Noise Effects Distributions-- Phase 1 Alternatives

COMMUNITY	Grid Point	Baseline Number Annual Day NEA > 60 SEL	Alternative 1: Runway 4R takeoffs over the Nahant Neck to increase shoreline crossing altitudes	Alternative 2: Runway 9 takeoffs extended east to increase shoreline crossing altitudes	Alternative 3: Runway 15R takeoffs extended east to increase shoreline crossing altitudes	Alternative 5: Runway 22R/L takeoffs extended east to increase shoreline crossing altitudes	Alternative 6: Runway 22R/L approach route over Drunk intersection in Marshfield	Alternative 7: Runway 27L approach route over Drunk intersection in Marshfield	Alternative 8: Runway 15R approach route over Drunk intersection in Marshfield	Alternative 9: Increase usage of west downwind approach to Runway 9	Alternative 11: Off-shore side-step approach route to Runway 33L	Alt. 12A / Alt. 12B / Alt. 12C: Raise instrument approach intercept altitude for late-night arrivals on Runway 4R/L (Alt. 12A), Runway 22R/L (Alt 12B), and Runway 33L (Alt 12C)	Alt. 13: Prop takeoffs at night from Runways 22R/L and 15R follow jet takeoff routes
			Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Average Day Change in Numbers of Events Above 50 SEL Change in DNL % Change of NA > 50 dBA SEL (event heard above suburban ambient) % Change of NA > 60 dBA SEL (outdoor speech disruption) % Change of NA > 90 dBA SEL (indoor speech disruption) % Change of TA > 50 dBA (Duration of Exposure) % Change of TA > 65 dBA (Duration of Exposure)	Change in Numbers of Nighttime Events Above 70 SEL Change in DNL % Change in Awakenings (windows closed) >70 SEL Change in Numbers of Nighttime Events Above 70 SEL Change in DNL % Change in Awakenings (windows closed) >70 SEL Change in Numbers of Nighttime Events Above 70 SEL Change in DNL % Change in Awakenings (windows closed) >70 SEL	Change in Numbers of Nighttime Events Above 70 SEL % Change in Awakenings (windows closed) >70 SEL % Change of night TA > 50 dBA (Duration of Exposure) % Change of night TA > 65 dBA (Duration of Exposure)
27 takeoff corridor													
Dedham	PT029	146	0 -4 -2 -7 0 0 0 0 37 0 0 0 0										
Jamaica Plain	S28	280	0 -8 -1 -10 0 0 0 0 24 0 0 0 0										
Medfield	PT018	43	0 0 0 0 0 0 0 0 0 0 0 0 0										
Norwood	PT031	72	0 -2 -1 -4 0 0 0 0 30 0 0 0 0										
Roslindale	PT007	247	0 -8 -1 -9 0 0 0 0 26 0 0 0 0										
Roxbury	S27	538	0 -1 -1 3 0 0 0 0 1 0 0 0 0										
South Boston	S02	742	0 0 0 0 0 0 0 0 0 0 0 0 0										
South End	PT016	647	0 -1 0 -1 0 0 0 0 1 0 0 0 0										
South End	S01	653	0 -1 0 -2 0 0 0 0 2 0 0 0 0										
