

**4.0 DESCRIPTION OF THE  
UNDERTAKING'S EFFECTS  
ON HISTORIC PROPERTIES**

#### **4.0 DESCRIPTION OF THE UNDERTAKING'S EFFECTS ON HISTORIC PROPERTIES**

This section assesses effects on historic properties in the APE for the Green North Alternative plus Spur with Armstrong Corner Road Interchange Option 2A, Summit Interchange Option 3B, and Ratledge Road Area Option 4B Modified, DelDOT's Preferred Alternative for the US 301 Project Development. The Preferred Alternative has the potential to affect 22 historic properties. Under Section 106, an effect is defined as an "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register" (36 CFR Part 800.16[i]). The effects that a proposed undertaking will have on a historic property are predicted based on the distinguishing characteristics of the property and the design and anticipated consequences of the undertaking. Each of the types of potential effects to historic properties is discussed below.

##### **4.1 Physical Effects**

Under 800.5(a)(2) physical effects would be caused by "physical destruction of to damage to all or part of the property", a "change in the character of . . . physical features within the property's setting that contributes to its historic significance", the "removal of the property from its historic location", or "alternations . . . not consistent with the Secretary's Standards for the Treatment of Historic Properties". All of the proposed physical improvements for the US 301 project including staging and stock piling will be located outside of the National Register boundaries of the identified historic properties. Therefore, the Preferred Alternative does not have the potential to physically affect historic properties. The surrounding farmlands and open viewsheds that enhance the integrity of setting and contribute to the historic significance of many of the farmhouses/farm complexes could be physically affected by the undertaking. At this stage in the project development process, it is unknown if historic or pre-historic archaeological sites will sustain physical effects. The MOA outlined and included in Appendix C discusses the protocol to address such events, should they occur.

##### **4.2 Audible Effects**

Under 800.5(a)(2) an audible effect could be caused by the introduction of audible elements that would diminish the integrity of a property's significant historic features. Table 5 details the existing and future (including the No-Build Alternative and the Preferred Alternative) noise levels at historic properties in the APE. Predicted noise levels were calculated to 0.1 dBA and then rounded to the nearest whole integer. The locations of the noise receptors are shown in Figures 3-24.

The FHWA issued guidelines for noise evaluation as established in Title 23 of CFR Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The FHWA's Noise Abatement Criteria (NAC) as adopted by DelDOT is 66 dBA for Category B or residential land use (23 CFR Part 722). Referencing the NAC, a Category B (residential) property would experience traffic noise impacts where future predicted (design year 2030) noise levels meet or exceed 66 dBA or there is a "substantial increase" of 10 dBA or more between the existing noise levels and the future predicted noise levels. When a property has the potential to experience a noise impact, consideration of traffic noise reduction measures and effects on the property is

necessary. Based on the NAC, an increase is considered perceptible when there is 3 dBA or more between the existing and future predicted noise levels; however, this is not considered a noise impact. For the purposes of Section 106, an increase greater than 3 dBA but less than 10 dBA would be perceptible and may be considered an effect that requires mitigation even though it would not meet the NAC for a noise impact.

Five properties will experience decreases in noise levels (Table 5). A noise level decrease will occur in these locations since the Preferred Alternative will divert traffic from the nearest roadway that most influences noise on the property and move it to the new US 301, which will be farther away.

Audible effects can be caused by the introduction of higher noise levels in the vicinity of properties for which National Register-qualifying characteristics might be adversely affected by noise level changes. Noise-sensitive historic properties include those resources for which solitude, quiet, or contemplation contribute to or define the reasons for their significance. Many of the historic properties identified in the US 301 project corridor are agricultural and retain an agrarian setting in which solitude, quiet, or contemplation is evident.

#### **4.3 Visual Effects**

Under 800.5(a)(2) an adverse visual effect could be caused by the introduction of visual elements that would diminish the integrity of a property's character defining features. To assist in the assessment of potential visual effects, site plans were prepared for those resources within the APE for the Green North Alternative to show the location of any existing landscaping and features in relation to the undertaking (see Section 3.0; Figures 3 to 24). For those resources that have the potential to be adversely affected by the proposed alternative, cross-sections were created to show how the setting of historic resources will be visually impacted by the Preferred Alternative. Photographs taken from the building complex on each of the 22 historic properties toward the proposed improvements are included in Section 3.0 of this report. Finally, Table 4 provides measurements on the distances between the Preferred Alternative and the National Register boundary and the dwelling on each historic property.

Visual effects can be caused by a change in current aesthetics, setting characteristics, or by an obstruction of views from or toward historic properties. Aesthetic and setting visual effects occur when the proposed improvements have an effect on the perceived beauty or character of a place or structure. Obstructive effects can occur when the proposed project obstructs any part of a historically significant property or viewshed from the historic property resulting in a diminishment and identifiable change of the property's historic character. Generally, the introduction of visual changes can diminish a resource's integrity of setting, location, feeling, and/or association.

Overhead lighting, which will be limited to areas around toll plazas and interchanges as much as possible, may have visual effects on historic properties in the immediate vicinity if it introduces elements that diminish the integrity of the properties' historic features or results in a non-historic use for the property. The lighting plans will be developed during the final design phases of the project and will be reviewed by the DE SHPO and other parties, as outlined under the stipulations

Table 4. Summary of Effect Assessment for Historic Properties.

CRS No.	Resource Name	NR Criteria	Visual										Noise*			Effect**	Comments
			Measurement to Mainline Taken at Station	Approximate Distance of Dwelling (feet)	Approximate Distance of Mainline LOD to Boundary (feet)	Approximate Distance of Ramp and/or Local Road LOD to Dwelling (feet)	Approximate Distance of Ramp and/or Local Road LOD to Boundary (feet)	Approximate Distance of Ramp and/or Local Road LOD to Boundary (feet)	Approximate Elevation near Dwelling	Approximate Highest Elevation of Mainline, Spur, or Ramp	Ramp &/or Local Road	Existing	No Build	Preferred Alternative			
N14388	Shahan Farm	A, C	STA. 117+00	2336	140	2938	30	57.4	73.5	Strawberry Lane Extension	46	46	46	NE	Intervening distance and tree line		
N05225	B.F. Hanson House	C	STA. 189+00	305	75	640	75	70.6	70.7	Levels Road extension to existing US 301	61	63	59	AE: (iv) (v)	Adverse visual; mitigation recommended		
N05221	C. Polk House Estate	C	STA. 231+00	465	425	850	425	74.1	78.6	Levels Road extension to Existing US 301	56	56	56	AE: (iv) (v)	Adverse visual; mitigation recommended		
N00113	Rumsey Farm	A, C	STA. 251+00	915	740	280	230	68.7	86.4	Levels Road extension to Existing US 301	52	53	52	AE: (iv) (v)	Adverse visual; mitigation recommended		
N00112	Summerton	C	STA. 250+00	1735	1670	170	70	70.5	86.4	Levels Road extension to Existing US 301	62	63	61	AE: (v)	Adverse visual; mitigation recommended		
N00118	Hedgejawn	A, C	STA. 164+00	2560	2260	1100	600	62.6	86.4	Levels Road extension to Existing US 301	60	60	60	NA	Intervening landscaping and development		
N00117	Cochran Grange	A, C	STA. 280+00	3615	3370	2580	2300	67.8	57.7	Levels Road extension to Existing US 301	60	59	59	NE	Intervening distance		
N00106	The Maples	C	STA. 308+00	1015	970	130	0	69.4	96.6	Bunker Hill Road	56	65	60	AE: (iv) (v)	Adverse audible and visual; view of The Maples will be blocked by undertaking; mitigation recommended		
N05148	Rosedale	A, C	STA. 315+00	1270	485	960	200	72.1	96.6	Bunker Hill Road	46	51	53	AE: (iv) (v)	Adverse audible and visual; view of The Maples will be blocked by undertaking; mitigation recommended		
N00107	S. Holton Farm	C	STA. 365+00	415	15	415	15	69.9	97.5	Mainline/Spur Split	46	54	59	AE: (iv) (v)	Adverse audible, visual and secondary; mitigation recommended		
N00109	Choptank	A, C	STA. 178+00	1985	1725	1025	790	65.2	97.5	Old Schoolhouse Road	46	48	46	AE: (iv) (v)	Adverse visual; mitigation recommended		
N00427	Woodside	A, C	STA. 220+00	3180	2835	1290	900	50.52	76.9	Churchtown Road	58	63	55	NE	Intervening distance and tree line		
N05123	Governor Benjamin T. Biggs Farm	A, B, C	STA. 242+00	1260	1015	1810	1540	60.9	60.8	Bethel Church Road ramp/extension	47	56	50	AE: (iv) (v)	Adverse visual; mitigation recommended		
N05146	Armstrong-Walker House	A, C	STA. 405+00	805	575	1450	1320	66.9	92.3	Armstrong Corner Road Interchange new/extension US 301	67	67	66	AE: (iv) (v)	Adverse visual; mitigation recommended		
N03930	Achmesier	A, C	STA. 431+00	3345	1215	2820	850	65	95.8	Armstrong Corner Road Interchange new/extension US 301	46	46	46	NE	Intervening distance and tree line		
N00121	Weston	A, C	STA. 490+00	2220	1045	3750	2810	70.8	95.8	Armstrong Corner Road Interchange new/extension US 301	51	52	52	NE	Intervening distance and landscaping		
N05132	Lovett Farm	A, C	STA. 512+00	2600	0	6480	4120	60.9	67.3	Armstrong Corner Road Interchange new/extension US 301	46	46	46	NA	Sufficient distance between farm complex and improvements		
N05131	T.J. Houston Farm	C	STA. 522+00	1455	1445	7625	7560	65.3	65.1	Armstrong Corner Road or Jamison Corner Road Interchange	46	46	49	AE: (iv) (v)	Adverse visual; mitigation recommended		
N12636	State Bridge Number 383	C	STA. 573+00	3085	3085	3085	3085	52.7	83.1	LOD for Interchange includes ramps & Mainline	N/A	N/A	N/A	NE	Revisit if planned improvements to Jamison Corner Rd not undertaken		
N05195	J. Houston House	C	STA. 640+00	3065	2600	3065	2600	64.7	83.1	LOD for Interchange includes ramps & Mainline	49	49	49	NA	Intervening distance and tree line		
N05244	Fairview	A, C	STA. 690+00	2885	2530	2615	2335	61.28	77.6	Hyetts Corner Road	58	60	60	NE	Intervening distance and topography		
N03947	Idalia Manor	A, C	STA. 759+00	515	105	4910	5720	40.7	44.4	SR 1 northbound ramp from Mainline to SR 1	59	63	63	AE: (iv) (v)	Adverse cumulative audible and visual effect		

