2 ALTERNATIVES CONSIDERED

2.1 Alternative History – Review of those Eliminated from Detailed Study since 2007

2.1.1 2007 Draft Environmental Impact Statement Alternatives

Fifteen (15) alternatives* were developed, excluding the No Build, for U.S. 219 Section 050 during the former National Environmental Policy Act (NEPA) Draft Environmental Impact Statement (DEIS) conducted between 2001 and 2007. The location of these alignments is shown in **Figure 2-1** and include:

- No Build (not shown on **Figure 2-1**)
- Transportation Systems Management (TSM) low-cost solutions without major construction such as high occupancy vehicle lanes, improved public transportation, ride sharing, and park-and-ride lots (not shown on **Figure 2-1**)
- Upgrade of existing U.S. 219
- Alignments A through E, E-Shift and AE
- United State Army Corp of Engineers (USACE) Alignments 1 and 2
- United States Fish and Wildlife Service (USFWS) Alignment
- Agency Alignment
- Ridge Alignment (2 alignments)

Upon completion of the preliminary alternatives analysis phase, six (6) alternatives were advanced for detailed study in the 2007 DEIS. These were:

- No Build Alternative
- Alignments A, D, E, E-Shift, and AE.

Preparation of the DEIS was in process; however, the project was put on hold prior to the public hearing in 2007 due to funding constraints.

2.1.2 Planning and Environmental Linkages (PEL) Study

Maryland State Highway Administration (SHA) with Pennsylvanian Department of Transportation (PennDOT) as a partner, initiated a PEL study in 2014 and completed the study in July 2016. The PEL study re-visited and evaluated the 15 alignments including the no build and all previous alignments developed during the earlier 2007 NEPA study. The PEL study additionally considered a Westerly Alignment. This alignment was developed in response to public comment. The PEL study alignments are depicted in **Figure 2-1**.

All 16 alignments, including the No Build, were evaluated to determine whether they met the PEL vision and goals while minimizing environmental impacts using the following 3-step screening and evaluation process:

A. Step 1 Screening

Step 1 screened each alignment for their ability to address the PEL vision and goals per specific performance measures. The PEL vision was to assist the Appalachian Regional Commission (ARC) in working toward the completion of Corridor N of the Appalachian Development Highway System (ADHS) through improvements to the project area.

Goals of the PEL included:

- Provide safe and efficient access for the southern Somerset County and northern Garrett County regions to improve their economic development potential.
- Improve the level of safety for motorists traveling on U.S. 219.
- Improve mobility in the U.S. 219 corridor.

*The terms **alignment** and **alternatives** have been used interchangeably throughout this chapter. **Alignments** originated in the PEL document. Once the project was re-initiated in 2021 and started the NEPA process, the term **alternatives** is used exclusively.

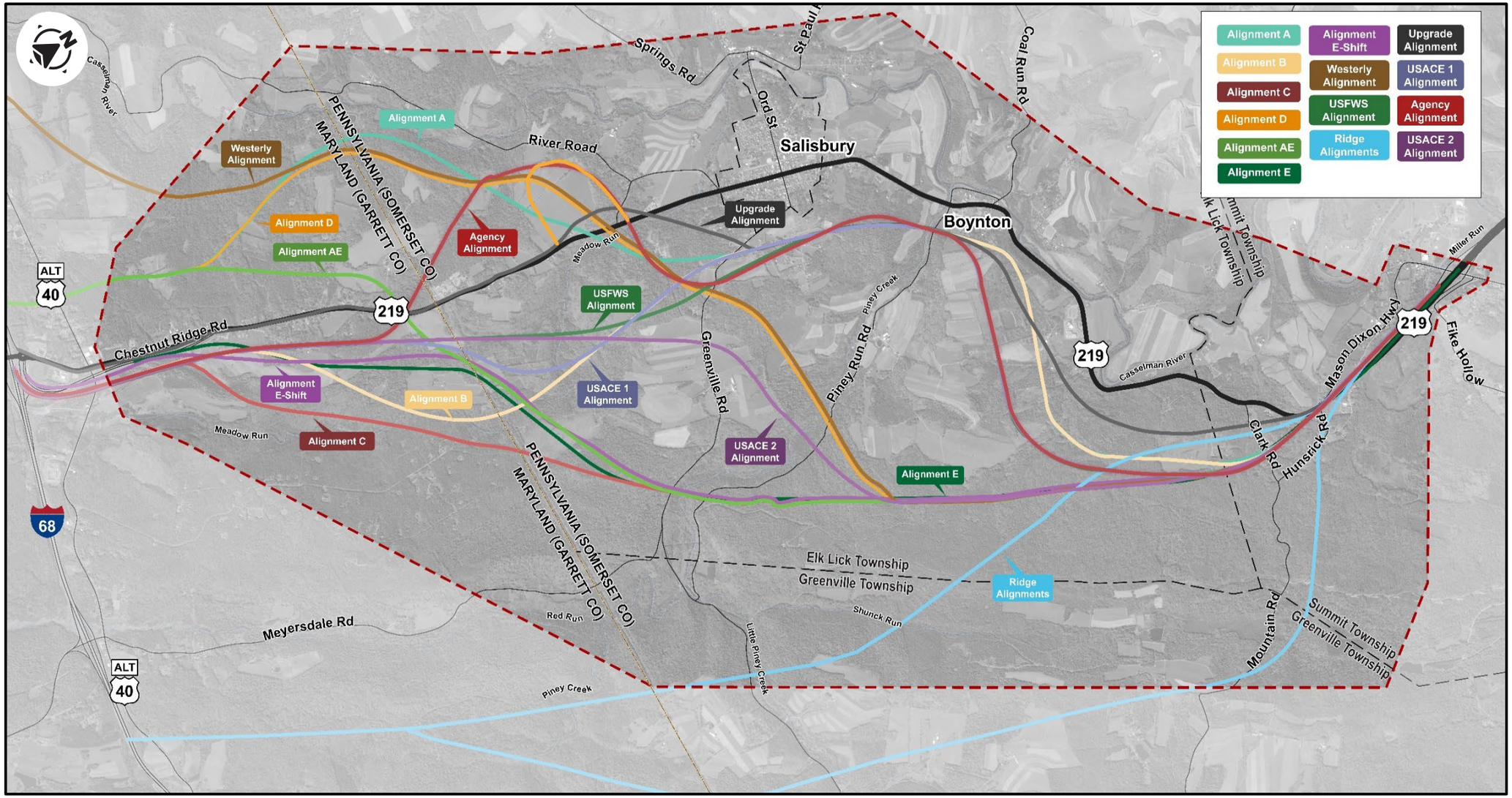


Figure 2-1: Alignments Considered during 2007 DEIS or 2016 PEL Study

The project team evaluated alignments to determine whether they met the PEL goals. Those dismissed for not meeting the PEL vision and goals:

- No Build**
- TSM Alternative
- Upgrade of existing U.S. 219
- Ridge Alignments (2 alignments - Citizen's Impact Group)
- Westerly Alignment

B. Step 2 Screening

The project team completed an initial environmental and cultural resources screening of the alignments advanced from Step 1 to Step 2. Alignments were assessed using readily available data within a Limit of Disturbance (LOD) which included a 50-foot-wide buffer outside of the preliminary roadway cut/fill limits for the entire project area. Following the initial environmental and cultural resource analysis, these alignments were considered unreasonable due to their potential impacts in comparison to other alignments and were dismissed from further evaluation:

- Alignments A, B, C
- USACE Alignments 1 and 2
- Agency Alignment
- USFWS Alignment

****The No Build Alternative does not meet the project purpose and need but must be retained per the CEQ NEPA regulations [40 CFR 1502.14(C)]. The No Build Alternative is intended to provide a baseline for comparison to the build alternatives.**

C. Step 3 Screening

The third screening step collected and used targeted data to further refine which of the four alignments would advance to a NEPA study. Also, potential stormwater management facilities were considered and an expanded LOD was developed.

During this step in the process, it was determined that Alignments D and AE result in greater environmental, cultural, and socioeconomic impacts than E and E-Shift. Alignments E and E-Shift were found to be reasonable alignments to meet the vision and goals of the PEL study, advance into a future NEPA study, and to balance socioeconomic, environmental, and transportation impacts for the proposed project. **Figure 2-2** depicts the process and screening results, and **Figure 2-3** identifies the alignments and reasons for dismissal.

D. Logical Termini and U.S. 219 improvement between I-68 and the Proposed Chestnut Ridge Development

The PEL study concluded Alignments E and E-Shift were considered reasonable and recommended to be evaluated in future NEPA Studies. However, at the time of the PEL study, adequate funding was not available to advance the project in its entirety. As a result, an evaluation was conducted to determine whether any stand-alone projects existed along the recommended E/E-Shift alignment that exhibited logical termini and would not preclude the study of future alignments which would complete Corridor N of the ADHS.

E. U.S. 219 improvement in Maryland between I-68 and the Proposed Chestnut Ridge Development NEPA Study

The PEL identified the recently constructed 1.4 mile four-lane segment of U.S. 219 in Maryland as a stand-alone project to move forward into NEPA based on its ability to:

1) address the PEL's local and regional economic goals,
2) provide a high-speed and safe truck connection to the proposed Casselman Farm Development, and
3) provide rational end points for both the transportation improvement and for the assessment of environmental impacts, consistent with the Federal Highway Administration's (FHWA's) logical termini definition.

