USTRANSCOM JDPAC / SDDC TEA

• Organization Overview
• Programs for National Defense
  • Railroads / Seaports / Highways
• Military Highway Needs and Challenges
  • STRAHNET
  • Power Projection Platform (PPP) Routes
  • Military Strategic Transportation Program (MSTP)
  • Deployment Guide

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Roles and Lines of Reporting

USD(A&S)  
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“Wears three hats”
- Director, JDPAC
- Director, Transportation Engineering Agency (TEA)
- Special Assistant for Transportation Engineering

USTRANSCOM  
Gen Stephen Lyons

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- Joint Distribution Process Analysis Center (JDPAC) created out of BRAC 2005
- CONOPS Approved 2007 – “Analytic Engine for USTRANSCOM and Component Commands”
- Full Operational Capability - October 2010

Together, we deliver.
JDPAC/TEA – What We Do

- **Operational Analysis**
  - Future/Current Ops Supporting Analysis
  - Workload Forecasting
  - Cost Based Decision Support Analysis

- **Deployability Analysis**
  - Mobility Force Structure Sufficiency/Readiness
  - Operations Plans (OPLANs) Feasibility
  - Transportability Engineering
  - Modeling, Simulation & Optimization Capabilities
  - Transportation Data

- **Transportation Engineering**
  - **National Defense Programs: Highways / Railroads / Seaports**
  - Defense Access Roads
  - Traffic Engineering
  - Transportation Infrastructure

Together, we deliver.
Highways for National Defense (HND)

Mission

- Ensure that national defense is served by adequate, safe and efficient public highway systems
- Identify and Integrate Defense Needs Into Public Highway Programs
- Establish policy and provide guidance on the safe use of public highway systems by DoD assets

What We Do

- Develop and update the Strategic Highway Network (STRAHNET) and STRAHNET Connectors
- Coordinate with FHWA to ensure standard vertical clearance routes
- Focal point for the Federal Lands Access Program & the Emergency Relief for Federally Owned Roads Program
- Proponent for defense regulation on permits for military movements on US public highways
- Publish Directory of Highway Permit and Movement Control Officials
- Coordinate Military emergency preparedness issues with FHWA, States and other agencies

Partner Organizations

- Military Services/installations
- Federal Highway Administration
- State Departments of Transportation
- American Association of State Highway and Transportation Officials (AASHTO)
- Transportation Research Board (TRB)

Together, we deliver.
STRAHNET is a system of about 61,000 miles of highways, including the Interstate System. An additional 2,000 miles of STRAHNET Connectors link important military installations and ports. Together, STRAHNET and the Connectors define the total minimum public highway network necessary to support Defense deployment needs. STRAHNET was originally established in 1956.

Together, we deliver.
In 1922, the Bureau of Public Roads commissioned the Chief of Staff of the Army, General John Pershing, to draw up a map defining the roads in the U.S. that were the most important in the event of war.

In 1956, President Dwight D. Eisenhower signed into law the National Interstate and Defense Highways Act, authorizing construction of a 41,000-mile Interstate System. This 41,000-mile National Interstate and Defense Highway System formed the basis of today’s STRAHNET.

The National Highway System (NHS) Designation Act of 1995 designated a 160,955-mile road network and the MAP-21 in 2012 further expanded the NHS to 220,000 miles. Today, the 63,861-mile STRAHNET comprises just 29% of the total NHS mileage. With the STRAHNET making up a smaller proportion of the NHS over time, limited highway funding is more often being directed away from national defense needs on the STRAHNET.
A DOD surge deployment would require large-scale rapid movement of military equipment by road and rail from major military installations to Strategic Seaports.

- Some deployment cargo would be containerized, however the majority would be ‘rolling stock’ equipment, to include OS/OW and tracked vehicles.
- Over 8,000 commercial trucks required on first day; 80,000+ commercial trucks required in first 150 days.
- Anticipate that over 15,000 DoD vehicles would self-deploy to Strategic Seaports via convoy on the STRAHNET.
- Containerized AA&E shipments sent via STRAHNET to Ammo Ports.
Within each state, Defense Movement Coordinators (National Guard) assist with obtaining permits and with the scheduling of convoys to reduce military congestion.

Ensuring that the states and local agencies are familiar with their roles and responsibilities in supporting military deployments requires consistent active collaboration.

Aside from a surge DOD deployment, the highway network is a critical enabler of Defense Support of Civil Authorities (DSCA) events to save lives, prevent human suffering and mitigate property damage.
PPP Routes

• A subset of the STRAHNET, the PPP routes include about 15,000 miles of public roadways that are the most critical to support the movement of DOD equipment

• 18 designated PPP installations deploy military forces to Seaports of Embarkation (SPOE’s) during a national emergency

• It is important that these PPP routes be capable (i.e., are of adequate roadway/bridge design and condition) of supporting the rapid movement of military equipment
PPP Route Analysis

2019 - FHWA supporting the execution of 4 PPP route studies with intent to complete remaining in 2020-2021 pending funding availability (FHWA has programmed funds in FY 20 to execute additional studies).