\*See Figures 3-24 for location of receptors within National Register boundaries.

\*\*NE no effect  
 NA no adverse effect  
 AE adverse effect

An Effect means alteration to the characteristics of a historic property that qualify it for inclusion in, or eligibility for, the National Register.

An Adverse Effect is found when an undertaking may alter, directly or indirectly, the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

Adverse effects on historic properties in the APE include two types from 36 CFR 800.5(a)(2):

- (iv) Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance; and
- (v) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

Table 5. Summary of Noise Impact Analysis.

Receptor No.	Receptor Location	Existing (2007) Noise	NAC Existing Impact?*	Future (2030) No-Build Noise	Future (2030) Build Noise	Difference (Build - Existing)	NAC Impact?/ Detectable Increase**
H-1	Shahan Farm	46	No	46	46	0	No/No
H-2	B.F. Hanson House	61	No	63	59	-2	No/No
H-3	C. Polk House Estate	56	No	56	56	0	No/No
H-4	Rumsey Farm	52	No	53	52	0	No/No
H-5	Summerton	62	No	63	61	-1	No/No
H-6	Hedgelawn	60	No	60	60	0	No/No
H-7	Cochran Grange	60	No	59	59	-1	No/No
H-25	The Maples	56	No	65	60	4	No/Yes
H-8	Rosedale	46	No	51	53	7	No/Yes
H-10	S. Holton Farm	46	No	54	59	13	Yes/Yes
H-28	Choptank	46	No	48	46	0	No/No
H-27	Woodside	58	No	63	55	-3	No/No
H-31	Governor Benjamin T. Biggs Farm	47	No	56	50	3	No/No
H-11	Armstrong-Walker House	67	Yes	67	66	-1	Yes/No
H-12	Achmester	46	No	46	46	0	No/No
H-14	Weston	51	No	52	52	1	No/No
H-13	Lovett Farm	46	No	46	46	0	No/No
H-29	T.J. Houston Farm	46	No	46	49	3	No/No
NA	State Bridge Number 383	NA	NA	NA	NA	NA	NA
H-24	J. Houston House	49	No	49	49	0	No/No
H-19	Fairview	58	No	60	60	2	No/No
H-18	Idalia Manor	59	No	63	63	4	No/Yes

\*NAC Impact exists if noise level  $\geq$  66 dBA or there is an increase of 10 dBA or more

\*\*A 3 dBA increase represents a perceptible change in noise level

of the MOA (Appendix C). Overhead signage may also affect the views from historic properties by introducing elements that diminish the integrity of the properties' historic views. During final design, the SHPOs and other consulting parties as appropriate will review signage placement in the vicinity of historic properties.

#### **4.4 Atmospheric Effects**

Under 800.5(a)(2) atmospheric elements that diminish the integrity of a historic property's significant historic features, including the property's use, can be considered adverse. An air quality analysis conducted for the project, including a detailed impact evaluation for carbon monoxide (CO), demonstrated that the undertaking will not cause or exacerbate localized violations of the National Ambient Air Quality Standards (NAAQS) (The Wilson T. Ballard Company 2005). Thus, it does not appear that the Preferred Alternative has the potential to have an atmospheric effect on historic properties in the APE.

#### **4.5 Secondary and Cumulative Effects**

36 CFR Section 800.5 (a) (1) of the Section 106 implementing regulations states that adverse effects to historic properties "may include reasonably foreseeable effects that could be caused by the undertaking and that may be cumulative, may occur later in time, be further removed in distance or be cumulative." Secondary effects are caused by actions later in time or farther removed in distance but are still reasonably foreseeable as a result of the undertaking.

A cumulative effect is one that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions that take place over a period of time, regardless of what agency or person undertakes such other actions. Indirect cumulative effects may include effects related to induced changes in the pattern of land use, population density, or growth rate. As acknowledged in the DEIS, the US 301 Project Development area is experiencing an unprecedented level of residential development. To date, these development pressures have resulted in the acquisition of former farmsteads, removal of all or nearly all associated buildings, and new or planned construction in the location of former farm complexes and farmlands. Development pressures and planned growth in recent years have created drastic changes to the landscape. The US 301 Project Development effort, considered alongside pre-existing developmental influences, has the potential to affect the rate of development in the area and therefore may contribute to a cumulative effect on historic properties. Secondary effects to historic properties could also occur where adjacent zoning allows for development that is incompatible with the historic setting of the resources.

#### **4.6 Project Effects on Historic Properties**

The effects of the Green North Alternative on each of the historic properties in the APE are summarized in Table 4 and discussed below. In consultation with the DE SHPO, the Preferred Alternative was found to have no effect on the following seven resources:

- Shahan Farm, CRS No. N14388
- Cochran Grange, CRS No. N00117;

- Woodside, CRS No. N00427;
- Weston, CRS No. N00121;
- Achmester, CRS No. N03930;
- State Bridge Number 383, CRS No. N12636; and
- Fairview, CRS No. N05244;

The Preferred Alternative will not alter the physical characteristics that qualify these properties for listing in the National Register. Additionally, due to intervening landscape features or distances that impair visibility of the new alignment or lack of audible impacts, these properties will not be directly affected by the Preferred Alternative.

The Green North Alternative will have an effect on the remaining 15 historic properties within the APE:

- B.F. Hanson House, CRS No. N05225;
- C. Polk House Estate, CRS No. N05221;
- Rumsey Farm, CRS No. N00113;
- Summerton, CRS No. N00112;
- Hedgelawn, CRS No. N00118;
- The Maples, CRS No. N00106;
- Rosedale, CRS No. N05148;
- S. Holton Farm, CRS No. N00107;
- Choptank, CRS No. N00109;
- Governor Benjamin T. Biggs Farm, CRS No. N05123;
- Armstrong-Walker House, CRS No. N05146;
- Lovett Farm, CRS No. N05132;
- T. J. Houston Farm, CRS No. N05131;
- J. Houston House, CRS No. N05195; and
- Idalia Manor, CRS No. N03947.

