

# Mississippi Statewide 511 System Research, Vision and Implementation Strategy

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## Introduction

### Purpose of Document

The purpose of *Technical Memorandum #3* is to build upon the vision, discussed and agreed to at the Visioning Workshop held on January 28, 2003 at the Mississippi Department of Transportation (MDOT). This document illustrates the issues, costs, and steps involved in achieving the vision for Mississippi's 511 service. The document includes both a Conceptual Design and Implementation Plan, and provides the following:

- General 511 guidelines;
- Documentation of system requirements;
- Options for system architecture;
- Estimated capital and recurring costs for the various 511 elements;
- Deployment schedule;
- Organizational roles and responsibilities;
- Funding strategy;
- Marketing strategy; and,
- Recommendations for implementation.

The document concludes with a list of general key issues, collected from the experience of other 511 deployers.

### Project Background

MDOT continues to develop intelligent transportation systems (ITS) statewide, and in doing so has commissioned this, the last of three, technical memoranda documenting the feasibility and issues related to the implementation of a statewide 511 service. *Technical Memorandum #1, Project Research and Stakeholder Engagement*, documented the resources potentially available to 511. An inventory and analysis of traveler information data available through MDOT, City of Jackson Public Transportation (JATRAM) and other transit agencies, the Highway Patrol/Department of Public Safety (DPS), emergency management services and the tourism industry was provided in *Technical Memorandum #1*. One-on-one stakeholder interviews were conducted with representatives from MDOT and other key agencies, with the goals of soliciting input and generating a list of potential requirements for the system.

Following delivery and acceptance of *Technical Memorandum #1*, MDOT hosted a 511 Visioning Workshop, including stakeholders from various MDOT Departments and Districts, Hattiesburg Metropolitan Planning Organization (MPO), the City of Jackson, DeSoto County, Joseph D. Fail Eng., Inc., Harrison County Sheriff's Office, Natchez Trace Parkway, Central Mississippi Planning and Development District (CMPDD), Mississippi Trucking Association, Federal Highway Administration (FHWA), Mississippi Water Resources Association, as well as representatives from

Cellular South, BellSouth and the Clarion Ledger.

For the benefit of stakeholders unable to attend the workshop, and as follow-up for those who did attend, update meetings were held in May 2003 for representatives from the Mississippi Development Authority and DeSoto County MPO, where issues pertaining to MDOT's design and vision for an eventual statewide system and interstate sharing of data were discussed. PBS&J also met with representatives from the Gulf Coast Planning Commission in July 2003 to solicit input regarding implementing 511 in that region.

During the Visioning Workshop and subsequent update meetings, issues pertaining to the development of the most effective Mississippi 511 service were discussed. Consensus was reached on several issues critical to the successful implementation of 511, including these main system components of a 511 service: systems, content, consistency, and business environment. The agreed-upon vision for a staged rollout of Mississippi's 511 program was documented in Technical Memorandum #2: *Vision Development*, and is best summarized by the following Vision Statement.

Mississippi (MS) 511 is proposed to be:

- An integrated statewide service, developed in phases, initially implemented in Jackson;
- Consistent with the national guidelines to the maximum extent possible;
- Transportation and tourism/travel services-focused;
- A public service first and foremost, though the opportunity for private sector involvement will be explored;
- Consistent with the *Mississippi ITS Strategic Plan* and current or planned traveler information programs;
- Connected to bordering states' 511 services where possible and available;
- Viewed as an essential public service by citizens, tourists and through travelers; and,
- Available to the traveling public 24 hours per day, 7 days per week.

### **National 511 Update**

Since July 2000, when the Federal Communications Commission (FCC) designated 511 as the nation's travel information number, eighteen 511 systems have become operational in the United States and many more are in the planning stages. Several are statewide implementations, such as Arizona, Utah, Nebraska and Alaska, and others cover a specific region, such as the I-81 Corridor in Virginia, I-4 in Orlando, Southeast Florida and the San Francisco Bay area. As of June 2003:

- 511 is available to over 50 million Americans;
- Over 8.5 million calls have been placed;
- Three services have broken the million call barrier; and,
- Peak usage overall was experienced during winter storms, accidents, and holidays.

