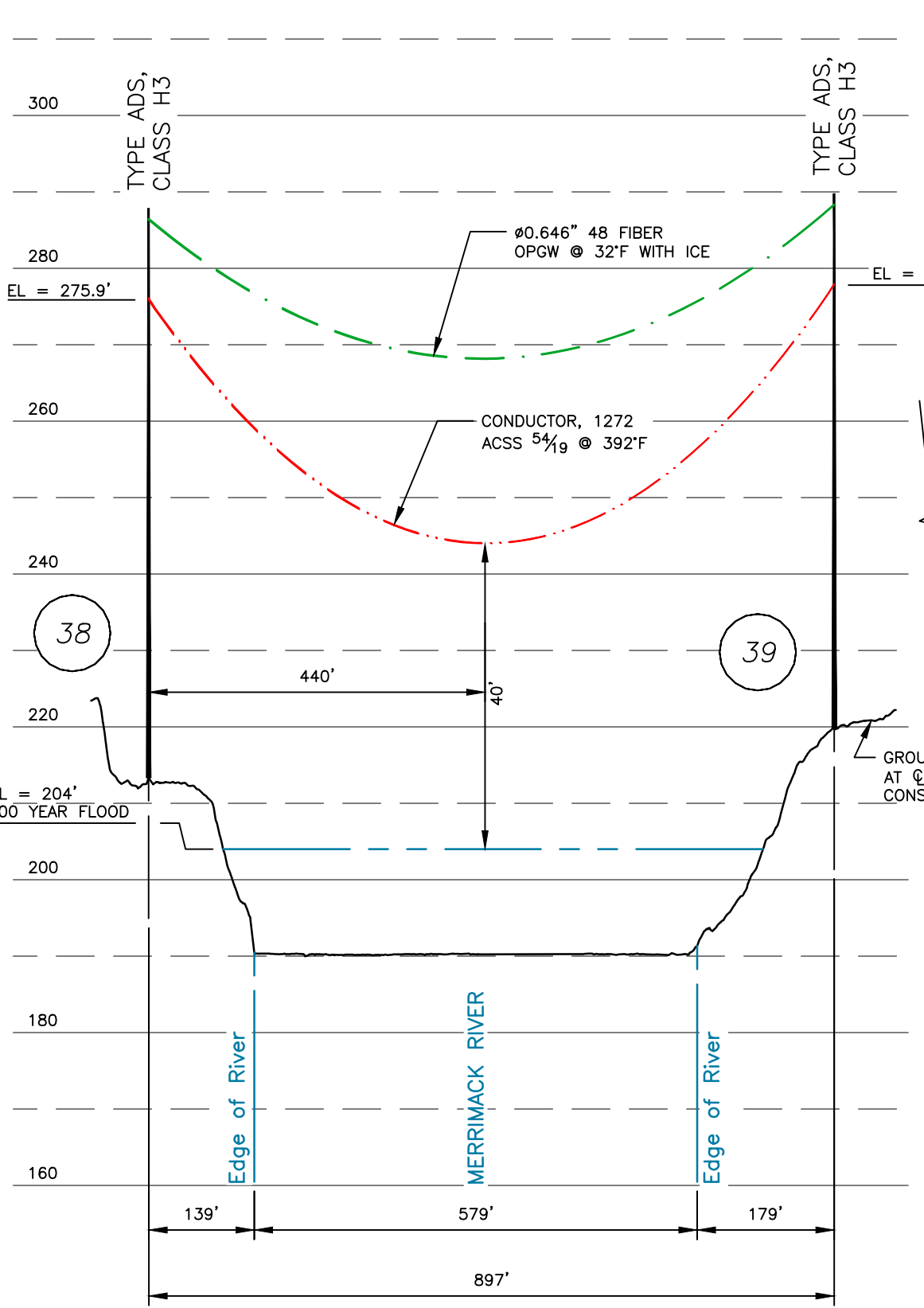


LEGEND:

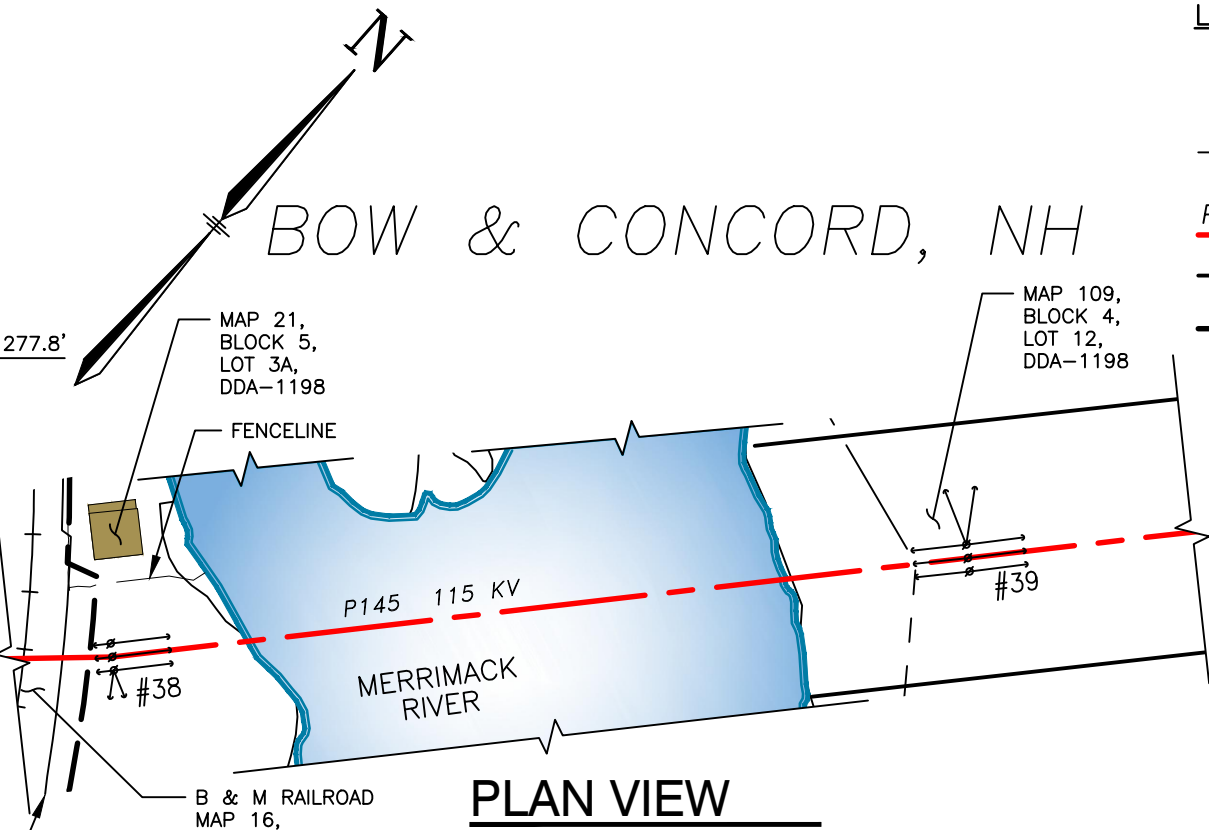
- P145 LINE: - - - -
- P145 STR: 38

EVERSOURCE ENERGY		T	1
P145, 115kV LINE STATE LAND AND WATER BODY CROSSING LOCATION PLAN BOW, CONCORD, AND PEMBROKE, NEW HAMPSHIRE EXHIBIT 1		DRAWN AH	ENGINEER AJW
		CHECKED BS	APPROVED JF
		DATE 12/13/2021	
SCALE 1" = 7000'	FILE: P14543901.DWG	DRAWING NO. P14543901	

DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR
1	ISSUED FOR DETAILED DESIGN		12/13	AH	BS	JF



PROFILE VIEW
 SCALE: HORZ 1" = 200'
 VERT 1" = 20'



PLAN VIEW
 SCALE: 1" = 200'

LEGEND:

- STRUCTURE (WITH GUYS)
- PROPERTY BOUNDARY
- P145 LINE 115KV LINE, C OF CONSTRUCTION
- LIMITS OF EVERSOURCE RIGHT OF WAY
- RAILWAY EASEMENT
- MERRIMACK RIVER