Therefore, the Criteria of Adverse Effect were applied to these historic properties; each is considered in Section 5.0 of this report, which assesses the applicability of adverse effects identified under 36 CFR 800.5.

#### *4.6.1 CRS No. N14388, Shahan Farm, 389 Strawberry Lane*

No potential effects are expected for this resource. No property located within the National Register boundary will be required for the project. The proposed roadway improvements in this area will be located to the northwest of the farmstead complex (Photograph 23). The planned improvements in this area will include the introduction of an at-grade four-lane limited access road, the Preferred Alternative mainline, to the west, a bridge structure elevated approximately 30 feet above existing ground to carry a reconstructed Strawberry Lane over US 301, a new local connector road between US 301 and Strawberry Lane, and a potential stormwater management facility. While the Limit of Disturbance (LOD) of the Preferred Alternative mainline will be in



**Photograph 23:** View from CRS No. N14388, Shahan Farm, facing northwest to the Preferred Alternative's overpass at Strawberry Lane from the northwest corner of the granary. Note the tree line that will shield the property from a view of the overpass (February 2007).

close proximity (within approximately 140 feet of the National Register boundary), the proposed improvements will not be visible from the historic farm complex due to intervening tree lines that run along the edge of the farmstead on the east side of existing US 301 as well as approximately 2,336 feet of intervening distance (Figure 3) between the dwelling and the boundary. As a result of comments received at the Public Hearing held on January 8 and 9, 2007, the new local connector road will provide the customers of Hooper, Inc. (a retail and repair farm equipment facility located on the east side of existing US 301) with continued local access to the business as well as safe transportation of large farm machinery across new US 301. The connector road will have no physical effect on the Shahan Farm, nor will it result in significant increases in noise or traffic in the vicinity. Additionally, none of these improvements will result in the removal of any of the trees that screen the current roadway or future roadway from the Shahan Farm. Therefore, the undertaking will have no visual effect on this property.

Noise receptor H-1 is located approximately 2,130 feet from the Preferred Alternative, close to the side of the farmstead that faces the alternative. Analysis indicates that the existing noise levels at the property (46 dBA) do not approach FHWA's NAC for Category B properties, which is 66 dBA (23 CFR Part 722). Therefore, under the NAC, the property is not currently experiencing noise impacts. Due to the distance of the farmstead from the existing highway, no change in the noise level is expected in the future (2030) if the Preferred Alternative is not carried out. Additionally, if the Preferred Alternative is constructed, the property will not experience any additional increases in the average daily noise level. Therefore, an increase in noise level will not be detectable in this location, and the undertaking will have no audible effect on the resource. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.2 CRS No. N05225, B.F. Hanson House, 1102 Middletown-Warwick Road*

Although no physical or direct effects are expected within or adjacent to the property's National Register boundary, improvements to US 301 will introduce new visual elements within the viewshed of the farm (Figure 4 and Photograph 24). Improvements in the immediate vicinity of the B.F. Hanson House will include the construction of the Preferred Alternative mainline approximately 75 feet west of the National Register boundary and parallel to existing US 301. The LOD of new roadway will be located approximately 305 feet from the B.F. Hanson House. Also, to the northwest of the property, stormwater management facilities may be constructed on both sides of the new US 301, and a toll plaza may be constructed approximately 2,000 feet to the north (south of Middle Neck Road). Access to the B.F. Hanson House using the gravel driveway that leads from existing US 301 will be maintained. The view from the front yard of the dwelling looking toward the proposed undertaking, shown in Photograph 24, illustrates that the new roadway will be clearly visible from the property. Therefore, the undertaking will have a visual effect on the B.F. Hanson House.

Noise receptor H-2 is located towards the front of the property, approximately 295 feet from the Preferred Alternative and approximately 1,100 feet north of Warwick Road. The Preferred Alternative is expected to slightly decrease existing noise levels at the B.F. Hanson House by



**Photograph 24:** View from CRS No. N05225, B. F. Hanson House, facing northwest to existing U.S. 301 and the Preferred Alternative from the property's front yard (February 2007).

2 dBA to 59 dBA. This decrease can be attributed to the relocation of the main roadway from approximately 240 feet to approximately 295 feet west of the location of the receptor on the property. As the property will experience a decrease in noise if the Preferred Alternative is constructed, there is no potential for an audible effect. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.3 CRS No. N05221, C. Polk House Estate, 929 Middletown-Warwick Road*

No property will be required from within the resource's National Register boundary. However, the Preferred Alternative mainline LOD will be located approximately 425 feet from the National Register boundary and will be visible from the rear of the C. Polk House Estate dwelling across open farm fields (Figure 5 and Photograph 25). Approximately 2,800 feet to the north, a grade-separated diamond interchange will be constructed to provide a connection to existing US 301 (Levels Road interchange).

A new toll plaza will be located 1,800 feet to the southwest, south of Middle Neck Road, in the current location of agricultural lands and within view of the C. Polk House Estate. Therefore, the undertaking will have a visual effect on the C. Polk House Estate (Photograph 26).

Noise receptor H-3 is located in the front yard of the property approximately 530 feet from existing US 301. If the Preferred Alternative is constructed, the C. Polk House Estate will maintain its existing average daily noise level of 56 dBA. The maintenance of a similar level of noise can be attributed to the new highway taking much of the traffic, especially heavy truck traffic, from existing US 301 (approximately 560 feet away from the receptor) and moving it to the new Preferred Alternative roadway that will be approximately 720 feet away from the receptor. This noise level does not meet or approach the NAC; therefore the property will not experience a noise impact. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.4 CRS No. N00113, Rumsey Farm, 841 Middletown-Warwick Road*

Although no physical or direct effects are expected within or adjacent to the property's National Register boundary, the Preferred Alternative mainline, including the construction of a grade-separated interchange to the northwest, will introduce new visual elements (Figure 6). The interchange will be located approximately 740 feet to the northwest of the farm complex, across open farm fields. Both the interchange and a proposed extension of Levels Road will be clearly visible from the farm complex (Photographs 27 and 28). The Levels Road LOD (approximately 2 feet above existing ground) will be located approximately 150 feet to the northeast of the National Register boundary. Therefore, there is the potential for a visual effect to Rumsey Farm should the Preferred Alternative be constructed.

Noise receptor H-4 is located near the building on the property closest to the interchange ramp, approximately 670 feet from existing US 301. Existing noise levels at the property do not meet or approach the NAC. Since the proposed roadway will take much of the traffic, including heavy



**Photograph 25:** View from CRS No. N05221, C. Polk House Estate, facing northwest to the Preferred Alternative. The Preferred Alternative will block the property's view of the poultry farm in the rear of the photograph (February 2007).



**Photograph 26:** View from CRS No. N05221, C. Polk House Estate, facing northeast to the proposed Levels Road Interchange from the farm complex (February 2007).



**Photograph 27:** View from CRS No. N00113, Rumsey Farm, facing northwest to Levels Road Interchange from the northeastern corner of the dwelling. The new interchange will be partially obscured by the tree line separating the farm complex from the agricultural fields (February 2007).



**Photograph 28:** View from CRS No. N00113, Rumsey Farm, facing northeast to the Levels Road access road from the northern farm lane. The post-1962 dwelling will be removed as part of the new access road's construction (February 2007).

truck traffic, off of existing US 301 and onto the new roadway, which will be located further away from the receptor, the noise increase associated with traffic on improved US 301 will be negated, yielding future noise levels (52 dBA) that are comparable to existing levels (52 dBA). The traffic on relocated Levels Road will be insufficient to influence the overall noise impacts for the project, as determined during a one-hour period. Therefore, the undertaking does not have the potential to have an audible effect on the Rumsey Farm. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.5 CRS No. N00112, Summerton, 840 Middletown-Warwick Road*

No physical or direct effects are expected to the property's National Register boundary. In this location, the Preferred Alternative will construct an extension of Levels Road to an interchange located approximately 4,000 linear feet north of Middle Neck Road (Figure 7). The proposed interchange will be located to the northwest of Summerton, on the opposite side of existing US 301, and approximately 1,530 feet from the National Register boundary of the resource (Photograph 29). The intersection of existing US 301 and the extension of Levels Road will be located north of and adjacent to the resource (Photograph 30). The portion of Levels Road on the east side of existing US 301 is currently under construction relocated adjacent to Summerton as a part of the Westown Development. As part of the Preferred Alternative a turning lane will be added to the relocated roadway at the north corner of the National Register boundary. The proposed Levels Road extension and the additional left turn lane on existing Levels Road will be within the viewshed and immediate setting of the farm complex associated with Summerton, and the undertaking has the potential to have a visual effect on the property.

