

Conservation Law Foundation • Vermont Sierra Club
Vermont Natural Resources Council • Vermont Public Interest Research Group
Smart Growth Vermont • Vermont Smart Growth Collaborative
Vermont League of Conservation Voters

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By Email and US Mail

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Re: Comments on Final Environmental Impact Statement (FEIS) for the Circ-Williston
Transportation Project

Dear Mr. Sikora and Mr. Robie:

Conservation Law Foundation (CLF), Friends of the Earth (FOE), Vermont Sierra Club (Sierra), Vermont Natural Resources Council (VNRC), Vermont Public Interest Research Group (VPIRG), Smart Growth Vermont (SGV), the Vermont Smart Growth Collaborative (VSGC) and the Vermont League of Conservation Voters (VLCV) offer the following comments on the Final Environmental Impact Statement (FEIS) for the Circ-Williston Transportation Project.

I. Meaningful Public Input Thwarted.

On August 4, 2010, Conservation Law Foundation requested a 60-day extension of the public comment period for the Circ-Williston Final Environmental Impact Statement (FEIS)(attached). On August 17, 2010 this request was summarily denied. (Attached response from Ken Robie 8/17/10).

The FEIS has been in development since November 2007 when comments on the DEIS were submitted. The agencies have taken nearly three years to prepare the FEIS. They only have provided a meager 45 days for the public to comment.

The failure to allow more time for public comment precludes the agencies from taking a hard look at the environmental impacts. Public input has been effectively denied. Our organizations and the members we represent have been unable, in the limited time provided, to undertake a meaningful review of the complete FEIS. Simply reading the complete FEIS – which without the appendices is more than 800 pages long, and with the appendices and comments is over 7 inches thick – would take more than the 45 days provided for comment.

The failure to provide more time is particularly egregious since the FEIS comment period is wholly during the summer when many people are away and unable to work on submitting comments.

The failure to provide more time is politically motivated and contrary to the purposes of NEPA. The purpose of accepting comments is to facilitate responsible review of environmental impacts and allow the agencies to take a hard look at those impacts. That purpose has been defeated here. It is completely transparent that the denial of more time to submit comments is entirely politically motivated to allow the final decision to be issued during Vermont's upcoming gubernatorial election. The "fast-tracking" of the prior environmental review for similar political reasons resulted in a faulty environmental review that was later rejected by the federal court.

The agencies are failing to take their NEPA responsibilities seriously. Given the length of the FEIS and the time the agencies have taken to prepare this, they should allow more than 45 days for comment. The failure to allow more time precludes public input and precludes the agencies from taking the hard look at environmental impacts that NEPA requires.

The failure to allow additional time for comment is particularly egregious in this instance. The DEIS provided numerous alternatives to review. No comment period was provided after the preferred alternative was selected. The agencies have denied totally public comment on the preferred alternative.

If additional time were allowed, we would have presented additional, useful information on the FEIS that would assist the agencies in taking the requisite hard look at the environmental impacts.

The agencies also failed to provide supporting documentation originally requested for review of the DEIS results. These include GIS mapping files and model files essential to the evaluation of crucial 4(f) and traffic issues and impacts.

In addition to an inadequate comment period, the agencies failed to identify anywhere where the public could view the FEIS. Interested persons without a computer, without a high speed

internet connection, or without computer skills are precluded from viewing the FEIS. This is an egregious denial of an opportunity to provide public input.

II. Incorporation of Comments on DEIS

The extensive comments on the DEIS submitted on November 20, 2007¹ (attached) by Conservation Law Foundation (CLF), Friends of the Earth (FOE), Vermont Sierra Club (Sierra), Vermont Natural Resources Council (VNRC), Vermont Public Interest Research Group (VPIRG), Smart Growth Vermont (SGV), and the Vermont Smart Growth Collaborative (VSGC) are specifically incorporated into these comments.

Many of these comments remain unaddressed and are as applicable to the FEIS as they are to the DEIS. It was impossible within the unreasonably limited comment period to identify the specific responses to each of the comments. The responses were littered across Appendix Q and then cross referenced other appendices and overall failed to address the substance of the comments but instead created an unreasonable and dense maze calculated to obfuscate rather than honestly address any comments.

In light of the foregoing, all the comments submitted by CLF et al on November 20, 2007 are expressly resubmitted as comments on the FEIS.

III. GHG Emissions

Climate change impacts and increased greenhouse gas emissions from increases in VMT continue to be ignored in the FEIS.

