

**FINAL REPORT**

**December 12, 2013**

**Transmitted to the Clerk of the House of Representatives on Friday, December 13, 2013,  
by the Office of the Secretary of Transportation.**

**South Carolina Department of Transportation  
955 Park Street; Suite 309  
Columbia, South Carolina 29201**

# Utilities Relocation Study Committee

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## Executive Summary

The Utilities Relocation Study Committee (Appendix I) was created by proviso 68A.10 of the FY12-13 Appropriations Act (Appendix II). The goal of the study committee is to provide a comprehensive analysis and potential solutions with regard to cost and logistical issues dealing with publicly owned water and wastewater line relocations due to SCDOT projects. Note that this study deals only with governmental and not-for-profit public water and wastewater utilities and excludes all other utilities including gas, electric, telecommunication, stormwater, and for-profit water and wastewater providers.

South Carolina's highway system is a multi-billion dollar investment that supports the state's economy and enables safe and efficient transportation across the state. Located below and adjacent to South Carolina's highways is a vast and complex network of public utilities that provide essential services such as water and sewer to communities and the local economies they support. As South Carolina improves its highways and bridges, the water and wastewater public utilities that exist under and adjacent to the highway system will continue to be impacted and must be accommodated.

Water and wastewater lines are often placed in the highway right-of-way in order to minimize land acquisition requirements and costs. When these lines must be relocated to accommodate road widenings, projects, or bridge replacements, it becomes the utility provider's responsibility to absorb the cost of the relocation. The current statewide estimated costs for such SCDOT related relocations is estimated to be approximately \$16 million annually. This annual average figure is based on a statewide survey conducted by the Relocation Study Committee reviewing actual relocation expenditures over the past ten years. In comparing the relocation costs to the dollars administered by SCDOT each year for highway and bridge construction, the Study Committee has determined the historical ten year average ratio between construction costs (road widening and bridge replacement) and relocation expenses is approximately 15.6 to 1. It is important to note that typically, road widening and bridge construction projects require significant utility relocation expenses while interstate projects and resurfacing projects require very little.

Public water and wastewater providers in South Carolina consist of a wide variety of entities ranging from extremely large utility providers like Greenville Water System or Grand Strand Water and Sewer to extremely small utility providers like the Towns of Clio and Latta. In addition, municipalities, special purpose districts, county owned systems, and not-for-profit systems abound. As such, funding options for relocation costs vary significantly and include taxes; bonds; State Revolving Fund dollars; USDA – Rural Development loans; and a combination of the above. However, some are not eligible for any of these options. Many smaller towns and rural systems are so financially leveraged that they cannot qualify for any additional source of revenue to fund relocation mandates.

Large systems, as categorized by the Utility Relocation Study Committee and defined by the US Environmental Protection Agency, are those serving greater than 10,000 taps. There are currently 35 utility providers in the state of South Carolina meeting this criteria or 12% of the total number of providers. Naturally, these large systems in urban areas have far more latitude than smaller systems when it comes to having sources or options for revenue. Due to the urbanization trends now underway across the country, larger systems are seeing unprecedented growth – not only in residential users but commercial users as well. Urban population density results in more customers per linear foot of water/wastewater line than is possible in rural areas due to sparse population. This results in lower utility costs per customer.

## Utilities Relocation Study Committee

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Conversely, small systems, as categorized by the Study Committee, comprise 88% of utility providers in South Carolina (260 utility providers). These small systems, especially those in rural areas are extremely limited in their ability to identify revenue sources for funding projects such as relocations. Many rural areas are also dealing with a decline in residential and commercial customers. Due to the urbanization references above, rural areas are seeing a disproportionate aging of their customer base. As a result, water usage and incomes in rural areas are down substantially. Yet, small towns and rural systems are facing the expensive issues associated with aging systems and ultimately system replacement. In addition, customer density for rural systems is low, with customers per mile of water line routinely at ten or less. This extremely low density results in maintenance and replacement costs per customer at much higher levels than in the densely populated urban settings. It is important to realize water and wastewater line relocations required due to highway projects rarely result in new customers or additional sources of revenue. In essence, these are unfunded mandates for these providers.

In a typical year, SCDOT oversees about \$250 million worth of bridge and road widening projects. This number is the basis of the estimated ratio derived from our survey results. This means that, for every million dollars in new funding for non-Interstate road widenings and bridge replacement projects, there will be an estimated \$64,000 in non-reimbursed utility relocation costs incurred by publicly owned water and wastewater providers.

