4910-9X

DEPARTMENT OF TRANSPORTATION

Office of the Secretary of Transportation

Docket No. DOT-OST-XXXX-XXXX

Guidance on Multimodal State Freight Plans and State Freight Advisory Committees

AGENCIES: Office of the Secretary of Transportation (OST), Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration (FRA), Maritime Administration (MARAD), Pipeline and Hazardous Materials Safety Administration (PHMSA), Great Lakes Saint Lawrence Seaway Development Corporation (GLS); U.S. Department of Transportation (DOT).

ACTION: Notice of Guidance.

SUMMARY: The Fixing America's Surface Transportation (FAST) Act included a provision that requires each State that receives funding under the National Highway Freight Program to develop a State Freight Plan that provides a comprehensive plan for the immediate and long-range planning activities and investments of the State with respect to freight and meets all the required plan contents listed in the Act. The Infrastructure Investment and Jobs Act (IIJA) added several new required elements and updated procedures for State Freight Plans. This document replaces the prior guidance on State Freight Plans and State Freight Advisory Committees, issued on October 14, 2016. This document includes the prior and new minimum required elements that State Freight Plans must meet and suggests recommended, but optional elements that States may

include in their State Freight Plans. IIJA also updated the requirements for State Freight Advisory Committees, and this guidance addresses those new requirements and provides suggestions for establishing State Freight Advisory Committees that will benefit State freight planning. Except for any requirements specified in the statutes cited in the guidance documents, the contents of this guidance document do not have the force and effect of law and are not meant to bind the public in any way. This guidance document is intended only to provide information to the public regarding existing requirements under the law or agency policies.

DATES: Unless otherwise stated in this Notice, this guidance is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: Ryan Endorf, 1200 New Jersey Avenue, S.E., Washington, DC 20590. Telephone Number (202) 366-4835 or E-mail ryan.endorf@dot.gov. Questions can also be submitted to Freight@dot.gov.

SUPPLEMENTARY INFORMATION: The IIJA, enacted on November 15, 2021, includes several new required elements for State Freight Plans, establishes new priorities States are required to consider in carrying out activities under the State Freight Plan, clarifies the State Freight Plan approval process, and modifies the length of the update cycle for State Freight Plans. The purpose of this Guidance on State Freight Plans and State Freight Advisory Committees is to provide States with updated information on the statutorily required elements of State Freight Plans under 49 U.S.C. § 70202 and recommend approaches and information that States may include in their State Freight Plans. This guidance also strongly encourages States to establish State Freight Advisory Committees, updates the statutory requirements for State Freight Advisory Committees

and provides suggestions as to how those Committees can help the State with its freight planning.

49 U.S.C. 70202, as amended by the IIJA, lists required elements that all State Freight Plans must address for each of the transportation modes:

1. An identification of significant freight system trends, needs, and issues with respect to the State;
2. A description of the freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the State;
3. When applicable, a listing of –
    a. multimodal critical rural freight facilities and corridors designated within the State under section 70103 of title 49 (National Multimodal Freight Network);
    b. critical rural and urban freight corridors designated within the State under section 167 of title 23 (National Highway Freight Program);
4. A description of how the plan will improve the ability of the State to meet the national multimodal freight policy goals described in section 70101(b) of title 49, United States Code and the national highway freight program goals described in section 167 of title 23;
5. A description of how innovative technologies and operational strategies, including freight intelligent transportation systems, that improve the safety and efficiency of the freight movement, were considered;
6. In the case of roadways on which travel by heavy vehicles (including mining, agricultural, energy cargo or equipment, and timber vehicles) is projected to

substantially deteriorate the condition of the roadways, a description of improvements that may be required to reduce or impede the deterioration;

7. An inventory of facilities with freight mobility issues, such as bottlenecks, within the State, and for those facilities that are State owned or operated, a description of the strategies the State is employing to address those freight mobility issues;
8. Consideration of any significant congestion or delay caused by freight movements and any strategies to mitigate that congestion or delay;
9. A Freight Investment Plan that, subject to 49 U.S.C. 70202(c), includes a list of priority projects and describes how funds made available to carry out 23 U.S.C. 167 would be invested and matched;
10. The most recent commercial motor vehicle parking facilities assessment conducted by the State under 49 U.S.C. 70202(f);
11. The most recent supply chain cargo flows in the State, expressed by mode of transportation;
12. An inventory of commercial ports in the State;
13. If applicable, consideration of the findings or recommendations made by any multi-State freight compact to which the State is a party under 49 U.S.C. 70204;
14. The impacts of e-commerce on freight infrastructure in the State;
15. Considerations of military freight;
16. Strategies and goals to decrease --
    a. The severity of impacts of extreme weather and natural disasters on freight mobility;

b. The impacts of freight movement on local air pollution;

c. the impacts of freight movement on flooding and stormwater runoff;

d. the impacts of freight movement on wildlife habitat loss; and

17. Consultation with the State Freight Advisory Committee, if applicable.

Each of these required elements is discussed more fully in Section V of the guidance below.

Guidance on State Freight Plans and State Freight Advisory Committees:

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I. BACKGROUND AND PROGRAM PURPOSE

The purpose of this document is to provide guidance on the implementation of 49 U.S.C. 70201 (State Freight Advisory Committees) and 70202 (State Freight Plans), as established under the Fixing America's Surface Transportation Act (FAST Act; Pub. L. 114-94) and subsequently modified by the Infrastructure Investment and Jobs Act (IIJA; Pub. L.117-58). This document replaces the prior guidance on State Freight Plans and State Freight Advisory Committees, issued on October 14, 2016. Except for any requirements specified in the statutes cited in the guidance documents, the contents of

this guidance document do not have the force and effect of law and are not meant to bind the public in any way. This guidance document is intended only to provide information to the public regarding existing requirements under the law or agency policies.

Originally, sections 1117 and 1118, respectively, of the Moving Ahead for Progress in the 21st Century Act (MAP-21; Pub. L. 112-141) required the Secretary to encourage States to establish freight advisory committees and develop freight plans. 49 U.S.C. 70201 now requires the Secretary to encourage each State to establish a State Freight Advisory Committee consisting of a representative cross-section of public and private freight stakeholders and including representatives of specified stakeholder groups. 49 U.S.C. 70202 further requires each State receiving funding under 23 U.S.C. 167 (establishing the National Highway Freight Program (NHFP)) to develop a comprehensive State Freight Plan that includes both immediate and long-term freight planning activities and investments. Section 70202 specifies certain minimum contents for State Freight Plans and provides that such plans may be developed separate from or be incorporated into the Long-Range Statewide Transportation Plans required by 23 U.S.C. 135.

23 U.S.C. 167 requires that each State that receives NHFP funds shall develop a freight plan, consistent with the requirements under 49 U.S.C. 70202, that provides a comprehensive plan for the immediate and long-range planning activities and investments of the State with respect to freight. State Freight Plans developed pursuant to 49 U.S.C. 70202 are multimodal in scope. For example, a State Freight Plan is required to include a description of how the Plan will improve the ability of the State to meet the national multimodal freight policy goals described in 49 U.S.C. 70101(b), and if applicable, the

State Freight Plan must include multimodal critical rural freight facilities and corridors designated within the State under 49 U.S.C. 70103. State Freight Plans are meant to be comprehensive, and as such, they should assist State planning that involves all relevant freight modes (highway, rail, waterborne, air cargo, and pipeline, as appropriate to that State).

Each State Freight Plan must include a fiscally constrained Freight Investment Plan and a list of the multimodal critical rural freight facilities and corridors that the State designates under 49 U.S.C. 70103 and the critical rural freight corridors and critical urban freight corridors (if these have been identified at the time of submission of the Plan) designated by the State and Metropolitan Planning Organizations (MPOs) under 23 U.S.C. 167. FHWA has issued separate guidance on the implementation of 23 U.S.C. 167.

II. POLICY

DOT strongly encourages all States to establish State Freight Advisory Committees. Advisory Committees are an important part of the process needed to develop a thorough State Freight Plan. If a State establishes a State Freight Advisory Committee, the State must consult with its respective advisory committee while developing or updating its State Freight Plan (49 U.S.C. 70202(b)(17)). Bringing together the perspectives and knowledge of public and private partners, including shippers, carriers, and infrastructure owners and operators, is necessary for developing a comprehensive and relevant State Freight Plan.

Pursuant to 49 U.S.C. 70202, each State that receives funding for the NHFP shall develop a comprehensive freight plan that provides for the immediate and long-range

planning activities and investments of the State with respect to freight. Further, 23 U.S.C. 167(h)(4) specified that, notwithstanding any other provision of the FAST Act, effective beginning 2 years after the date of enactment of the FAST Act (i.e., December 4, 2017), a State may not obligate funds apportioned to the State under the NHFP unless the State has developed a freight plan in accordance with 49 U.S.C. § 70202. All States have met these requirements. Pursuant to 49 U.S.C. 70202, as amended by IIJA, State Freight Plans are required to be updated no less frequently than every 4 years – this requirement was decreased from the 5-year update cycle previously required by the FAST Act. State Freight Plans developed in response to the FAST Act remain active until the original 5-year update cycle has expired. If the original Plan has expired and the State has not updated its State Freight Plan consistent with the new requirements under the IIJA, then the State must not obligate NHFP funds. There is no statutory allowance for an extension on the period of eligibility of the Plan or grace period on implementing the new update cycle. State Freight Plans must be updated to comply with IIJA as part of the next scheduled update.

State Freight Plans can help States contribute to the goals of the National Multimodal Freight Policy in 49 U.S.C. 70101(b) and the goals of the NHFP in 23 U.S.C. 167(b). DOT believes strongly that these goals provide essential direction and support for the improvement of freight transportation across all modes.

For reasons in addition to enabling access to funding under the NHFP, DOT strongly encourages all States to be as comprehensive as possible in the multimodal considerations in their State Freight Plan. DOT understands that the effects of freight transportation are often regional, corridor-level, or national in scope. In addition, freight

planning can be more complex because it often involves many actors, including privately owned and operated infrastructure. DOT strongly encourages States to consider the performance and modal interaction of the overall freight system when updating their State Freight Plans. State Freight Plans that consider all the relevant transportation modes, integrated transportation and land use design, and aspects of freight performance, such as congestion reduction/reliability, safety, infrastructure condition, economic vitality, system reliability, dwell time, freight emissions reductions, and environmental sustainability will lead to better policies, investments, and performance outcomes.[1]

The State Freight Plans can also be used to communicate the freight performance measurement targets established pursuant to MAP-21, progress and strategies to goal achievement, any extenuating circumstances or other information relevant to this regulatory requirement.