The FEIS inappropriately writes off climate change impacts in contravention of NEPA's procedural mandates and to the detriment of Vermont's GHG emissions reduction goals.² The Circ-Williston FEIS reports that "[t]he sources of greenhouse gas emissions are from all over the world, and climate change does not easily lend itself to an analysis at a local level."³ The FEIS continues, "Further, nothing in National Environmental Policy Act (NEPA) law explicitly requires an analysis of climate change impacts, and no national or Vermont standards have been established requiring such an analysis."⁴ This mirrors language in a Draft Supplemental Environmental Impact Statement (DSEIS) related to an Interstate 93 highway improvement

¹ <http://www.circeis.org/documents/2007-comments-received/Organizations%20and%20Businesses.pdf> at pp. 3-92.

² See FEIS at 15-8 (noting that Vermont has established GHG emissions reduction goals including attaining a 25% reduction in GHG emissions as compared to 1990 levels by January 1, 2012).

³ FEIS at 15-12.

⁴ *Id.*

proposal upon which EPA Region I previously submitted comments criticizing FHWA's approach to climate change.⁵ Regarding that road-building project, EPA commented:

The DSEIS goes on to characterize climate change as a global issue and "climate change does not easily lend itself to analysis at a local level." We believe the decision by FHWA and NHDOT [the New Hampshire Department of Transportation] not to do a GHG [greenhouse gas] analysis for this project in the reevaluation is problematic... EPA has routinely commented on the need to... discuss potential mitigation strategies related to those emissions... [T]he statement "nothing in the National Environmental Policy Act (NEPA) law explicitly requires an analysis of greenhouse gases at the project level..." misses the mark.⁶

EPA's comments ring true for the Circ-Williston FEIS as well.

In addition, the FEIS is devoid of any real-world corroboration of the bold conclusion that the preferred alternative will in fact reduce GHG emissions while at the same time increasing vehicle miles traveled (VMT). The FEIS relies entirely on an assumption-ridden desktop-modeling analysis to reach the conclusion that GHGs will be reduced via the construction of the highway under the preferred alternative. Construction of new highways leads to more vehicles on the road, more VMT.⁷ Even without real-world corroboration, the FEIS includes a finding that project alternatives to improve VT 2A will reduce carbon dioxide equivalent emissions by 720 metric tons annually beyond the emissions level of the preferred alternative.⁸ The present conclusions regarding the preferred alternative are arbitrary. To avoid an arbitrary conclusion, VTrans and FHWA must prepare a comprehensive climate change analysis taking all of these concerns into account.

NEPA requires climate change analysis for major federal actions resulting in significant GHG emissions.⁹ EPA issued an endangerment finding determining that GHG emissions contribute to climate change thus endangering public health and welfare.¹⁰ Under NEPA's implementing regulations, an Environmental Impact Statement (EIS) must discuss effects of an action on the human environment "includ[ing] the natural and physical environment and the relationship of people with that environment."¹¹ NEPA requires that a federal agency assess indirect and

⁵ See DSEIS Comment Letter from EPA, Region I, to Kathleen O. Laffey, New Hampshire Division Administrator, Federal Highway Administration (Oct. 9, 2009) (*available at* <http://www.epa.gov/newengland/nepa/pdfs/2009/20090278DSEIS.pdf>).

⁶ *Id.*

⁷ See FEIS, Appendix Q-Vol. I at Q-105-6.

⁸ See FEIS Table 15-1 at 15-10.

⁹ See, e.g., *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008) (requiring cumulative impacts analysis of climate change in an EIS).

¹⁰ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act (Dec. 15, 2009) 74 Fed. Reg. 66,496.

¹¹ 40 C.F.R. § 1508.14.

cumulative impacts for each alternative in an EIS.¹² NEPA’s implementing regulations provide that “[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”¹³ Further, NEPA implementing regulations require that an agency “[i]nclude appropriate mitigation measures not already included in the proposed action or alternatives.”¹⁴ In February, the Council on Environmental Quality (CEQ) issued a *Draft NEPA Guidance on Consideration of the effects of Climate Change and Greenhouse Gas Emissions* affirming the applicability of climate change analyses to NEPA and advising agencies to consider GHG emissions reduction alternatives and mitigation measures.¹⁵ Moreover, the CEQ draft guidance specifically asks federal agencies to include direct and indirect impacts of GHG emissions in the scoping of an EIS.¹⁶ FHWA has obdurately refused to consider climate change and GHG emissions in the scoping of the Circ-Williston project despite repeated public concerns regarding the narrow scope of the project.¹⁷ The Circ-Williston project is the most significant highway capacity increasing project in the State of Vermont. As transportation is the largest contributor of GHG emissions in Vermont, the emissions impacts from this project must be evaluated.

IV. Impacts of Preferred Alternative

Significant impacts of the preferred alternative are not addressed in the FEIS.