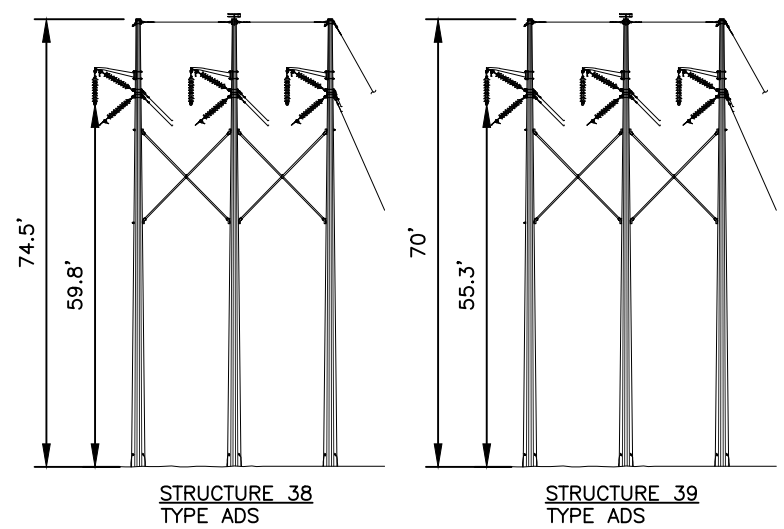
STRUCTURE LOCATION		
STRUCTURE	LONGITUDE	LATITUDE
38	-71.50698168	43.16406038
39	-71.50569469	43.16633379

NESC VERTICAL CLEARANCE (FT) FROM TABLE 232.1, C2-2012	
NATURE OF SURFACE UNDERNEATH WIRES, CONDUCTORS OR CABLES	115kV
WATER AREAS SUITABLE FOR SAIL BOATING; 20-200 ACRES	30.1

CABLE SCHEDULE						
WIRE	QTY OF CABLES	DESCRIPTION	DESIGN CONDITIONS			
			MAX DESIGN TENSION (lb)	TEMP (°F)	ICE (in)	WIND (psf)
CONDUCTOR	3	ACSS, 1272 KCMIL 5/8, PHEASANT	13500	0	0.5	4
OPGW	2	48F Ø0.646" OPGW	8000	0	0.5	4

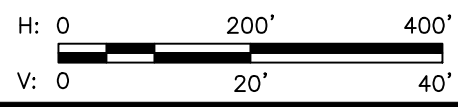
NOTES:

- PARCEL INFORMATION PROVIDED BY NH GRANIT.
- ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
- 100 YEAR FLOOD ELEVATION FROM THE FEMA FLOOD MAP SERVICE CENTER, NATIONAL FLOOD HAZARD LAYER FIRMETTE, 33013C0542E, DATED APRIL 19, 2010.



STR 38: IS AN EVERSOURCE TYPE ADS, SINGLE CIRCUIT STEEL POLE DEAD END ANGLE, HORIZONTAL CONFIG., GUYED.
 STR 39: IS AN EVERSOURCE TYPE ADS, SINGLE CIRCUIT STEEL POLE DEAD END ANGLE, HORIZONTAL CONFIG., GUYED.

STRUCTURE DETAIL
 SCALE: NTS



EVERSOURCE ENERGY		T	1
		DRAWN	AH
P145, 115kV LINE MERRIMACK RIVER, PUBLIC WATER CROSSING BOW & CONCORD, NEW HAMPSHIRE EXHIBIT 2		ENGINEER	AJW
		CHECKED	BS
SCALE: AS SHOWN		APPROVED	JF
		DATE	12/13/2021
FILE: P14543901.DWG		DRAWING NO. P14543901	

DWG REV	ISSUED FOR DETAILED DESIGN	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR
1				12/13	AH	BS	JF

CONCORD AND PEMBROKE, NH

LEGEND:

- #48 STRUCTURE
- PROPERTY BOUNDARY
- P145 LINE 115KV LINE, C OF CONSTRUCTION
- LIMITS OF EVERSOURCE RIGHT OF WAY
- SUOCCOOK RIVER

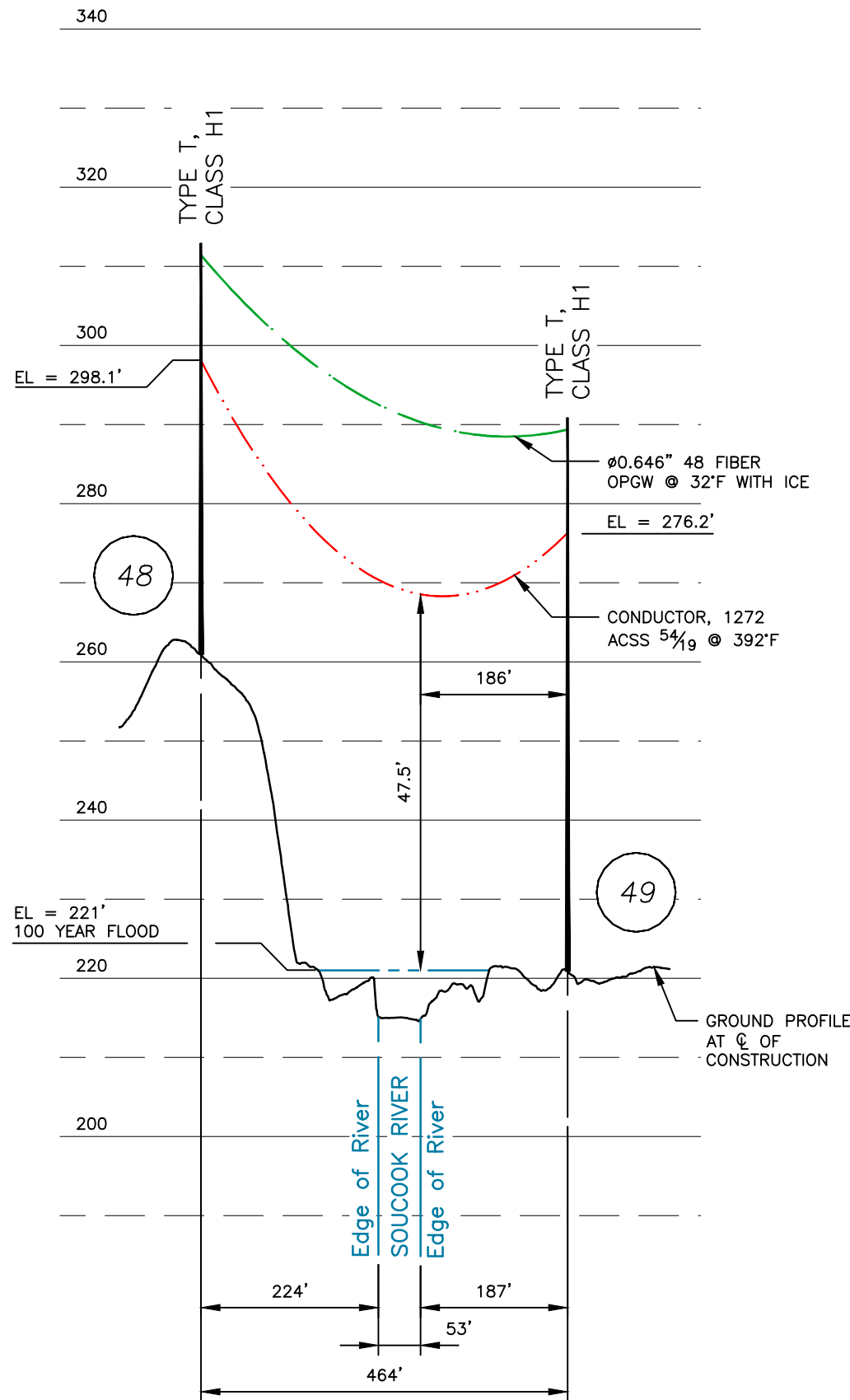
STRUCTURE LOCATION		
STRUCTURE	LONGITUDE	LATITUDE
48	-71.50041343	43.17448237
49	-71.49917779	43.17537665