The State Freight Plan may be developed as a document separate from, or incorporated into, the Long-Range Statewide Transportation Plan required by 23 U.S.C. 135. If the State Freight Plan is separate from the Long-Range Statewide Transportation Plan,[2] both should explain how the projects and actions listed in the State Freight Plan are compatible with and reflected in the Long-Range Statewide Transportation Plan. If the two plans are combined, the Long-Range Statewide Transportation Plan should include a separate section focused on freight transportation and must include the elements specified in 49 U.S.C. 70202.

[1] For more information on performance measures, particularly on highways, please see www.fhwa.dot.gov/TPM.
[2] 23 U.S.C. §135(f) (Long-Range Statewide Transportation Plan).

Due to the flexibility provided by statute, DOT will review State Freight Plans separately from the process for approving Long-Range Statewide Transportation and State Rail Plans, which are governed by other statutes. For consideration of compliance with IIJA provisions of State Freight Plans, States should submit their State Freight Plans to the Federal Highway Division Office in their State. DOT will review the freight plans for compliance with 49 U.S.C. 70202 and will notify the State whether the State's updated State Freight Plan complies with the statutory requirements described below.

DOT released a multimodal, National Freight Strategic Plan September 3, 2020 (see https://www.transportation.gov/freight/NFSP). DOT will update the National Freight Strategic Plan every five years to comply with the requirements under 49 U.S.C. 70102, as enacted by the FAST Act and amended by IIJA. In the future, the National Freight Strategic Plan will be based on the national goals and priorities set forth in 49 U.S.C. 70101. This Plan has and will continue to incorporate, to the extent possible, issues and trends identified in State Freight Plans to capture State and local priorities.

III. FUNDING

Authorization level under IIJA: There is no formula or discretionary funding specifically designated for State Freight Plans or to establish or operate State Freight Advisory Committees. Nevertheless, there are several Federal funding resources with eligibility to support Plan development and planning or Advisory Committee activities. The following is not an exhaustive list, as other Federal funding may be eligible for data collection, analysis, or planning related to discrete elements of the State Freight Plan requirements.

In general, States may use funding apportioned under the Surface Transportation Block Grant Program (23 U.S.C. 133) for developing State Freight Plans, as well as funding set aside from apportioned programs for the State Planning and Research Program (23 U.S.C. 505). Similarly, States can use funds from the NHFP to support freight planning and outreach, including efforts to develop or update State Freight Plans and support State Freight Advisory Committees. They may also use carryover balances from National Highway System (NHS) funds authorized under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU; 23 U.S.C. 103(b)(6)(E) as in effect on the day before enactment of MAP-21) that can be used for transportation planning that benefits the NHS in accordance with 23 U.S.C. 134 and 135 (section 1104 of MAP-21 amended 23 U.S.C. 103, eliminating the National Highway System Program under section 103; however, the carryover balances remain available for planning activities that benefit the NHS).

IV. STATE FREIGHT ADVISORY COMMITTEES

DOT strongly recommends that States use a collaborative process for freight planning that involves the relevant stakeholders acting within or affected by the freight transportation system. To help accomplish this and per the statutory language found in 49 U.S.C. 70201, DOT strongly encourages States to establish, continue, or expand membership in State Freight Advisory Committees. A forum of this type that is similar to that of other States will also improve the ability of public and private stakeholders, including but not limited to cargo carriers and logistics companies (across the modes), and safety, community, energy, and environmental stakeholders, to identify and engage the appropriate freight planning organization in each State. DOT notes that the

establishment of State Freight Advisory Committees is not required by statute or by DOT. In the event a Committee is established, it should be done pursuant to 49 U.S.C. 70201(b), where the role of each committee shall include at a minimum the items listed in section 70201(b).

As specified in 49 U.S.C. 70201(a), State Freight Advisory Committees should include representatives of a cross-section of public and private sector freight stakeholders. These include the following:

- Ports, if applicable;
- Freight railroads, if applicable;
- Shippers;
- Carriers;
- Freight-related associations;
- Third-party logistics providers;
- Freight industry workforce;
- The transportation department of the State;
- Metropolitan Planning Organizations (MPOs);
- Local governments;
- The environmental protection department of the State, if applicable;
- The air resources board of the State; if applicable;
- Economic development agencies of the State; and
- Not-for-profit organizations or community organizations.

In addition to these organizations identified in the statute, DOT recommends considering the inclusion of the following:

- Federal agencies;
- Independent transportation authorities, such as maritime port and airport authorities of varying sizes, toll highway authorities, and bridge and tunnel authorities;
- Safety partners and advocates
- Other private infrastructure owners and investors, such as pipelines;
- Representatives of minority and women-owned businesses
- Hazardous material transportation providers;
- Representatives of environmental justice populations potentially affected by freight movement;
- University Transportation Centers and other institutions of higher education with experience in freight.

The inclusion of freight carriers, freight associations, and shipper and logistics companies in State Freight Advisory Committees is essential, as much of the innovation in freight carriage, management, and planning for future systems takes place among these organizations. Planning for freight without consulting with these organizations would constitute a significant gap in understanding the nature of freight needs and concerns. Carriers should represent a range of sizes and specialties, including full truck load, less than truckload, and small package delivery services. Similarly, participation by shipper and logistics companies of different sizes can provide critical information about warehousing and distribution service needs.

Since MPOs are responsible for developing and programming projects in their Transportation Improvement Programs (TIPs), DOT strongly encourages States to

include representatives from MPOs in freight planning processes because many freight projects are located within metropolitan areas. Similarly, local governments, which often have land use authority in locations of important freight activity, should be included. MPOs, local governments, and civic organizations are affected by and may be concerned about community impacts of freight projects. Early collaboration with those organizations during the freight project planning process can help to address concerns and opportunities. For example, community input and engagement with railroad representatives can help identify existing or emerging impacts of rail activity that affect economic development, mobility, throughput, and safety at railway-roadway grade crossings. This focus in a State Freight Advisory Committee can help inform strategies and identify areas for investment in a State Freight Plan to resolve conflicts and expand access and opportunity in all communities, particularly underserved, overburdened, and disadvantaged communities. Similarly, the inclusion of independent transportation authorities, such as port and airport authorities, toll highway authorities, and bridge and tunnel authorities, will help minimize the fragmentation of planning that often occurs due to different authorities acting independently.

The FAST Act made important changes to the Tribal Transportation Program and also established the Tribal Transportation Self-Governance Program (section 1121 of the FAST Act; 23 U.S.C. 207) that extends many of the self-governance provisions of Title V of the Indian Self-Determination and Education Assistance Act to transportation. Representation of Tribal Nations in State freight planning is essential to development of a comprehensive State Freight Plan.

State DOTs already coordinate State involvement in both freight and passenger rail operations, and as required under section 303 of the Passenger Rail Investment and Improvement Act (PRIIA; Pub. L. 110-432), develop FRA-accepted State Rail Plans. Rail, highway, and other modal divisions (pipeline safety, ports, and airports) within the State DOT, or in other agencies of the State government, should be represented if deemed appropriate by the State. States should also consider the inclusion of other State agencies, including those engaged in law enforcement, housing and emergency planning, which may have the authority to regulate and enforce speed limits on roads and highways, issue permits for higher-weight truck movements and longer combination vehicles (tractor-trailer combinations with two or more trailers) on State roads, and plan for emergency operations. Participation of Federal and State environmental agencies may prove useful in helping project sponsors anticipate and mitigate potential environmental issues that could arise from freight projects. Additionally, these agencies establish and enforce air and water regulations that have important effects on freight transportation. Joint planning with multiple participants within the framework of State Freight Advisory Committees can facilitate better solutions and prevent future conflicts.

States are encouraged to invite representatives from neighboring States and nations (Canada and Mexico, and their Provinces and States, as appropriate) to participate in State Freight Advisory Committees. They should also consider inviting councils of government and regional councils (if not already represented through the MPO), organizations representing multi-State transportation corridors, and other local and regional planning organizations to participate. Participation by Federal government representatives is also encouraged. These participants can provide technical assistance on

Federal planning and funding programs. Similarly, participation by regional economic development offices and State or regional Chambers of Commerce can be beneficial.

Representatives from the freight transportation industry workforce, including underrepresented groups, are critical participants in the freight planning process. Transportation workers provide input in identifying bottlenecks and other inefficiencies, access, operations and safety issues, methods to respond to freight labor shortages, truck parking capacity and information needs, applications of new technologies, and other factors. Similarly, independent transportation experts, including academic specialists and industry consultants are valuable additions to the planning effort.

In all cases, DOT expects that State Freight Advisory Committee participation will vary by State and acknowledges that available funding, State DOT resources, and specific characteristics of a State's freight infrastructure and supply chains will lead to significant differences in the size and composition of such Committees.

IIJA also establishes required qualifications for membership on a State Freight Advisory Committee. Per 49 U.S.C. 70201(b), each member of a freight advisory committee shall have qualifications, including the following, as applicable:

- General business and financial experience;
- Experience or qualifications in the areas of freight transportation and logistics;
- Experience in transportation planning;
- Experience representing employees of the freight industry;
- Experience representing a State, local government, or MPO; or
- Experience representing the views of a community group or not-for-profit organization.

49 U.S.C. 70201(c) directs that State Freight Advisory Committees shall:

- Advise the State on freight-related priorities, issues, projects, and funding needs;
- Serve as a forum for discussion of State transportation decisions affecting freight mobility;
- Communicate and coordinate regional priorities with other organizations (for example, among a State's DOT, MPOs, tribal and other local planning organizations);
- Promote the sharing of information between the private and public sectors on freight issues; and
- Participate in the development of the State Freight Plan, including by providing advice regarding the development of the Freight Investment Plan.

DOT notes that the multimodal, multiagency mix of participants recommended above offers an excellent forum for the exchange of information needed to develop the required components of the State Freight Plan (described in more detail below), such as in the identification of significant freight system trends, needs, and issues with respect to the State; a description of how innovative technologies and operational strategies, including freight intelligent transportation systems, that improve the safety and efficiency of freight movement are considered; creating an inventory of facilities with freight mobility issues, such as bottlenecks; development of strategies to mitigate congestion or delay; improve supply chain resilience; and development of Freight Investment Plans that combine public and private funding.

The identification of problems and opportunities in a multimodal forum can lead to innovative solutions that may never rise to the level of a State Freight Plan priority. By

facilitating State, MPO, and local government access to highly skilled freight expertise, the Committee focuses and facilitates government efforts to incorporate freight into day-to-day planning efforts and raise the visibility of freight issues. For this reason, DOT recommends that State Freight Advisory Committees meet on a regular basis, not solely for the purpose of developing or revising a State Freight Plan.