A. Sprawl Impacts

The FEIS’s preferred alternative will precipitate an exodus away from Chittenden County and will contribute to residential and commercial sprawl elsewhere. As Table 17-23 and 17-24 show, the preferred alternative will result in the greatest loss in households and employment in Chittenden County from 2000-2030 based on changes in accessibility of all the alternatives

¹² 40 C.F.R. § 1508.25.

¹³ 40 C.F.R. § 1508.25(c).

¹⁴ 40 C.F.R. § 1502.14; *see also* 42 U.S.C. § 4332(2)(C)(iii). Under CEQ regulations, mitigation includes:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

40 C.F.R. § 1508.20.

¹⁵ Memorandum from Nancy H. Sutley, Chair, Council on Environmental Quality, to Heads of Federal Departments and Agencies (Feb. 28, 2010) (*available at* 75 Fed. Reg. 8,046) (Federal agencies... should consider opportunities to reduce GHG emissions caused by proposed Federal actions and adapt their actions to climate change impacts throughout the NEPA process and to address these issues in their agency NEPA procedures.”).

¹⁶ *Id.*

¹⁷ FEIS, Appendix Q-Vol. 2 at Q-26 (“Reducing greenhouse gas emissions is a policy goal beyond the scope of this EIS, and therefore was not identified as an element of the project purpose and need statement.”).

considered.¹⁸ EPA previously observed that the job losses from the Metropolitan Planning Areas are larger for the preferred alternative than any of the VT 2A improvement alternatives. Furthermore, “Enterprise Planning Areas, which are intended to be job centers, gain jobs under the VT 2A alternatives and the Hybrid Alternatives, but not under the Cir [sic] A-B alternatives, which result in job losses from those areas.”¹⁹ The FEIS recognizes that “[t]he combined effect of past, present, other actions, and the direct and indirect effects of the Build Alternatives in the Northwest Vermont would result in changes to rural landscapes as some areas become more suburban or urban in character.”²⁰ Curiously, in spite of the proposed development of the rural landscape and the acknowledged potential for encroachment into existing habitat areas,²¹ FHWA suggests that sprawl impacts will in part be “moderated by the countervailing effect of planning that focuses growth in villages....”²² Since FHWA’s own planning encourages sprawl development, this claim is specious. The FEIS fails to identify what planning FHWA is referring to and how it will mitigate the sprawl impacts of the proposed project. The FEIS fails to consider the human and environmental impacts of the preferred alternative’s contribution to residential and commercial sprawl in anything but an arbitrary fashion.

B. Land Use Changes

Significant land use changes were not evaluated. Most notably, the only specifically land use impacts considered are the direct impacts. All growth changes are considered indirect impacts and are based exclusively on existing zoning without evaluating either the cumulative impacts of the road or the proposals to change land use and roadways within Essex. For example the extension of Allen Martin Drive to Exit 11 and Town Plan changes that recognize the Circ impacts on forest resources of Saxon Hill Forest as well as the impact of directing truck and commuter traffic through neighborhoods. (See comments on FEIS of Bruce Post).

The analysis of land use changes is conflicting and contradictory. These impacts remain unevaluated. The FEIS states:

The No Build Alternative represents the future conditions without the proposed project. For the purposes of the comprehensive transportation screening analysis, a future No Build year of 2025 was used since it coincided with the Chittenden County Metropolitan Planning Organization’s (CCMPO’s) *2025 Metropolitan Transportation Plan (MTP)*, which is based on future 2025 land use projections prepared by the Chittenden County Regional Planning Commission (CCRPC). The MTP contains a variety of projects to be

¹⁸ FEIS, Table 17-23 and 17-24 at 17-77.

¹⁹ DEIS Comment Letter from EPA, Region I, to Kenneth R. Sikora, Jr. Federal Highway Administration, Region I, and Robert Desista, Regulatory Division, Operations Directorate, U.S. Army Corps of Engineers (Nov. 16, 2007) (FEIS, Appendix Q-Vol. I at Q-30-31).

²⁰ FEIS 17-128.

²¹ FEIS 17-119. The preferred alternative will directly impact 59 acres of forested habitat and 24 acres of grassland habitat including vernal pool habitat and deer wintering habitat while all impacts to wildlife under the VT 2A alternatives would be only “minor.” FEIS 17-118.

²² FEIS 17-119.

implemented over the next two decades. In order to evaluate the full incremental transportation benefit of the alternatives being screened, the No Build Alternative for screening did not include all MTP projects.

