



SITE NAME: HENNIKER NORTH RT 114
SITE NUMBER: VT-NH-3012B
ADDRESS: 796 LIBERTY HILL ROAD
HENNIKER, NH 03242

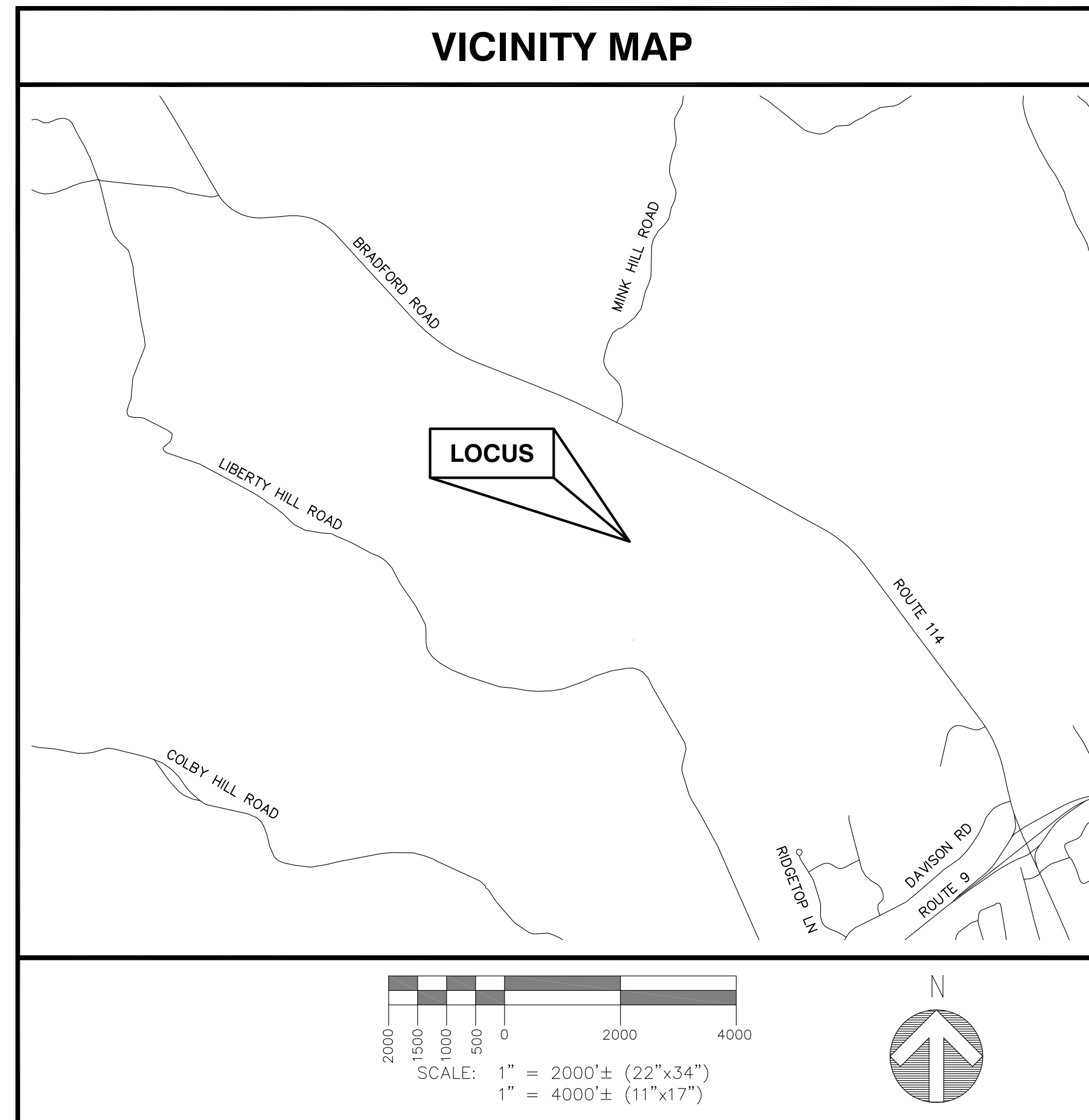
DRAWING INDEX

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C-1	ABUTTERS PLAN & EXISTING CONDITIONS	A
A-1	COMPILED PLOT PLAN	0
A-2	COMPOUND PLAN & ELEVATION	0
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GENERAL NOTES

- CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER & VERTEX TOWER ASSETS, LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
- PLANS FOR PERMITTING PURPOSES ONLY. NOT FOR CONSTRUCTION.
- THIS PLAN SET WAS ORIGINALLY PRINTED TO ANSI D (22"x34") WITH 1" MARGINS. PRINTING TO ANSI B (11"x17") WILL RESULT IN A HALF-SCALE (1:2) SHEET SET WITH 1/2" MARGINS. CONFIRM ALL SCALED DISTANCES WITH GRAPHICAL SCALES SHOWN HEREIN.
- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH VERTEX TOWER ASSETS, LLC CONSTRUCTION GUIDELINES.
- ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL DIG-SAFE (888) 344-7233 72-HOURS PRIOR TO ANY EXCAVATION.
- NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 BUILDING CODE: NEW HAMPSHIRE STATE BUILDING CODE (2015 IBC) WITH AMENDMENTS
 ELECTRICAL CODE: NEC 2017 WITH NEW HAMPSHIRE AMENDMENTS

VICINITY MAP



PROJECT INFORMATION

SITE TYPE:	RAW LAND
SCOPE OF WORK:	PROPOSED FENCED COMPOUND CONTAINING 150' MONOPOLE TOWER. PROPOSED GRAVEL DRIVEWAY AND IMPROVEMENTS FROM EXISTING GRAVEL TRAVEL WAY AND UTILITIES FROM EXISTING SOURCES.
SITE NAME:	HENNIKER NORTH RT 114
SITE NUMBER:	VT-NH-3012B
SITE ADDRESS:	796 LIBERTY HILL ROAD HENNIKER, NH 03242
ASSESSOR'S TAX ID#:	1-65
ZONING DISTRICT(S):	RURAL RESIDENTIAL (RR)
LATITUDE:	43° 12' 06.92"± N (SURVEY 1A)
LONGITUDE:	71° 51' 10.59"± W (SURVEY 1A)
(P) ELEVATION:	1007.3'±
DATUM:	NAD83/NAVD88
PROPERTY OWNER(S):	N/F THOMAS N. PATENAUE 2012 IRREVOCABLE TRUST & KATHLEEN A. GOSS REVOCABLE TRUST 32 HARVEY WAY HILLSBORO, NH 03244
APPLICANT:	VERTEX TOWER ASSETS, LLC 155 SOUTH STREET SUITE 205 WRENTHAM, MA 02093
SITE ENGINEER:	PROTERRA DESIGN GROUP, LLC 4 BAY ROAD BUILDING A; SUITE 200 HADLEY, MA 01035
SURVEYOR:	NORTHEAST SURVEY CONSULTANTS 116 PLEASANT STREET SUITE 302 PO BOX 109 EASTHAMPTON, MA 01027
WETLAND SCIENTIST:	LUCAS ENVIRONMENTAL, LLC 500A WASHINGTON STREET QUINCY, MA 02169

PERMITTING

ProTerra
DESIGN GROUP, LLC

4 Bay Road
Building A; Suite 200
Hadley, MA 01035
(413)320-4918

NO.	DATE	REVISIONS
A	10/30/20	ISSUED FOR REVIEW
O	12/11/20	ISSUED FOR PERMITTING

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 155 SOUTH STREET
 SUITE 205
 WRENTHAM, MA 02093

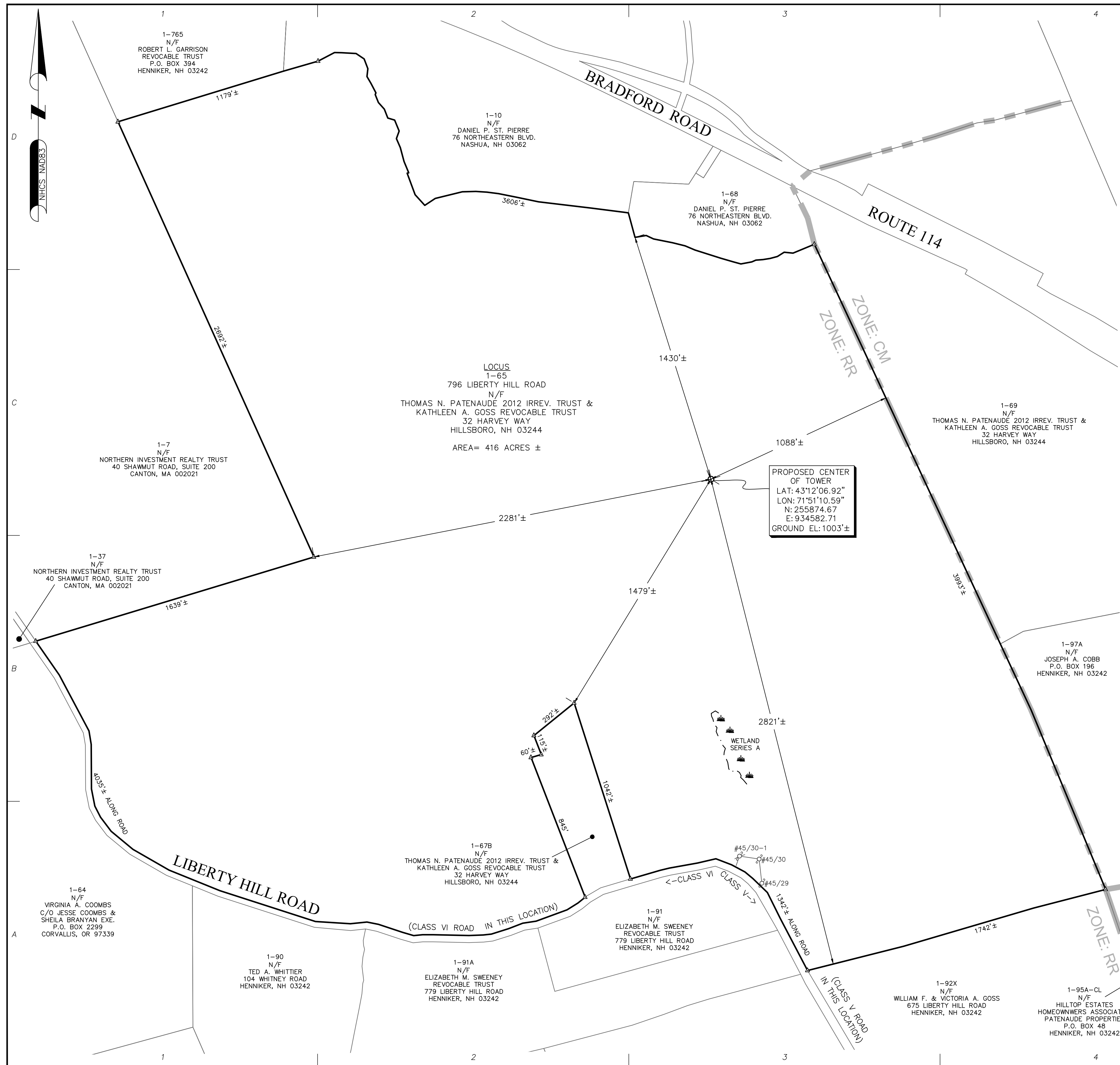
STAMP:

DATE: 12/11/2020
DRAWN: JEB
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 18-015

SHEET TITLE:

TITLE SHEET

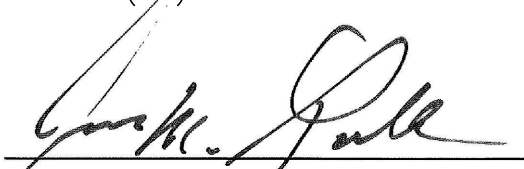
T-1



FAA 1-A CERTIFICATION

I HEREBY CERTIFY THAT THE LATITUDE, LONGITUDE, AND ELEVATION PRESENTED HEREON MEET THE REQUIREMENTS OF THE FAA WITH THE FOLLOWING ACCURACIES:

THREE (3) FEET VERTICALLY
 TWENTY (20) FEET HORIZONTALLY


 JAMES M. LAVELLE NH LLS # 489
 12-11-2020
 DATE

SURVEY NOTES

- SITE DETAIL SHOWN ON THIS SURVEY IS BASED ON FIELD DATA COLLECTED ON JUNE 8, 2020. BOUNDARY INFORMATION IS COMPILED FROM RECORD DOCUMENTS AND IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.
- THE PURPOSE OF THIS SURVEY IS TO SUPPORT THE DESIGN AND CONSTRUCTION OF A TELECOMMUNICATION FACILITY. USE OF THIS SURVEY BY ANYONE OTHER THAN VERTEX TOWER ASSETS, LLC, AND USE OF THIS SURVEY FOR ANY PURPOSE NOT RELATED TO THE DESIGN OF THE INTENDED FACILITY IS STRICTLY PROHIBITED.
- PROPERTY LINES AND BOUNDARY DIMENSIONS SHOWN ON THIS SURVEY ARE BASED ON A COMPILATION OF RECORDED DEEDS AND ARE NOT INTENDED TO REPRESENT DEFINITIVE BOUNDARY LINES OR BE USED FOR THE PURPOSES OF CONVEYANCE. PROPERTY RELATED INFORMATION HAS NOT BEEN CONFIRMED BY FIELD SURVEY OBSERVATIONS AND NO ASSESSMENT OF LAND OCCUPATION HAS BEEN CONDUCTED IN THE PREPARATION OF THIS SURVEY. A PROPERTY LINE RETRACEMENT SURVEY HAS NOT BEEN CONDUCTED.
- THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.
- PRIMARY GEODETIC SURVEY CONTROL WAS ESTABLISHED FROM AN ON THE GROUND SURVEY USING THE GLOBAL POSITIONING SYSTEM (GPS) ON JUNE 8, 2020. THE GRID COORDINATES ARE BASED ON THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM OF 1983 (2011). ELEVATIONS SHOWN ARE ASSUMED AND ARE APPROXIMATED TO THE NAVD 88 VERTICAL DATUM. VERTICAL AND HORIZONTAL INFORMATION SHOWN MEETS THE STANDARD CRITERIA FOR AN FAA 1A CERTIFICATION (20± HORIZONTAL AND 3± VERTICAL).
- IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY, ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
- THE LOCUS PARCEL IS IDENTIFIED AS MAP 1 LOT 65 IN THE TOWN OF HENNIKER TAX ASSESSOR'S DATABASE.
- THE PROJECT AREA IS LOCATED IN FLOOD ZONE "X" (NO SHADING) (AREAS OF MINIMAL FLOOD HAZARD) ACCORDING TO FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 33013C 0480 E, DATED 04/19/2010.
- ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233
- THE SUBJECT PROPERTY IS LOCATED IN THE TOWN OF HENNIKER RR ZONING DISTRICT.
- WETLANDS SHOWN HEREON WERE DELINEATED BY LUCAS ENVIRONMENTAL, LLC ON 5/20/2020.