Alternatives Established	Step 1 Screening	Step 2 Screening	Step 3 Screening	Preliminary Alternatives	Detailed Study Alternatives
No Build	~~No Build*~~	~~No Build*~~	~~No Build*~~	No Build	No Build
Upgrade	~~Upgrade~~	~~Upgrade~~	~~Upgrade~~	E	E
TSM	~~TSM~~	~~TSM~~	~~TSM~~	E-Shift	E-Shift
A	A	~~A~~	~~A~~	DA	~~DA~~
B	B	~~B~~	~~B~~	DA-Shift	~~DA-Shift~~
C	C	~~C~~	~~C~~	DU	DU
D	D	D	~~D~~	DU-Shift	DU-Shift
E	E	E	E		
E-Shift	E-Shift	E-Shift	E-Shift		
AE	AE	AE	~~AE~~		
USACE 1	USACE 1	~~USACE 1~~	~~USACE 1~~		
USACE 2	USACE 2	~~USACE 2~~	~~USACE 2~~		
Agency	Agency	~~Agency~~	~~Agency~~		
USFWS	USFWS	~~USFWS~~	~~USFWS~~		
Ridge	~~Ridge~~	~~Ridge~~	~~Ridge~~		
	~~Westerly~~	~~Westerly~~	~~Westerly~~		

*Note: Although the No Build Alternative was eliminated in Step 1 (Screening) of the PEL Study due to not meeting the project purpose and need it must be retained per the CEQ NEPA Regulations [40 CFR 1502.14(C)]. The No Build Alternative is carried into the current NEPA Study to provide a baseline for comparison to the build alternatives.

Figure 2-2: Alignment Screening Process

Dismissed in Step 1 - No Build*

- Does not meet the PEL vision and goals

Dismissed in Step 1 - Upgrade Alignment

- Does not meet the PEL vision and goals
- Has the greatest impacts to existing communities by requiring the relocation of up to 100 residences and approximately 24 businesses
- Expected to have impacts on Tomlinson Inn and Little Meadows, Braddock's Road and National Road
- Does not meet safety objectives to reduce traffic volumes on existing US 219

Dismissed in Step 1 - TSM Alternative

- Non-Capacity adding strategies do not meet PEL vision and goals

Dismissed in Step 1 - Ridge Alignment

- Does not meet AASHTO's current design standards (interchange spacing) and does not meet all of the PEL goals
- Anticipated that it would not attract car and heavy truck traffic away from existing US 219
- Passes through forest interior and plant species of specials concern
- Upslope of Findley Spring and crosses through the spring's recharge area
- Located approximately 3 miles outside of the PFA

Dismissed in Step 1 - Westerly Alignment

- In closer proximity to the Casselman River than any other alignment (within 800 feet from the approximate centerline of the alignment at the closest point - the limit of disturbance would be much closer to the river)
- Does not meet AASHTO's current design standards (interchange spacing) and does not meet all of the PEL goals
- Located approximately 1.5 miles outside of the PFA

Dismissed in Step 2 - Alignment A

- Has higher impacts to productive agriculture and NHD streams than E, E-Shift and AE
- Anticipated adverse effect on two historic sites and a higher potential for archaeological impacts
- Bisects Garrett County Employment Center in Maryland
- Does not tie into current logical termini

Dismissed in Step 2 - Alignment B

- One of the highest impacts to productive agriculture
- Requires approximately 11 residential and 7 commercial displacements
- Has the highest impact to NWI wetlands and NHD streams
- Has the highest potential for impact to pre-historic archaeology

Dismissed in Step 2 - Alignment C

- Requires approximately 8 residential and 7 commercial displacements
- Potential for impacts to the Meadow Run wetland complex
- Has an anticipated adverse effect on 2 historic sites and encroaches further into the Little Meadows historic site than any other alignment

Dismissed in Step 2 - USACE 1 Alignment

- Has 15 residential impacts and one of the highest productive agricultural impacts
- Has higher NHD stream impacts and higher forestland impacts than other alignments
- Anticipated to adversely affect two historic properties

*Note: Although the No Build Alternative was eliminated in Step 1 (Screening) of the PEL Study due to not meeting the project purpose and need it must be retained per the CEQ NEPA Regulations [40 CFR 1502.14(C)]. The No Build Alternative is carried into the current NEPA Study to provide a baseline for comparison to the build alternatives.

Figure 2-3: Step 2 Reasons for PEL Alternatives to be Carried or Dismissed

Dismissed in Step 2 - USACE 2 Alignment

- Displaces 11 residences and has higher stream and forest impacts than USACE 1 Alignment
- Likely to have a direct impact on three potential bat hibernacula along Piney Creek

Dismissed in Step 2 - Agency Alignment

- Has the highest impacts to productive agriculture, second highest impact to forestland
- Anticipated adverse effect on two historic properties and has greater potential for archaeology impacts
- Requires seven residential displacements

Dismissed in Step 2 - USFWS Alignment

- Has one of the highest impacts to productive agriculture and a higher potential for forestland and NHD streams impacts
- Impacts the second highest amount of NWI wetlands (tie with USACE 1 Alignment)
- Effects two historic sites and requires approximately 15 residential displacements

Dismissed in Step 3 - Alignment D

- Directly impacts a known bat hibernacula (federally threatened northern long-eared bat)
- Impacts PAL in Pennsylvania, thus requiring approval by ALCAB to condemn farmlands
- Bisects Garrett County Employment Center in Maryland
- Does not tie into current logical termini

Dismissed in Step 3 - Alignment AE

- Impacts nearly twice the delineated wetlands as other alignments and would be difficult to obtain a permit
- Bisects Garrett County Employment Center in Maryland
- Does not tie into current logical termini

Carried into NEPA in Step 3 - Alignment E

- Allows Garrett County Employment Center in Maryland to stay intact compared to Alignments D and AE
- Least potential for environmental impacts (Along with E-Shift)
- No residents displaced
- Most publicly favored alignment

Carried into NEPA in Step 3 - Alignment E-Shift

- Allows Garrett County Employment Center in Maryland to stay intact compared to Alignments D and AE
- Least potential for environmental impacts (Along with E)
- No residents displaced
- Second-most publicly favored alignment

Figure 2-3: Step 2 Reasons for PEL Alternatives to be Carried or Dismissed (Continued)

The PEL identified that the 1.4-mile section in Maryland improves the existing I-68/U.S. 219 interchange and best addresses the PEL's vision and goals by directly serving near future planned development (Casselman Farm Development Site) located in Garrett County, MD's Priority Funding Area (PFA)), which is illustrated in **Figure 2-4**. This section is "of sufficient length to address environmental matters on a broad scope and does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements" including the current study to complete the remaining four-lane U.S. 219 section between the Meyersdale Interchange in Pennsylvania and the recently completed 1.4-mile section in Maryland.

A NEPA study was initiated for the 1.4-mile section in Maryland, following the PEL. The NEPA study evaluated multiple alternatives presented at a public workshop on September 8, 2016, and an open house on September 9, 2016. A Joint Location/Design Public Hearing followed on February 6, 2017, to obtain public input on the alternatives under consideration. FHWA approved a Categorical Exclusion (CE) for the Preferred Alternative on July 18, 2017, with the new highway opening to traffic in May 2021.

2.1.3 Current NEPA EIS Project

The project was re-initiated by PennDOT in 2021. The first step was to examine the 2016 PEL study's vision and goals to establish a Purpose and Need Statement for a proposed project. The PEL study area was also reviewed to confirm that no major changes to land use, resource presence, desire of the public and municipal officials, economy, community facilities and services, and population occurred within the study area since 2016 that would influence the project's purpose and need. After consulting with both Somerset County and Garrett County, conducting field views, and reviewing aerial mapping, PennDOT determined that no discernible changes occurred in the project area that would affect the project's vision and goals.

On a regional level, the ADHS's goals remain to generate economic development in previously isolated areas by supplementing the interstate system. Connecting the missing link between I-68 to the south and Meyersdale to the north has been identified as a critical step in realizing ADHS's goals and vision. Though the 1.4-mile roadway project did not fully complete ADHS Corridor N in Maryland, it provides an incremental improvement with the short-term benefit of supporting proposed development initiatives in the Chestnut Ridge Development Corridor (CRDC), which is an area that roughly aligns with the PFA shown in **Figure 2-4**, as well as the long-term benefit of completing another portion of Corridor N.

A. Revisiting Logical termini

The PEL evaluated two potential southern logical termini for this segment of the corridor, with the easternmost terminus having served as the logical terminus for the recently completed 1.4-mile U.S. 219 section in MD. It serves as this study's southern terminus. This southern terminus is consistent with the study's purpose of completing ADHS Corridor N to improve regional system linkage, to provide safe and efficient access for motorists traveling on U.S. 219, and to provide transportation infrastructure to support economic development within the Appalachian Region. **Figure 2-5** highlights the southern logical terminus for the project.

Consideration of a new or different logical termini would create additional new impacts beyond those associated with the new 1.4-mile construction in Maryland because the alignment would need to connect to I-68. This connection to I-68 would require the alignment to impact land not currently in transportation use. FHWA guidance is to space interchanges no closer than 3 miles from one another on rural interstates. **Figure 2-6** depicts Exit 22, U.S. 219 north/Meyersdale exit, labelled as "2". To the east is the Exit 24 interchange, Lower New Germany Road, labelled as "3" in **Figure 2-6**. This exit is only 1.76 miles from the U.S. 219 north/Meyersdale exit. To the west is the Exit 19 interchange, Grantsville/Swanton, located 3.06 miles from the U.S. 219 north/Meyersdale exit and labelled a "1" in **Figure 2-6**. Any new interchange would require abandoning the existing U.S. 219

north/Meyersdale interchange. This would not be fiscally responsible due to the recent investment of over $90 million.

B. Preliminary Alternatives

The 2016 PEL had recommend that E and E-Shift alternatives advance to NEPA. When studies were reinitiated in 2021, FHWA determined that a broader range of alternatives beyond the PEL recommended alternatives (E and E-Shift) would need to be studied in greater detail. While AE and D were dismissed in Step 3 of the PEL Evaluation due to higher environmental impacts, it was determined that the level of detail during NEPA could allow for further minimization of impacts and that both alternatives should be included in the DEIS.