DOT notes that if a State is establishing or updating a State Freight Plan and also opted to create a State Freight Advisory Committee, 49 U.S.C. 70202 requires that the State consult with its State Freight Advisory Committee on the State Freight Plan. DOT believes in general that it will be more beneficial to prepare a State Freight Plan based on State Freight Advisory Committee review and input. Neither the FAST Act nor IIJA requires, however, that a State Freight Advisory Committee be established or provide its approval for a State Freight Plan to become final. As such, the authority of the State to go forward with a State Freight Plan is not diminished by establishing a Committee. A State Freight Advisory Committee is advisory in nature and is not subject to Federal open meeting laws, though State open meeting laws may apply. DOT strongly encourages States to conduct State Freight Advisory Committee business in an open manner so that interested persons are able to observe any meeting of the Committee and be afforded opportunities to provide input.

23 U.S.C. 167(d)(2), provides that the Federal Highway Administrator, in re-designating the Primary Highway Freight System, shall provide an opportunity for State Freight Advisory Committees, as applicable, to submit additional route miles for consideration. Similarly, 49 U.S.C. 70103(c) authorizes the Under Secretary of Transportation to consider recommendations by State Freight Advisory Committees for

facilities to be included on the National Multimodal Freight Network. DOT notes that States are not statutorily constrained from placing requirements in the charters of their State Freight Advisory Committees to require State consensus with such Committee recommendations for such facilities to the Under Secretary or the Administrator.[3]

V. STATE FREIGHT PLANS

Beginning on December 4, 2017, to be eligible to obligate Federal funds provided through the NHFP (23 U.S.C. 167), States are required to have a State Freight Plan that is in effect, consistent with the requirements set forth in 49 U.S.C. 70202, and provides a comprehensive plan for the immediate and long-range planning activities and investments of the State with respect to freight.

DOT recognizes that many States are in the process of updating their State Freight Plans. DOT emphasizes that those Plans can be updated (including by amendment) to be compliant with the new IIJA requirements; however, any plan updated following the passage of IIJA on November 15, 2021 must address all of the new requirements to be compliant. The required elements of State Freight Plans under 49 U.S.C. 70202, as amended by IIJA, are listed below:

1. An identification of significant freight system trends, needs, and issues with respect to the State;
2. A description of the freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the State;

[3] The charter for the California Freight Advisory Committee (http://dot.ca.gov/hq/tpp/offices/ogm/CFAC/Final_CFAC_Charter_062813_3.pdf) is one example of a State Freight Advisory Committee charter that conforms to good practice, providing for committee membership, responsibilities, frequency of meetings, decision processes, reporting, etc. States can, of course, vary from this format, but DOT strongly recommends the development of a charter document.

3. When applicable, a listing of –
    A. multimodal critical rural freight facilities and corridors designated within the State under section 70103 of title 49 (National Multimodal Freight Network);
    B. critical rural and urban freight corridors designated within the State under section 167 of title 23 (National Highway Freight Program);
4. A description of how the plan will improve the ability of the State to meet the national multimodal freight policy goals described in section 70101(b) of title 49, United States Code and the national highway freight program goals described in section 167 of title 23;
5. A description of how innovative technologies and operational strategies, including freight intelligent transportation systems, that improve the safety and efficiency of the freight movement, were considered;
6. In the case of roadways on which travel by heavy vehicles (including mining, agricultural, energy cargo or equipment, and timber vehicles) is projected to substantially deteriorate the condition of the roadways, a description of improvements that may be required to reduce or impede the deterioration;
7. An inventory of facilities with freight mobility issues, such as bottlenecks, within the State, and for those facilities that are State owned or operated, a description of the strategies the State is employing to address those freight mobility issues;
8. Consideration of any significant congestion or delay caused by freight movements and any strategies to mitigate that congestion or delay;

9. A Freight Investment Plan that, subject to 49 U.S.C. 70202(c), includes a list of priority projects and describes how funds made available to carry out 23 U.S.C. 167 would be invested and matched;
10. The most recent commercial motor vehicle parking facilities assessment conducted by the State under 49 U.S.C. 70202(f);
11. The most recent supply chain cargo flows in the State, expressed by mode of transportation;
12. An inventory of commercial ports in the State;
13. If applicable, consideration of the findings or recommendations made by any multi-State freight compact to which the State is a party under 49 U.S.C. 70204;
14. The impacts of e-commerce on freight infrastructure in the State;
15. Considerations of military freight;
16. Strategies and goals to decrease --
    A. The severity of impacts of extreme weather and natural disasters on freight mobility;
    B. The impacts of freight movement on local air pollution;
    C. the impacts of freight movement on flooding and stormwater runoff; and
    D. the impacts of freight movement on wildlife habitat loss; and
17. Consultation with the State Freight Advisory Committee, if applicable.

The action of amending or updating a State Freight Plan to comply with the new requirements under IIJA will constitute a formal update of the plan and would restart the clock for submitting an updated State Freight Plan, which must be updated at least once every 4 years.

DOT emphasizes that the elements listed in 49 U.S.C. 70202 are the only required elements of State Freight Plans. Each element must be addressed if a State wishes to obligate NHFP funds available under 23 U.S.C. 167. As long as State Freight Plans cover the required elements, they may be organized in any structure that works best for individual States. Note that if a State wishes to obligate NHFP funds for a project (other than those exempt from inclusion in the Freight Investment Plan), including a freight intermodal or freight rail project, that project must be included in the fiscally constrained Freight Investment Plan as well.

The following paragraphs provide guidance on the minimum amount of information necessary to satisfy each required element. For each required element, DOT also identifies optional information/methods that States may consider including in their State Freight Plans. These items have been identified through a review of research papers, studies of best industry practices, and State Freight Plans that were completed immediately following the FAST Act. DOT is providing this information to help inform each State's freight planning process; ultimately, it is up to each State to determine which if any of these additional elements to include.

A State Freight Plan must address an 8-year forecast period (previously required by the FAST Act to be a 5-year horizon), although DOT strongly encourages an outlook covering the next 20 years. While IIJA provides that "A State freight plan described in subsection (a) shall address an 8-year forecast period" (49 U.S.C. 70202(d)), the Act also states that the plan should provide "a comprehensive plan for the immediate and long-range planning activities and investments of the State with respect to freight" (49 U.S.C. 70202(a)). In almost all transportation planning exercises, long-range planning

necessarily exceeds a period of 8 years. DOT notes that a freight plan horizon of only 8 years would not enable States to do more than list present problems and projects already in the development pipeline, without respect to longer-term trends and new technologies. In summary, whereas a planning forecast of 8 years is sufficient (and must be provided) to meet the statutory requirement, longer outlooks supplementing the 8-year forecast are strongly recommended for the overall State Freight Plan—if possible, corresponding at least to the 20-year outlook of the Long-Range Metropolitan and Long-Range Statewide Transportation Plans. Carefully developed forecasts of freight movements will be essential to the success of a freight plan whether it covers an 8-year period or a 20-year period. For example, it will be important to have accurate estimates of freight moving along a particular corridor and the numbers of trucks, trains, etc. associated with moving that freight in an efficient manner in order to select the most appropriate project or projects for that corridor. Improved freight travel modeling is necessary for estimating freight emissions accurately and to better inform alternatives analysis for freight projects, including multi-modal freight planning.

For States lacking a long-term freight modeling capability, Freight Analysis Framework (FAF) forecasts are acceptable as a default (www.bts.gov/faf). To assist States in long term freight planning, Section VII of this guidance contains a number of data and analysis sources that may prove useful. DOT continues to support further improvements in freight modeling through its freight model improvement program.

A special exception to this guidance on a 20-year outlook periods applies to the fiscally constrained Freight Investment Plan component of the State Freight Plan (49 U.S.C. 70202(c)(2)), which addresses the NHFP funding timeframe and can be updated

more frequently than the four-year requirement for the entire State Freight Plan. In the context of State Freight Plans, the statute requires that "the Freight Investment Plan component of a freight plan shall include a project, or an identified phase of a project, only if funding for completion of the project can reasonably be anticipated to be available for the project within the time period identified in the Freight Investment Plan." The statutes governing Long-Range Statewide Transportation Plans do not require these plans to be fiscally constrained, however, and in some cases, States may not be able to provide a fiscally-constrained state-wide list of freight projects exceeding the planning period of the Statewide Transportation Improvement Program (STIP), which is required to be fiscally constrained. States offering the Long-Range Statewide Transportation Plan as a State Freight Plan must include a Freight Investment Plan to meet State Freight Plan Requirements. DOT recommends that all Freight Investment Plans, at a minimum, be carefully aligned with the TIP and STIP documents for the respective State. Aligning this investment plan with the above-referenced documents enhances the State's ability to better prioritize their freight projects and ensures coordination between the State DOT and the MPOs. States may opt to extend the period of their Freight Investment Plans to longer intervals, including 20-year periods that correspond to the Statewide and metropolitan long-range plans, if this would help them for freight-planning purposes.

DOT notes that the contents of the State Freight Plan and its necessary components should comply with what a State determines is needed to guide planning and investment activities. DOT supports these State efforts to improve their freight planning and invites the inclusion of any aspects of freight planning that a State believes add value

to its planning effort in addition to addressing the required components under 49 U.S.C. 70202.

DOT has organized this section around the statutory requirements of 49 U.S.C. 70202 and each element includes subsections describing minimum requirements and suggestions (optional) that States may consider including in their State Freight Plans.

1. **An identification of significant freight system trends, needs, and issues with respect to the State;**

   Minimum Elements

   States have broad flexibility in addressing the trends, needs, and issues of their freight systems. To enhance the identification of these issues, State Freight Plans should begin with a discussion of the role that freight transportation plays in the State's overall economy, and how the economy is projected to grow or change. The discussion should address the key issues confronting the freight system, both in the present and anticipated in the future. Finally, this element should include discussion of forecasted freight movements and how those may be affected by broader economic trends within the State and/or region.

   Additional Recommendations for State Consideration

   This section could identify those industries which are most important to the economy of the State and the specific freight transportation modes and facilities most vital to the supply chains of these industries. Some of the key topics States may consider addressing include the needs to improve safety and reduce impacts of freight movement on the environment and on communities, particularly minority and low-income communities, and those disproportionately impacted by

freight activities, as well as future transportation labor force challenges and supply chain disruptions and resiliency. This description could include assessing the following: the benefits and burdens of freight movements, including air quality, noise, and vibration impacts; effects on community connectivity and cohesion; impacts of longer and more frequent trains at roadway/rail grade crossings; attracting and retaining a qualified workforce; truck parking capacity and information on truck parking availability; hazardous material transportation and emergency response capability; and areas with high levels of pedestrian and bicycle activity. Many of these issues can be identified through the State Freight Advisory Committee (if one has been established). In most instances, the State will also have identified critical freight issues in studies conducted through State agencies, MPOs, and academic or research institutions. Additionally, there are many national studies (such as through the Transportation Research Board of the National Academies of Science, Engineering and Medicine) and frequently, local case studies that focus on emerging freight problems, such as last mile delivery issues, that will be relevant to many States.

