MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

WE ARE HERE TODAY AT YOUR REQUEST TO DISCUSS OUR REPORT ENTITLED "BETTER TARGETING OF FEDERAL FUNDS NEEDED TO ELIMINATE UNSAFE BRIDGES" (CED-81-126) WHICH THE ACTING COMPTROLLER GENERAL ISSUED TO SENATOR JAMES SASSER OF TENNESSEE ON AUGUST 11, 1981. SINCE THEN S. 1649, WHICH WOULD IMPLEMENT SEVERAL OF OUR RECOMMENDATIONS, WAS INTRODUCED. I WILL SUMMARIZE THE REPORT'S FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS.

THE BRIDGE PROBLEM

THE UNITED STATES HAS A SUBSTANTIAL BRIDGE PROBLEM. ACCORDING TO THE FEDERAL HIGHWAY ADMINISTRATION'S (FHWA) NATIONAL BRIDGE INVENTORY, THERE ARE MORE THAN 500,000 BRIDGES NATIONWIDE. ABOUT 40 PERCENT, OR SLIGHTLY OVER 200,000 BRIDGES, ARE DEFICIENT.
About 98,000 of these are structurally deficient, that is, they are structurally weak or unsound and must be closed, restricted to lighter vehicles, or immediately rehabilitated to prevent further deterioration and collapse. The other 102,000 deficient bridges are functionally obsolete because they are too narrow, have inadequate underclearances, have insufficient load-carrying capacity, or are poorly aligned with the roadway and can no longer safely service today's traffic. According to the National Bridge Inventory, about 120,000 bridges are or should be posted for lower weight limits to restrict them to lighter vehicles. FHWA reports that about 3,700 bridges are closed to all traffic, and that an estimated 150 bridges collapse each year. As pointed out later, some of these statistics need to be used with caution.

Structural deficiencies occur principally because of lack of proper maintenance due to insufficient funds, exposure to the elements, general wear, and poor initial design. The major reasons for functional obsolescence are increased traffic, changing traffic patterns, and higher safety standards. Many bridges are deficient largely because of their advanced age. About 75 percent of all bridges were built before 1935, and the usual design life is about 50 years. Weather, erosion, vibration, decay, metal fatigue, and other factors have over time weakened many of these bridges. Also, the bridges were built at a time of less traffic, slower speeds, and fewer large trucks and buses. Often, roadways have been widened and improved to accommodate traffic, but, because of high costs, the bridges have not.
DEFICIENT BRIDGES HAVE A SAFETY, ECONOMIC, ENERGY, AND QUALITY OF LIFE IMPACT. MANY OF THESE BRIDGES LIMIT THE USE OF ROADS AND HIGHWAYS AND CAN CAUSE INCREASED ACCIDENTS, TRAFFIC CONGESTION, TRAVEL TIME, DRIVER FRUSTRATION, AND FUEL CONSUMPTION.

FHWA ESTIMATED IN MARCH 1981 THAT IT WOULD COST $41.1 BILLION TO REPLACE OR REHABILITATE THE DEFICIENT BRIDGES THAT HAVE ALREADY BEEN IDENTIFIED. THE COST ESTIMATE IS EXPECTED TO INCREASE AS ADDITIONAL BRIDGES NEED REPLACING OR REHABILITATING IN THE FUTURE. IF THE AVERAGE LIFE OF A BRIDGE IS 50 YEARS, AN AVERAGE OF 11,320 BRIDGES WILL NEED REPLACING EACH YEAR, MANY MORE THAN ARE CURRENTLY BEING REPLACED. INFLATION WOULD FURTHER INCREASE THE COST. FHWA'S CONSTRUCTION PRICE INDEX INCREASED 146 PERCENT FROM 1970-79, COMPARED TO 87 PERCENT FOR THE CONSUMER PRICE INDEX. THE SAME INFLATION RATE FOR THE NEXT 10 YEARS WOULD MORE THAN DOUBLE THE COST.

