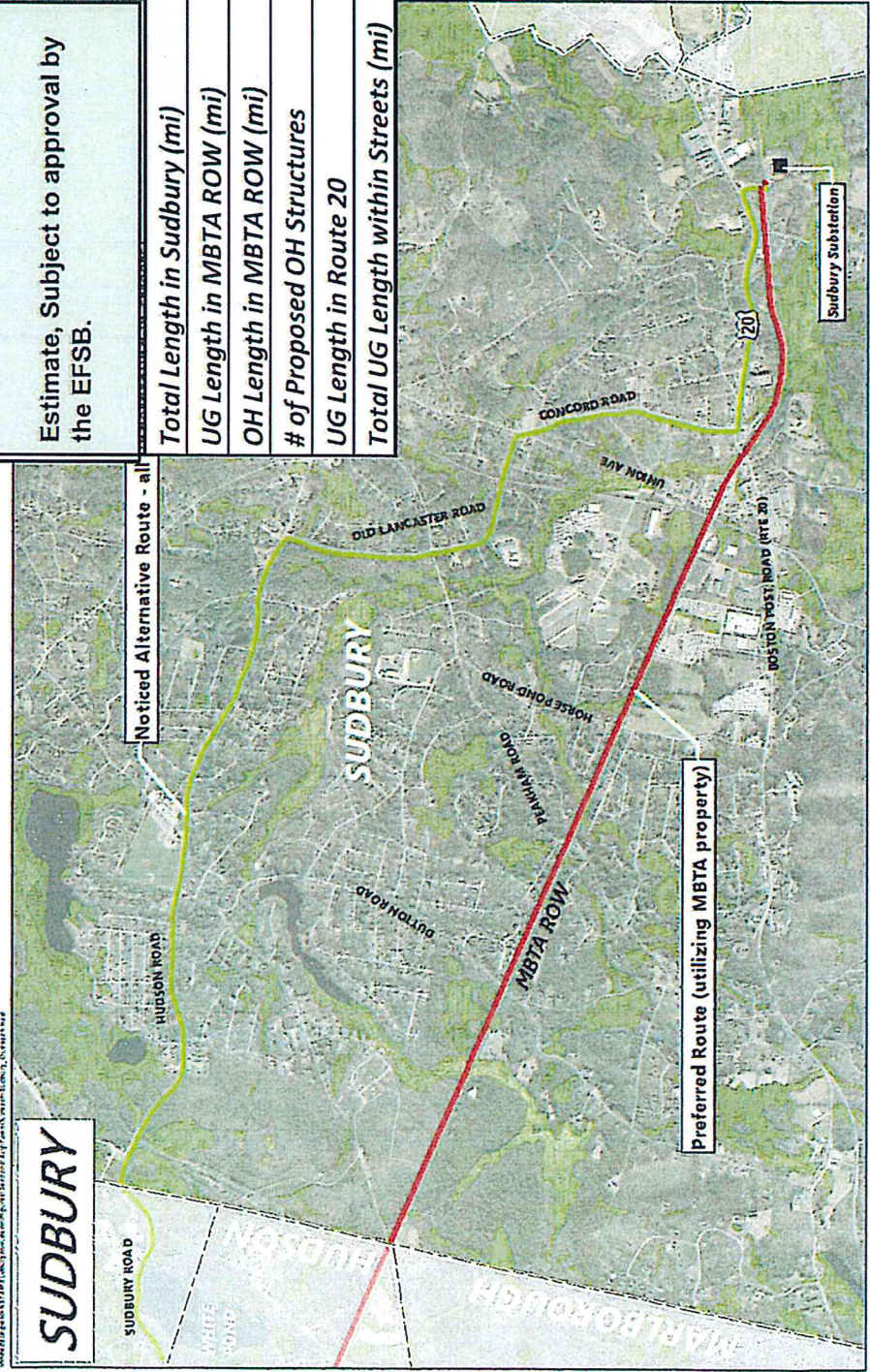


Routing and Design within Sudbury

Sudbury Details Only	Preferred Route				Alt Route
	OH in MBTA ROW w/ UG in streets (Hudson)	UG in MBTA ROW w/ UG in streets (Hudson)	OH/UG in MBTA ROW w/ UG in streets (Hudson)	All UG in streets	
Estimate, Subject to approval by the EFSB.	4.29	4.29	4.29	4.29	5.62
Total Length in Sudbury (mi)	0	4.29	4.29	0	0
UG Length in MBTA ROW (mi)	4.29	0	0	0	0
OH Length in MBTA ROW (mi)	52	0	0	0	0
# of Proposed OH Structures	0	0	0	0	0.89
UG Length in Route 20	0	0	0	0	5.62
Total UG Length within Streets (mi)					



DRAFT EVERSOURCE ENERGY
Proposed 115 kV Line Sudbury Substation to Hudson Substation
8/8/2016

Locus Map

Legend:

- Preferred Route (utilizing MBTA property)
- Noticed Alternative Route - all underground in streets
- Wetland (MADEP)
- Municipal Boundary

Scale: 0 500 1000 Feet

EVERSOURCE ENERGY
Vhb

Routing and Design Re-Evaluation Results, cont.