PROPERTY OWNER: THOMAS N. PATENAUDE 2012 IRREV. TRUST & KATHLEEN A. GROSS REVOCABLE TRUST
 32 HARVEY WAY
 HILLSBORO, NH 03244

LOCUS DEED REFERENCE: BOOK 3359 PAGE 128 & BOOK 2366 PAGE 1548

PLAN REFERENCES: N/A


LEGEND

N/F	- NOW OR FORMERLY
△	- CALCULATED POINT
○	- TOWER CONTROL POINT

	- LOCUS PROPERTY LINE
	- ABUTTERS PROPERTY LINE
	- ZONING LINE
	- WETLAND DELINEATION

ABUTTERS PLAN & EXISTING CONDITIONS

ANSI D (22"x34") SCALE: 1"=300'
 ANSI A (11"x17") SCALE: 1"=600'



ProTerra

DESIGN GROUP, LLC

4 Bay Road, Bldg. A,
 Suite 200
 Hadley, MA 01035
 Ph: (413)320-4918

CONSULTANTS:
NORTHEAST SURVEY CONSULTANTS

116 Pleasant St. Ste. 302
 P.O. Box 109
 Easthampton, MA 01027
 (413) 203-5144
 northeastsurvey.com

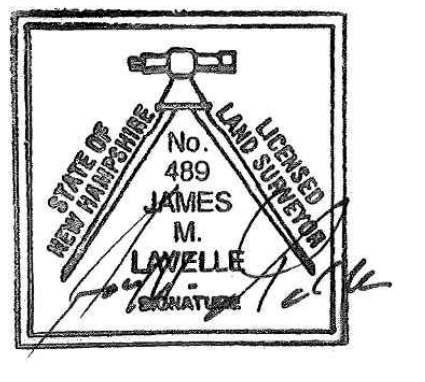


NO. DATE	REVISIONS	ISSUED FOR REVIEW
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HENNIKER, NH 03242

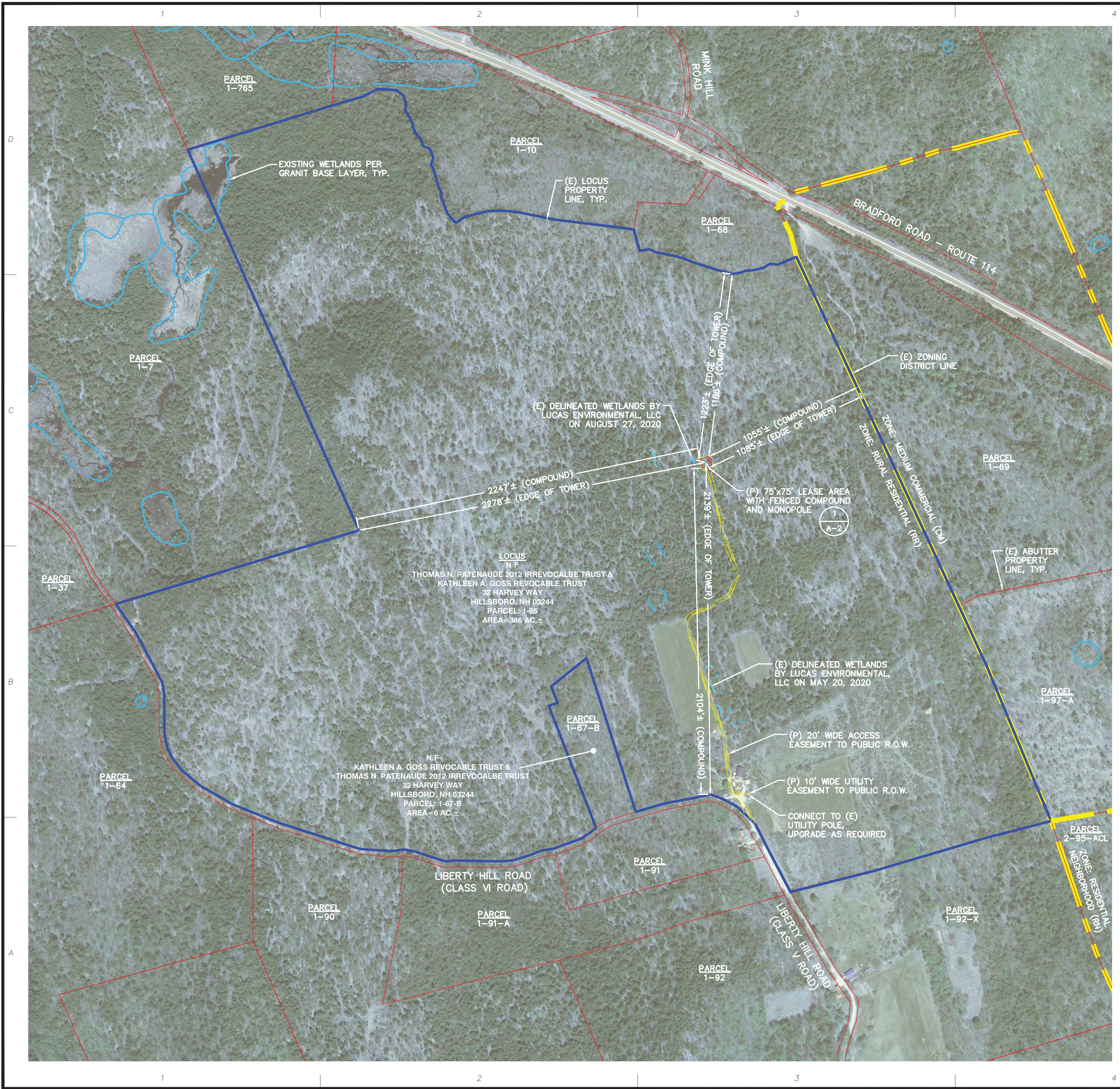
VERTIX TOWER ASSETS, LLC
 155 SOUTH STREET, SUITE 205
 WRENTHAM, MA 02093
Vertex Towers LLC

APPLICANT:



DATE: 12/11/2020
 DRAWN: BCF
 CHECK: BCF
 SCALE: 1"=300'
 JOB NO.: 20-058

SHEET TITLE:
ABUTTERS PLAN & EXISTING CONDITIONS
C-1



REFERENCES

PROPERTY LINE AND EXISTING FEATURES - SEE SHEETS C-1 PREPARED BY NORTHEAST SURVEY CONSULTANTS.

TOPOGRAPHY - LIDAR DATA FOR CONNECTICUT RIVER WATERSHED, COLLECTED BY USGS IN FALL 2015 AND DISTRIBUTED BY NH GRANIT, QL2 QUALITY LEVEL, VERTICAL ACCURACY OF 0.093 METERS

ZONING DISTRICTS - "ZONING MAP" OBTAINED VIA TOWN OF HENNIKER, NH WEB PAGE AXISGIS.COM/HENNIKERNH/ ON JANUARY 28, 2020.

AERIAL PHOTOGRAPHY - DATA PREPARED BY NEW HAMPSHIRE STATEWIDE GIS CLEARINGHOUSE "NH GRANIT" 2010-2011.

PLAN REFERENCE - SUBDIVISION PLAN, TAX LOT 91 FOR ELIZABETH M. SWEENEY, PREPARED BY ARTHUR F. SICILIANO JR., DATED MAY 2003, REVISED JUNE 2003.

FLOODPLAIN - FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 33013C0480E EFFECTIVE DATE APRIL 19, 2010 PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), US DEPARTMENT OF HOMELAND SECURITY. ENTIRE AREA SHOWN IS WITHIN ZONE "X" UNSHADED: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL FLOOD CHANCE FLOODPLAIN.

GENERAL NOTES

- THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND POSITIONS OF ALL PROJECT OWNER'S EQUIPMENT ARE SHOWN IN ILLUSTRATIVE FASHION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.
- THE PROJECT OWNER'S PCS FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
- THE DESIGN OF THE TOWER, FOUNDATION AND ANTENNA MOUNTING HARDWARE WILL MEET THE ANSI/EIA/TIA-222-G STANDARDS FOR STRUCTURAL STEEL ANTENNA SUPPORTING STRUCTURES AND STATE BUILDING CODE REQUIREMENTS. DETAILED CONSTRUCTION DRAWINGS AND STRUCTURAL CALCULATIONS WILL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SUBMITTED WITH A BUILDING PERMIT APPLICATION FOR REVIEW AND APPROVAL BY THE LOCAL BUILDING CODE ENFORCEMENT OFFICIAL.
- ONCE THE FACILITY BECOMES FULLY OPERATIONAL, NORMAL AND ROUTINE MAINTENANCE BY TOWER OWNER'S AND CARRIER'S TECHNICIANS WILL BE PERFORMED. THE ESTIMATED VEHICULAR TRAFFIC GENERATED BY THESE VISITS IS PREDICTED TO BE LESS THAN THE TYPICAL TRAFFIC GENERATED BY A SINGLE-FAMILY DWELLING.

ZONING SUMMARY

ZONING DISTRICT(S): RURAL RESIDENTIAL (RR)
 ASSESSOR'S ID#: 1-65

(P) USE: PERSONAL WIRELESS SERVICE FACILITY (PWSF)¹

DIMENSION	PROVIDED	CONSTRAINT
LOT - AREA	416± ACRES	5 ACRES
LOT - FRONTAGE	5,378'±	250' MIN.
(P) COMPOUND - FRONT YARD	2,104'±	30' MIN.
(P) COMPOUND - REAR YARD	1,186'±	15' MIN.
(P) COMPOUND - SIDE YARD	1,055'±	15' MIN.
(P) TOWER - HEIGHT (HIGHEST APPURTENANCE)	150'± ^{2,3} (156'±)	150' (20' ABOVE TREE CANOPY)
(P) TOWER - FALL ZONE (PROPERTY LINE/BUILDING SETBACK)	1,085'±	125% TOWER HEIGHT (195' - HIGHEST APPURTENANCE)

1 - TOWN OF HENNIKER ZONING ORDINANCE, ARTICLE XXV - WIRELESS COMMUNICATION TOWERS, SECTION 133-129: PERSONAL WIRELESS SERVICE FACILITIES SHALL BE PERMITTED AS A PRINCIPAL OR ACCESSORY (SECONDARY) USE IN ALL ZONING DISTRICTS WITHIN THE TOWN OF HENNIKER, OTHER THAN THE RESIDENTIAL VILLAGE (RV) AND COMMERCIAL VILLAGE (CV) DISTRICTS...

SPECIAL CONSIDERATIONS MAY REQUIRED FOR THE FOLLOWING:

- TOWN OF HENNIKER ZONING ORDINANCE, ARTICLE XXV - WIRELESS COMMUNICATION TOWERS, SECTION 133-131, B.1 HEIGHT LIMITATIONS...A PERSONAL WIRELESS SERVICE FACILITY SHALL NOT EXCEED ONE HUNDRED FIFTY (150) FEET...INCLUDING ALL ATTACHMENTS.
- TOWN OF HENNIKER ZONING ORDINANCE, ARTICLE XXV - WIRELESS COMMUNICATION TOWERS, SECTION 133-131, B.2 PWSFS IN WOODED AREAS. A PERSONAL WIRELESS SERVICE FACILITY LOCATED IN A WOODED AREA SHALL NOT PROJECT HIGHER THAN TWENTY (20) FEET ABOVE THE AVERAGE HEIGHT OF THE FIVE TALLEST TREES WITHIN A 180-FOOT RADIUS OF THE PROPOSED TOWER. FURTHER, A PWSF LOCATED IN A WOODED AREA MUST BE CAMOUFLAGED TO BLEND IN WITH THE NATURAL CHARACTER OF SUCH AREA.
- TOWN OF HENNIKER ZONING ORDINANCE, ARTICLE XXV - WIRELESS COMMUNICATION TOWERS, SECTION 133-131, D. EASEMENTS AND LEASED AREAS. IF A PWSF IS TO BE LOCATED ON AN EASEMENT OR LEASED AREA, THE PWSF SHALL BE SET BACK FROM THE EDGE OF THE EASEMENT OR LEASED AREA A DISTANCE OF AT LEAST 125% OF THE TOWER'S HEIGHT PLUS ADDITIONAL AREA FOR ACCESSORY STRUCTURES AND ACCESS, IF REQUIRED.

COMPILED PLOT PLAN

SCALE: 1"=350' (22x34)
 1"=700' (11x17)

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ADDRESS: 796 LIBERTY HILL ROAD
HENNIKER, NH 03242

APPLICANT:
VERTEX TOWER ASSETS, LLC
 165 SOUTH STREET
 SUITE 205
 WRENTHAM, MA 02098

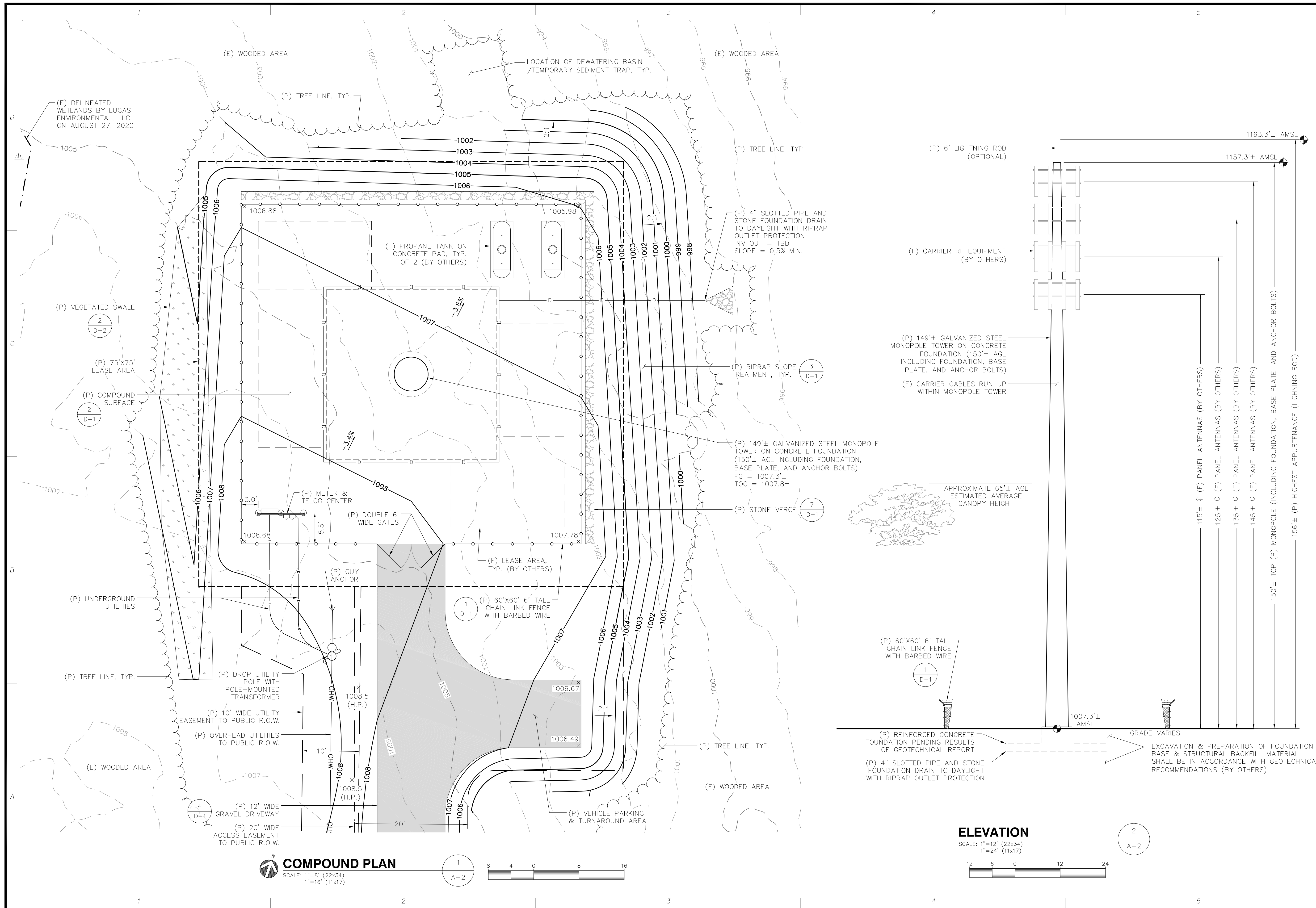
VERTeX Towers LLC

STAMP:

DATE: 12/11/2020
 DRAWN: JEB
 CHECK: JMM/TEJ
 SCALE: SEE PLAN
 JOB NO.: 18-015

COMPILED PLOT PLAN

A-1



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HENNIKER, NH 03242

APPLICANT: VERTEX TOWER ASSETS, LLC
165 SOUTH STREET
SUITE 205
WRENTHAM, MA 02093

VERTIX TOWERS LLC

STAMP:

DATE: 12/11/2020
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SCALE: SEE PLAN
JOB NO.: 18-015