West Roxbury	PT003	183	0 -4 -1 -6 0 0 0 0 37 0 0 0 0										
Westwood	PT030	108	0 -4 -1 -6 0 0 0 0 36 0 0 0 0										
4 approach													
Canton	PT032	128	0 -2 -2 -6 -1 0 0 0 18 0 0 0 0										
Canton	PT083	195	0 -5 -2 -12 -3 0 0 0 10 0 1 0 0										
Canton	PT088	194	0 -5 -2 -12 -3 0 0 0 12 0 1 0 0										
Dorchester	S23	498	0 -13 -2 -9 -2 0 0 0 0 0 0 0 0										
Milton	PT012	391	0 -14 -3 -21 -1 0 0 0 0 0 1 0 0										
Milton	S24	406	0 -13 -4 -20 -3 0 0 0 -1 0 0 0 0										
Randolph	PT034	243	0 -7 -4 -20 -6 0 0 0 -16 0 -1 0 0										
Randolph	PT082	268	0 -7 -3 -15 -3 0 0 0 0 0 1 0 0										
Randolph	PT089	272	0 -6 -3 -14 -3 0 0 0 2 0 1 0 0										
Sharon	PT087	113	0 -1 -1 -2 -3 0 0 0 5 0 0 0 0										
South Boston	PT099	845	0 0 0 0 -1 0 0 0 0 0 0 0 0										
South Boston	PT100	728	0 0 0 -1 -1 0 0 0 0 0 0 0 0										
South Boston	S03	812	0 0 0 0 -2 0 0 0 0 0 0 0 0										
Stoughton	PT084	137	0 -2 -2 -5 -4 0 0 0 3 0 1 0 0										
Stoughton	PT085	115	0 -1 -1 -2 -4 0 0 0 4 0 0 0 0										
Stoughton	PT086	141	0 -2 -2 -6 -3 0 0 0 4 0 1 0 0										
close in													
Brookline	PT019	238	0 -4 -1 -3 0 0 0 0 36 0 0 0 0										
Cambridge	PT020	455	0 -1 0 -6 0 0 0 0 22 0 0 0 0										
Chelsea	PT001	676	0 0 0 0 -1 0 0 0 -15 -1 0 0 0										
Chelsea	PT047	679	0 -3 0 0 0 0 0 0 -28 0 0 0 0										
Chelsea	S15	637	0 0 0 0 0 0 0 0 -10 0 0 0 0										
Dorchester	PT014	486	0 -7 -1 -11 -1 0 0 0 1 0 0 0 0										
East Boston	PT046	817	0 0 0 0 0 3 0 0 -1 0 0 0 0										
East Boston	S09	883	0 0 0 0 0 6 0 0 -1 0 0 0 0										
East Boston	S10	852	0 0 0 0 0 0 0 0 -1 0 0 0 0										
East Boston	S11	822	0 0 0 0 0 0 0 0 -3 0 0 0 0										
East Boston	S12	854	0 0 0 0 0 -2 0 0 0 0 0 0 0										
East Boston	S13	757	0 0 0 0 0 0 0 0 0 0 0 0 0										
East Boston	S14	893	0 0 0 0 0 0 0 0 0 0 0 0 0										
East Boston	S30	870	0 0 0 0 0 0 0 0 0 0 0 0 0										
Everett	PT004	594	0 0 0 0 -1 0 0 0 -20 -1 0 0 0										
Everett	S21	541	0 0 0 -1 0 0 0 0 -13 -1 0 0 0										
Malden	PT010	487	0 -5 0 0 0 0 0 0 -23 0 0 0 0										
Mattapan	S29	388	0 -7 -2 -12 0 0 0 0 4 0 0 0 0										
Medford	S22	401	0 0 0 1 0 0 0 0 4 -1 0 0 0										
Revere	PT013	664	0 -4 0 0 0 0 0 0 -32 0 0 0 0										
Revere	S16	764	0 0 0 0 0 2 0 0 -26 -1 0 0 0										
Revere	S17	548	0 -1 0 -1 0 0 0 0 -26 0 0 0 0										
Somerville	PT015	496	0 0 0 3 0 0 0 0 18 -1 0 0 0										
Winthrop	PT005	901	0 0 0 0 0 0 0 0 -3 0 0 0 0										
Winthrop	S04	924	0 0 0 0 0 0 0 0 -2 0 0 0 0										
Winthrop	S05	901	0 0 0 0 0 0 0 0 -9 0 0 0 0										
Winthrop	S06	1003	0 0 0 0 0 0 0 0 0 0 0 0 -1										