NESC VERTICAL CLEARANCE (FT) FROM TABLE 232.1, C2-2012	
NATURE OF SURFACE UNDERNEATH WIRES, CONDUCTORS OR CABLES	115kV
WATER AREAS NOT SUITABLE FOR SAIL BOATING OR WHERE SAIL BOATING IS PROHIBITED	18.6

CABLE SCHEDULE						
WIRE	QTY OF CABLES	DESCRIPTION	DESIGN CONDITIONS			
			MAX DESIGN TENSION (lb)	TEMP (°F)	ICE (in)	WIND (psf)
CONDUCTOR	3	ACSS, 1272 KCMIL 54/9, PHEASANT	10000	0	0.5	4
OPGW	2	48F Ø0.646" OPGW	5000	0	0.5	4

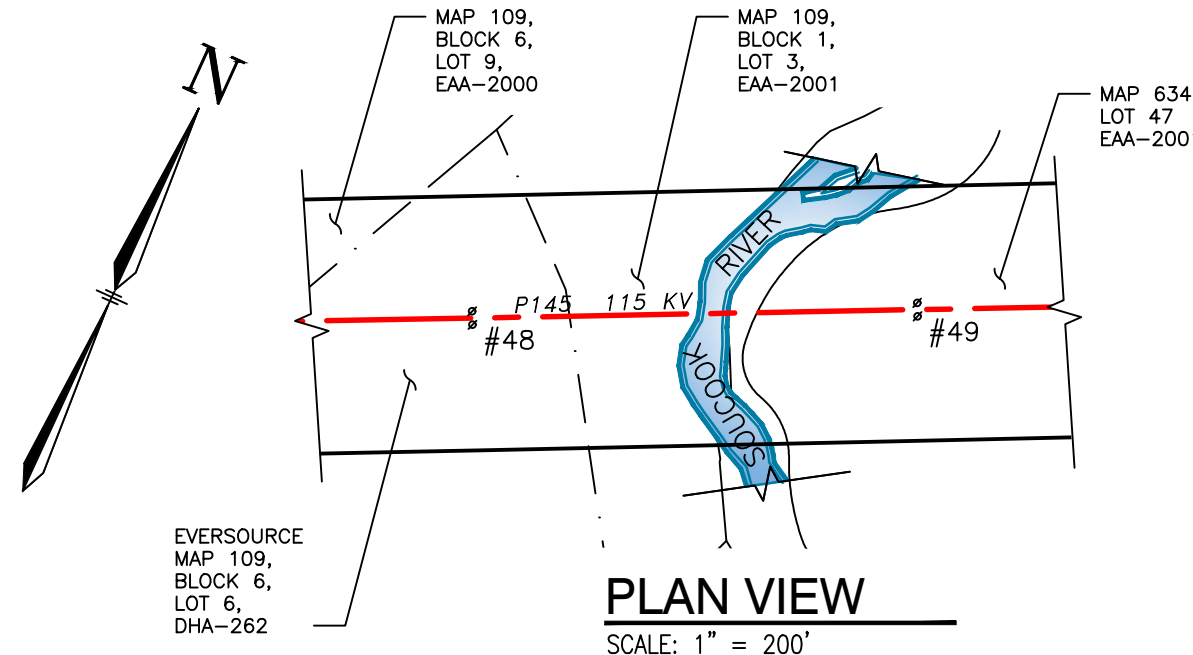
NOTES:

1. PARCEL INFORMATION PROVIDED BY NH GRANIT.
2. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
3. 100 YEAR FLOOD ELEVATION FROM THE FEMA FLOOD MAP SERVICE CENTER, NATIONAL FLOOD HAZARD LAYER FIRMETTE, 33013C0542E, DATED APRIL 19, 2010.



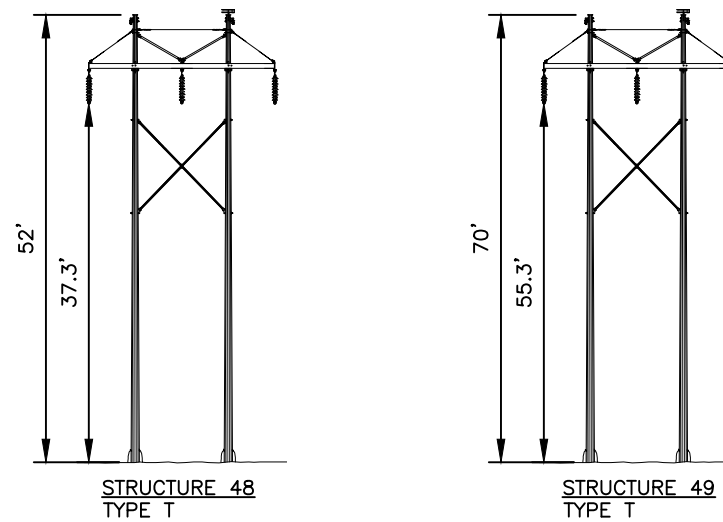
PROFILE VIEW

SCALE: HORZ 1" = 200'
VERT 1" = 20'



PLAN VIEW

SCALE: 1" = 200'



STRUCTURE 48
TYPE T

STRUCTURE 49
TYPE T

STR 48: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

STR 49: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

STRUCTURE DETAIL

SCALE: NTS



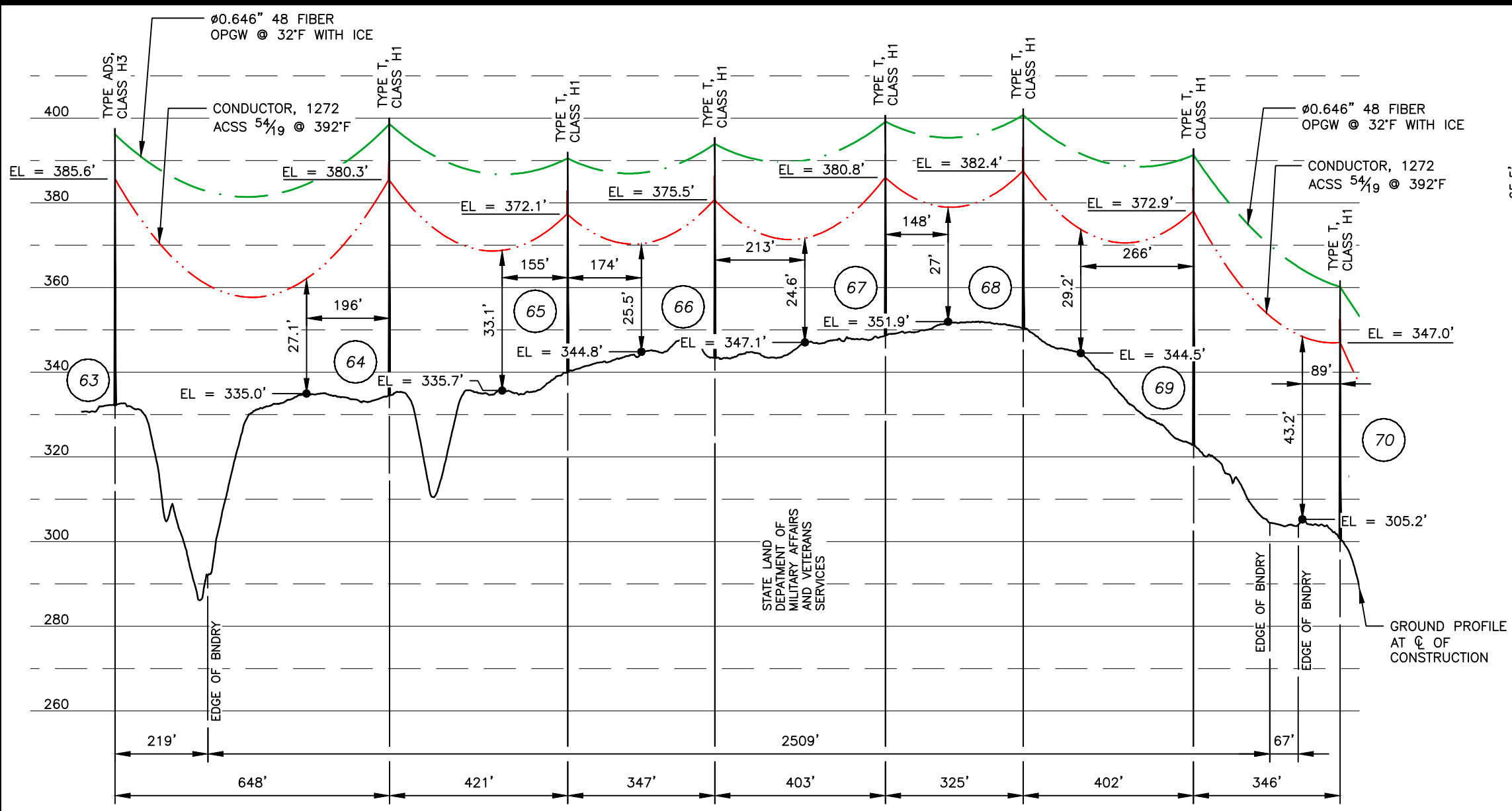
DWG REV	ISSUED FOR DETAILED DESIGN	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	AH	BS	JF
1				12/13		AH	BS	JF