Alternatives AE and D were initially examined, as they were the two alternatives that made it to Step 3 of the PEL Evaluation. Since both alternatives from the PEL ended west of the current I-68 interchange and bisected the Casselman Farm Development, both alternatives needed to be modified to tie into the current southern terminus. Once re-engineered to tie into the new southern logical termini, Alternative AE essentially became the same alternative as Alternative E and E-Shift (**Figure 2-7**). As a result, Alternative AE was eliminated from further consideration to be studied in the EIS. Alternative D, however, due to its more northerly east-to-west crossing of the project area provided multiple opportunities to combine with the southern portion of previously dismissed PEL alternatives to tie into the new southern terminus (**Figure 2-8**).

Two different combinations of a D Alternative were developed (Alternatives DA and DU). The first of these combinations was with the previously studied Agency Alignment (Red Alignment in **Figure 2-1**) which was named Alternative D/Agency (Alternative DA). This alternative uses the original Alternative D alignment, to a point just west of where it crosses existing U.S. 219, and then it follows the Agency Alignment back to the new southern terminus. The second combination was with the previously studied USFWS (Green Alignment in **Figure 2-1**) and USACE2 (Purple Alignment in **Figure 2-1**) alternatives from the PEL, which was referred to as Alignment D/USFWS/USACE (Alternative DU). This alternative again uses the northern portion of Alternative D alignment but veers southeast of U.S. 219, in the same proximity as the original USFWS USACE2 Alignment, tying into the new southern terminus (**Figure 2-1**). Since a shift for Alternative E was evaluated in the vicinity of Old Salisbury Road near the southern terminus, it is appropriate to study the same shift for Alternatives DA and DU.

As mentioned above, the team updated all secondary source data and conducted field views within the project area and determined that no significant changes have occurred in the project area that would invalidate the findings from the 2016 PEL. With the completion of the improvements to U.S. 219 from I-68 to Old Salisbury Road in 2021, the project area was revised from what was used in the PEL Study to what is shown in **Figure 2-5**, which reflects the new logical southern terminus. None of the project area's natural, cultural, and socioeconomic features have substantially changed since 2016 and would not result in different impact quantities from the previously studied alternatives. Therefore, the team decided to carry seven alternatives, including Alternatives DA, DA-Shift, DU, DU-Shift, E, E-Shift, and the No Build Alternative, into the formal NEPA process. The locations of these alternatives are depicted in **Figure 2-9**.

2.2 DEIS Alternatives Description – Preliminary Alternatives

Alternative DA, DA-Shift, DU, DU-Shift, E, E-Shift, and the No Build Alternative were presented to the Pennsylvania resource agencies at a May 25, 2022, Agency Coordination Meeting and to the Maryland resource agencies at a June 15, 2022, Interagency Review Meeting (IRM). This presentation, was also provided to the Community Advisory Committee (CAC) on June 2, 2022, and public officials and general public at a June 23, 2022, open house meeting and a June 27, 2022, virtual meeting.

It was determined that these alternatives, except for the No Build Alternative, meet the project's purpose and need and would be considered in the DEIS.

