PUTTING HUMPTY-DUMPTY TOGETHER: CREATING AN "INTERMODE" FRAMEWORK FOR SEAMLESS FREIGHT TRANSPORTATION POLICY DEVELOPMENT

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I. Overview

For the purposes of this paper an "intermodal system is one in which individual modes e.g., trains, trucks, ships and airplanes, are linked and governed in a manner that creates a seamless and sustainable transportation system."[1] Intermodal combinations produce unique service and cost results as well as environmental and other societal benefits. For these reasons, and to be effective, public policies should both foster the efficiencies of intermodal combinations through the planning of public works and recognize their distinctiveness, much as a metallurgist must recognize the singular properties of an alloy from its separate metals in order to use it effectively. Therefore, for planning and programs purposes, these intermodal combinations should be viewed as the Intermode – a mode that uniquely stands on two or more legs and realizes a singular transportation purpose.

The Intermode is cooperation in motion; it is not the result of the inadvertent collision of one modal function into another. This concerted effort builds on the best beneficial aspects of each connecting mode and reduces the impedance at interconnection. Thus out of many comes one unique intermodal entity. "Humpty-Dumpty" arises as a smooth and efficient creation -- one assembled from the formerly separated modal pieces.

Rail and truck terminals with seaport and airport hubs are integral elements of the service economy of metropolitan regions; they are the essential foundation upon which the freight Intermode is built. These facilities play an increasingly important role in linking urban areas and their hinterlands to inter-regional domestic and international trade networks. They serve as a conduit for US merchandise trade

that contributes more than 25% of our Gross Domestic Product, and that share is expected to rise to 37% by 2025[2]

Metropolitan gateway hubs not only transfer goods from one mode to another, they spawn related warehousing and distribution activity as part of the logistics chain that assembles materials for manufacture and delivers finished goods to final consumers.[3] Gateway transfers, as generators of both major freight activity (and commercial benefits), often produce negative environmental/quality of life impacts. These unwelcome elements must be mitigated by the Intermode to be sustainable. A broad, holistic viewpoint and management framework is essential to effectively apply public and private sector resources and to insure that the national and regional transportation systems are durable and robust.

Impressive net employment effects of the aviation and marine hub facilities can be seen in the estimates of the economic impacts of regions they serve. For example, in 2004 Port Authority of New York and New Jersey aviation facilities directly and indirectly supported 374,000 jobs and $14.5 billion in wages -- while the region's port industry generated 227,000 jobs with $9.4 billion in wages.

In 2004, the USDOT Bureau of Transportation Statistics reported that goods valued at nearly $2 trillion passed through the nation's airport, seaports and border crossings.[2] The New York and New Jersey Aviation ($111 Billion) and Marine ($101 Billion) gateways alone were entrusted to handle $212 Billion of this total, (including almost $71 Billion in exports) -- that's over 11% of the value of all US gateway trade. This sum is only exceeded in economic significance by the more than 14% of goods by value moving through Southern California Airport and Seaport facilities[3]. Thus the Gateway facilities of only two of the nation's large metropolitan regions handle over 25% of the value of international gateway trade for the entire nation. The focus on

value provided above, as opposed to a division by mode, ton-miles or TEU throughput, highlights the importance of gateway intermodal systems. They are major elements of the embankment upon which our international and domestic commerce is built and the success (or failure) at these hub nodes is a matter of national concern.

Unfortunately there is little in current public sector transportation policy that helps support the *coordinated, systematic* improvement of crucial intermodalsystems. Despite the congressionally mandated emphasis on intermodal systems improvement in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), only slow progress has been made in developing the public contribution to intermodal systems development over the last 15 years.

The paper discusses the fact that the projected steady growth in domestic and international freight demand portend greater reliance on effective intermodal combinations; and that the strengthening of the Intermode, including its oft neglected waterway elements, is crucial to sustaining the benefits of the US freight system. It argues that for public agencies to apply resources that advance private sector efficiencies they should apply a total logistics chain of service approach in order to maximize their contribution to intermodal development and foster the required public-private partnerships.