SHEET TITLE:
**COMPOUND PLAN
& ELEVATION**

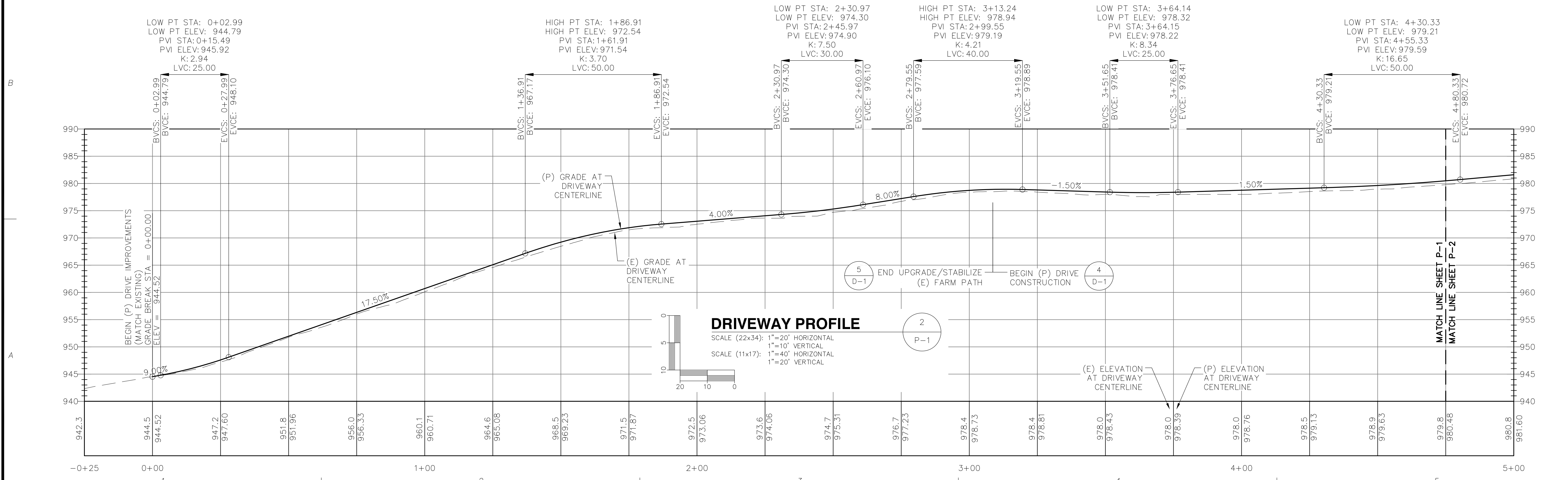
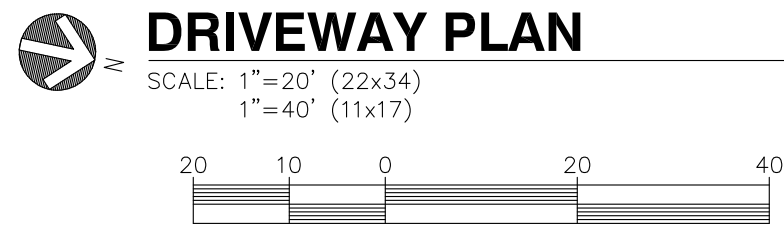
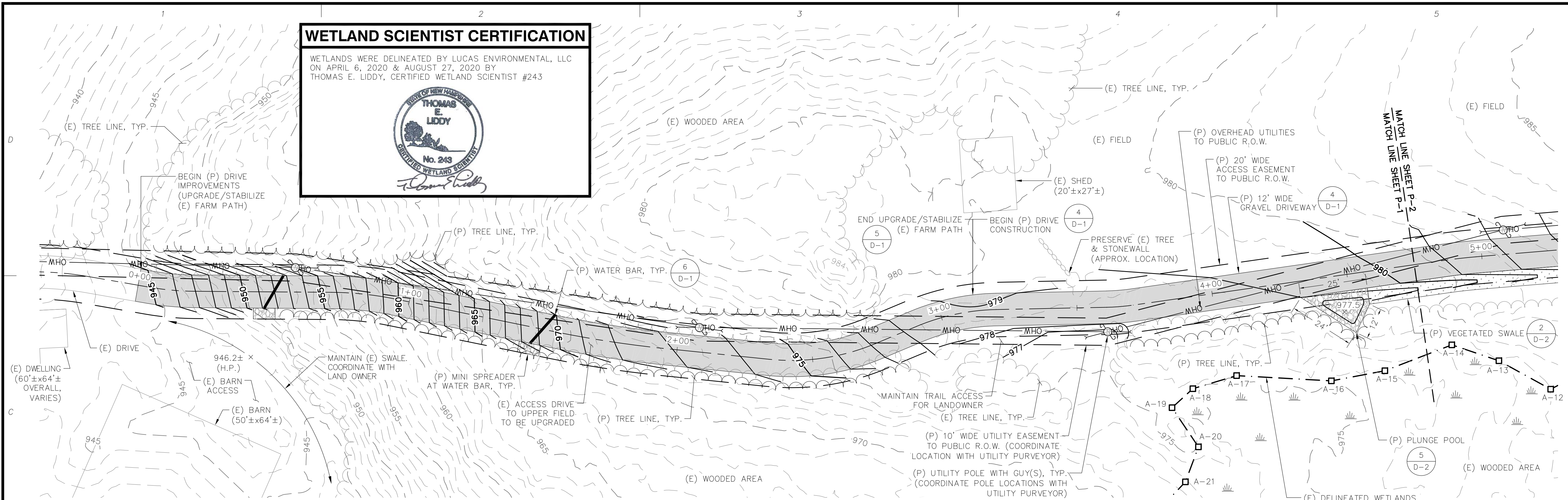
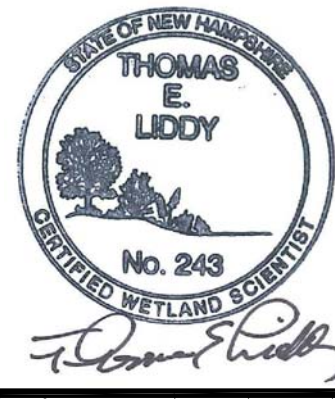
A-2

COMPOUND PLAN
SCALE: 1"=8' (22x34)
1"=16' (11x17)

ELEVATION
SCALE: 1"=12' (22x34)
1"=24' (11x17)

WETLAND SCIENTIST CERTIFICATION

WETLANDS WERE DELINEATED BY LUCAS ENVIRONMENTAL, LLC ON APRIL 6, 2020 & AUGUST 27, 2020 BY THOMAS E. LIDDY, CERTIFIED WETLAND SCIENTIST #243



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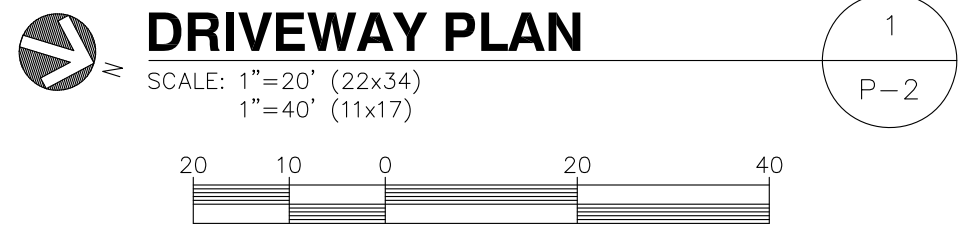
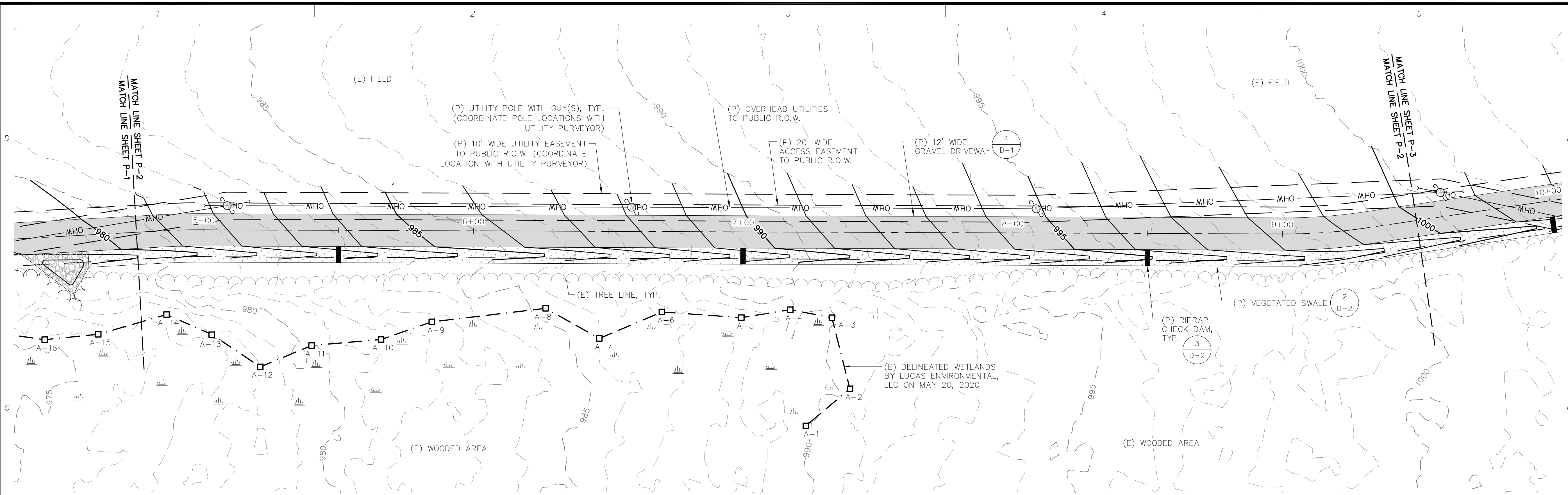
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VERTIX TOWERS LLC

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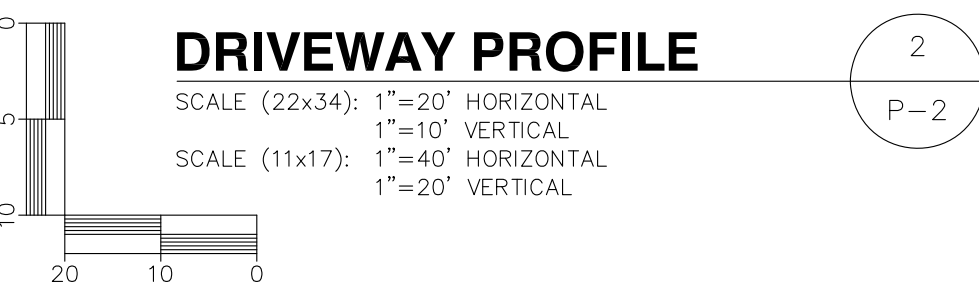
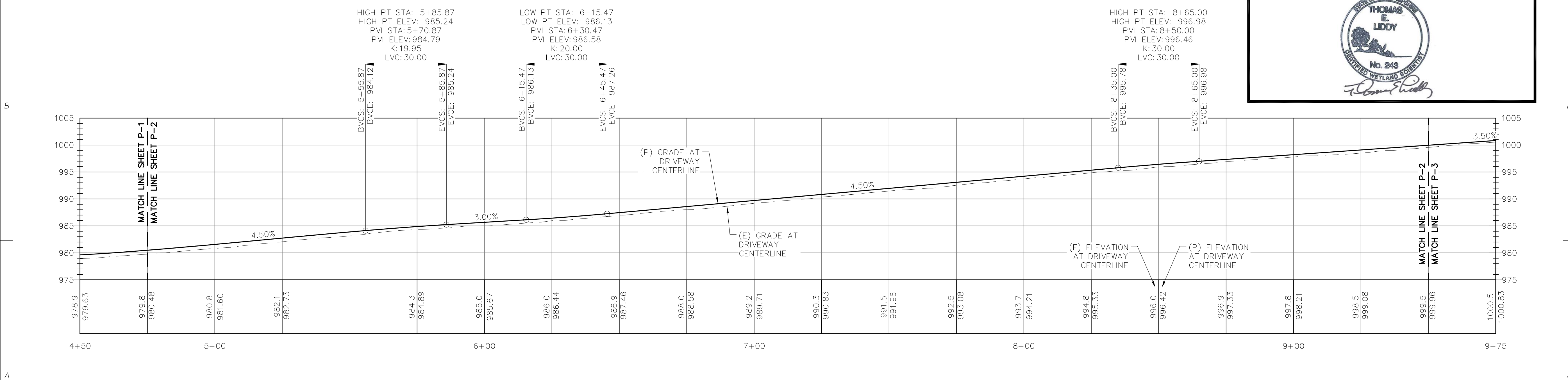
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DRIVEWAY PLAN & PROFILE
P-1



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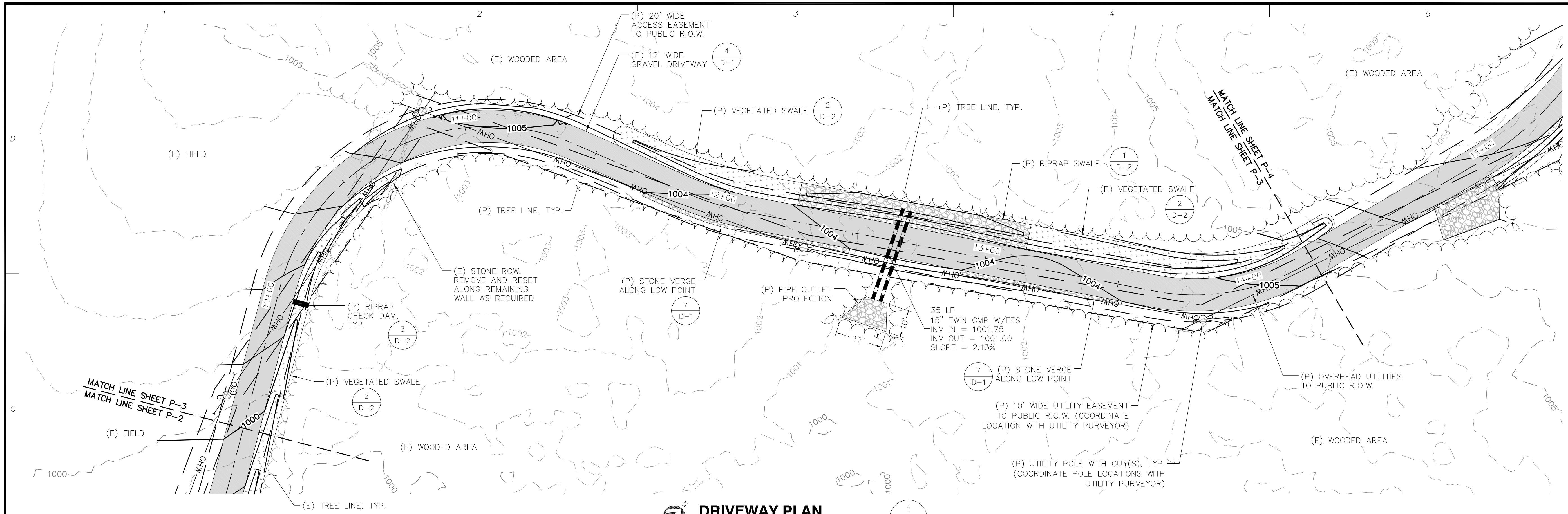
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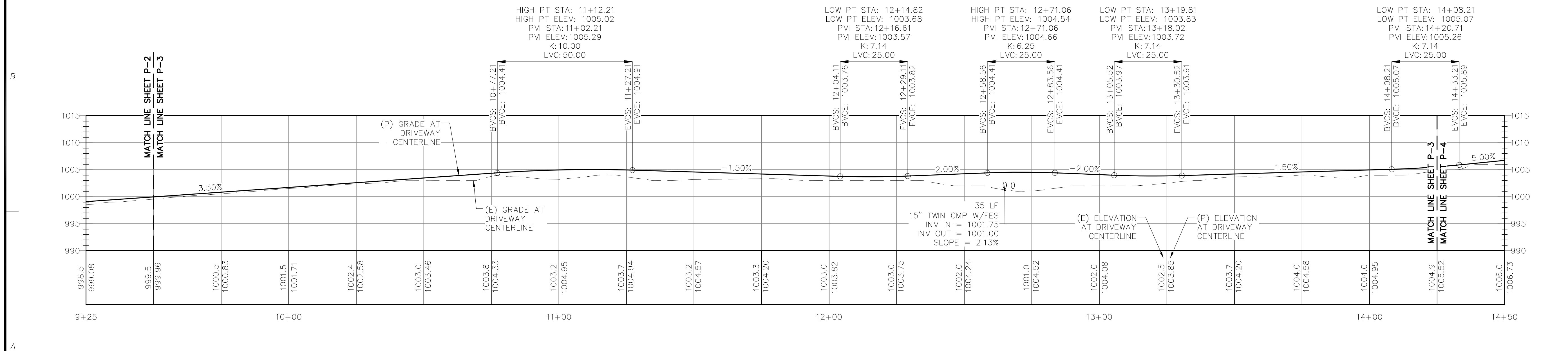
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DRIVEWAY PLAN & PROFILE
P-2



DRIVEWAY PLAN
SCALE: 1"=20' (22x34)
1"=40' (11x17)



DRIVEWAY PROFILE
SCALE (22x34): 1"=20' HORIZONTAL, 1"=10' VERTICAL
SCALE (11x17): 1"=40' HORIZONTAL, 1"=20' VERTICAL

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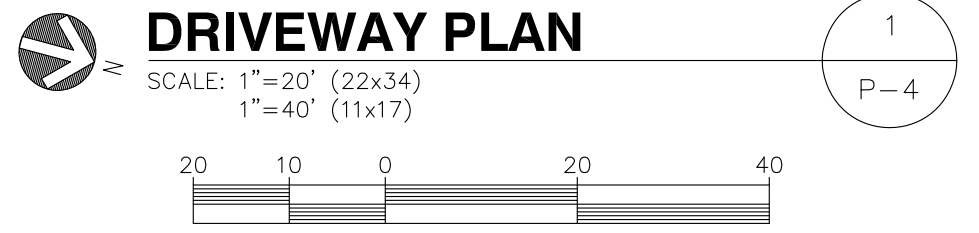
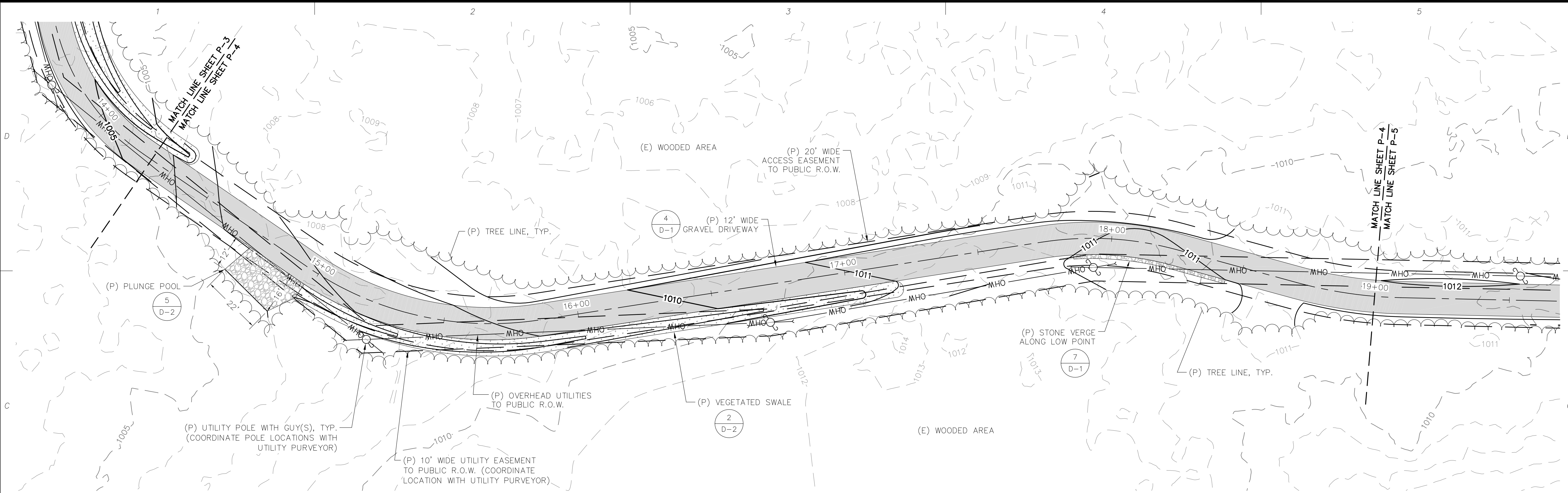
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SHEET TITLE:
DRIVEWAY PLAN & PROFILE
P-3