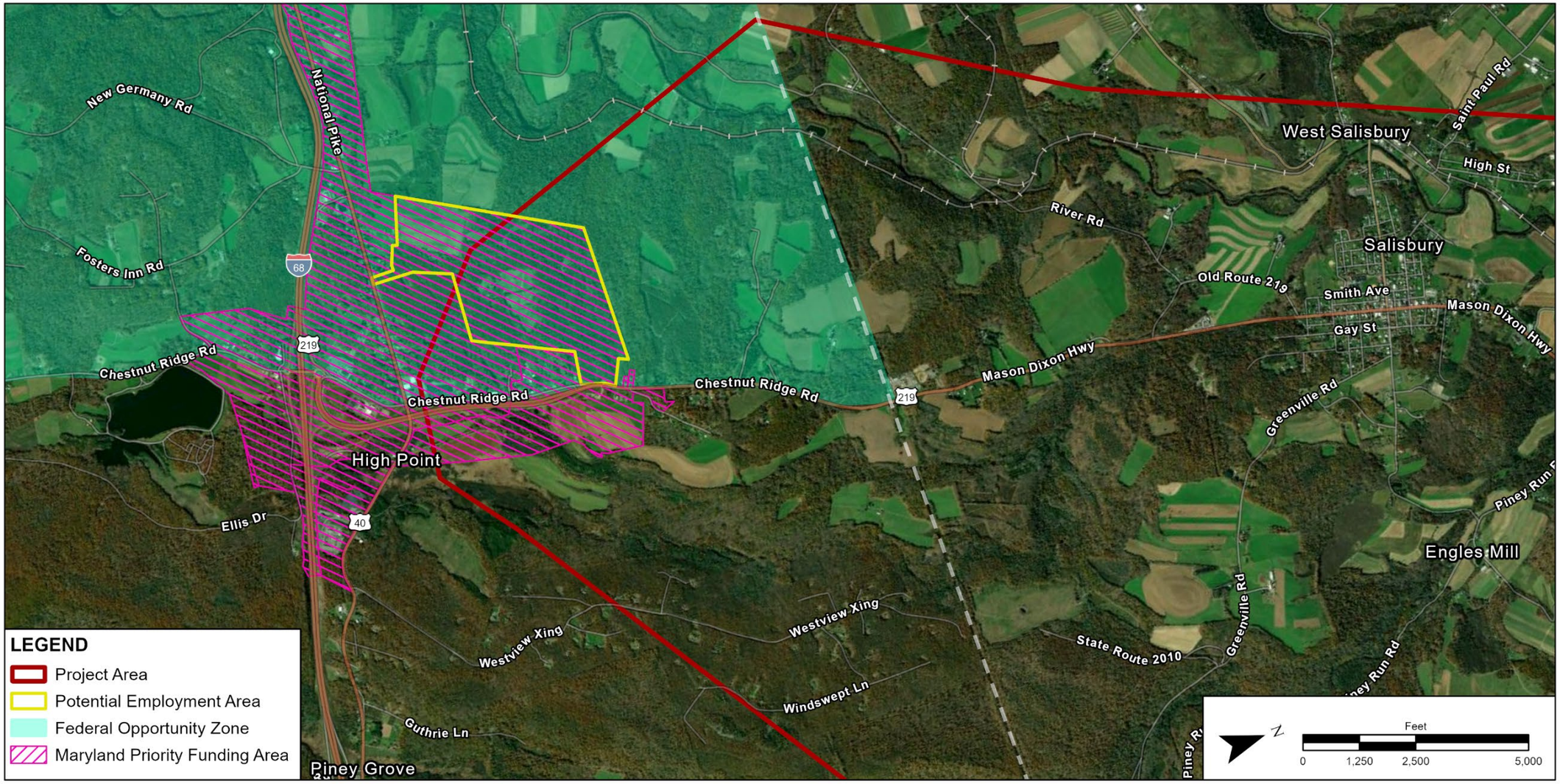


Figure 2-4: Economic Development Areas

Figure 2-5: Southern Logical Termini

Figure 2-6: Interstate 68 (I-68) Interchange Spacing

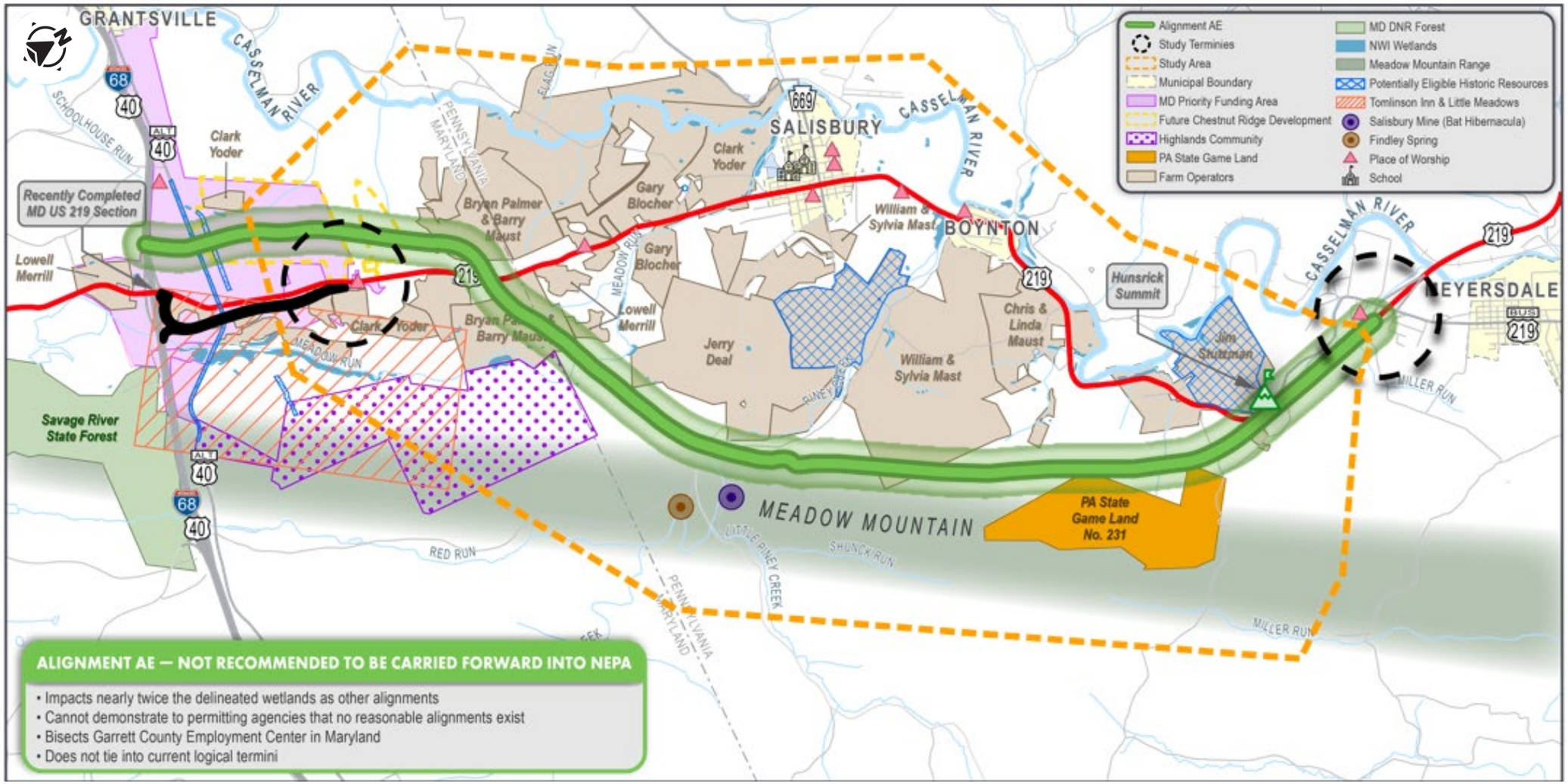


Figure 2-7: Alignment AE from the PEL

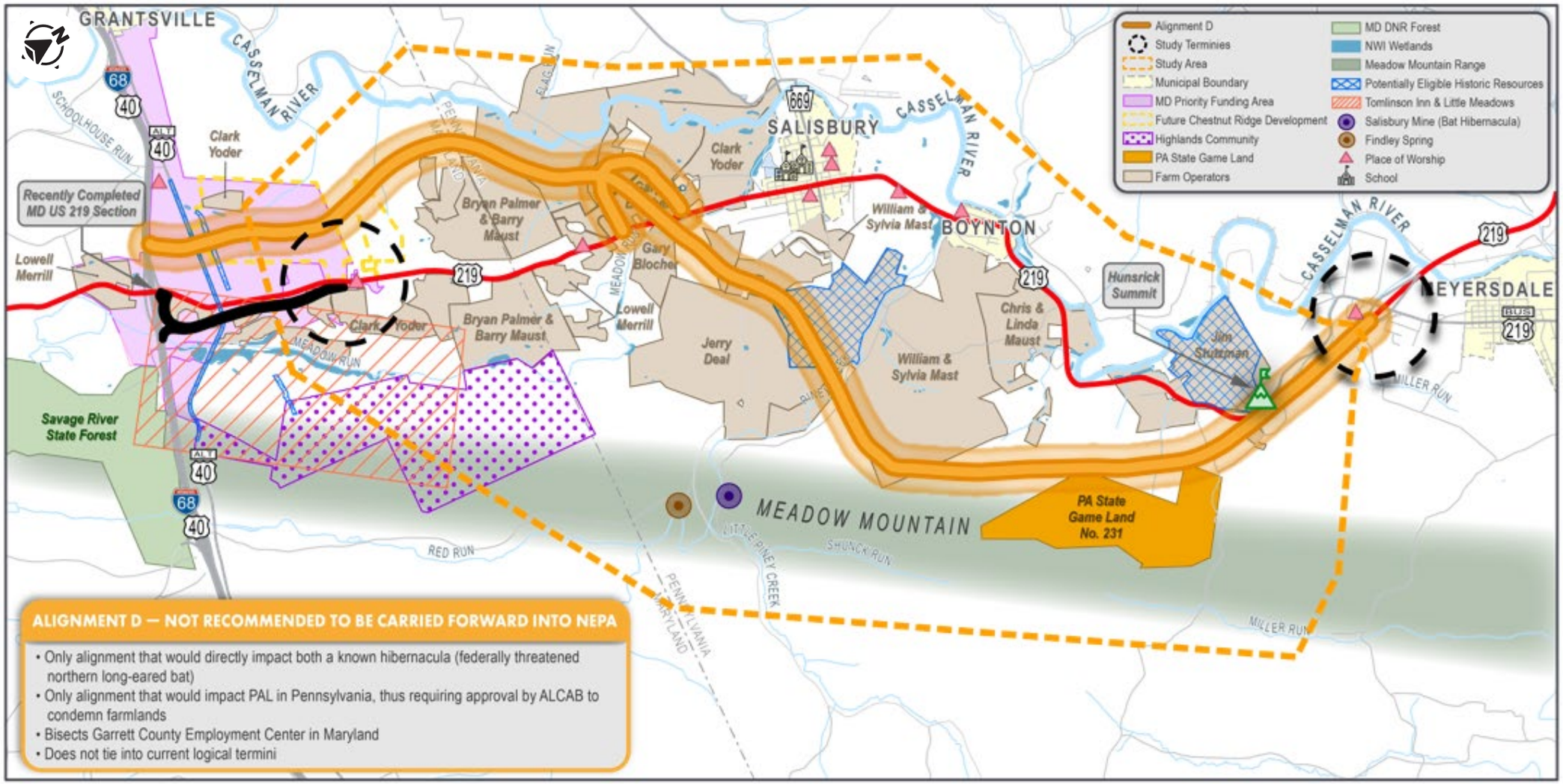


Figure 2-8: Alignment D from the PEL

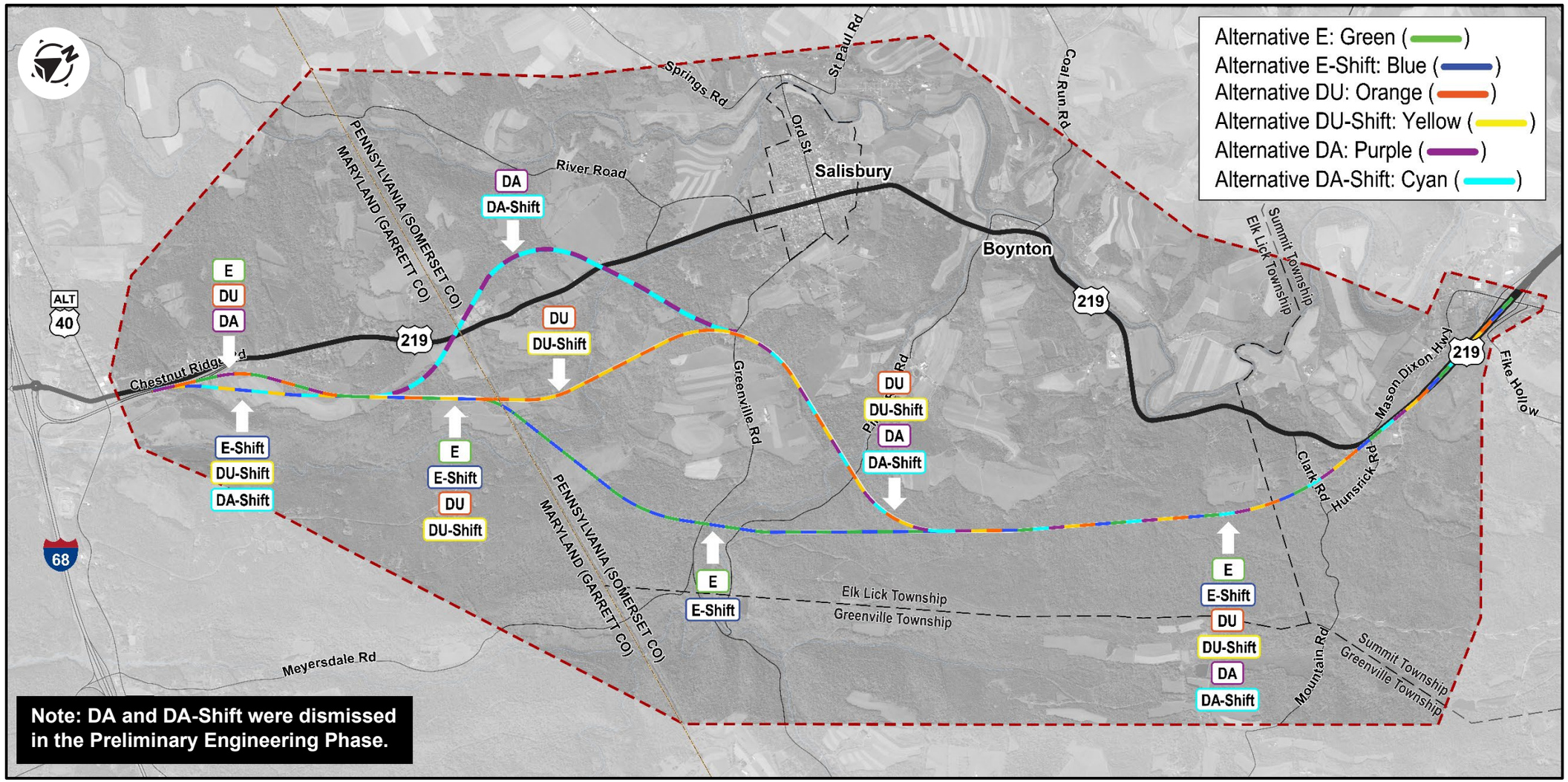


Figure 2-9: Alternatives Carried into the NEPA Process

The No Build Alternative was retained as a basis for comparison. The alternatives are described below in **Chapter 2.3.1 to 2.3.9**. These alternatives are presented on **Figure 2-9** and their associated environmental impacts are presented in **Table 2-1**.

2.2.1 No Build Alternative

The No Build Alternative involves taking no action, except routine maintenance along U.S. 219. The existing two-lane roadway between Meyersdale, Pennsylvania and Garrett County, Maryland would remain. No new alternatives or additional roadway would be constructed.

2.2.2 Overview of Build Alternatives

Each of the proposed build alternatives Alternative DA, DA-Shift, DU, DU-Shift, E, and E-Shift, were evaluated with a consistent roadway layout, also known as a typical section. The typical section for each build alternative provides a four-lane divided limited access highway with 12-foot wide travel lanes, 8-foot wide inside shoulders and 10-foot wide outside shoulders. The width of the median between the inside edges of northbound and southbound travel lanes is between 36 to 60 feet. Most of the median within Pennsylvania would be 60 feet wide and would transition down to 36 feet wide in Maryland to match the current roadway typical section. Typical sections of the build alternatives are depicted in **Figure 2-10**.

