

Appendix F

Preliminary Noise Barrier Evaluation Results for the Detailed Study Alternatives

Table F-1. Preliminary Noise Barrier Evaluation Results for the Detailed Study Alternatives

Noise Study Area (NSA)	Noise Barrier and Location Description	Length/Height ¹ (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor/Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction ²
Alternative 1						
NSA 2	Barrier NW 2 – directly northwest of the US 17/ NC 130 interchange	577 / 15	8,593	17	505 / 1,500	Yes
NSA 17	Barrier NW 17 – north of Alternative 1 along Ash Little River Rd	2,279 / 30	68,384	2	34,192 / 1,500	No ³
NSA 46	Barrier NW 46 – north of US 17 between Mintz Cem. Rd and Bliss Rd	5,193 / 8	41,543	12	3,462 / 2,500	No ³
NSA 47	Barrier NW 47 – south of US 17 between Anchor Tr and Ocean Ridge Pkwy	2,440 / 8.22	20,049	7	2,864 / 1,500	No ³
NSA 28	Barrier NW 28 – south of Alternative 1 and between Bright Rd and Little River Rd	5,733 / 26	149,049	11	474,247 / 30,000	No ⁴
NSA 29	Barrier NW 29 – along Frank Gore Road in the area of Division Ln and Magalene Ln extending west to Little River Rd	1,945 / 17	32,111	10	112,389 / 30,000	No ⁵
NSA 33	Barrier NW 33 – north of Wampee Rd (S-57), primarily in the communities of Patriot Point and North Village, and a pool area within the North Village community	7,575 / 30	227,253	15	353,505 / 30,000	No ⁴
NSA 35	Barrier NW 35 – west of and adjacent to SC 9 in the area of Old Sawmill Cir	2,379 / 30	71,367	4	624,461 / 30,000	No ⁴
Alternative 1A						
NSA 4	Barrier NW 4 – along Wildwood St in the areas of and between Frogie Ln and Squirrel Ave	1,206 / 8.9	10,741	8	1,343 / 2,500	Yes
NSA 5	Barrier NW 5 – along Wildwood St in the areas of and between Cockatoo Dr and Frogie Ln	981 / 9.7	9,516	11	865 / 2,500	Yes
NSA 10	Barrier NW 10 – in the area of Starboard Rd	2,083 / 11.16	23,245	11	2,113 / 2,500	Yes

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	from its intersection with Old Shallotte Rd to the area of Ridge Rd					
NSA 11	Barrier NW 11 – north of Old Shallotte Rd, near its intersection with Mintz Cem. Rd	2,165 / 12.9	27,923	2	13,962 / 2,500	No ³
NSA 17	Barrier NW 17 – north of Alternative 1A along Ash Little River Rd	2,279 / 30	68,384	2	34,192 / 2,500	No ³
NSA 28	Barrier NW 28 – south of Alternative 1A and between Bright Rd and Little River Rd	5,733 / 26	149,049	11	474,247 / 30,000	No ⁴
NSA 29	Barrier NW 29 – along Frank Gore Road in the area of Division Ln and Magalene Ln extending west to Little River Rd	2,000 / 16.61	33,222	11	105,706 / 30,000	No ⁵
NSA 33	Barrier NW 33 – north of Wampee Rd (S-57), primarily in the communities of Patriot Point and North Village, and a pool area within the North Village community	7,575 / 30	227,253	12	441,881 / 30,000	No ⁴
NSA 35	Barrier NW 35 – west of and adjacent to SC 9 in the area of Old Sawmill Cir	2,379 / 30	71,367	3	721,595 / 30,000	No ⁴
Alternative 2						
NSA 2	Barrier NW 2 – directly northwest of the US 17/ NC 130 interchange	741 / 13.5	10,003	17	588 / 1,500	Yes
NSA 44	Barrier NW 44 – south of US 17 and directly west of McLamb Ct	1,344 / 13.55	18,219	3	6,073 / 1,500	No ³
NSA 46	Barrier NW 46 – north of US 17 between Mintz Cem. Rd and Bliss Rd	6,113 / 8	48,903	11	4,446 / 2,500	No ³
NSA 47	Barrier NW 47 – south of US 17 between Anchor Tr and Ocean Ridge Pkwy	2,617 / 8.2	21,468	7	3,067 / 1,500	No ³