EVERSOURCE ENERGY

P145, 115kV LINE
SUOCCOOK RIVER, PUBLIC WATER CROSSING
CONCORD AND PEMBROKE, NEW HAMPSHIRE
EXHIBIT 3

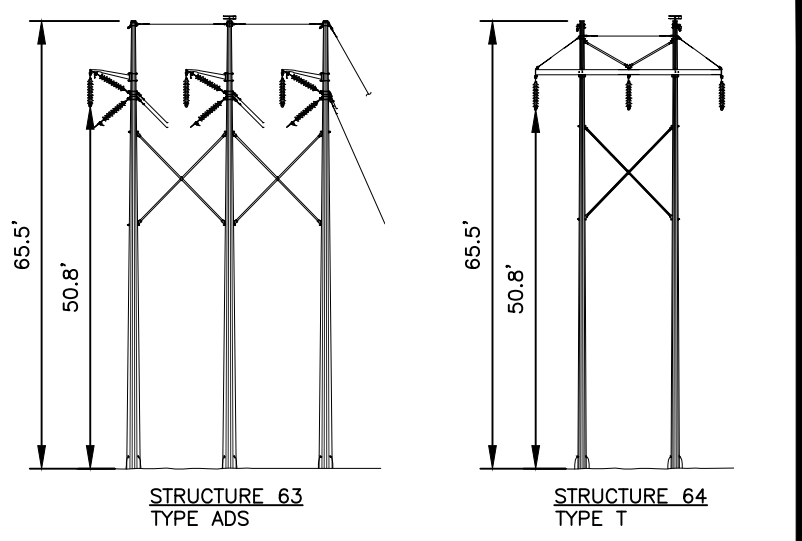
SCALE AS SHOWN	FILE: P14543902.DWG IMAGE:	DRAWING NO. P14543902
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T	1
DRAWN AH	ENGINEER AJW
CHECKED BS	APPROVED JF
DATE 12/13/2021	



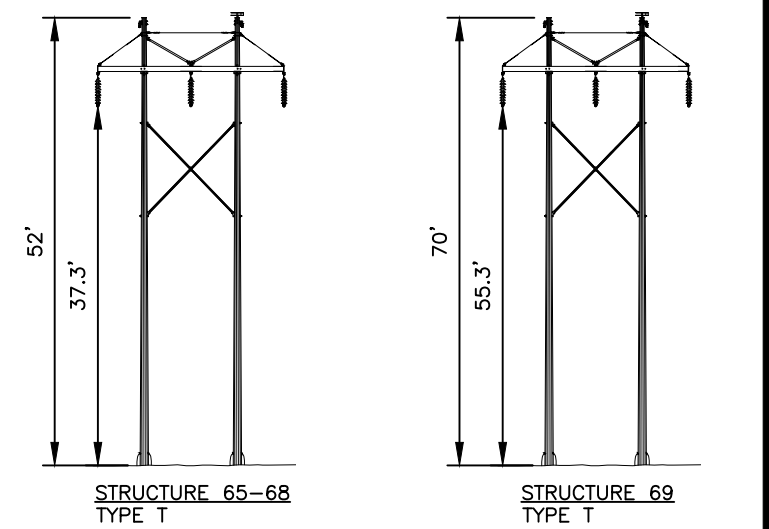
PROFILE VIEW

SCALE: HORZ 1" = 300'
VERT 1" = 30'



STR 63: IS AN EVERSOURCE TYPE ADS, SINGLE CIRCUIT STEEL POLE DEAD END ANGLE, HORIZONTAL CONFIG., GUYED.

STR 64: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

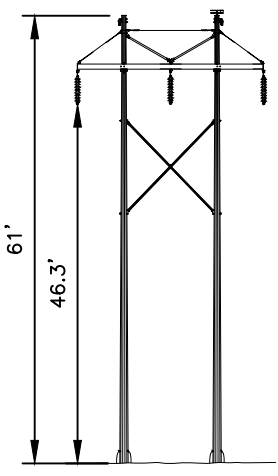


STR 65-68: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

STR 69: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

STRUCTURE DETAIL

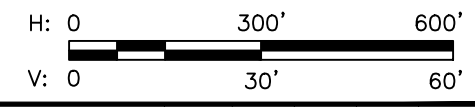
SCALE: NTS



STR 70: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

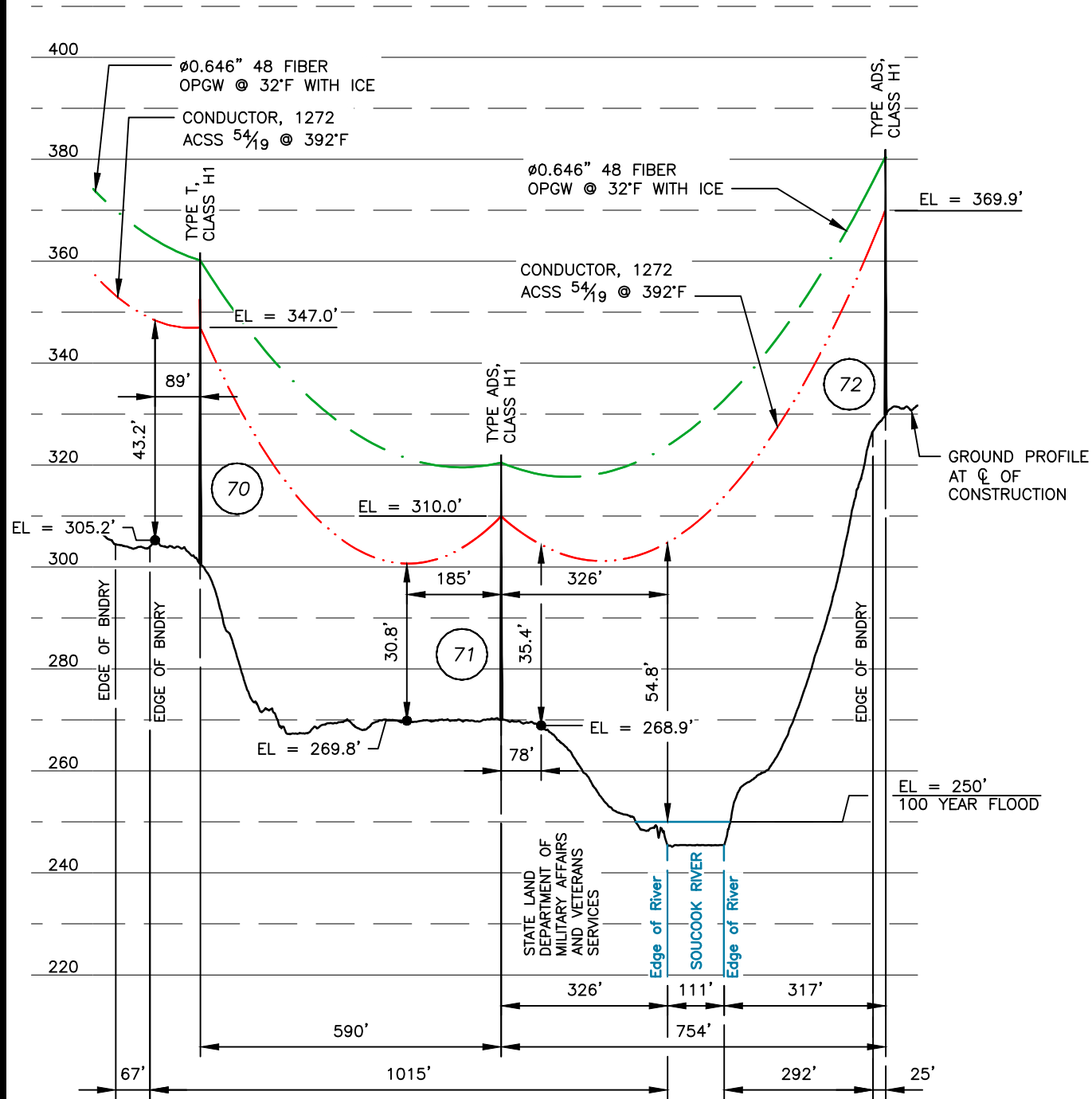
STRUCTURE DETAIL (CONTINUED)