Certain projects on the MTP had the potential to influence the performance of some of the alternatives being screened, while other projects on the MTP were incorporated as elements of the alternatives being screened. Both sets of projects were excluded from the No Build Alternative to make it possible to see the full incremental benefit of the alternatives being screened. Examples of projects in the MTP that were not included in the No Build Alternative include Circumferential Highway segments G-J in Colchester (at the time of the screening, i.e., before detailed analysis, it was felt that the presence of segments G-J in the screening analysis could unduly influence the traffic volumes in the A/B corridor versus the VT 2A corridor and, thereby prejudice the results; subsequent detailed analysis documented in Chapter 5.0 shows that this influence is minor and inconsequential) and improvements to the VT 117 corridor (would overlap with an alternative being screened). Also excluded were commuter rail and passenger rail to adjacent counties, which would overlap with an alternative being screened; pedestrian/bicycle path network improvements, which would not materially affect traffic volumes; and Corridor and Arterial Congestion Management Program projects, which either overlap with the alternatives being screened or were not sufficiently defined to permit modeling of their effect on traffic volumes.

FEIS at 3-8. Based on this, the impacts of the No Build Alternative do not include the listed MTP projects.

The DEIS shows that all these were included in the No Build screening analysis. The DEIS states:

The future condition without the proposed project is called the No Build Alternative. Analysis of the No Build Alternative is required by NEPA and is used as a baseline for the evaluation of the environmental effects of the Build Alternatives of the proposed project. The No Build Alternative includes most of the expected improvements in the VT 2A and Circ A/B corridors, as well as other transportation and non-transportation projects in Chittenden County.

DEIS at 4-1. The discussion in the appendix confirms and defends that the No Build analysis included these MTP projects. It states:

The use of projects included in the Chittenden County Metropolitan Planning Organization's (CCMPO) Metropolitan Transportation Plan (MTP) as reasonably foreseeable future actions to include in the No Build Alternative is reasonable and a common practice for transportation projects' environmental impact statements. Using

only projects already started or included in the TIP would not reflect all of the planned projects for the 2030 analysis year.

FEIS App Q-ii p.38.

The net effect of all this is that it is impossible to determine what is being compared and whether the MTP projects are or are not included in the No Build analysis and what, if any, effect the changes in the definition of the No Build alternative has on the impacts. As a result, the FEIS provides conflicting, confusing and contradictory analysis and cannot be considered as providing a hard look at the actual land use impacts. One cannot even determine what has been evaluated and how it compares with what was evaluated in the past. In light of the unreasonably short period of time allowed for comment, the confusing and contradictory definitions and analysis preclude a fair evaluation.

C. 2A Impacts Overstated

The FEIS continues to magnify the impacts of the 2A alternatives in a manner that shows that these impacts were not evaluated. The designs for the 2A alternatives are uniformly overbuilt resulting in unnecessary and greater impacts on wetlands, 4(f) properties and increased cost. The FEIS fails to consider reasonable changes that would reduce impacts to these alternatives while at the same time numerous changes are made to the preferred alternative to reduce its impacts, including changes in the ROW to reduce wetland impacts. Most notable is the failure to consider more limited widening of the roadway or minor changes in alignment or cross section that would reduce impacts to historic properties. Additionally, the impacts of the Hybrid alternatives are considered collectively to have the same impacts as the preferred alternative even though the alternatives have different designs. For example, Alternative 23 is a narrower roadway requiring a narrower ROW and would have a more limited footprint impact.

Specific examples of overstating impacts of Route 2A alternatives is apparent when comparing the proposed cross sections of Route 2A²³ with the requirements of the Vermont State Design Standards, AASHTO Guidelines, and the recent ITE Guide to Walkable Urban Thoroughfares. The FEIS proposed excessively wide 12 foot travel lanes, plus 4 feet shoulders that are unnecessary due to a proposed parallel bicycle path. Travel lane widths of 11 feet or even lower can be used on Route 2A as it is an urban arterial, particularly in the Five Corners area. Shoulders are unnecessary on significant portions of the corridor, as it is an urban or suburban environment with a parallel path for bicycle and pedestrian travel. Inside shoulders are not required in urban cross sections. The impacts along Route 2A can be substantially reduced by altering the proposed cross sections without compromising safety or mobility, and will comply with all prevailing, accepted engineering guidance from VTrans, AASHTO and ITE.

²³ FEIS, Chapter 3, Alternatives, Figures 3.5-2b, 3.5-3b and 3.5-4b.

The overall result is that the impacts of the 2A alternatives are overstated and are not evaluated. Instead they are assumed to have as great an impact as possible. This is a transparent attempt to inflate their impacts compared to the preferred alternative. With nearly seven years of study and analysis, the FEIS should have been able to provide an evaluation that does not overstate the impacts of the alternatives considered.