Phase I. Study Initiation

• Identify the data and information required from State DOTs and installations to ensure the defense readiness capability of public highway infrastructure

Phase II. State DOT and Installation Coordination & Route Assessments

• Assess the current / future deployment needs for each of the PPP installations
• Identify the current capability of the defined PPP routes to safely and efficiently accommodate major deployments from the PPP installations to SPOEs

Phase III. Summary Report and Recommendations

• Identify minimum PPP route requirements; assess variance by PPP mission and geography
• Identify performance measures that State DOTs should use to inform planning and programming on PPP routes

Outcomes:

1. Documentation of procedures that define participants, issues and protocol by which military and State DOT’s coordinate during military deployments
2. Ensure routes and connectors between military installations and seaports are fully capable of supporting national defense deployments
• Underline the need for more focused attention by FHWA on the STRAHNET to improve national security and emergency response capabilities
• Specify how the statewide and metropolitan transportation planning and programming processes should be used to address STRAHNET needs
• Recommend criteria and propose mechanisms to incentivize state DOTs and local agencies to prioritize STRAHNET and military-related needs in their project prioritization processes
• Establish a funding stream that supplements funding for improvements on the STRAHNET, prioritizing PPP routes
• Consideration for an expedited permitting program for oversize/overweight vehicles during a national emergency

FHWA / TEA initiative to facilitate the creation of language within the next Surface Transportation Reauthorization (under 23 USC) that will better promote the consideration of military needs when prioritizing National Highway System funds
Purpose - Developed by FHWA and SDDC as a guide, best practices and is a good resource for State DOT’s Permit and Emergency Management

*Currently being Updated*

Typical Military Deployments Description
- Warning Order (assistance may be needed by military)
- Notice to Deploy (Units defined, activation occurs)
- Convoy Movements

Key Concepts for Permitting
- Permit requests may be made by the most expeditious means
- Oversize/Overweight permits must be coordinated with the State and Locals
- Moves may be made without written permits provide they are later confirmed in writing

Military/State must develop coordination procedures/plans and agreements to avoid delay
Questions
BACKUP SLIDES
Executive Order 12656 (November 1988), “Assignment of Emergency Preparedness and Responsibilities” -- “*Federal plans should include appropriate involvement of and reliance upon private sector organizations in the response to national security emergencies.*”

- Established under authority of Defense Production Act (1950), Federal Civil Defense Act (1950), and the National Security Act (1947)
- Identify facilities and resources, both government and private, essential to the national defense and mobilization readiness
- Coordinate with State and local highway agencies in the management of all Federal, State, city, local, and other highways, roads, streets, bridges, tunnels, and publicly owned highway maintenance equipment to assure efficient and safe use of road space during national security emergencies

It is the intent of the Programs for National Defense is to serve as a conduit for the partnership between civil sector authorities and the DOD in order to comply with these provisions and plan for potential emergencies.
1919 Motor Transport Corps Convoy on ‘Lincoln Highway’

- 3000 mile convoy from Washington, D.C. to San Francisco, CA
- 28 yr old Major Dwight D. Eisenhower participated
- 4 objectives:
  - Encourage ‘construction of through-route and transcontinental highways’
  - Procure ‘recruits for the Motor Transport Corps’
  - Exhibit “to the public the motor vehicle for military purposes
  - Study and observe the ‘terrain and standard army vehicles’
- Metrics:
  - 81 vehicles suffered ‘230 road incidents’ which forced 9 to retire
  - From Illinois through Nevada, practically all roadways were unpaved
  - Convoy ‘broke’ and repaired multiple wooden bridges, including 14 in Wyoming alone
  - Planned average speed of advance was 15mph; actual was 5 mph over 56 travel days
Championed by namesake
   - 1919 Army Convoy
   - Exposure to ‘Reichsautobahn’ system – first implementation of Germany’s Autobahn network

Construction was authorized by the Federal Aid Highway Act of 1956

Specs:
   - Two lanes minimum in each direction
   - Lanes that were 12 feet in width
   - Right shoulder to be 10-foot wide and paved
   - Design that allowed speeds of 50-70 miles per hour
   - No intersections, traffic signals or rail crossings
   - An estimated 55,000 bridges were built to accommodate the requirement for uninterrupted traffic flow.