Winthrop	S07	943	0 0 0 0 0 0 0 0 -1 0 0 0 0										
Winthrop	S08	887	0 0 0 0 0 1 0 0 -3 0 0 0 0										
Far North Shore													
Beverly	PT017	116	0 -4 -2 -5 0 0 0 0 0 0 0 0 0										
Beverly	PT052	139	0 -4 -2 -6 0 0 0 0 0 0 0 0 0										
Beverly	PT053	121	0 -2 -2 -5 0 0 0 0 0 0 0 0 0										
Beverly	PT054	110	1 3 -1 -3 0 0 0 0 0 0 0 0 0										
Beverly	PT055	89	1 10 -1 0 0 0 0 0 0 0 0 0 0										
Beverly	PT062	100	0 -2 -1 -3 0 0 0 0 0 0 0 0 0										
Beverly	PT063	95	0 2 -1 -3 0 0 0 0 0 0 0 0 0										
Danvers	PT092	120	-1 -10 -2 -7 -1 0 0 0 0 0 0 1 0										
Gloucester	PT024	14	0 1 0 0 0 0 0 0 0 0 0 0 0										
Gloucester	PT058	40	3 8 1 5 0 0 0 0 0 0 0 0 0										
Gloucester	PT059	27	2 -3 1 4 0 0 0 0 0 0 0 0 0										
Gloucester	PT060	14	1 1 0 2 0 0 0 0 0 0 0 0 0										
Gloucester	PT061	12	0 0 0 1 0 0 0 0 0 0 0 0 0										
Hamilton	PT090	66	-1 -9 -1 -2 0 0 0 0 0 0 0 0 0										
Manchester	PT056	72	1 15 0 2 0 0 0 0 0 0 0 0 0										
Manchester	PT057	53	2 19 1 4 0 0 0 0 0 0 0 0 0										
Manchester	PT065	59	1 13 0 2 0 0 0 0 0 0 0 0 0										
Manchester	PT066	47	2 13 0 2 0 0 0 0 0 0 0 0 0										
Rockport	PT067	9	0 0 0 0 0 0 0 0 0 0 0 0 0										
Wenham	PT025	85	-1 -10 -1 -3 0 0 0 0 0 0 0 1 0										
Wenham	PT064	75	0 10 -1 0 0 0 0 0 0 0 0 0 0										
Wenham	PT093	91	-1 -11 -1 -5 0 0 0 0 0 0 0 1 0										
Near North Shore													
Lynn	PT026	303	0 -12 -2 -10 0 0 0 0 -5 1 0 1 0										
Lynn	PT041	368	0 -12 -1 -9 0 0 0 0 -6 1 0 0 0										
Lynn	PT050	271	0 -13 -2 -14 0 0 0 1 -1 0 0 1 0										
Lynn	S20	292	0 -14 -2 -13 0 1 0 0 -3 0 0 1 0										
Marblehead	PT038	175	1 3 -1 -7 -1 0 0 0 0 0 0 0 0										
Marblehead	PT039	223	0 7 -1 -9 -2 0 0 0 0 0 0 0 0										
Nahant	PT011	525	0 5 -1 -3 0 0 0 0 -17 0 0 0 0										
Nahant	S18	508	0 6 -1 -3 0 0 0 0 -17 0 0 0 0										
Peabody	PT091	171	-1 -8 -2 -11 -1 0 0 0 0 0 0 2 0										
Salem	PT051	228	0 -2 -2 -11 0 0 0 0 0 0 0 0 0										
Saugus	PT042	511	0 -5 0 -3 0 0 0 0 -25 0 0 1 0										
Saugus	PT048	544	0 -7 0 -1 0 0 0 0 -29 0 0 0 0										
Saugus	PT049	386	0 -10 -1 -6 -1 0 0 0 -18 0 0 -1 0										
Swampscott	PT022	250	0 0 -2 -12 -1 0 0 0 -1 0 0 0 0										
Swampscott	PT040	273	0 0 -1 -10 -1 0 0 0 -1 0 0 0 0										
Swampscott	S19	274	0 -2 -1 -11 0 -1 0 0 -1 0 0 0 0										
South Shore													
Braintree	PT008	270	0 -22 -5 -34 -8 0 0 0 -36 0 0 0 0										
Cohasset	PT035	301	-1 -6 2 0 0 -2 0 0 0 0 -1 0 0										
Cohasset	PT036	338	-2 -13 3 6 0 -1 0 0 0 0 -1 0 0										
Cohasset	PT043	280	-1 -19 0 -21 0 -2 0 0 0 0 -2 0 2										