In cut sections, where excavation would be required for construction, a proposed swale is located 15 feet outside the edge of the roadway shoulder. The backslope of the swale extends for 5 feet at a 4:1 slope, then continues at a 2:1 slope, until intersecting the existing ground. In fill sections, where fill must be placed for construction, a 10:1 slope extends from the outside roadway shoulder for 6 feet, then continues at a 2:1 slope until intersecting existing ground.

2.2.3 Common Segment Improvements – All Build Alternatives

The northern three miles in Pennsylvania all follow the same alignment, starting from the existing Meyersdale interchange. In addition to the three miles being on the same alignment, other improvements described below are being proposed. These improvements include upgrades to portions of existing U.S. 219 (Mason Dixon Highway), an extension of Hunsrick Road from Mountain Road to Fike Hollow Road on the east side of U.S. 219, cul-de-sac of Mountain Road, and cul-de-sac of Clark Road. These improvements are intended to ensure that local traffic has continued access. These improvements are included with all alternatives being considered, other than the No Build Alternative. The scope of these proposed improvements is outlined below and depicted in **Figure 2-11**. The numbers below correspond to the number on the figure, illustrating the location of the improvement. Stormwater management facilities, which would result in the need for additional right-of-way and environmental impacts have also been incorporated into the design, as shown on **Figure 2-11**.

1. Hunsrick Road Extension

Improvements made to tie a new U.S. 219 alternative into existing U.S. 219 require the removal of the existing Hunsrick Road Bridge (SR 2102). Due to geometric and intersection sight distance constraints at the intersection of Hunsrick Road (T-355) and Mason-Dixon Highway (T-355), it was determined that the Hunsrick Road Bridge would not be replaced and Hunsrick Road would terminate on the east side of U.S. 219.

As a result of the Hunsrick Road Bridge removal, a new roadway would be constructed: the Hunsrick Road Extension. This new roadway would connect existing Hunsrick Road with Fike Hollow Road (T-363) and would parallel new U.S. 219 alternative along the eastern side. This new connector roadway would provide access from Hunsrick Road to U.S. Business Route 219 (SR 2047) near the Meyersdale Interchange. The proposed typical section for the Hunsrick Road Extension includes two 10-foot travel lanes and with 4-foot outside shoulders. The design speed is anticipated to be 25 miles per hour.

2. Clark Road

Clark Road (T-353) extends west from Mountain

Road (T-824) to existing U.S. 219. Due to topographical and geometric constraints, providing a grade separated crossing of a new U.S. 219 alternative proposed under this study was not practical. It was determined Clark Road should be bisected where it crosses a new alternative of U.S. 219 proposed under this study. A cul-de-sac would be placed at each end of the roadway where it intersects the U.S. 219 right-of-way. The eastern side of Clark Road would maintain access to U.S. Business 219 near the Meyersdale interchange via Mountain Road, Hunsrick Road Extension, and Fike Hollow Road.

3. Mountain Road

Mountain Road (T-824) currently extends north from the intersection with Hunsrick Road to a cul-de-sac adjacent to existing U.S. 219. With the associated improvements of the Hunsrick Road Extension, the northern end of Mountain Road would be connected to Hunsrick Road Extension and the existing cul-de-sac would be removed. The existing intersection of Mountain Road with Hunsrick Road would be maintained.

To avoid the steep grade (14%) on existing Mountain Road, a portion of Mountain Road is to be closed to traffic. Access to property along Mountain Road would be maintained and cul-de-sacs would be placed where the road would be closed. As noted above, the northern segment of Mountain Road would be accessible from the Hunsrick Road Extension while the southern segment of Mountain Road would be accessible from the existing intersection with Hunsrick Road.

4. Mason-Dixon Highway

The Mason-Dixon Highway (T-355) would be improved between Hunsrick Road and the U.S. 219 Meyersdale Interchange in accordance with PennDOT's Resurfacing, Restoration, and Rehabilitation (3R) design criteria, using a design speed transition from 55 mph to 35 mph. The upgrades are roughly 1.3-miles in length, starting near Hunsrick Road and ending at the U.S. 219 Meyersdale Interchange.

Prior to the opening of the Meyersdale Bypass, Mason-Dixon Highway carried U.S. 219. After the Meyersdale Bypass opened, PennDOT transferred ownership and maintenance of Mason-Dixon Highway to Summit Township. Following completion of a new U.S. 219 alternative proposed under this study, ownership of Mason-Dixon Highway is to be transferred back to PennDOT as part of re-routed traffic patterns in the area.

5. Existing U.S. 219 Connection to be Removed

Existing U.S. 219 would be severed, and a local connection would be re-established immediately south of the existing Hunsrick Road bridge along the previously abandoned roadway alignment. This new roadway would become Business U.S. 219.

2.2.4 Alternative DA

The alignment for Alternative DA was determined using input from some of the farm owners in the project area and Cooperating and Participating Agencies during the former 2001 NEPA efforts to avoid natural resource impacts by staying closer to U.S. 219 while avoiding the mountain slope/ridge. Alternative DA starts at the southern end of the Meyersdale Bypass, proceeding in a southerly direction to just south of the Mast Farm, where it heads westward toward existing U.S. 219. The alternative crosses between the Deal and Mast Farms, then turns in a southwesterly direction, crossing existing U.S. 219 just south of Salisbury, Pennsylvania. Alternative DA then travels in a southerly direction, crossing existing U.S. 219 again, just south of the Mason-Dixon Line and staying close to existing U.S. 219, and ties into the newly constructed section of U.S. 219 in Maryland.

2.2.5 Alternative DA-Shift

The Alternative DA-Shift alignment resulted from combining Alternative DA with Alternative E-Shift. Alternative E-Shift was suggested by residents during former 2001 NEPA efforts to move the alternative further away from residences along Old Salisbury Road. Alternative DA-Shift follows the same alternative as Alternative DA from Meyersdale until about one mile south of the Mason-Dixon Line, where the alternative is shifted eastward, away from Old Salisbury Road.

2.2.6 Alternative DU

The Alternative DU alignment was developed by combining suggestions from the U.S. Fish and Wildlife Service (USFWS) with an alternative identified during former 2001 NEPA efforts. USFWS suggested an alternative to avoid the mountain slope/ridge in Pennsylvania and reduce potential impacts to terrestrial wildlife. Alternative DU follows Alternative DA until Greenville Road, where instead of continuing southwest towards existing U.S. 219, the alternative travels south towards the Mason-Dixon Line. Alternative DU and Alternative DA coincide again south of the Mason-Dixon Line.

2.2.7 Alternative DU-Shift

Like Alternative DA Shift, Alternative DU-Shift resulted from combining Alternative DU with Alternative E-Shift to move the alternative further away from residences along Old Salisbury Road. Alternative DU-Shift mimics the alternative of Alternative DU from Meyersdale until south of the Mason-Dixon Line, where the alternative is shifted eastward and away from Old Salisbury Road.

2.2.8 Alternative E

The Alternative E alignment was suggested during former 2001 NEPA efforts to avoid farmland in Pennsylvania and avoid residential areas along existing U.S. 219. Alternative E starts at the southern end of the Meyersdale Bypass and proceeds in a southerly direction along the face of Meadow Mountain. At the Pennsylvania/Maryland border, Alternative E would extend in a southwesterly direction, east of the existing U.S. 219.

2.2.9 Alternative E-Shift

The alignment for Alternative E-Shift was suggested by residents along Old Salisbury Road during former 2001 NEPA efforts and involves shifting Alternative E further away from the residences on Old Salisbury Road. Alternative E-Shift follows Alternative E, with the exception of a small shift in Maryland, slightly eastward, away from the homes along Old Salisbury Road. Alternative E does not directly impact the homes along Old Salisbury Road; however, residents requested an evaluation of a slightly eastward shift to move the alternative further from their homes. The trade-off is that Alternative E-Shift bisects a farm field that is only slightly impacted by Alternative E. This shifted section is the same as the shifted section of Alternative DA-Shift and Alternative DU-Shift.

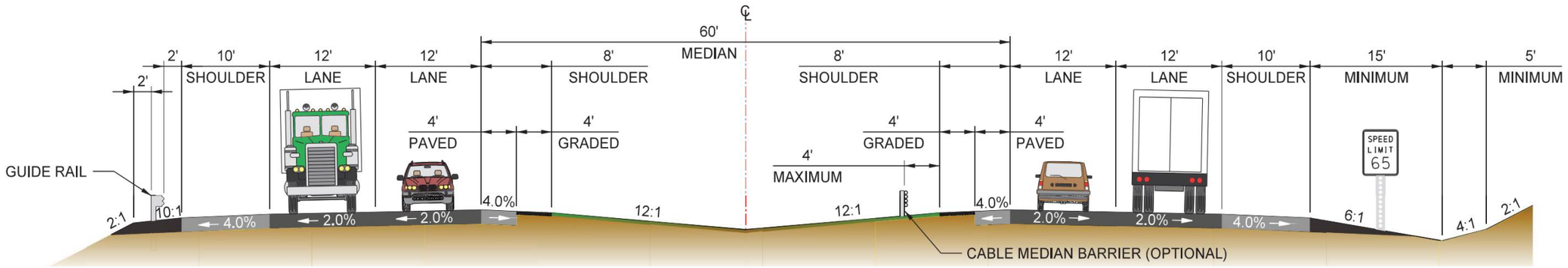
2.3 Alternatives Dismissed from Preliminary Alternatives Phase

The first step in the NEPA alternative evaluation phase was to quantify environmental impacts for each of the alternatives using readily available desktop information such as on-line GIS data. **Table 2-1** presents the results of that evaluation. At the stage of the project when impacts in **Table 2-1** were calculated, the LODs for the alternatives were based only on the roadway layout. LODs at this stage of the project did not include stormwater management basins, the proposed maintenance facility (described in **Chapter 2.5**), Mason Dixon Highway improvements, or the Hunsrick Road Extension. It was determined that the impacts for Alternative DA and DA-Shift were significantly higher for most resources and a decision was made to dismiss those alternatives from further study and not collect detailed field data on those two alternatives. This analysis and decision was presented to the Pennsylvania and Maryland resource agencies at an August 24, 2022 interagency meeting. None of the resource agency representatives expressed concern about dismissing Alternative DA and DA-Shift at that time. Therefore, Alternative DU, DU-Shift, E, and E-Shift advanced into the detailed study phase.