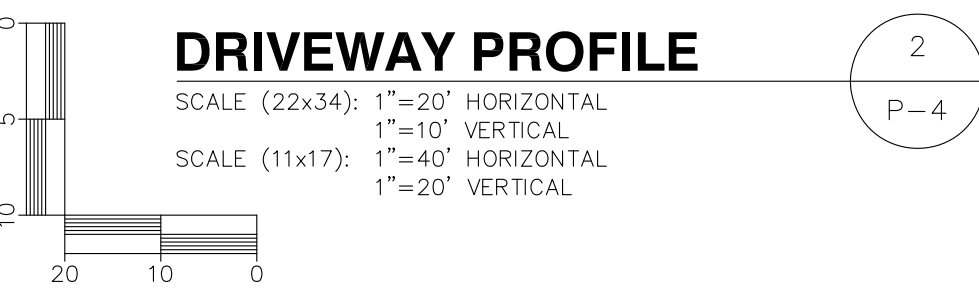
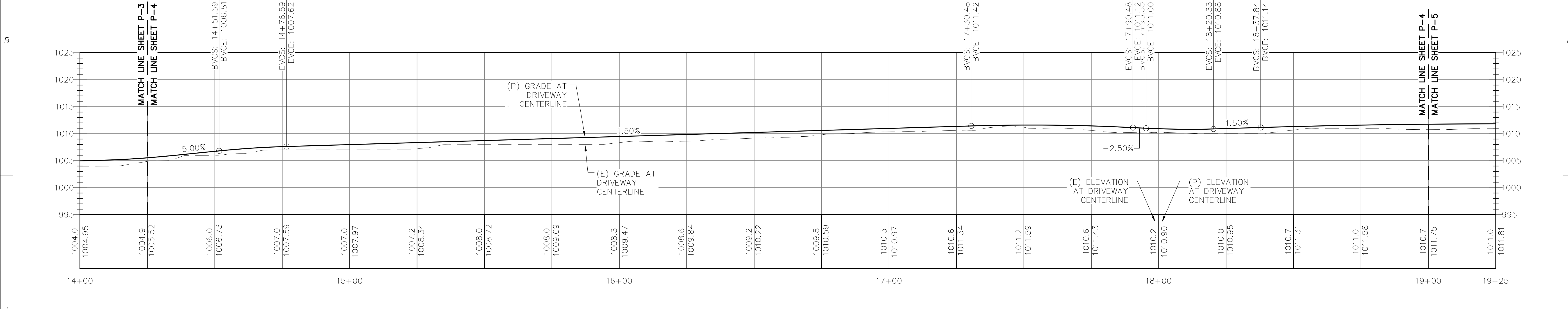


HIGH PT STA: 14+76.59
HIGH PT ELEV: 1007.62
PVI STA: 14+64.09
PVI ELEV: 1007.43
K: 7.14
LVC: 25.00

HIGH PT STA: 17+52.98
HIGH PT ELEV: 1011.59
PVI STA: 17+60.48
PVI ELEV: 1011.87
K: 15.00
LVC: 60.00

LOW PT STA: 18+10.95
LOW PT ELEV: 1010.81
PVI STA: 18+07.83
PVI ELEV: 1010.69
K: 6.25
LVC: 25.00

HIGH PT STA: 19+27.84
HIGH PT ELEV: 1011.82
PVI STA: 19+27.84
PVI ELEV: 1012.49
K: 60.00
LVC: 180.00



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WRENTHAM, MA 02093

VERTIX TOWERS LLC

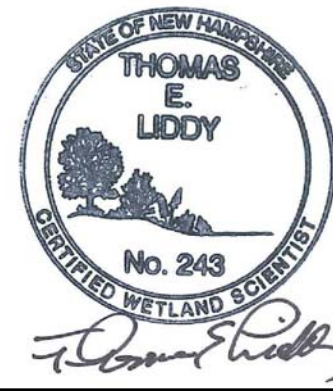
STAMP:

DATE: 12/11/2020
DRAWN: JEB
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 18-015

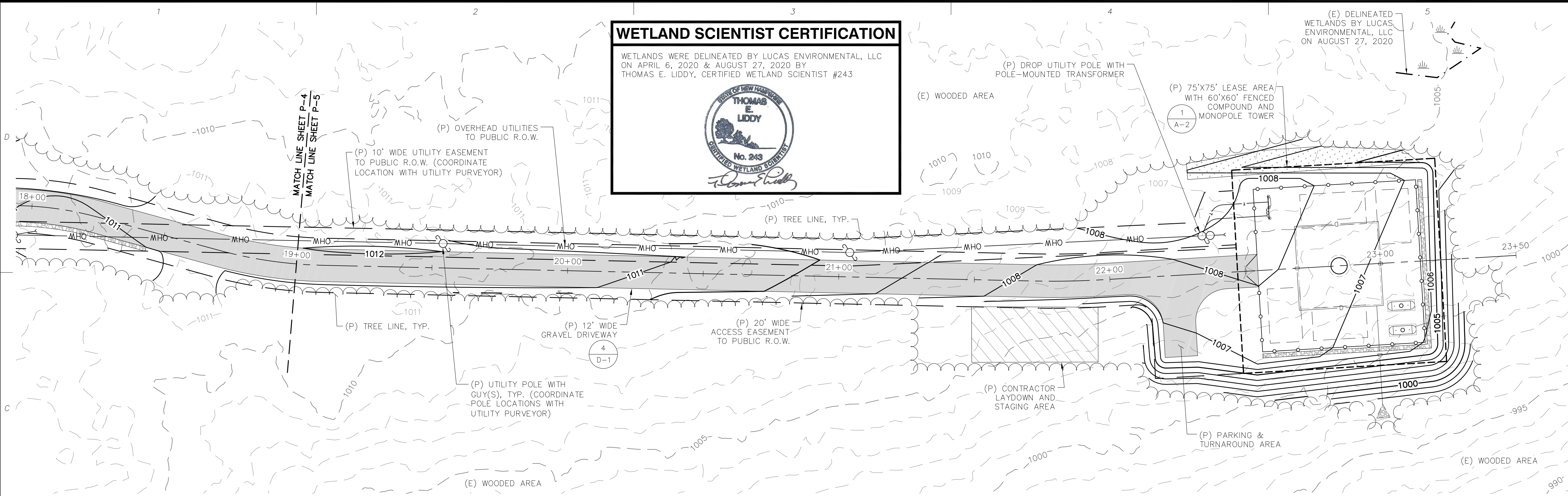
SHEET TITLE:
DRIVEWAY PLAN & PROFILE
P-4

WETLAND SCIENTIST CERTIFICATION

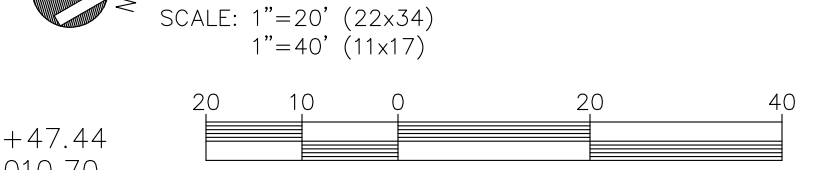
WETLANDS WERE DELINEATED BY LUCAS ENVIRONMENTAL, LLC ON APRIL 6, 2020 & AUGUST 27, 2020 BY THOMAS E. LIDDY, CERTIFIED WETLAND SCIENTIST #243



(E) DELINEATED WETLANDS BY LUCAS ENVIRONMENTAL, LLC ON AUGUST 27, 2020



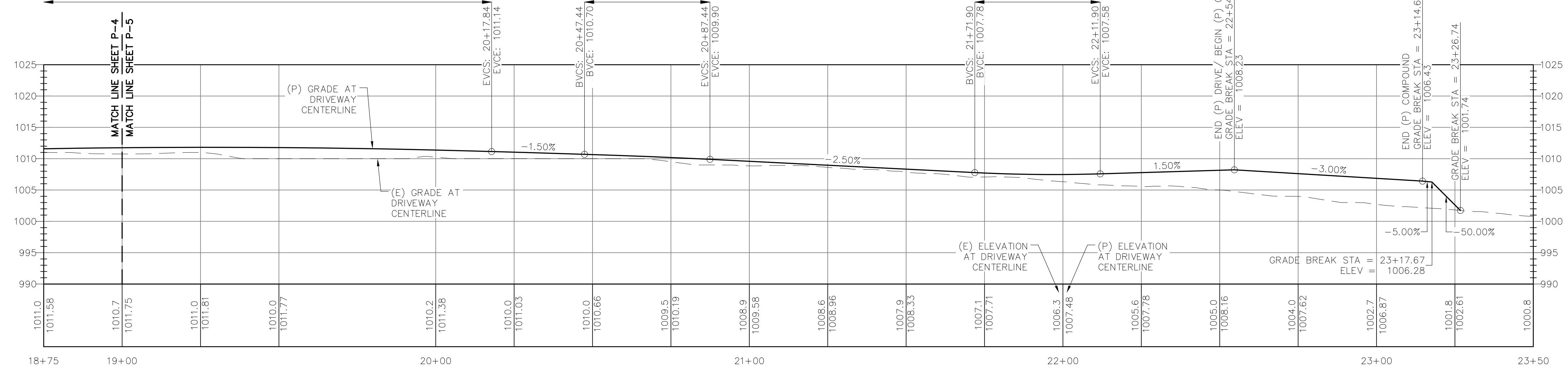
DRIVEWAY PLAN



HIGH PT STA: 19+27.84
HIGH PT ELEV: 1011.82
PVI STA: 19+27.84
PVI ELEV: 1012.49
K: 60.00
LVC: 180.00

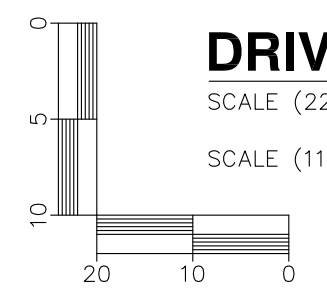
HIGH PT STA: 20+47.44
HIGH PT ELEV: 1010.70
PVI STA: 20+67.44
PVI ELEV: 1010.40
K: 40.00
LVC: 40.00

LOW PT STA: 21+96.90
LOW PT ELEV: 1007.47
PVI STA: 21+91.90
PVI ELEV: 1007.28
K: 10.00
LVC: 40.00



DRIVEWAY PROFILE

SCALE (22x34): 1"=20' HORIZONTAL
1"=10' VERTICAL
SCALE (11x17): 1"=40' HORIZONTAL
1"=20' VERTICAL



4 Bay Road
Building A, Suite 200
Hodley, MA 01035
(413)320-4918

NO.	DATE	REVISIONS
A	10/30/20	ISSUED FOR REVIEW
O	12/11/20	ISSUED FOR PERMITTING

SITE NAME: HENNIKER NORTH RT 114
SITE NUMBER: VT-NH-3012B
ADDRESS: 796 LIBERTY HILL ROAD
HENNIKER, NH 03242

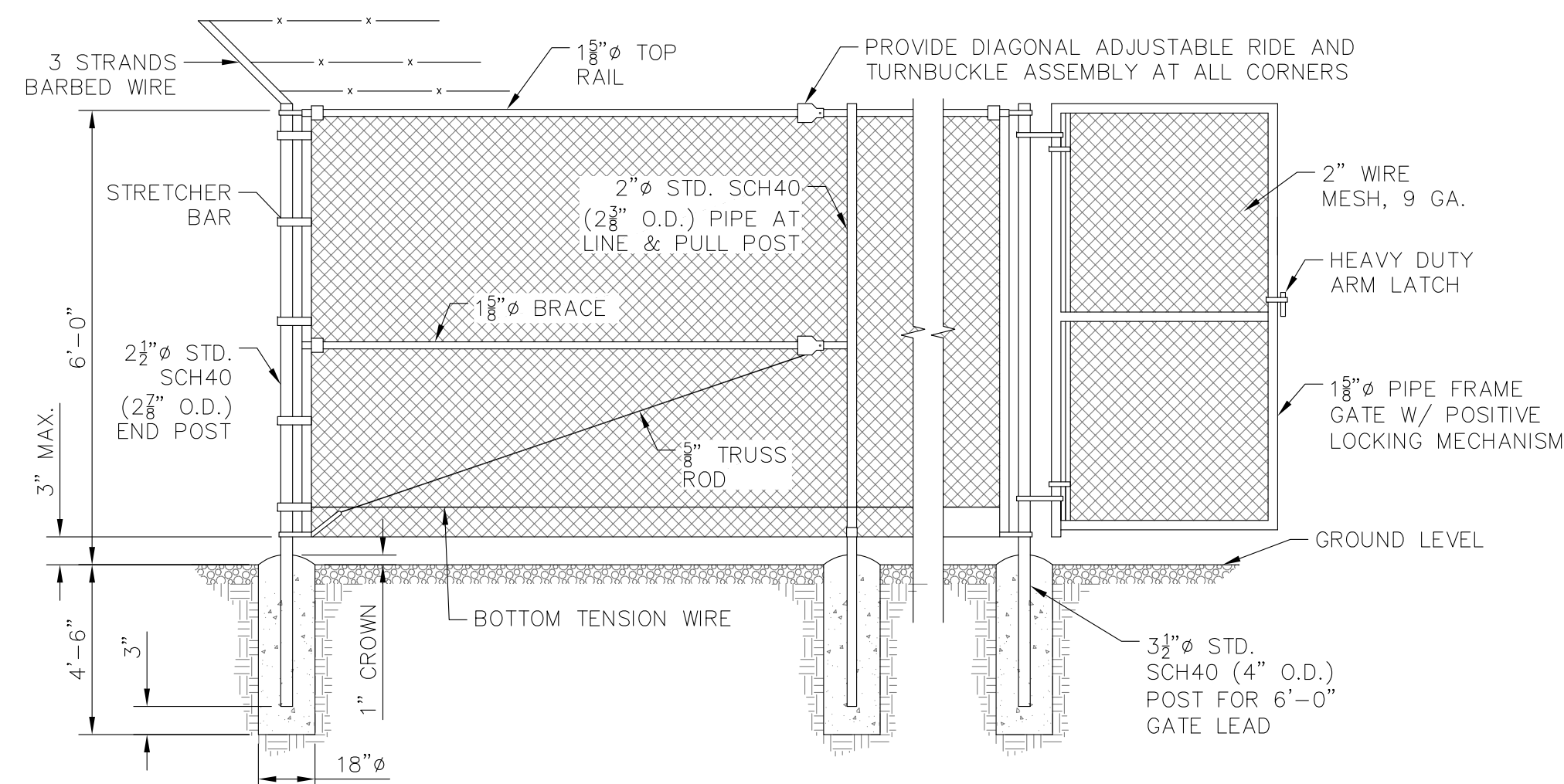
APPLICANT:
Vertex Towers LLC
VERTEX TOWER ASSETS, LLC
165 SOUTH STREET
SUITE 205
WRENTHAM, MA 02093

STAMP:

12-11-2020

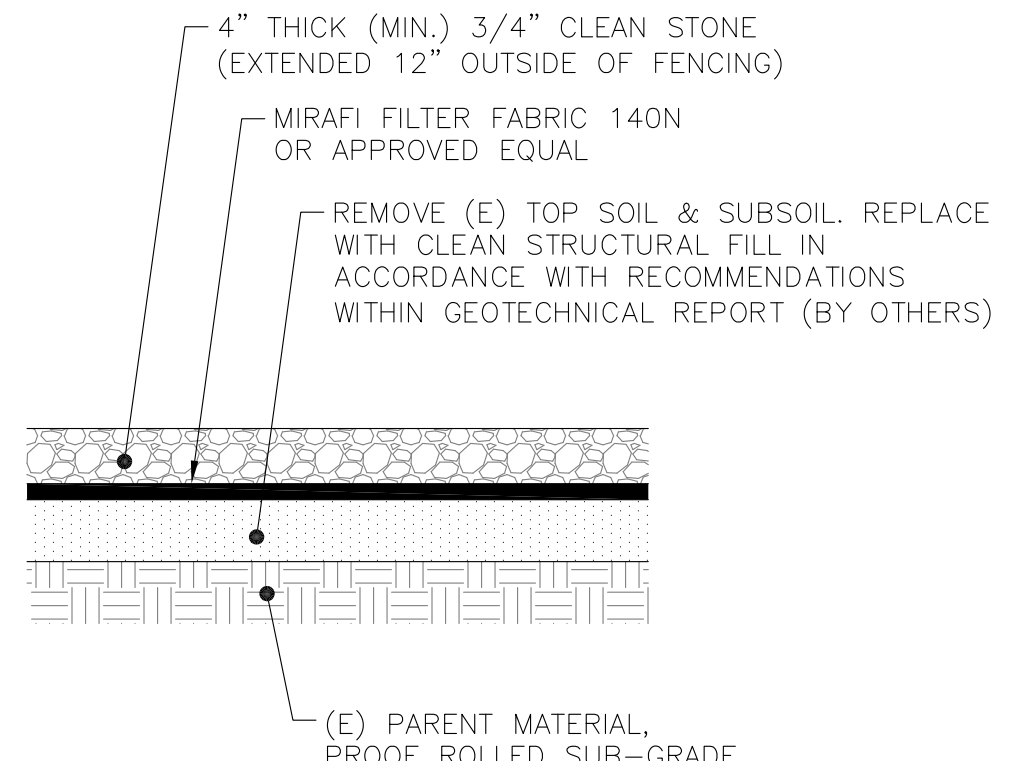
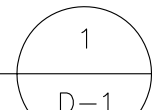
DATE: 12/11/2020
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CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 18-015

SHEET TITLE:
DRIVEWAY PLAN & PROFILE



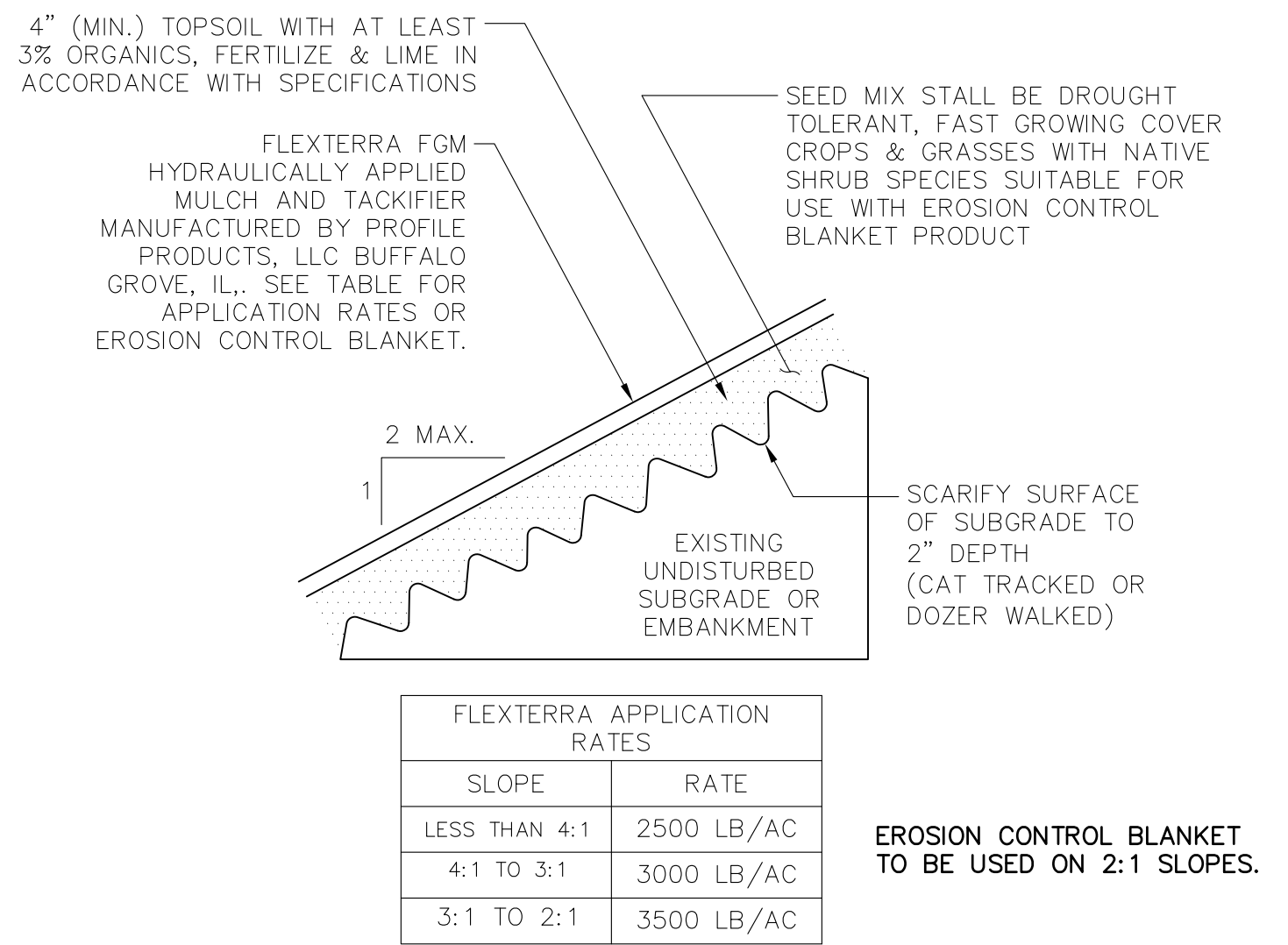
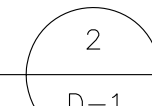
CHAIN LINK FENCE

SCALE: NONE

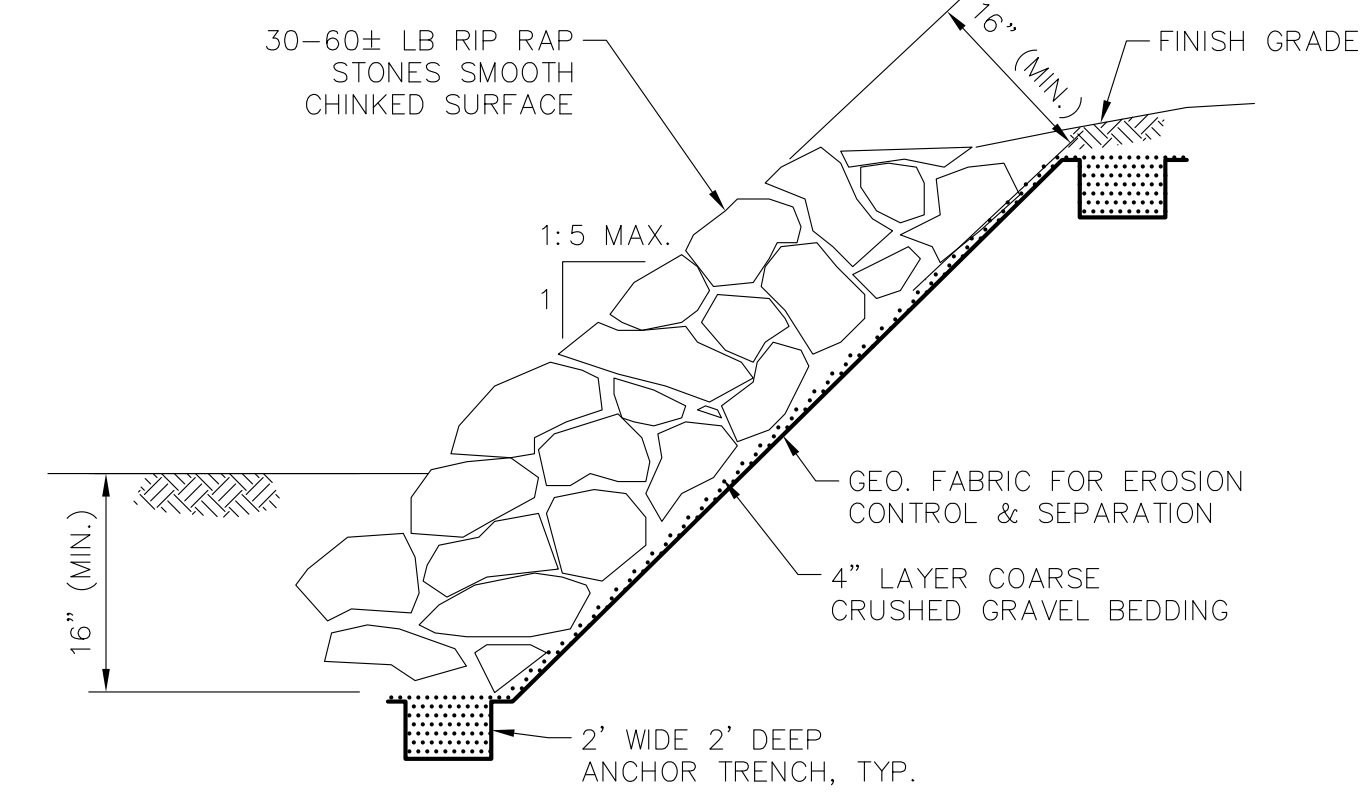


COMPOUND SURFACE

SCALE: NONE



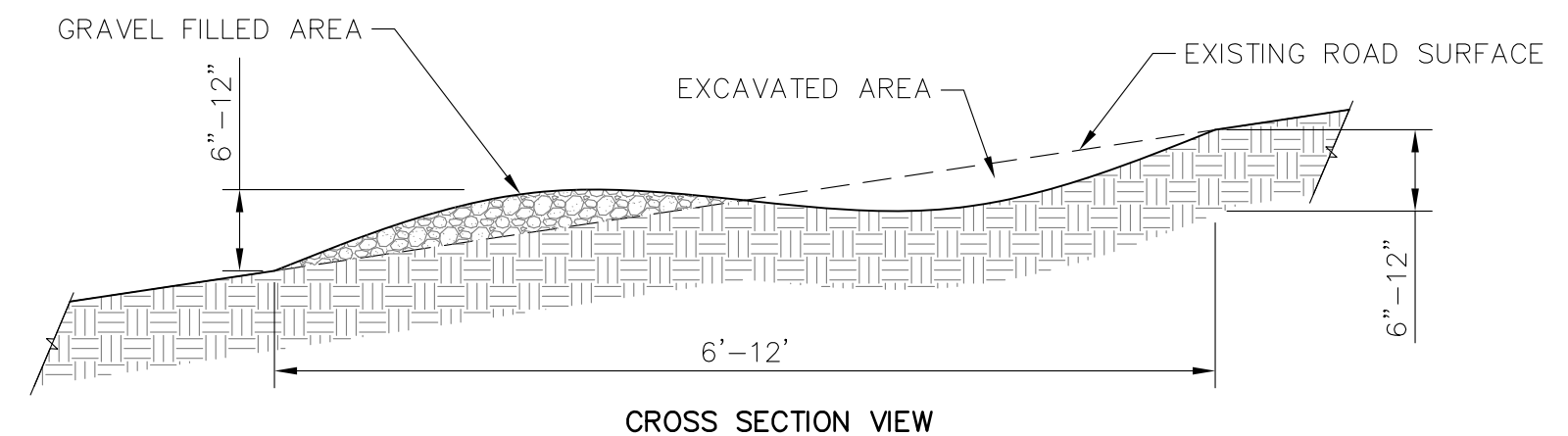
VEGETATED SLOPE



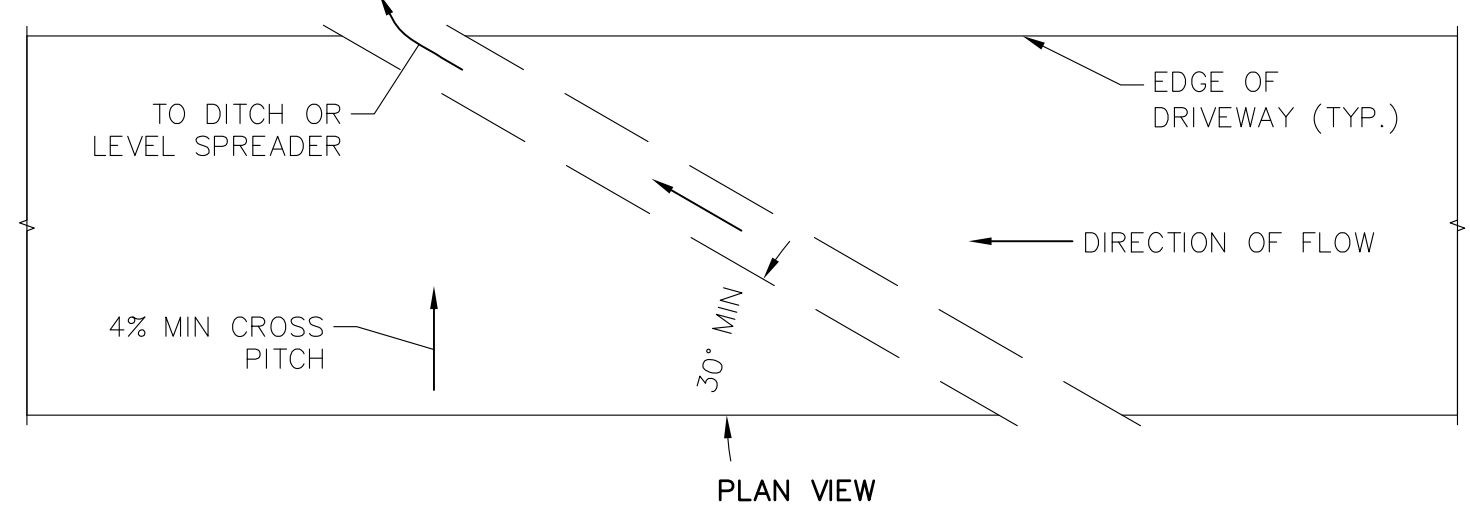
RIPRAP SLOPE

SPACING NEEDED BETWEEN WATER BARS	
SLOPE	DIVERSION SPACING (FT)
< 5%	NONE
5-10%	200
10-20%	150
20-35%	100

WATER BAR OR WATER DEFLECTOR MAY BE USED INTERCHANGEABLY BASED UPON FIELD CONDITIONS

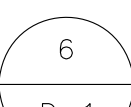


CROSS SECTION VIEW



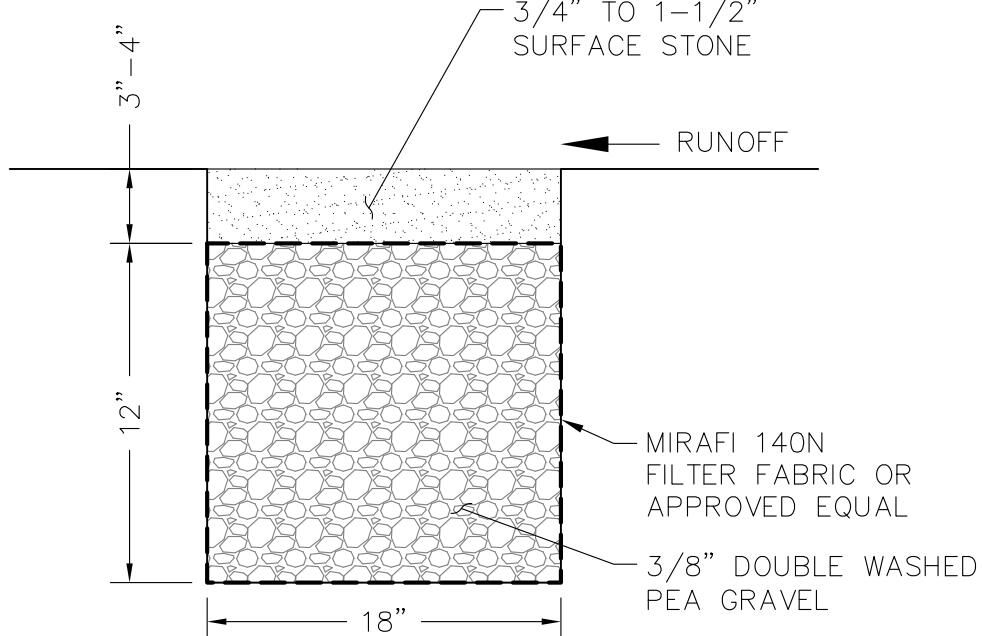
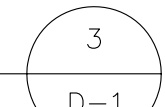
WATER BAR