SCALE: NTS

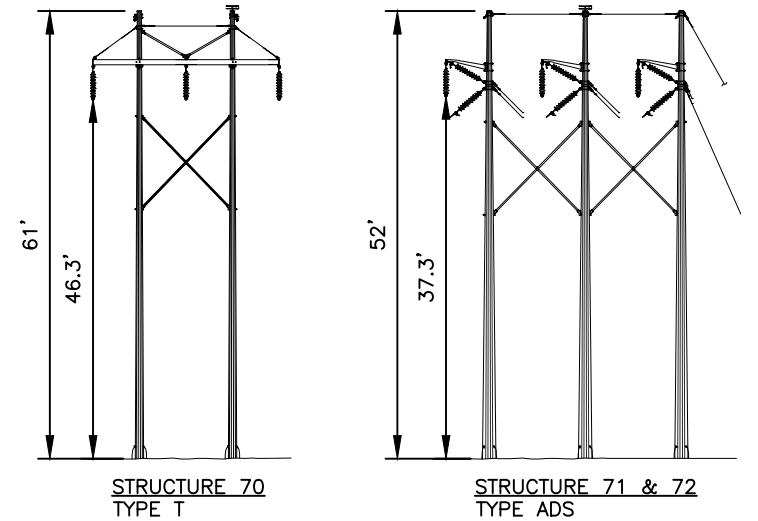


EVERSOURCE ENERGY		T	1
		DRAWN	AH
P145, 115kV LINE STATE LAND AND PUBLIC WATER CROSSING PEMBROKE AND CONCORD, NEW HAMPSHIRE EXHIBIT 4		ENGINEER	AJW
		CHECKED	BS
SCALE: AS SHOWN		APPROVED	JF
		DATE	12/13/2021
FILE: P14543903.DWG		DRAWING NO. P14543903	

DWG REV	ISSUED FOR DETAILED DESIGN	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	AH	BS	JF
1				12/13		AH	BS	JF

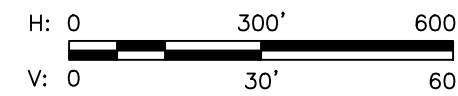


PROFILE VIEW
 SCALE: HORZ 1" = 300'
 VERT 1" = 30'



STR 70: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.
 STR 71 & 72: IS AN EVERSOURCE TYPE ADS, SINGLE CIRCUIT STEEL POLE DEAD END ANGLE, HORIZONTAL CONFIG., GUYED.

STRUCTURE DETAIL
 SCALE: NTS

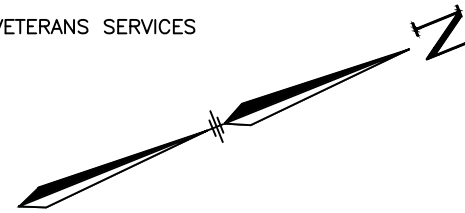


1	ISSUED FOR DETAILED DESIGN	12/13	AH	BS	JF	
DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

		T	1
		DRAWN	AH
P145, 115kV LINE STATE LAND AND PUBLIC WATER CROSSING PEMBROKE AND CONCORD, NEW HAMPSHIRE EXHIBIT 5		ENGINEER	AJW
		CHECKED	BS
SCALE AS SHOWN FILE: P14543903.DWG IMAGE:		APPROVED	JF
		DATE	12/13/2021
DRAWING NO.		P14543903	

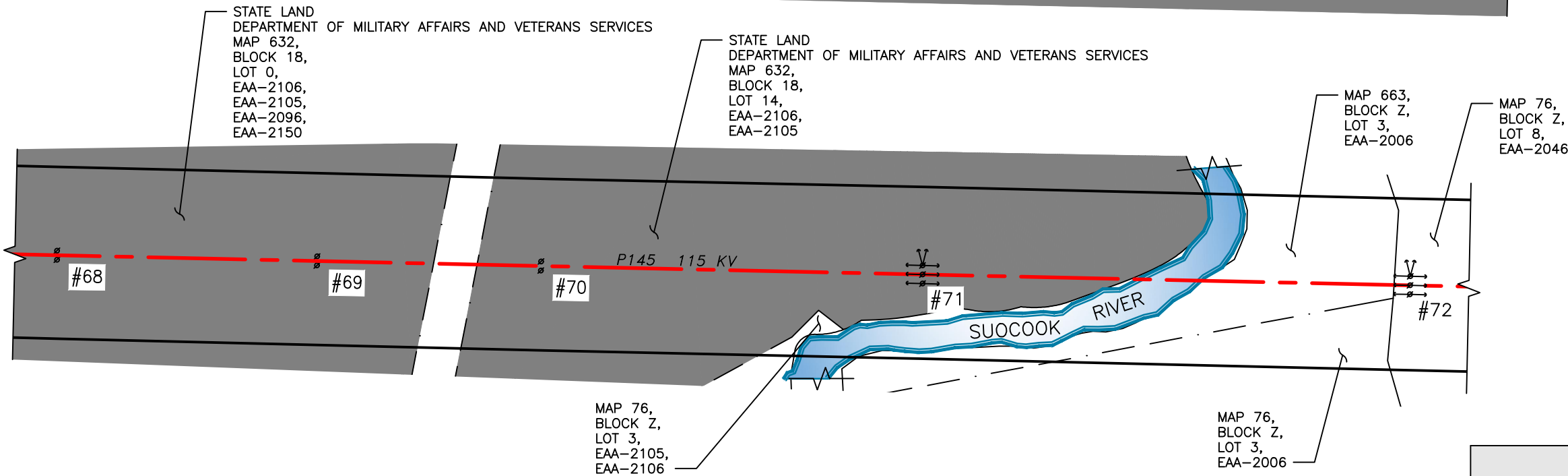
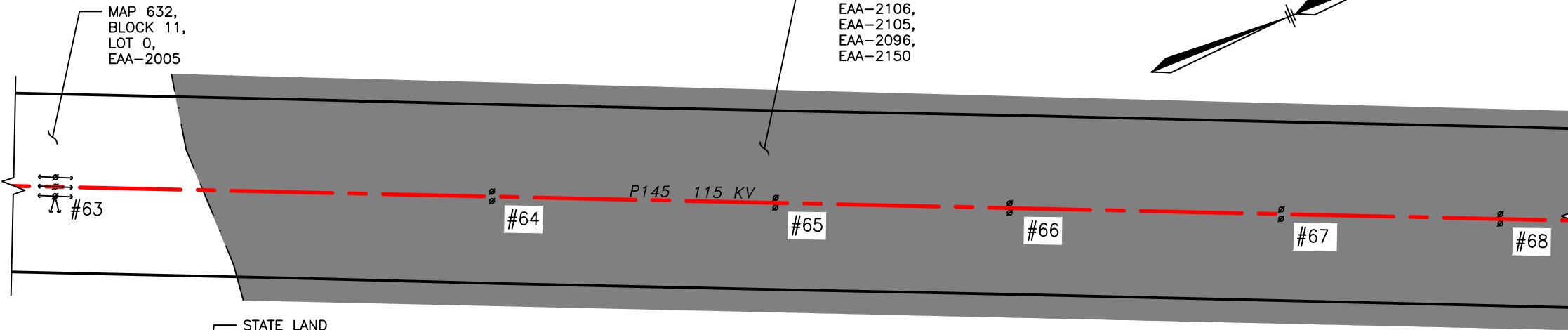
PEMBROKE & CONCORD, NH

