1



INSTALLATION AND MAINTENANCE:

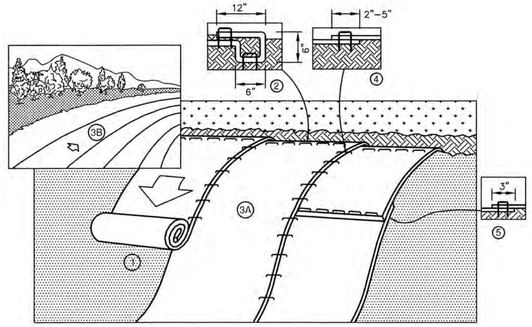
INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS: PLACE ABSORBENT PILLOW IN UNIT. STAND GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO CATCH BASIN INSERT SO THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF THE UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE CATCH BASIN INSERT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.

UNACCEPTABLE INLET PROTECTION METHOD:

A SIMPLE SHEET OF GEOTEXTILE UNDER THE GRATE IS NOT ACCEPTABLE.

STORM DRAIN INLET PROTECTION NOT TO SCALE



NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
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.
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.

EROSION CONTROL BLANKET - SLOPE NOT TO SCALE

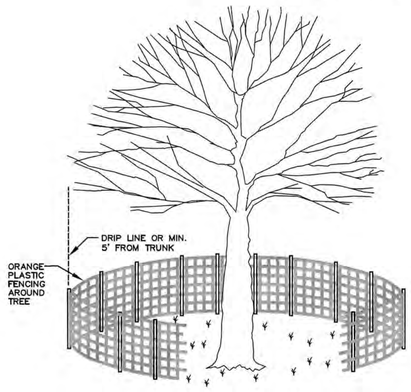
APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

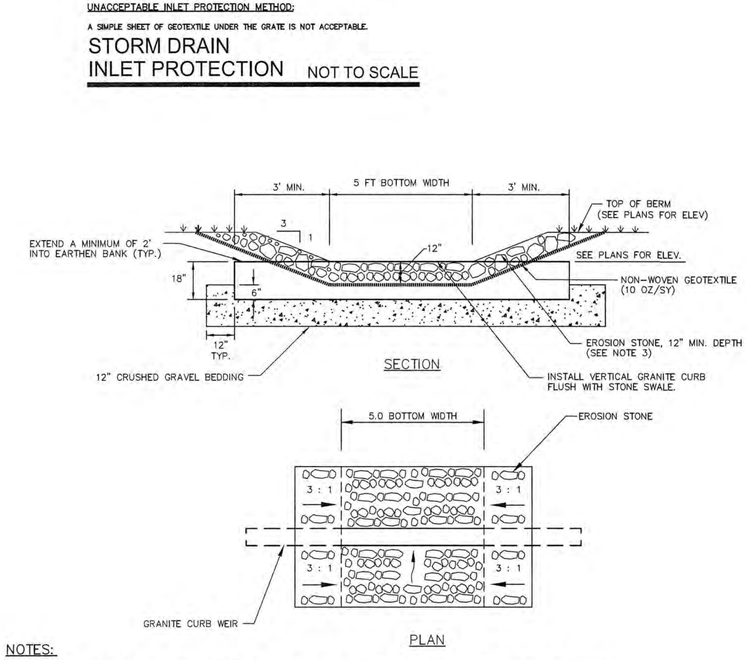
NOTE:
IF SOIL BECOMES COMPATCED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHOULD BE AERATED BY PUNCHING SMALL HOLES IN IT WITH SUITABLE AERATING EQUIPMENT.

ANY DAMAGE TO THE CROWN, TRUNK OR ROOT SYSTEM OF ANY TREE RETAINED ON SITE SHOULD BE REPAIRED IMMEDIATELY. CONSULT A FORESTER OR TREE SPECIALIST FOR MORE SERIOUS DAMAGE OF TREES.

CONTRACTOR TO USE TREE PROTECTION WHERE SUITABLE AND/OR AS DIRECTED BY THE ENGINEER.



TREE PROTECTION DETAILS NOT TO SCALE



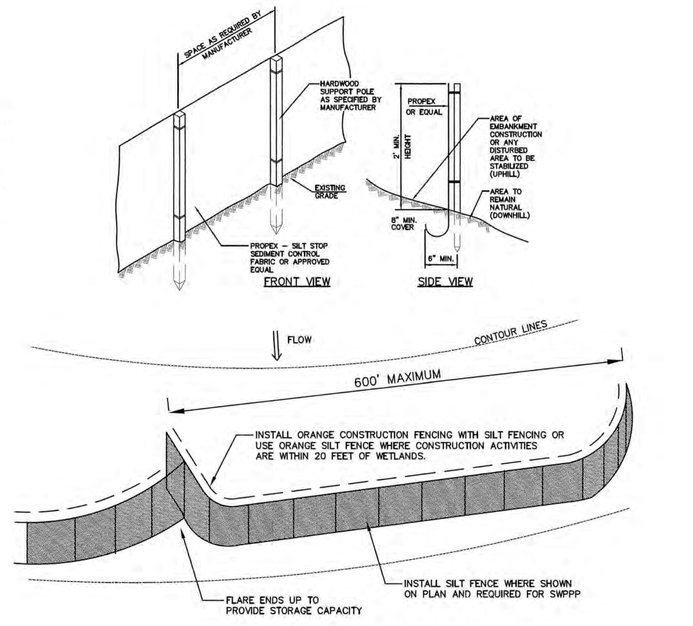
NOTES:

1. CONSTRUCT OUTLET CONTROL STRUCTURE TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
2. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
3. EROSION STONE SHALL MEET THE FOLLOWING GRADATION:

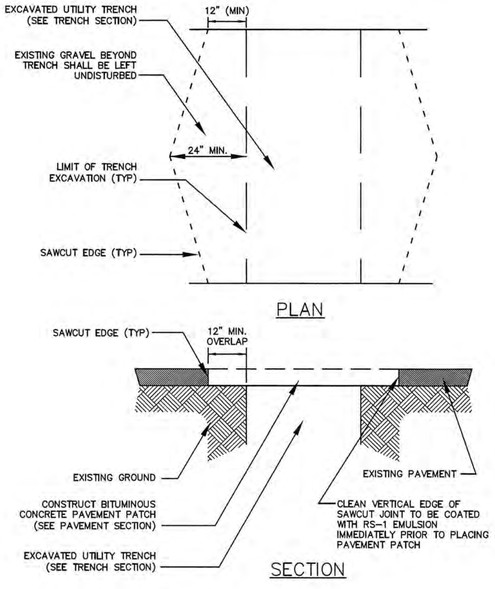
SIZE	PERCENT PASSING BY WEIGHT
18"	100
12"	90–100
4"	0–15

4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. 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 18 INCHES.
5. THE EROSION STONE 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.

OVERFLOW WEIR /OUTLET STRUCTURE NOT TO SCALE



SILT AND ORANGE CONSTRUCTION FENCE DETAIL NOT TO SCALE



NOTES

1. MACHINE CUT EXISTING PAVEMENT.
2. ALL TEMPORARY, DAMAGED OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET NHDOT REQUIREMENTS.

TYPICAL TRENCH PATCH NOT TO SCALE

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145 LANG ROAD
PORTSMOUTH, NH

TAX MAP 287, LOT 01

TITLE:

DETAIL SHEET

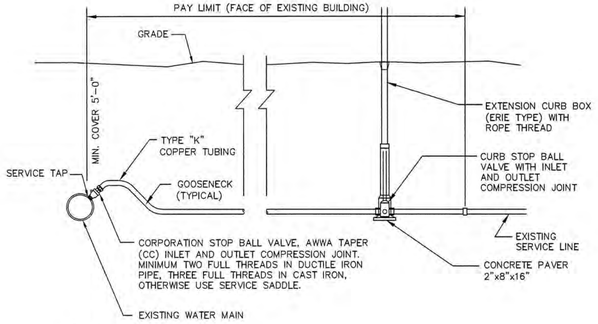
SHEET NUMBER:

D - 2

4787

APPROVED BY THE PORTSMOUTH PLANNING BOARD

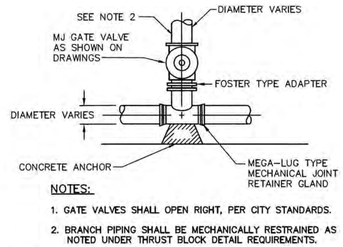
CHAIRMAN DATE



NOTES

1. PROVIDE NEW LINE USING CONTINUOUS LENGTHS OF COPPER. NO COUPLING ALLOWED IN ROADWAY WITHOUT APPROVAL OF ENGINEER.
2. TAPS TO BE MADE AT APPROXIMATELY 2:00 & 10:00
3. PROVIDE FOR SERVICE LINE CONTRACTION AND EXPANSION BY INSTALLING "S" IN SERVICE LINE NEAR MAIN.
4. IF SERVICE IS INSTALLED WITH LESS THAN 5' COVER, INSULATE OVER LINE.
5. REMOVE EXISTING CURB STOP.
6. CONNECT CURB STOP TO EXISTING SERVICE LINE AT PROPERTY LINE OR AT LOCATION APPROVED BY THE ENGINEER (NO COUPLING WITHOUT APPROVAL OF ENGINEER) AFTER PRESSURE TESTING AND DISINFECTION.
7. SHUT OFF EXISTING CORPORATION AND REMOVE OR ABANDON EXISTING SERVICE LINE.
8. CURB BOX SHALL BE SET IN THE GRASS/LANDSCAPE AREA BETWEEN CURB AND SIDEWALK UNLESS DIRECTED OTHERWISE.
9. 2" OR LARGER SERVICE CONNECTIONS SHALL USE A STAINLESS STEEL SERVICE SADDLE.

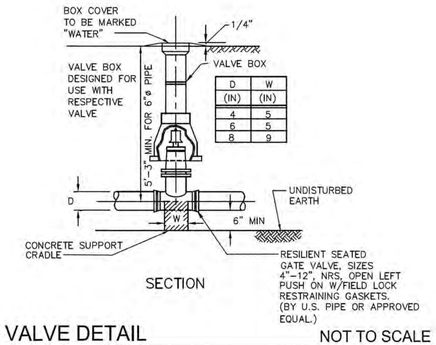
SERVICE CONNECTION DETAIL NOT TO SCALE



NOTES:

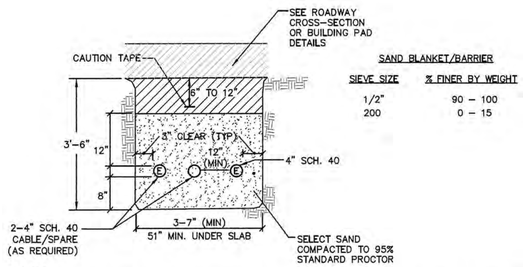
1. GATE VALVES SHALL OPEN RIGHT, PER CITY STANDARDS.
2. BRANCH PIPING SHALL BE MECHANICALLY RESTRAINED AS NOTED UNDER THRUST BLOCK DETAIL REQUIREMENTS.

TEE & GATE VALVE ASSEMBLY DETAIL NOT TO SCALE



SECTION

WATER VALVE DETAIL NOT TO SCALE



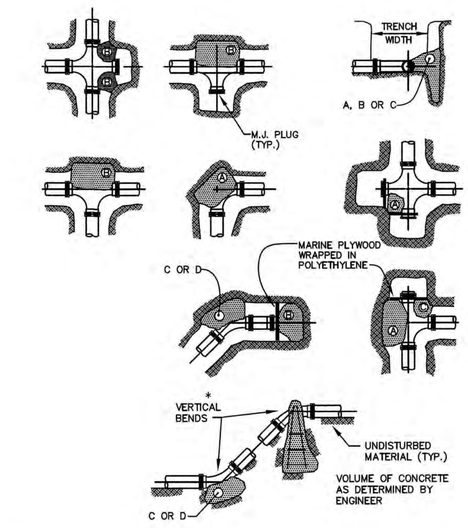
SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. ALL CONDUIT IS TO BE SCHEDULE 40 PVC, ELECTRICAL GRADE, GRAY IN COLOR AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. A 10-FOOT HORIZONTAL SECTION OF RIGID GALVANIZED STEEL CONDUIT WILL BE REQUIRED AT EACH SWEEP, UNLESS IN THE OPINION OF THE SERVICE PROVIDER DESIGNER, THE SWEEP-PVC JOINT IS NOT SUBJECT TO FAILURE DURING PULLING OF THE CABLE. ALL JOINTS ARE TO BE WATERTIGHT.
2. ALL 90 DEGREE SWEEPS WILL BE MADE WITH RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES.
3. BACKFILL MAY BE MADE WITH EXCAVATED MATERIAL OR COMPARABLE, UNLESS MATERIAL IS DEEMED UNSUITABLE BY SERVICE PROVIDER. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE IN 6-INCH LAYERS AND THOROUGHLY COMPACTED.
4. A SUITABLE PULLING STRING, CAPABLE OF 300 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE SERVICE PROVIDER IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT. A MINIMUM OF TWENTY-FOUR (24") INCHES OF ROPE SLACK SHALL REMAIN AT THE END OF EACH DUCT. PULL ROPE SHALL BE INSTALLED IN ALL CONDUIT FOR FUTURE PULLS. PULL ROPE SHALL BE NYLON ROPE HAVING A MINIMUM TENSILE STRENGTH OF THREE HUNDRED (300#) LBS.
5. SERVICE PROVIDER SHALL BE GIVEN THE OPPORTUNITY TO INSPECT ALL CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD SERVICE PROVIDER BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. TYPICAL CONDUIT SIZES ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY. HOWEVER, SERVICE PROVIDERS MAY REQUIRE DIFFERENT NUMBERS, TYPES AND SIZES OF CONDUIT THAN THOSE SHOWN HERE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDUIT SIZES, TYPES AND NUMBERS WITH EACH SERVICE PROVIDER PRIOR TO ORDERING THEM.
7. ROUTING OF CONDUIT, LOCATION OF MANHOLES, TRANSFORMERS, CABINETS, HANDHOLES, ETC., SHALL BE DETERMINED BY SERVICE PROVIDER DESIGN PERSONNEL. THE CONTRACTOR SHALL COORDINATE WITH ALL SERVICE PROVIDERS PRIOR TO THE INSTALLATION OF ANY CONDUIT.
8. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE. WHERE REQUIRED BY UTILITY PROVIDER, CONDUIT SHALL BE SUPPORTED IN PLACE USING PIPE STANCHIONS PLACED EVERY FIVE (5') FEET ALONG THE CONDUIT RUN.
9. UNDER A BUILDING SLAB THE CONDUIT SHALL BE ENCASED IN 8" OF CONCRETE ON ALL SIDES.
10. ALL CONDUIT TERMINATIONS SHALL BE CAPPED TO PREVENT DEBRIS FROM ENTERING CONDUIT.