D. Safety

The methodology used to evaluate safety impacts is unsound and untested and fails to provide a genuine evaluation of these impacts. For the preferred alternative, impacts from unspecified “TSM” improvements are provided, including Route 2A “spot improvements.” These are the basis of much of the actual claimed safety benefits of the preferred alternative. First, the FEIS assesses these as providing identical crash reduction factor as a roundabout, even though these are not roundabouts and no evaluation is provided that these improvements function the same in terms of safety as roundabouts, which throughout experience and literature provide for far greater safety benefits than signalized intersections. Second, the methodology used is unsound as it has not been implemented. No information regarding actual intersection crash rates is provided. Third, the FEIS fails to evaluate crashes on intersecting routes at the new Circ interchanges and intersections. The creation of new intersections will result in additional accidents. This is an impact that was not evaluated in the FEIS.

Despite these methodological shortcomings, Alternative 22 and Alternative 23 outperform the preferred alternative in the measures that are used. Crash reduction compared to the 2030 no build reflected as total crashes / percentage change from the no build 2030 are as follows:

VT2A:

NB2030 = 176

Alt 17 (FEIS): 148/-15.9%

Alt 22 (VSGC 2A): 133/-24.4%

Alt 23 (VSGC w/ Blvd): 129/-26.7%

Areawide:

NB2030 = 569

Alt 17 (FEIS): 548/-3.7%

Alt 22 (VSGC 2A): 528/-7.2%

Alt 23 (VSGC w/ Blvd): 536/-5.8%

FEIS table 5-13, p.5-25.

The significantly improved performance in terms of safety – despite serious methodological shortcomings – shows the failure of the FEIS evaluation of the benefits of the preferred alternative.

V. Arbitrary evaluations

A number of evaluations in the FEIS are arbitrary.

A. Evaluation of Roundabouts

The evaluation of roundabouts inappropriately applies the “critical approach” method noted on page 5-3 of Chapter 5, Section 5.3.3. The evaluation is based on several outdated references, which are documented in the FHWA Guide to Roundabouts.²⁴

The FEIS computed roundabout capacity for the appropriate scenarios, but did not include the detailed computer worksheets that document the analysis, so a comprehensive review of this critical issue is not possible. However, the FEIS then essentially “trumps” their own analysis based on reviewing the volume to capacity ratios of critical approaches. The basis for this crude method is from only two documents from the mid-1990s, one from Australia and the other from Germany. This trumped up method does not represent current roundabout design and analysis. Further, if a modern roundabout analysis indicated potential traffic capacity issues at any approaches, the FEIS did not make any effort to mitigate the capacity issues through the many advanced tools of roundabout design, such as modifications to lane widths and approach angles. Overall the faulty application of the stated standard, which is in FHWA Guide to Roundabouts, shows a failure to evaluate the performance and allow public input on the analysis that was done.

B. Evaluation of unsignalized levels of service

The FEIS suggests that unsignalized level of service will be worse under Alternative 3 and 23. The FEIS fails to consider the traffic engineering advantages of roundabout corridors, where drivers wishing to turn left onto Route 2A can instead turn right, and safely reverse direction at a roundabout.

VI. Historic Resources

The FEIS fails to evaluate impacts to historic resources. The FEIS identifies historic resources that will be affected by the various Circ alternatives and then reaches conclusions about the effects. The FEIS fails to evaluate the impact of the effect on the historic features. The analysis treats all impacts equally rather than assess whether the impact has any negative effect on the eligibility of the property for the National Register of Historic Places. The FEIS also fails to consider possible mitigation of impacts. See attached letter from Julie Weisgerber to Sandra Levine dated Aug. 23, 2010 regarding Circ-Williston Transportation Project – Historic Property Opinion.

²⁴ Roundabouts: An Informational Guide, US Department of Transportation, Federal Highway Administration, Publication No. FHWA-RD-00-67.

The result of these failures is that impacts to historic resources for the Route 2A Alternatives are significantly overstated. The impact of taking a portion of a front lawn that will not impact the historic features of the property is treated equal to an impact that does affect historic features. Similarly, impacts to non-historic features, such as the new porch on the Lincoln Inn, are erroneously treated as a negative impact. In fact there is no substantive evaluation of impacts.

While mitigation of other impacts are considered, simple mitigation such as burying power lines, narrowing the lane and shoulder widths as allowed in the Vermont State Standards²⁵, or realigning the ROW are not considered at all. Clearly, if a ROW can be moved to reduce impacts to wetlands, a power line can be buried, or road alignment can be changed to minimize impacts to historic resources. These are common practices. For example they were used by FHWA and VTrans in modifying Main Street into Burlington and modifying Route 7.

The FEIS falls far short of an evaluation of impacts to historic resources. The impacts to the historic features are not evaluated. Mitigation is not considered at all. Rather than provide a substantive evaluation, the FEIS overstates the impacts to the 2A properties in order to make the Preferred Alternative seem more appealing.

