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RIDOT's Carbon Reduction Strategy Lacks Emission Reduction Analysis and Stakeholder Engagement; Falls Well Short of Act on Climate Goals

To Whom It May Concern:

The transportation sector represents the largest proportion of greenhouse gas emissions in Rhode Island and the 2020 GHG inventory demonstrated that the scale of emissions reductions required in transportation requires transformational societal change. In the 2021 Act on Climate, meeting the greenhouse gas emission reduction mandate is deemed to be within the powers, duties and obligations of each public agency. **Rhode Island's Department of Transportation (RIDOT) must recognize its own agency and role in achieving these reductions in the transportation sector.** In this Carbon Reduction Strategy ("CRS"), we see RIDOT defer and deflect its own responsibility to make such change, referencing constraints of available funding and collective responsibility across agencies and sectors.

Throughout the CRS, RIDOT acknowledges the very significant gap between its own forecasts, current policies/plans, and the state's statutorily required targets in the Act on Climate. By RIDOT's own evaluation, RIDOT's Capital Program will not substantially move the needle when it comes to carbon reduction. **Acadia Center is particularly concerned by RIDOT's failure to measure project-level emissions, overdependence on congestion management as an emissions reduction strategy, and lack of a stakeholder process.** Rhode Island's CRS should represent a pathway to identifying – and then funding and implementing – strategic actions the state needs to make significant progress towards the mandates as outlined in the Act on Climate.

RIDOT's project selection criteria and prioritization can and must be shifted now to align with the state's full carbon reduction potential.

Failure to Measure Carbon Emissions Reduction Potential

In Section 7, RIDOT draws on the State's 2021 Clean Transportation and Mobility Innovation Report to evaluate and compare emissions reduction strategies by project category. The high-level comparison presented in Table 7.2 offers gradients of cost-effectiveness (Legend: + Moderate; ++ Strong; +++ Very Strong; - NA) across different considerations (GHG, Particulate Matter 2.5, Jobs, Health Benefits); it is challenging to understand how these different considerations and wide benefit ranges translate to project selection criteria. If Bicycle investments have +++ for Health Benefits (>\$2.5M of health benefits), but traffic flow improvements have +++ for jobs (>20 jobs), which one would RIDOT prioritize and why? By focusing on categories of projects, there is no room for specificity on type of project or scale of

project. One is unable to weigh the relative benefits of a \$1M pedestrian investment vs. a \$100M pedestrian investment.

Acadia Center is also concerned with RIDOT's decision to remove a column labeled 'New non-SOV trips' in transferring this table to the CRS. With the removal of this cost-effectiveness category, RIDOT appears to be ignoring the widely varying level of cost-effectiveness of reducing single occupancy vehicle (SOV) travel across project categories. The cost effectiveness criteria, as presented in Table 7.2, ignore the negative impacts of traffic flow improvements on new SOV trips, as well as the long-term impacts of induced demand on health and PM 2.5 (particulate matter/air quality). For example, the Clean Transportation and Mobility Innovation Report scores "Traffic flow improvements" as a "-" in terms of cost-effectiveness for new non-SOV trips. According to the Benefits Key in Table 5 (see below), this score translates to "less than 1,000 new non-SOV trips per \$1 million spent" meaning the strategy could result in 999 new non-SOV trips avoided or, for example, *negative* 20,000 new non-SOV trips avoided (or in other words an increase in SOV trips). In other words, it's not even clear if the report is claiming traffic flow improvements are increasing or decreasing SOV trips. It is worth noting that in each '-' benefits range, the benefits could include any scale of negative values or impacts, whether adding PM 2.5, adding SOV trips, or negatively impacting health.

Table 6. Cost-Effectiveness of Clean Transportation Strategies

| Strategy | GHG | PM2.5 | New non-SOV trips | Jobs | Health benefits |
|--|-----|-------|-------------------|------|-----------------|
| Light duty EVs | +++ | +++ | - | + | ++ |
| Electric transit buses | +++ | +++ | - | + | +++ |
| Electric school buses | +++ | +++ | - | + | ++ |
| Electric trucks | +++ | +++ | - | ++ | ++ |
| Hydrogen trucks | +++ | +++ | - | ++ | ++ |
| Shared ride incentives | + | + | +++ | + | + |
| Micromobility: Shared e-scooters & e-bikes | + | + | ++ | + | ++ |
| Micromobility: E-bike ownership | ++ | ++ | +++ | + | ++ |
| Land use/smart growth | +++ | ++ | - | ++ | ++ |
| Bicycle investment | ++ | ++ | +++ | ++ | +++ |
| Pedestrian investment | + | + | +++ | ++ | +++ |
| Travel demand & mobility management | ++ | ++ | +++ | ++ | ++ |
| Bus rapid transit | + | + | +++ | ++ | + |
| Commuter/intercity rail | + | + | ++ | ++ | + |
| Bus service: Expansion | + | - | ++ | +++ | + |
| Bus service: Efficiency | ++ | + | ++ | +++ | ++ |
| Electric microtransit | + | + | +++ | ++ | + |
| Traffic flow improvements | +++ | - | - | +++ | - |