Noise receptor H-5 is located in the front yard approximately 250 feet from existing US 301. The existing noise levels on the property (62 dBA) do not meet the NAC. Should the Preferred Alternative be constructed, the noise level will decline by 1 dBA because much of the traffic will be removed from existing US 301 and directed onto the new roadway, which will be located further west of the property. The traffic on relocated Levels Road will be insufficient to influence the overall noise impacts for the project, as determined during a one-hour period. Therefore, the undertaking does not have the potential to have an audible effect on Summerton. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.6 CRS No. N00118, Hedgelawn, 772 Middletown-Warwick Road*

No physical or direct effects are expected to the property's National Register boundary. The Preferred Alternative mainline LOD will be located approximately 2,485 feet to the northwest of the National Register boundary and will include an elevated interchange (approximately 32 feet above existing ground) that will be only partially visible from the front yard of the farmstead due to intervening existing development (Photograph 31 and Figure 8). Plans are underway for the construction of the Middletown Business and Technology Park on the opposite side of the existing US 301. A number of buildings related to agricultural enterprises are located between Hedgelawn and the Preferred Alternative on the parcel that is planned for development. This existing construction will partially screen the mainline from the viewshed of Hedgelawn. The proposed Levels Road extension will not be easily visible from the farm complex due to an intervening line



**Photograph 29:** View from CRS No. N00112, Summerton, facing north to the new Levels Road interchange from the property's front yard. The new interchange will be located in the far background of this photograph (February 2007).



**Photograph 30:** View from CRS No. N00112, Summerton, facing northeast to the new Levels Road access road from the farm complex. The new road will be located in the photograph's foreground. Cochran Grange is visible in the background of the photograph (February 2007).



**Photograph 31:** View from CRS No. N00118, Hedgelawn, facing northwest to Levels Road Interchange from the property's driveway. Note the existing, modern agricultural buildings shielding the view from the property to the new interchange (February 2007).

of evergreens that follows along the southern edge of the National Register boundary for Hedgelawn (Photograph 32). Despite intervening development, the Preferred Alternative mainline will be partially visible from the farmstead complex associated with Hedgelawn, and therefore the Preferred Alternative has the potential to have a visual effect on the resource.

The existing noise levels on the property (60 dBA) do not meet the NAC. If the Preferred Alternative is constructed, the property will not experience any increases in the average daily noise level. Therefore, an increase in noise level will not be detectable in this location. The undertaking does not have the potential to have an indirect audible effect on Hedgelawn. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.7 CRS No. N00117, Cochran Grange, 704 Middletown-Warwick Road*

No potential effects are expected for this resource. No physical or direct effects are expected within the property's National Register boundary. The Preferred Alternative will construct a four-lane, limited-access divided highway that will not be visible from the front yard of the farmstead (Photograph 33 and Figure 9). The LOD of the proposed highway will be located approximately 3,615 feet to the northwest of the dwelling on the opposite side of existing US 301. Therefore, the undertaking will not have a visual effect on Cochran Grange due to intervening distance.

The existing noise levels on the property (60 dBA) do not meet the NAC based on noise receptor H-7, which is located approximately 350 feet from existing US 301 and greater than 1,500 feet from the Preferred Alternative mainline, outside of the range of influence of traffic noise from the new roadway. If the Preferred Alternative is constructed, the property not be affected by traffic noise from the new roadway. Therefore, the Preferred Alternative does not have the potential to have an audible effect on the property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.8 CRS No. N00106, The Maples, 1023 Bunker Hill Road*

While no physical or direct impacts are expected to the National Register boundary, the Preferred Alternative will be visible from the rear of the yard where there is a discontinuation of the tree line running along the western edge of the National Register boundary (Photograph 34 and Figure 10). The Preferred Alternative mainline LOD will be located approximately 970 feet to the northwest of the boundary. The Bunker Hill overpass (approximately 23 feet above existing ground) will be visible from the southwest corner of the National Register boundary (Photograph 35). Both the highway and the overpass will be visible from The Maples across farm fields. The undertaking will also partially block the view from The Maples to Rosedale, a nearby farm located on the opposite side of Choptank Road. As the undertaking will introduce new visual elements into the landscape and obstruct a historic viewshed, it will have a visual effect on The Maples.

Noise receptor H-25 is located in the front yard of the property approximately 133 feet from Bunker Hill Road. Existing noise levels (56 dBA) do not meet the NAC. If the Preferred Alternative is constructed, the property will experience a 4 dBA increase in the average daily noise level. Although this increase does not meet the FHWA criteria for an impact, the increase will be



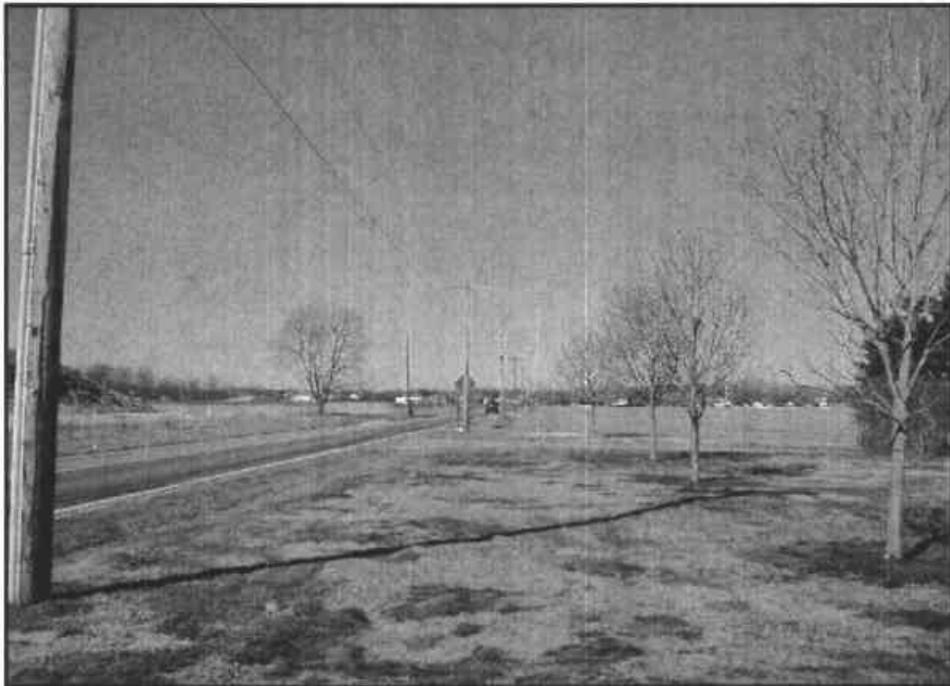
**Photograph 32:** View from CRS No. N00118, Hedgelawn, facing southwest to the Levels Road Ramp. Note the intervening line of evergreens that shields the property from view of Levels Road (February 2007).



**Photograph 33:** View from CRS No. N00117, Cochran Grange, facing northwest to the Preferred Alternative. Notice the intervening distance between the property and the new roadway which will be located in the far background of this photograph (February 2007).



**Photograph 34:** View from CRS No. N00106, The Maples, facing northwest to the Preferred Alternative from the northern edge of the National Register boundary. Note fenceline associated with Rosedale to the left in the background (February 2007).



**Photograph 35:** View from CRS No. N00106, The Maples, facing northwest to the Bunker Hill Road overpass from the front yard, adjacent to the dwelling (February 2007).

perceptible. For the purposes of Section 106 consultation in Delaware, based on an application of the Criteria of Adverse Effect this increase is considered an adverse effect. Therefore, the undertaking has the potential to have an audible effect on the Maples. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.9 CRS No. N05148, Rosedale, 1143 Bunker Hill Road*

No property will be required from the National Register boundary of the resource. However, the Preferred Alternative mainline will be clearly visible from the farm complex, as the LOD will be located approximately 485 feet to the southeast of the National Register boundary. Intervening space between the roadway and the dwelling will include open yard, Choptank Road, and farmlands (Photograph 36 and Figure 11). Stormwater management facilities may be located in close proximity to the highway on the west side of the proposed alignment. Additionally, improvements to Bunker Hill Road to provide an overpass of the new US 301 will be visible from the southeast corner of the property historic boundary. At its highest elevation (approximately 23 feet above existing ground), Bunker Hill Road will be approximately 750 feet distant (Photograph 37). As a result of the close proximity of the property to the proposed overpass and highway, the project will have a visual effect on Rosedale.