The following are possible items to consider when identifying the economic trends and forecasts that will affect freight:[4]

[4] There are many Transportation Research Board publications that can assist States in evaluating freight system trends and needs. Among them are NCFRP Report 8, Freight-Demand Modeling to Support Public-Sector Decision Making; NCHRP Report 606, Forecasting Statewide Freight Toolkit; NCHRP Report 388, A Guidebook for Forecasting Freight Transportation Demand; SHRP 2 Capacity Project C43, Innovations in Freight Demand Modeling and Data Improvement; NCHRP Report 750, Strategic Issues Facing Transportation, Volume 1: Scenario Planning for Freight Transportation Infrastructure Investment; and others. (See: http://www.trb.org/FreightTransportation/FreightTransportation2.aspx)

- Global, national, regional, and local economic conditions and outlooks, particularly those of the State, neighboring States or countries, and principal trading partners;
- Population growth and location;
- Income and employment by industry and service sector, including the expected employment by each sector of the transportation industry;
- Freight attributes of industry and service sectors (including heavy freight, less than truckload freight, and small package delivery);
- Type, value, and quantity of imports and exports;
- Industrial and agricultural production forecasts; and
- Forecasts of freight movements by commodity type and location, including small package deliveries associated with e-commerce, and projected port or rail freight activity.

DOT notes that when there is a high degree of uncertainty about future economic, industrial, and technological conditions, (e.g., changing energy markets, deployment of connected and autonomous freight vehicles), approaches, such as scenario planning, can help to develop alternative outlooks and investments that can accommodate more than one future outlook.

DOT strongly encourages States to include a discussion of supply chain resiliency, including the types of critical products moving through or delivered in the State and the impacts of congestion or delays in the movement of those products for people and businesses across the State. In particular, DOT suggests

consideration of critical products related to health, safety, energy, and food that are particularly vital to sustain human life.

DOT recommends that the State Freight Plan describe the conditions and performance of the State's freight transportation system, including trends in conditions and performance. This analysis would help to identify needs for future investment within the State. If a State has already conducted an analysis of the conditions and performance of its overall public infrastructure, that analysis could be referenced or incorporated into the State Freight Plan in so far as it pertains to the freight system. Similarly, States may be able to develop such measures from State asset management systems, Highway Performance Monitoring System data, Level of Service data from Transportation Management Centers, National Performance Management Research Data Sets (NPMRDS), or other sources. It is recommended that the performance measures used correspond to those required under Item 2 ("A description of freight policies, strategies, and performance measures") below.

Information on the condition and performance of private infrastructure is also encouraged, although it is acknowledged that this information is more difficult to obtain. State Rail Plans and other sources could be used to gather information on some aspects of freight rail and rail bridge data (e.g., miles and locations of freight rail that can carry cars weighing 286,000 pounds or greater, tunnel heights adequate for double stack rail cars, dual track sections). Similarly, States may have commissioned reports on port and waterway conditions, or may be able to establish performance conditions. Metrics for States to assess truck parking

capacity are offered for consideration in the summary report on the first Jason's Law survey, available here: http://www.ops.fhwa.dot.gov/freight/infrastructure/truck_parking/jasons_law/truckparkingsurvey/index.htm.

Data on port and waterway conditions and performance may also be available from port authorities, in Port Master Plans, or from automatic identification systems (AIS) for vessels and Global Positioning System (GPS) probe data for trucks in port areas and operating on port access roads. More information about performance data for measuring mobility for non-highway modes is provided in Item 7, "An inventory of facilities with freight mobility issues," below.

DOT acknowledges, however, that the 49 U.S.C. 70202 does not specifically require condition and performance data in State Freight Plans. States are not required or expected to undertake such an evaluation solely for the purpose of informing the State Freight Plan.

States are strongly encouraged to consider environmental justice and equity in identifying and evaluating significant freight trends, needs, and issues across the State. Environmental justice, as defined by the EPA, is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

2. **A description of freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the State;**

Minimum Elements

This section of the State Freight Plan is important for providing the overall approach the State will take to address the challenges described in the preceding section. The policies and strategies in the State Freight Plan are likely to reflect a mix of State legislative direction, discretionary decisions by State DOTs and other State agencies, decisions by other States, plans by MPOs, local and tribal governments, special transportation authorities (including port, airport, and toll authorities), military planning, and the accommodation of plans by private sector companies, such as railroads, marine terminal operators, pipeline companies, trucking companies, and others. States should identify any statutory and State constitutional constraints on freight-related investments and policies, such as prohibitions on spending State funds on certain kinds of infrastructure.

Additional Recommendations for State Consideration

The State could also discuss regional freight planning activities in which the State participates, identify freight-related institutions within the State, and explain the governance structures and funding mechanisms for such institutions.

DOT recommends that the State explain how it will measure the success of its strategies, policies, and investments in achieving the goals and objectives of the Plan. Such measurements may be qualitative, but preferably would be quantifiable and consistent with the measures (if any) used by the State to describe the conditions and performance of the freight infrastructure (including measures of pavement and bridge condition, traffic congestion and travel time, safety, emissions and water quality, and other factors). Where possible, the State

should consider the use of performance measures in the State Freight Plan that are consistent with those used in other State planning documents and in reports and grant requests submitted to the Federal government. These would allow a State to determine if it is achieving its objectives and to quantify and assess outputs and outcomes relative to expectations.

States are strongly encouraged to identify policies and strategies that address environmental justice and equity concerns arising from freight movements, particularly those affecting low-income and disadvantaged populations.

States should also consider freight policies and strategies that increase supply chain resilience in the State, particularly for the movement of critical products related to health, safety, energy, and food.

3. **When applicable, a listing of—**
    a. **Multimodal critical rural freight facilities and corridors designated within the State under section 70103 of title 49; and**
    b. **Critical rural and urban freight corridors designated within the State under section 167 of title 23;**

Minimum Elements

Compliance with this requirement is straightforward: if these corridors have been designated pursuant to the statutes given above, the corridors should be included in the State Freight Plan. Plans will need to be updated if corridors are added or previous designations are changed or redesignated.

Additional Recommendations for State Consideration

DOT also suggests, but does not require, that States to provide an inventory of the State's freight transportation assets, both publicly and privately owned, that it deems most significant for its freight planning purposes. This optional list could include elements that are either included or not included in the National Highway Freight Network or the National Multimodal Freight Network, such as locally important freight roads and bridges not on these networks, short line railroads, smaller border crossings, water (including port) facilities, waterways, pipeline terminals, smaller airports, etc. It also could include warehousing, freight transfer facilities, and foreign trade zones located in the State.

4. **A description of how the plan will improve the ability of the State to meet the National Multimodal Freight Policy goals described in section 70101(b) of title 49 and the national highway freight program goals described in section 167 of title 23;**

Minimum Elements

DOT notes that the goals of the National Multimodal Freight Policy are extensive and pertain to the National Multimodal Freight Network (49 U.S.C. 70103). These goals are to:

(1) Identify infrastructure improvements, policies, and operational innovations that strengthen the contribution of the National Multimodal Freight Network to the economic competitiveness of the United States, reduce congestion and eliminate bottlenecks on the National Multimodal Freight Network, and increase productivity, particularly for domestic industries and businesses that create high-value jobs;

(2) Improve the safety, security, efficiency, and resiliency of multimodal freight transportation;

(3) Achieve and maintain a state of good repair on the National Multimodal Freight Network;

(4) Use innovation and advanced technology to improve the safety, efficiency, and reliability of the National Multimodal Freight Network;

(5) Improve the economic efficiency and productivity of the National Multimodal Freight Network;

(6) Improve the reliability of freight transportation;

(7) Improve the short- and long-distance movement of goods that travel across rural areas between population centers, travel between rural areas and population centers, and travel from the Nation's ports, airports, and gateways to the National Multimodal Freight Network;

(8) Improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address multimodal freight connectivity;

(9) Reduce the adverse environmental impacts of freight movement on the National Multimodal Freight Network; and

(10) Pursue the goals described in this subsection in a manner that is not burdensome to State and local governments.

The goals of the NHFP (23 U.S.C. 167(b)) are similar but focus on investing in infrastructure improvements and implementing operational improvements on the highways of the United States.

Additional Recommendations for State Consideration

It is noteworthy that the National Multimodal Freight Policy goals are more comprehensive of freight transportation issues than are the required elements of State Freight Plans. States should strongly consider emphasizing aspects of their State goals and strategies intended to improve safety, security, and resiliency of the freight system, including through the use of enhanced designs, technologies, and multimodal strategies. Safety in particular is of paramount concern to the public and policy makers with more than 5,600 freight-related fatalities nationally in 2019.[5] New technologies offer great potential to reduce or even eliminate fatalities over the next several decades, but more conventional investments in safety are also highly effective in reducing accident risk.

It would be particularly informative to address how the State is addressing climate change, which is increasingly affecting the safety, reliability, and resiliency of the freight transportation system through severe weather events and other impacts. Similarly, strong consideration should be given to describing how the State plans to mitigate the effects of freight transportation on communities, particularly minority and low-income communities, and the environment. They are encouraged to discuss plans to reduce noise, vibration, air and light pollution, and barriers to movements in communities, and to provide information on freight investments that are intended to support economic opportunities for disadvantaged and low-income individuals, veterans, seniors, youths, and others

[5] See Table 6.1 in Freight Facts and Figures, https://www.bts.gov/browse-statistical-products-and-data/freight-facts-and-figures/fatalities-freight-transportation.

with local workforce training, employment centers, health care, and other vital services.

Although not cited as a component of the National Multimodal Freight Policy or the NHFP goals, States are invited to provide information on how they will seek to develop and maintain an adequate workforce for the freight transportation industry, including opportunities for small and disadvantaged business enterprises. This may include information on workforce development plans, registered apprenticeships, the creation of good jobs with the choice of a union, and other efforts to attract and retain a qualified workforce.

DOT recommends that these goals be addressed sequentially in the State Freight Plan, but this is not mandatory. Where possible, DOT recommends that State goals and policies (addressed under Item 2, "A description of freight policies, strategies, and performance measures," above) should be associated with comparable components of the National Multimodal Freight Policy and the NHFP. DOT also recommends that each State identify which goals it believes to be most important and merit the largest focus. DOT acknowledges that a State may not have specific goals or investments pertaining to all elements of the National Multimodal Freight Policy or the NHFP and notes that this is not required for a compliant State Freight Plan.