After examining numerous options for funding these relocations, the Utility Relocation Study Committee has determined what it believes to be the optimal and most equitable funding solution to serve the interests of the state. This proposed solution is an annual appropriation by the General Assembly of \$7.0 million to be used only by relocation impacted small utility providers, serving 10,000 water and sewer taps or less, to off-set one half of their total relocation expenses. The State's fifty percent share would be adjusted annually based upon actual relocation requirements and costs. These small utilities would be responsible for the other half of their specific total relocation expense by whatever means necessary. For-profit providers and utility providers serving greater than 10,000 taps would be ineligible for this program. Expenditures would be limited to relocation costs for participating small utility providers who are required by SCDOT to relocate lines within the state rights-of-way due to SCDOT highway projects. Allowable costs would be for like facilities. Upgrades/betterments would not be eligible for funding.

A second primary objective of the Relocation Study Committee was to evaluate process improvements to minimize public utility relocation costs as well. The Process Subcommittee identified the following five specific areas for improvement:

- 1) Establish a Joint Stakeholder Group to examine the possibility of having SCDOT obtain right-of-way to accommodate both highway relocations and public water and wastewater utilities. This possibility requires additional study and likely some statute refinements to effectively implement such an approach. The Committee recommends this specific item be further evaluated through a Joint Stakeholder Working Group in 2014.
- 2) Updating the Utilities Accommodations Manual is a high priority for a number of SCDOT stakeholders. The SCDOT Project Development Process should be updated to require early coordination. A vast majority of cost avoidance and process improvement opportunities deal with early planning, communications, and coordination between the utility providers and SCDOT. All parties agree that each could do a better job in this area with more consistency

## Utilities Relocation Study Committee

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among SCDOT Program Managers and Utility Coordinators working in District Engineering offices.

- 3) Enhancing communications between utility providers and the SCDOT will result in tremendous efficiencies when relocations are deemed necessary. Several examples were cited where utility providers identified conflicts early in the preliminary engineering stage and SCDOT was able to adjust the design and the relocation was avoided entirely.
- 4) Integration of utility relocations into the overall SCDOT project management and bid process will result in significant gains in schedule compliance and coordination. It is recommended that SCDOT identify requirements for inclusion of relocation work into the bid process and include those requirements in the Project Development Process with reference in the Utilities Accommodations Manual. The inclusion of utility relocation work in the SCDOT bid process could be accomplished through the use of memorandum of agreement. This would result in the use of a single prime contractor who would be responsible for coordinating and executing construction as opposed to the use of multiple prime contractors.
- 5) Establish an ongoing Utility and SCDOT Working Group to work on continuing improvement of the coordination and communication process.

These specific areas should help reduce the number and costs of water and wastewater relocations, however they will not eliminate them. Overall costs should be minimized by an enhanced planning process featuring improved coordination, better predictability and overall efficiency.

The benefits to SCDOT are: 1) enhanced control of project planning, with fewer schedule delays due to unfunded utility relocations; 2) preliminary work planning and coordination is optimized resulting in reduced relocation costs; and 3) small (primarily rural) utility providers, counties, and municipalities that have limited means of paying for relocations would be covered so lines can be moved and not left under new pavement, thus reducing future maintenance costs for SCDOT when old lines rupture or taps are installed under new pavement.

The benefits to water and wastewater entities are: 1) financially leveraged small utility providers will not be burdened with the total relocation costs that they have no ability to fund and instead be faced with providing only one half of the total cost of construction; and 2) relocation costs for all utility providers, regardless of size, should decrease due to increased involvement of utility providers in SCDOT project planning.

The cost of water and wastewater line relocations due to SCDOT projects is significant. The current system of each provider paying these costs results in a large number of small utility providers, counties, and municipalities being placed in financial hardship. Providing fifty percent of the funds for utility relocations for these small utility providers further allows more local funds to be used for improving services and future system upgrades. The proposed solutions in this report provide a common sense and equitable resolution to these issues. Not only will costs be lowered for small, cash strapped public water and sewer providers, but all utility providers as well as the SCDOT will be incentivized and expected to work more closely for optimal and lower cost relocation solutions during the planning process resulting in more efficient service and reduced overall relocation costs for all South Carolinians.