ELECTRIC / COMMUNICATION TRENCH NOT TO SCALE

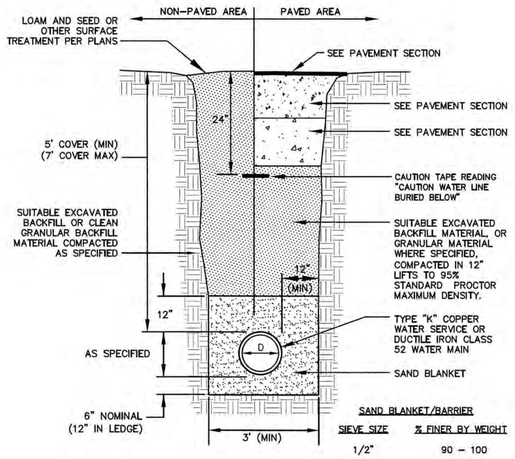


TEST PRESSURE = 150 psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38

NOTES:

1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
5. POLYETHYLENE (6 MIL) SHALL BE PLACED AROUND FITTINGS PRIOR TO CONCRETE PLACEMENT.

THRUST BLOCKING DETAIL NOT TO SCALE



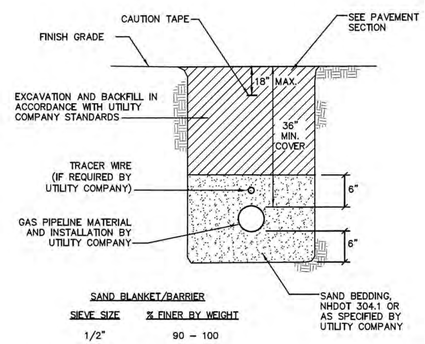
SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. WATER MAINS SHALL BE POLY WRAPPED.
3. WATER MAINS SHALL HAVE 3 WEDGES PER JOINT.

WATER MAIN TRENCH NOT TO SCALE



SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY AND PROVIDE ALL EXCAVATION, COMPACTION AND BACKFILL FOR PIPE INSTALLATION WITHIN THE PROJECT SITE.
2. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

GAS TRENCH NOT TO SCALE

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STATE OF NEW HAMPSHIRE – CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER – 5/20/19

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PROJECT:

ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT

145 LANG ROAD
PORTSMOUTH, NH

TAX MAP 287, LOT 01

TITLE:

DETAIL SHEET

SHEET NUMBER:

D - 3

4787

MANHOLE NOTES:

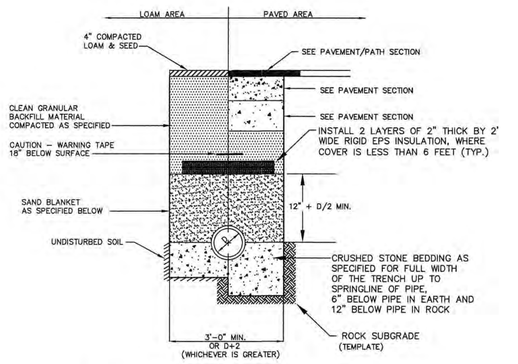
1. IT IS THE INTENTION OF THE NHDES THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT IN ANY APPROVED MANHOLE. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MAN-HOLE CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE, A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2. BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED.
3. PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.
4. LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN'S STANDARD SPECIFICATIONS.
5. 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 HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
6. FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) LETTER "S" FOR SEWERS OR "D" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
7. BEDDING SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33.

   100% PASSING 1 INCH SCREEN — 0-10% PASSING #4 SIEVE
   90-100% PASSING 3/4 INCH SCREEN — 0-5% PASSING #8 SIEVE
   20-55% PASSING 3/8 INCH SCREEN

   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2" TO 1/2" SHALL BE USED.
8. CONCRETE FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000 LBS.) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS:

   CEMENT 6.0 BAGS PER CUBIC YARD
   WATER 5.75 GALLONS PER BAG CEMENT
   MAXIMUM SIZE OF AGGREGATE 1 INCH
9. FLEXIBLE JOINT A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:

   PVC PIPE - 60"
   RCP & CI PIPE - ALL SIZES - 48"
   AC & VC PIPE - UP THROUGH 12" DIAMETER - 18"
   AC & VC PIPE - LARGER THAN 12" DIAMETER - 36"
10. 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 H-20 LOADS.



BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.

SAND BLANKET		CRUSHED STONE BEDDING *	
SIEVE SIZE	% FINER BY WEIGHT	SIEVE SIZE	% PASSING BY WEIGHT
1/2"	90 - 100	1"	100
200	0 - 15	3/4"	90 - 100
		3/8"	20 - 55
		# 4	0 - 10
		# 8	0 - 5

* EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

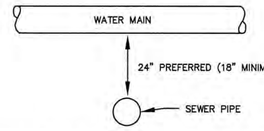
SEWER TRENCH SECTION — NOT TO SCALE

STANDARD TRENCH NOTES:

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN OF THE DRAWING.
2. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33, STONE SIZE NO. 67.
   100% PASSING 1 INCH SCREEN
   90 - 100% PASSING 3/4 INCH SCREEN
   20 - 55% PASSING 3/8 INCH SCREEN
   0-10% PASSING #4 SIEVE
   0-5% PASSING #8 SIEVE
   WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH SHALL BE USED.
3. SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 90 - 100% PASSES 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. BLANKET MAY BE OMITTED FOR CAST-IRON, DUCTILE IRON, AND REINFORCED CONCRETE PIPE PROVIDED HOWEVER, THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE.
4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION; AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.
5. BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES - DIVISIONS 300 AND 400 RESPECTIVELY.
6. SHEETING, IF REQUIRED: WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION 1 FOOT ABOVE THE TOP OF PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAT 1 FOOT ABOVE THE TOP OF THE PIPE.
7. 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 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.) ALSO, W SHALL BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
8. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
9. CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATION REQUIREMENTS FOR CLASS A (3000#) CONCRETE AS FOLLOWS:
   CEMENT: 6.0 BAGS PER CUBIC YARD
   WATER: 5.75 GALLONS PER BAG CEMENT
   MAXIMUM SIZE OF AGGREGATE: 1 INCH
   CONCRETE ENCASEMENT IS NOT ALLOWED FOR PVC PIPE.
10. CONCRETE FULL ENCASEMENT: IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MINIMUM). BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.
11. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES DESIGN STANDARDS REQUIRE TEN FEET (10') SEPARATION BETWEEN WATER AND SEWER. REFER TO CITY'S STANDARD SPECIFICATIONS FOR METHODS OF PROTECTION IN AREAS THAT CANNOT MEET THESE REQUIREMENTS.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

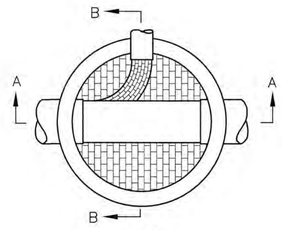
CHAIRMAN DATE



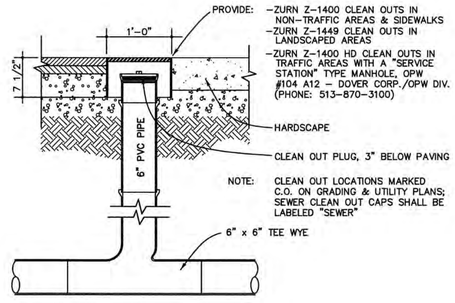
NOTES

1. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER AND SEWER MAINS. A MINIMUM VERTICAL DISTANCE WITH WATER ABOVE SEWER SHALL BE MAINTAINED.
2. SEWER PIPE JOINTS SHALL BE LOCATED A MINIMUM OF 6 FEET HORIZONTALLY FROM WATER MAIN.
3. IF THE REQUIRED CONFIGURATION CANNOT BE MET, THE SEWER MAIN SHALL BE CONSTRUCTED TO MEET THE NHDES REQUIREMENTS FOR FORCE MAIN CONSTRUCTION.

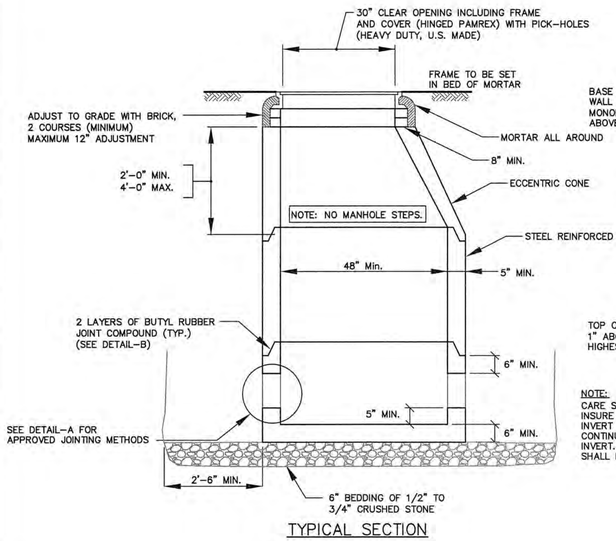
WATER MAIN / SEWER CROSSING — NOT TO SCALE



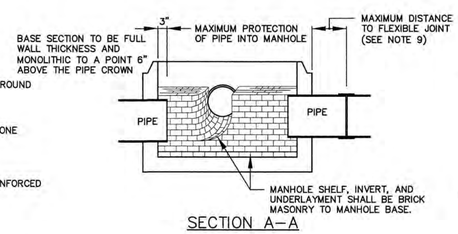
PLAN



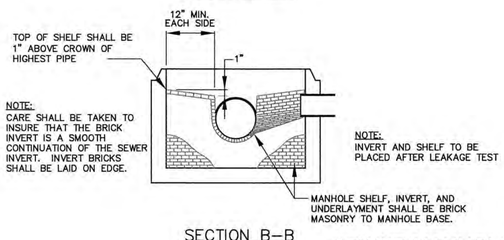
CLEANOUT DETAIL — NOT TO SCALE



TYPICAL SECTION

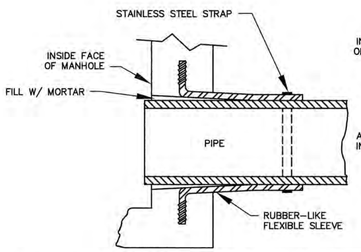


SECTION A-A

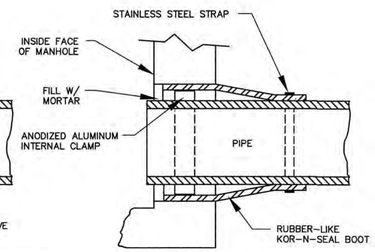


SECTION B-B

SEWER MANHOLE DETAILS — NOT TO SCALE



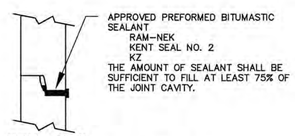
LOCK-JOINT FLEXIBLE MANHOLE SLEEVE (OR EQUAL)



KOR-N-SEAL JOINT SLEEVE (OR EQUAL)

NOTE: ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

DETAIL-A



BITUMASTIC

NOTE: ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

DETAIL-B
(APPROVED MANHOLE SECTION JOINTING METHODS)

4787

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE — CORY D. BELDEN No. 14238 — LICENSED PROFESSIONAL ENGINEER
5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/20/19

DRAWN BY: RLH
APPROVED BY: EDW
DRAWING FILE: 4787-DETAILS.DWG

SCALE:
22" x 34" - N.T.S.
11" x 17" - N.T.S.

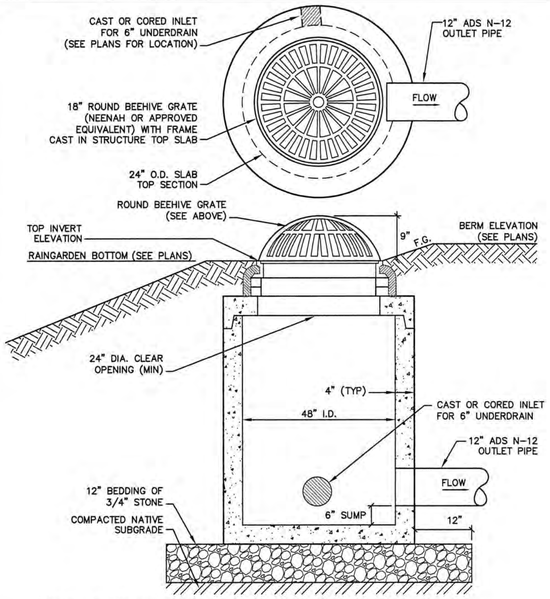
OWNER OF RECORD:
ARBOR VIEW & THE PINES, LLC
C/O FOREST PROPERTIES MGMT.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT. INC.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH
TAX MAP 287, LOT 01

TITLE:
DETAIL SHEET

SHEET NUMBER:
D - 4

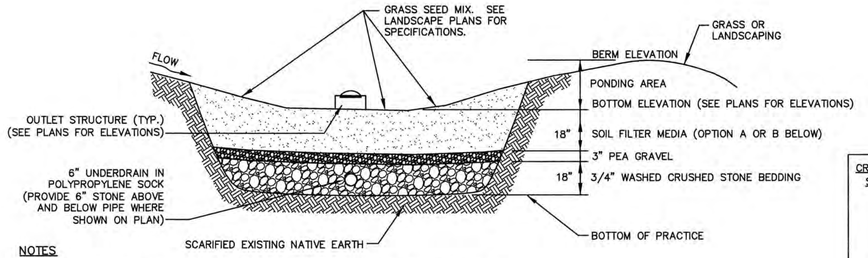


CONSTRUCTION SPECIFICATIONS

1. OUTLET STRUCTURE SHALL BE CONSTRUCTED ONSITE OR PRECAST TO EQUAL DIMENSIONS.
2. ALL JOINTS AND PIPE OPENINGS SHALL BE SEALED WATERTIGHT WITH MORTAR.
3. STRUCTURE IS TO BE BUILT TO WITHSTAND H20 LOADING.
4. SOIL UNDERLYING THE STRUCTURE'S GRAVEL BASE PAD AND THE PAD ITSELF ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR.
5. ALL CONCRETE SHALL BE 4,000 PSI MINIMUM.

OUTLET STRUCTURE DETAIL

NOT TO SCALE



NOTES

1. WHEN CONTRACTOR EXCAVATES RAIN GARDEN AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL FILTER MEDIA SHALL BE EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.

MAINTENANCE REQUIREMENTS

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS IS WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- 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.
- 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.

DESIGN REFERENCES

- UNH STORMWATER CENTER
- EPA (1999A)
- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 2, DECEMBER 2008 AS AMENDED.