THE FEDERAL BRIDGE PROGRAMS

THE BRIDGE REPLACEMENT/REHABILITATION PROGRAM

THE ASSISTANCE PROGRAM IS NOW REFERRED TO AS THE HIGHWAY BRIDGE REPLACEMENT AND REHABILITATION PROGRAM. THE 1978 ACT, IN ADDITION TO MAKING OFF-SYSTEM BRIDGES ELIGIBLE FOR PROGRAM FUNDING, PERMITTED RECONSTRUCTION OR REHABILITATION RATHER THAN COMPLETE REPLACEMENT OF A BRIDGE AND INCREASED THE MAXIMUM FEDERAL SHARE OF EACH PROJECT FROM 75 PERCENT TO 80 PERCENT. THE ACT ALSO PROVIDED THAT AT LEAST 15 PERCENT AND NO MORE THAN 35 PERCENT OF THE FUNDS APPORTIONED TO THE STATES IS TO BE USED FOR OFF-SYSTEM BRIDGES, AND IT DESIGNATED $200 MILLION OF EACH FISCAL YEAR'S AUTHORIZATION TO BE USED AT THE DISCRETION OF THE SECRETARY OF TRANSPORTATION GENERALLY FOR BRIDGES THAT COST MORE THAN $10 MILLION TO REPLACE OR REHABILITATE.

PROGRAM FUNDING HAS BEEN LIMITED IN COMPARISON TO THE SIZE OF THE BRIDGE PROBLEM. FOR EXAMPLE, ALL THE PROJECTS APPROVED DURING THE FIRST 9-1/2 YEARS OF THE PROGRAM WOULD BE ONLY ABOUT 3 PERCENT OF THE BRIDGES THAT ARE CURRENTLY IDENTIFIED AS DEFICIENT. CLEARLY, CONTINUED HIGH FEDERAL FUNDING LEVELS AND GREATER STATE AND LOCAL EFFORTS WILL BE NEEDED TO "PUT A DENT IN" THE BRIDGE PROBLEM. EVEN WITH INCREASED FUNDING, THE UNITED STATES MAY HAVE A LARGE NUMBER OF DEFICIENT BRIDGES FOR YEARS TO COME. WE CONSIDER IT ESSENTIAL THAT THE LIMITED FEDERAL BRIDGE REPLACEMENT/REHABILITATION PROGRAM FUNDS BE USED WHERE THEY ARE NEEDED THE MOST. TO ENSURE THAT THIS IS DONE, WE RECOMMENDED TWO MAJOR CHANGES IN THE PROGRAM. ONE CHANGE CONCERNS DISTRIBUTION OF PROGRAM FUNDS TO THE STATES. THE OTHER CONCERNS PROJECT ELIGIBILITY AND SELECTION.


TO IMPROVE DISTRIBUTION OF FUNDS TO THE STATES, WE RECOMMENDED THAT THE CONGRESS DIRECT THE SECRETARY OF TRANSPORTATION TO USE THE LATEST AVAILABLE NEEDS DATA, INCLUDING OFF-SYSTEM BRIDGES, TO ANNUALLY ALLOCATE FUNDS TO THE STATES. WE ALSO RECOMMENDED THAT THE CONGRESS CONSIDER ALLOWING THE STATES GREATER FLEXIBILITY TO ADDRESS SEVERE OFF-SYSTEM BRIDGE PROBLEMS BY USING MORE THAN THE MAXIMUM 35 PERCENT OF THE FUNDS FOR OFF-SYSTEM BRIDGES. IN TENNESSEE, FOR EXAMPLE, NEARLY 60 PERCENT OF THE OFF-SYSTEM BRIDGES ARE DEFICIENT AND OVER 1,300 HAVE BEEN RECOMMENDED FOR CLOSURE. STATE OFFICIALS WOULD HAVE LIKED TO HAVE SPENT MORE THAN THE MAXIMUM 35 PERCENT FOR OFF-SYSTEM BRIDGES BECAUSE OF THEIR POOR CONDITION BUT COULDN'T UNDER THE LAW.

WE FURTHER RECOMMENDED THAT THE SECRETARY OF TRANSPORTATION DIRECT FHWA TO REVISE ITS PROJECT ELIGIBILITY CRITERIA TO CONCENTRATE ON BRIDGES IN THE WORST CONDITION AND MOST IN NEED OF REPLACEMENT OR REHABILITATION. STILL WE POINTED OUT THAT STATE AND LOCAL GOVERNMENTS WILL NEED SOME FLEXIBILITY IN SELECTING
PROJECTS. FHWA'S DECEMBER 1978 CHANGE IN ELIGIBILITY CRITERIA NOT ONLY BROADENED THE DEFINITION OF A DEFICIENT BRIDGE BUT ALSO RESULTED IN NEARLY ALL DEFICIENT BRIDGES BEING ELIGIBLE FOR FUNDING. WE DO NOT BELIEVE THAT A PROGRAM THAT IS CURRENTLY FUNDED PRIMARILY WITH FEDERAL FUNDS OF ABOUT $1 BILLION PER YEAR CAN BE DIRECTED EFFECTIVELY AT ELIMINATING ALL DEFICIENT BRIDGES, WHICH, I POINTED OUT EARLIER, FHWA ESTIMATED WOULD COST $41.1 BILLION IN 1981 DOLLARS. WE RECOGNIZE THE NEED FOR WORK ON A WIDE RANGE OF DEFICIENT BRIDGES, BUT OTHER FEDERAL-AID HIGHWAY FUNDS AND STATE AND LOCAL FUNDS COULD BE USED FOR THIS WORK IF CONSIDERED ESSENTIAL. MORE RESTRICTIVE CRITERIA WOULD BETTER ENSURE THAT BRIDGES IN THE WORST CONDITION AND MOST IN NEED OF WORK ARE SELECTED FIRST.