	<i>OH in MBTA ROW w/ UG in streets (Hudson)</i>	<i>UG in MBTA ROW w/ UG in streets (Hudson)</i>	<i>OH/UG in MBTA ROW w/ UG in streets (Hudson)</i>	<i>All UG in streets</i>
Cost (est.)	\$37M	\$85M	\$75M	\$113M
Reliability Benefits	<ul style="list-style-type: none"> Sudbury-Hudson line adds a third, geographically separate line to serve HL&P, eliminating the possibility of a loss of load under some contingency conditions on lines serving HL&P from NGRID's Northborough Rd substation. New "ring bus" design provides additional reliability benefits for HL&P eliminating any loss of load risks following breaker failure New Sudbury-Hudson line will facilitate planned maintenance for the regional area: <ul style="list-style-type: none"> Adds a third 115-kV supply source for the ~550 MW Marlboro-Westboro-Hudson area in addition to the two 69-KV sources Adds a fourth 115-kV supply source for the ~300 MW Sudbury-Concord-Maynard area ROW does not include any Area of Critical Environmental Concern (ACEC). 			
Operational Flexibility:	<ul style="list-style-type: none"> 80-ft ROW clearing results in conversion of 68 acres from forested to early successional habitat in MBTA property. 88 out of 89 structures planned to avoid permanent wetlands impact. 			
Environmental Impacts	<ul style="list-style-type: none"> 68 acres of tree clearing and installation of OH line will result in visual change for residential abutters and users of land preserves. Visual screening may help mitigate impacts. Adjacent neighbors: <ul style="list-style-type: none"> • 261 housing units • 99 business units 1 trenchless crossing Low existing utility density 3 Hard Angles > 30 degrees 	<ul style="list-style-type: none"> 30-ft ROW clearing results in 26 acres of habitat conversion. No permanent wetlands impact. 	<ul style="list-style-type: none"> 30-ft ROW clearing of UG portion and under 2-miles of 80-ft ROW clearing in OH portion results in 34 acres of habitat conversion. No permanent wetlands impact as all 20 new structures avoid wetlands 	<ul style="list-style-type: none"> Minimal temporary impacts due to limited number of trenchless crossings.
Social Impacts, Including visual impacts	<ul style="list-style-type: none"> Limited project impacts as 26 acres of tree clearing requirements are similar to the planned bike trail. Adjacent neighbors: <ul style="list-style-type: none"> • 261 housing units • 99 business units 8 trenchless crossings Low existing utility density 3 Hard Angles > 30 degrees 	<ul style="list-style-type: none"> Minimal impact as 34 acres of tree clearing and installation of line on limited OH portion may be mitigated with visual screening. Adjacent neighbors: <ul style="list-style-type: none"> • 261 housing units • 99 business units 6 trenchless crossings Low existing utility density 3 Hard Angles > 30 degrees 	<ul style="list-style-type: none"> No visual impact. Construction activities will necessitate temporary traffic controls. Adjacent neighbor counts: <ul style="list-style-type: none"> • 504 housing units • 138 business units 14 trenchless crossings High existing utility density 6 Hard Angles > 30 degrees 	<ul style="list-style-type: none"> No visual impact. Construction activities will necessitate temporary traffic controls. Adjacent neighbor counts: <ul style="list-style-type: none"> • 504 housing units • 138 business units 14 trenchless crossings High existing utility density 6 Hard Angles > 30 degrees
Constructability	<ul style="list-style-type: none"> 1 trenchless crossing Low existing utility density 3 Hard Angles > 30 degrees 	<ul style="list-style-type: none"> 8 trenchless crossings Low existing utility density 3 Hard Angles > 30 degrees 	<ul style="list-style-type: none"> 6 trenchless crossings Low existing utility density 3 Hard Angles > 30 degrees 	<ul style="list-style-type: none"> 14 trenchless crossings High existing utility density 6 Hard Angles > 30 degrees

MBTA property is our preferred route - with three design options

Noticed Alternative In-Street Route