SCALE: NONE



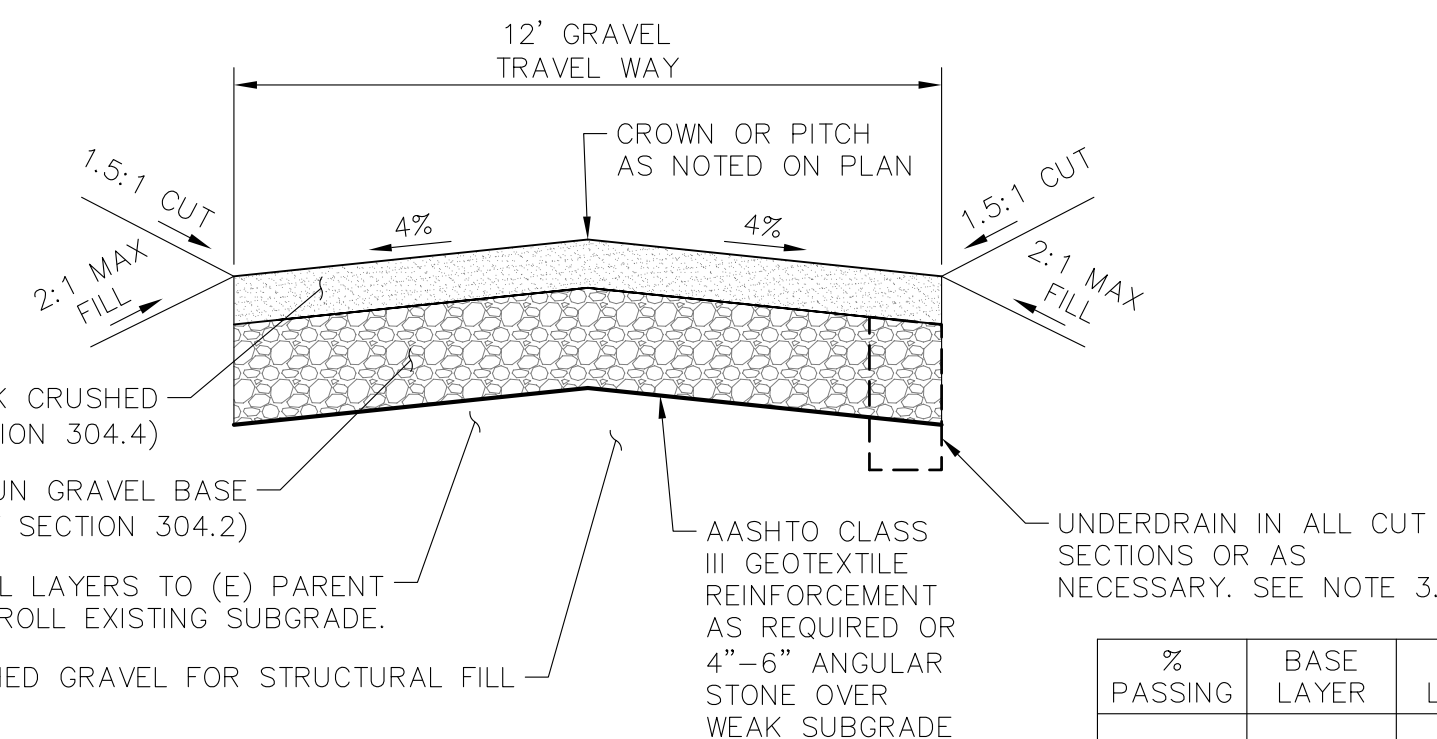
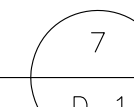
SLOPE TREATMENT

SCALE: NONE



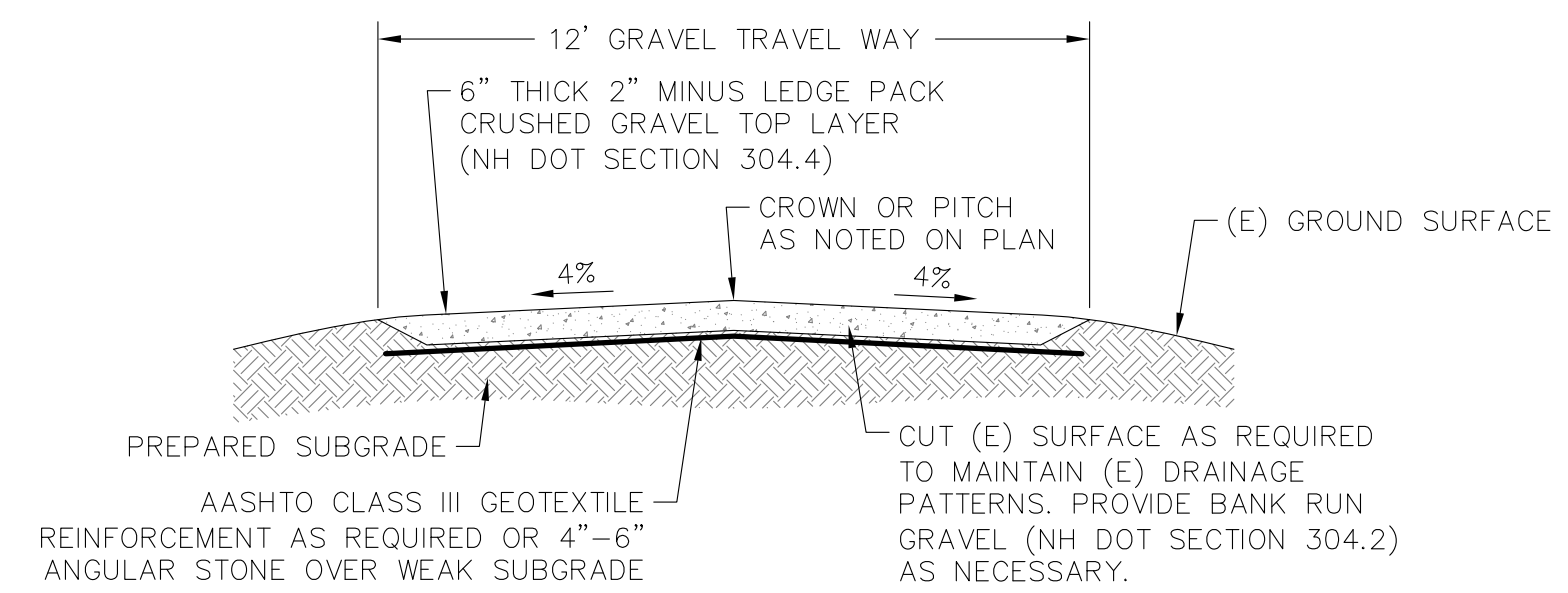
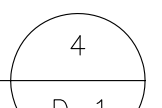
STONE VERGE

SCALE: NONE



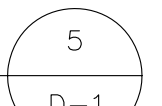
DRIVEWAY SECTION

SCALE: NONE



RESURFACED ROADWAY

SCALE: NONE



- NOTES:
- ALL GRANULAR MATERIALS SHALL BE COMPACTED TO 95±% MAXIMUM DRY DENSITY BY STD. PROCTOR METHOD
 - ALL CUT AND FILL SLOPES TO BE COVERED WITH JUTE MESH EROSION CONTROL BLANKETS AND/OR HYDROSEEDING WITH NEW ENGLAND ROADSIDE MATRIX MIX AT 35LBS PER ACRE OR EQUAL. THE REQUIREMENT FOR INSTALLATION OF SUBDRAINS SHALL BE AT ALL CUT SECTIONS OR AS DETERMINED BY THE ENGINEER-OF-RECORD BASED ON FIELD CONDITIONS AT THE TIME OF CONSTRUCTION. SUBDRAINS SHALL BE OUTLETTED TO DAYLIGHT AS APPROVED BY THE ENGINEER-OF-RECORD.
 - ALL MATERIALS TO CONFORM TO STATE AND/OR MUNICIPAL STANDARD AS REQUIRED.

% PASSING	BASE LAYER	TOP LAYER
6"	100	-
3"	-	-
2"	-	100
1-1/2"	-	85-100
1"	-	-
3/4"	-	45-75
#4	25-70	10-45
#200*	0-12	0-5**

* (IN SAND PORTION) ** (IN TOTAL SAMPLE)

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HENNIKER, NH 03242

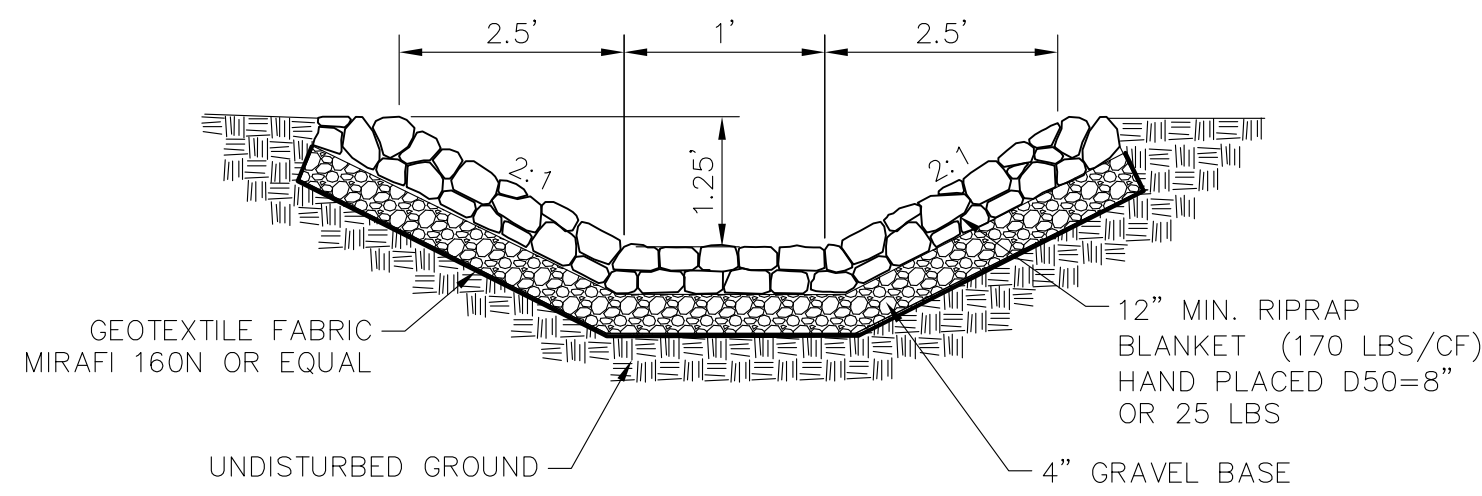
APPLICANT: Vertex Towers LLC
VERTEX TOWER ASSETS, LLC
165 SOUTH STREET
SUITE 205
WRENTHAM, MA 02098

STAMP:

DATE: 12/11/2020
DRAWN: JEB
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 18-015
SHEET TITLE:

DETAILS

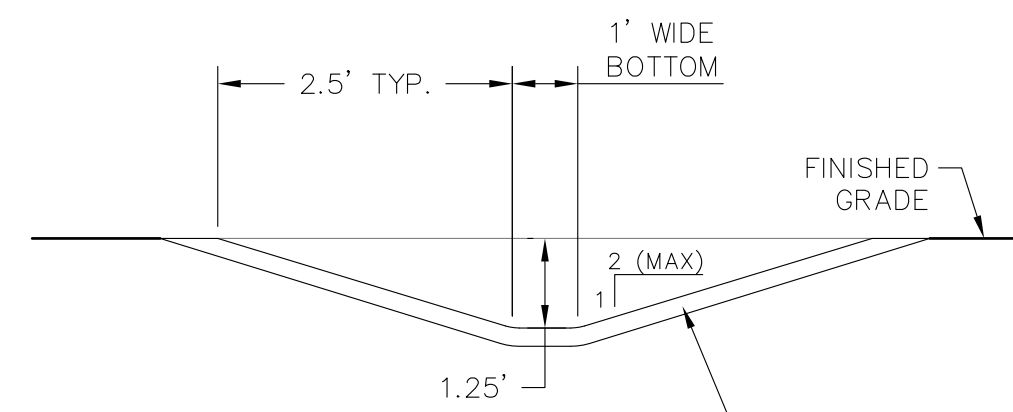
D-1



RIPRAP SWALE

SCALE: NONE

1
D-2



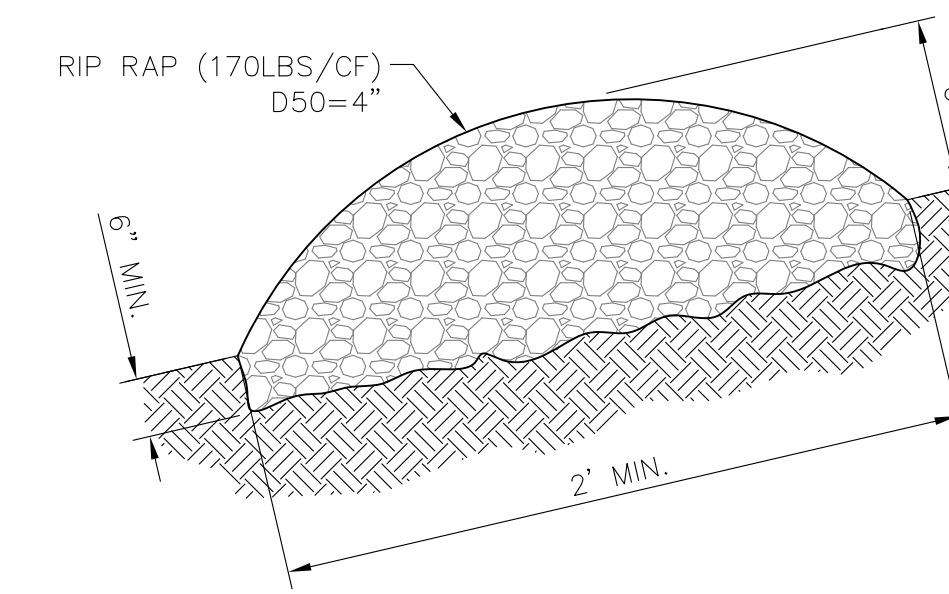
4" (MIN.) TOPSOIL WITH AT LEAST 3% ORGANICS, FERTILIZE AND SEED SIDE SLOPES AND BOTTOM WITH NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS & MOIST SITES BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL. PROVIDE EROSION CONTROL BLANKET.

EROSION CONTROL BLANKET TO BE USED ON 2:1 SLOPES AND THE BOTTOM OF THE VEGETATED SWALE.

VEGETATED SWALE

SCALE: NONE

2
D-2



PLACE RIP RAP CHECK DAM WITHIN RIP RAP SWALES SPACED AT:

- 150' MIN. WHERE LONGITUDINAL SLOPES ARE 5-10%.
- 100' MIN. WHERE LONGITUDINAL SLOPES ARE 10-20%.

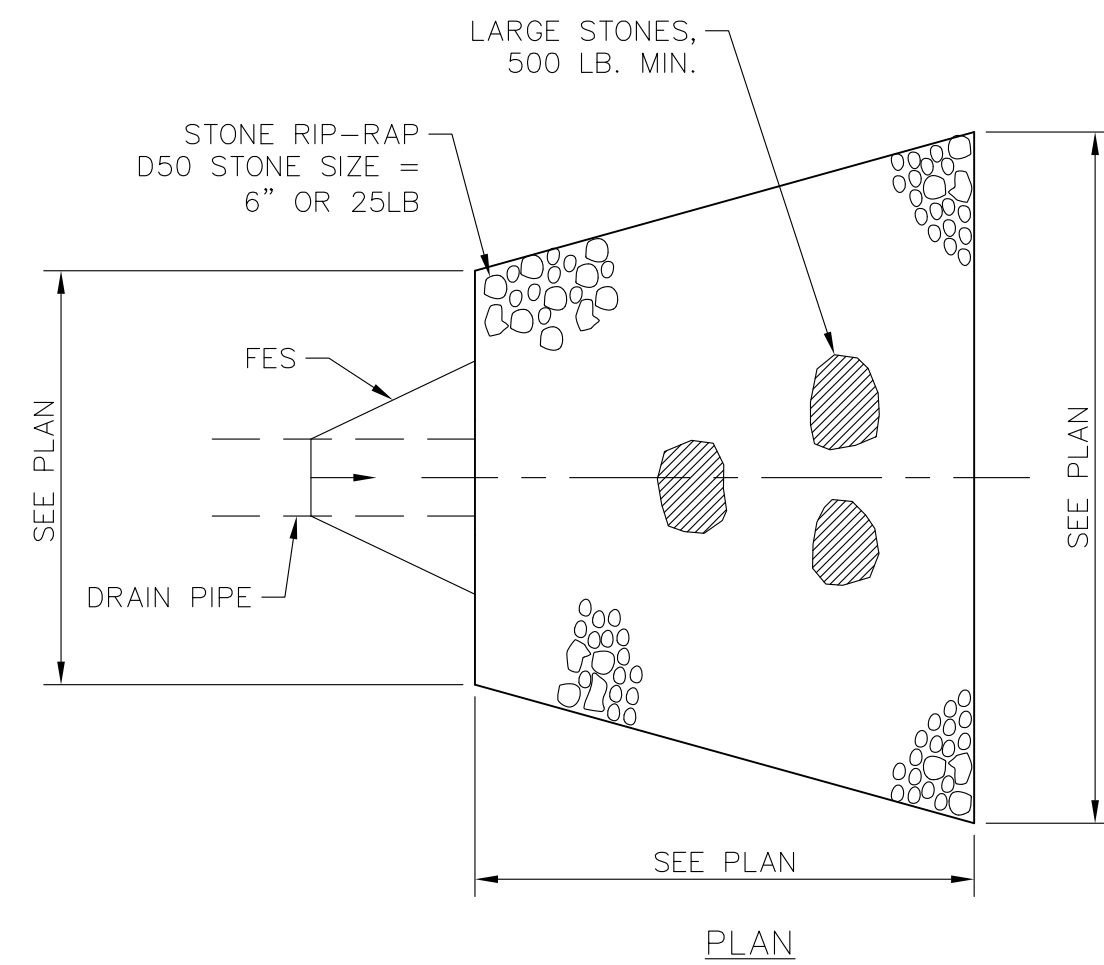
PLACE RIP RAP CHECK DAM WITHIN VEGETATED SWALES SPACED AT:

- THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE OVERFLOW ELEVATION OF THE DOWNSTREAM DAM.