TO DETERMINE THE TYPE OF BRIDGES SELECTED BY THE STATES FOR FUNDING UNDER THE PROGRAM, WE EXAMINED PROJECT APPROVAL DATA FOR 10 STATES, WITH EMPHASIS ON THE SUFFICIENCY RATINGS. EACH BRIDGE RECEIVES A SUFFICIENCY RATING, WHICH IS THE METHOD USED TO EVALUATE THE ADEQUACY OF A BRIDGE TO REMAIN IN SERVICE IN ITS PRESENT CONDITION. A RATING OF 100 WOULD REPRESENT AN ENTIRELY SUFFICIENT BRIDGE--ONE THAT NEEDS ABSOLUTELY NO WORK. A ZERO RATING WOULD INDICATE AN ENTIRELY INSUFFICIENT OR DEFICIENT BRIDGE--ONE THAT HAS MANY SAFETY PROBLEMS AND SHOULD BE CLOSED. THE LOWER THE RATING, THE HIGHER THE PRIORITY FOR REPLACEMENT.

THE STATES ARE SELECTING MANY BRIDGES WITH LOW SUFFICIENCY RATINGS. IN THE 10 STATES FOR WHICH WE EXAMINED PROJECT APPROVAL DATA, ABOUT 40 PERCENT OF THE BRIDGES SELECTED FOR FUNDING HAD SUFFICIENCY RATINGS BELOW 20. HOWEVER, THE STATES ALSO HAD SELECTED SOME BRIDGES WITH RELATIVELY HIGH RATINGS. FOR THE 10
STATES, 534, OR ABOUT 21 PERCENT, OF THE 2,544 BRIDGES SELECTED HAD RATINGS OF 40 OR ABOVE AND MANY OF THESE HAD RATINGS OF 60 OR ABOVE.

FEDERAL HIGHWAY OFFICIALS TOLD US THAT THEY ENCOURAGE THE STATES TO SELECT BRIDGES WITH LOWER SUFFICIENCY RATINGS, BUT THE STATES MAY SELECT ANY ELIGIBLE BRIDGE AND MANY FACTORS, SOME UNIQUE TO AN INDIVIDUAL STATE, ENTER INTO THE SELECTION PROCESS.

WE FOUND THAT FHWA, IN ADMINISTERING THE $200 MILLION ANNUALLY IN DISCRETIONARY FUNDS, WAS ALSO SELECTING BRIDGES WITH RELATIVELY HIGH SUFFICIENCY RATINGS. THE MAJOR REASON IS THAT FHWA SELECTS BRIDGES WITH "LEGISLATIVE HISTORY" FIRST. FHWA CONSIDERS BRIDGES TO HAVE LEGISLATIVE HISTORY IF THEY ARE MENTIONED IN CONGRESSIONAL COMMITTEE REPORTS OR THE CONGRESSIONAL RECORD AS CANDIDATES FOR DISCRETIONARY FUNDING. MORE AND MORE BRIDGES ARE RECEIVING LEGISLATIVE HISTORY. WE RECOMMENDED THAT THE SECRETARY OF TRANSPORTATION DEVELOP A FORMAL SELECTION PROCESS FOR DISCRETIONARY PROJECTS TO PROPERLY WEIGH FACTORS SUCH AS SUFFICIENCY RATINGS, COSTS, AND BENEFITS.