The paper explores what was accomplished – and what was not – in the recent surface transportation programs re-authorization (SAFETEA-LU). Finally, it recommends a future action agenda to move national policy in a supportive and complementary direction that recognizes that institutions and policy frameworks that were built on separate modal foundations and warrant significant reforms probably cannot be changed overnight

II. The New "I" of ISTEA

1. Intermodalism Revealed

One of the novelties of ISTEA, the Intermodal Surface Transportation Efficiency Act of 1991, was the appearance of the word "Intermodal" in its title. The landmark law contained other important words and concepts that then were new to the policy preambles of highway-focused legislation and to the legislators who enacted it. It declared:

> "It is the purpose of the United States to develop a National Intermodal Transportation System that is economically efficient and environmentally sound, provides a foundation for the Nation to compete in the global economy and will move people and goods in an energy efficient manner."

Heretofore surface transportation legislation was simply called the "Highway Bill." If an "I"-word appeared in the reauthorization language, it stood for the "Interstate" system -- that brilliant Eisenhower era innovation that connected the vision of a nationwide world-class highway system with pay-as-you-go- financing.

By 1991, the last commitments were made to Interstate Highway completion and something new was afoot. USDOT strategic planning efforts made it evident to lawmakers and stakeholders alike that the National Transportation System (NTS) offered more than highway mobility. It also included an improving freight and passenger rail system, aviation facilities meeting (and straining under) sky-high demand, inland waterways delivering the cornucopia of the Heartland and oceangoing gateways fostering commerce with the rest of the world. There was much optimism that, with added public and private cooperation and support, the total system could become greater than the sum of its parts. In this way the potential capacity shortfall in one mode might be overcome by a substitution and/or combination with other modes. While ISTEA was first and foremost a highway bill, it also sought a broader national policy that captured the value

of intermodal connectivity. The ISTEA mandated National Commission on Intermodal Transportation observed:

> "Transportation Policy has traditionally focused on single elements: automobiles, trains, trucks, ships, airplanes and transit systems. In an intermodal system, these elements are connected in a seamless system that is efficient, safe, flexible, environmentally sound and meets the needs of the Nation's travelers and shippers." [4]

It viewed the potential benefits of a National Intermodal Transportation System as enormous.

> "Intermodal offers the promise of: (1) lowering overall transportation costs by allowing each mode to be used for the portion of the trip to which it is best suited; (2) increasing economic productivity and efficiency, thereby enhancing the Nation's global competitiveness; (3) reducing congestion and the burden on overstressed infrastructure components; (4) generating higher returns from public and private infrastructure investments; (5) improving mobility for the elderly, disabled, isolated, and economically disadvantaged; and (6)reducing energy consumption and contributing to improved air quality and environmental conditions."[5]

Initial Congressional focus on improving intermodal connectivity was a positive development for urban communities. Most passenger and freight gateways are found at or near major and intermodal entry and transfer points encourage job generating distribution and warehousing activities. Federal concern and support could help insure connector capacity to local and regionally financed seaports and airports and assist in minimizing the impacts of congestion and environmental degradation. However the Commission noted that much needed to be done to improve the Federal contribution.

> "First, planning and policies, particularly at the Federal level, do not encourage and accommodate intermodalism. Second, Federal funding of transportation programs falls short of authorized levels and is directed modally, discouraging investment in intermodal transportation. Finally, Federal Government institutions are organized along modal lines, which inhibits planning and developing an intermodal transportation system."[6]

Although most transportation experts generally concede that considerable progress has been made in improving the efficiency and cost of intermodal systems – problems remain

in providing effective federal support. Most of this progress is the result of private sector applications of intermodal technology associated with container handling and improved ITS tracking/management systems. The need to preserve and build upon these successes requires improvements to the public infrastructure and the rules and processes governing their development.