### **Conceptual Design**

#### **Mississippi's 511 System: The User Experience**

511 is expected to be the face of ITS and traveler information in the United States; a recognizable brand from state to state and useful to commuters and travelers of all types. At its most basic, 511 should be understood simply as a way for people to get the traveler information they need in order to make informed decisions about how and when to travel. Some examples are provided to illustrate how 511 will work for travelers of all kinds in and through Mississippi:

1. It is 8:15 a.m. on Tuesday morning and DPS has reported an accident on Interstate 55 at Exit 92A / East McDowell Rd. Joe Smith, who lives in Crystal Springs and works in downtown Jackson, drives I-55 every day, passing through the Stack on every trip. Although he knows there is going to be some congestion due to the construction taking place, he wants to make sure there are no incidents slowing traffic further before he starts his morning commute. He calls 511 from his cell phone just as he gets onto the interstate. He says "55" and receives the information regarding the accident on I-55. He knows this is going to affect his morning commute. Because he is armed with this information, he is able to route around the accident and get to work on time.
2. Barbara Jones is a long distance trucker, driving from Florida to Memphis, TN. She used 511 in Orlando during her trip, where she received information that allowed her to avoid a delay caused by a stalled car on I-4. When she crossed from Alabama into Mississippi, she was relieved to see a road sign advertising Mississippi's 511 service. She dials 511 on her cell phone, and says "Interstate Ten" to receive a road report on I-10. She hears a digitized message telling her the highway is clear and there are no reported problems. On the same call, she asks for more information; she checks conditions on I-55, and learns there are icy roads ahead. Because she has information pertinent to her trip, she can plan her rest stop before she hits the icy areas.
3. John Anderson works in Biloxi. He is preparing to meet his family in Hattiesburg for the weekend, but it is hurricane season and a tropical storm is expected. He dials 511 from his home phone, and listens to the weather advisory from DPS, indicating the storm has traveled east and is not expected to affect Mississippi. He gets on the road as planned. When he calls his mother to let her know he'll be on time, he suggests she call 511 to find out if there are any events taking place in Hattiesburg that they might enjoy visiting.

## General Guidelines

### Approach

To establish and sustain 511 services, it is necessary to clearly articulate the general approach to how resources will be used. For Mississippi's 511 system, the following principles will apply:

- *All calls for the basic service should be no more than the cost of a local call to the user* - In compliance with the national 511 implementation guidelines, if a user is within the local calling range to the service's answering point (in this case MDOT), the 511 code may be translated to a local number, and the user may pay the cost of the local call. For users outside of this local calling area, a toll-free number will be installed as the backbone for the 511 service; in this case the caller incurs no charge. The service is free; there is no fee to access the information, as there is with 411. However, for wireless users, roaming charges may apply.

The cost of the toll-free number can vary from month to month. The more successful the service and the more calls received, the higher the cost to the 511 operating agency or contractor (though lower per-minute rates may be negotiated based on higher projected call volumes). The cost to MDOT's customer, the traveling public, does not change.

- *The public sector anticipates supporting most or all of the basic service costs* - Based on the findings of the 511 Deployment Coalition's 511 *Business Models and Costs Information Report*, the public sector agencies involved in delivering basic 511 services need to accept responsibility for most or all of the costs. The types of costs include:
  - Data gathering infrastructure;

- Data gathering operations and maintenance (personnel and technical maintenance);
  - Data fusion and oversight;
  - Data dissemination infrastructure (the Interactive Voice Response (IVR) component);
  - Telecommunications charges (for physical lines as well as monthly service charges) and,
  - 511 translation charges – one-time and occasionally recurring charges from landline or wireless carriers.
- Sponsorship and advertising on basic services can be used to defray the costs to the maximum extent possible - Although Coalition guidelines suggest that sponsorship can be used to defray implementation and maintenance costs, most 511 implementers have chosen not to accept advertising. In Mississippi; however, travel and tourism will be a central source of information, and therefore can be an excellent chance for sponsorship to assume some of the costs.
  - *Self-supporting or revenue generating “optional” content is possible* - Implementers of 511 can include additional content or services that could provide revenue generation capability. These services could be public sector-sponsored, such as weather; or private sector services, such as driving directions. It is possible and acceptable for optional services to be available for a fee to consumers, in the form of a membership or per-use fees. Any charges for optional content should be explained prior to the user reaching a “commitment point” so they can opt out before being assessed any charges.
  - *MDOT is in a position to utilize currently available system functionality and structure for the MS 511 system* - The existing travel information systems in the state will play a large role in how the system will function and operate. Currently, MDOT has its own data collection and fusion engines, and receives data from DPS as well. These two agencies will be responsible for the initial data streams for MS 511.