Table 5. Benefits Key

| Benefits Range | GHG tons/\$M | PM2.5 lbs/\$M | New non-SOV trips per \$M | New jobs per \$M | Value of health benefits per \$M |
|----------------|--------------|---------------|---------------------------|------------------|----------------------------------|
| - | <10 | <1 | <1,000 | <1 | <\$0.1M |
| + | 10 – 100 | 1 – 10 | 1,000 – 50,000 | 1 – 10 | \$0.1 – \$0.25M |
| ++ | 100 – 1,000 | 10 – 100 | 50,000 – 250,000 | 10 – 20 | \$0.25M – \$2.5M |
| +++ | >1,000 | >100 | >250,000 | >20 | >\$2.5M |

RIDOT summarizes that the 2021 analysis ranks congestion management among the more cost-effective project types, but they also appear to manipulate the factors presented in order to better align with the status quo priorities of RIDOT. The wide benefit ranges across multiple considerations and the grouping of categories of projects is not a viable method to evaluate and compare emissions.

In Section 8 of the CRS, we learn that **RIDOT does not calculate project-level emissions reductions associated with STIP projects**. Only three projects in the STIP underwent emissions analyses as part of their applications for federal funding – the Cranston Canyon (\$85M), Route 146 Reconstruction (\$196M), and the Missing Move (\$135M). These three large projects focus solely on traffic operation and flow improvements and even capacity expansion. Section 8 of the

CRS states, “These three projects are therefore taken as *representative of the order of magnitude of emissions reductions* that might be achieved through STIP investments.” This is a strange statement considering 1) The wide variety and scale of projects considered in the STIP, ranging from bike path preservation, to safety service patrols, to bridge overpass construction and 2) The fact that RIDOT just made the point in Table 7.2 that the GHG reduction cost-effectiveness varies wildly across different transportation strategies.

The Cranston Canyon, Route 146 Reconstruction, and the Missing Move cannot be taken as representative of emissions reductions that might be achieved through a wide range of other STIP investments. Equivalent investments of over \$400M in alternative strategies which, for example, reduce VMTs or promote mode shift, would have wholly different outcomes and require distinct emissions reduction analysis. Further, based on RIDOT’s limited emissions analysis, \$416M of investments yielded 10,530 tons of CO₂e per year, for a baffling rate of \$40,000 per ton of CO₂e reduced (to put that in perspective, last year the [EPA estimated the social cost of carbon](#) to be between \$120-\$340 per ton of CO₂ depending on discount rate used). This rate of investment to emissions reductions further discredits RIDOT’s argument that congestion management is among the more cost-effective transportation strategies for reducing emissions.

Strategies to Reduce Carbon Emissions Beyond Congestion Management

RIDOT’s own Rhode Island Transportation Emissions Forecast demonstrates that a much more aggressive shift to reducing vehicle miles traveled and modal shift will be needed to come close to achieving the 2040 and 2050 targets. The forecasts of GHG emissions from the transportation sector, existing policies and plans, and the limited state agency engagement identify the need for an array of emissions reductions strategies, and in particular the need for further action by RIDOT. And yet, there is a glaring **disconnect between the scale of emission reduction needed to move the needle and the investments proposed in RIDOT’s CRS.**

Two thirds of the initial \$23.7 million of Carbon Reduction Program (“CRP”) funding has been preliminarily assigned to congestion management. Of projects which encourage alternative travel, RIDOT dedicates a very small proportion of funding to “Sidewalk Installation” (3%) and a larger proportion (28%) to “Bike Path Preservation”. While Rhode Island’s bike paths are an incredible recreational (and in cases, commuting) asset, maintenance of existing bike paths does not meaningfully contribute to the very significant transportation mode shift that is needed to reduce carbon emissions; safe, separated, connected bikeways and improved transit are needed to encourage mode shift. Land use and smart growth, such as housing density near transit, are also key strategies that have been identified with no actual funding allocations by RIDOT. Further, Acadia Center requests more information regarding the definition of “Greenway Enhancements” and how this investment encourages mode shift.