5. **A description of how innovative technologies and operational strategies, including freight intelligent transportation systems, that improve the safety and efficiency of freight movement, were considered;**

Minimum Elements

States should describe any innovative technologies and operational strategies that are currently planned for and/or being implemented across the State. States should also describe how these technologies and operational strategies can be integrated into existing infrastructure as well as any corresponding infrastructure needs to implement these technologies and strategies.

Additional Recommendations for State Consideration

States can use a range of innovative technologies and operational strategies to improve the safety and efficiency of freight movement. Many solutions include Transportation Systems Management and Operations (TSMO) approaches that maximize the operational performance of the existing transportation system and provide flexible solutions to manage dynamic conditions. Information technology includes freight traveler information systems, electronic credentialing, automated permitting, smart roadside commercial motor vehicle monitoring, truck queue management and appointment systems as ports, truck parking information management systems, and border wait time information. Safety strategies include truck safety warning systems, work zone management for trucks, road weather management, and traffic incident management. Arterial management can include traffic signal timing for trucks, access management at freight facilities, active traffic demand management, off-peak deliveries, and managed truck lanes. Finally, integrated multimodal transportation can be used to improve efficiency through interconnected freight flows utilizing highway, rail, air, and waterborne transportation.

In the last few years, the deployment of advanced driver assistance systems has accelerated rapidly. Connected autonomous vehicles, including trucks, may become increasingly common in the coming decades. These and other technologies, including intelligent transportation systems, could greatly improve the safety and efficiency of freight and passenger movements. They may enable freight carriers of all modes and passenger cars and trains to make safer and more efficient use of existing infrastructure capacity due to fewer collisions, more efficient and coordinated vehicle operations, and the ability to rapidly route around congested locations, including corridors with significant transit lines and high pedestrian and bicycle traffic. Freight mobility integration into communities with Complete Streets policies can reduce bicycle and pedestrian fatalities and injuries, and aid States in meeting Safety Performance Measures. Safety improvements are already being realized through features such as automated braking and lane departure warning systems, but impacts will become much more pronounced over the next 10-20 years. As such, DOT strongly encourages States, when developing or updating their State Freight Plans, to thoroughly explore the abilities of these new technologies and how they will affect the need to modify or expand existing infrastructure.

The private sector has been leading the way with regard to applications of advanced driver assistance systems, large data sets to plan and coordinate vehicle and freight logistics, new vehicle and engine technologies, unmanned aircraft and ground systems, and many other innovative applications of technology.

As such, States are encouraged to work with private terminal operators, freight carriers, third party logistics providers, academic institutions, and other participants in the freight transportation system to develop credible forecasts of the use of innovative technologies and operational strategies within a State or across its borders. Forums such as State Freight Advisory Committees provide excellent opportunities for State and other public entities to consult with private interests to acquire information on their expected rate of adoption of new technologies, how these technologies will impact the freight system, and the means by which the public sector can best accommodate them with infrastructure investments, intelligent transportation system deployment investments, and regulatory support. Because Freight Advisory Committees should also include representatives from the transportation industry workforce, states have an opportunity to utilize their on-the-ground experience to identify technology implementation problems, safety issues, and other challenges.

Special studies done by agency experts, consultants, and State academic institutions are a valuable source of information in the development and deployment of connected and automated vehicle technologies. Familiarity with the technology plans of other neighboring States, including through participation in their State Freight Advisory Committees or regional or corridor-based freight groups, will help to promote the use of compatible intelligent transportation systems for multistate system users. Ultimately, however, consultation with private sector interests about these technologies will help to ensure that public

investments provide public benefits from improved goods movement within the State and across multistate regions.

6. **In the case of roadways on which travel by heavy vehicles (including mining, agricultural, energy cargo or equipment, and timber vehicles) is projected to substantially deteriorate the condition of the roadways, a description of improvements that may be required to reduce or impede the deterioration;**

Minimum Elements

In general, the State Freight Plan should address the problems and strategies to manage heavy freight vehicles on roadways. State Freight Plans should include a description of any specific improvements necessary to reduce deterioration along the State's roadways.

Additional Recommendations for State Consideration

In recent decades, domestic energy production has increased the volume and weight of trucks and other modal freight activity to support growth in this sector. This has led in some cases to accelerated deterioration of roads and bridges not originally built for large volumes of heavy trucks and potentially to impacts in other transportation modes. DOT recommends that State Freight Plans make use of existing research, to the extent possible, to address the impacts of heavy vehicles.[6]

[6] For example, Texas DOT made use of information developed by its Energy Sector Impacts Task Force and other sources to inform its State Freight Plan. See the following for more information: Texas Department of Transportation, Task Force on Texas' Energy Sector Roadway Needs, Report to the Texas Transportation Commission, December 13, 2012, http://ftp.dot.state.tx.us/pub/txdot-info/energy/final_report.pdf; Texas Department of Transportation, Texas Freight Mobility Plan, Final, January 25, 2016, https://ftp.txdot.gov/pub/txdot/move-texas-freight/studies/freight-mobility/2016/plan.pdf.

This analysis can also consider the viability of shifting heavy freight to modes other than highways (such as rail or water). DOT recommends, but does not require, that the State Freight Plan address special needs of waterways, ports, and railways to accommodate vessels and trains used to move very heavy resource-related materials.

7. **An inventory of facilities with freight mobility issues, such as bottlenecks, within the State, and for those facilities that are State owned or operated, a description of strategies the State is employing to address the freight mobility issues;**

Minimum Elements

The statute does not provide specific instructions as to what qualifies as a significant mobility impediment or bottleneck, leaving this determination to the State. States have a significant degree of flexibility to determine which facilities most concern them based on methods they employ to measure mobility. States should include an inventory of locations that it believes have freight mobility issues. This section should include a description of strategies being taken to address freight mobility issues, either by the State or private sector.

Additional Recommendations for State Consideration

FHWA published a Truck Freight Bottleneck Reporting Guidebook that outlines methods for identifying and measuring bottlenecks, available at: [https://www.fhwa.dot.gov/tpm/guidance/hop18070.pdf].

State Freight Plans may emphasize the identification of freight facilities that will likely be on the National Highway Freight Network and the National Multimodal

Freight Network. States are encouraged to identify any significant intermodal connector/first- and last-mile or other mobility problems even if not on these networks. States are strongly encouraged to describe mobility issues associated with non-highway modes. States are also strongly encouraged to consider freight mobility issues occurring in urban settings that affect multiple transportation users including transit riders, bicyclists, and pedestrians.

Performance measurement is important to understand freight flows and bottlenecks and gain insight into where investments, both operational and capital, could best help improve the freight network. In the discussion of Item 2. "A description of freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the State," DOT describes various forms of performance metrics available to States. With regard to measuring freight mobility, DOT also recommends consideration of methods that address the fluidity of freight movement through the use of multimodal data and analysis to understand source-to-destination freight trips. Many States have used truck probe data and truck counts to evaluate freight performance at the facility level. Through the Freight Logistics Optimization Works (FLOW) initiative, DOT and other partners are making available resources for data and approaches to help with fluidity analyses that better illuminate freight bottlenecks at the system level, including through use of data provided by the private sector. As of yet, however, applications of fluidity measures are limited by a lack of publicly available data.

Until consistent national-level freight fluidity data are available, DOT notes that there are numerous potential sources of information on facilities with freight mobility issues. One particularly valuable resource is the State Freight Advisory Committee. Public and private participants in the State Freight Advisory committee will often have first-hand, specific data about freight mobility problems in and on public and private facilities throughout the State. A number of States, MPOs, and regional or corridor coalitions have developed detailed studies of mobility problems and solutions. States may also consult reports about the locations of major highway freight bottlenecks issued periodically by FHWA at [https://ops.fhwa.dot.gov/freight/freight_analysis/mobility_trends].

Information about railroad bottlenecks may be available in State Rail Plans, or through consultation with railroads serving the State. Similarly, MPOs can provide information about locations where railroad-highway crossings or railroad-railroad crossings create congestion for vehicles, trains, pedestrians, and non-motorized vehicles, including bicycles. Railroad unions may be able to share important concerns about bottlenecks. DOT notes that, because railroad freight and railroad-highway grade crossing and separation projects are eligible for funding under the Nationally Significant Freight and Highway Projects (INFRA Grants) program and the NHFP, as well as new funding programs created by the IIJA, railroads will have new incentives to participate in multimodal freight investment and planning at a State, MPO, and local level.

Port authorities, either participating through State Freight Advisory Committees, MPOs, or in direct consultation with the State, can provide valuable information

about mobility and other constraints facing the port, including landside connections to highway and railroad systems, as well as connections to inland waterway systems and pipelines. Their Master Plans and other planning documents can also provide forecasted volumes that are useful for predicting where future mobility and other constraints may occur. The Port Performance Freight Statistics Program (www.bts.gov/ports) is a source of data on capacity and throughput for the largest ports. In some States, the State DOT is responsible for port investments and will already have mobility issues identified. The U.S. Army Corps of Engineers may have lock performance and outage information that could inform States about potential inland waterway bottlenecks or disruptions. Port and maritime labor organizations, marine terminal operators, barge and vessel operators, and maritime and port industry associations can be accessed directly to identify facilities with mobility constraints or collectively through State Freight Advisory Committees.

All aspects of the energy transportation pipeline industry are regulated to some extent by Federal and State agencies, which may be able to provide information on congested segments and facilities. Similarly, pipeline operators and their associations may contribute useful information. Potential methods to present solutions to the mobility problems are identified in the next section, immediately below.

States may also consider potential freight and supply chain bottlenecks resulting from incidents such as major storms, cybersecurity incidents, or labor-management issues. All these types of incidents could potentially result in

bottlenecks that inhibit freight movement, especially for critical products related to health, safety, energy, and food. States may consider strategies to preemptively address these vulnerabilities to increase overall supply chain resilience.

8. **Consideration of any significant congestion or delay caused by freight movements and any strategies to mitigate that congestion or delay;**

Minimum Elements

States are already required to identify facilities with mobility impediments (see Item 7 above), and this inventory can be used to address this element. States should make an effort to provide quantitative or qualitative assessments of delay to freight movements on those facilities previously identified. Strategies to address congestion and delay can be drawn from any source preferred by the State, including pre-existing evaluations and plans.

Additional Recommendations for State Consideration

States are encouraged to consider network effects of mitigation actions, and where possible, to look to a broad mix of solutions, including adding multimodal capacity, improved intelligent transportation systems and technological solutions, changed operating procedures (e.g., longer port gate hours), incentives to use off-peak delivery times, regulatory changes to eliminate impediments to improved efficiency (e.g., removing regulatory barriers to connected autonomous vehicles), and multimodal approaches to resolve freight congestion problems.