VII. Wetlands

The FEIS's preferred alternative will destroy vast areas of fragile wetlands. According to the FEIS, the preferred alternative will permanently fill and eliminate wetland functions and services on 21.81 acres of wetlands and have permanent secondary impacts on an additional 29.56 acres of wetlands.²⁶ The FEIS fails to address the temporary secondary impacts of the preferred alternative altogether.²⁷ Project alternatives to improve VT 2A, which meet the purpose and need of the project,²⁸ would directly impact less than 1.4 acres.²⁹ The FEIS notes that secondary impacts of improving VT 2A "would be minor because no fragmentation impacts would occur and the affected systems are already adjacent to a roadway."³⁰

The proposed wetland mitigation goals for the preferred alternative are inadequate. EPA has already expressed concern that the project's compensatory mitigation scheme "is unlikely to be successful" because it is "technically difficult to restore or create these habitats successfully, let alone replicate the unusual juxtaposition of habitats present in the study area" and because of the "myriad risks inherent in wetland restoration and especially creation that make these already

²⁵ Vermont State Design Standards, October 22, 1997, <http://www.aot.state.vt.us/progdev/standards/statabta.htm>

²⁶ FEIS at 11-58.

²⁷ FEIS at 11-47.

²⁸ FEIS at 3-20.

²⁹ FEIS at 11-54

³⁰ FEIS at 11-54.

difficult ventures more challenging.”³¹ VTrans and FHWA acknowledge that their emergent and forested wetland enhancement goals are “at the low end of the recommended range.”³² VTrans and FHWA’s compensatory mitigation plan will not replace the ecological values of the lost wetlands under the preferred alternative.

Clean Water Act Section 404(b)(1) Guidelines require that only the least environmentally damaging practicable alternative (LEPDA) to a discharge of dredge or fill material into wetlands be permitted.³³ Executive Order 11,990 further provides that an agency should avoid wetlands construction unless “there is no practicable alternative to such construction” and “the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.”³⁴ In spite of EPA’s observation that “the VT 2A alternatives group appears to contain the least environmentally damaging practicable alternative” and its “recommendation that the Corps [of Engineers] not issue a Section 404 permit for any new alignment build alternative identified in the DEIS,”³⁵ the FEIS proposes to move forward with this massive road-building project and summarily dismisses improving VT 2A alternatives as “not practicable.”³⁶ FHWA’s rationale is specious. As noted above, the FEIS overstates the significance of the impact of VT 2A alternatives’ on historic properties.³⁷ Other projects in Chittenden County have responsibly moved forward, including the Main Street improvements in Burlington, where impacts to historic properties have been greater than those contemplated by improving VT 2A.

The wetland functions will not be preserved. The preferred alternative unnecessarily destroys valuable wetlands and the water quality protections they provide.

VIII. Air Pollution

1. *The FEIS fails to undertake the required quantitative analysis of how fine and ultrafine particulate matter, diesel exhaust and other air pollutants will increase immediately adjacent (within 400 m) to the proposed major roads, thereby increasing the incidence of heart disease, cancer and asthma and other diseases among those living immediately adjacent to these proposed major roads (see e.g. American Academy of Pediatrics 2004, Brunekreef et al. 1997, Garshick et al. 2003, Madina-Ramon et al. 2008, Nakai et al. 1999, Nitta et al. 1995, Tonne et al 2007, Van Vliet et al 1997, Venn et al. 2001, Zhou and Levy 2007).*

³¹ DEIS Comment Letter from EPA, Region I, to Kenneth R. Sikora, Jr. Federal Highway Administration, Region I, and Robert Desista, Regulatory Division, Operations Directorate, U.S. Army Corps of Engineers (Nov. 16, 2007) (FEIS, Appendix Q-Vol. I at Q-22).

³² FEIS at 11-61.

³³ 40 C.F.R. § 230.10(a)

³⁴ Exec. Order No. 11,990 42 Fed. Reg. 26,961 (May 24, 1977).

³⁵ DEIS Comment Letter from EPA, Region I, to Kenneth R. Sikora, Jr. Federal Highway Administration, Region I, and Robert Desista, Regulatory Division, Operations Directorate, U.S. Army Corps of Engineers (Nov. 16, 2007) (FEIS, Appendix Q-Vol. I at Q-14).

³⁶ FEIS at 11-70.

³⁷ FEIS at ch. 21.