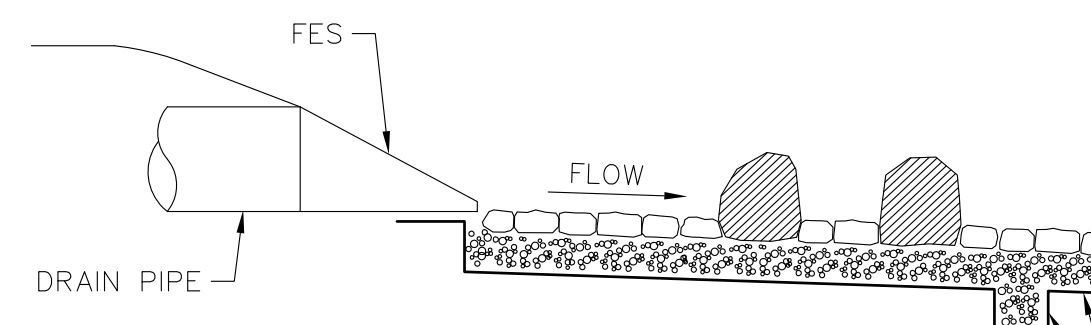
RIP RAP CHECK DAM

SCALE: NONE

3
D-2



PLAN



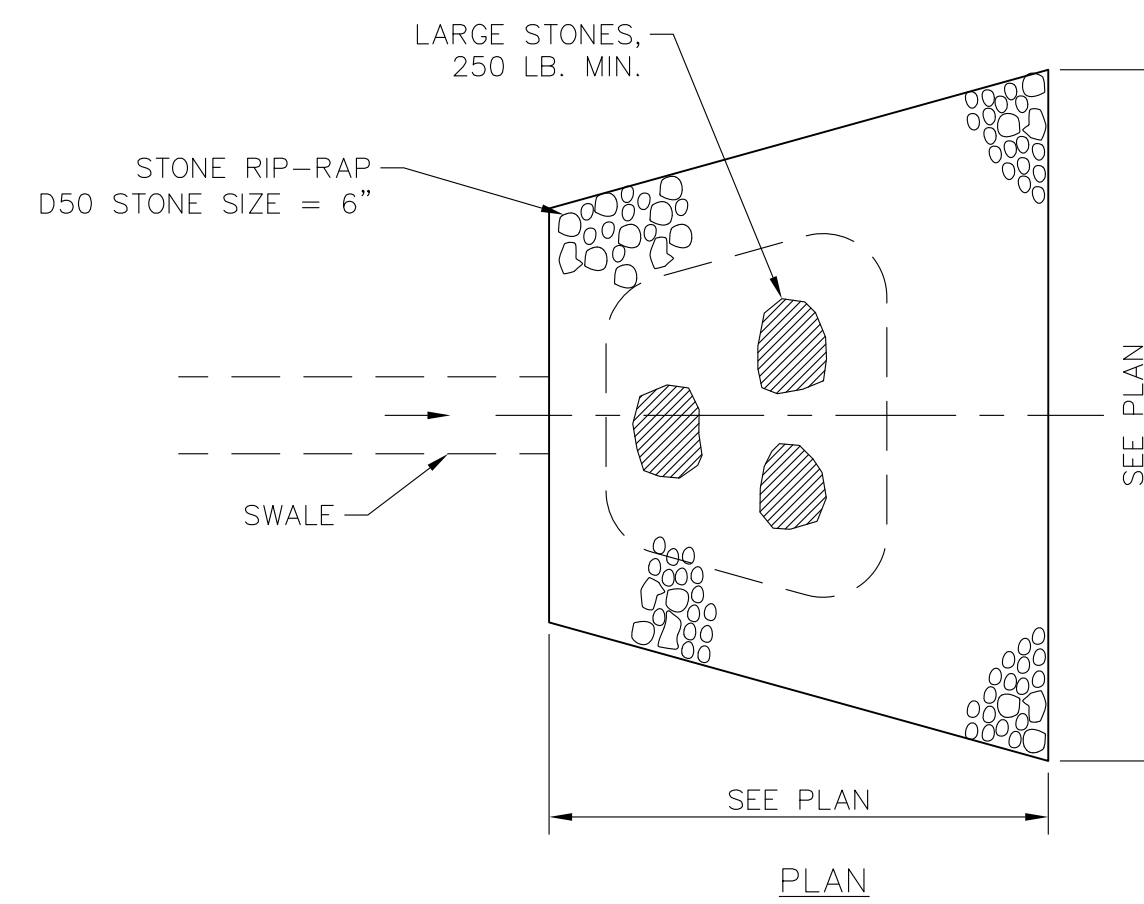
ELEVATION

MIRAFI 160N NON-WOVEN CLASS II FILTER FABRIC OR EQUAL WITH 2' WIDE X 2' DEEP ANCHOR TRENCH

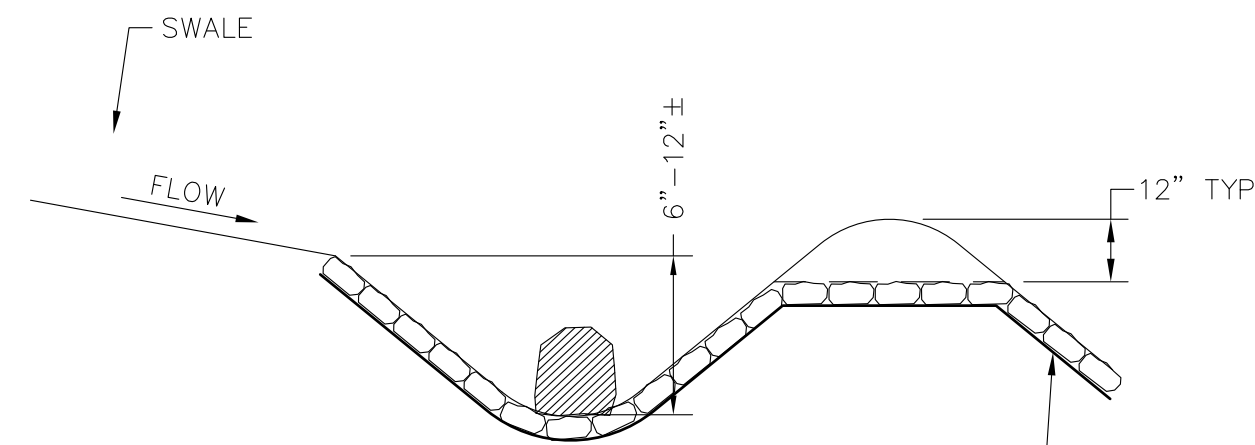
OUTLET PROTECTION

SCALE: NONE

4
D-2



PLAN



ELEVATION

MIRAFI 160N NON-WOVEN CLASS II FILTER FABRIC OR EQUAL

PLUNGE POOL

SCALE: NONE

5
D-2

NO.	DATE	REVISIONS
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SITE NUMBER: VT-NH-8012B
ADDRESS: 796 LIBERTY HILL ROAD
HENNIKER, NH 03242

APPLICANT:
Vertex Towers LLC
165 SOUTH STREET
SUITE 205
WRENTHAM, MA 02098

STAMP:

JESSE M. MORENO
No. 12802
12-11-2020

DATE: 12/11/2020
DRAWN: JEB
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 18-015
SHEET TITLE:

DETAILS

D-2

N/F
 KATHLEEN A. GOSS REVOCABLE TRUST &
 THOMAS N. PATENAUE 2012 IRREVOCALBE TRUST
 32 HARVEY WAY
 HILLSBORO, NH 03244
 PARCEL: 1-67-B
 AREA=6 AC.±

LOCUS
 N/F
 THOMAS N. PATENAUE 2012 IRREVOCALBE TRUST &
 KATHLEEN A. GOSS REVOCABLE TRUST
 32 HARVEY WAY
 HILLSBORO, NH 03244
 PARCEL: 1-65
 AREA=386 AC.±

(E) DELINEATED
 WETLANDS BY LUCAS
 ENVIRONMENTAL, LLC
 ON AUGUST 27, 2020

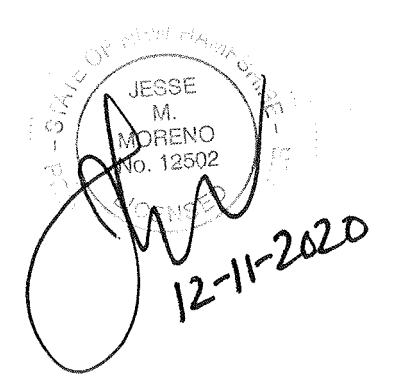
ProTerra
 DESIGN GROUP, LLC

4 Bay Road
 Building A, Suite 200
 Hadley, MA 01035
 (413)320-4918

NO.	DATE	REVISIONS
A	10/30/20	ISSUED FOR REVIEW
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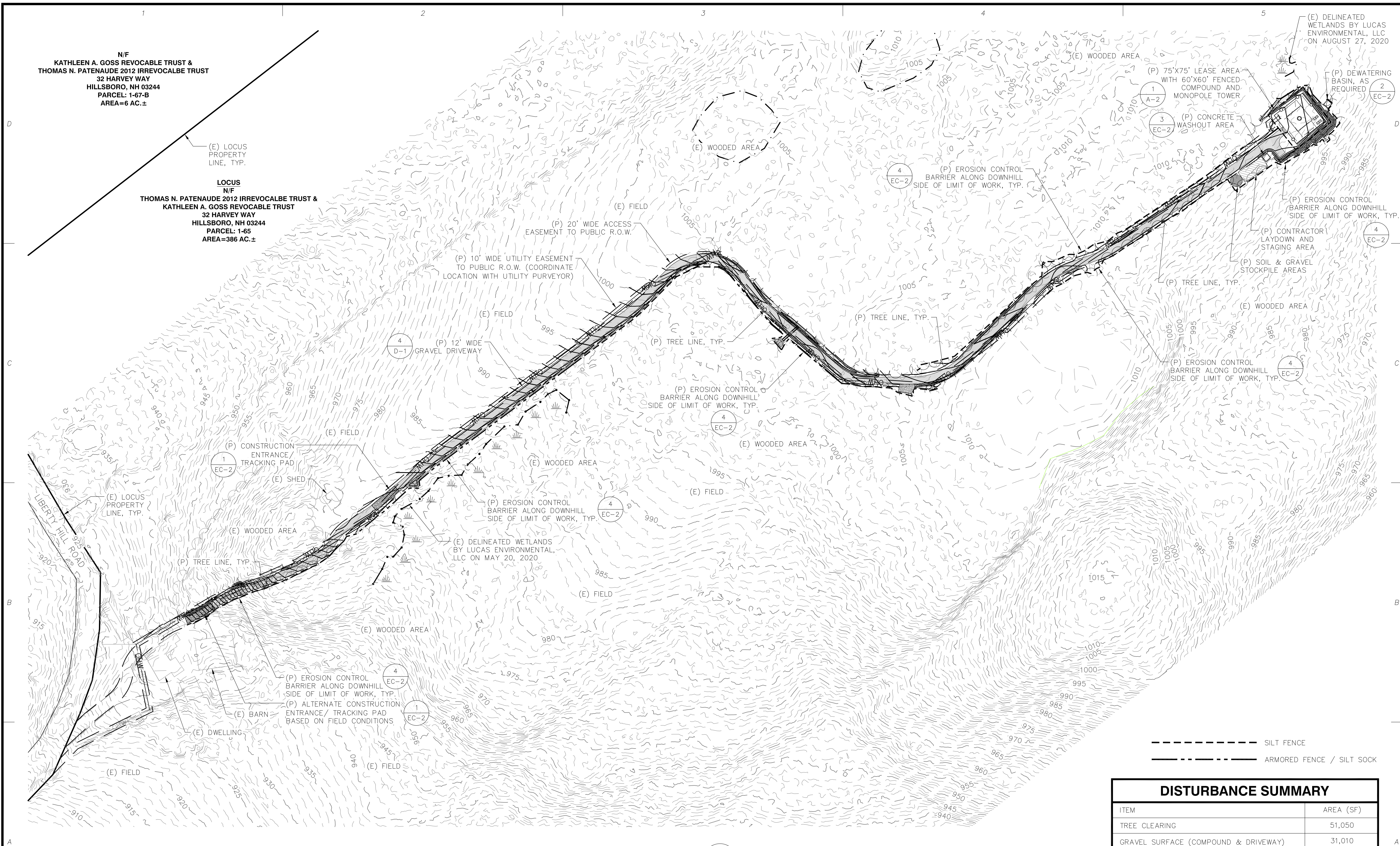
APPLICANT:
Vertex Towers LLC
 VERTEX TOWER ASSETS, LLC
 165 SOUTH STREET
 SUITE 205
 WRENTHAM, MA 02093

STAMP:


DATE: 12/11/2020
 DRAWN: JEB
 CHECK: JMM/TEJ
 SCALE: SEE PLAN
 JOB NO.: 18-015

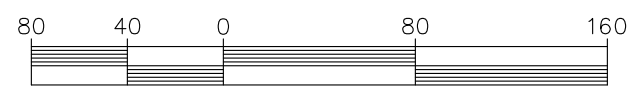
SHEET TITLE:
EROSION CONTROL PLAN

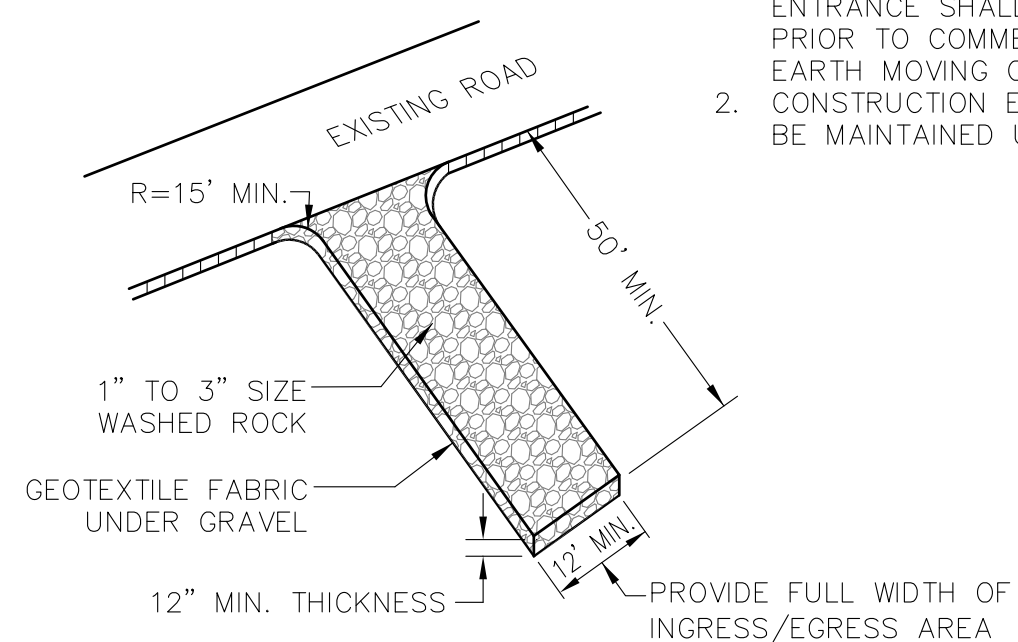
EC-1



DISTURBANCE SUMMARY	
ITEM	AREA (SF)
TREE CLEARING	51,050
GRAVEL SURFACE (COMPOUND & DRIVEWAY)	31,010
RIPRAP (DRAINAGE)	960
RIPRAP SWALE (DRAINAGE)	785
VEGETATED SWALE (DRAINAGE)	6,600
LOAM & SEED	45,870
TOTAL EARTH DISTURBANCE	85,225

EROSION CONTROL PLAN
 SCALE: 1"=80' (22x34)
 1"=160' (11x17)



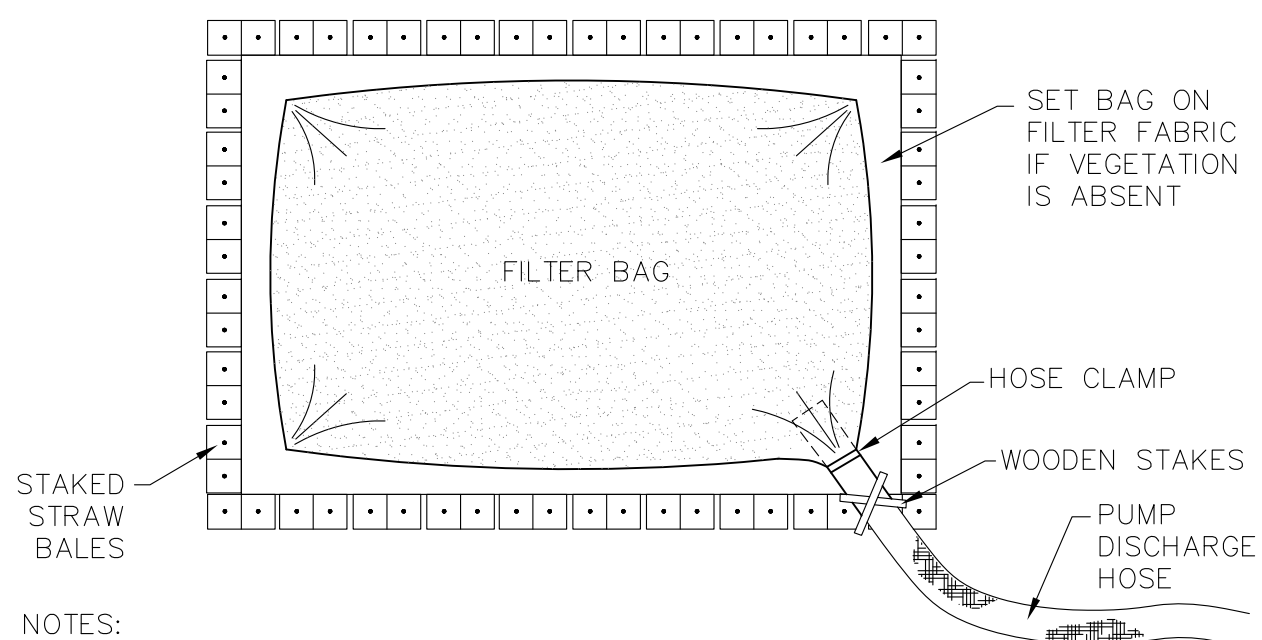


- CONSTRUCTION ENTRANCE NOTES:**
1. AGGREGATE CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF EARTH MOVING OPERATIONS.
 2. CONSTRUCTION ENTRANCE TO BE MAINTAINED UNTIL REMOVED.