CRUSHED STONE BEDDING *

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 –10
# 8	0 – 5

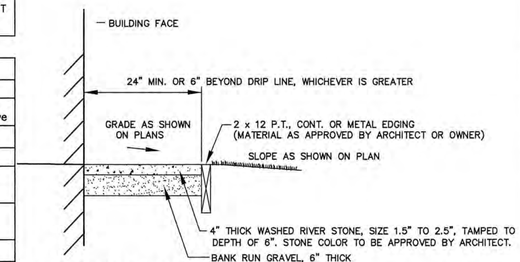
* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 OF NHDOT NHDOT STANDARD SPECIFICATIONS

FILTER MEDIA MIXTURES

Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Filter Media Option B			
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5
Loamy coarse sand	70 to 80	10	85 to 100
		20	70 to 100
		60	15 to 40
		200	8 to 15

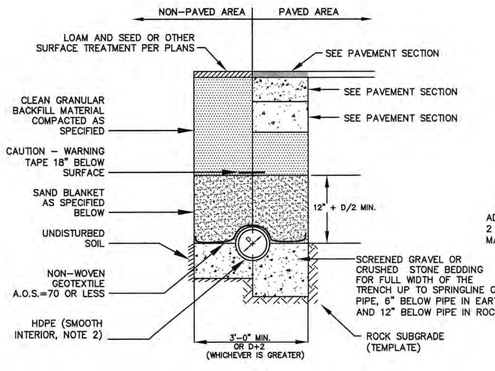
TYPICAL RAINGARDEN

NOT TO SCALE



DRIP EDGE DETAIL

NOT TO SCALE



NOTES:

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. ALL PIPE SHALL BE HDPE WITH SMOOTH INTERIOR AND CORRUGATED EXTERIOR, ADS TYPE N-12 OR APPROVED EQUAL.

SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

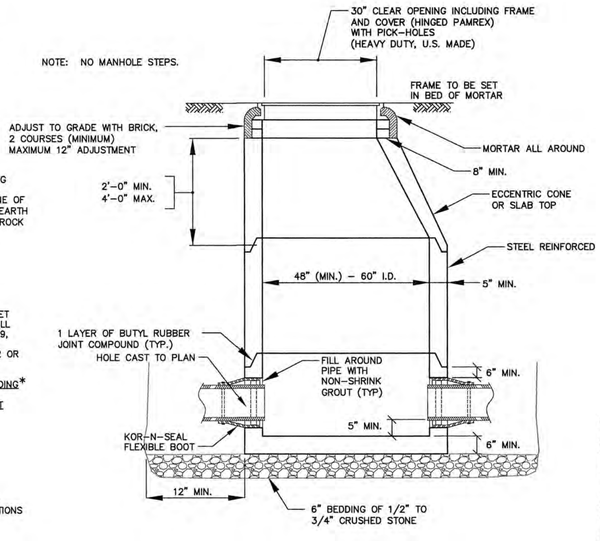
SCREENED GRAVEL OR CRUSHED STONE BEDDING*

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 – 10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

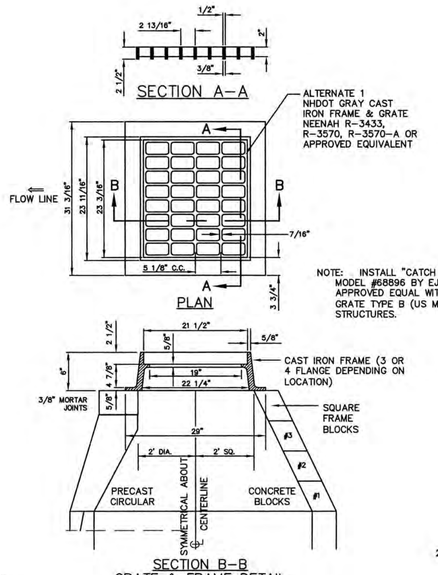
STORM DRAIN TRENCH

NOT TO SCALE



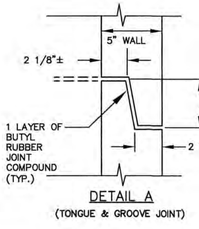
DRAIN MANHOLE DETAIL

NOT TO SCALE

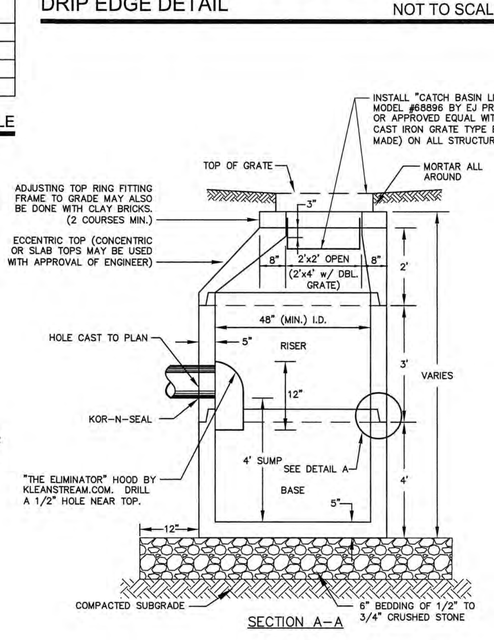


NOTES

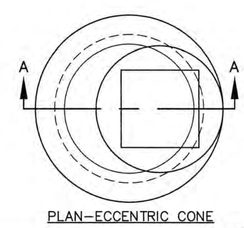
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4000 PSI).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. USE H20 LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4' OF FINISH GRADE.
7. FRAME AND GRATE DIMENSIONS ARE TYPICAL BUT MAY VARY BASED ON PRODUCT SELECTED OR EQUIVALENT APPROVED BY THE ENGINEER.



DETAIL A
(TONGUE & GROOVE JOINT)



SECTION A-A



PLAN-ECCENTRIC CONE

DEEP SUMP CATCH BASIN

NOT TO SCALE

4787

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE – CORY D. BELDEN No. 14239 – LICENSED PROFESSIONAL ENGINEER
5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/20/19

DRAWN BY: RLH
APPROVED BY: EDW
DRAWING FILE: 4787-DETAILS.DWG

SCALE:
22" x 34" – N.T.S.
11" x 17" – N.T.S.

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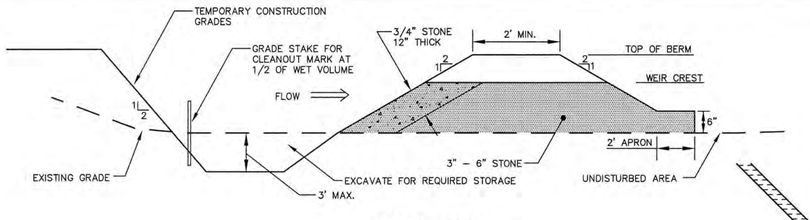
ARBOR VIEW & THE PINES, LLC
C/O FOREST PROPERTIES MGMT.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT. INC.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

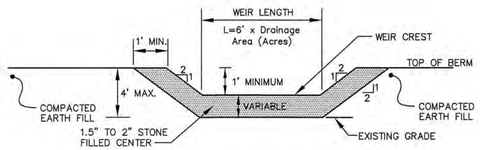
PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH
TAX MAP 287, LOT 01

TITLE:
DETAIL SHEET

SHEET NUMBER:
D - 5



CROSS SECTION



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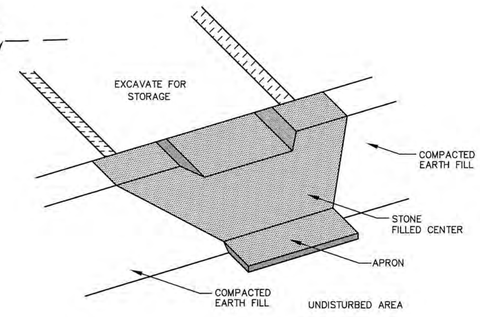
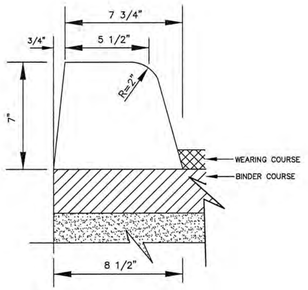


ISOMETRIC VIEW



FULL FACE BITUMINOUS CONCRETE CURB DETAIL

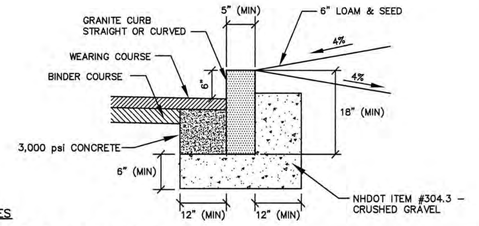
NOT TO SCALE

MAINTENANCE

1. SEDIMENT SHALL BE REMOVED AND THE TRAP SHALL BE RESTORED TO ITS ORIGINAL CAPACITY WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN STORAGE VOLUME. SEDIMENT REMOVED SHALL BE DISPOSED OF SO THAT IT DOES NOT CAUSE A SEDIMENT PROBLEM AT ANOTHER LOCATION.
2. THE STRUCTURE SHALL BE CHECKED BI-WEEKLY AND AFTER EVERY MAJOR STORM TO INSURE THAT IT IS WORKING PROPERLY AND IS NOT DAMAGED. DAMAGE TO THE STRUCTURE SHALL BE REPAIRED IMMEDIATELY.
3. 3/4" STONE SHALL BE CHECKED DURING INSPECTION AND REPLACED WHEN THE OPENINGS IN THE STONE HAVE BECOME CLOGGED.
4. WHEN THE DRAINAGE AREA FLOWING INTO THE BASIN HAS BEEN FULLY STABILIZED, THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA VEGETATED USING LOAM AND SEED WITH MULCH (OR SOD IF NECESSARY) WITHIN 72 HOURS OF THE REMOVAL OF THE BASIN.

TEMPORARY SEDIMENT TRAP (TST) OUTLET

NOT TO SCALE



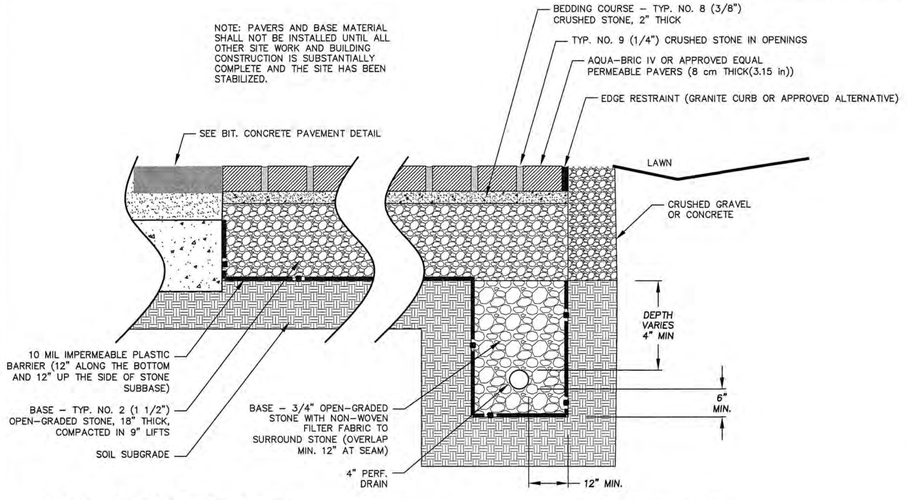
NOTES

1. SEE PLANS FOR CURB LOCATION.
2. SEE PLANS FOR PAVEMENT CROSS SECTION.
3. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
4. MINIMUM LENGTH OF CURB STONES = 4'.
5. MAXIMUM LENGTH OF CURB STONES = 10'.
6. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART.
7. CURB ENDS TO ROUNDED AND BATTERED FACES TO BE CUT WHEN CALL FOR ON THE PLANS.
8. CURB SHALL BE INSTALLED PRIOR TO PLACEMENT OF TOP PAVEMENT COURSE.
9. JOINTS BETWEEN CURB STONES SHALL BE MORTARED.

RADIUS	MAX. LENGTH
21'	3'
22'–28'	4'
29'–35'	5'
36'–42'	6'
43'–49'	7'
50'–56'	8'
57'–60'	9'
OVER 60'	10'

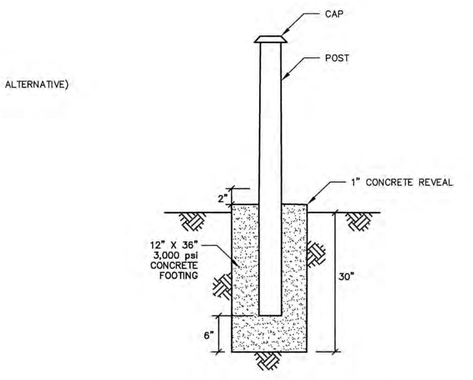
VERTICAL GRANITE CURB

NOT TO SCALE



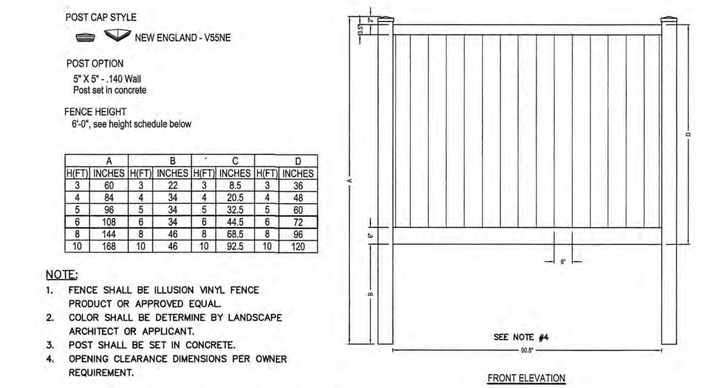
POROUS PAVERS DETAIL

NOT TO SCALE



FENCE POST DETAIL

NOT TO SCALE



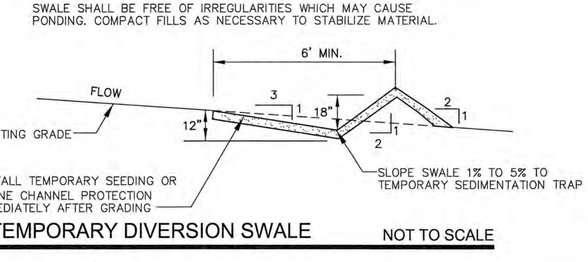
A		B		C		D	
H(FT)	INCHES	H(FT)	INCHES	H(FT)	INCHES	H(FT)	INCHES
3	60	3	22	3	8.5	3	36
4	84	4	34	4	20.5	4	48
5	96	5	34	5	32.5	5	60
6	108	6	34	6	44.5	6	72
8	144	8	46	8	68.5	8	96
10	168	10	46	10	92.5	10	120

NOTE:

1. FENCE SHALL BE ILLUSION VINYL FENCE PRODUCT OR APPROVED EQUAL.
2. COLOR SHALL BE DETERMINE BY LANDSCAPE ARCHITECT OR APPLICANT.
3. POST SHALL BE SET IN CONCRETE.
4. OPENING CLEARANCE DIMENSIONS PER OWNER REQUIREMENT.