Consultation with the various parties participating in the State-wide assessment of mobility impediments can yield essential information about alternatives not previously considered, and, as noted earlier, can inform States about rapidly

emerging technology deployments in the private sector. Private freight carriers may also share their plans to address rail, port, waterway, pipeline, and air cargo capacity problems, which may affect State plans for highway capacity projects linked to these facilities or otherwise affected by them.

9. **A Freight Investment Plan that, subject to 49 U.S.C. 70202(c)(2), includes a list of priority projects and describes how funds made available to carry out section 167 of title 23 would be invested and matched;**

Minimum Elements

States must include all projects that will utilize NHFP funding available under 23 U.S.C. 167 in their Freight Investment Plan, with the exception of those described in 23 U.S.C. 167(h)(6). As required in 49 U.S.C 70202(c)(2), the Freight Investment Plan component shall include a project, or identified phase of a project, only if funding for completion of the project can be reasonably anticipated to be available for the project within the time period identified in the Freight Investment Plan. This language pertains to "Fiscal-Constraint" and has the same meaning as is applied to TIPs and STIPs (see 23 C.F.R. § 450.218(o)). Multi-state projects would require coordination of the States involved such that the project is accurately and consistently reflected in each State's Freight Plan.

Additional Recommendations for State Consideration

DOT encourages States to include non-NHFP funded or unfunded projects in their State Freight Plans if the project would address needs identified in their plans. This strategy helps stakeholders see the universe of potentially beneficial freight projects, especially those for which NHFP funding is not sufficient to address

project costs. Such projects could be considered for future Federal discretionary grants or other State, local, or private funding. If these additional projects are included in a State Freight Plan, it should be indicated that these projects are not part of the prioritized list of fiscally constrained NHFP projects. Other than projects considered for future discretionary grant opportunities, DOT recommends that all freight projects that are included in the State Freight Plan and which involve the expenditure of public funds be included in TIPs, STIPs, and be consistent with Long-Range Metropolitan and Statewide Transportation Plans. To the extent that States have prepared economic analysis for specific projects, DOT encourages States to consider the results of those analyses when determining which projects are included on their Freight Investment Plan, and also to refer to the results of benefit-cost analyses, as appropriate, when and if the project is mentioned in the State Freight Plan. Identifying projects by mode is sometimes useful, but is not required.

10. The most recent commercial motor vehicle parking facilities assessment conducted by the State under 49 U.S.C. 70202(f);

Minimum Elements

Subsection (f) specifies that as part of the development or updating, as applicable, of a State Freight Plan under this section, each State that receives funding under section 167 of title 23, in consultation with relevant State motor carrier safety personnel, shall conduct an assessment of—

(1) the capability of the State, together with the private sector in the State, to provide adequate parking facilities and rest facilities for commercial motor vehicles engaged in interstate transportation;

(2) the volume of commercial motor vehicle traffic in the State; and

(3) whether there exist any areas within the State with a shortage of adequate commercial motor vehicle parking facilities, including an analysis (economic or otherwise, as the State determines to be appropriate) of the underlying causes of such a shortage.

Parking facilities provide commercial motor vehicle operators, including buses and commercial motor vehicles, a location where they can take rest breaks in compliance with hours-of-service (HOS) regulations. Basic data on parking capacity and utilization includes locations, number of commercial motor vehicle parking spaces, utilization information, and demand, based upon truck volumes and freight origins and destinations. Stakeholder engagement through outreach to the trucking industry can provide data on driver perceptions on parking availability, but also provides an understanding of driver behavior and decision-making to consider in addressing parking needs. Commercial motor vehicle parking metrics include:

- An inventory of commercial motor vehicle parking supply collected at a facility level for rest areas and other public facilities that measure the capacity of a commercial motor vehicle parking location.
- An identification of additional commercial motor vehicle facilities that have been completed by the State since the prior State Freight Plan and

new facilities planned to be developed or expanded by the State in the next 4 years.

- General information on private commercial motor vehicle parking supply at truck stops and other similar facilities to allow for assessment of private sector capability to provide parking facilities for commercial motor vehicles.
- State level measures such as total number of public and private parking spaces, number of spaces in relation to National Highway System mileage, or number of spaces in relation to truck vehicle miles of travel.
- Safety and security issues, such as crashes with commercial motor vehicles parked on the side of the road, fatigue-related crashes, HOS violations, or crime at parking facilities.
- Operational demand for commercial motor vehicle parking, such as truck vehicle miles of travel, truck traffic counts and projections, and major origins and destinations, such as freight generators and intermodal connectors.

A major focus of the analysis should include safety and crashes involving commercial motor vehicles. Commercial motor vehicles parked on highway ramps and shoulders present a risk to commercial motor vehicle drivers and a hazard to other drivers. Safety considerations also include driver fatigue-related crashes and driver safety at parking facilities. States are strongly encouraged to develop a plan outlining existing safety risks around the shortage of truck parking

and identify strategies to improve commercial driver safety through the expansion of truck parking facilities in their State.

Understanding shortages of commercial motor vehicle parking and underlying causes of such a shortage should consider freight origins and destinations and the importance of parking relative to major freight generators. Parking near ports, intermodal facilities, and distribution centers should be considered.

Understanding the impact of congestion on travel time and the related driving distance is important to assessing parking needs along major freight corridors.

Additional Recommendations for State Consideration

Parking activity is tied to a set of factors associated with highway safety; mandatory rest requirements for commercial vehicle operators; and commercial motor vehicle operations in the context of supply chains. Parking deficits and commercial motor vehicle parking in unsafe locations are causing States to look at opportunities to expand parking capacity. Expanding commercial motor vehicle parking capacity requires an assessment of where parking capacity deficiencies exist. Metrics for States to assess truck parking capacity are offered for consideration in the summary report on the Jason's Law survey, available here: *http://www.ops.fhwa.dot.gov/ freight/ infrastructure/ truck_ parking/ jasons_ law/ truckparkingsurvey/ index.htm*.

Additional data can provide information on parking capacity, utilization, demand, and driver needs. Additional commercial motor vehicle parking metrics to consider include:

- Commercial motor vehicle parking demand and utilization collected at a facility or corridor level that measure the demand for commercial motor vehicle parking or the utilization of commercial motor vehicle parking facilities by day of the week and time of day.
- Safety and security issues for drivers, such as crime and security provisions at parking facilities.
- Driver needs measures for driver perception, issues, and amenity needs at parking facilities.
- Environmental and local community impacts of commercial motor vehicle parking, such as emissions, noise, or traffic.

Because of the strong linkage between freight transportation and land use, engaging MPOs and local municipalities on commercial motor vehicle parking may help with considering commercial motor vehicle parking as part of freight-intensive land use development. This could also incorporate methods for mitigating impacts of commercial motor vehicle parking on local communities, such as truck stop electrification.

The National Coalition on Truck Parking, which includes public and private sector organizations with an interest in advancing safe truck parking, has developed resources on truck parking capacity, technology and data, funding, finance and regulation and state, regional and local government coordination available at:

[https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups].

Truck Parking Information and Management Systems (TPIMS) that collect data

on parking availability may also provide the State with parking usage data and are a potential means of providing drivers with real-time parking availability.

11. The most recent supply chain cargo flows in the State, expressed by mode of transportation;

Supply chain cargo flows represents end-to-end movement of freight and provide essential information for planning infrastructure investments. Understanding supply chain cargo flows for a State includes information about the State's economy; operation and logistics of freight facilities such warehouses and distribution centers; and how commodities are transported across the State on a multimodal transportation network. While information about transportation network system performance for a single mode, land use and locations of freight facilities, and economy is tracked by public agencies, DOT acknowledges that commodity level operations and logistic information is difficult to access due to privacy concerns. In addition, this proprietary business-sensitive freight operations and logistics information is spread among multiple agents of the supply chain, including shippers, carriers, receivers, and logistics agencies, and adds challenges to sourcing consistently available information.

Minimum Elements

This analysis should include data aggregating total cargo flows by mode, regardless of commodity type and geography. The FAF provides estimated freight flow data by mode of transportation and can be a starting point for this analysis. DOT recognizes that the definition of "most recent" will depend on the

data sources chosen to support this analysis. Ideally, the data sources will have been updated within the previous three years, and they should not be older than five years in the past. Similarly, the level of granularity in the analysis will depend on the data sources used.

Additional Recommendations for State Consideration

DOT encourages States to develop the State's economic profile by identifying major industries, major trading partners and major commodities that are transported into, outside and within the State by various modes of transportation (See discussion of Item 1: Identification of Significant Freight System Trends, Needs, and Issues with Respect to the State). Identifying significant external (State or country) trading partners can be useful in identifying gateways (both within the State and outside of the State) that can inform where supply chains flow and help prioritize corridor and gateway investments within the State and nation. Gross Domestic Product (GDP) information (https://www.bea.gov/data/gdp) published through Bureau of Economic Analysis is a potential data source for developing a State's economic profile.

DOT encourages States to focus their attention on cargo flows pertaining to the State's major industries or commodities rather than trying to describe every commodity. DOT encourages States to pursue data with the lowest level of granularity (i.e., county to county), but recognizes difficulties relating to availability of that data and does not require it to meet the minimum requirements. States are highly encouraged to include cargo flows for critical products related to health, safety, energy, and food that are particularly important for State and where

shortages due to congestion or other delays would cause substantial risk to the State or other industries within the State.

DOT recommends States to engage the freight industry though State Freight Advisory Committees to forge partnerships in sharing major freight operations and logistics information identifying major cargo flows, flow destinations and supply chain bottlenecks to improve end-to-end movement of freight that is critical to inform the State Freight Plan.

12. An inventory of commercial ports in the State;

Minimum Elements

This section of the State Freight Plan should include a listing of all commercial ports in the State that are active at the time the State is updating their State Freight Plan. For purposes of this guidance, a commercial port would be defined as any coastal seaport, inland waterway or Great Lakes port, inland port, land port of entry, or airport/spaceport, both privately owned/operated and publicly owned/operated, within the State. For coastal seaports, inland waterway or Great Lakes port, inland port, and land port of entry, any of those commercial ports moving more than two million short tons of cargo annually, as of the most recent data available for that commercial port, should be included in the inventory. The Port Performance Freight Statistics Program (www.bts.gov/ports) is a source of data on capacity and throughput for the largest ports.

Additional Recommendations for State Consideration

DOT encourages States to consider including an inventory of cargo-handling commercial airports in their State, given the important role that aviation plays in transporting high-value, time-sensitive goods.

DOT encourages States to consider providing additional information about each commercial port and airport, such as the total throughput, specific commodities moved, and other defining characteristics of the facility (i.e., number of terminals, multimodal connections, equipment, etc.).