The remaining share of CRP funds (\$12.2 million) purports to aim to diversify RIDOT’s carbon reduction strategies, with \$10 million or 85% categorized as mode shift. However, \$4.1 million of those funds allocated as mode shift is for “Bridge Group 4R (Transit Operating Support)”. Acadia Center requests more information on this line item. How does this support transit operations and therefore encourage mode shift? Why was this allocation so much greater than tangible bike infrastructure investments? **Linking each item to an associated STIP project number and offering more information on proposed projects is critical to the ability of stakeholders and members of the public to offer informed comments and feedback.**

The internal stakeholder workshop offered robust ideas for diversified carbon reduction strategies, which are not fully captured in Table 3.1. Acadia Center requests comprehensive notes from this workshop. The priorities included as ‘Top near-term’ are also not reflected in any actions or commitments made by RIDOT in the CRS. Acadia Center

recommends restructuring the categories of existing strategies to reduce carbon emissions in Table 6.1. In this table, RIDOT's definition of 'innovation' groups new technologies with strategies that are not so much innovative as they are new to RIDOT, such as connected infrastructure and micromobility. Bicycle and pedestrian investments deserve their own category of strategies, alongside public transit as a core strategy for modal shift. Land use and smart growth is also a core grouping of strategies to reduce carbon emissions that has been identified in existing plans but is overlooked in Table 6.1.

Further, Acadia Center cautions against the vague goal of "emphasizing the take-up of alternative fuels for various transportation strategies". While alternative fuels, including green hydrogen, may make sense in decarbonizing specific transportation end uses (e.g., shipping, aviation, and potentially long-distance trucking) they make little sense in the bulk of transportation end uses (e.g., light-duty and medium duty vehicles, local busses). The "[hydrogen ladder](#)" developed by Michael Liebreich articulates this point succinctly. Green hydrogen and biofuels are and will continue to be limited in supply and extremely expensive, particularly as demand for these fuels increases as states and the country as a whole move towards achieving decarbonization goals. As a result, these fuels should be allocated to the most challenging to electrify sectors of the economy. In the case of light-duty and medium-duty vehicles, battery electric vehicles (BEVs) are and will continue to be both more efficient and less expensive to operate than hydrogen fuel cell electric vehicles (HFCEVs).

Lack of Stakeholder Process

RIDOT presented on the CRS to the EC4 in June, with no discussion by the EC4 and limited opportunity for public comment at that meeting. The stakeholder workshop referenced in September 2023 was not a public workshop. The intent of the workshop was to help RIDOT brainstorm with other State sister agencies and quasi-state authorities on potential strategies to inform the plan. Two advocacy groups –Acadia Center and Grow Smart RI – were invited to join this internal workshop due to our interest and repeated inquiries regarding the CRS. The opportunity to attend was not extended to any other external participants. The conversations and carbon reduction strategies proposed were robust, and a similar opportunity to engage must be extended to other advocates and broader members of the public.

Presentations on the CRS to both the Transportation Advisory Committee (TAC) and State Planning Council did not occur until late October and early November. At the October 26th TAC meeting, the Chair of the TAC made clear that he did not feel that accepting public comment on the CRS was the role of the TAC. Staff at RIDOT have also noted that they did not need to open the CRS up for public comment. **Acadia Center urges RIDOT to create more meaningful and welcoming spaces for the public to engage with the development and implementation of carbon reduction strategies.**

An understanding of RIDOT's agreement or disagreement with proposed comments and willingness to incorporate changes into the CRS is a critical piece of a meaningful public process. [Acadia Center and fellow advocates submitted comments on September 19th](#) and would appreciate responses from RIDOT on the methodology concerns raised in that letter, along with the decision to not host a public forum. Acadia Center calls on RIDOT to (a) make public all comments received on its CRS and (b) respond with its agreement or disagreement with proposed comments and willingness to incorporate certain changes into the CRS. We were glad to hear that RIDOT intends to put out a comment report. As a living document, continued dialogue and engagement with stakeholders and members of the public can and must occur in 2024.

This \$35 million of CRP funding, along with \$9 Billion in future STIP investments, must be informed by quantifiable emissions reductions impacts and stakeholder input. In the absence of any analysis or engagement, RIDOT's process

for identifying projects and strategies to reduce transportation emissions is based solely on “RIDOT’s internal priorities and logistical capacities” – in other words, the way things have always been done at RIDOT. Under this status quo, and by its own admission, RIDOT’s strategies will not make meaningful progress in moving the state towards a trajectory necessary to achieve its mandated greenhouse gas emissions reductions.

Sincerely,

A handwritten signature in cursive script that reads "emily koo". The letters are fluid and connected, with a lowercase 'e' and 'k'.

Emily Koo

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