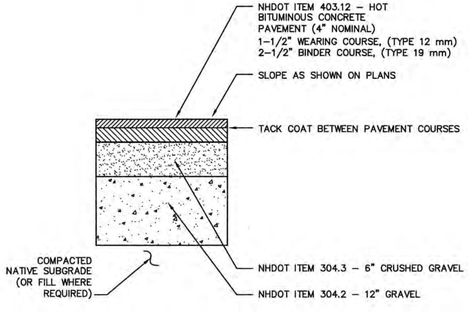
DUMPSTER SCREENING DETAIL

NOT TO SCALE



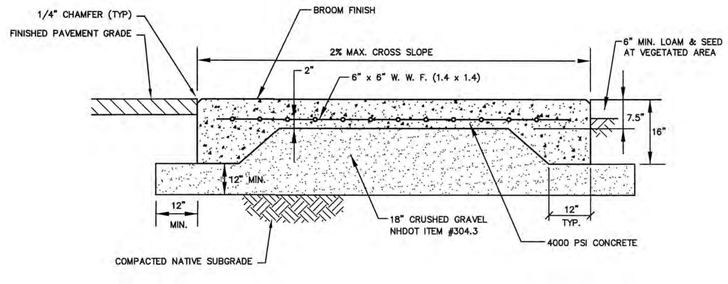
TEMPORARY DIVERSION SWALE

NOT TO SCALE



PAVEMENT CROSS SECTION

NOT TO SCALE



DUMPSTER SLAB DETAILS

NOT TO SCALE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

CORY D. BELDEN No. 14230 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/20/19

DRAWN BY: RLH
APPROVED BY: EDW
DRAWING FILE: 4787-DETAILS.DWG

SCALE:
22" x 34" – N.T.S.
11" x 17" – N.T.S.

OWNER OF RECORD:
ARBOR VIEW & THE PINES, LLC
C/O FOREST PROPERTIES MGMT.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

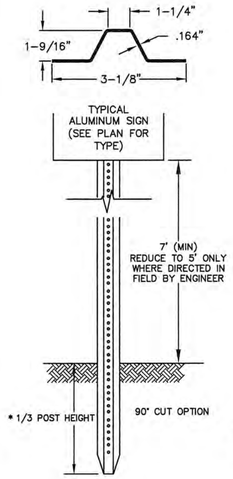
APPLICANT:
FOREST PROPERTIES MGMT. INC.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH
TAX MAP 287, LOT 01

TITLE:
DETAIL SHEET

SHEET NUMBER:
D - 6

4787



NOTES

1. ALL SIGNS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

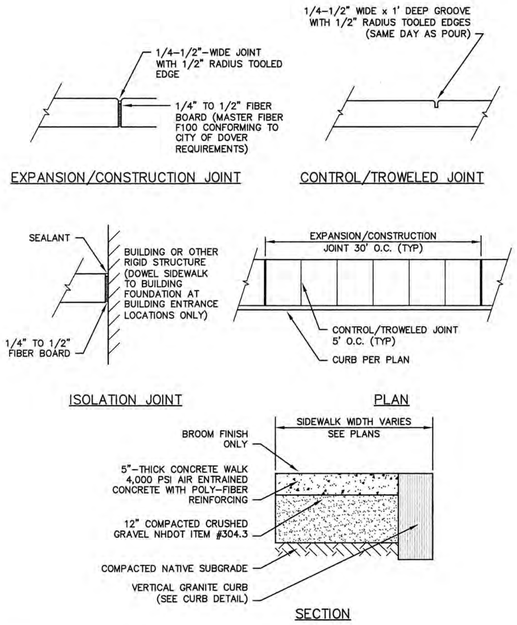
LENGTH: AS REQUIRED

WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)

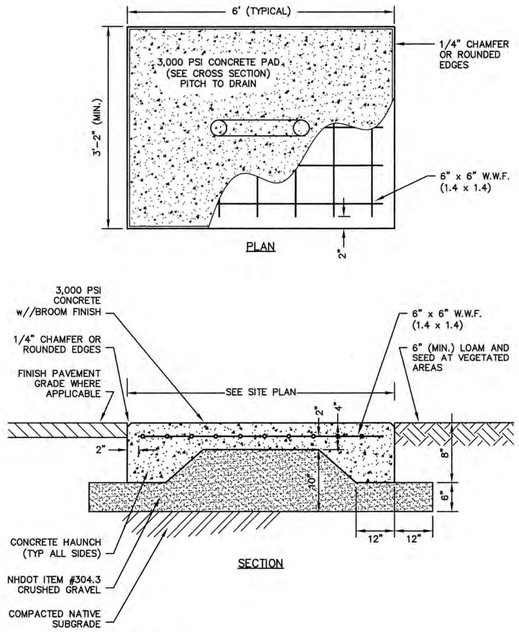
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH

STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)

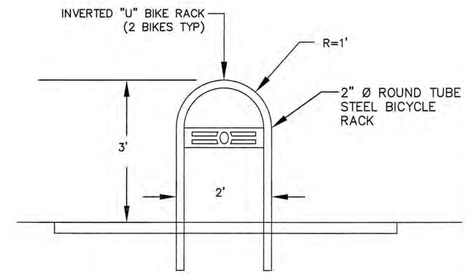
SIGN DETAILS NOT TO SCALE



CONCRETE SIDEWALK DETAIL NOT TO SCALE



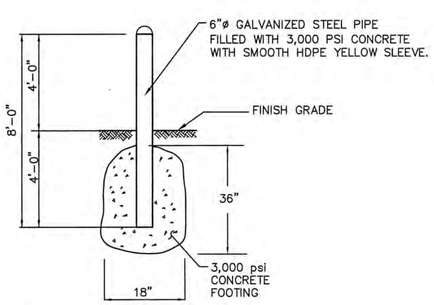
BICYCLE RACK PAD NOT TO SCALE



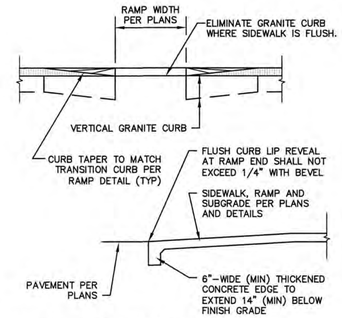
NOTES:

1. INSTALL BICYCLE RACK IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. DETAIL DEPICTS IN-GROUND MOUNT. USE SURFACE MOUNT BICYCLE RACK FOR INSTALLATIONS ON CONCRETE PADS.
3. SEE SITE PLAN FOR LOCATIONS & BICYCLE STALL REQUIREMENTS.

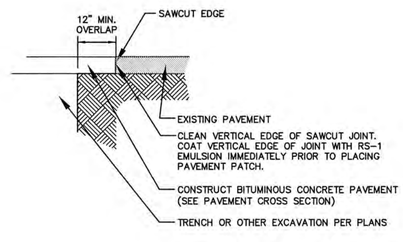
BICYCLE RACK DETAIL NOT TO SCALE



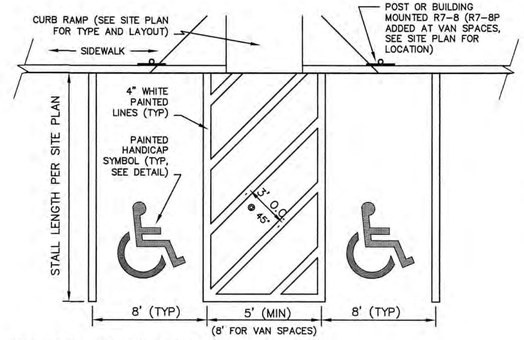
BOLLARD NOT TO SCALE



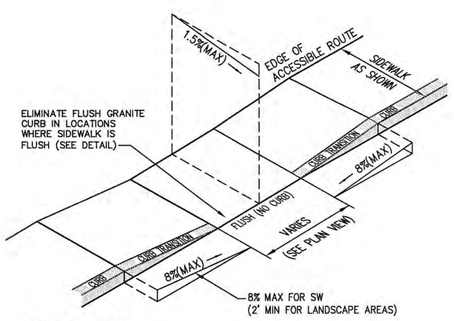
FLUSH CURB AT RAMP DETAIL NOT TO SCALE



TYPICAL PAVEMENT SAWCUT NOT TO SCALE



PARKING STALL LAYOUT NOT TO SCALE

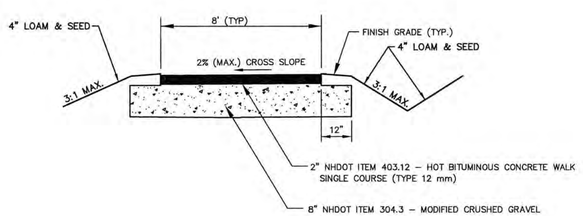


CURB RAMP NOT TO SCALE

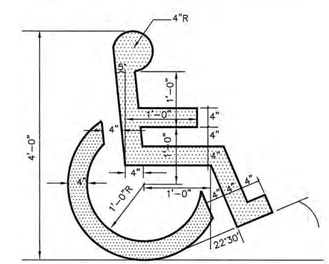
ADDITIONAL NOTES APPLICABLE TO ALL CURB RAMPS:

1. ALL CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) AND ALL APPLICABLE CODES.
2. THE MAXIMUM ALLOWABLE CROSS SLOPE OF AN ACCESSIBLE ROUTE (SIDEWALK) AND CURB SHALL BE 2%.
3. THE MAXIMUM ALLOWABLE RUNNING SLOPE OF AN ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
4. THE MAXIMUM ALLOWABLE RUNNING SLOPE OF AN ACCESSIBLE ROUTE (SIDEWALK) CURB RAMP SHALL BE 8.3% FOR A MAXIMUM ELEVATION CHANGE OF 6".
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. BASE OF RAMP SHALL BE GRADED TO PREVENT THE PONDING OF WATER.
7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
8. FLUSH CURB SECTIONS SHALL HAVE A MAXIMUM LIP REVEAL OF 1/4" WITH A BEVEL AT THE EDGE OF PAVEMENT.
9. EDGES OF SIDEWALK FOOTINGS ALONG FLUSH CURBS SHALL BE HAUNCHED SO AS TO EXTEND TO A MINIMUM DEPTH OF 1' BELOW FINISH GRADE.
10. NO RAMP SHALL BE LESS THAN 4' IN WIDTH.
11. CURB RAMPS SHALL HAVE A FLAT 2% MAX LANDING AT THE TOP AND BOTTOM OF THE RAMPS WHEN THERE IS A CHANGE IN DIRECTION.

NOT TO SCALE



BITUMINOUS CONCRETE SIDEWALK NOT TO SCALE



NOTES

1. SYMBOL TO BE PAINTED IN ALL HANDICAPPED ACCESSIBLE SPACES IN WHITE PAINT (BLUE-PAINTED SQUARE BACKGROUND OPTIONAL).

PAINTED ADA SYMBOL NOT TO SCALE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

ENGINEER:

ALTUS ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

STATE OF NEW HAMPSHIRE - CORY D. BELDEN No. 14238 LICENSED PROFESSIONAL ENGINEER
5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/20/19

DRAWN BY: RLH
APPROVED BY: EDW
DRAWING FILE: 4787-DETAILS.DWG

SCALE:
22" x 34" - N.T.S.
11" x 17" - N.T.S.

OWNER OF RECORD:
ARBOR VIEW & THE PINES, LLC
C/O FOREST PROPERTIES MGMT.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

APPLICANT:
FOREST PROPERTIES MGMT. INC.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH
TAX MAP 287, LOT 01

TITLE:
DETAIL SHEET

SHEET NUMBER:
D - 7

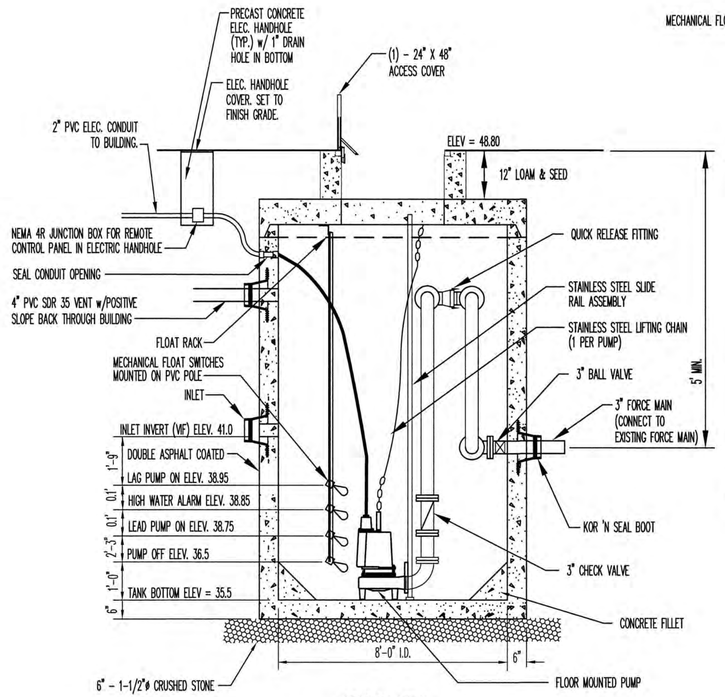
4787

APPROVED BY THE PORTSMOUTH PLANNING BOARD

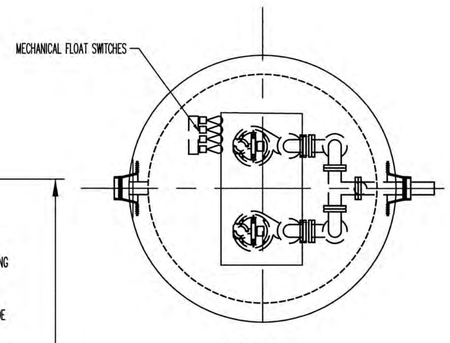
CHAIRMAN DATE

EMERGENCY STORAGE: 1/2 DAY DESIGN FLOW
– 2,444 GALLONS

DRAW DOWN: 2.25'



SECTION VIEW



PLAN VIEW

VOLUME = $\pi 4^2 \times 7.48\ GAL/FT^3 = 376\ GAL/FT.$

SANITARY DESIGN FLOW DATA

Arbor View Apartments (42 Units)
42 apartment units
28 2-bedroom units & 14 3-bedroom units

Design flow based on Metcalf and Eddy/AECOM Wastewater Engineering, 5th Edition (2014) Table 3-3 page 190

Apartment 38 gpd per person typical

Assume 2.5 occupants per 2-bdrm unit and 3.5 occupants per 3 bdrm unit
Average = 2.83 occupants per unit for 42 units

Design flow:=2.83 people x 38 gpd/person *42 units	**4,517 GPD**
Peaking factor 6	
Peak flow (NHDES for design flows under 100,000 gpd)	**27,100 GPD**
Design peak hourly flow (NHDES)	**1129.17 GPH**

PUMP STATION SIZING
Expected flow expected to spread over 16 hours

Peak flow 3.0 x Design flow	**13,550 GPD**
Design peak hourly flow (16 hours)	**847 GPH**
Design Peak (16 hours)	**14.1 GPM**
Design flow (16 hours)	**3.1 GPM**

PUMP STATION SPECIFICATIONS

Pump Station: Furnish and install pump station as shown on the plans. Station shall include but not be limited to a concrete pump chamber, pumps, slide rail assemblies, duplex controller, access cover, discharge piping, fittings, valves, junction box, level sensors, electric service and level controls. All wiring shall be in compliance with the City of Portsmouth, New Hampshire codes.