NATIONAL BRIDGE INSPECTION PROGRAM

THE MAJOR ASPECT OF THE NATIONAL BRIDGE INSPECTION PROGRAM IS THAT STATE AND/OR LOCAL GOVERNMENTS MAINTAIN AN INVENTORY OF THEIR BRIDGES AND INSPECT THEM IN ACCORDANCE WITH THE NATIONAL BRIDGE INSPECTION STANDARDS. THESE STANDARDS WERE DEVELOPED BY THE DEPARTMENT OF TRANSPORTATION IN CONSULTATION WITH THE STATES AND OTHER INTERESTED PARTIES TO SERVE AS THE MINIMUM REQUIREMENTS TO BE MET WITH REGARD TO BRIDGE INVENTORY AND INSPECTION. THE BASIC TENET OF THE STANDARDS IS THAT QUALIFIED PERSONNEL USE
PROPER METHODS TO INSPECT BRIDGES AT APPROPRIATE INTERVALS AND PROPERLY RECORD AND MAINTAIN THE DATA THEY COLLECT.

STATE AND LOCAL GOVERNMENTS HAVE MADE SUBSTANTIAL PROGRESS SINCE THE PROGRAM'S START, BUT FULL COMPLIANCE WITH THESE IMPORTANT STANDARDS HAS NOT BEEN ACHIEVED. FOR EXAMPLE, WE FOUND THAT:

--SOME INSPECTORS DID NOT MEET THE MINIMUM QUALIFICATIONS FOR TRAINING AND EXPERIENCE.

--SOME STATE AND LOCAL GOVERNMENTS WERE NOT INSPECTING THEIR BRIDGES AT LEAST EVERY 2 YEARS AS REQUIRED BY THE STANDARDS, AND SOME LOCAL GOVERNMENTS WERE NOT INSPECTING THEIR BRIDGES AT ALL.

--THE INITIAL INVENTORY AND INSPECTION OF BRIDGES, PARTICULARLY BRIDGES OFF THE FEDERAL-AID HIGHWAY SYSTEM, HAD NOT BEEN COMPLETED.

--STRUCTURALLY WEAK BRIDGES WERE NOT ALWAYS BEING PROPERLY CLOSED OR POSTED FOR LOWER WEIGHT LIMITS TO PROTECT AGAINST BRIDGE COLLAPSES. EVEN IF BRIDGES WERE PROPERLY POSTED OR CLOSED, THE POSTINGS AND CLOSINGS WERE OFTEN IGNORED BY THE PUBLIC. BRIDGE WEIGHT LIMITS WERE NOT ALWAYS ENFORCED, AND FINES FOR VIOLATIONS WERE SMALL AND INEFFECTIVE.

WE RECOMMENDED THAT THE SECRETARY OF TRANSPORTATION DIRECT FHWA TO ASSESS THE STATES' AND LOCAL GOVERNMENTS' COMPLIANCE WITH THE NATIONAL BRIDGE INSPECTION STANDARDS AND DEVELOP A STRATEGY FOR BRINGING ABOUT FULL COMPLIANCE. AS PART OF THE ASSESSMENT, THE ADMINISTRATOR SHOULD DETERMINE (1) WHETHER ANY OF THE REQUIREMENTS, SUCH AS THE 2-YEAR REINSPECTION REQUIREMENT, SHOULD BE STRENGTHENED OR LESSENED, (2) WHETHER FHWA SHOULD ENCOURAGE STATE GOVERNMENTS
TO ASSUME AUTHORITY FOR OFF-SYSTEM INSPECTIONS, AND (3) THE NEED TO PENALIZE OR TAKE OTHER ACTION AGAINST THOSE GOVERNMENTS THAT DO NOT COMPLY. THE RESULTS OF THE ASSESSMENT SHOULD BE INCLUDED IN THE ANNUAL REPORT TO THE CONGRESS ON THE BRIDGE PROGRAMS.

WE ALSO FOUND INCOMPLETE, INACCURATE, AND UNRELIABLE INVENTORY DATA AND INCONSISTENCIES IN BRIDGE INSPECTION AND RATING, AND LIMITED MONITORING OF THE PROGRAM BY FHWA. WE RECOMMENDED THAT THE SECRETARY OF TRANSPORTATION DIRECT FHWA TO GIVE MORE EMPHASIS TO ACCURATE AND COMPLETE NATIONAL BRIDGE INVENTORY DATA AND CONSISTENT INSPECTION PROCEDURES AND BRIDGE RATINGS.