Potential noise impacts to Rosedale were evaluated based on noise analysis conducted for noise receptor H-8, located in the front yard of the property approximately 1,200 feet from the planned highway. If the Preferred Alternative is constructed, Rosedale may experience +7 dBA of additional noise, bringing the average daily level to 53 dBA. The increase in noise will be perceptible in this location; however, this increase would not be considered an impact under FHWA guidelines since the increase will be less than 10 dBA. For Section 106 consultation in Delaware as part of the application of the Criteria of Adverse Effect, this noticeable increase is considered an adverse effect. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.10 CRS No. N00107, S. Holton Farm, 2010 Choptank Road*

No property will be required from within the resource's National Register boundary. The Preferred Alternative mainline LOD will be located approximately 15 feet east of the National Register boundary of the resource amidst open farm fields, resulting in a loss of farmlands and viewsheds within view of the S. Holton Farm (Photograph 38 and Figure 12). The roadway mainline will be approximately three to nine feet above existing ground in this location. The ramp to connect the northbound US 301 mainline to the northbound Spur Road will pass over the southbound mainline lanes northeast of the property and will be elevated approximately 35 feet above existing ground (Photograph 39). Both the mainline and ramp will be visible from the farm complex in this location. Therefore, the proposed improvements will introduce new visual elements into the immediate vicinity and larger environment of the resource as well as compromise historic views and connections to surrounding farmlands.

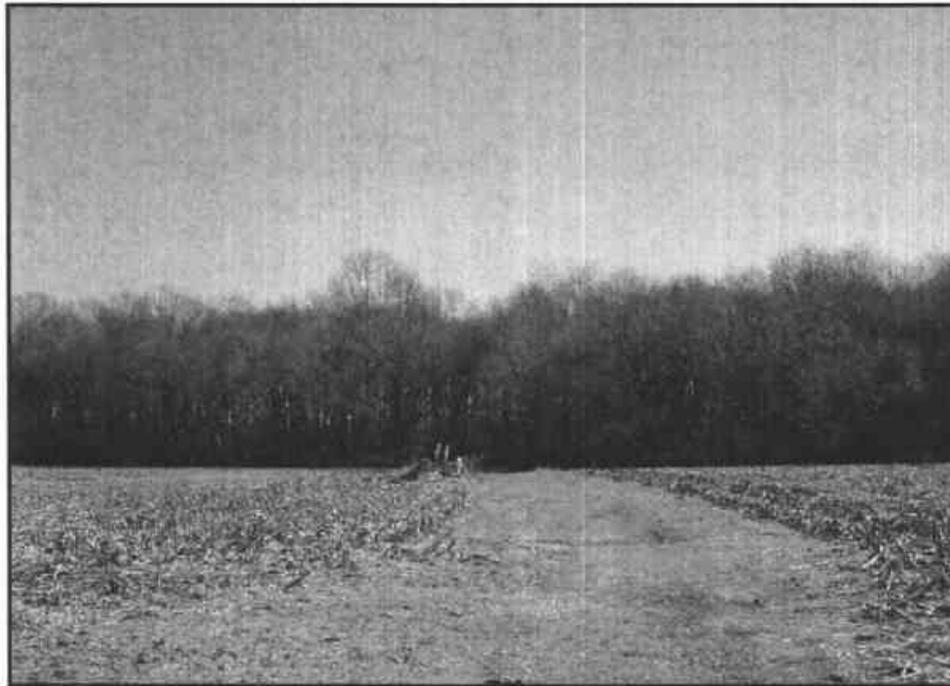
The existing noise levels on the property (46 dBA) do not meet the NAC. If the Preferred Alternative is constructed, the property will experience a 13 dBA increase in the average daily noise level. An increase of 10 dBA or more meets the FHWA criteria for a noise impact; therefore, the undertaking has the potential to audibly affect the S. Holton Farm. For the purposes of Section 106 consultation in Delaware as part of



**Photograph 36:** View from CRS No. N05148, Rosedale, facing east to Choptank Road and the area of the Preferred Alternative. The alternative will be located to the rear of the photograph, behind Choptank Road (February 2007).



**Photograph 37:** View from front yard of CRS No. N05148, Rosedale, facing southeast to the Bunker Hill Road overpass which will be located to the rear of the photograph (February 2007).



**Photograph 38:** View from CRS No. N00107, S. Holton Farm, facing southeast to the Preferred Alternative. The mainline will be located between the farm and the tree line visible in the background (February 2007).



**Photograph 39:** View from the yard of CRS No. N00107, S. Holton Farm, facing northeast to the ramp that will connect the northbound U.S. 301 mainline to the northbound Spur Road (February 2007).

the application of the Criteria of Adverse Effect, this increase is considered an adverse effect.

There may be a change in the character of the use of a portion of the farmlands associated with the S. Holton Farm. The proposed construction of the four-lane divided highway will separate a portion of the farmlands at the eastern end of the tax parcel from the rest of the property (Figure 12). Although the improvements are outside the National Register boundary, the undertaking has the potential to have a secondary effect on the S. Holton Farm by resulting in the loss of some of the associated agricultural lands.

#### *4.6.11 CRS No. N00109, Choptank, 1542 Choptank Road*

No property will be required from within the resource's National Register boundary. The LOD of the proposed two-lane Spur Road will be constructed approximately 1,725 feet northeast of the National Register boundary of the resource across open farm fields (Photograph 40 and Figure 13). The roadway will be approximately two to five feet above existing ground in this location. Old School House Road to the southeast of the resource will be reconstructed to cross over the Spur Road and will be approximately 30 feet above existing ground at its highest point (approximately 1,900 feet from the National Register boundary) over the Spur Road (Photograph 41 and Figure 13). Therefore, the improvements will create a change in the agrarian setting of the resource by introducing new visual elements in the vicinity, resulting in a visual effect.

Potential noise impacts to Choptank were evaluated based on noise analysis conducted for noise receptor H-28, located approximately 800 feet from Choptank Road and approximately 1,725 feet from the proposed Spur Road LOD. If the Preferred Alternative is constructed the property will not experience any change in the average daily noise level. Therefore, the Preferred Alternative does not have the potential to have an audible effect on the property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

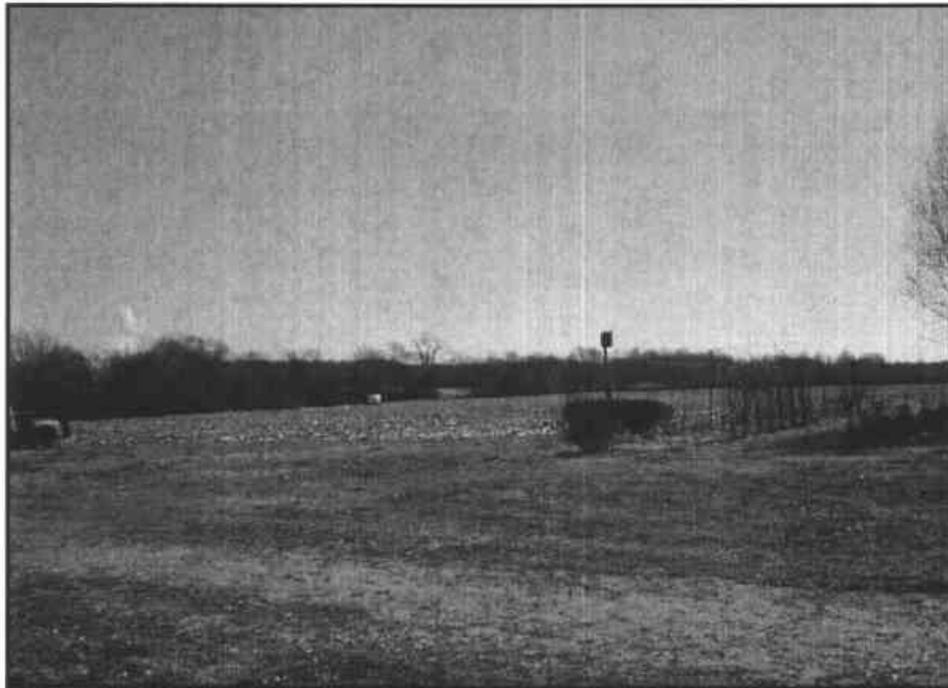
#### *4.6.12 CRS No. N00427, Woodside, 1358 Choptank Road*

No potential effects are expected for this resource. No property will be acquired from within the resource's National Register boundary. The proposed two-lane Spur Road will not be visible from the property, as it will be obscured from view by a tree line located to the east of Woodside along an intermittent stream. Additionally, there will be approximately 2,835 feet between the National Register boundary and the proposed improvements to the east, which include an overpass (approximately 29 feet above existing ground) that will carry Churchtown Road over the two-lane Spur Road. Figure 14 and Photograph 42 illustrate that the proposed ramp will not be visible from the farm complex on the property. Therefore, the undertaking will not have a visual effect on Woodside.