Pump Chamber: Pump chamber shall be an 8–foot inside diameter precast concrete pump chamber to the depth shown on the Drawings and manufactured by Old Castle Concrete Products or approved equal. Structure shall be designed for an H–20 wheel loading.

Access Cover: The access covers shall be rigidly constructed to provide a 300 lb. live load/square foot rating with a 24" X 48" clear opening by Syracuse Castings or approved equal. Cover shall be sealed with neoprene seal at openings and have hinges constructed of 316 stainless steel.

Pumps: Provide pump motors with adequate horsepower to deliver 85 gpm at 26' TDH, taking into account the manufacturer's rated efficiency. Motors shall be 1.0 HP, 240 Volt single phase, 60 Cycle 1750 rpm, 6.00 diameter impeller unless otherwise specified by the manufacturer and approved by the Engineer. Pumps shall be submersible non–clog sewage pumps designed for typical raw sewage applications with 3" discharge as manufactured by Crane Model SE1074L (Barnes series) or approved equal. Provide discharge piping assembly for installation and removal of pump without entering wetwell (Barnes Breakaway Fitting or equal)

Controller: Duplex control to perform equal alternation of both pumps Control to consist of two circuit breakers with through–door operating handle, two magnetic starters with ambient compensated quick–trip overloads in each line, discharge piping by manufacturer, duplex unit, running lights, lightening arrestor, moisture sensor alarm, temperature alarm, door–mounted resets, hour meters, and door–mounted hand–off–automatic selector switches for each pump. Enclosure to include continuous hinge, neoprene gasket in cover and continuous seam weld. Model to include transformers for 240 volt control circuit. Initial start up will require system to operate with both pumps.

The controls located in the building shall be of Nema 3R construction. All conduit and wiring between the station junction boxes and control panel shall be included.

Slide Rail Assembly: The slide rail assembly, mounting hardware, and lifting chain shall be AISI type 316 stainless steel. Slide rail to be provided with AISI type 316 stainless guide supports. Discharge coupling to be machined cast iron and support the pump four (4) inches above the floor.

Piping: The discharge pipe shall be two (3") inch in diameter SDR 26 or SCH. 40 PVC pipe. All fittings shall be cemented or threaded. PVC Ball check valves shall be provided with teflon seats. The working pressure of the check valves shall be 150 psi.

Level Control: Four (4) liquid level control sensors shall be provided to control operation of the pumps and provide a high water alarm. The level control sensors shall be mounted on a PVC pipe. The controls shall be set at elevations shown on the plans and for a dosage rate of 847 gallons.

Alarm: Alarm shall be interior mounted audio and visual in a location as determined by the Architect. Contractor shall provide a sign for identification. – Remote dial–up alarm as back up.

DUPLEX SEWER PUMP STATION

NOT TO SCALE

4787

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433–2335 www.ALTUS–ENG.com

CORY D. BELDEN No. 14239 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
5/20/19

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/20/19

DRAWN BY: RLH
APPROVED BY: EDW
DRAWING FILE: 4787–DETAILS.DWG

SCALE:
22" x 34" – N.T.S.
11" x 17" – N.T.S.

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C/O FOREST PROPERTIES MGMT.
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

APPLICANT:
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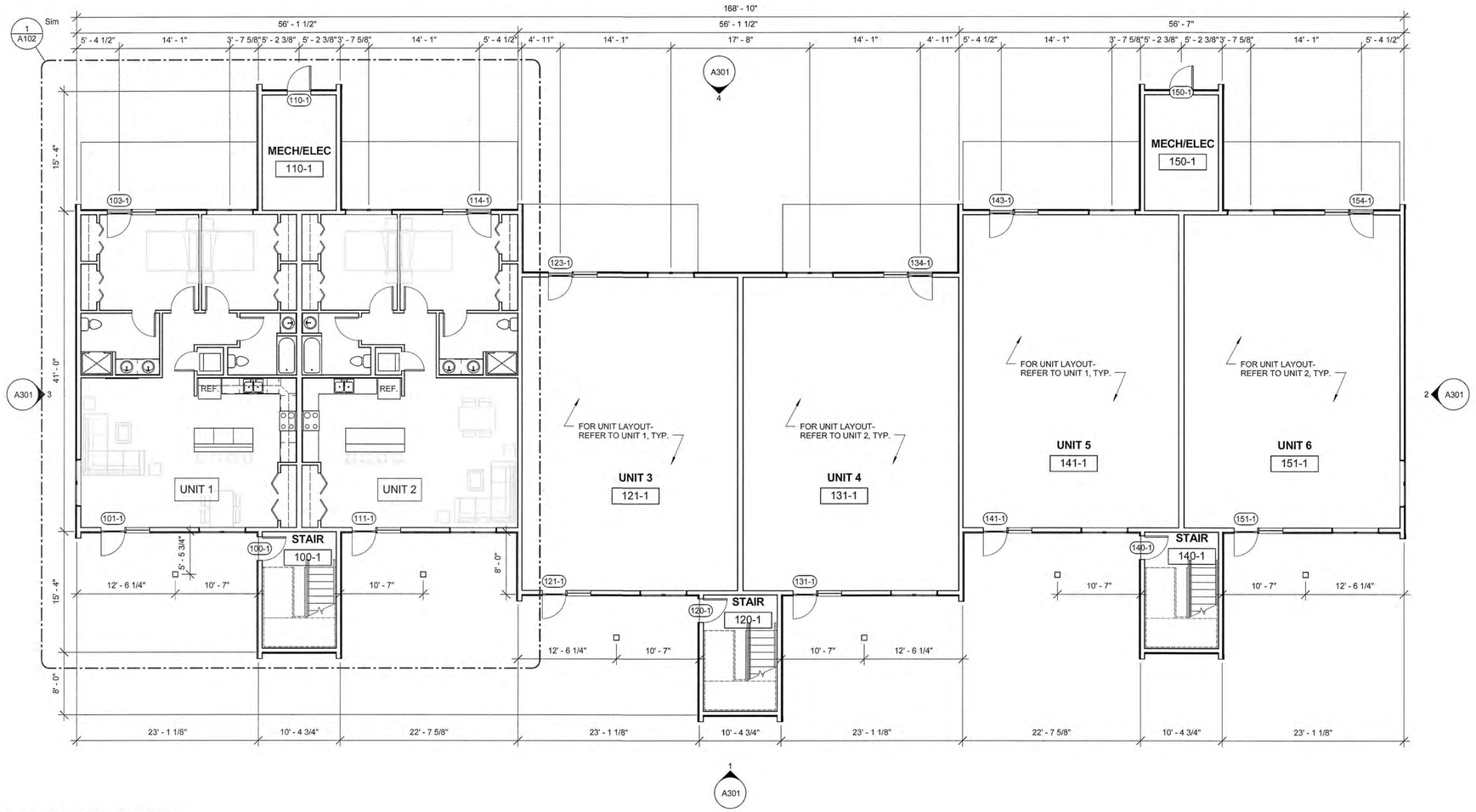
625 MOUNT AUBURN STREET
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH
TAX MAP 287, LOT 01

TITLE:
DETAIL SHEET

SHEET NUMBER:
D - 8



1 BUILDING 1- FIRST FLOOR PLAN
1/8" = 1'-0"

BUILDING AREA CHART		
	GROSS FLOOR AREA	USE PER FLOOR
BUILDING 1		
- FLOOR 1	7840 SF	RESIDENTIAL (R-2), MECH, ELEC
- FLOOR 2	7510 SF	RESIDENTIAL (R-2)
- FLOOR 3/ LOFT	7510 SF/1625 SF	RESIDENTIAL (R-2)
TOTAL BLDG 1	24,485 SF	
BUILDING 2		
- FLOOR 1	10,345 SF	RESIDENTIAL (R-2), MECH, ELEC
- FLOOR 2	10,010 SF	RESIDENTIAL (R-2)
- FLOOR 3/ LOFT	10,010 SF/2165 SF	RESIDENTIAL (R-2)
TOTAL BLDG 2	32,530 SF	

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name: ARBOR VIEW EXPANSION

Drawing Name: BLDG 1 OVERALL PLAN

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

A101

Scale: As indicated

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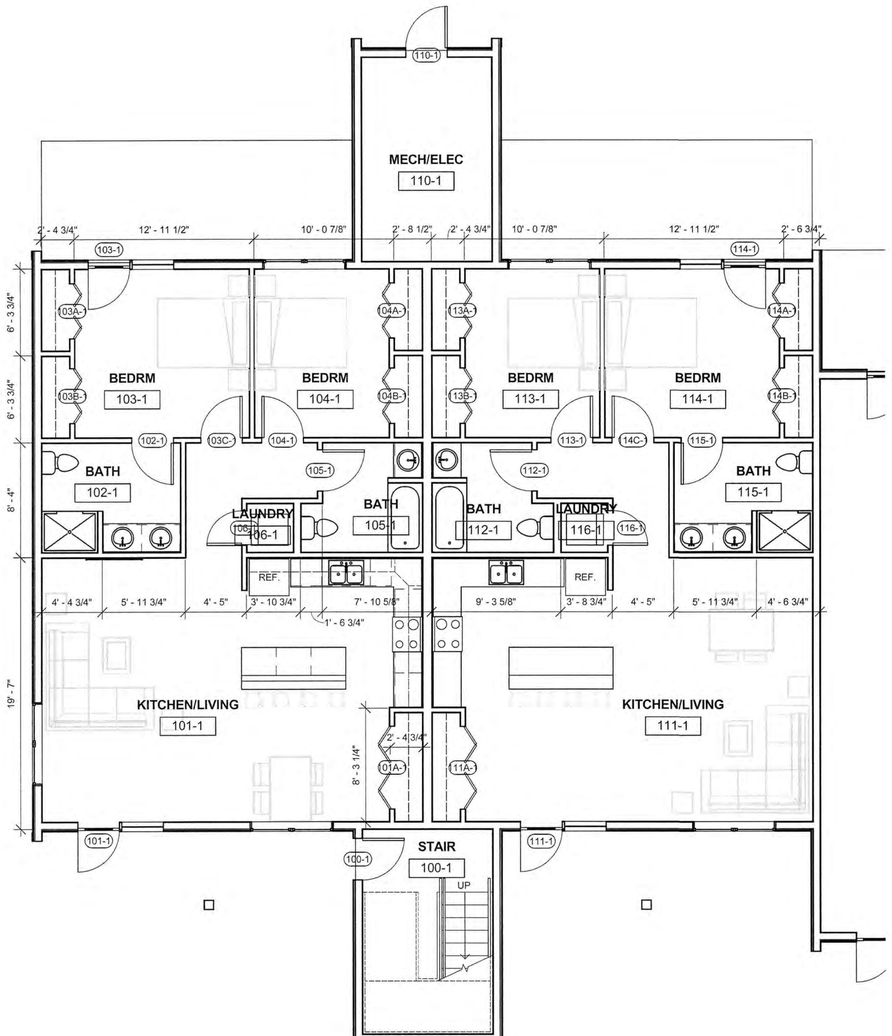
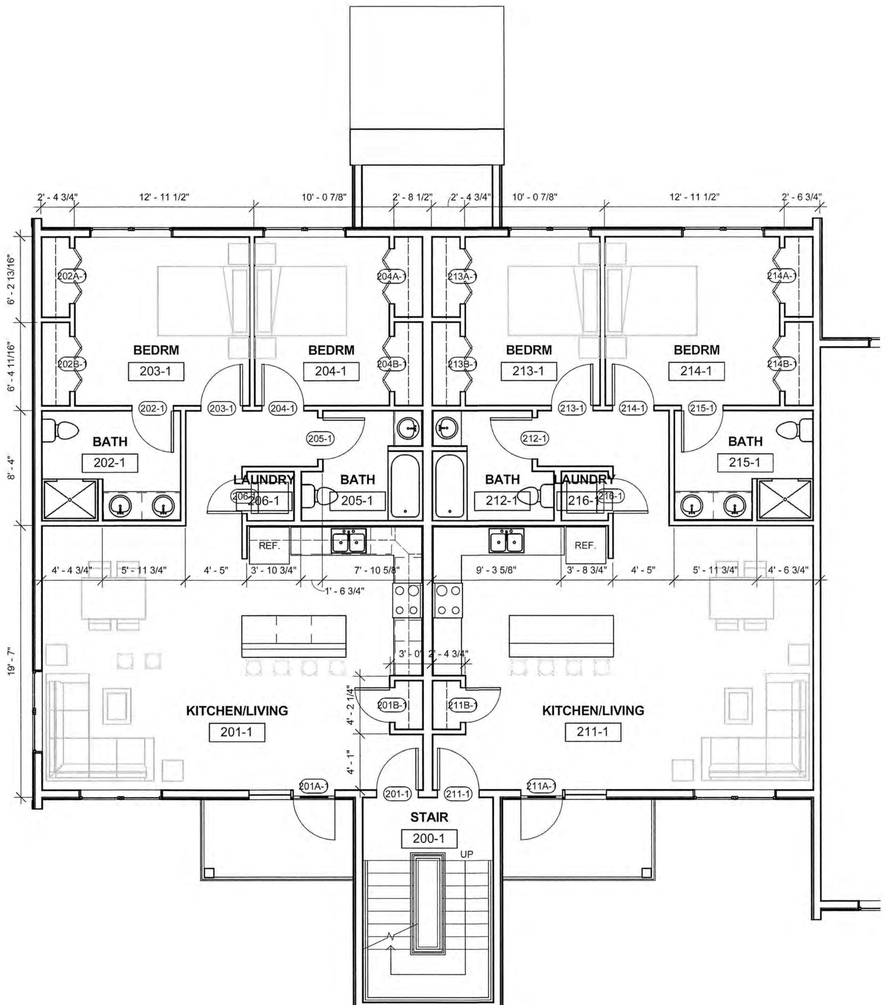


1 BUILDING 1- FIRST FLOOR PLAN- UNIT LAYOUT
3/16" = 1'-0"



2 BUILDING 1- SECOND FLOOR PLAN- UNIT LAYOUT
3/16" = 1'-0"

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name: ARBOR VIEW EXPANSION

Drawing Name: BLDG 1 UNIT PLANS

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

A102

Scale: 3/16" = 1'-0"