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Noise Study Area (NSA)	Noise Barrier and Location Description	Length/Height ¹ (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor/Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction ²
NSA 50	Barrier NW 50 –northeast quadrant of the intersection of US 17 and Headwaters Rd	1,765 / 8.31	14,666	6	2,444 / 2,500	Yes
NSA 51	Barrier NW 51 – south of and adjacent to US 17 between the areas of Fink Way and Seaside Rd	773 / 12.02	9,290	3	3,097 / 1,500	No ³
NSA 52	Barrier NW 52 – north of and adjacent to US 17 between Pea Landing Rd and R D Tr	7,370 / 8	58,961	24	2,457 / 2,500	Yes
NSA 53	Barrier NW 53 –adjacent to and south of US 17, east of Thomasboro Rd	2,352 / 8	18,816	6	3,136 / 1,500	No ³
NSA 58	Barrier NW 58 – north of and adjacent to US 17, west of Pea Landing Rd	2,594 / 8	21,428	51	420 / 2,000	Yes
NSA 59	Barrier NW 59 – north of Hickman Rd between Middleton Dr and Crow Creek Dr	1,775 / 13	22,644	10	2,264 / 2,500	Yes
NSA 61	Barrier NW 61 – south of Hickman Rd between Crow Creek Dr and Shingletree Rd	3,099 / 10	30,407	49	621 / 2,000	Yes
NSA 62	Barrier NW 62 – north of Hickman Rd and west of Crow Creek Dr	2,927 / 12	33,760	18	1,876 / 2,500	Yes
NSA 64	Barrier NW 64 – north of Hickman Rd, around Green Pasture Ln	1,193 / 10.8	12,883	3	4,295 / 2,500	No ³
NSA 28	Barrier NW 28 – south of Alternative 2 and between Bright Rd and Little River Rd	5,733 / 30	171,980	11	474,275 / 30,000	No ⁴
NSA 29	Barrier NW 29 – along Frank Gore Rd in the area of Division Ln and Magalene Ln extending west to Little River Rd	1,944 / 16.28	34,636	10	121,226 / 30,000	No ⁵
NSA 33	Barrier NW 33 – north of Wampee Rd (S-57), primarily in the communities of Patriot	7,575 / 30	227,253	15	353,505 / 30,000	No ⁴

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Noise Study Area (NSA)	Noise Barrier and Location Description	Length/Height ¹ (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Receptor/Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction ²
	Point and North Village, and a pool area within the North Village community					
NSA 35	Barrier NW 35 – west of and adjacent to SC 9 in the area of Old Sawmill Cir	2,379 / 30	71,367	4	624,461 / 30,000	No ⁴
Alternative 4						
NSA 2	Barrier NW 2 – directly northwest of the US 17/ NC 130 interchange	577 / 15	8,586	17	505 / 1,500	Yes
NSA 17	Barrier NW 17 – north of Alternative 4 along Ash Little River Rd	2,279 / 30	68,384	2	34,192 / 2,500	No ³
NSA 44	Barrier NW 44 – south of US 17 and directly west of McLamb Ct	1,268 / 14	17,465	3	5,822 / 1,500	No ³
NSA 46	Barrier NW 46 – north of US 17 between Mintz Cem. Rd and Bliss Rd	5,908 / 8	47,265	13	3,636 / 2,500	No ³
NSA 47	Barrier NW 47 – south of US 17 between Anchor Tr and Ocean Ridge Pkwy	2,617 / 8	21,468	7	3,067 / 1,500	No ³
NSA 35	Barrier NW 35 – west of and adjacent to SC 9 in the area of Old Sawmill Cir	2,379 / 30	71,367	4	17,849 / 30,000	No ⁴
Alternative 4A						
NSA 4	Barrier NW 4 – along Wildwood St, in the areas of and between Frogie Ln and Squirrel Ave	1,299 / 8	10,680	8	1,335 / 2,500	Yes
NSA 5	Barrier NW 5 – along Wildwood St in the areas of and between Cockatoo Dr and Frogie Ln	981 / 10	9,612	11	874 / 2,500	Yes
NSA 10	Barrier NW 10 – in the area of Starboard Rd from its intersection with Old Shallotte Rd to the area of Ridge Rd	2,083 / 11	23,840	11	2,167 / 2,500	Yes
NSA 11	Barrier NW 11 – north of Old Shallotte Rd, near its	2,165 / 13	28,039	2	14,020 / 2,500	No ³