## Content

Mississippi’s 511 system will leverage the efforts of the 511 Deployment Coalition in defining the information, or content, to be made available. The Coalition’s implementation guidelines provide detailed recommendations on the types of content to be provided. These guidelines, which will be essential elements of Mississippi’s service, establish some basic concepts regarding 511 content:

- *Basic and Optional Services* - Basic content will be consistent throughout the entire system, and available to callers from Jackson as well as from other areas of the state. Optional content, such as additional public sector-oriented information and/or private sector supported services, can be added elements to Mississippi’s 511 service at the discretion of MDOT.
- *Basic highway information is automated, corridor-based and focused on the Mississippi portion of the National Highway System (NHS)* - Callers will receive recorded or automated messages for interstate highways throughout the state. The highways will be individually selectable and divided into logical segments, as Coalition guidelines suggest that roadway information be categorized not by city or jurisdiction, but by roadway segment. Cooperation is needed in Mississippi’s nine districts to divide highways into logical segments.
- *More detail will be provided in urban areas* - Due to increased congestion and importance of

information in Jackson, the suburbs of Memphis, and the Gulf Coast region, content will be more detailed and roadway segments will be smaller in length. Coalition guidelines recommend updating information when conditions change, rather than on a predetermined schedule.

- *All major public transportation agencies in urban areas will be invited to provide information via 511* - Regional 511 systems will work in conjunction with existing customer service centers operated by JATRAM in Jackson and other transit agencies in each region. Providing information on service disruptions, changes or additions and the ability to offer direct transfers to customer service centers will be explored.

## Consistency

511 Coalition Guidelines suggest that in order to be identified as the face of ITS nationally, 511 must maintain a certain consistency among all deployed systems. 511 must be available and recognizable across districts, cities, counties and states. As such, it was decided during the Visioning Workshop that Mississippi's 511 system will feature consistency with other implementations in the following areas:

- *User interface* - Coalition guidelines suggest 511 systems utilize voice recognition software as the primary interface, and this type of interface is planned for Mississippi's system. A voice recognition system provides a user the opportunity to speak his or her choice, and may also have a back-up system allowing a user to enter their selection via keypad (touch-tone). The voice talent used to record the menu instructions will sound familiar and agreeable to residents of the state. In addition, users will be given the ability to interrupt the recording at any time to switch, or jump, to another part of the system. Shortcuts will also be available, which give the experienced user a method of accessing information quickly, without having to wait for prompts.
- *Floodgate Message* - Mississippi has a pronounced need for evacuation and emergency information. To support callers' quick access to critical and time-sensitive information in times of emergency or evacuations, the IVR system will have an override capability to support "Alert" or Floodgate messages at the start of the call, regardless of the region covered. This will be a statewide message. This floodgate message will not be interruptible as are the other menu choices.
- *ADA Accessible* - The Telecommunications Act of 1996 states that equipment manufacturers and carriers must provide access to and make their services and products usable by individuals with disabilities "if readily achievable". MDOT's 511 system will provide the disabled community access through telecommunications relay services (TRS). Hearing or speaking impaired users will be able to use 711 for this purpose. Mississippi's Telecommunications Center for Customers with Disabilities (TCCD) handles these calls. TCCD will be provided with the point-to number for 511.
- *No link to 911* - Consistent with Coalition guidelines and all implementations of 511, no direct link with 911 will be available.
- *Interstate data sharing* - Because Mississippi is home to several suburbs of Memphis, Tennessee, interaction with TN's 511 or ATIS is an important element in achieving consistency between systems. Mississippi's 511 user interface and content offerings must correlate seamlessly with that of Tennessee's, as many users will need information in both states. Jim McDougal of DeSoto County MPO expressed an enthusiasm for data sharing between states. Although Tennessee has received the federal 511 planning grant, planning activities are in the early stages. The issue has been flagged for further discussion for when

Tennessee increases its level of planning activity. When the issue becomes more active, Mississippi should be aware of and try to implement data transmission codes such as Traffic Management Data Dictionary (TMDD) and Society of Automotive Engineers (SAE) standards in order to maintain consistency.