2. Progress In The Private Sector

Consider, for example, the impact of double-stack rail technology on the long distance intercity freight movement. In the mid-eighties, the railroad industry was beginning to recover from a collapse of service in the Northeast and seriously anemic financial and service levels nationwide. Freed from heavy handed economic regulation, the railroad industry began reducing its bloated operating structures[7], eliminating archaic work rules, and applying efficient new technologies that would improve its bottom line. None of these efforts was more important than the introduction of double-stack rail cars that could increase train efficiency by upwards of 40%. The importance of intermodal systems partnerships (be they private or public sector based) is evidenced by the fact that it was the international ocean carriers (e.g. American President Line) -- looking for a better way to move Asian - US container cargo -- that provided the major impetus for the introduction of the double-stack systems that shippers enjoy today. One train set was deployed for double-stack service in 1984 and by 1994 241 trains sets were moving more than a million Twenty-Foot Equivalent Units (TEUs) per year to multiple port-city pairs. Now, over 12.4 million TEUs are moving annually on rail corridors in every region of the

country as railroads and their intermodal partners increase efficiencies with refinements in their tracking and management systems[10]

The cost savings for substituted rail for truck line haul is impressive. Recent data indicates that rail container rates for international container moves between Los Angles and Chicago are "in the vicinity of 43 to 48 cents a mile (around 55 cents for premium high speed service), while the average truckload rate is approximately $1.40 per mile."[11]

If intermodal rail is viewed as a separate mode it grew at the faster than all other modes -- over 5.1% average per annum -- between 1990 and 2000.[8]

Premier intermodal services are now available from a variety firms who have mastered its coordination and price complexities. There are companies that are inherently intermodal, such as UPS and FedEx, and many firms based in every mode are successfully facilitating intermodal logistics as an adjunct to their base services.[9] The freight industry's once visionary application of new technologies and logistic chain partnerships has evolved into today's standard (though still improving) product.

Now the public sector should take greater cognizance of the distinctive features and service relationships of the Intermode and apply this focus to multi-modal integration in the use of public assets. The challenge to both the public and private sector is more daunting now than that present when ISTEA was enacted in 1991. Greater pressure, which is expected to extend well into the future, is being generated from rising international commerce and a shortage of highway capacity for both passenger and freight activities.[10]

At the passage of ISTEA existing capacity and the application of new technologies fueled private sector efforts to improve operational results. Today, many of the benefits from these applications have been exhausted and a coordinated public and private sector physical improvements are needed. This problem has been well identified in a series of public, and private-sector reports issued over the last five years.[11] Here are some of their key findings:

- Peak period highway congestion for all vehicles doubled from 1982 –2000, but truck traffic from 1993 to 2001 increased twice as fast as passenger traffic.[12]

- Since the Staggers Act of 1980, the rail industry has 35% less track; 32% fewer locomotives, 27% fewer railcars, 60% less employees but handles 50% more freight; [13]

- Air cargo sustained an annual growth rate of 5.1% between 1990 and 2000 and is expected to continue at this high annual average through 2020.[14]

- Inland waterways handle 20% of our nation's coal and 60% of its grain movements. Tonnage has increased 33 % since the 1970's but the system has been allowed to age with little improvement. (The median age for its locks is 35 years –contributing to lock efficiency problems and failures that help create congestion and delays at locks that sometimes last six hours or more.[15]

- From 1990 through 2000 tonnage at US Ports increased by 13.8% while capacity expanded only marginally. In 2001 approximately 25% of the largest deepwater ports reported unacceptable landside access flow conditions. [16]

Future projections show steady economic prosperity fueling moderate growth for all modes through 2020. Even so, as the 2003 US Chamber of Commerce Study of Trade and Transportation observed, *total domestic tonnage will increase 67% and international trade will double by 2020*.[17] With this demand pressure in mind Chamber consultant M. John Vickerman takes a skeptical view of the effective status overall intermodal freight system. He notes that "(w)e do not have an intermodal system as such – rather we have an aggregation of multiple private and public modes, each of which is stove piped into their individual areas of interest with little or no true communication and

collaboration."[18] He concludes that these shortcomings -- particularly those dealing with international trade -- make us "a nation at risk."

III. A Time for New Paradigms

It is now appropriate to ask a key question: *"What should be the essential aspect of a new federal transportation policy that would maximize the contribution of intermodal systems, especially those with waterborne elements, to our national network?"* The answer is that a new "systematic" policy approach is required. This approach would apply a greater federal focus to intermodal development, particularly at gateways, because focusing on the effectiveness of these high volume, high value handling systems would be, in effect, keeping "our eyes on the prize" – creating the world's best, sustainable and reliable conduit for 21st Century commerce. Doing so would strengthen the links between modes and highlight areas where the modes, beyond stand-alone effectiveness, can better contribute to the Intermode.[19] Doing so should result in a better alignment between the "brain power" essential to intermodal management with the muscle provided by the operations of each mode. This policy would advance the traditional federal policy of promoting "inherent modal advantages" to include the Intermode. [20] A brief audit of the intermodal policy highlights of the last three surface transportation bills suggests this needed direction.