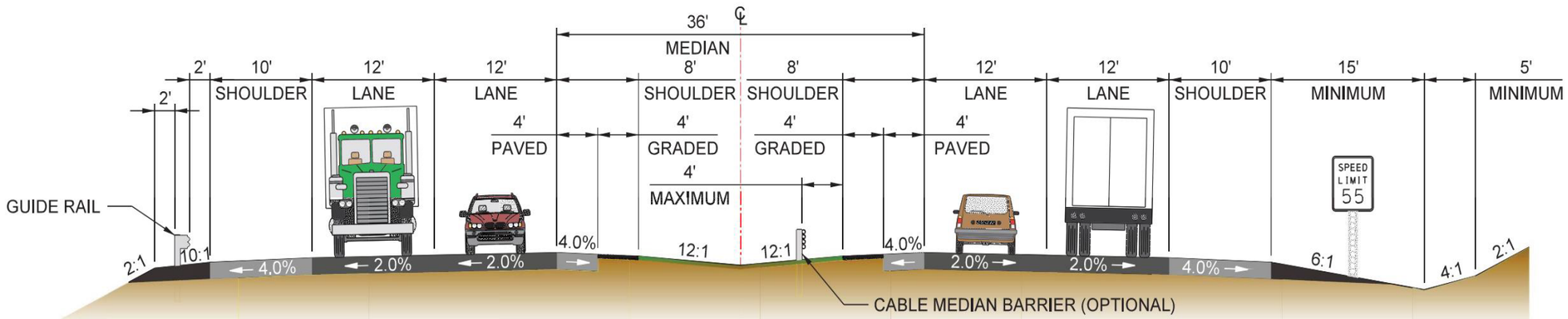
Additionally, information related to dismissing Alternative DA and DA-Shift was presented to the public during meetings held in November 2023. There was no concern or opposition expressed at those meetings regarding dismissing Alternatives DA and DA-Shift from further consideration and not carrying them into the detailed alternatives phase.

Table 2-1: Impacts Analysis Using Secondary Source Data

Socioeconomic *includes only buildings within alignment **includes buildings outside of alignment	DA	DA-Shift	DU	DU-Shift	E	E-Shift
Residential Displacements (#)*	12	12	9	9	6	6
Parcels containing impacted buildings**	33	28	31	26	27	22
Outbuilding Displacements (#)	18	17	15	14	13	12
Commercial Displacements (#)	2	2	2	2	2	2
Other Displacements (e.g. billboards) (#)	3	3	1	1	2	2
Parcels Impacted	96	88	85	77	73	65
Columbia Gas Line (feet)	482	482	480	480	947	947
Salisbury Water Line (feet)	1301	1301	1301	1301	1378	1378
Historic Resources	**DA**	**DA-Shift**	**DU**	**DU-Shift**	**E**	**E-Shift**
Mason Dixon Marker (#)	0	0	0	0	1	1
Tomlinson Inn/Little Meadows (acres)	9.7	14.1	10.9	15.3	10.7	15.1
Lowry Farm (acres)	16.9	16.9	16.8	16.8	0.0	0.0
Miller Farm (acres)	1.2	1.2	1.2	1.2	1.2	1.2
Engineering	**DA**	**DA-Shift**	**DU**	**DU-Shift**	**E**	**E-Shift**
Length of Alignment (miles)	8.6	8.6	8.2	8.2	7.8	7.8
Segment Acres	547.8	549.3	515.6	517.1	462.9	464.3
Natural Resources	**DA**	**DA-Shift**	**DU**	**DU-Shift**	**E**	**E-Shift**
National Land Cover Database Forestland	411	409	406	404	359	357
Number of Potential Bat Hibernacula Impacted	3	3	3	3	0	0
PA Productive Agriculture (acres) - 2016 data	33.1	33.1	26.9	26.9	16.6	16.6
MD Productive Agriculture (acres) - 2016 data	46.6	39.8	49.1	42.4	47.7	41.0
National Wetlands Inventory - Wetlands (acres)	2.8	2.8	3.6	3.6	1.7	1.7
National Hydrography Dataset - Streams (linear feet)	5120	5120	3151	3151	3120	3120
State Gamelands (acres)	1.1	1.1	1.1	1.1	1.1	1.1



U.S. 219 TYPICAL SECTION WITH **60' MEDIAN**



U.S. 219 TYPICAL SECTION WITH **36' MEDIAN**

Figure 2-10: Proposed Typical Sections

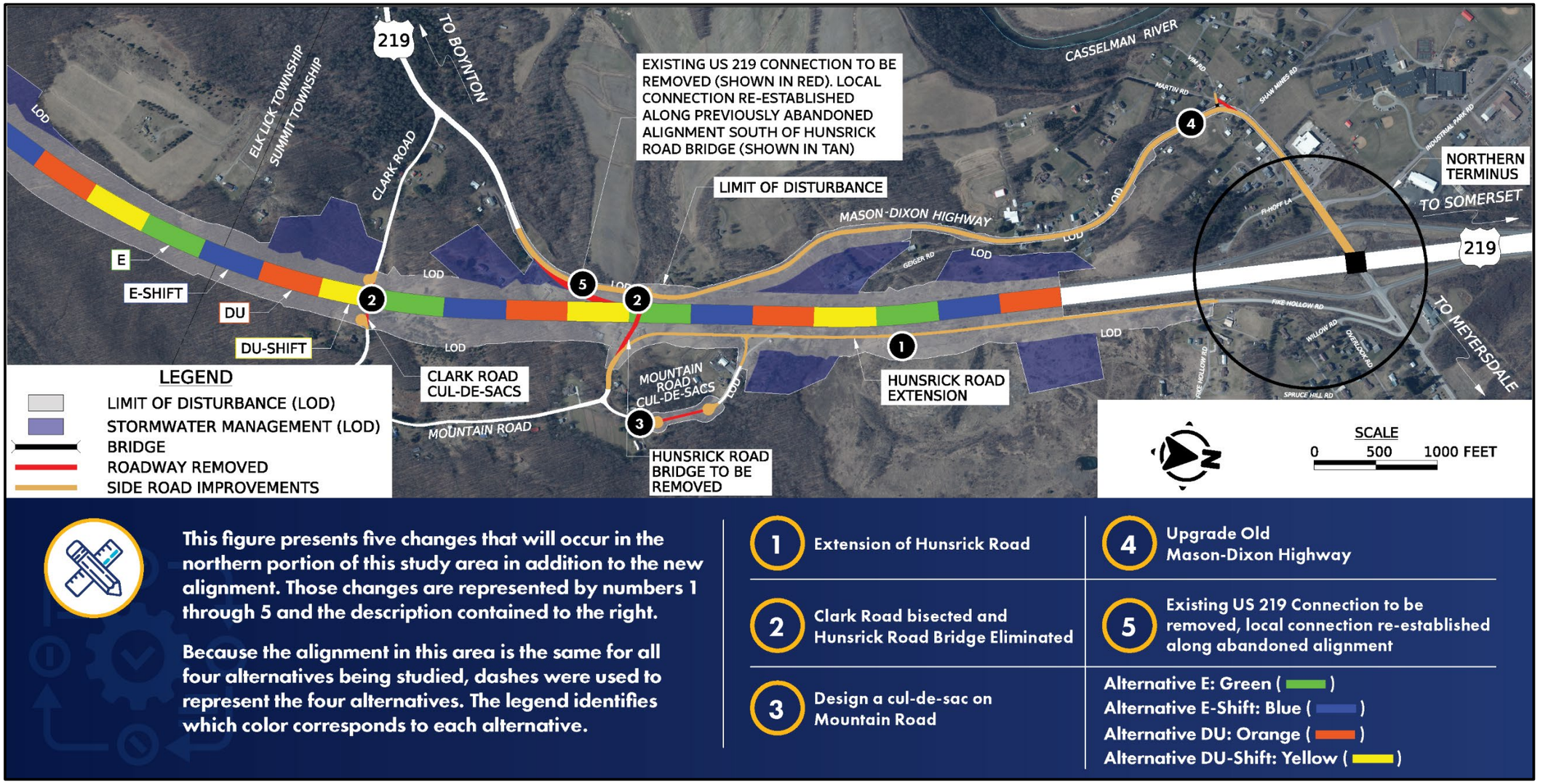


Figure 2-11: Additional Improvements in Northern Portion of Project Area

2.4 Traffic & Transportation

2.4.1 Projected Traffic Volumes

The projected traffic volumes for the No Build opening year (2030) and Design Year (2050) were adjusted to account for the currently proposed alternatives. Since each alternative utilizes varying alignments with the same connections from a traffic standpoint, a single build set of traffic volumes was generated and is available in project technical files.

All alternatives remove a bridge on Hunsrick Road over existing U.S. 219 and sever Clark Road, requiring a new connection to Fike Hollow Road or along the proposed Business U.S. 219. An Origin-Destination study was conducted utilizing StreetLight Data's Origin and Destination (O-D) metrics to identify vehicle trips. The data metrics tracked trips originating at the southern terminus of U.S. 219 and ending north of the U.S. 219 Meyersdale interchange as well as to the east in the town of Meyersdale and conversely for north to south traveling vehicles. These vehicles were redistributed with the assumption they would use the new U.S. 219 bypass with remaining vehicles using Business U.S. 219 for local trips. **Figure 2-12** depicts the build ADT for the design year (2050).

An existing roadway connection between Chestnut Ridge Road Road/Business U.S. 219 and the 1.4-mile section of U.S. 219 built previously in Maryland would not be advanced as part of the currently proposed alternatives. Previously, a proposed interchange and adjacent development were considered as part of the proposed alternatives in a similar location to this existing roadway connection. Removing this tie would require further analysis to determine how local traffic destined for area businesses would re-route through the adjacent intersections to the south through Alternate U.S. 40 and the roundabout with the I-68 westbound ramps. Although analysis is ongoing, the impact to LOS to both mainline segments of U.S. 219 and the adjacent intersections is anticipated to be negligible.