Louisiana has commissioned a strategic plan for the implementation of 511, to begin with a pilot system in the Baton Rouge area. Issues of interstate sharing of traffic data will be addressed in their strategic plan.

Alabama is also working on a 511 plan that will provide road construction, road closures and delays, special events, weather and road surface conditions, public transportation information and major transportation disruptions.

As of the publication of this document, Arkansas has not applied for the 511 federal planning grant.

## **System Requirements**

### **System Structure and Interface**

The structure of the MS 511 system should be built upon Mississippi's current travel information database, the GoMDOT system, and in accordance with national 511 guidelines. As MDOT, in conjunction with DPS, provides real-time traveler information via its GoMDOT website, using this existing technical infrastructure will allow MDOT to leverage its resources and ensure consistent quality of information throughout the system. As stated in the *Vision Plan*, the initial component of a telephone-based service is the traveler information system, which receives and stores real-time information. With a traveler information system already in place, MDOT is well on its way to being able to provide data to 511.

In order for GoMDOT data to be available to 511, some reworking of the database will be necessary. MDOT operators currently report data using a series of drop down menus and freeform text. Categories of information that require freeform text will have to be converted into selectable data. The fields currently ready for inclusion in a 511 system are:

- Type
- Special Conditions
- Impact
- County
- Route
- Begin Time
- End Time
- Direction to Send Email Alert

The fields that currently use free form text are:

- Location
- County Route Begin Mile
- County Route End Mile
- Begin Date
- End Date
- Description of Work / Advice to the Public
- Initials / Name

The conversion of freeform text to selectable drop-down menus will not only make that information available to 511, but will benefit MDOT in other ways. The possibility of operator error is greatly decreased when data must be selected rather than input manually. It is recommended that MDOT implement the standard series of International Traveler Information Interchange Standard codes, which provide standard descriptions of incidents and events for use with these drop-down menus.

Also necessary to the initial implementation is the use of an IVR telephone dissemination platform. Adhering to recommended content and consistency guidelines, MDOT should have a 511 system capable of providing information to a caller through voice recognition with manual interaction (touch-tone) as a back up.

Information available for use on the GoMDOT website must be properly formatted and converted into voice-based information for communicating via a 511 system. This may be accomplished by parsing data directly from the database that comprises the website information - a task that may be performed by the same Information Service Provider (ISP) or technology that provides the web service.

### **System Content**

As agreed to during the Visioning Workshop, the Mississippi 511 system will provide, initially, basic content, related to the following:

- Road Conditions
- Construction
- Weather
- Public Transportation
- Tourism

### **Road Conditions**

As stated in the Coalition's content guidelines, the NHS will be the basis for basic 511 highway/roadway-related content. Additionally, weather-related road conditions on arterials currently reported by DPS will be available. The road condition information will be provided by the MDOT Traffic Alert system and the relevant DPS computer-aided dispatch (CAD) data. The data is currently collected for GoMDOT's traffic alerts.

### **Construction**

Construction alerts will also be provided by MDOT. Information collected for GoMDOT's Project Reports section will provide 511 construction information not only in Jackson, but also in Northern Mississippi and the Gulf Coast region. Data is currently entered as free form text and posted to the website. In the conversion to 511, this data will be assigned to existing data fields, created for the traffic alerts, and entered into the traveler information system.

### **Weather**

Mississippi is a state where travel can be critically affected by weather, and the inclusion of weather data in 511 is imperative. For reference, Deployment Assistance Report (DAR) #6 – Weather and Environmental Content on 511 Services, is currently available on the ITS America webpage at <http://www.itsa.org/511.html>. As per the Coalition's draft guidelines on weather content, Mississippi 511 will provide information on current travel conditions and forecasts for upcoming severe weather phenomena that are likely to impact the ability to travel. Rather than assume the cost of installing a statewide Road Weather Information System (RWIS), Mississippi should seek to contract with a

private weather provider. Data provided by a private contractor is generally available formatted in eXtensible Markup Language (XML), which will enable the data to be disseminated via Mississippi's 511 system.

## **Public Transportation**

Transit information will be added to the MS 511 system on a regional basis. In the initial implementation of Mississippi's 511 system, only Jackson will be included in the public transportation portion. JATRAM is Jackson's largest public transportation agency, and is currently in the process of developing a Global Positioning System (GPS) system for their buses, which will allow real-time tracking of bus location. At present, no real-time information is collected for the city's buses.