Noise receptor H-27 is located near the front of the property and approximately 140 feet from Choptank Road. The average daily noise level will not increase. If the Preferred Alternative is constructed, Woodside will experience a decline of 3 dBA as existing traffic on Choptank Road to the west will be diverted onto the proposed Spur Road that will be located at a further distance to



**Photograph 40:** View from CRS No. N00109, Choptank, facing northeast to the Spur Road. The roadway will be located beyond the tree line visible in the photograph (February 2007).



**Photograph 41:** View from CRS No. N00109, Choptank, facing east to the Old School House Road overpass. The overpass will not be higher than the trees and will only be visible through the gap in the tree line created by Old School House Road (February 2007).



**Photograph 42:** View from CRS No. N00427, Woodside, facing east to the Spur Road from the rear of the farm complex. Note the tree and brush lines that will screen the Spur Road from the viewshed of the property (February 2007).

the east. No audible impact on Woodside is anticipated from the proposed undertaking. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.13 CRS No. N05123, Governor Benjamin T. Biggs Farm, 1196 Choptank Road*

No property will be acquired from within the property's National Register boundary. The proposed two-lane Spur Road LOD will be located approximately 1,015 feet from the National Register boundary (Figure 15). A view taken from the farm complex shows the roadway will be visible from the rear of the property (Photograph 43). A partial cloverleaf interchange and ramp to an extended Bethel Church Road will be located to the northeast. The interchange and ramp will be partially visible from the farm complex (Photographs 44 and 45). The extension of Bethel Church Road will not have any secondary effects on the property as it will not be clearly within view due to intervening distance (Photograph 46) and will not result in increases in noise or traffic within the vicinity. Therefore, the improvements will create a change in the setting of the resource by introducing new visual elements, resulting in a visual effect.

An analysis of noise receptor H-31, located approximately 425 feet from Choptank Road and 1,225 feet from the proposed Spur Road, reveals that the average daily noise level will not have a perceptible increase. If the Preferred Alternative is constructed, the Governor Benjamin T. Biggs Farm will experience an increase of 3 dBA, bringing the average daily noise level to approximately 50 dBA. These noise levels do not meet or approach the NAC, and therefore the property will not experience an NAC impact if the Preferred Alternative is constructed. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.14 CRS No. N05146, Armstrong-Walker House, 5036 Summit Bridge Road*

No property will be acquired from within the property's National Register boundary. In this area, the proposed Preferred Alternative mainline will be elevated approximately 24 feet above existing ground to pass over Armstrong Corner Road and the LOD will be located approximately 805 feet northwest of the National Register boundary. Despite some limited intervening tree lines, the highway will be visible across farm fields from the northwestern corner of the farm and from the rear of the farm complex (Photographs 46 and 47 and Figure 16). A proposed ramp to existing US 301 located north of the Armstrong-Walker House will have returned to grade from the Armstrong Corner Road crossing. The ramp will be located approximately 1450 feet to the north of the dwelling on the Armstrong-Walker House property, on the other side of Armstrong Corner Road. While the proposed ramp will be located at a far distance, it will be within view of the farm complex. Therefore, there is the potential for a visual effect to the Armstrong-Walker House.

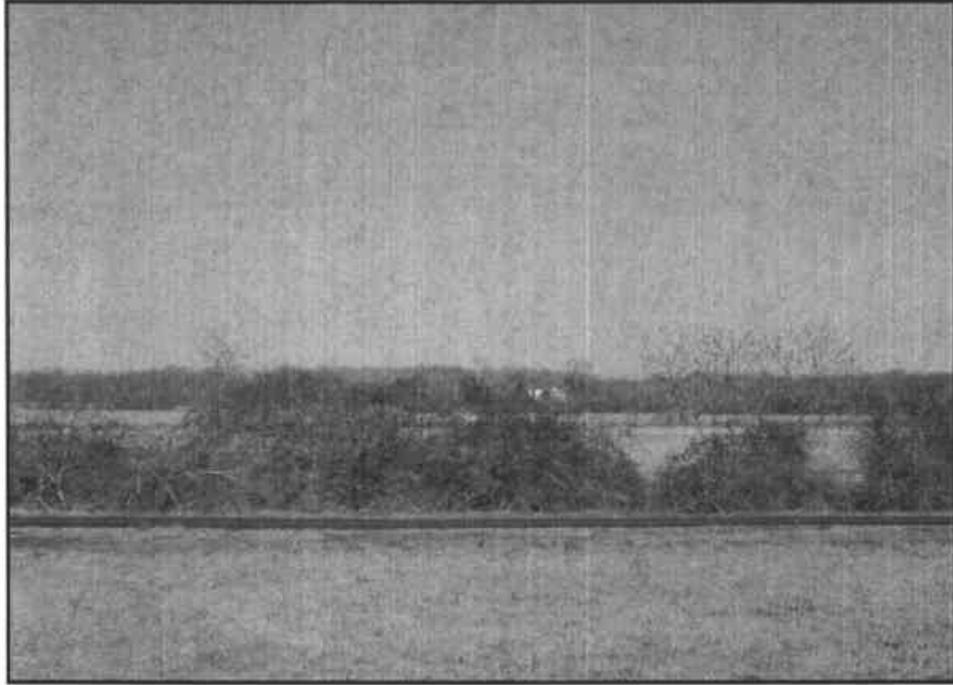
Noise receptor H-11 is located in the front yard approximately 150 feet from existing US 301. The existing average daily noise level of 67 dBA exceeds the NAC. Therefore, the property is currently experiencing noise impacts. Based on noise modeling data, the construction of the Preferred Alternative will result in a decrease in the noise level by 1 dBA. Therefore, the project will have no effect on the existing average daily noise levels on the Armstrong-Walker House property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.



**Photograph 43:** View from CRS No. N05123, Governor Benjamin T. Biggs Farm, facing east to the Spur Road from the eastern edge of the National Register boundary. The Spur Road will be located between the tree line visible in the center of the photograph and the dense tree line depicted in the background (February 2007).



**Photograph 44:** View from CRS No. N05123, Governor Benjamin T. Biggs Farm, facing northeast to the Spur Road interchange with the Bethel Church Road extension from the eastern National Register boundary. The interchange will be located between the line of vegetation located in the foreground and the Summit Bridge Farms Subdivision located in the background (February 2007).



**Photograph 45:** View from CRS No. N05123, Governor Benjamin T. Biggs Farm, facing north to the Bethel Church Road extension from the northeastern corner of the National Register boundary. The extension will be located between the line of vegetation and the dwelling shown in the far background of the photograph (February 2007).



**Photograph 46:** View from rear of the property associated with CRS No. N05146, Armstrong-Walker House facing northwest to the Armstrong Corner Road overpass. The post-1962 dwelling visible between the posts will be within the path of the Preferred Alternative and will be removed (February 2007).



**Photograph 47:** View from the side yard at the CRS No. N05146, Armstrong-Walker House facing north to the ramp to existing U.S. 301. The ramp will be located on the opposite side of Armstrong Corner Road (February 2007).

#### *4.6.15 CRS No. N03930, Achmester, 617 Marl Pit Road*

No potential effects are expected for this resource. No property will be acquired from within the resource's National Register boundary. The Preferred Alternative will include an overpass of existing US 301 and the Norfolk Southern railroad tracks (approximately 29 feet above existing ground). The proposed mainline LOD will be located approximately 1,215 feet northwest of the National Register boundary for the resource (Figure 17 and Photograph 48) and approximately 3,345 feet from the dwelling located along Marl Pit Road. Tree lines that run along an intermittent stream and the Norfolk Southern Railroad at the northern and eastern edges of the National Register boundary will serve to screen the alternative visually from the viewshed of the property; therefore, there is no potential for a visual effect.