2.4.2 Level of Service Analysis

The *TRB's Highway Capacity Manual, 7th edition* A *Guide for Multimodal Analysis* (2022) is used as the basis for determining the anticipated LOS for highway segments. LOS is an indication of how well a particular segment can accommodate the projected traffic volumes in a given peak hour. For the project's rural setting and classification of roadway, a LOS during peak hours of A through C is generally acceptable, with D through F being unacceptable. See **Figure 1-6** for a description of each LOS A-F. For the new section of U.S. 219 and the section of Business U.S. 219 south of Salisbury, PA, the PM peak hour had higher traffic volumes than the AM. For the sections of Business U.S. 219 north of Salisbury, PA, the AM peak hour had higher traffic volumes than the PM. The LOS for 2030 and 2050 build conditions use the worst-case analysis period. If additional traffic generators are introduced into the area in the future, impacts to local roadway traffic operations are typically evaluated and mitigated through the municipal site plan approval process. The proposed roadway would be capable of accommodating the additional traffic volumes generated by any foreseeable developments due to the relatively low ADT anticipated.

Figure 2-12 depicts the build LOS for the design year (2050) and **Table 2-2** depicts the build LOS for the opening year (2030) and design year (2050). In all build scenarios, all highway sections operate acceptably at LOS C or better.

Table 2-2: LOS for Opening & Design Year No Build and Build Conditions

Analysis Year	Existing U.S. 219 South of Salisbury	Existing U.S. 219 North of Salisbury	Mason Dixon Highway	Proposed U.S. Route 219
2030 No Build	D	C	A	N/A
2030 Build	C	B	B	A
2050 No Build	D	D	A	N/A
2050 Build	C	C	C	A

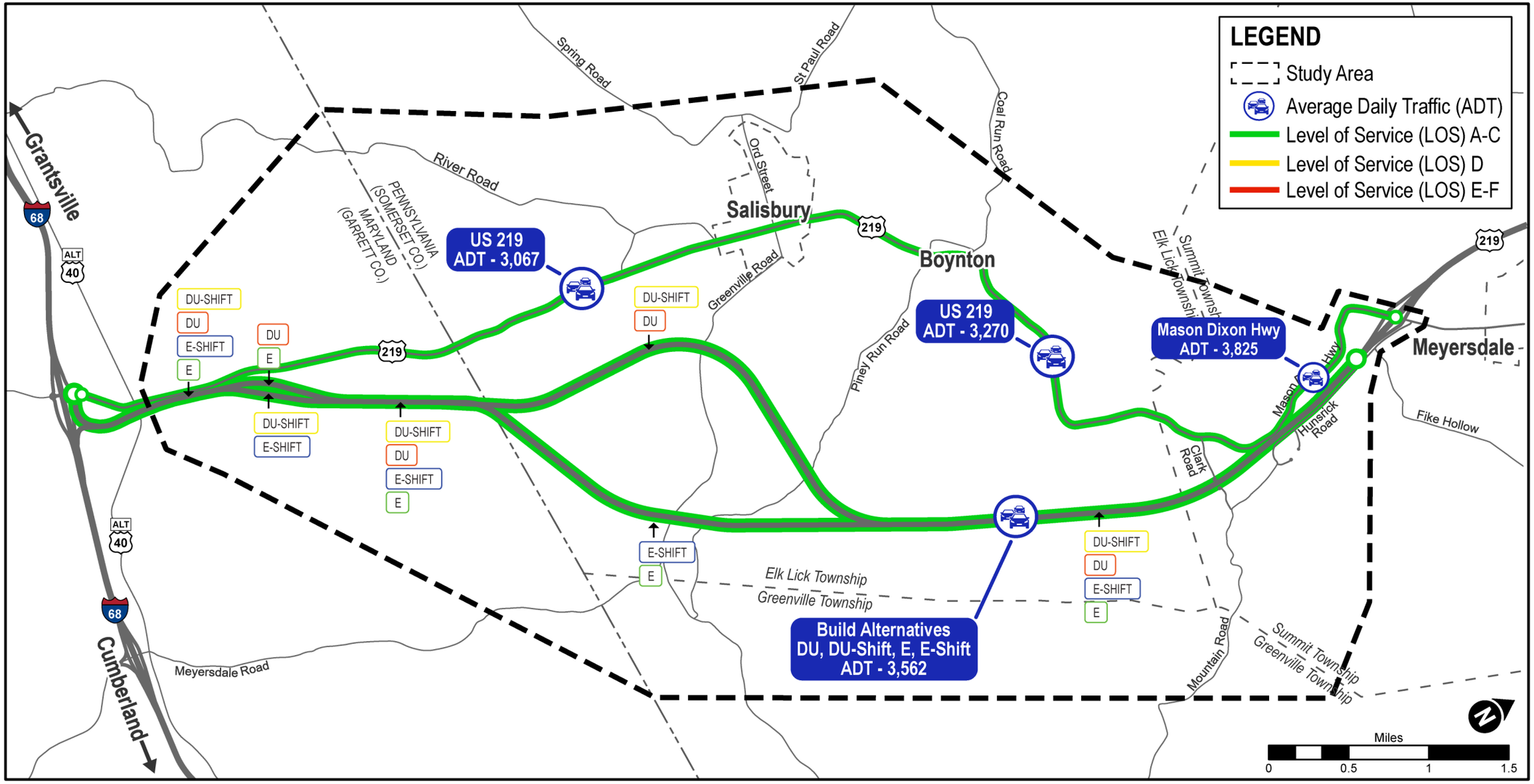


Figure 2-12: 2050 Build Condition Projected ADT & LOS

2.5 Detailed Alternatives Phase

Prior to beginning collection and mapping for the detailed alternatives, PennDOT requested that a maintenance facility be incorporated into the design.

The engineers met with PennDOT maintenance staff to discuss needs for a facility and based on those meetings, facilities were developed for each of the four alternatives.

For Alternatives E Modified and E-Shift Modified a 5.7-acre maintenance facility site is located on the eastern side of the alignment (along northbound lanes), just north of the Maryland/Pennsylvania state border, with a 9.3-acre limit of disturbance.

For Alternatives DU Modified and DU-Shift Modified, the 5.7-acre maintenance facility site is located on the western side of the alignment (along southbound lanes), just north of the Maryland/Pennsylvania state border, with a 10.5-acre limit of disturbance. The impact associated with the maintenance facility site is part of the project impact numbers since these sites have been incorporated into the overall limit of disturbance for each alternative.

After collecting and mapping all of the field data and based on results of the technical studies, PennDOT and SHA continued to evaluate modifications to the alternatives to avoid and/or minimize potential impacts to environmental and cultural resources, including wetlands, watercourses, farmlands, historic properties, Section 4(f)/Section 2002 resources (PA state equivalent of a Section 4(f) resource), and Pennsylvania State Game Lands. While it is the intent of the project to result in the least amount of impact on the social and natural environment as possible, several resources are afforded more protection under certain laws than others. The goal of these laws is to try and avoid the resource altogether. If avoidance is not possible, then the impact to the resource should be minimized to the extent possible. If the resource is impacted, then the impact must also be mitigated. On January 24, 2024, refinements to Alternative DU, DU-Shift, E, and E-Shift were proposed to the Pennsylvania and Maryland resource agencies at an interagency meeting, and these refinements were termed Alternative DU Modified, DU-Shift Modified, E Modified, and E-Shift Modified. **Figure 2-13** illustrates the resources to be avoided.

The Miller Farm identified as Number 1 on **Figure 2-13** is considered a historic resource protected under Section 4(f)/Section 2002. This resource is located on the west side of U.S. 219, approximately 0.5 miles from the northern limit of the project. The boundary of the Miller Farm abuts the Mason Dixon Highway and an abandoned portion of the previous U.S. 219 right-of-way line. The exact location of the right-of-way in this area is being established to better understand what impacts, if any, may result in this location. The abandoned portion of U.S. 219 in this area needs to be re-established (and be designated Business U.S. 219) since the new alternatives would eliminate the connection between the Meyersdale Bypass and existing U.S. 219. The Business U.S. 219 alignment would be reestablished in its original location before construction of new U.S. 219. Approximately 0.4 miles of roadway would need to be constructed that would connect the Mason Dixon Highway to existing U.S. 219. The proposed roadway must be reestablished in its original location, as moving the alignment to the west would have a greater impact to the Miller Farm and moving the alignment to the east would be in conflict with all of the proposed alternatives.

The Pennsylvania State Game Lands 231 (SGL 231) indicated as Number 2 on **Figure 2-13** is considered a Section 4(f)/Section 2002 resource and is located along the east side of all of the alternatives on the ridge of Meadow Mountain. SGL 231 starts to parallel the alternatives at about 1.25 miles south of the northern limit of the project area and extends for about 1.44 miles. At approximately 1.96 miles from the northern limit, all of the alternatives would slightly impact SGL 231 (1.0 acre of impact). In an effort to avoid this resource, a 300-foot long retaining wall, approximately 3.5 feet in height, was proposed along the east side of U.S. 219 at the location where the 1.0-acre impact would have occurred. This retaining wall would allow cut

slope impacts to SGL 231 to be completely avoided. Additionally, in this area, the LOD was reduced from 100 feet beyond the top of the cut to approximately 45 feet beyond the top of the cut. This modification was applied to all alternatives.