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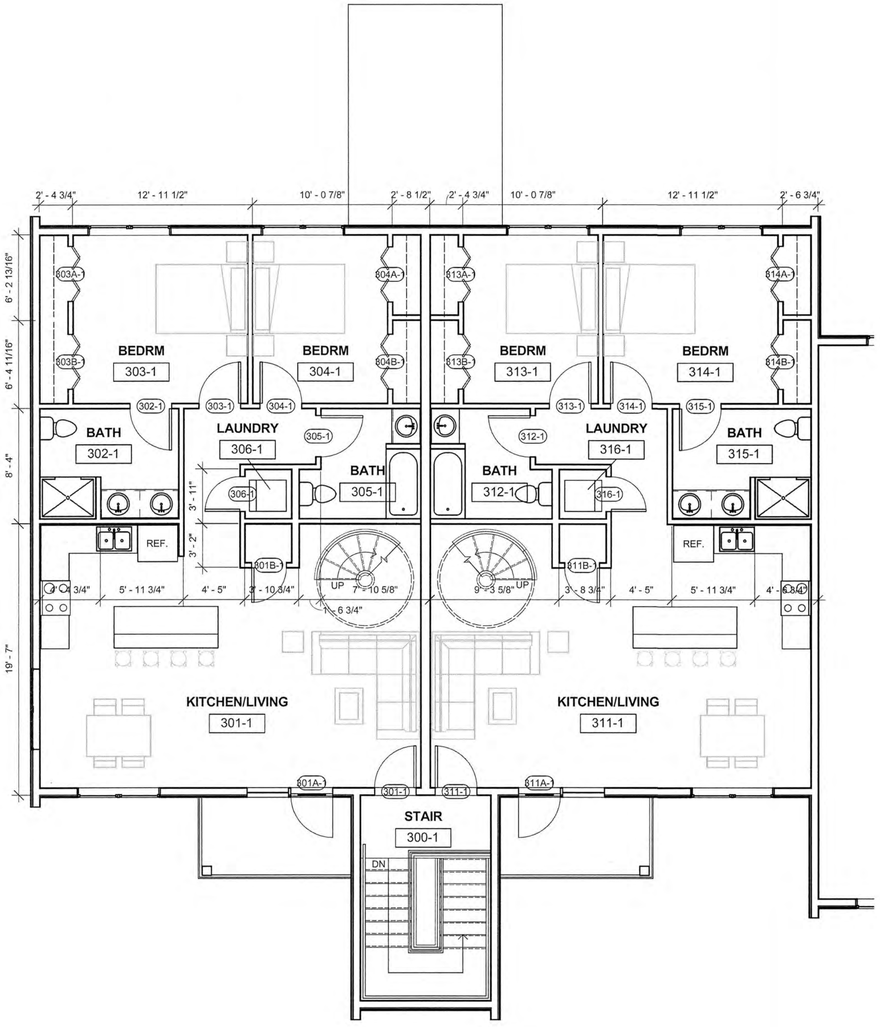
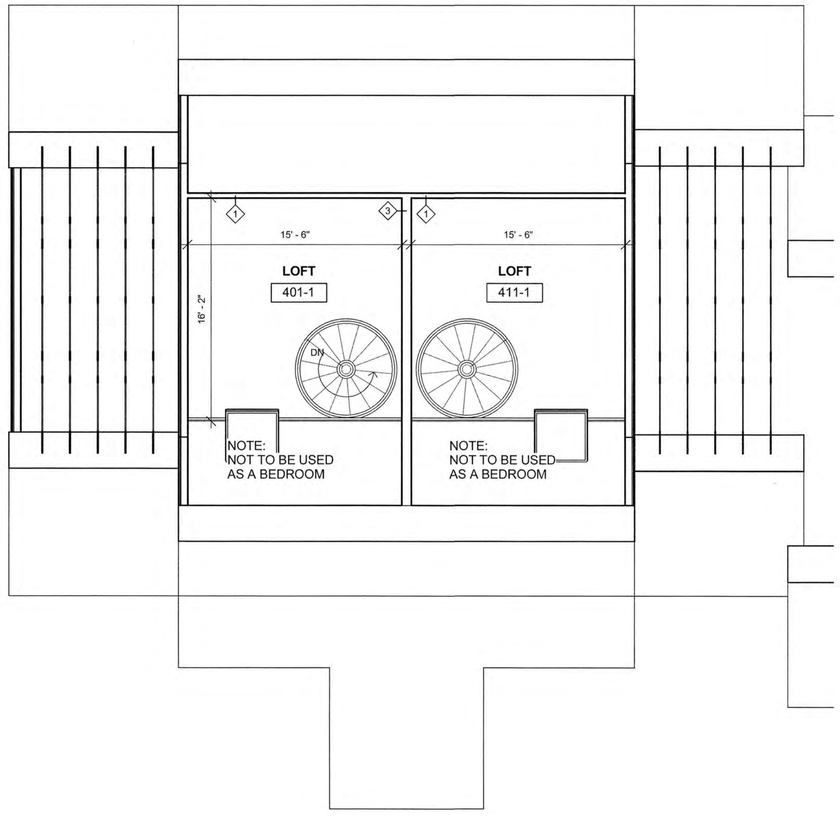


1 BUILDING 1- THIRD FLOOR PLAN- UNIT LAYOUT
3/16" = 1'-0"



2 BUILDING 1- LOFT PLAN- UNIT LAYOUT
3/16" = 1'-0"

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

**NOT FOR CONSTRUCTION
PERMIT SET ONLY**

No.	Description	Date

Project Name:
ARBOR VIEW
EXPANSION

Drawing Name:
BLDG 1 UNIT PLANS

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

A103

Scale: 3/16" = 1'-0"

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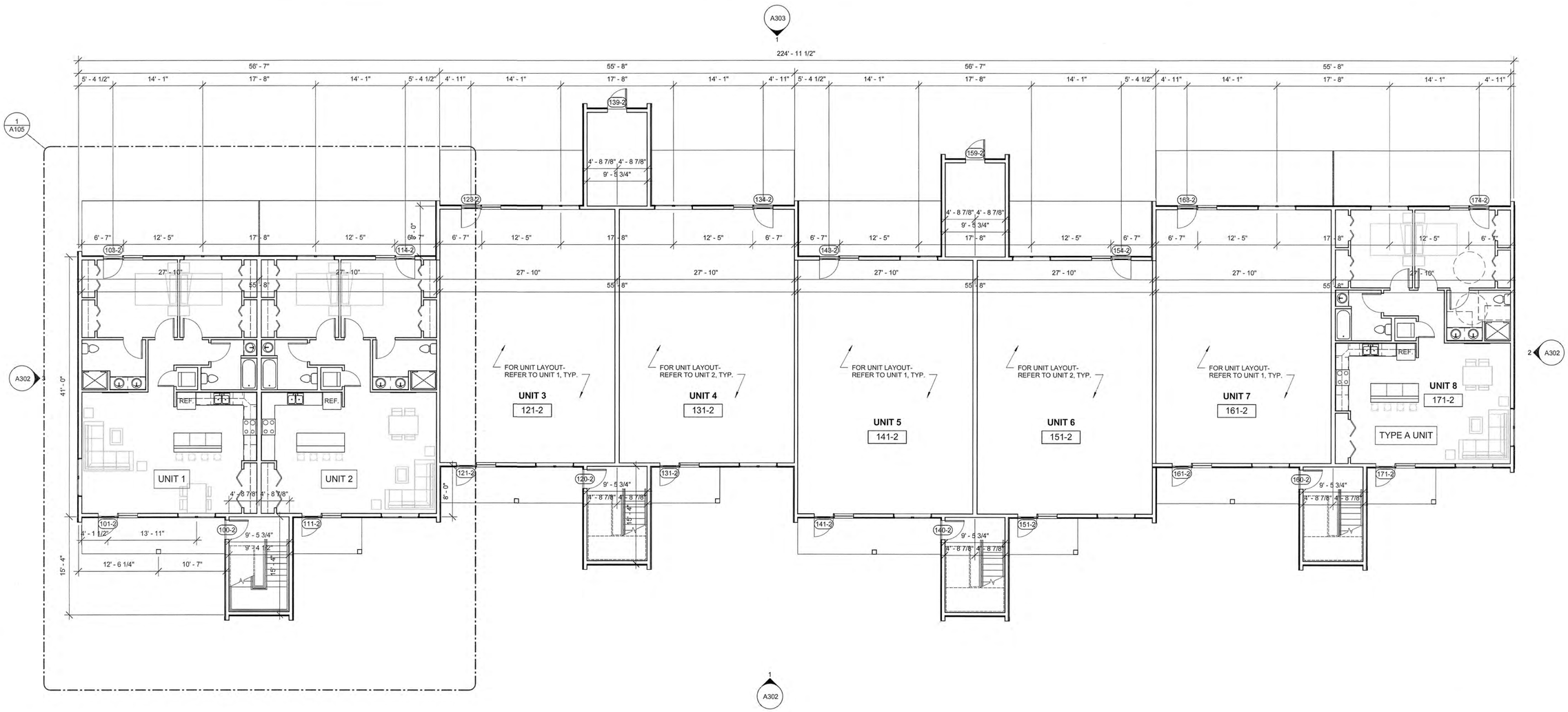


1
A302

1 BUILDING 2- FIRST FLOOR PLAN
1/8" = 1'-0"

BUILDING AREA CHART		
	GROSS FLOOR AREA	USE PER FLOOR
BUILDING 1		
- FLOOR 1	7840 SF	RESIDENTIAL (R-2), MECH, ELEC
- FLOOR 2	7510 SF	RESIDENTIAL (R-2)
- FLOOR 3/ LOFT	7510 SF/1625 SF	RESIDENTIAL (R-2)
TOTAL BLDG 1	24,485 SF	
BUILDING 2		
- FLOOR 1	10,345 SF	RESIDENTIAL (R-2), MECH, ELEC
- FLOOR 2	10,010 SF	RESIDENTIAL (R-2)
- FLOOR 3/ LOFT	10,010 SF/2165 SF	RESIDENTIAL (R-2)
TOTAL BLDG 2	32,530 SF	