Cohasset	PT044	310	-1 -20 0 -19 0 -1 0 0 0 0 -2 0 1										
Cohasset	PT045	343	-1 -35 -2 -33 -1 -1 0 0 0 0 -4 0 3										
Cohasset	PT096	278	0 -20 -1 -27 0 -2 0 0 0 0 -2 0 2										
Cohasset	PT097	337	-1 -31 -1 -30 -1 -1 0 0 0 0 -4 0 3										
Hingham	PT002	350	-1 -38 -4 -51 -3 0 0 0 -8 -5 0 0 -1										
Hingham	PT098	387	-2 -37 -1 -11 -3 -1 0 0 -3 -5 0 0 2										
Holbrook	PT033	164	0 -9 -3 -18 -7 0 0 0 -30 0 0 0 0										
Hull	PT021	582	-1 -14 0 0 -9 0 0 0 -30 0 0 0 0										
Hull	PT023	525	-1 -12 0 0 -7 0 0 0 -16 1 0 0 0										
Hull	PT037	376	-2 -25 2 4 -1 -1 0 0 0 -3 0 0 0										
Hull	S26	618	-1 -8 0 0 -10 0 0 0 -33 0 0 1 0										
Quincy	PT009	370	0 -20 -4 -27 -7 0 0 0 -25 0 0 0 0										
Quincy	S25	743	0 0 0 0 -3 1 0 0 0 -1 0 0 0										
Weymouth	PT006	300	-1 -31 -6 -43 -6 0 0 0 -34 -1 0 0 0										
Southeast Shore													
Duxbury	PT074	45	0 -2 -1 -4 4 38 0 0 0 2 0 0 0										
Duxbury	PT081	47	0 -3 -2 -3 5 46 0 0 0 2 0 0 0										
Halifax	PT027	45	0 -1 0 0 2 18 0 0 0 1 0 0 0										
Hanson	PT028	111	0 -5 -1 -2 0 -38 0 0 0 -2 0 0 0										
Marshfield	PT071	149	0 -9 1 9 3 -37 0 0 0 1 0 0 0										
Marshfield	PT072	96	0 -6 0 0 7 18 0 0 0 2 0 0 0										
Marshfield	PT073	59	0 -4 -2 -2 8 51 0 0 0 2 0 0 0										
Marshfield	PT078	159	0 -16 0 -4 1 -43 0 0 0 0 0 0 0										
Marshfield	PT079	96	0 -6 -1 -1 6 14 0 0 0 2 0 0 0										
Marshfield	PT080	69	0 -4 -2 -2 6 40 0 0 0 2 0 0 0										
Scituate	PT068	262	0 8 2 11 0 -7 0 0 0 -1 0 0 0										
Scituate	PT069	227	0 16 3 28 0 -23 0 0 0 -1 0 0 0										
Scituate	PT070	195	0 1 2 9 1 -44 0 0 0 0 0 0 0										
Scituate	PT075	250	0 -5 1 -4 0 -5 0 0 0 -1 0 0 0										
Scituate	PT076	225	0 -5 2 8 0 -14 0 0 0 -2 0 0 0										
Scituate	PT077	204	0 -7 1 -6 0 -29 0 0 0 -1 0 0 1										
Scituate	PT094	190	0 -6 1 -1 0 -40 0 0 0 -1 0 0 1										
Scituate	PT095	225	0 -12 0 -10 0 -12 0 0 0 -2 0 0 1										

= Decrease >3 DNL
= Decrease > 5% ops and > +/- 10 ops change day, 1 op change night
= Decrease > 5% minutes and > +/- 10 ops change day, 1 op change night
= Change of > +/- 1% and < +/- 10 operations change per day

= Increase >3 DNL
= Increase > 5% ops and > +/- 10 ops change day, 1 op change night
= Increase > 5% minutes and > +/- 10 ops change day, 1 op change night

= No Noticeable Change (+/- 3 DNL)
= No Noticeable Change (+/- 5% ops) or < +/- 10 ops change day, 1 op change night
= No Noticeable Change (+/- 5% minutes) or < +/- 10 ops change day, 1 op change night

Source: Landrum & Brown, 2006, compiled from data provided by the Project Consultant Team, Boston Overflight Noise Study