Noise receptor H-12 is located in the yard of the resource, approximately 3,276 linear feet from the LOD of the Preferred Alternative and outside of the influence of traffic noise from the new roadway. The average daily noise level of 46 dBA is not considered a noise impact. If the Preferred Alternative is constructed, the noise level will remain the same. This noise level does not meet or approach the NAC, and therefore the property will not experience an audible effect. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

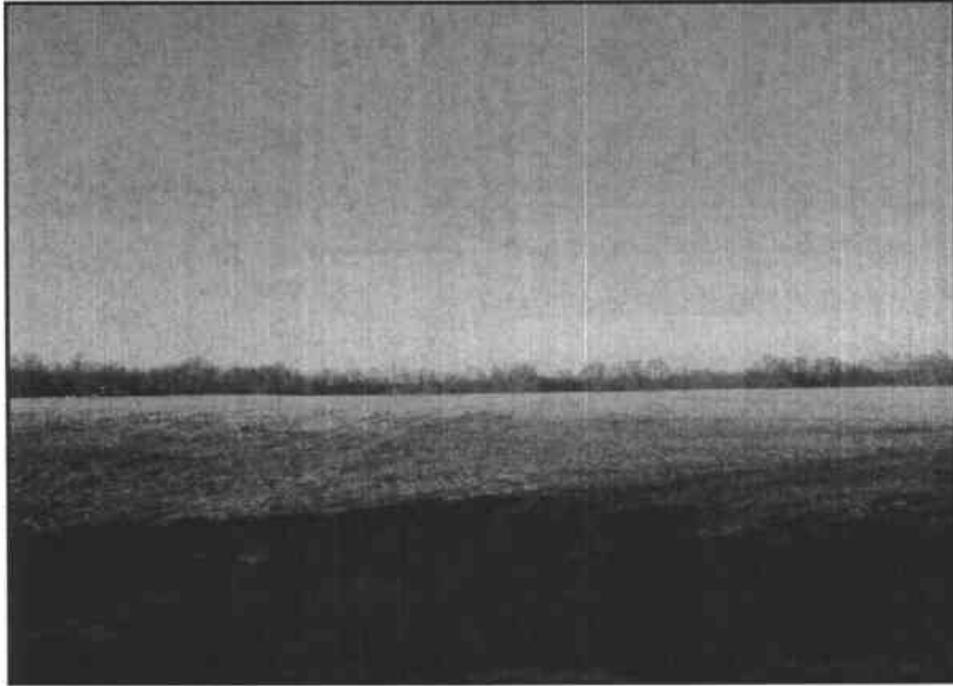
#### *4.6.16 CRS No. N00121, Weston, 4677 Summit Bridge Road*

No potential effects are expected for this resource. No property will be acquired from within the property's National Register boundary. The Preferred Alternative mainline LOD will be located across farm fields and wetlands approximately 1,045 feet to the southeast of the National Register boundary. A portion of the roadway will be carried on an at-grade bridge in order to span wetlands in this area. The roadway will not be visible from the farm complex associated with Weston due to intervening tree lines located along a stream that generally forms the southeastern corner of the National Register boundary (Photograph 49 and Figure 18). Therefore, there will be no visual change in the setting of Weston if the Preferred Alternative is constructed.

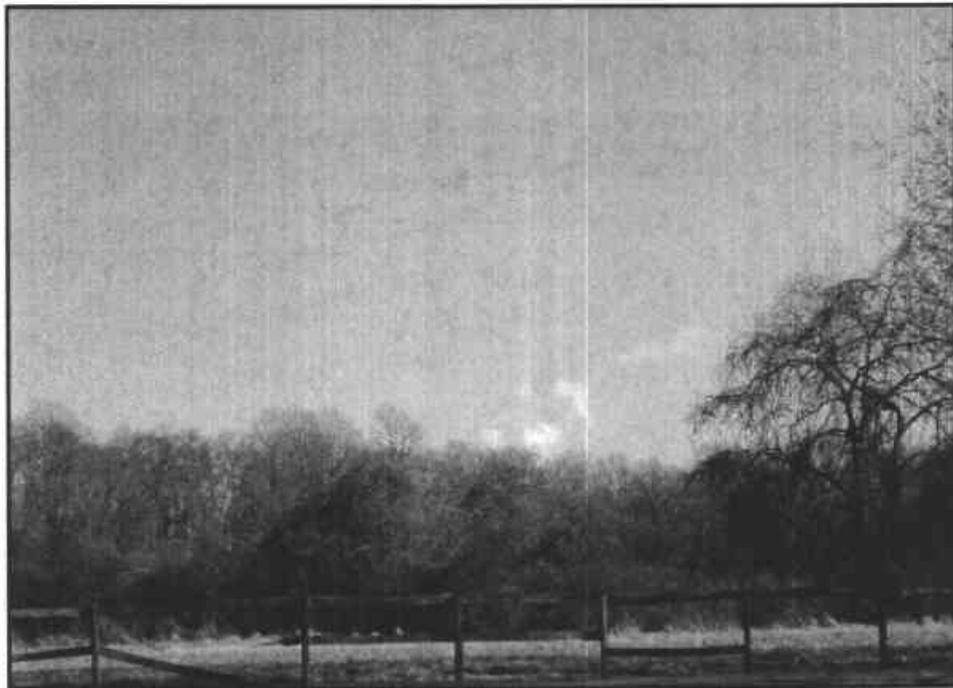
The existing noise levels on the property (51 dBA) do not meet the NAC based on noise receptor H-14, which is located near the dwelling at the end of the main driveway, approximately 740 feet from existing US 301. If the Preferred Alternative is constructed, the dwelling, which is over 1,500 feet from the new roadway, will not be influenced by traffic noise from the new roadway. Therefore, the Preferred Alternative does not have the potential to have an audible effect on the property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.17 CRS No. N05132, Lovett Farm, 1405 Cedar Lane Road*

No property will be acquired from within the property's National Register boundary. The proposed improvements, including the Preferred Alternative mainline and an at-grade bridge spanning wetlands, will be located to the northwest of the property within close proximity to the National Register boundary and approximately 2,600 feet from the dwelling (Figure 19).



**Photograph 48:** View from CRS No. N03930, Achmester, facing north to the Preferred Alternative. The tree line, which also serves as the northern National Register boundary, will visually screen the mainline from view (February 2007).



**Photograph 49:** View from CRS No. N00121, Weston, facing southeast to the Preferred Alternative from the southern edge of the farm complex. The tree line and vegetation will visually screen the mainline from view (February 2007).

The proposed improvements will be within the viewshed of the Lovett Farm due to the level topographic conditions and open nature of the farmland (Photograph 50). These improvements may be partially screened from view in the future by an approved residential development between the farm complex and the undertaking and within the historic boundary adjacent to the building complex. Whether the undertaking of the highway construction precedes or postdates the development of residential homes in this location, at the time of the Section 106 consultation process the Preferred Alternative has the potential to visually affect the property.

Regarding audible changes, the existing average daily noise level is 46 dBA, which does not meet the NAC. If constructed, the Preferred Alternative will not change the average daily noise level (modeled for receptor H-13); therefore, the undertaking does not have the potential to have an audible effect on the Lovett Farm. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.18 CRS No. N05131, T.J. Houston Farm, 1306 Cedar Lane*

No property will be acquired from within the property's National Register boundary. The proposed Preferred Alternative mainline LOD will be located northwest of the property, within approximately 1,445 feet of the National Register boundary and approximately 1,455 feet of the dwelling (Figure 20). A view taken from the farm complex shows the roadway will be clearly visible across open farm fields from the rear of the property (Photograph 51). Although plans have been approved for the construction of a residential development known as Churchtown Manor on the farmland that lies between the farm complex and the undertaking, construction has not yet begun. Whether the undertaking of the highway construction precedes or postdates the development of residential homes in this location, at the time of the Section 106 consultation process the Preferred Alternative has the potential to visually affect the property.