CONSTRUCTION ENTRANCE

SCALE: NONE

1
EC-2

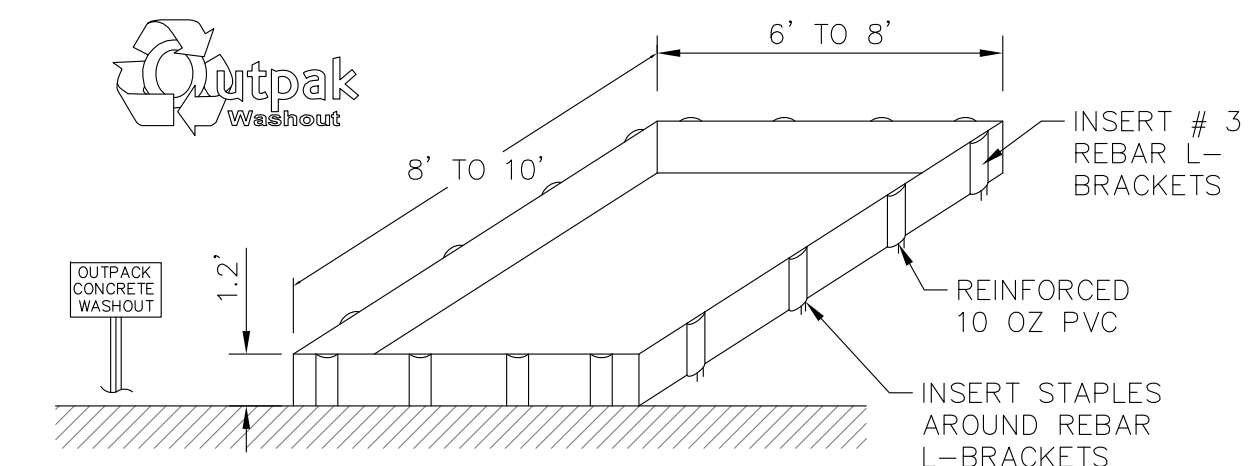


- NOTES:**
1. ENSURE DISCHARGE AREA IS COVERED BY STABLE VEGETATION.
 2. USE DIFFUSER NOZZLE OR LOW DISCHARGE RATE TO PREVENT SCOURING.
 3. TO BE PLACED AT AN UPLAND LOCATION THAT WILL ALLOW WATER TO DRAIN TO THE GROUND.
 4. SIZE OF STRAW BALE ENCLOSURE TO BE 10'x10' ADJUSTED TO WATER VOLUME.
 5. ADDITIONAL STRAW BALES MAY BE USED TO INCREASE RETENTION & FILTERING.

DEWATERING BASIN

SCALE: NONE

2
EC-2

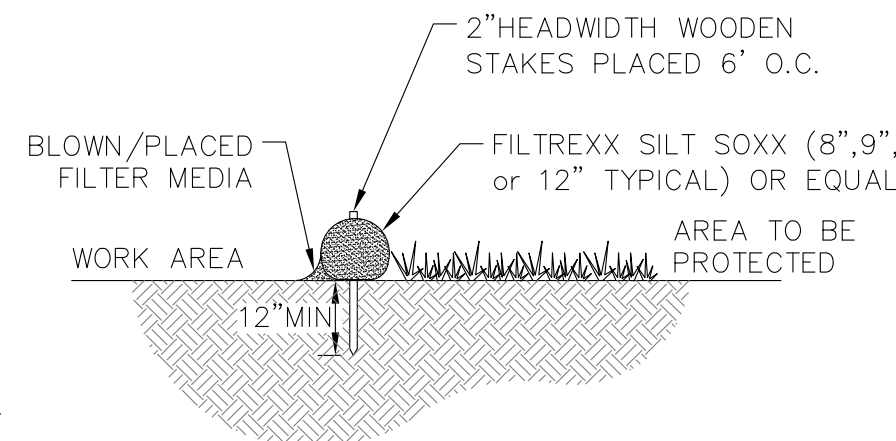


- NOTES:**
1. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON THIS PROJECT.
 2. SIGNS SHALL BE PLACED AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT.
 3. THE CONCRETE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR WASTE CONCRETE AND OTHER LIQUID WASTE.
 4. WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
 5. DO NOT MIX EXCESS AMOUNTS OF FRESH CONCRETE OR CEMENT ON-SITE.
 6. DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
 7. AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.
 8. LOCATE WASHOUT AREA AT LEAST 50' (15 METERS) FROM STORM DRAINS, OPEN DITCHES, OR WATERBODIES.
 9. WASH OUT WASTES INTO THE OUTPACK WASHOUT AS SHOWN WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED OF PROPERLY.

CONCRETE WASHOUT AREA

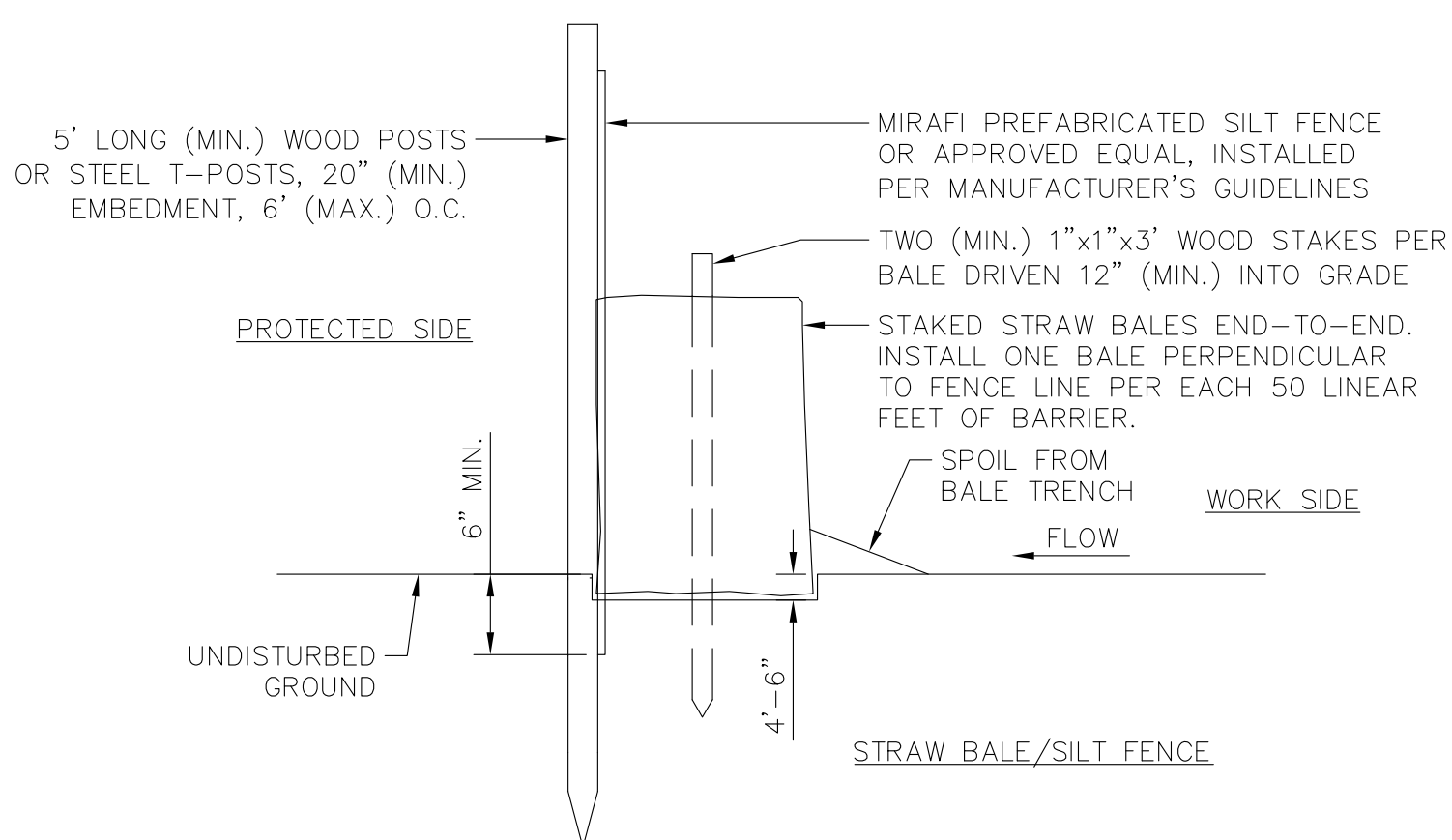
SCALE: NONE

3
EC-2



- NOTES:**
1. USE SILT SOXX WHERE CONDITIONS DO NOT ALLOW STAKES TO BE DRIVEN.
 2. SILT SOXX FILL TO MEET FILTREXX SPECIFICATIONS AND APPLICATION REQUIREMENTS.
 3. SILT SOXX COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
 4. FILTER MEDIA/STRAW BALES TO BE INERT AND FREE FROM INVASIVE WEEDS AND NON-NATIVE SPECIES.
 5. MAY STAKE BEHIND SOCK AT SLIGHT ANGLE (6\"/>

SILT SOXX / COMPOST MEDIA SOCK



EROSION CONTROL BARRIER

SCALE: NONE

4
EC-2

EROSION CONTROL NOTES

1. APPLICANT PROPOSES TO CONSTRUCT A CELLULAR TELECOMMUNICATIONS FACILITY CONSISTING OF A FENCED COMPOUND, DRIVEWAY AND UTILITY WORK WITHIN A LEASE AREA AND EASEMENTS.
2. ALL WORK SHALL CONFORM TO THE NEW HAMPSHIRE STORMWATER MANUAL – VOLUME 3 "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" BY NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES DATED DECEMBER 2008 OR AS SUBSEQUENTLY REVISED.
3. TEMPORARY SILT FENCE EROSION CONTROL BARRIER SHALL BE MAINTAINED THROUGHOUT SITE CONSTRUCTION. STOCK PILE ON SITE 100 FT. OF SILT FENCE FOR EMERGENCY USE. TEMPORARY EROSION BARRIERS SHALL REMAIN IN PLACE UNTIL PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED.
4. THE CONTRACTOR SHALL CHIP ALL BRUSH AND SLASH CUTTINGS ON SITE AND STOCKPILE THE CHIPS TO BE USED ON ALL UNSTABLE, DISTURBED AREAS DURING CONSTRUCTION AS TEMPORARY STABILIZATION MULCH. NO BURNING WILL BE ALLOWED ON SITE.
5. TEMPORARY STABILIZATION MUST BE PROVIDED TO ANY DISTURBED EARTH THAT IS OPENED UP IN ANY ONE LOCATION FOR MORE THAN 14 DAYS. CHIPS FROM LAND CLEARING, EROSION CONTROL BLANKETS, OR FAST GROWING RYE GRASSES MAY BE USED FOR TEMPORARY STABILIZATION AS REQUIRED.
6. STRIPPED TOPSOIL SHALL BE STOCKPILED AND PROTECTED WITH STRAW MULCH. ALL STOCKPILES SHALL HAVE AN APPROVED SILTATION BARRIER TOTALLY SURROUNDING THE PILE. THE PILE SHALL BE IN AN APPROVED UPLAND AREA A MINIMUM OF TWENTY-FIVE FEET FROM ALL RESOURCE AREAS.
7. THE PHASING AND SEQUENCING OF THE WORK FOR THE SITE PREPARATION FOR THE TELECOMMUNICATIONS EQUIPMENT INSTALLATION CONSISTS OF INSTALLING TEMPORARY EROSION AND SEDIMENTATION CONTROL BARRIERS; CLEARING AND ROUGH GRADING OF COMPOUND; FOUNDATION WORK; BACK FILL FOUNDATIONS; FENCED COMPOUND CONSTRUCTION; INSTALLATION OF TOWER AND GROUND EQUIPMENT; INSTALLATION OF UTILITIES; GROUNDING AND LIGHTNING PROTECTION; EQUIPMENT TESTING; FINAL GRADING AND STABILIZATION OF DISTURBED AREAS; LOAM AND SEED DISTURBED AREAS OUTSIDE COMPOUND; FINAL CLEANUP. THE ESTIMATED TIME FOR COMPLETION OF THE WORK IS APPROXIMATELY **SIXTEEN (16) WEEKS**.
8. THE COMPOUND ENCLOSURE IS SURFACED WITH CRUSHED STONE UNDERLAIN BY A WEED-BLOCK SYNTHETIC FILTER FABRIC; DRAINAGE PATTERNS, RUNOFF VOLUMES AND PEAK FLOW RATES WILL NOT BE ALTERED BY THE PROPOSED CONSTRUCTION.
9. IF REQUIRED, TEMPORARY DEWATERING OF THE TRENCH EXCAVATIONS SHALL BE DIVERTED INTO A TEMPORARY STILLING BASIN. INFILTRATION IN THE STILLING BASIN AND FLOW THROUGH THE CRUSHED STONE CONTAINMENT BERM WILL RESULT IN DIFFUSE, NON-POINT SOURCE RUNOFF OVER VEGETATED AREAS.
10. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF THE FENCED COMPOUND AND ROADWAY SHALL BE PERMANENTLY ESTABLISHED WITH A NATIVE VEGETATIVE GROUND COVER AT THE CONCLUSION OF CONSTRUCTION. GRADED AREAS SHALL BE PROTECTED WITH STRAW MULCH UNTIL A GOOD VEGETATIVE COVER IS ESTABLISHED.
11. THE TOTAL IMPACT AREA OF THE DISTURBED TOWER & COMPOUND CONSTRUCTION SITE IS BOUNDED BY THE "LIMIT OF WORK" AS SHOWN HEREON. THE MAXIMUM AREA OF DISTURBANCE WITHIN THE LIMIT OF WORK IS APPROXIMATELY **85,225 SQUARE FEET**. THE PROJECT IMPACT AREA IS ABOVE THE EXEMPTION THRESHOLD OF 43,560 SQUARE FEET IN 40 CFR PARTS 9, 122-124 AND THEREFORE IS SUBJECT TO REGULATION UNDER THE EPA NPDES GENERAL CONSTRUCTION PERMIT PROGRAM.
12. THE PROJECT OWNER'S GENERAL CONTRACTOR SHALL CONDUCT ALL SITE DEVELOPMENT WORK IN A MANNER THAT DOES NOT EXCEED THE LIMITS OF WORK SHOWN ON THE PLANS. ADDITIONALLY, THE PROJECT OWNER'S GENERAL CONTRACTOR SHALL CONDUCT ALL CONSTRUCTION ACTIVITIES IN A MANNER THAT DOES NOT RESULT IN STORM WATER DISCHARGES WITH AN ADVERSE IMPACT ON ANY RESOURCE AREAS OR DOWNSTREAM PROPERTIES.
13. A CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON THIS PROJECT. SIGNS SHALL BE PLACED AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT. WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
14. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SILT FROM BEHIND SILTATION BARRIERS AND DISPOSE OF SILT EVENLY IN UPLAND AREAS. REMOVE ALL EROSION CONTROL DEVICES WHEN A GOOD VEGETATIVE COVER IS ESTABLISHED.

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HENNIKER, NH 03242

APPLICANT:
Vertex Towers LLC
165 SOUTH STREET
TRENTHAM, MA 02098

STAMP:

DATE: 12/11/2020
DRAWN: JEB
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 18-015

SHEET TITLE:
EROSION CONTROL
DETAILS
EC-2