1. ISTEA

ISTEA first called upon States and Metropolitan Planning Organizations (MPOs) to identify intermodal interconnectivity needs, encouraged multimodal corridor wide analysis and provided

direct support for ferry services. It introduced the Congestion Mitigation Air Quality (CMAQ) program to support projects and operations that resulted in cleaner air. Among other things, CMAQ takes an intermodal corridor approach: it allows infrastructure and start-up operating funds to be available to non-highway modes where the end result would be less congestion and pollution on the highway segment for example, as it did for the 1995 start-up of Red Hook Brooklyn, NY – Port Newark, NJ cross-harbor barge operations and for 2003-2005 helped support the operation of the Port of New York/ New Jersey–Port of Albany container barge.

2. TEA 21

In 1996 the Transportation Equity Act for the 21st Century (TEA 21) extended the funding for intermodal projects through the introduction of a new "Corridors and Borders" Program aimed at making the surface transportation systems more responsive to the demands of cross-border and waterborne international trade. Corridor related sub-provisions made highway funding available for access improvements to seaport connectors -- if such projects meet criteria that demonstrate its "national significance." (The program proved to be woefully under funded and provided only a small allocation of money to a large number of projects.) TEA 21 also introduced new innovative financing tools to add flexibility and funding available to support public-private partnerships. Any transportation project that met broad modal eligibility rules could qualify e.g., the Alameda Corridor TIFIA loan. These provisions had too little impact beyond the notable Alameda Corridor success. Too often the complicated rules associated with using government funds cancelled out much of their utility.

3. SAFETEA-LU

There was much hope that the legislative proposals that ultimately merged to become SAFETEA-LU would produce a strong freight component. In anticipation of the legislative debate modal and shipper trade associations, coalitions and public sector groups, such as the American Association of State Highway and Transportation Officials (AASHTO), formed the unprecedented Freight Stakeholders Coalition to define the levels of funding and make them more responsive to freight requirements. Much of the coalition's focus was on gateway, freight corridor and border needs as well as how funds could be supplied to private rail infrastructure to capture the public benefits available from eliminating rail bottlenecks. One recommendation that won almost universal stakeholder support was to provide direct funds to improve highway connectivity to ports and railheads. Congressional approval for new programmatic and funding support to address intermodal connector deficiencies looked like a strong possibility when Administration, Senate and House bills contained provisions for a connector set-asides (2% of the NHS program as proposed by the Administration and Senate) or formula funding ($420 M per annum for six years as contained in the House bill) but no provision emerged. State DOT favored provisions to make freight programs clearly eligible for CMAQ (Air Quality Improvement) funding also had no takers. The States proposed that $7 million be spent annually to build state DOT freight planning capacity but only $875,000 will be allocated and the States recommendation to create a new Freight Transportation Cooperative Research Program at $8 million per annum was reduced to $3.75 million per year – and sent to the National Academy of Science (TRB) for Administration.

Doubtless budget pressures had much to do with these changes. The final reauthorization came in at $286 billion or $66 billion less the than House initially sought (based on public and private sector estimates of maintenance of current systems level of service). In the end SAFETEA-LU essentially stayed the course laid out by TEA 21; core transportation programs saw significant increases despite the fact that major cuts initially loomed – the Administration proposed a $252 billion program (or $100 billion under system maintenance estimates.). Less than 0.4% is provided for new programs.

Some transportation experts argue that SAFETEA-LU is, in fact, good for freight systems -- emphasizing that more than $4 billion for goods movement infrastructure is contained in its provisions. These funds are distributed through four major program categories:

- Projects of National and Regional Significance -- $1.5 Billion
- National Corridors Program --$1.8 billion
- The Borders Program -- $833 million
- National Corridors planning and development & Coordinated Border Infrastructure Programs --$140 million in FY 2005 funds.