STATE LAND
DEPARTMENT OF MILITARY AFFAIRS AND VETERANS SERVICES
MAP 632,
BLOCK 18,
LOT 0,
EAA-2106,
EAA-2105,
EAA-2096,
EAA-2150



LEGEND:

- STRUCTURE (WITH GUYS)
#63
- STRUCTURE
#64
- PROPERTY BOUNDARY
- P145 LINE 115KV LINE, ☉ OF CONSTRUCTION
- LIMITS OF EVERSOURCE RIGHT OF WAY
- SUOCCOOK RIVER
- STATE OF NEW HAMPSHIRE PROPERTY



NESC VERTICAL CLEARANCE (FT) FROM TABLE 232.1, C2-2012	
NATURE OF SURFACE UNDERNEATH WIRES, CONDUCTORS OR CABLES	115kV
WATER AREAS NOT SUITABLE FOR SAIL BOATING OR WHERE SAIL BOATING IS PROHIBITED	18.6
OTHER AREAS TRAVERSED BY VEHICLES, SUCH AS CULTIVATED, GRAZING, FOREST, AND ORCHARD LANDS, INDUSTRIAL SITES, COMMERCIAL SITES, ETC.	20.1

CABLE SCHEDULE						
WIRE	QTY OF CABLES	DESCRIPTION	DESIGN CONDITIONS			
			MAX DESIGN TENSION (lb)	TEMP (°F)	ICE (in)	WIND (psf)
CONDUCTOR	3	ACSS, 1272 KCMIL 54/9, PHEASANT	10000	0	0.5	4
OPGW	2	48F Ø0.646" OPGW	5000	0	0.5	4

PLAN VIEW

SCALE: 1" = 200'

STRUCTURE LOCATION		
STRUCTURE	LONGITUDE	LATITUDE
63	-71.48789056	43.18956693
64	-71.48770020	43.19134005
65	-71.48757657	43.19249160
66	-71.48747453	43.19344197
67	-71.48735608	43.19454508
68	-71.48726058	43.19543457
69	-71.48714242	43.19653492
70	-71.48704071	43.19748209
71	-71.48686732	43.19909675
72	-71.48664578	43.20115963

NOTES:

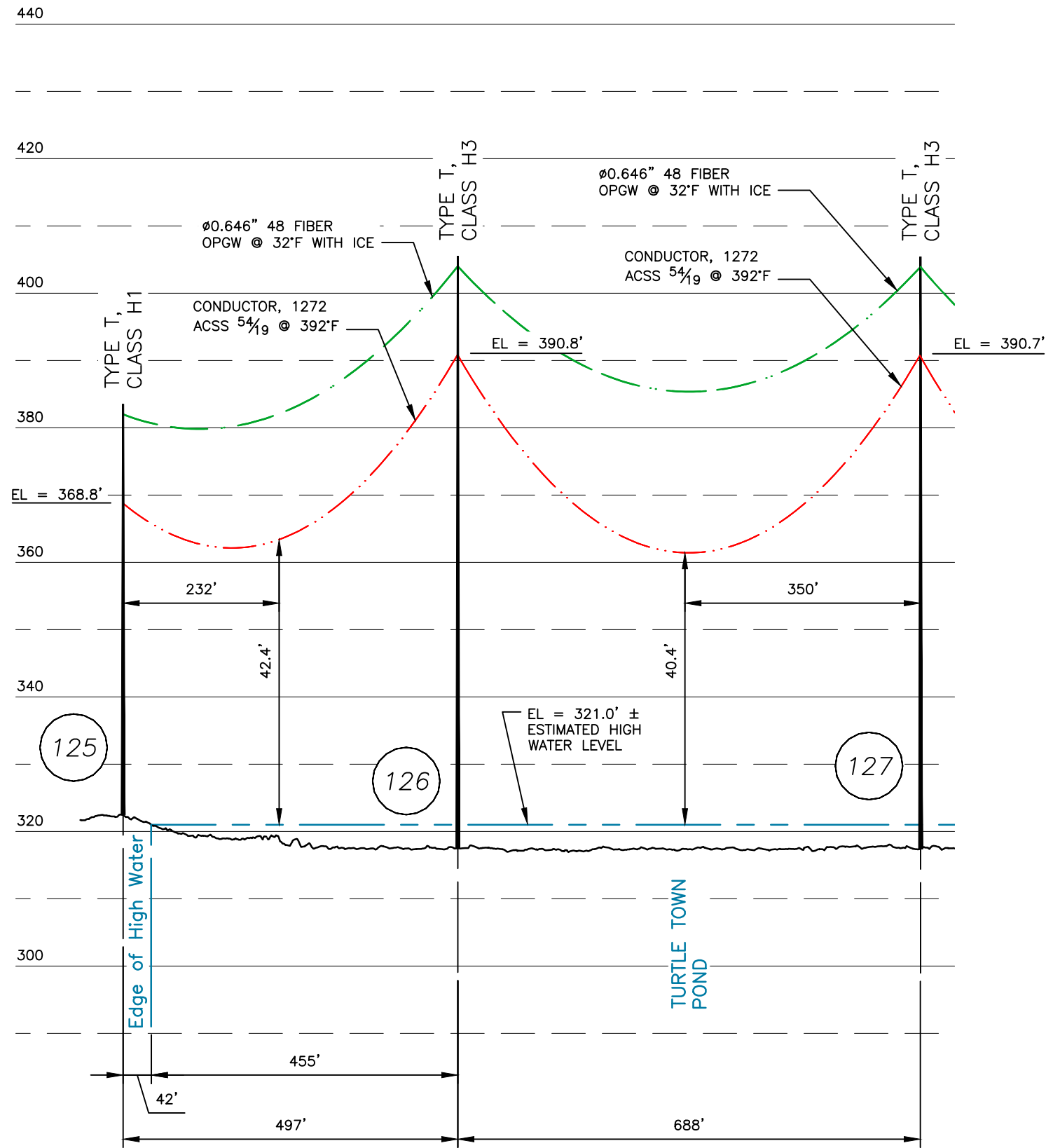
- PARCEL INFORMATION PROVIDED BY NH GRANIT.
- ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
- 100 YEAR FLOOD ELEVATION FROM THE FEMA FLOOD MAP SERVICE CENTER, NATIONAL FLOOD HAZARD LAYER FIRMETTE, 33013C0553E, DATED APRIL 19, 2010.