The U.S. Army Corps of Engineers (USACE) Waterborne Commerce Statistics Center (link) provides data on tonnage for maritime commercial ports. DOT recommends use of the Bureau of Transportation Statistics (BTS) T-100 Market (All Carriers) data set to measure total freight landing/departing from airports and the BTS Transborder Freight data set for land ports of entry. Securing access to freight data at inland ports that primarily serve rail may require States to work with the private sector to determine total cargo moved.

States are not prohibited from including facilities in this inventory that do not meet the minimum tonnage threshold, particularly if those facilities had a down year due to factors outside their control or are facilities the State expects will meet the threshold in the future, for example, due to expected growth in cargo movements.

13. **If applicable, consideration of the findings or recommendations made by any multi-State freight compact to which the State is a party under 49 U.S.C. 70204;**

Minimum Elements

If a State belongs to a multi-State freight compact, as defined under 49 U.S.C. 70204, then the State Freight Plan must document how the State considered any findings or recommendations made by that multi-State freight compact. 49 U.S.C. 70204 requires the Secretary of Transportation to establish a program to provide grants to multi-State freight compacts or States seeking to form a multi-State freight compact. The statute does not define or identify any existing compacts, so it is up to the State to determine if they currently belong to an existing multi-State freight compact.

Additional Recommendations for State Consideration

States may consider addressing the findings or recommendations made by any multi-State organization in their State Freight Plans, even if those organizations do not constitute a "multi-State freight compact" as defined in 49 U.S.C. 70204.

14. The impacts of e-commerce on freight infrastructure in the State;

The use of e-commerce for purchasing goods has significantly increased in recent years, and has accelerated since the onset of the COVID-19 pandemic in mid-March 2020. This e-commerce growth has impacted freight transportation patterns and related transportation infrastructure. These impacts are likely to continue to grow in the coming years due to projected, continued e-commerce growth.

One of the most obvious ways e-commerce is impacting freight transportation infrastructure is through increased, direct deliveries to consumers, often to

people's homes. While overall transportation volumes are not necessarily increasing as a result of e-commerce, due to individuals or families making fewer trips to commercial retail stores, freight transportation shipment patterns have likely become more complex, due to the much greater number of delivery locations. E-commerce shipments to people's residences increases freight volumes on roadways and streets not designed for freight vehicles. Additionally, in some cases freight carriers will not deliver shipments unless someone is available to accept the package(s), which can result in carriers not making the deliveries and needing to make additional trips to drop off the shipments. Some communities are working with freight carriers to address these issues by creating designated delivery locker locations, which are generally located near residential areas, close enough for many people to easily travel to the lockers but with a small enough number of locations to significantly reduce the number of stops freight carriers need to make for deliveries.

Increased e-commerce shipments are also creating greater freight transportation infrastructure impacts in many commercial retail areas, which in many cases have experienced increased frequency of freight deliveries. The growing number of curbside deliveries creates challenges in many communities, especially when communities also need to balance other transportation needs, such as accommodating pedestrians, bicyclists, other micromobility users, private car drivers, transit and intercity buses, and service providers (such as utility or construction vehicles). In some high-density locations, freight carriers themselves are utilizing cargo bikes to make deliveries.

Additionally, some consumers are utilizing curbside pickups when making online purchases, to minimize physical contact while reducing shipping costs. It is important for communities and transportation professionals to understand the land use patterns in their jurisdictions, which strongly influence not only freight delivery and pickup demand but also non-freight transportation volumes, both by location and by time of day, as well as impacts to other transportation users and modalities.

These new supply chain technologies and approaches are changing where, when, and how all types of freight vehicles are utilizing the transportation infrastructure.

Minimum Elements

State Freight Plans should include a narrative describing how shifts toward e-commerce are affecting freight infrastructure in the State. This section should describe recent effects as well as projected impacts over the next eight years. To the extent that data is available, States should consider supplementing their narratives with applicable data, such as changes in warehousing space and capacity within the State.

Additional Recommendations for State Consideration

States may consider working through their State Freight Advisory Committee or other stakeholder groups to identify impacts of e-commerce on freight infrastructure. States may consider working directly with local governments and MPOs to get perspective on how local land-use patterns are affected and changing in response to new demand.

15. Considerations of military freight;

The expeditious movement of military cargoes and equipment in support of the global deployment ability and sustainment of U.S. Armed Forces is critical for national defense. These cargoes travel on the same infrastructure that commercial freight moves on, and it is vital that this infrastructure is maintained to be in a state of readiness at all times. The military is a critical economic driver for many States and it is a driver of freight and cargo movements. This includes the movement of military personnel, supplies, and equipment around the United States, and throughout the world. The Department of Defense's (DOD) U.S. Transportation Command (USTRANSCOM) is the single point of contact for completing deployment and global distribution for the military in support of the National Military Strategy. The expeditious movement of military equipment is central to DOD's mission of providing military forces needed to deter war and to protect the security of the Nation. The military organizes equipment and personnel into convoys for travel on public roads and must communicate with States to protect public safety and minimize disruption of civilian transportation while the military convoys are in transport. Cooperation between the military and Federal, State, and local government agencies is essential for safe and successful military convoy deployments.

Minimum Elements

At minimum, State Freight Plans must include an unclassified discussion of military freight within their State. Plans should identify specific military installations as well as key transportation infrastructure within their State

identified by USTRANSCOM (e.g., Strategic Highway Network, Strategic Railroad Corridor Network, etc.) that support military cargo movement, including highways, railroads, seaports, and airports. USTRANSCOM identifies these assets by type and State, as well as specific corridor studies, on their website. Note that some of these corridor studies are restricted access, so States are encouraged to reach out to USTRANSCOM for more information. States should be cognizant that military freight, like other types of freight cargo, may solely pass through their State on its infrastructure as it moves from its origin to destination. States should make sure to consider these impacts in their discussion as well.

In terms of presenting information on military cargoes, this information can be aggregated and does not need to delineate between type of cargo/equipment. States should consider vehicle size and weight-related impacts and needs related to military freight movements.

FHWA has developed a publication on coordination procedures between States and DOD to support military deployments: Coordinating Military Deployments on Roads and Highways a Guide for State and Local Agencies (https://ops.fhwa.dot.gov/publications/fhwahop05029).

Additional Recommendations for State Consideration

States are encouraged to collaborate with USTRANSCOM and the military installations located within their respective State on addressing any additional information necessary, including deployment needs, training, types of moves, and

deficiencies that are being or need to be addressed. States are encouraged, but not required, to provide specific tonnage estimates of military cargo.

16. Strategies and goals to decrease --

a. the severity of impacts of extreme weather and natural disasters on freight mobility;

b. the impacts of freight movement on local air pollution;

c. the impacts of freight movement on flooding and stormwater runoff;

d. the impacts of freight movement on wildlife habitat loss;

Environmental factors – specifically climate variability and climate change – pose threats to U.S. transportation systems. When large-scale events disrupt freight systems, supply chains can fail, and populations are at risk of losing access to basic necessities and to critical goods flows needed to support infrastructure repairs and post-disaster recovery. The range of impacts from these threats may include flooding and damage to highways, limited waterway access, buckled runways, and weakened structures such as bridges. Severe conditions may reduce the life of capital assets, increase operational disruptions, and create the need for new infrastructure. Some consequences may require changes in the design, constructions, siting, operation, and maintenance of infrastructure. These consequences can also jeopardize national investment in transportation infrastructure, weaken mobility and the economy, and compromise the safety of the traveling public. Finally, climate change has been shown to disproportionally impact vulnerable populations: older adults, children, low-income communities,

and communities of color. These communities have less capacity to prepare for and cope with extreme weather and other climate change-related events; and it is vital that these populations are meaningfully involved in discussions about solutions to mitigate impacts from transportation actions and from climate change, including supply chain-disruptions.

All of these factors can stress our nation's freight and logistics system. Increases in heavy precipitation events, coastal flooding, heat, wildfires, and other extreme weather threaten freight infrastructure and have the potential to impede freight mobility. Much of our nation's critical freight infrastructure is located in regions vulnerable to flooding, including many ports, airports, and rail lines. Storm-related flooding – exacerbated by rising sea levels in coastal areas – can close railyards and railways, low-lying roads, and maritime port cargo facilities disrupting supply chain patterns and leading to delays in cargo movement.

Transportation accounted for the largest portion (27 percent) of total U.S. greenhouse gas (GHG) emissions in 2020. More than one-third of that amount came from freight transportation sources, especially medium and heavy trucks, which accounted for 24 percent of the U.S. transportation sector GHG emissions despite making up only 9 percent of total vehicle miles traveled. The Biden-Harris Administration has set an ambitious goal that at least half of all new vehicles (including both light- and heavy-duty vehicles) sold in the United States by 2030 will be zero-emissions vehicles. Carriers are increasingly exploring the use of electric and alternative fuel vehicles and making sustainability commitments.

Finally, while climate change-related extreme weather and flooding events can have significant impacts on freight mobility, freight mobility can also negatively impact wildlife habitats and air quality, particularly as freight movements and facilities take on a greater footprint and carry more freight traffic through and near wildlife corridors, crossings, and population centers. Expansion of infrastructure assets can reduce or eliminate existing wildlife habitats and threaten wildlife populations. Increases in freight movement can raise emission levels of harmful air pollutants, such as nitrous oxide and diesel particulate matter. These pollutants can cause serious breathing problems and other health issues, especially in children and in elderly populations.

Minimum Elements

Consideration and inclusion of all four of these elements is required for a State Freight Plan to meet minimum requirements. At minimum, State Freight Plans should set quantifiable goals to decrease the impacts of each of the 4 areas identified in the statute and identify strategies to achieve those goals. As part of setting goals, the State Freight Plan should include a discussion of existing conditions ("the baseline"), including reference to recent related events, such as extreme weather/natural disaster or flooding/stormwater runoff, changes in air quality, siting of freight facilities in or near wildlife areas and population centers, as well as consideration of anticipated impacts to freight transportation as the result of continued climate change and extreme weather and flooding events, and impacts of freight emissions and increasing freight volumes on communities and wildlife. Existing estimates of air pollution, including greenhouse gas emissions,

for cities and counties can be found on the EPA's website and these data should be included as reference point in State Freight Plans. FHWA's environmental toolkit provides a number of resources relating to air quality, stormwater, floodplains, wildlife, and habitat and ecosystems that can be used to set goals and identify strategies for addressing those goals. FHWA recently released a report on Freight Resilience Planning that provides a summary of current practices, methods, and gaps in freight resiliency planning that could inform efforts to address climate change and extreme weather risks.