The EIS ignores the large scientific literature that shows air pollutants levels are elevated near major roadways, thereby causing an elevated incidence of heart disease, cancer, asthma and other diseases in those living immediately adjacent to major roads.³⁸ Moreover, a number of studies have estimated an explicit relative risk for various mortality and morbidity endpoints, for those living immediately adjacent to a major road, as compared to those living further away, or at background levels.³⁹ Together, these scientific studies provide a solid basis for quantifying the health risks associated with living immediately adjacent to major roads. This literature shows not only an increased mortality and morbidity for the general population, but also demonstrates that specific subgroups that are especially sensitive to air pollution (e.g. children and heart disease patients) also suffer elevated disease incidence near major roads.

2. The FEIS wrongly assumes that NEPA only requires that the proposed alternatives not trigger any Clean Air Act violations. In particular, the logic behind the following analysis in the EIS is not correct: “Based upon the analysis, the ambient PM10 and PM2.5 levels would continue to meet the NAAQS for these pollutants under the No Build and Build Alternatives. Therefore, further examination of PM10 and PM2.5 pollutants is not required.” The following sentence is also not correct “The NAAQS are set at levels designed to protect public health.”

The fundamental error here is that the analysis quoted in the previous paragraph is based on the methodology in EPA Guidance for Qualitative Hot-Spot Analysis. And that methodology is designed to determine whether a project conforms with the Clean Air Act. By contrast, the EIS must conform with NEPA. NEPA requires disclosure of all known significant risks to human health. Even if it is true that the proposed project will not make Vermont a non-attainment area for PM_{2.5}, the question remains of how much excess mortality and morbidity from heart disease, cancer and asthma there will be among those living immediately adjacent to the proposed alternative. As the scientific literature cited above demonstrates, there is abundant evidence for localized harmful effects of small and ultra fine particulate matter, diesel exhaust and other air pollutants immediately adjacent (within 400 m) of roads. The harmful effects associated with these hot spots are not accounted for by the current NAAQS standard for PM_{2.5}. The FEIS thus errs when it bases its analysis of PM_{2.5} on the NAAQS, thereby failing to quantify the localized effects of PM_{2.5} on human health.

3. The FEIS fails to disclose the number of individuals who live or go to school within 400 m of the proposed alternative. Given the overwhelming evidence that those living immediately adjacent to major roads are at increased risk of heart disease, cancer and asthma, in order for the public to sensibly evaluate the proposed alternatives, VTrans needs to disclose the

³⁸ For evidence of elevated levels of air pollutants near major roads see Adgate et al. (2002), Basrur (2003), Clougherty et al. (2008), Colome (1992), Dor et al. (1995), Funasaka et al. (2000), Heinrich et al. (2005), Hoek et al. (2002), Illgen et al. (2001), Kingham et al. (2000), KTI (2004), Kousa et al. (2002), Koushki et al. (1992), Levesque et al. (1990), Linden et al. (2007), Molnar (2007), Nakai et al. (1995), Nethery et al. (2008), Reponen et al. (2003), Roorda-Knappe et al. (1998), Sanderson et al. (2005), van Roosbroeck et al. (2006), Viala (1994), Wilson (2006), Wilson et al. (2005), Wilson and Suh (1997), Zhu et al. (2002), and Zhou and Levy (2007).

³⁹ See for example, Beelen et al. (2008), Brugget et al. (2007), English et al. (1999), Garshick et al. (2003), Gauderman et al. (2005), Hoek et al. (2002), Hoffman et al. (2006), Hoffman et al. (2007), Janssen et al. (2003), Jerrett et al. (2005), Kim et al. (2004), Kim et al. (2008), Lin et al. (2002), Medina-Ramon et al. (2008), McConnell et al. (2006), Morganstern et al. (2007), Nitta et al. (1993), Ryan et al. (2005), Salam et al. (2008), Toone et al. (2007), Venn et al. (2001), Vineis et al. (2006), and Wilhelm et al. (2008).

number of individuals who live and work in the immediate vicinity of the proposed alternative. This information is readily available to VTrans, for example it is contained in GIS databases, but nowhere in Chpt. 8 of the EIS is it presented or cited. The only reference in Chpt. 8 is the statement “proximity of the Build Alternatives to one or more schools,” which is far from an adequate disclosure of how PM_{2.5}, diesel particulate matter and other pollutants will affect schoolchildren.

The failure of the FEIS to obtain and use this readily available data to determine the number of individuals who reside or go to school in areas immediately adjacent to the proposed alternatives violates 40 CFR 1502.22(a) which provides: “[i]f the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.” 40 CFR 1502.22(a). Moreover, failure to undertake this analysis is explicitly contrary to the conclusion of the guidance document *Analyzing, Documenting, and Communicating the Impacts of Mobile Source Air Toxic Emissions in the NEPA Process*, which states on pg. 19 that “[t]he weight of the current evidence indicates that it is reasonable to use proximity to a transportation facility as a screening tool in NEPA evaluations of MSATs.” Carr et al. (2007).