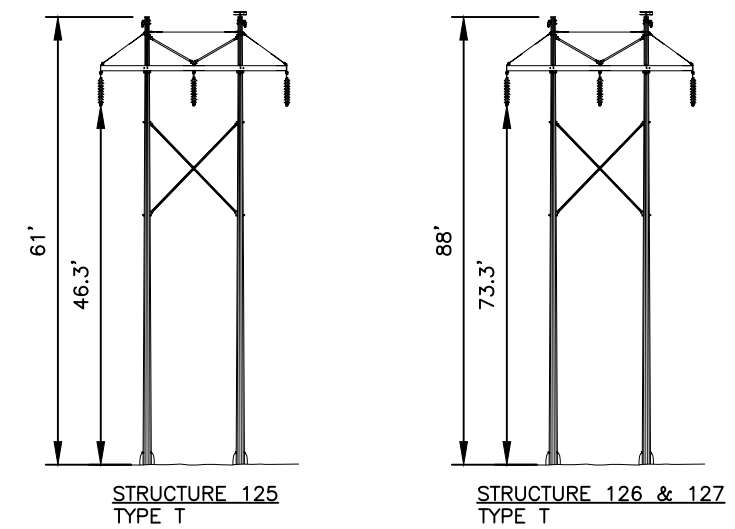
P145, 115kV LINE
STATE LAND AND PUBLIC WATER CROSSING
PEMBROKE AND CONCORD, NEW HAMPSHIRE
EXHIBIT 6

SCALE AS SHOWN	FILE: P14543903.DWG	DRAWING NO. P14543903
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DWG REV	ISSUED FOR DETAILED DESIGN	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR
1				12/13	AH	BS	JF

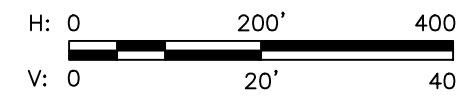


PROFILE VIEW
 SCALE: HORZ 1" = 200'
 VERT 1" = 20'



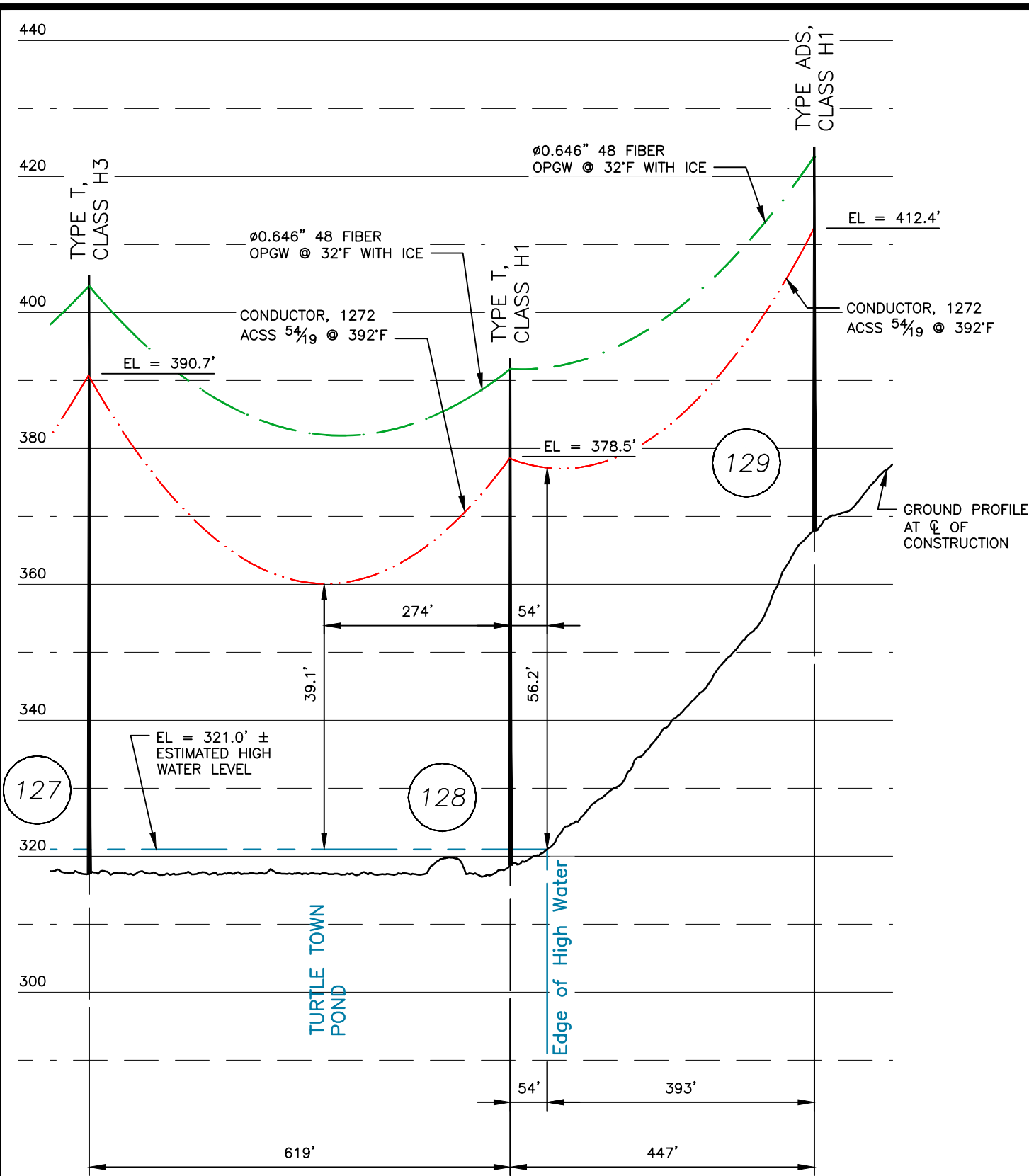
STR 125: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.
 STR 126 & 127: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

STRUCTURE DETAIL
 SCALE: NTS



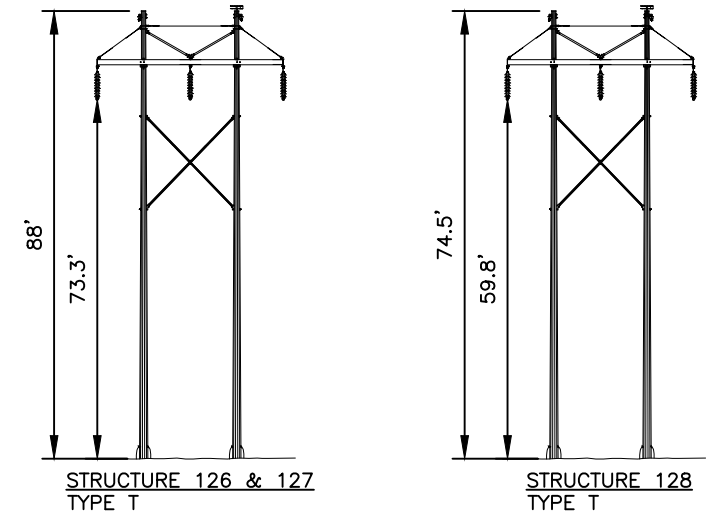
1	ISSUED FOR DETAILED DESIGN	12/13	AH	BS	JF	
DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

		T	1
		DRAWN	AH
P145, 115kV LINE TURTLE TOWN POND, PUBLIC WATER CROSSING CONCORD, NEW HAMPSHIRE EXHIBIT 7		ENGINEER	AJW
		CHECKED	BS
SCALE: AS SHOWN FILE: P14543904.DWG IMAGE:		APPROVED	JF
		DATE	12/13/2021
DRAWING NO.		P14543904	



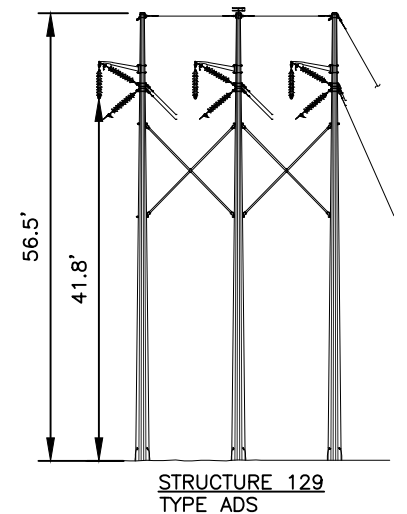
PROFILE VIEW

SCALE: HORZ 1" = 200'
VERT 1" = 20'



STR 126 & 127: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.

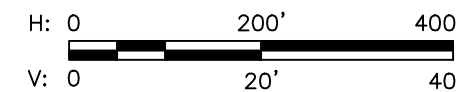
STR 128: IS AN EVERSOURCE TYPE T, SINGLE CIRCUIT STEEL POLE H-FRAME.



STR 129: IS AN EVERSOURCE TYPE ADS, SINGLE CIRCUIT STEEL POLE DEAD END ANGLE, HORIZONTAL CONFIG., GUYED.