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name: ARBOR VIEW EXPANSION

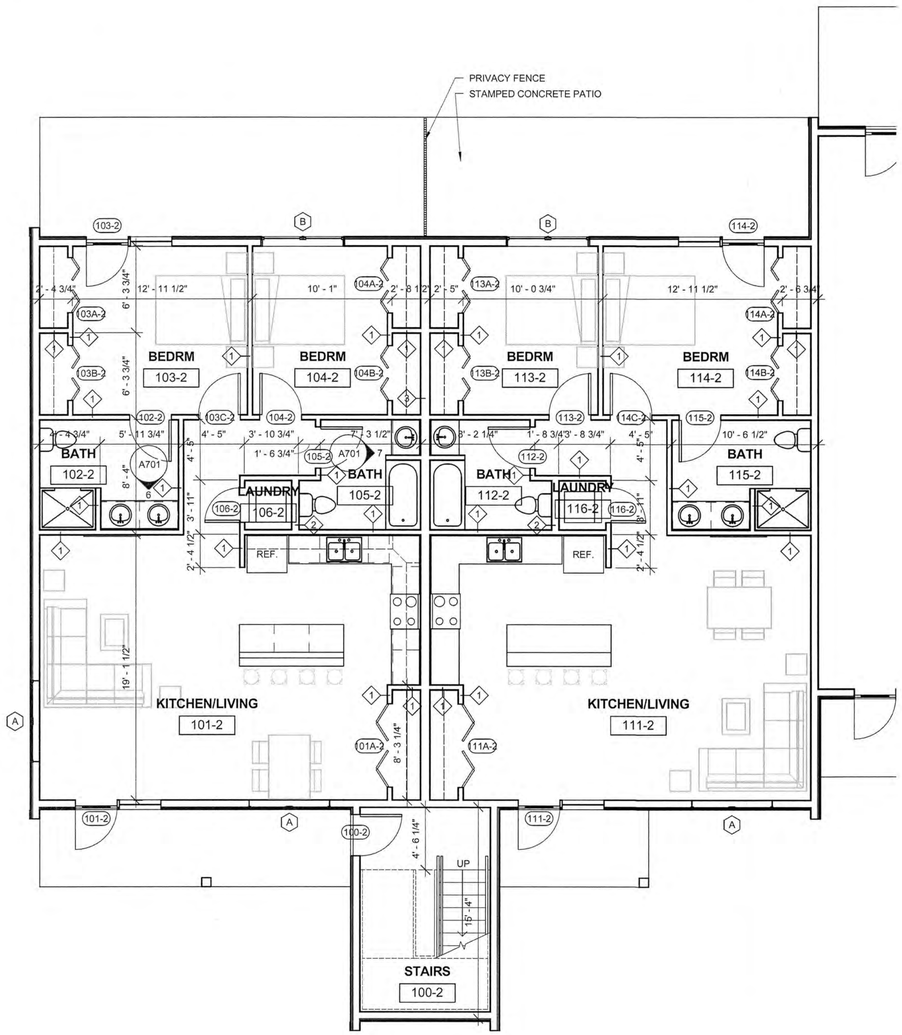
Drawing Name: BLDG 2 OVERALL PLAN

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

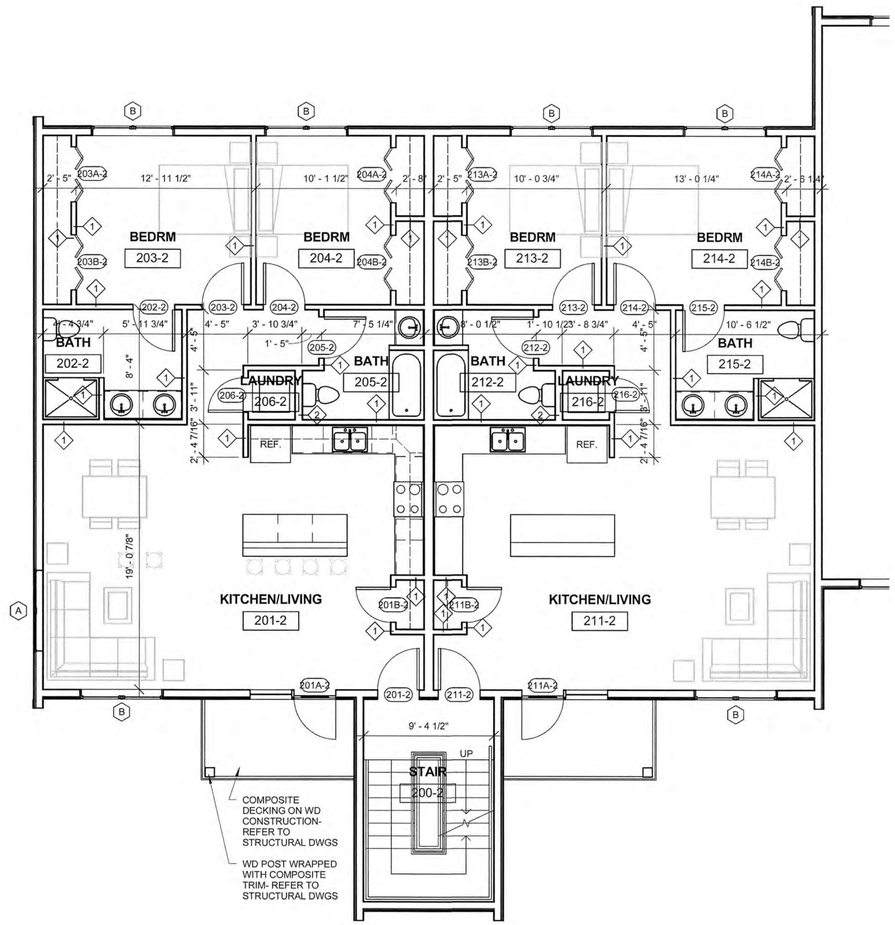
A104

Scale: As indicated

5/17/2019 10:58:14 AM



1 BUILDING 2- FIRST FLOOR PLAN - UNIT LAYOUT
3/16" = 1'-0"



2 BUILDING 2- SECOND FLOOR PLAN- UNIT LAYOUT
3/16" = 1'-0"

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name: ARBOR VIEW EXPANSION

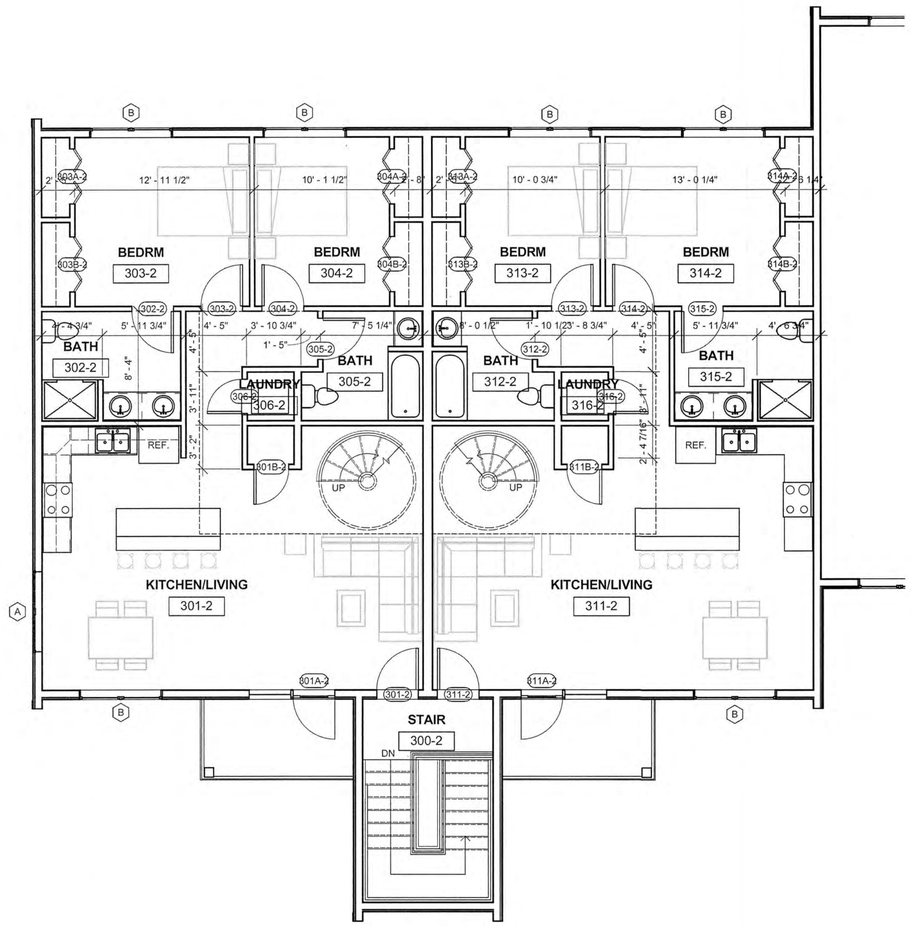
Drawing Name: BLDG 2 UNIT PLANS

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

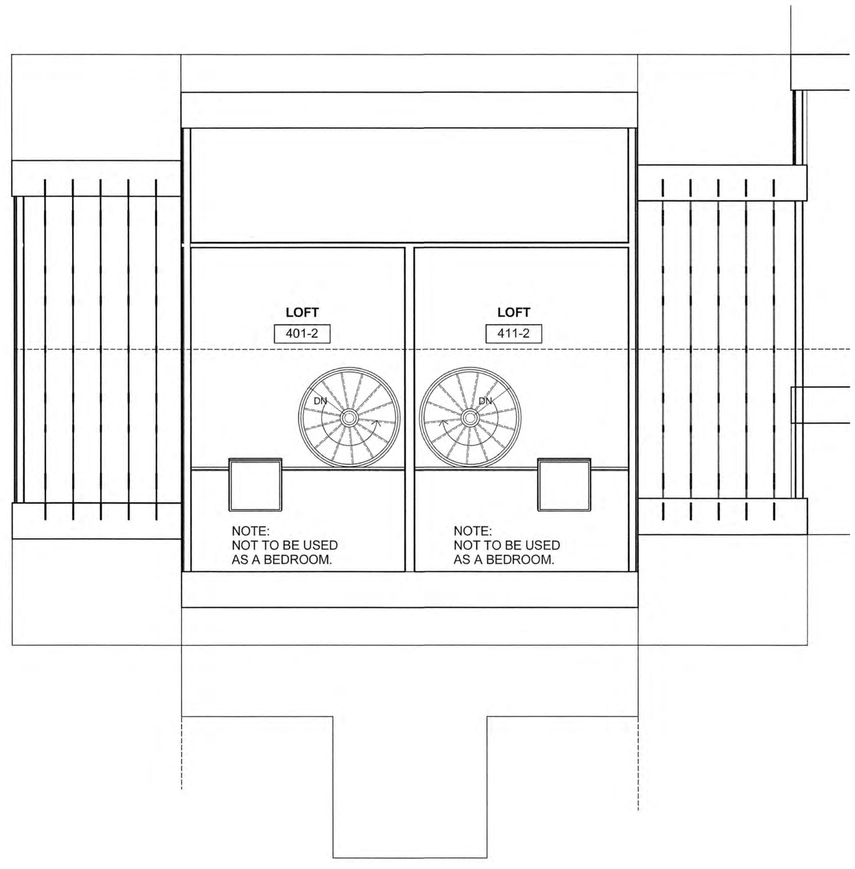
A105

Scale: 3/16" = 1'-0"

5/17/2019 10:58:15 AM



1 BUILDING 2- THIRD FLOOR PLAN- UNIT LAYOUT
3/16" = 1'-0"



2 BUILDING 2- LOFT PLAN- UNIT LAYOUT
3/16" = 1'-0"

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION
PERMIT SET ONLY

No.	Description	Date

Project Name:
ARBOR VIEW
EXPANSION

Drawing Name:
BLDG 2 UNIT PLANS

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

A106

Scale: 3/16" = 1'-0"

5/17/2019 10:58:16 AM

1 BUILDING 1- FRONT ELEVATION
1/8" = 1'-0"

2 BUILDING 1- EAST SIDE ELEVATION
1/8" = 1'-0"

3 BUILDING 1- WEST SIDE ELEVATION
1/8" = 1'-0"

4 BUILDING 1- BACK ELEVATION
1/8" = 1'-0"

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

**NOT FOR CONSTRUCTION
PERMIT SET ONLY**

No.	Description	Date

Project Name:
ARBOR VIEW
EXPANSION

Drawing Name:
EXTERIOR ELEVATIONS-
BLDG 1

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

A301

Scale: 1/8" = 1'-0"

5/17/2019 10:58:20 AM

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name:
ARBOR VIEW EXPANSION

Drawing Name:
BUILDING RENDERING

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

A300

Scale:

5/17/2019 10:58:17 AM

1 BUILDING 2- FRONT ELEVATION
1/8" = 1'-0"

2 BUILDING 2- EAST ELEVATION
1/8" = 1'-0"

3 BUILDING 2- WEST ELEVATION
1/8" = 1'-0"

EXTERIOR FINISH SCHEDULE			
MATERIAL	MANUFACTURER/MODEL	COLOR	NOTES
ROOFING	IKO CAMBRIDGE OR EQUAL	HARVARD SLATE	CONFIRM COLOR WITH OWNER
SIDING	HARDIPLANK LAP SIDING	STERLING GRAY	CONFIRM COLOR WITH OWNER
TRIM	AZEK OR EQUAL	WHITE, SIZES VARY	CONFIRM COLOR WITH OWNER
WOOD TRIM	STAIN GRADE CEDAR		CONFIRM COLOR WITH OWNER
STONE BASE	STONEYARD.COM	BOSTON BLEND LEDGE	CONFIRM COLOR WITH OWNER
WINDOWS	MARVIN WINDOWS OR EQUAL	DARK BRONZE	CONFIRM COLOR WITH OWNER

EXTERIOR FINISH NOTES

1. COLOR SELECTION FOR ALL MATERIALS TO BE PROVIDED TO ARCHITECT AND OWNER FOR FINAL SELECTIONS AND APPROVAL.
2. PROVIDE GARDEN HOSE HOOK UPS NEAR GREEN SPACES.
3. PROVIDE ALL REQUIRED SIGNAGE PER CODE.
4. GC TO COORDINATE WINDOW TINTING AND SPANDREL GLASS COLORS TO ENSURE MATCH IN APPEARANCE.

EXTERIOR LIGHTING NOTES

1. PROVIDE GOOSENECK LIGHTS AT SIGNAGE. COORDINATE LOCATIONS WITH OWNER AND SIGNAGE. BASIS OF DESIGN: BASELITE SIGN LIGHT, SHADE DSL9, 3/4" ARM EXTENSION E6.
2. PROVIDE RECESSED LIGHTING AT SOFFITS, TYP. BASIS OF DESIGN: INDT LIGHTING L4/LRM4 SERIES.
3. PROVIDE VERTICAL LINEAR SCONCES AT ALL EXTERIOR DOORS. PROVIDE ONE TO EACH SIDE AT MAIN ENTRY. BASIS OF DESIGN: CAMMAN LIGHTING OW916, SALONO II.

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name:
ARBOR VIEW EXPANSION

Drawing Name:
EXTERIOR ELEVATIONS- BLDG 2

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

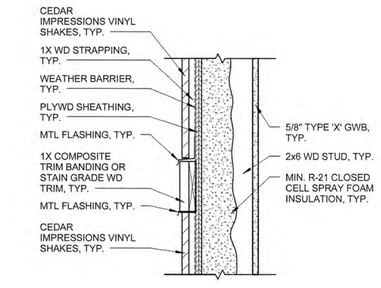
A302

Scale: As indicated

5/7/2019 10:58:25 AM

1 BUILDING 2- BACK ELEVATION
1/8" = 1'-0"

2 BUILDING 2- FRONT ELEVATION - ENLARGED VIEW
1/4" = 1'-0"



3 TYPICAL DETAIL AT HORIZONTAL TRANSITIONS
1 1/2" = 1'-0"

EXTERIOR FINISH SCHEDULE

MATERIAL	MANUFACTURER/MODEL	COLOR	NOTES
ROOFING	IKO CAMBRIDGE OR EQUAL	HARVARD SLATE	CONFIRM COLOR WITH OWNER
SIDING	HARDIPLANK LAP SIDING	STERLING GRAY	CONFIRM COLOR WITH OWNER
TRIM	AZEK OR EQUAL	WHITE, SIZES VARY	CONFIRM COLOR WITH OWNER
WOOD TRIM	STAIN GRADE CEDAR		CONFIRM COLOR WITH OWNER
STONE BASE	STONEYARD.COM	BOSTON BLEND LEDGE	CONFIRM COLOR WITH OWNER
WINDOWS	MARVIN WINDOWS OR EQUAL	DARK BRONZE	CONFIRM COLOR WITH OWNER

EXTERIOR FINISH NOTES

1. COLOR SELECTION FOR ALL MATERIALS TO BE PROVIDED TO ARCHITECT AND OWNER FOR FINAL SELECTIONS AND APPROVAL.
2. PROVIDE GARDEN HOSE HOOK UPS NEAR GREEN SPACES.
3. PROVIDE ALL REQUIRED SIGNAGE PER CODE.
4. GC TO COORDINATE WINDOW TINTING AND SPANDREL GLASS COLORS TO ENSURE MATCH IN APPEARANCE.

EXTERIOR LIGHTING NOTES

1. PROVIDE GOOSENECK LIGHTS AT SIGNAGE. COORDINATE LOCATIONS WITH OWNER AND SIGNAGE. BASIS OF DESIGN: BASELITE SIGN LIGHT, SHADE DSL9, 3/4" ARM EXTENSION E6.
2. PROVIDE RECESSED LIGHTING AT SOFFITS, TYP. BASIS OF DESIGN: INDT LIGHTING L4/LRM4 SERIES.
3. PROVIDE VERTICAL LINEAR SCONCES AT ALL EXTERIOR DOORS. PROVIDE ONE TO EACH SIDE AT MAIN ENTRY. BASIS OF DESIGN: CAMMAN LIGHTING OW916, SALONO II.

ARBOR VIEW EXPANSION
FOREST PROPERTIES MANAGEMENT
145 LANG ROAD
PORTSMOUTH, NH 03801

McHENRY
ARCHITECTURE
4 Market Street
Portsmouth, New Hampshire
603.430.0274

NOT FOR CONSTRUCTION PERMIT SET ONLY

No.	Description	Date

Project Name:
ARBOR VIEW EXPANSION

Drawing Name:
EXTERIOR ELEVATIONS- BLDG 2

Project number:	18101
Date:	05/07/2019
Drawn by:	MB
Checked by:	MG

A303

Scale: As indicated

5/17/2019 10:58:27 AM

Letter of Authorization

I, Anderson Libert, of Arbor View & The Pines LLC and Forest Properties Management Inc., of Cambridge, MA, hereby authorize Altus Engineering, Inc. of Portsmouth, New Hampshire to represent Forest Properties Management Inc. in all matters concerning engineering and related permitting for the development of Arbor View Apartments, Portsmouth, NH. The property is identified on the Assessor's Maps as Tax Map 287, Lot 01 and is located at Lang Road and Joan Avenue in Portsmouth, NH. This authorization shall include any signatures required for Federal, State and Municipal permit applications.

Signature	Anderson Libert Print Name	4/1/19 Date
Witness	DIANE PICKOVER Print Name	4/1/19 Date

ALTUS ENGINEERING, INC.

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

PARKING DEMAND ANALYSIS

(For Conditional Use Permit Application)
June 24, 2019

Assessor's Map 287, Lot 01
145 Lang Road, Portsmouth, NH
Altus Project #P4787

Forest Properties Management, owners of the Arbor View Apartment Complex at 145 Lang Road, in Portsmouth, NH (Tax Map 287, Lot 01) is proposing to construct two new apartment buildings on the site. The current site has five existing apartment buildings, and a maintenance building with an additional apartment for a total of 145 existing units.

Two variances to allow the construction of the two new apartment buildings were granted on November 20, 2018. A variance from Section 10.521 to allow a lot area per dwelling unit of ±8,321 s.f. where 10,000 s.f. is required and a variance from Section 10.522 to allow building lengths of 225 feet and 170 feet for a multi-family dwelling where 160 feet is the maximum allowed.