Potential noise impacts to the T. J. Houston Farm were evaluated based on noise receptor H-29, located approximately 1,000 feet from Cedar Lane Road and approximately 1,485 feet from the mainline LOD. If the Preferred Alternative is constructed, the T. J. Houston Farm will not experience a noise impact, as the existing noise level of 46 dBA, will experience a +3 dBA increase which will not be perceptible at the property. Therefore, the undertaking does not have the potential to affect the T. J. Houston Farm audibly. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.19 CRS No. N12636, State Bridge Number 383, Jamison Corner Road*

No potential effects are expected for this resource. No property will be acquired from within the property's National Register boundary, and noise and visual effects do not apply to this resource as it is a vehicular bridge. As part of a separate undertaking by DelDOT, Jamison Corner Road will be improved. The improvements may include a new bridge west of the existing bridge in order to accommodate future traffic related to planned development. As part of the planned improvements the existing structure may remain in place to be used as a bicycle/pedestrian bridge.



**Photograph 50:** View from CRS No. N05132, Lovett Farm facing west to the Preferred Alternative from the farm complex. The mainline will be located in the far background of the photograph and will pass behind the treeline along the right side (February 2007).



**Photograph 51:** View from CRS No. N05131, T. J. Houston Farm facing northwest to the Preferred Alternative from the western edge of the farm complex. The mainline will be located between the treeline and the farm complex (February 2007).

With regards to the Preferred Alternative, the proposed improvements will include the construction of a diamond interchange approximately 3,830 feet north of the existing bridge (Figure 21). This interchange will provide local access from the new US 301 south to Jamison Corner Road and the proposed Scott Run Business Park and north to Hyetts Corner Road. As there are separate plans underway for improvements to Jamison Corner Road and the associated structure over Scott Run, at this time the project does not have the potential to have a secondary effect on the bridge. However, should the planned improvements to the Jamison Corner Road Bridge over Scott Run not be undertaken, the potential of the Preferred Alternative to affect State Bridge Number 383 will need to be revisited.

#### *4.6.20 CRS No. N05195, J. Houston House, 1000 Jamison Corner Road*

No property will be acquired from within the property's National Register boundary. In this location, the undertaking will involve the construction of a four-lane, divided highway with diamond interchange (approximately 6 feet above existing ground) to provide local access to Jamison Corner Road and Hyetts Corner Road (Figure 22). The Preferred Alternative will not be clearly visible from the property, as it will be largely obscured from view by a tree line located along Scott Run at the western edge of the National Register boundary (Photograph 52). Additionally, there will be at least 2,598 linear feet in distance from the National Register boundary to the proposed improvements and approximately 3,065 linear feet between the dwelling and the proposed improvements. Buildings and structures associated with the approved Scott Run Business Park development, not yet under construction, will be located between the farm complex and the Preferred Alternative. Thus, this resource has the potential for a visual effect.

Noise receptor H-24 is located near the dwelling at the end of the main driveway, approximately 1,300 feet from Jamison Corner Road. Existing noise levels at the property (49 dBA) do not approach the NAC; therefore, the property is not currently experiencing noise impacts. Additionally, if the Preferred Alternative is constructed, the property will not experience any increases in the average daily noise level. Therefore, an increase in noise level will not be detectable in this location, and the undertaking will have no audible effect on the resource. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

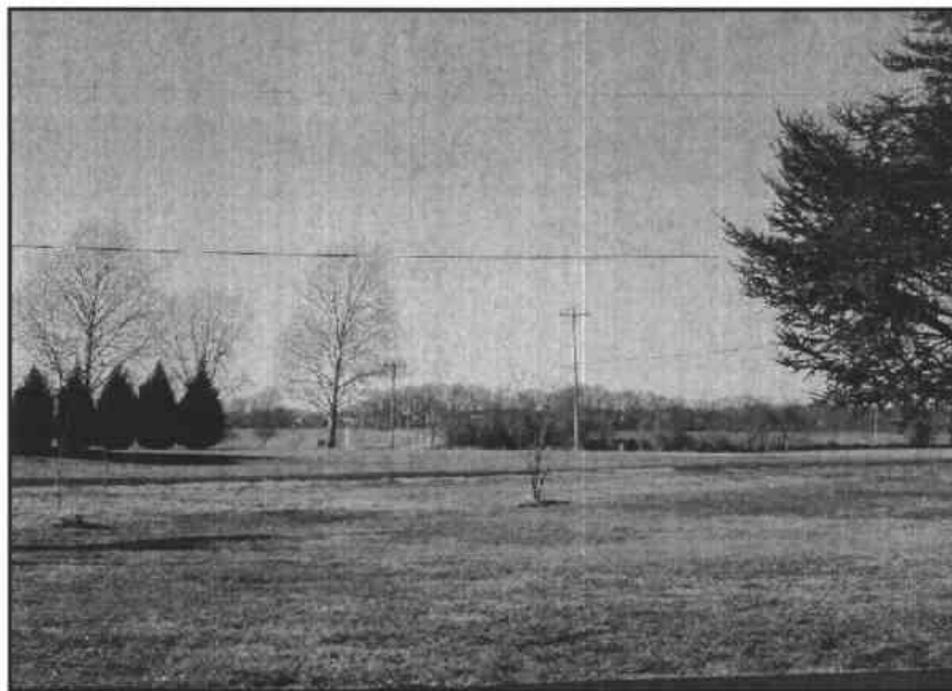
#### *4.6.21 CRS No. N05244, Fairview, 350 Hyetts Corner Road*

No property will be acquired from within the property's National Register boundary. Proposed improvements in the vicinity include the construction of an overpass to carry a reconstructed Hyetts Corner Road over the new Preferred Alternative mainline, approximately 22 feet above existing ground and approximately 3,085 feet northwest of the National Register boundary. The improvements associated with the overpass will begin along Hyetts Corner Road northwest of Fairview. It does not appear that these improvements will be within view of the dwelling due to intervening distance and topography; therefore, there is no potential visual effect to this resource (Photograph 53 and Figure 23).

The existing noise levels on the property (58 dBA) do not meet the NAC based on receptor H-19, which is located in the front yard, approximately 170 feet from Hyetts Corner Road. Because the



**Photograph 52:** View from CRS No. N05195, J. Houston House facing northwest to the Jamison Corner Road interchange with the Preferred Alternative. The tree line and intervening distance will largely screen the interchange from view of the property (February 2007).



**Photograph 53:** View from CRS No. N05244, Fairview facing northwest to Hyetts Corner Road overpass from the property's driveway. The overpass will be in the location of the tree line visible in the background and will not be visible from the property due to topography and intervening distance (February 2007).

property is further than 1,500 feet from any element of the Preferred Alternative, it is considered outside of the influence of traffic noise from the proposed highway. Existing and future noise levels (58 dBA and 60 dBA, respectively) do not meet or approach the NAC, and therefore the property will not experience an NAC impact whether or not the Preferred Alternative is constructed. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

#### *4.6.22 CRS No. N03947, Idalia Manor, 1870 South Dupont Highway*

No property will be acquired from within the property's National Register boundary. The proposed improvements in the vicinity of the resource will include the tie-in of the new US 301 to SR 1 north of the Biddles Corner Toll Plaza and south of the Senator Roth Bridge over the C&D Canal. Directional ramps will be provided from southbound SR 1 to southbound US 301 and from northbound US 301 to northbound SR 1 (Figure 24 and Photograph 54). The northbound flyover ramp (approximately 30 feet above existing SR 1) will be within view of the dwelling and farm complex associated with Idalia Manor. The existing viewshed from Idalia Manor to the north and west is compromised by SR 1 and US 13 and bridges over the C&D Canal. The introduction of additional roadway improvements to the north and west of the farm complex will result in an additional visual change in the roadway infrastructure within the viewshed of Idalia Manor. The introduction of additional roadway improvements to the north and west of the farm complex, in combination with the previous construction of SR 1, has the potential to result in a cumulative visual effect; if the Preferred Alternative is constructed, it will direct additional traffic onto the existing SR 1 and result in further traffic and roadway infrastructure within the viewshed of Idalia Manor.

The existing ambient noise levels on the property (59 dBA) do not meet the NAC. Noise receptor H-18 is located in the front yard, approximately 450 feet from US 13. If the Preferred Alternative is constructed, the property will experience an increase in the average daily noise level of 4 dBA to 63 dBA. Although this increase does not meet the FHWA criteria for an impact, the increase will be perceptible. For the purposes of Section 106 consultation in Delaware, based on an application of the Criteria of Adverse Effect this increase is considered an adverse effect. Therefore, the undertaking has the potential to have an audible effect on Idalia Manor.



**Photograph 54:** View from CRS No. 03947, Idalia Manor, facing southwest to point where the proposed northbound on-ramp will tie into existing SR 1 north (July 2006).