However those programs are fully subscribed by lawmakers' earmarks, making these categories little more than funding funnels instead of program focal points. Undoubtedly, a substantial portion of these monies will find their mark to boost worthwhile programs and projects. Nationally important projects that received substantial funding include the Alameda East Project in the San Gabriel Valley, the Paul Desmond Bridge heightening in Long Beach, the CREATE (systematic rail connection improvements) in Chicago, the Virginia-West Virginia Heartland Corridor and the Liberty Corridor intermodal improvements in Northern New Jersey/New York. The problem with a bill with more than 5,000 earmarks is that the funds, or the most part, are not

allocated on a rational national/regional system basis but as disconnected transportation and economic development solutions to local and political problems. On that basis the bill's attention to national freight problems and the provision of intermodal solutions is more haphazard than policy driven.

In a recent column "Lip Service From Washington" Larry Kaufman, former intermodal editor at the Journal of Commerce praised recent public private partnership efforts to improve infrastructure essential to help railroads attract more traffic from the highways to the mobility benefits of all (including truckers) in major intermodal corridors.[21] He rhetorically asked: "what did Congress and the Administration do (in SAFETEA-LU) to advance such partnerships?" And answered:

> "They diddled and quibbled for two years before passing a pork –larded $286 billion program. The two most prominent public-private partnerships were effectively stiffed. While the Alameda Corridor East and Chicago's CREATE project received minimal funding authorization, there is some $24 billion going to (projects like) a $250 million bridge in Alaska, bike trails in the lower 48, historical museums and other projects that keep the member of Congress in Office. *If there had been a transportation policy, it might have been easier to reject the special pleading for purely political purposes." (Emphasis added)*[22].

A 2004 report on 21st Century mobility published by the Hudson Foundation acknowledges that federal government is giving increased attention to freight systems needs but the effort may not be enough given the strains facing the national freight system over the next ten to twenty years.

> " … The current level of effort, allowing, for some up trend in funding in light of historical trends is insufficient to maintain the current performance of the freight system let alone enhance it… There is no doubt, therefore that the expected future strains on the freight system merit a policy response from the Federal Government. Policy response means some significant change; it could be a change in funding levels, changes in regulatory practice, or some combination of these types of changes. The clear of message thus far is that some significant response is definitely needed. The cost of the economy of a poorly performing freight system is too great to ignore."[23]

It is possible for optimists to argue that SAFETEA-LU, while much less than a full throttle response to the challenges stated above, may yet set the table for a major intermodal policy break-through over the next few years.

- The massive earmarking in the bill for "projects of national and regional significance", especially to support large intermodal rail freight oriented programs such as CREATE and the Heartland Corridor (a mix of double-stack rail and inland port connectivity improvements), is recognition, even an implicit criticism, of the inflexibility of the categorical programs that perpetuate program delivery in administratively neat but confining modal silos. Even modest oversight of the implementation of these major earmarks may require intermodal expertise that may exceed what is now available at USDOT.

- The fact that SAFETEA-LU aims to return 92% of gas and excise tax funds collected by the federal government to the states of origin raises questions that might provide a catalyst for a rethinking of the USDOT role including its approach to freight matters. If over 90% is effectively rebated to the states, how important is the federal role? And if the Department is given little authority in developing new and needed responses, why not minimize the federal role? Where's the value added?

- Several major intermodal public-private partnerships will benefit from SAFETEA-LU earmark largesse. With luck and good management, public-private cooperative models may emerge to provide bottoms-up examples on how to apply federal funds to the intermodal mix.

- Policy and program ossification is, in part, the result of the heavy reliance of gas taxes as funding source. Highway stakeholder groups fight hard to ensure that these monies go specifically to their needs. But the Intermode view is that the increasing demand for additional intermodal capacity -- particularly through domestic waterborne systems -- is also a demand for new sources of funding, modifying existing sources, and financing to cover intermodal connectivity and other alternate capacity enhancements.

- SAFETEA-LU calls for two major studies of future policy and funding options. This provides a major opportunity to take new approaches to the federal government's entire program response including its approaches to the Intermode.