Coalition guidelines call for at least one automated report from each participating transit agency that provides a brief description of the agency's operations, as well as major service disruptions, changes or additions. JATRAM in Jackson can choose to make service disruption information available on the transit portion of the 511 menu. In addition, the agency may provide information on the top 3 or 4 frequently asked questions (FAQs) via a voice file. Static information such as fares, schedules and general office information will be available, giving after-hours users access to this information.

511 users will, during business hours, be provided an option to be transferred to JATRAM's customer service center in order to reach an operator. Links to Hattiesburg Area Redit Transit (HART) in Hattiesburg, Coast Transit Authority (CTA) on the Gulf Coast, and some or all of the 22 rural transit agencies serving other parts of the state will be added as the service rolls out. Many currently implemented 511 systems offer a caller the phone number to dial to reach outside agencies. Whenever possible, a call transfer, providing a seamless transition for the caller, is preferred and is planned for MS 511.

## **Tourism Information**

The Mississippi Development Authority operates the Division of Tourism and keeps a significant amount of tourist information in a centralized database, updated regularly. Information from the Division of Tourism must be processed differently from traffic data for a few reasons. Most notably, traffic information is guided by standard message sets and codes; i.e. a traffic incident or construction project is reported using a standard set of code numbers and abbreviations, standard in all states and jurisdictions. The same is not true of tourism information. Therefore, data from the Division of Tourism will not be formatted to match the structure of traffic data, and will not be imported into MDOT's 511 database. Instead, users seeking information regarding attractions and events will have the option to be transferred to the existing Division of Tourism call center; much in the same way a user can be transferred to JATRAM and other transit agencies.

## **User Interfaces**

As agreed during the 511 Visioning Workshop, and in accordance with national guidelines, the primary interface to Mississippi's 511 system will be voice recognition, and the output will use concatenated speech. Voice recognition allows for a user to speak their selection when requesting information.

There are two basic types of voice recognition: directed speech and natural speech:

- In directed speech, a user is asked to speak certain words in order to achieve a response. The words may be as simple as "yes" or "no," or they may be the names of area roadways

or facilities. A user might be asked to name the roadway in which he or she is interested, and respond "Interstate 55."

- In natural speech, the system listens for these same words, but the user may utter them in the course of a normal sentence, such as "tell me about Interstate 55." The system in this case picks up the "Interstate 55" utterance, and responds accordingly.

A touch-tone input will be provided to the user as backup for those who are unable to, or choose not to, use the voice recognition option.

With a concatenated speech output, Voice eXtensible Markup Language (VXML) is used to translate text or "tokens," read from the database, and concatenated into a series of pre-recorded phrases or sentences that make up the message being delivered.

## **Implementation Strategy**

### **Architecture Options**

There are two main alternatives to choosing how the MS 511 system is architected: an on-premise system, where the system is housed and maintained at MDOT; or a network-based off-premise system, which outsources the IVR system and call routing path to an outside entity, most likely a private company, outside of the MDOT facilities. Both alternatives could have either a centralized call center or multiple call centers to handle incoming 511 calls, and both alternatives may be provided by private contractors regardless of whether MDOT wishes to own or lease physical equipment that might be housed at its facilities.

### **MDOT Hosted Architecture**

The on-premise solution would use MDOT's existing traveler information database as the highway database component of the 511 system. An IVR system, a component of which would convert MDOT's Hyper Text Markup Language (HTML) data to VXML, could be built by MDOT, supplied by a contractor, or purchased off-the-shelf. Regardless, an additional server would be added to handle the telephonic portion of the system. IVR servers are generally comprised of a hardware element, which includes a Central Processing Unit (CPU) or server and connectivity to telecommunications lines (via a T-1<sup>[1]</sup> or separate telephone lines), and a software component to operate the system. Voice recognition software, VXML software, and the proper licenses for each, would have to be purchased as well.

MDOT or a contractor would be responsible for recruiting and training the staff necessary to operate and maintain the system. MDOT would have the choice of implementing the system, including the preparation of voice recordings and installation of voice recognition software and hardware, or contracting the initial project setup. Staffing and system architecture is also dependent on the hours of operation. A 24-hour, seven day a week system (which is recommended) requires more support and potential communication links than a system that operates only on weekdays during peak commuting periods (which is not recommended). It should be noted that a system may be operational 24/7 but only have live staffing for a portion of that time.