Additional Recommendations for State Consideration

State DOTs are strongly encouraged to work collaboratively with other State agencies to develop goals and identify strategies for inclusion in their State Freight Plan. States are also strongly encouraged to work closely with local governments and MPOs to assess each of these areas. Local governments and MPOs may have more specific tools and data that can be used to set goals.

DOT strongly encourages States to identify strategies to address environmental justice and equity considerations arising from freight movements, especially for communities that may disproportionally experience consequences from climate change and other pollutants directly or indirectly arising from freight movements. States are particularly encouraged to establish State Freight Advisory Committees (see section 4 of this guidance) that include diverse representation and to conduct enhanced outreach to low-income populations and disadvantaged communities in developing the plan. States are strongly encouraged to evaluate existing freight routes and consider whether shippers could be incentivized to choose alternate

modes of transportation or alternative routes that do not disproportionately affect disadvantaged communities or other vulnerable populations and incentivizing the use of other modes of freight transportation (supply chain routes) and reduced or zero-emission vehicles.

States are encouraged to leverage existing statewide resilience plans and strategies, as well as long-range statewide and metropolitan transportation plans, and apply those to a freight-specific context. States are encouraged to consider nature-based improvements for resilience strategies in addition to strategies that harden existing infrastructure. Under FHWA's Transportation Performance Management program, States have set targets related to mobile on-road emissions, and States are encouraged to build off those targets in their State Freight Plans. DOT issued a Climate Action Plan in August 2021 that identifies a number of strategies DOT is taking to bolster adaptation and increase resilience. States are welcome to draw strategies from this action plan that can be incorporated across their freight transportation planning process. FHWA also recently released a report on Freight Resilience Planning that provides a summary of current practices, methods, and gaps in freight resiliency planning that could inform efforts to address climate change and extreme weather risks.

In addition, IIJA establishes the new PROTECT program (23 U.S.C. 176) which provides formula funds and competitive grants to States for resilience improvements. Under this program, States have the option of developing a Resilience Improvement Plan in order to reduce the amount of non-Federal share of the costs of the project. DOT strongly recommends that States consider

including elements of that Resilience Improvement Plan, or by reference, if applicable, in their State Freight Plans.

The IIJA also established the Carbon Reduction Program under 23 U.S.C. 175 which provides $6.4 billion in formula funding to help States develop carbon reduction strategies and address the climate crisis facing the nation. As part of this program, States are required to develop carbon reduction strategies, in consultation with Metropolitan Planning Organizations, and States are encouraged to include elements of those strategies, particularly as they pertain to freight movements, in their State Freight Plans. States may also consider strategies that incentivize the use of cleaner or more sustainable fuels as well as infrastructure investment to support freight transport electrification.

17. Consultation with the State Freight Advisory Committee, if applicable.

Minimum Elements

Each State should provide information summarizing its consultation efforts with their State Freight Advisory Committee (if one has been established). Possible methods of doing this are to reference or summarize minutes of the meetings of the Committee with regard to discussions of the State Freight Plan. Other methods are acceptable, including the incorporation of a written position paper from the State Freight Advisory Committee. DOT notes that there is no statutory requirement that a State Freight Advisory Committee must approve a State Freight Plan.

Additional Recommendations for State Consideration

State DOTs are encouraged to identify membership of the State Freight Advisory Committees by name and affiliation. They can also describe their qualifications and/or areas of expertise.

VI. Other Encouragements

States are strongly encouraged to use the analysis conducted as part of the State Freight Plan to prioritize the investments they make with NHFP funding and other eligible Federal funding. This data-driven and consultative approach to addressing freight needs can ameliorate issues of safety, supply chain delays, environmental and equity impacts, the quality of life of freight workers and the public, and other key issues facing the nation. States must continue to submit updated State Freight Plans and Freight Investment Plan amendments to their FHWA Division Office for DOT review and approval. This process ensures that DOT will be able to provide feedback to the States on the Plans and help States reach compliance for their continued use of NHFP funding.

In addition, State DOTs are encouraged to post agendas and minutes of freight meetings, as well as the State Freight Plans, amended Freight Investment Plans, corridor designations, studies, and other supporting materials on publicly accessing websites to enable access by neighboring State DOTs and other public and private entities.

DOT encourages each State to designate a freight transportation coordinator to facilitate effective communication with the FHWA Division Office in that State regarding the submission of State Freight Plans and Freight Investment Plans. A point of contact can help streamline information exchange with the operating

administrations of DOT and freight stakeholders and help ensure that freight transportation needs are given adequate consideration in the transportation planning process. Within a State Freight Plan, States may provide DOT with information as to how they are organized to plan and implement freight programs across the network of highways, rail lines, waterways, airports, maritime ports, inland ports, land ports of entry, and distribution centers that constitute the multimodal freight system in their State.

This point of contact would also be useful in managing the flow of information between the State and DOT on other freight elements, such as the designation of critical urban freight corridors, critical rural freight corridors, changes to the Primary Highway Freight System, and inputs to the National Freight Strategic Plan and National Multimodal Freight Network. The DOT-designated Marine Highway Network is also an area of emphasis, and the State points of contact can request edits or amendments to that network by contacting the Maritime Administration's Gateway Directors.[7]

VII. DATA AND ANALYTICAL RESOURCES FOR STATE FREIGHT PLANNING

The operating administrations of DOT and other departments in the U.S. Government provide a wide range of data and analysis resources to assist States in the freight planning process. The following is a series of links to Internet websites that provide useful data and analysis resources:

[7] Contact information for the Gateway Directors is available at http://www.marad.dot.gov/about-us/gateway-offices/.

General Data and Analysis Sources on Freight:

DOT National Multimodal Freight Policy Website:

https://www.transportation.gov/freight

DOT Supply Chains:

https://www.transportation.gov/supplychains

BTS General Freight Data:

https://www.bts.gov/topics/freight-transportation

Freight Analysis Framework, incorporating data from the BTS Commodity Flow Survey and TransBorder Freight Data; Census Foreign Trade Statistics; U.S. Army Corps of Engineers Waterborne Commerce Statistics; and other sources:

https://www.bts.gov/faf

Freight Indicators for Supply Chains:

https://www.bts.gov/freight-indicators

Commodity Flow Survey:

https://www.bts.gov/cfs

Data on Demographics and Economic Censuses:

https://www.census.gov/programs-surveys/economic-census.html

National Transportation Atlas Database, GIS files across all modes (including rail, ports, America's Marine Highways, locks, etc):https://www.bts.gov/ntad

State Statistics:

https://www.bts.gov/product/state-transportation-statistics

North American Industry Classification System (NAICS):

https://www.census.gov/naics/

Freight Resources and Statistics by Transportation Mode

General Highway Freight Data:

http://www.ops.fhwa.dot.gov/freight/freight_analysis/data_sources/index.htm and

National Level Maps Showing Freight Truck Commodity Corridors:

https://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/index.htm

State Level Maps Showing Freight Truck Flow Patterns:

https://ops.fhwa.dot.gov/freight/freight_analysis/state_info/index.htm

Freight Mobility Trends and Highway Bottlenecks:

https://ops.fhwa.dot.gov/freight/freight_analysis/mobility_trends

Freight Performance Measure Primer:

https://ops.fhwa.dot.gov/publications/fhwahop16089.

Freight Performance Measures:

http://www.ops.fhwa.dot.gov/freight/freight_analysis/travel_time.htm

The National Coalition on Truck Parking:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups.

National Performance Management Research Data Set:

https://npmrds.ritis.org/analytics/.

Performance Based Planning and Programing Guidebook:

https://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/

Quick Response Freight Manual:

http://www.ops.fhwa.dot.gov/freight/publications/qrfm2/index.htm

Examples of existing State Freight Plans (none are compliant with the FAST Act as of the issuance of this draft guidance):

http://www.ops.fhwa.dot.gov/freight/resources/frt_solutions/index.htm#freight_plans

Truck Freight Bottleneck Reporting Guidebook:

https://www.fhwa.dot.gov/tpm/guidance/hop18070.pdf.

Truck Parking Information and Metrics for Assessing Truck Parking Capacity (Jason's Law)

http://www.ops.fhwa.dot.gov/freight/infrastructure/truck_parking/index.htm

International Statistics:

U.S. International Trade Data:

https://www.census.gov/foreign-trade/data/index.html

International Trade Data and Analysis

https://www.trade.gov/trade-data-analysis

North American Transborder Freight Data:

https://www.bts.gov/transborder

Border Crossing/Entry Data:

https://www.bts.gov/browse-statistical-products-and-data/border-crossing-data/border-crossingentry-data

Maritime Data and Statistics:

Navigation Data Center, Waterborne Commerce Statistics Center, U.S. Army Corps of Engineers:

https://www.iwr.usace.army.mil/About/Technical-Centers/WCSC-Waterborne-Commerce-Statistics-Center-2/

Maritime Data and Statistics, U.S. Maritime Administration:

https://www.maritime.dot.gov/data-reports/data-statistics/data-statistics

Port Performance Freight Statistics Program:

https://www.bts.gov/ports

Great Lakes St. Lawrence Seaway System, under bilateral American and Canadian management:

https://www.seaway.dot.gov/publications/annual-reports and https://greatlakes-seaway.com/en/about-us/slsmc-management/annual-corporate-summaries/

Rail Freight Resources and Statistics:

Final State Rail Plan Guidance:

https://railroads.dot.gov/rail-network-development/planning/state-rail-plan-guidance

Comparative Evaluation of Rail and Truck Fuel Efficiency on Competitive Corridors:

https://railroads.dot.gov/elibrary/comparative-evaluation-rail-and-truck-fuel-efficiency-competitive-corridors

Surface Transportation Board Data:

- Economic Data: https://www.stb.gov/reports-data/economic-data/
- Rail Service Data: https://www.stb.gov/reports-data/rail-service-data/

Online highway-rail grade crossing investment analysis tool:

https://gradedec.fra.dot.gov/

Air Freight Statistics

FAA Aerospace forecasts:

https://www.faa.gov/data_research/aviation/

Office of Airline Information:

https://www.bts.gov/airline-data-downloads

Other Resources

EPA Air Quality – Cities and Counties:

https://www.epa.gov/air-trends/air-quality-cities-and-counties

FHWA's Environmental Review Toolkit:

https://www.environment.fhwa.dot.gov/about/topic_list.aspx

Environmental Justice Screening and Mapping Tool

https://www.epa.gov/ejscreen

Bureau of Labor Statistics Industries at a Glance:

https://www.bls.gov/iag/

National Transportation Library (research related to freight transportation and a freight data dictionary):

https://rosap.ntl.bts.gov

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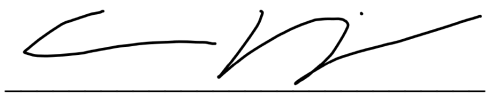

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