The Deal Farm, identified as Number 3 on **Figure 2-13,** is considered a historic resource protected under Section 4(f)/Section 2002. The resource is located between Piney Run Road and Greenville Road. While the historic name of this farm is called the Deal Farm, it is also an active farm operated by the Deal and Miller families. The farm has been in the same families for over one hundred years and includes approximately 524 acres of land (355 are owned by Myron Deal and Jennifer Miller and 169 acres are leased). The owners estimate that of the 524 acres of land, 262 are in agricultural production. The farm produces corn, soybeans, hay, small grains, beef cattle, and hogs. The boundary of the farm property is larger and different than the historic Deal Farm property; however, a reduction in the limit of disturbance with Alternatives E and E-Shift, on the west side of proposed Piney Creek Bridge resulted in avoidance of the historic portion of the Deal Farm. There was never an impact with Alternatives E and E-Shift to the Deal/Miller farming operation. An avoidance of the Deal Farm with Alternatives DU and DU-Shift was not achievable since the Deal Farm abuts another historic property, the Lowry Farm. The current DU and DU-Shift alternatives impact the corners of both portions of the historic Lowry and Deal Farms. If alternatives DU and DU-Shift were moved north, the alternatives would bisect the historic Lowry Farm property. The Lowry Farm is identified as Number 4 on **Figure 2-13**.

Another modification of the alternatives was made to avoid Mason Dixon Marker No. 191, located just south of the Pennsylvania/Maryland border. Mason Dixon Marker No. 191 is indicated as Number 5 on **Figure 2-13** and is considered a historic resource protected under Section 4(f). The modified alternatives generally shifted 10 to 60 feet westward, away from the Mason Dixon Marker, the median width was reduced in this area from 60 feet to 44 feet and the limit of disturbance was reduced from 100 feet to 50 feet in this area. These modifications resulted in a total avoidance of Mason Dixon Marker No. 191.

The last modification focused on the historic Tomlinson Inn and Little Meadows, located in Maryland, labeled as Number 6 on **Figure 2-13**. The Tomlinson Inn and Little Meadows is considered a historic resource protected under Section 4(f). The Tomlinson Inn and Little Meadows historic district is bounded to the north and to the west by Chestnut Ridge, to the south by the National Pike, to the east by Meadow Mountain and is over 500 acres. For all of the modified alternatives, the existing U.S. 219 tie-in location in Maryland was adjusted north by approximately 650 feet to avoid impacts to this resource. Additionally, the horizontal alignment was also shifted 60 feet to the west, the median width was reduced from 60 feet to between 36 and 44 feet and the limit of disturbance was reduced to approximately 50 feet beyond the cut and fill lines. These modifications resulted in a total avoidance of the Tomlinson Inn and Little Meadows historic site.

The reduction in the median width and limit of disturbance in the areas discussed above also resulted in a reduction of all social and natural resource impacts. **Table 2-3** contains the impact numbers before and after the modifications were made. At the stage of the project when impacts in **Table 2-3** were calculated, the LODs for the alternatives were expanded to include stormwater management basins, the proposed maintenance facility (described in **Chapter 2.6**), Mason Dixon Highway improvements, and the Hunsrick Road Extension. The alternatives would continue to be refined as the design progresses and these impacts are thought to be worst-case impacts at this time.

The Pennsylvania and Maryland resource agencies supported the design refinements, and PennDOT and SHA elected to move forward with the modified alternatives and to dismiss the unmodified alternatives, Alternatives DU, DU-Shift, E, and E-Shift, from further consideration.

2.6 Alternatives Advanced for Further Evaluation

The following alternatives are being advanced in the NEPA process and would be examined in further detail in this DEIS: Alternative DU Modified, Alternative DU-Shift Modified, Alternative E Modified and Alternative E-Shift Modified. A comparison of socioeconomic, environmental, and cultural resource impacts, as well as mitigation for unavoidable impacts, is presented in **Chapter 3**.

1 Miller Farm | 2 Pennsylvania State Game Land 231 (SGL) | 3 Deal Farm | 4 Lowry Farm | 5 Mason Dixon Marker No. 191 | 6 Tomlinson Inn & Little Meadows

Figure 2-13: Detailed Study Alternatives and Refinement Locations

Table 2-3: Alternative Impacts Comparison Overview

Socioeconomic	DU	Modified	DU-Shift	Modified	E	Modified	E-Shift	Modified
Parcels intersected by the Limit of Disturbance (#)	135	117	129	114	125	106	119	103
Residential Displacements (#)	12	9	12	9	9	8	9	8
Outbuilding Displacements (#)	28	26	27	25	26	23	25	23
Commercial Displacements (#)	2	2	2	2	2	2	2	2
Other Displacements (e.g. billboards) (#)	2	2	3	2	3	3	4	3
State Game Land (acres)	1	0	1	0	1	0	1	0

Aboveground Historic Resources	DU	Modified	DU-Shift	Modified	E	Modified	E-Shift	Modified
Mason Dixon Marker (#)	0	0	0	0	1	0	1	0
Tomlinson Inn/Little Meadows (acres)	10.1	0	30.3	0	9.9	0	30.1	0
Lowry Farm (acres)	23.7	23.4	23.7	23.4	0	0	0	0
Miller Farm (acres)	0.7	0.6	0.7	0.6	0.7	0.6	0.7	0.6
Deal Farm (acres)	16.4	16.2	16.4	16.2	1.7	0	1.7	0
S.J. Miller School (acres)	0	0	0	0	0	0	0	0

Archaeology	DU	Modified	DU-Shift	Modified	E	Modified	E-Shift	Modified
Prehistoric Probability - High (acres)	133.6	50.0	133.6	50.0	132.2	48.6	132.2	48.6
Prehistoric Probability - Moderate (acres)	76.8	47.6	76.8	47.6	63.7	30.7	63.2	33.0
Prehistoric Probability - Low (acres)	361.3	266.3	376.4	266.2	302.8	192.1	317.1	192.1
Historic Probability - High (acres)	42.8	16.6	42.8	16.6	27.4	13.9	27.4	13.9
Historic Probability - Moderate (PA only) (acres)	22.0	13.2	22.0	13.2	16.7	11.7	16.7	11.7
Historic Probability - Low (PA only) (acres)	282.8	227.1	282.8	227.1	198.3	146.8	198.3	146.8

Mining & Potential Hazardous Waste	DU	Modified	DU-Shift	Modified	E	Modified	E-Shift	Modified
Surface Mining Boundaries (acres)	341.5	319.7	343.0	319.6	239.9	212.7	241.4	212.7
Deep Mine Boundaries (acres)	25.0	22.9	25.0	22.9	25.0	23.0	25.0	23.0
Area Of Concern Sites (#)	3	3	3	3	3	3	3	3

Table 2-3: Alternative Impacts Comparison Overview (Continued)

Engineering	DU	Modified	DU-Shift	Modified	E	Modified	E-Shift	Modified
Natural Gas Pipeline (linear feet)	487.1	397.7	487.1	397.7	951.6	873.8	951.6	873.8
Length of Alignment (miles)	8.7	8.3	8.7	8.3	8.4	7.9	8.3	7.9
Limit of Disturbance Acreage	725.8	628.7	739.2	626.2	675.8	560.9	689.3	558.7

Natural Resources	DU	Modified	DU-Shift	Modified	E	Modified	E-Shift	Modified
Forestland	**459.6**	**431.4**	**459.6**	**430.0**	**438.2**	**389.8**	**437.6**	**388.8**
Deciduous Forestland (acres)	200.7	185.6	200.7	184.2	272.6	245.8	270.9	244.8
Evergreen Forestland (acres)	1.9	0	1.9	0	8.4	3.8	9.2	3.8
Mixed Forestland (acres)	257.0	245.8	257.0	245.8	157.2	140.2	157.5	140.2
Forest Interior Dwelling Species Habitat (MD Only)	-	6.7	-	6.7	-	6.5	-	6.5
Farmland								
Productive Cropland/Pasture (acres)	71.4	53.5	91.5	53.7	53.8	37.8	73.8	38.0
Maple Sugar Production Forest (acres)	23.7	23.1	23.7	23.1	0.1	0.1	0.1	0.1
Productive Farms (#)	11	9	11	9	8	6	8	6
Prime Farmland Soils (acres)	39.0	32.9	39.0	32.9	26.3	19.9	26.3	19.9
Soils of Statewide Importance (acres)	141.6	102.9	149.0	102.9	120.8	82.0	127.6	81.9
Preferential Tax Assessment (acres)	146.7	74.92	170.3	75.18	106.2	36.14	129.7	36.36
Other								
FEMA 100-Year Flood Zone (acres)	12.3	12.3	12.3	12.3	7.1	4.7	7.1	4.7
Potential Bat Hibernacula (#)	3	3	3	3	0	0	0	0

Table 2-3: Alternative Impacts Comparison Overview (Continued)

Natural Resources	DU	Modified	DU-Shift	Modified	E	Modified	E-Shift	Modified
Wetland (acres)	**14.35**	**11.30**	**14.45**	**11.17**	**12.80**	**10.07**	**12.68**	**9.94**
Palustrine Emergent PEM	4.29	2.80	4.39	2.66	3.27	2.05	3.16	1.91
Palustrine Emergent/Palustrine Forested PEM/PFO	0.52	0.54	0.52	0.54	0.49	0.54	0.49	0.54
Palustrine Forested PFO	4.99	4.69	4.99	TBD	4.61	4.34	4.61	TBD
Palustrine Forested/Palustrine Scrub Shrub PFO/PSS	2.57	1.96	2.57	1.96	2.57	1.96	2.57	1.96
Palustrine Scrub Shrub PSS	1.65	1.31	1.65	1.31	1.51	1.17	1.51	1.17
Palustrine Scrub Shrub/Palustrine Emergent PSS/PEM	0.34	0	0.34	0	0.34	0	0.34	0
Palustrine Open Water POW	0	0	0	0	0.01	0.01	0.01	0.01
Streams	**29,173**	**24,796**	**29,549**	**24,811**	**29,295**	**23,192**	**29,675**	**23,192**
Perennial Streams (linear feet)	17,556	16,658	17,882	16,658	19,936	17,200	20,262	17,200
Intermittent Stream (linear feet)	8,721	8,138	8,771	8,153	6,710	5,992	6,764	5,992