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Noise Study Area (NSA)	Noise Barrier and Location Description	Length/Height ¹ (feet)	Square Footage	Number of Benefited Receptors	Square Feet per Benefited Receptor/Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely") for Construction ²
	intersection with Mintz Cem. Rd					
NSA 17	Barrier NW 17 – north of Alternative 4A along Ash Little River Rd	2,279 / 30	68,384	2	34,192 / 2,500	No ³
NSA 35	Barrier NW 35 – west of and adjacent to SC 9 in the area of Old Sawmill Cir	2,379 / 30	71,367	5	499,569 / 30,000	No ⁴
Alternative 7						
NSA 2	Barrier NW 2 – directly northwest of the US 17/ NC 130 interchange	796 / 20	15,576	19	820 / 1,500	Yes
NSA 44	Barrier NW 44 – south of US 17 and directly west of McLamb Ct	1,115 / 14	15,452	3	5,151 / 1,500	No ³
NSA 46	Barrier NW 46 – north of US 17 between Mintz Cem. Rd and Bliss Rd	5,956 / 8	47,650	12	3,971 / 2,500	No ³
NSA 47	Barrier NW 47 – south of US 17 between Anchor Tr and Ocean Ridge Pkwy	2,714 / 8	22,065	7	3,152 / 1,500	No ³
NSA 50	Barrier NW 50 –northeast quadrant of the intersection of US 17 and Headwaters Rd	1,824 / 9	14,595	6	2,433 / 2,500	Yes
NSA 51	Barrier NW 51 – south of and adjacent to US 17 between the areas of Fink Way and Seaside Rd	1,058 / 12	8,464	3	2,821 / 1,500	No ³
NSA 52 Part 1	Barrier NW 52 – north of Alternative 7 between R D Tr and directly west of Nicole Cir	3,828 / 10	30,624	16	1,914 / 2,000	Yes
NSA 52, 53, 56	Barriers NW 52, 53, 56 – north of Alternative 7 between Breath of Life Ministries and directly west of Thomasboro Rd	2,110 / 9.34	19,715	5	3,943 / 2,000	No ³
NSA 53	Barrier NW 53 –adjacent to and south of the existing US 17, east of Thomasboro Rd	3,442 / 8	27,538	5	5,508 / 1,500	No ³