IV. A New Policy Direction

This paper points to a new direction. It is a move away from strictly modal-oriented solutions and the existing organizational structures that support and perpetuate them. It aims to understand and apply the transportation benefits that come from strengthening the logistic chains for freight. This approach is increasingly essential as the domestic consumption of goods produced abroad grows sharply and, as a result, the public infrastructure and private distribution systems are changed in response. Advancing the Intermode requires greater focus to how both public and private resources can be systematically applied (not just commingled) to improve services in essential gateway corridors. It would aim to provide funding flexibility to overcome the problem that results from allowing narrow eligibility requirements determine the allocation of limited transportation resources rather than modal effectiveness. There are at least three essential steps to this task.

A. Building And Applying The Data Required To Support To The Growth And Effectiveness Of The Intermode. .

To move into the policy debates and program restructuring that will be essential to maximize freight transportation data resources, the federal government, with industry cooperation, must build up databases, like the BTS gateways statistics, that highlight the economic value as well as the cargo volume flows. Freight performance service metrics that focus on, for example, how and where international goods become commingled and assimilated into the domestic system are needed. These are data requirements that would benefit both public and private sector transportation planning. An Intermode-based policy also would advance the

needed efficiencies, currently unavailable for rail and waterborne systems, to serve as an effective substitute for highways in corridor of 400 miles or less (where about 80% of our freight moves.)

SAFETEA-LU funded freight planning and research should bolster the analytical tools that can compare intermodal and other non highway options to highway building projects to take account which approach produces the most enduring cost-benefits. More information is needed to understand how regulatory action (economic deregulation, effective safety and environmental rules) can positively impact systems development[24]. The fear of the unknown is often is often a factor that causes some States and MPOs to hesitate in embracing freight specific responses. The traditional, generic "one system serves all" approach has been politically successful; to introduce a special freight focus raises difficult issues of sorting out public benefits from private ones and measuring the effectiveness of the public contribution. (Besides, as often stated, "freight don't vote.") While federal planning rules have encouraged greater attention to freight elements, a good set of tools resting on a strong database is not available to bolster the confidence of State and MPO planners.

The public–private sector freight service dialog, begun as a prelude to enactment of SAFETEA-LU, should continue. The USDOT Office of Secretary and FHWA Freight Operations unit are now bringing a logistics chain perspective to agency thinking. This approach provides a common basis on how the system works. Fostering greater ITS-driven transparency regarding how and when cargo must move also is crucial to marrying efficient

economies of scale components involved in container transfers between ports and the railroads.

B. Strengthening The Maritime Mode Within New Federal Program Structures.

The upcoming work of the National Surface Transportation Policy and Revenue Study Commission, created in SAFETEA-LU, should incorporate domestic, intermodal *maritime* elements into its review of surface transportation system needs .

Since the late nineties, the Department of Transportation has devoted attention to the marine transportation system (MTS) inclusive of the maritime sector and its landside connections. The MTS effort is recognition that while the land and air modes have benefited by policy updates and the investment of considerable user-paid, public program funding, the domestic maritime sector has not progressed as much. The blinders of existing surface transportation policy effectively cut off the system view at the waters edge. Disputes over the benefits or disadvantages of the Jones Act, even among Jones Act adherents, have served to discourage policy discussions as to the potential for expanding the use of marine transportation. USDOT is contemplating ways to enhance the maritime transportation system and, particularly in the wake of the US Coast Guard's departure for the Department of Homeland Security, the maritime function in USDOT structure. USDOT staff has suggested initiatives that the current Administration could propose as "SEA-21" legislation -- as comparatively modest maritime counterpart to TEA-21 and AIR-21. Such a maritime focus should be encouraged and an Administration initiative should be to be advanced – if only to begin with an open

discussion between the Administration and Congress of the status, capacity and needs of the maritime sector.

The maritime objective in the 21st century should foster waterborne transportation's contribution to meet domestic and international system needs. A new, US maritime policy, complemented by a revitalized MARAD, assuming USDOT remains organized by modal administrations, could help shape and strengthen the coastal and short sea elements of our national transportation system. It could improve Intermode connectivity between our waterborne network and the rail and highway modes and between the international and domestic shipping trades. A strengthened MARAD could better assist the FHWA's Freight Management unit, the Federal Railroad Administration and the Office of Intermodalism to develop a total logistics viewpoint for freight programs. Indeed, an improvement in the MARAD mission should coincide with a strengthening of the Secretary's Office of Intermodalism to further the long stated objective of One DOT as it applies to the Intermode. Given its vital, historic role in military vessel availability and defense preparedness, the new MARAD should be charged with supporting technological advances in vessels, engines and general port infrastructure. Transportation security is best achieved from a total distribution chain perspective – and MARAD, being more intermodally minded than other modal administrations, is in a position to represent marine systems needs in federal agency discussions on securing the logistics chain. Fuel efficiency and environmental effects should rank with the need to achieve strategic defense objectives.