The FEIS fails to provide any explanation whatsoever as to why this sensible first step analysis, using readily available data, was not undertaken. This failure is particularly striking because such data often has very low uncertainty. *See* Carr et al. (2007) (Table 2). Importantly, such exposure data would be quite informative even if no such steps are taken to obtain actual quantitative risk estimates.

4. *The FEIS fails to quantify the impacts on public health from diesel exhaust.* In requesting that the agency undertake this analysis for diesel particulate matter (henceforth DPM), we are asking nothing more than simply meeting the established standard. The harmful effect of DPM on human health is well established (Bhatia 1998 and references therein, and EPA 2002 and references therein, Arlt (2005), Arlt et al. (2006), Garshick (2004), Hart et al. (2006), Monforton (2006), Laden et al. (2006), Laden et al. (2007), Garshick et al. (2008), and Ono et al. (2008). Numerous quantitative assessments of DPM at the local level have in fact been carried out. *See* Tran et al. (2006), Castaneda et al. (2008), Cutts et al. (2008), Pingkuan et al. (2008); *see also* CARB (2009). For example, Appendix C of Pingkuan (2008) contains figures that show isopleths of cancer risk from diesel particulate matter, at a local scale. For an example of DPM health risk assessment for a highway, *see the Health Risk Assessment for the Schuyler Heim Bridge Replacement and SR-47 Expressway Project* (Caltrans 2008). Moreover, the methodology for undertaking such risk assessments has now been standardized. *See* OEHHA (2000), OEHHA (2002), and OEHHA (2003). There is no reason why VTrans could not employ the same methodology in the present circumstance.

5. *The FEIS fails to fully consider the effects of fine and ultrafine particulate matter, diesel exhaust and ozone on especially sensitive individuals, including schoolchildren at the Allen Brook Elementary School, the elderly and pregnant women.* The references cited above demonstrate that air pollution is especially harmful to children, the elderly and pregnant women. And Chpt. 8 admits that there are schools near the proposed alternatives. Yet nowhere does Chpt. 8 of the FEIS address the impacts of the various alternatives on these populations that are

especially susceptible to the harmful effects of fine and ultrafine particulate matter, diesel exhaust and ozone. (Chapter 8 of the DEIS does have some tables presenting estimated levels of CO and NO₂ at the Allen Brook Elementary School. Importantly however, the primary pollutants of concern to children are fine and ultrafine particulate matter, diesel exhaust and ozone, which are not included in these tables.)

There is a substantial scientific literature showing the harmful effects of air pollution from major roads on children (Brunekreff et al. 1997, van Vliet et al. 1997, Morganstern et al. 2007, Venn et al. 2001, Janseen et al. 2003, Kim et al. 2008, Gauderman et al. 2004, McConnell et al. 2006, Zhou and Levy 2007, Willhem et al. 2008, American Association of Pediatrics Policy Statement 2004, Jerrett et al. 2008, Nordling et al. 2008, Parker et al. 2009, Jerrett et al. 2009, Braback and Forsberg 2009 and papers cited therein), which literature the FEIS entirely ignores. Moreover, it is well known that children are especially sensitive to air pollution (American Association of Pediatrics 2004, Bateson and Schwartz. 2008). Yet inexplicably, the FEIS simply ignores the effects of the various alternatives on the schoolchildren at the Allen Brook Elementary School.

6. The air pollution analyses is based on the 1993 Vermont SIP, which is now some 17 years old. As such the analysis in Chpt. 8 of the FEIS is based on out-of-date data that does not represent the current situation.

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IX. Conclusion

The FEIS and environmental review for the Circ-Williston Transportation Project are severely flawed. The agencies have thwarted meaningful public input, failed to evaluate significant environmental impacts, failed to evaluate the impacts of the preferred alternative, engaged in arbitrary evaluations, failed to evaluate impacts to historic resources, wetlands, and air quality.

To comply with the requirements of NEPA, the agencies should correct these significant shortcomings before making a final decision. The agencies should not pursue the costly and unnecessary preferred alternative when lower cost, cleaner, safer and more effective transportation solutions are available.

Sincerely,

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Attachments:

- Letter from CLF to FHWA & VTrans dated Aug. 4, 2010 requesting extension of comment period.
- Response from VTrans to CLF dated Aug 17, 2010 denying request
- Comments from CLF et al on the DEIS submitted Nov. 20, 2007.
- Letter from Julie Weisgerber to Sandra Levine dated Aug. 23, 2010 regarding Circ-Williston Transportation Project – Historic Property Opinion
- Resume of Julie Weisgerber