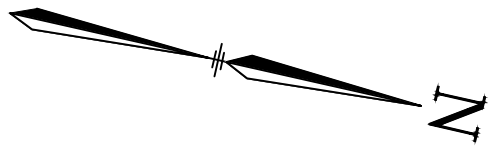
STRUCTURE DETAIL

SCALE: NTS



1	ISSUED FOR DETAILED DESIGN	12/13	AH	BS	JF	
DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

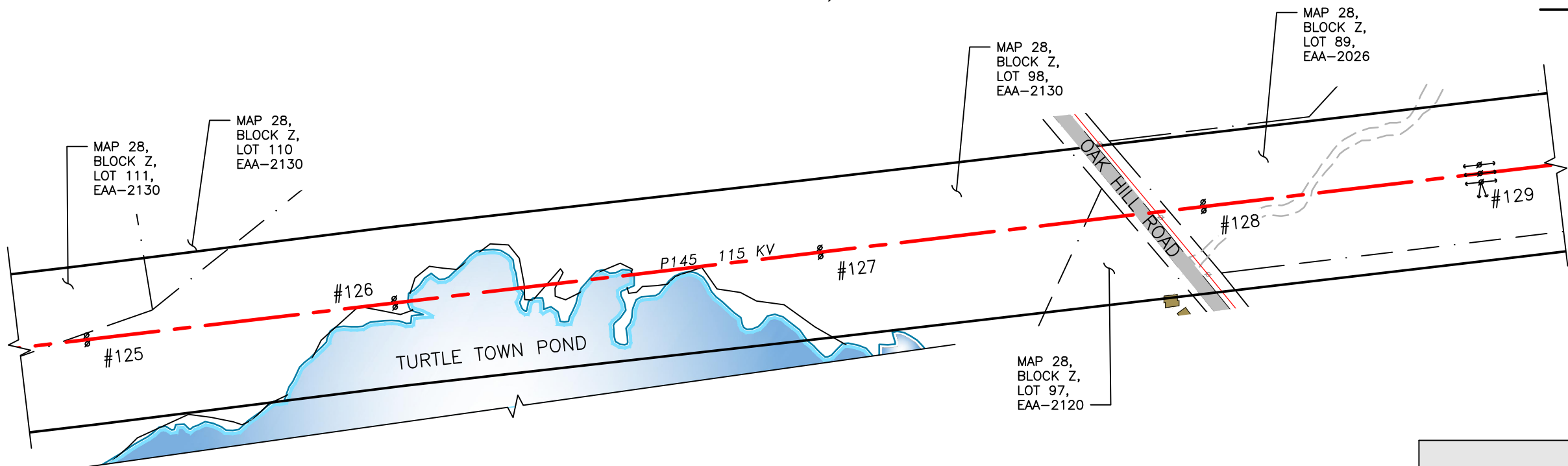
		T	1
		DRAWN	AH
P145, 115kV LINE TURTLE TOWN POND, PUBLIC WATER CROSSING CONCORD, NEW HAMPSHIRE EXHIBIT 8		ENGINEER	AJW
		CHECKED	BS
SCALE AS SHOWN FILE: P14543904.DWG IMAGE:		APPROVED	JF
		DATE	12/13/2021
DRAWING NO. P14543904			



CONCORD, NH

LEGEND:

- STRUCTURE #125
- STRUCTURE (WITH GUYS) #129
- PROPERTY BOUNDARY
- P145 LINE 115KV LINE, C OF CONSTRUCTION
- LIMITS OF EVERSOURCE RIGHT OF WAY
- TURTLE TOWN POND



STRUCTURE LOCATION		
STRUCTURE	LONGITUDE	LATITUDE
125	-71.51895145	43.25062291
126	-71.52011701	43.25168916
127	-71.52170597	43.25317664
128	-71.52314471	43.25451159
129	-71.52418358	43.25547548

NESC VERTICAL CLEARANCE (FT) FROM TABLE 232.1, C2-2012	
NATURE OF SURFACE UNDERNEATH WIRES, CONDUCTORS OR CABLES	115kv
WATER AREAS SUITABLE FOR SAIL BOATING; 200-2000 ACRES	36.1

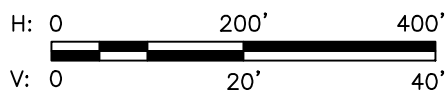
CABLE SCHEDULE						
WIRE	QTY OF CABLES	DESCRIPTION	DESIGN CONDITIONS			
			MAX DESIGN TENSION (lb)	TEMP (°F)	ICE (in)	WIND (psf)
CONDUCTOR	3	ACSS, 1272 KCMIL 5/8", PHEASANT	10000	0	0.5	4
OPGW	2	48F Ø0.646" OPGW	5000	0	0.5	4

PLAN VIEW

SCALE: 1" = 200'

NOTES:

1. PARCEL INFORMATION PROVIDED BY NH GRANIT.
2. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
3. FEMA FLOOD INSURANCE MAPS DO NOT EXIST FOR TURTLE TOWN POND. A WATER ELEVATION ANALYSIS DETERMINED THAT EL. 321' IS A CONSERVATIVE FLOOD ELEVATION OF TURTLE TOWN POND TO ESTABLISH SAFE CLEARANCE MEASUREMENTS. TURTLE TOWN POND EL. 321' WAS USED IN 2008 UNDER DE 08-064 (ORDER # 24,859) AND WILL BE UTILIZED FOR THE P145 CROSSING OVER TURTLE TOWN POND.



1	ISSUED FOR DETAILED DESIGN	12/13	AH	BS	JF	
DWG REV	EPN/DESCRIPTION	CONT/PE#	DATE	DRN	CHKD	APPR

**P145, 115kV LINE
TURTLE TOWN POND, PUBLIC WATER CROSSING
CONCORD, NEW HAMPSHIRE
EXHIBIT 9**

DRAWN AH	T 1
ENGINEER AJW	CHECKED BS
APPROVED JF	DATE 12/13/2021

SCALE AS SHOWN	FILE: P14543904.DWG IMAGE:	DRAWING NO. P14543904
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EXHIBIT 10 – P145 LINE REBUILD STRUCTURE TABLE

Eversource P145 Line Rebuild - DOE State Land and Waterbody Crossing Details

Existing Structure #	New Structure #	Structure Type	Height Change (feet)	Span (Pole to Pole)	Span Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)	
40	38	74.5' steel 3 pole, ADS, CLH3	5	38-39	897	30.1	40.0	Y	
41	39	70.0' steel 3 pole, ADS, CLH3	0						
50	48	52.0' steel 2 pole, T, CLH1	10	48-49	464	18.6	47.5	Y	
51	49	70.0' steel 2 pole, T, CLH1	25						
65	PERMANENT REMOVAL								
66	63	65.5' steel 3 pole, ADS, CLH3	25	63-64	648	20.1	27.1	Y	
67	PERMANENT REMOVAL								
68	64	65.5' steel 2 pole, T, CLH1	25	63-64	648	20.1	27.1	Y	
69	65	52.0' steel 2 pole, T, CLH1	10	64-65	421	20.1	33.1	Y	
70	66	52.0' steel 2 pole, T, CLH1	10	65-66	347	20.1	25.5	Y	
71	67	52.0' steel 2 pole, T, CLH1	10	66-67	403	20.1	24.6	Y	
72	68	52.0' steel 2 pole, T, CLH1	10	67-68	325	20.1	27.0	Y	
73	69	70.0' steel 2 pole, T, CLH1	25	68-69	402	20.1	29.2	Y	
74	70	61.0' steel 2 pole, T, CLH1	20	69-70	346	20.1	43.2	Y	
75	71	52.0' steel 3 pole, ADS, CLH1	10	70-71	590	20.1	18.6 30.8 35.4	54.8	Y
76	72	52.0' steel 3 pole, ADS, CLH1	10	71-72	754	20.1			Y
131	125	61.0' steel 2 pole, T, CLH1	0	125-126	497	36.1	42.4	Y	
132	126	88.0' steel 2 pole, T, CLH3	0						
133	127	88.0' steel 2 pole, T, CLH3	0	126-127	688	36.1	40.4	Y	
134	128	74.5' steel 2 pole, T, CLH1	30	127-128	619	36.1	39.1	Y	
135	129	56.5' steel 3 pole, ADS, CLH1	15	128-129	447	36.1	56.2	Y	