Critical disadvantages of hosting a 511 system in-house involve various issues regarding cost. Most dramatically, spikes in call volumes can greatly affect the cost of providing the service. Hosting a 511 service in-house requires the purchase of a static number of T-1 lines, which means a fixed capacity. There is no way to increase capacity on demand. This issue becomes important during weather events, initial marketing or new marketing campaigns, and emergency situations.

A state such as Mississippi, which experiences hurricane seasons, must consider carefully the need

to exceed the average capacity of its telephone system, and must take into account where and when the call volume will spike. Spikes can be estimated to increase the average call volume anywhere from 150%-600%. In order to meet Coalition guidelines of call acceptance, MDOT might have to install T-1 lines that are used only during these spikes in volume. Purchasing and maintaining T-1 lines that are not used on a normal basis is a costly solution. Additionally, expanding the number of lines or channels will also likely require an increase in IVR server hardware (and software licenses) to handle the increased capacity. Other disadvantages include the responsibility of paying for other physical equipment, hardware and software upgrades, as well as staffing, and other operating and maintenance costs that would be incurred even if using an outside contractor.

Other costs associated with the implementation of a 511 system housed at MDOT include initial hardware and software setup, tariffs, the costs of calls (associated with a cost per minute or cost per port, or both if utilizing a toll-free backbone for incoming calls) marketing costs, and maintenance and operational costs. Costs are further discussed in Section 3.4, along with deployment schedule.

Advantages of this solution include the ownership MDOT would have over its own system, including voice recordings and all hardware purchased. In addition, the system could be completely customized to MDOT's needs, and updated on MDOT's schedule.

### **Network Hosted Architecture**

When a 511 system is outsourced to a private network provider, the company provides the voice XML software, switching, and management functions. For implementers who do not currently have a traveler information database, the outsourced company may provide a form of this as well; however, as MDOT is already equipped with its own database, the assumption could be made that this database will provide sufficient data from its current location at MDOT to propagate an outsourced system.

All system operational and maintenance requirements would be the responsibility of the network provider, with the exception of MDOT's traveler information database, and any data inputs, which would be the responsibility of MDOT.

One variable to consider in implementing a network solution relates to economies of scale, and the number of guaranteed ports. A guaranteed port is one that is dedicated to the contracted service, in this case, Mississippi 511. By assigning a specific number of ports to the service, the network provider is stating that no other service will have access to these ports; in effect guaranteeing that these ports will always be available should call volumes reach such a level. However, if the implementer accepts the option of reserving a guaranteed number of ports, the ability of the service provider to margin available ports from other services to lower the costs to the implementer is reduced. In other words, the guaranteeing of ports increases the operating costs by not allowing those ports to be shared amongst other clients of the call-center service.

For example, a 511 service has a peak volume of usage during morning and afternoon weekday rush hours. A tourist attraction sees its peak volume of usage on weekends. By allowing each of these services to share available ports on a call center system, each service may also share in the reduced cost of providing ports for their own clientele.

Advantages to outsourcing 511 include an expedited implementation schedule. Hosting companies often offer a "plug and play" solution. For the new implementer, a private company who has done previous 511 work brings to the table the experience of working with other states or jurisdictions. In addition, the capacity available to a private company allows for the handling of large spikes in usage that a singular client would not be able to handle. Additionally, a private company providing similar call-hosting services to multiple entities is able to leverage its own infrastructure to the benefit of all

of those clients.

### **Call Volume**

A discussion of the number and interconnectivity of phone lines must begin with the issue of call volume. The number of calls a system expects to receive in a given period of time, and concurrently during times of extreme usage, drives the number of lines or ports required. This in turn drives much of the cost for the system, and dictates many of the architecture options selected.

In jurisdictions where phone-based traveler information systems were operational prior to implementing 511, it is possible to base a rough estimate on regular (monthly) call volumes. While MDOT currently hosts a live, operator-staffed traffic information helpdesk, usage of this service does not necessarily provide an accurate indication of what call volumes might be after the implementation of 511. A better indicator is to compare Mississippi, with a population of over 2.8 million, with other states and jurisdictions of similar population and extract available numbers. Table 1 below illustrates a comparison of 511 call volumes, populations, and the average calls per month divided by the population.