Milestones:
   - October 1974: Nebraska becomes first state to complete all of its mainline highways
   - October 1979: Final section of I-5 complete (connects Canada with Mexico)
   - August 1986: Final section of coast-coast I-80 complete (in Utah –50 miles from the site of the ‘golden spike’)
   - August 1990: Final section of coast-coast I-10 complete (in Arizona)
   - September 1991: Final section of coast-coast I-90 complete (in Idaho)
   - October 1992: Final section of coast-coast 70 complete (in Colorado)

One of the primary reasons for building the Interstates was national security

"Much of the success of Operation Desert Storm was due to our logistical ability to rapidly move troops to theater. The US highway system supported the mobilization of troops and moved equipment and forces to US embarkation ports – the was KEY to successful deployment."

Lt Gen Kenneth Wykle / Deputy Commander / US Transportation Command
Highway Challenges

• Issuance of clearances on over-size / over-weight shipments is a challenge during peacetime; would be exacerbated during wartime

• Develop agreements between State and DoD on predetermined routes (fort to port) and specific military vehicles to expedite OS/OW permitting

• It is essential that routes connecting forts to ports are not just identified by DOT’s, but evaluated, analyzed and maintained on a recurring basis to ensure they continue to meet the needs of the DOD at times of national emergencies.

• Request States to adopt performance measurements and prioritize projects that support National Defense
America’s Transportation Infrastructure Act of 2019
Climate Change: Resilience Funding

National Highway Performance Program (Sec. 1105)
- 15% of program funding for protective features designed to mitigate risk of recurring damage or future repair costs, from extreme weather events, flooding, or other natural disasters

Emergency Relief (Sec. 1106)
- Amends definition of a natural disaster to include wildfire and sea level rise
- Program funds may be used on “economically justifiable” protective features

Federal share payable (Sec. 1107)
- Federal share 100% for projects to add protective features to improve resiliency
Resilience Funding

Surface Transportation Block Grant Program (Sec. 1109)

- Allows program funding to be used for “Projects that use natural infrastructure alone or in combination with other eligible projects to enhance resilience of a transportation facility...”
Climate Change Resilience

Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Grant Program (Sec. 1407)

- Formula ($786 M) and competitive grant program ($200 M/year) for resiliency improvements

Disaster Relief Mobilization Pilot Program (Sec. 1505)

- Provides grants to local communities to develop disaster preparedness and disaster response plans
- $5M per year
Climate Change Resilience

Emergency Relief Projects (Sec.1523)

- Update FHWA emergency relief manual- include definition of resilience, identify procedures to incorporate resilience into ER projects, encourage use of Complete Streets design, develop best practices and track costs of ER projects
Reducing Carbon Emissions

Charging and Fueling Infrastructure Grants (Sec. 1401)

- Deployment of EV, hydrogen, and natural gas charging and fueling infrastructure along alternative fuel corridors
- $100M progressing to $300M per year

Reduction of Truck Emissions at Port Facilities (Sec. 1402)

- Competitive grant program to reduce idling and emissions at port facilities
- $60M progressing to $90M per year
Carbon Reduction Incentive Program (Sec. 1403)

Formula Grant Program
- Transportation improvements to reduce on-road mobile sources of carbon
- $100M per year, 65% suballocated

Carbon Reduction Planning Strategies
- States may develop plans- projects and strategies to reduce emissions and set emissions reduction goals

Carbon Reduction Performance Program Grants
- States and MPOs eligible if slowed or reduced transportation carbon emissions over last 2 years
- $100M per year, grants $5M to $30M
Reducing Carbon Emissions

Congestion Relief Program (Sec. 1404)
- Discretionary grants to urbanized areas for multimodal solutions to congestion relief
- $40 million per year, minimum grant $10M

Freight Plans (Sec. 1405)
- Inclusion of resilience and strategies to reduce local air pollution and water runoff in national freight strategic plan
Reducing Carbon Emissions

Innovative Technologies (USE IT Act) (Sec. 1406)
• Supports carbon reduction research, and development of carbon capture, utilization, and sequestration facilities and carbon dioxide pipelines

Federal Interagency Working Group (Sec. 1510)
• Creates a new federal interagency working group (organized through CEQ) with goal of transitioning the federal vehicle fleet to hybrid-electric vehicles, plug-in EVs, and alternative fuel vehicles
Stormwater

- DOT to study effects of permeable pavements on flood control (Sec. 1522)
- DOT and EPA to request a TRB study of stormwater runoff, including estimated pollutant loads, TMDL compliance strategies, and best practices (Sec. 1526)
- Requires FHWA to update its stormwater best management practices report (Sec. 1527)
- Requires Federal Lands Access Program projects to consider use of native plants and designs that minimize runoff and heat generation (Sec. 1113)