FINALLY OUR REPORT POINTED OUT THAT FEDERAL AGENCIES SUCH AS THE NATIONAL PARK SERVICE AND FOREST SERVICE OWN ABOUT 14,000 BRIDGES. THESE AGENCIES, HOWEVER, ARE NOT REQUIRED TO COMPLY WITH THE NATIONAL BRIDGE INSPECTION STANDARDS AS STATE AND LOCAL GOVERNMENTS ARE. WHILE THE AGENCIES INCLUDED IN OUR REVIEW DID HAVE INSPECTION PROGRAMS, THEY WERE NOT ALWAYS COMPLYING WITH THEIR OWN REGULATIONS AND SOME OF THE PROGRAMS DID NOT CONFORM TO THE NATIONAL STANDARDS. WE BELIEVE THAT THE TRAVELING PUBLIC SHOULD HAVE REASONABLE ASSURANCE THAT BRIDGES IT CROSSES IN NATIONAL PARKS AND ON OTHER FEDERAL LANDS ARE ADEQUATELY INSPECTED AND MONITORED. WE RECOMMENDED THAT THE CONGRESS REQUIRE FEDERAL AGENCIES THAT OWN BRIDGES TO COMPLY WITH THE NATIONAL BRIDGE INSPECTION STANDARDS. THE FULL IMPACT OF SUCH A REQUIREMENT WOULD NOT BE KNOWN UNTIL FHWA COMPLETES THE ASSESSMENT OF THE STANDARDS THAT WE RECOMMENDED EARLIER.

THE DEPARTMENT OF TRANSPORTATION'S RESPONSE TO OUR REPORT HAS BEEN LARGELY POSITIVE; IN FACT, IT HAS GIVEN THE REPORT EXTENSIVE
DISTRIBUTION THROUGHOUT FHWA OFFICES. THE DEPARTMENT GENERALLY AGREED WITH OUR REPORT'S FINDINGS AND CONCLUSIONS AND SOME OF THE RECOMMENDATIONS. FOR EXAMPLE, IT PROMISED TO MAKE EVERY EFFORT, WITHIN CURRENT BUDGET RESTRANTS, TO IMPROVING MANAGEMENT REVIEW IN THESE PROGRAMS. THE DEPARTMENT WAS CONCERNED, HOWEVER, THAT OTHER RECOMMENDATIONS MAY HAVE THE OVERALL EFFECT OF INCREASING ITS WORKLOAD AND FEDERAL INTERVENTION IN STATE AND LOCAL GOVERNMENTS AT A TIME WHEN EFFORTS ARE BEING MADE TO REDUCE THE OVERSIGHT DURDEN.

WE BELIEVE THAT THESE PROGRAMS ARE EXTREMELY IMPORTANT AND CAN BE MORE EFFECTIVE. FOR EXAMPLE, STATE AND LOCAL GOVERNMENTS NEED TO FULLY MEET INSPECTION STANDARDS TO ENSURE PUBLIC SAFETY AND ACCURATE, RELIABLE DATA ON THE CONDITIONS AND NEEDS OF THE NATION'S BRIDGES. WE FURTHER BELIEVE THAT THE RECOMMENDATIONS THAT CONCERN THE DEPARTMENT CAN BE IMPLEMENTED WITH PROPER FLEXIBILITY FOR STATE AND LOCAL GOVERNMENTS. I SHOULD ALSO POINT OUT THAT SOME OF THE CONCERNS ARE OVER POINTS THAT WE RECOMMENDED THAT FHWA ASSESS OR CONSIDER RATHER THAN IMPLEMENT. FOR EXAMPLE, IN SOME STATES, THE STATE GOVERNMENT INSPECTS LOCAL BRIDGES. IN OTHER STATES, SOME LOCAL GOVERNMENTS ARE HAVING PROBLEMS MEETING THE INSPECTION REQUIREMENTS AND WOULD PREFER THAT THEIR STATE GOVERNMENT ALSO PERFORM THE INSPECTIONS. STATE GOVERNMENTS ALREADY HAVE AN INSPECTION ORGANIZATION IN PLACE WHILE MANY LOCAL GOVERNMENTS HAVE TO USE CONSULTANTS. ALSO, INSPECTION AND RATING CONSISTENCY WOULD BE IMPROVED IF STATE TEAMS ARE INSPECTING ALL THE BRIDGES. THUS, WE RECOMMENDED THAT FHWA ASSESS WHETHER IT SHOULD ENCOURAGE STATE GOVERNMENTS TO ASSUME AUTHORITY FOR LOCAL
BRIDGE INSPECTIONS. WE UNDERSTAND THE DEPARTMENT’S CONCERN, BUT WHEN IT COMES TO MATTERS OF SAFETY, FEDERAL, STATE, AND LOCAL GOVERNMENTS COLLECTIVELY DO NEED TO PROVIDE SUFFICIENT RESOURCES TO AVOID CATASTROPHES.

MR. CHAIRMAN, THIS CONCLUDES MY STATEMENT. WE WILL BE GLAD TO RESPOND TO YOUR QUESTIONS.