The existing apartment complex was constructed in the 1980's prior to the City's current parking requirements. There are currently 329 existing parking stalls on the site that service the 145 units. Using the current 1 stall per 5 unit requirement for visitor parking, there are currently 29 visitor stalls and 300 residents parking stalls, an average of 2.07 stalls per unit. There is not a recorded plan of the approved site plan form the 1980's, but there is a 2007 survey plan on record with the City. This plan shows some of the existing stalls as winter snow storage areas and they are not included in the parking totals. For this Parking Demand Analysis all existing striped parking stalls are included in the total number of stalls on-site.

The current Zoning regulations (Section 10.1110) allow for 1.3 parking stalls per unit for multi-family buildings and 1 visitor stall per 5 units. The minimum required number of stalls for the new 186-unit lot would be 280 stalls based on current zoning regulations, with an allowable 20% increase for a maximum of 336 parking spaces.

Based on these calculations, the proposed 42 unit buildings (41 new units) would only be allowed to construct 7 new parking spaces on site, as there are currently 329 existing spaces. This project is proposing to construct a total of 38 new parking spaces (29 resident spaces and 9 visitor spaces). This is 0.7 new stalls per unit for the new 41 units. The following Parking Table illustrates the existing and proposed parking numbers for the site.

Table 1. Parking Table

Existing Conditions

Number of Units	145
Parking Spaces	
2.07 spaces per unit	300 spaces
Visitor Spaces (1 per 5 units)	29 spaces
Total Parking Spaces on Site	329 spaces

Proposed Conditions (allowed per current zoning regulations)

Number of Units	186
Parking Spaces	
1.3 spaces per unit	242 spaces
Visitor Spaces (1 per 5 units)	38 spaces
Min Parking Spaces Required	280 spaces
Max Parking Spaces Allowed (+20%)	336 spaces

Proposed Conditions (Proposed per CUP)

Proposed New Buildings	186
Parking Spaces	
1.77 resident stalls per unit	329 spaces
Visitor Spaces (1 per 5 units)	38 spaces
Total Proposed Parking Spaces	367 spaces
(Average of 1.77 spaces per unit plus 1 visitor stall per 5 units)	

Under current zoning regulations for on-site parking, when an existing site is expanded the entire site has to be meet the current parking zoning regulations. As noted, above this this would only allow construction of 7 new on-site parking stalls for the new 41 units on site. As shown in the attached photos taken on Monday June 17, 2019, at approximately 6:50 pm, the parking lot is currently being utilized close to capacity.

Per Section 10.1112.142 of the Zoning Ordinance, *"An application for a conditional use permit under this section shall identify permanent evidence-based measures to reduce parking demand, including but not limited to provision of rideshare/microtransit services or bikeshare station(s) servicing the property, proximity to public transit, car/van-pool incentives, alternative transit subsidies, provisions for teleworking, and shared parking on a separate lot subject to the requirements of 10.1112.62."*

- There is a bus transit stop on Lafayette Road, which approximately a 0.4 mile walk from the development site.
- The proposed development will install bike racks for bicycle usage.
- There are not any restrictions on the property that restrict teleworking.

All of the existing 145 units on site are two bedroom units, as well as the proposed new units. Many of the units are rented by couples and small families that have two adults in the household and require two vehicles. This is the primary demographic that is attracted to these moderately prices rental units located far from the City center. The tenants are currently allowed two vehicles for each unit and it would be a hardship to the owner if they had to limit the number of vehicles per unit. This area of town is also one of the few areas that provides reasonable rental rates, partially because it is located far from the downtown and many of the job opportunities and services. We understand the 1.3 parking stalls per unit in the downtown environment with job opportunities, shopping, and services within walking distance, but this location does not provide those opportunities.

We feel that the current proposal to add 38 additional parking spaces for the proposed 41 new units on site and reduce the average parking stall per unit from 2.07 down to 1.77 is a reasonable request. The current stalls are being used close to capacity and taking parking away from the existing tenants would be a hardship on the development.

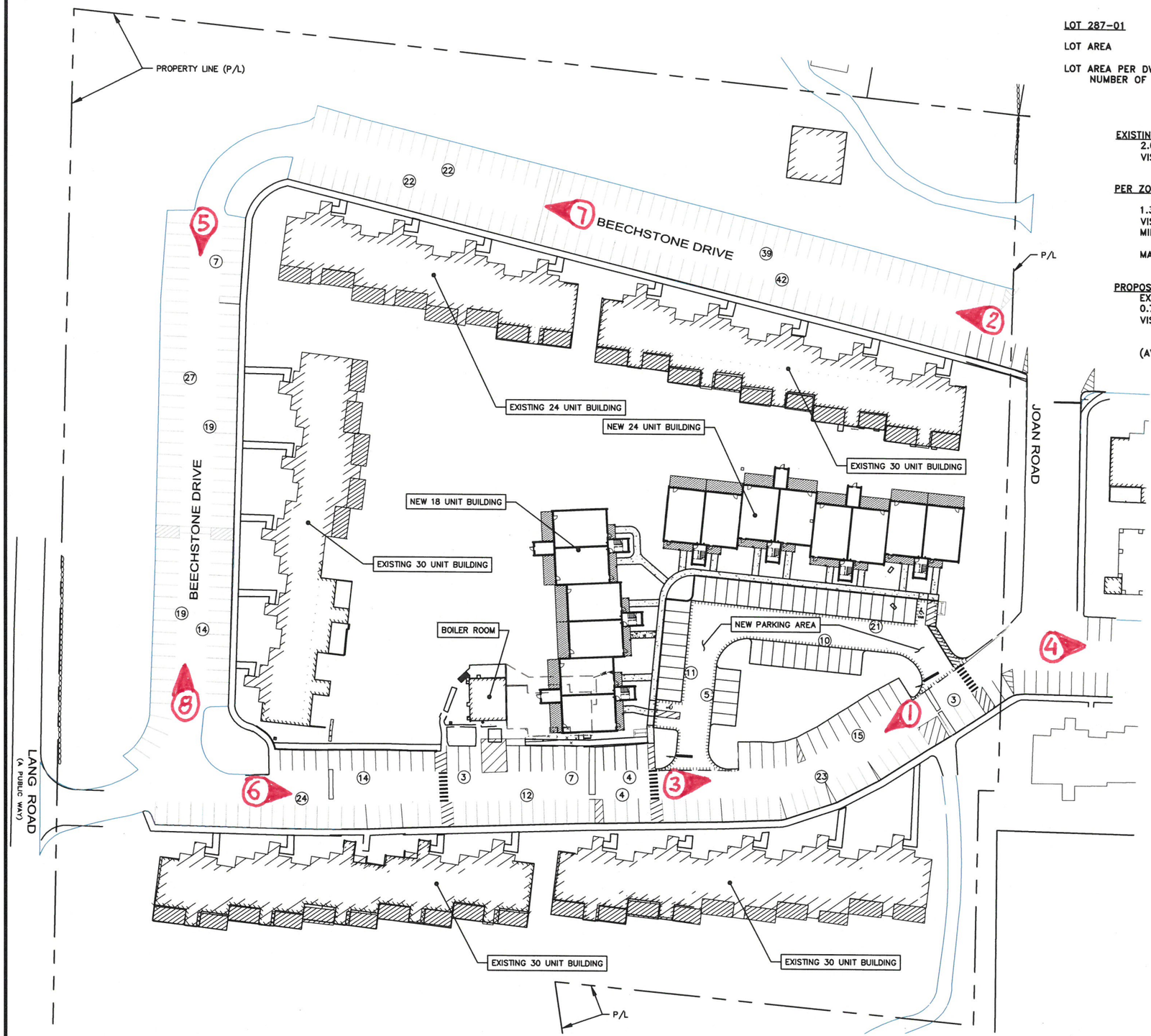
ALTUS ENGINEERING, INC.

Cory Belden, PE

Attachments: Conditional Use Parking plan, by Altus Engineering dated May 20, 2019
Site Pictures (taken June 17, 2019 - 6:50 pm)

Ecopy: Anderson Libert, Forest Properties

wde/4787-Parking Demand2.doc



PARKING CALCULATIONS

ZONING DISTRICT GA/MH

LOT 287-01

	REQUIRED	EXISTING	PROPOSED
LOT AREA	5.0 Acres	35.53 Acres	35.53 Acres
LOT AREA PER DWELLING (DENSITY)	10,000 SF	10,673 SF	8,321± SF
NUMBER OF UNITS	154 (ALLOWED)	145	186*

EXISTING (145 UNITS)

2.07 STALLS PER UNIT	= 300 STALLS
VISITOR PARKING (1 STALL PER 5 UNITS)	= 29 STALLS
TOTAL EXISTING STALLS	= 329 STALLS

PER ZONING REGULATION 10.1110 FOR MULTI-FAMILY BUILDINGS:

1.3 STALLS PER UNIT	= 242 STAALS
VISITOR PARKING (1 STALL PER 5 UNITS)	= 38 STALLS
MINIMUM STALLS ALLOWED	= 280 STALLS
MAXIMUM ALLOWABLE STALLS (120% MIN)	= 336 STALLS

PROPOSED (186 UNITS)

EXISTING RESIDENTIAL PARKING STALLS	= 300 STALLS
0.7 STALLS PER 42 NEW UNITS	= 29 STALLS
VISITOR PARKING (1 STALL PER 5 UNITS)	= 38 STALLS
PROVIDED	= 367 STALLS

(AVE 1.77 STALLS PER UNIT + 1 VISITOR STALL PER 5 UNITS)

(X) Photo / Direction

PER REFERENCE PLAN 1

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

P4787.2

ENGINEER:
ALTUS ENGINEERING, INC.
133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

ISSUED FOR: TAC

ISSUE DATE: MAY 20, 2019

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	CDB	05/20/19

DRAWN BY: CDB
APPROVED BY: EDW
DRAWING FILE: 4787.2.DWG

SCALE:
22" x 34" - 1" = 40'
11" x 17" - 1" = 80'

OWNER OF RECORD:
ARBOR VIEW & THE PINES LLC.
C/O FOREST PROPERTIES MGMT
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

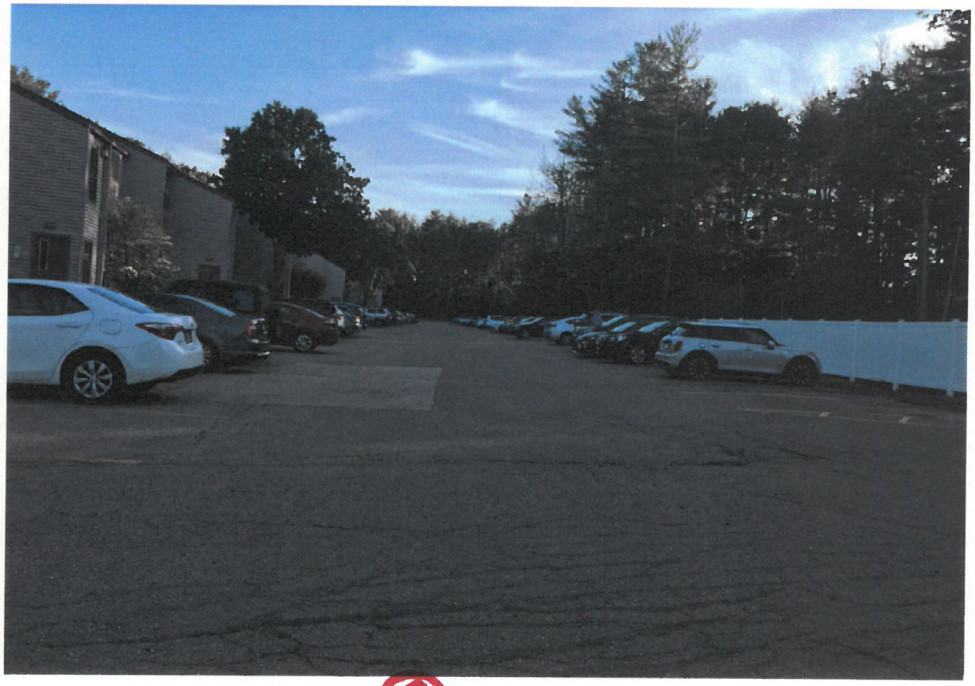
APPLICANT:
FOREST PROPERTIES MGMT INC.
625 MT AUBURN ST, STE 210
CAMBRIDGE, MA 02138

PROJECT:
ARBOR VIEW APARTMENTS RESIDENTIAL DEVELOPMENT
145 LANG ROAD
PORTSMOUTH, NH

TITLE:
CONDITIONAL USE PARKING PLAN

SHEET NUMBER:
CUP-1

1

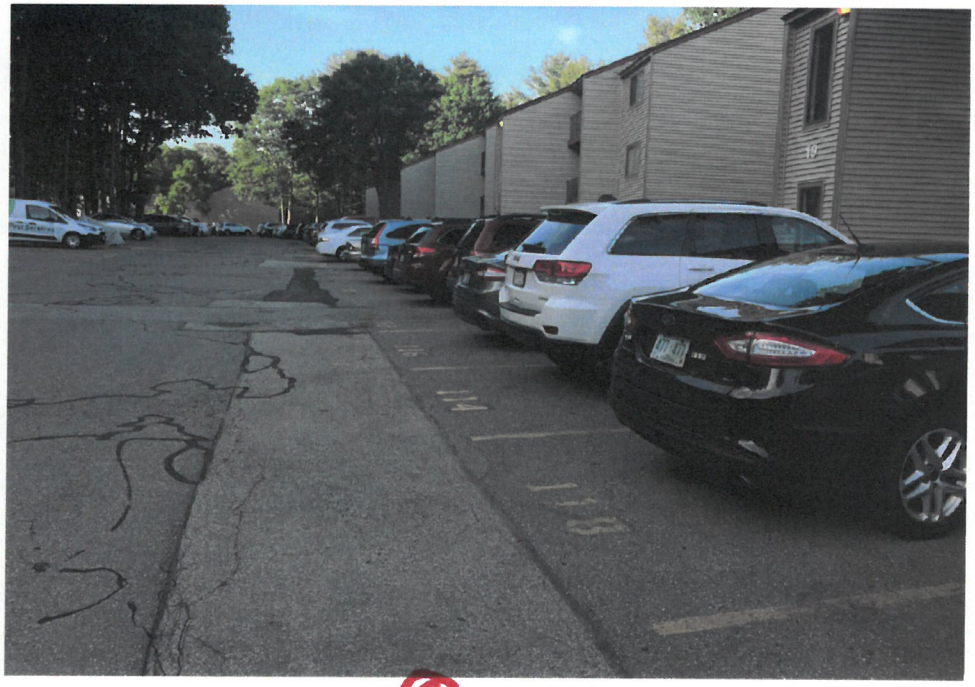


2

3

4

5



6

7

8