C. Forthrightly Address the Need for Flexible and Adequate Financing for All Modes Including the Intermode.

SAFETEA-LU provisions continue to encourage the availability and use of innovative finance tools to encourage public and private sector funding for intermodal improvements. Although most public transportation agencies have bonding authority, there will be projects, such as the Alameda Corridor Project, where the use of innovative financing will have a positive effect.

It remains to be seen if the recent improvements in these innovative programs will add the funding flexibility and target funds to the mode best suited to get the job done. At a minimum, the changes will do no harm and are based on the premise that public-private sector partnerships should be geared to encourage private sector participation and not buying it through the easy availability of public funds.

Current Federal funding for waterborne Intermode elements are mainly limited to channel deepening and maintenance and waterway navigational and safety programs. More funding is needed to assist ports to meet system needs. Providing direct funding sources for landside access, logistics-based security, and ITS improvements would bolster port contributions to the Intermode. One often mentioned potential funding source is a portion of Customs receipts. In the early years of this country, Customs duties were the only source of federal revenue and supported the improvement of waterway infrastructure for interstate and international commerce. Even today the linkage of revenues derived from seaport activity and the infrastructure that supports that activity is an exceptionally reasonable one – although

being based solely on import activity, would not be appropriate as a single means of supporting MTS funding. When considering the many fees now collected on maritime shipping activities, it is difficult to ignore the Harbor Maintenance Tax receipts that feed the Harbor Maintenance Trust Fund (HMTF). The HMTF primarily supports federal channel maintenance and has accumulated an unobligated balance projected to approach $3 billion at the close of FY 2006. The use of the HMTF to maintain the national system of channels must be preserved, but the size of the growing balance invites thoughts as to how that money might also be used to improve portions of that nation's transportation system to benefit the shippers who pay the fee. Certainly it would be a more appropriate use of user fees than to maintain an outsized trust fund balance to offset the federal budget deficit.

Another potential source is the application of user fees applied to intermodal transportation services. This approach is implicit in the GAO's Freight recommendations cited *supra*, which urged that the surface transportation reauthorization legislation promote efficiency by embracing the "user pay principle." While hardly a favored approach among industries, consideration of potential mechanisms that fairly tap the beneficiaries of the Intermode is appropriate and consistent with present day transportation financing methods. Indeed, mechanisms that would apply locally targeted user fees revenues to support investments in regions where the fees are collected may give skittish freight stakeholders greater confidence in such an approach.

IV. Conclusion

In the last few years the US Department of Transportation has reorganized itself to better function as "One DOT", even though it has many modal administrations under its purview. In

doing so the department aims to better realize the inherent advantages of all modes and to encourage intermodal connectivity to build synergy from all our national transportation assets. As noted above, recent renewal of the surface transportation law related initiatives leaves more work to be done in studying and addressing the capacity crush and the outmoded modal structure that shapes today's federal and state response in essential public and private sector working alliances.

The proposed program focus and suggested changes suggested herein are evolutionary not revolutionary. They are explicitly directed towards defining and focusing on improving the unique elements of the Intermod*e* -- an effort that is well underway in the private sector. *E PLURIBUS UNUM* expressed an idea that helped our forefathers build a great nation. It is an excellent perspective for the improvement of national systems of freight commerce in the 21st century.

ENDNOTES

1 There are more definitions of intermodalism than there are potential connecting modes. We chose this definition provided by Joseph S. Szyliowicz, founder of the Intermodal Transportation Institute at the University of Denver because it captures both the economic and social imperatives advanced by effective intermodal systems. Dr. Szyliowicz also notes that "such a system should be economically efficient, environmentally sound, safe and secure and ethically based. See Syliowicz, J (Undated) *Intermodalism: The Challenge and the Promise* available by title search on the worldwide web.