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NSA 68/70	Barriers NW 68/70 – north of Alternative 7 and east of Crow Creek Dr	3,091 / 16	49,256	78	631 / 2,500	Yes
NSA 71	Barrier NW 71 – north of Alternative 7 and includes noise sensitive locations along Meadowbrook Ln and Shingletree Swamp	1,416 / 14	20,012	3	6,671 / 2,500	No ³
NSA 72	Barrier NW 72 – south of Alternative 7 and includes the noise sensitive locations along Meadowbrook Ln and Tree Acres Cir	1,535 / 12	17,988	19	947 / 2,500	Yes
NSA 73	Barrier NW 73 – north of Alternative 7 and east of Calabash Rd	2,215 / 9	20,167	17	1,186 / 2,500	Yes
NSA 76	Barrier NW 76 – north of Alternative 7 between Calabash Rd and McLamb Rd	1,244 / 12	14,394	4	3,599 / 2,500	No ³
NSA 77	Barrier NW 77 – south of Alternative 7 between Calabash Rd and McLamb Rd	2,544 / 11	28,003	31	903 / 2,500	Yes
NSA 35	Barrier NW 35 – west of and adjacent to SC 9 in the area of Old Sawmill Cir	2,379 / 30	71,367	5	499,569 / 30,000	No ⁴
Alternative 8						
NSA 2	Barrier NW 2 – directly northwest of the US 17/ NC 130 interchange	686 / 16	10,650	17	626 / 1,500	Yes
NSA 44	Barrier NW 44 – south of US 17 and directly west of McLamb Ct	1,109 / 14	15,356	3	5,119 / 1,500	No ³
NSA 46	Barrier NW 46 – north of US 17 between Mintz Cem. Rd and Bliss Rd	5,672 / 8	45,379	10	4,538 / 2,500	No ³
NSA 47	Barrier NW 47 – south of US 17 between Anchor Tr and Ocean Ridge Pkwy	2,528 / 8	20,581	7	2,940 / 1,500	No ³
NSA 50	Barrier NW 50 – northeast quadrant of	1,765 / 8	14,666	6	2,444 / 2,500	Yes

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	the intersection of US 17 and Headwaters Rd					
NSA 51	Barrier NW 51 – south of and adjacent to US 17 between the areas of Fink Way and Seaside Road	1,061 / 8	8,488	3	2,829 / 1,500	No ³
NSA 52	Barrier NW 52 – north of and adjacent to US 17 between Pea Landing Rd and R D Trail	5,672 / 8	45,376	19	2,388 / 2,500	Yes
NSA 53	Barrier NW 53 – adjacent to and south of US 17, east of Thomasboro Rd	2,515 / 8	20,120	4	5,030 / 1,500	No ³
NSA 68/69	Barriers NW 68/69 – located west of Alternative 8 and east of Crow Creek Dr	3,194 / 10	31,602	37	854 / 2,500	Yes
NSA 87	Barrier NW 87 – east of US 17 between Carolina Farms Blvd and Persimmon Rd	3,474 / 12	27,795	17	1,635 / 2,000	Yes
NSA 88	Barrier NW 88 – west of US 17 and south of Marlowtown Rd	1,492 / 12	17,259	3	5,753 / 2,000	No ³
NSA 96	Barrier NW 96 – south of Alternative 8 and directly east of the NC/SC border on the North Carolina side	2,201 / 10	18,480	4	4,620 / 2,500	No ³
NSA 97	Barrier NW 97 – north of Alternative 8 and between Boundary Loop Rd and the NC/SC border	1,658 / 9	14,191	6	2,365 / 2,500	Yes
NSA 35	Barrier NW 35 – west of and adjacent to SC 9 in the area of Old Sawmill Cir	2,379 / 30	71,367	3	832,615 / 30,000	No ⁴
NSA 98	Barrier NW 98 – north of Alternative 8 and between the NC/SC border and Mineola Ave (S-50) in South Carolina	1,396 / 14	18,986	7	94,930 / 30,000	No ⁵
NSA 103	Barrier NW 103 – south of Alternative 8 along Little River Rd near its	3,693 / 30	110,802	36	107,724 / 30,000	No ⁵

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	intersection with Hartwell Dr					

¹Average wall height. Actual wall height at any given location may be higher or lower.

²The likelihood of a barrier's construction is preliminary and subject to change, pending completion of final design and the public involvement process.

³Barrier is not reasonable due to the quantity per benefited receptor exceeding the allowable quantity per benefited receptor; OR barrier is not reasonable due to an inability to achieve at least 7 dBA noise reduction for at least one benefited receptor.

⁴Barrier is not feasible due to an inability to achieve a minimum of 5 dBA noise reduction for at least 75 percent or three impacted receptors.

⁵Barrier is not reasonable due to the cost per benefited receptor exceeding the allowable cost per benefited receptor; OR barrier is not reasonable due to an inability to achieve at least 8 dBA noise reduction for at least 80 percent of benefited receptors.