[2] National Foundation of the U.S. Chamber of Commerce: (2003) *Trade and Transportation -- A Study of the North American Port and Intermodal System* p. 9

[3] The warehousing function is, at its most passive, transportation at zero miles per hour

[2] U. S. Department of Transportation, Bureau of Transportation Statistics (2004): *America's Freight Transportation Gateways: Connecting Our Nation to Places and Markets Abroad.*

[3] This translates to $284 billion in freight by value (LAX- $64B, POLA - $122B and POLB $96B), including $60 billion in combined exports.

[4] National Commission On Intermodal Transportation, (1994) *Toward A National Intermodal System: Final Report*, p.3. The Commission was directed by Congress to investigate US intermodalism and find ways to increase intermodal efficiency and to secure the necessary funds to do so.

[5] *National Commission Report*, page 3.

[6] *National Commission Report*, page 3.

[7] The rail industry efforts with regard to right of way and track reductions often proved to be overzealous Tracks sold off or removed as excess in the seventies and eighties has required costly replacement to meet today's growing systems needs e.g., BN's abandonment of the Stampede Pass Main line in 1983 and its re-purchase, from a short line, and restoration for $125 million.

[8] Ostria, S. (2004) "*2010 and Beyond"* p.6.

[9] Examples include Schneider National/Logistics; J.P. Hunt –trucking; CSX Intermodal, BNSF—railroad intermodal and logistics facilitation; C.H. Robinson, Excel – third party logistics providers; and Maersk Logistics, NYK Logistics – ocean carrier intermodal and logistic facilitation.

[10] U.S. Department of Transportation, Bureau of Transportation Statistics (2004): *America's Freight Transportation Gateways*. The BTS report indicates that more 50% of the US Merchandise Trade runs through 14 gateways. .

[11] See also American Association of State Highway Transportation Officials (2003) *Freight Bottom Line Report*; National Academies of Sciences: Transportation Research Board (2003) *Freight Capacity for the 21st Century, Special Report 271*; US Department of Transportation, Maritime, Administration, (2002) *Intermodal Access to US Ports Report on Survey Findings*.

[12] General Accounting Office, (2003) *Freight Transportation Strategies Needed to Address Planning and Financing Limitations.*

[13] Vickerman, M. J. (2004) *Trade and Transportation*

[14] Ostria, S. (2004) *"2010 and Beyond"*, p. 6

[15] Ostria, S., (2004) "*2010 and Beyond*" p. 6.

[16] Ostria, S., (2004*) "2010 and Beyond*" p. 5.

[17] U.S. Chamber of Commerce: (2003) "*Study of Trade and Transportation*", Executive Summary.

[18] The stovepipe problem that Mr.Vickerman describes is exacerbated by the stovepipe structure at the federal agency and policy level.

[19] Domestic waterborne transportation, including inland water and short-sea shipping would likely be a major beneficiary for this approach.

[20] The pre-World War II era Federal transportation policy evolved from the Granger Acts of the 1880s to the use of regulatory tools and mechanisms, applied by agencies such as the Interstate Commerce Commission, "to preserve inherent advantages of each transportation mode." This response was essentially defensive; it aimed to insure that needs of the public would not be overwhelmed by the real and potential uses of the monopoly powers of the railroads to unfairly dictate the prices, mode, and individual companies used to move people and goods. From the 1950s onward policy towards modal preservation became more active and includes such activities as the creation of the Interstate program, undertaking the St. Lawrence Seaway Project, the formation of Amtrak, etc.

[21] Such funding partnerships are growing in the Northeast. Private freight, passenger rail, state and federal agencies are working together to establish funding agreements that will provide equitable invest plans to clear produce public benefits along with shareholder value. The State of New York and New Jersey are working with the Port Authority of New York and New Jersey (PA) and the private railroads to eliminate bottleneck and upgrade key system elements. The PA and the railroads are already implementing a $50 million investment agenda in NJ. The PA and NY State are currently providing $40 million to meet NY freight rail needs.

[22] Kaufman, Lawrence H. *Lip Service from Washington*, Journal of Commerce, October 17, 2005

[23] Ostria, S., (2004*) "2010 and Beyond"* p. 60.

[24] SAFETEA –LU does call for a study on the impact of rail deregulation on the industry and its customers.

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