## Utility Relocation Costs

*Here are some recent examples of water and sewer line relocation expenses from around South Carolina:*

### Liberty-Chesnee-Fingerville Water

**\$3.2 million** resulting from the widening of US 221

### Town of Johnsonville

**\$800K** resulting from the widening of SC Hwy 41

### Darlington County Water & Sewer

**\$3.0 million** resulting from the widening of US 52/410  
**\$45K** resulting from modifications to the intersection of US 401 and Hoffmeyer Road

### Lancaster County Water & Sewer

**\$377K** – Barbeville Rd/Highway 160  
**\$1.5 million** in 2011  
**\$3.0 million** over previous 2 years

### Marlboro Water Company

**\$286K** – resulting from the widening of Hwy 38

### Town of Latta

**\$809K** – resulting from the widening of Hwy 501 & Hwy 301

**Task 1 - Identify and categorize a statewide estimate of the historical, current and anticipated costs associated with the relocation of water and sewer and public utilities inside and outside the rights-of-way owned by state agencies, counties, municipalities, or local water or sewer districts resulting from highway projects.**

A cost subcommittee (Appendix II) was assigned to quantify the cost of water and wastewater line relocations due to road projects from a historical and projected future perspective. The cost subcommittee agreed to collect ten years of expenditures in an effort to provide a reliable historical record and a quantitative confirmation for the data gathered relative to anticipated future costs for these activities. Collection of this data proved to be challenging. Water and wastewater providers in South Carolina fall into a myriad of different entity types. These include municipalities, not-for-profits, county systems, special purpose districts, for-profits, and multiple combinations of the aforementioned. Finding a reliable mechanism for collecting and sorting this information from such a diverse group was not easy. The subcommittee developed an online survey (Appendix IV) to collect not only annual historical relocation expenses, but also basic background information including limited financial information and user rates from every participating utility.

The survey was emailed in February, 2013, to all water and sewer utilities (excluding for-profit) in the state. This massive distribution was accomplished through a joint effort of all the state water and wastewater associations such as the SC American Waterworks Association, the SC Rural Water Association, and the SC Municipal Association. The initial survey response was tepid at best with only a 16% response rate. Subsequently, the survey was redistributed in March, 2013, in an attempt to increase participation. A number of larger systems were contacted directly and asked specifically to complete the survey. Ultimately, the total number of respondents represented over 54% of the total number of water taps in the state. The subcommittee deemed this to be a statistically significant survey response and therefore offered a high degree of confidence in the conclusions derived from the results. The subcommittee was tasked with determining future relocation costs as well as historical costs. Determining future costs with any degree of confidence was quickly determined to be nearly impossible due to the ever fluctuating state of the SCDOT project budget and long range plan. Instead, the subcommittee determined a more reliable indicator would be to utilize the historical data collected and compare it to the annual SCDOT budget that most directly impacts water and wastewater relocations. In establishing this ratio, future anticipated relocation expenditures could be extrapolated on an annual basis

# Utilities Relocation Study Committee

## Marlboro Water Company

In 1984, Marlboro Water Company borrowed \$898,374 from Rural Development.

The loan was needed for the sole purpose of relocating a water line to accommodate the widening of Hwy 38.

### *Loan Terms:*

Loan Amount	\$898,374.00
Term of Loan	40 years
Interest Rate	5.50%
Grant Amount	\$0.00

### *Actual Costs per Tap:*

Number of Taps	2004
Annual Cost/Tap	\$27.75
40 yr. Total Cost/Tap	\$1,110.00

### *Study Committee Proposal Cost per Tap:*

Annual Cost/Tap	\$13.88
40 yr. Total Cost/Tap	\$555.00

based on forecasted SCDOT funding. In addition, this ratio can be adjusted annually to more accurately reflect the actual expenditures and as such, progressively improve its accuracy.

It should be noted that the survey and subsequent analysis by SCDOT revealed that the vast majority of water and wastewater relocations were necessitated by road widening, bridge replacement and intersection modifications projects. Therefore the subcommittee was able to isolate the SCDOT budget line items for widening and bridge projects from historical data and compare this with data gathered from the survey. In so doing, an expenditure ratio of approximately 15.6 to 1 was calculated as a historical reference (Appendix V). In terms of dollars, this equates to \$64,000.00 in utility relocation costs for every million dollars of widening and bridge replacement costs. This ratio can be used as a rule of thumb to estimate future relocation funding needs based on anticipated or budgeted SCDOT projects. The subcommittee also recommended that this ratio be recalculated in subsequent years and adjusted as needed to more accurately reflect actual costs on an ongoing basis.

The survey also queried water and wastewater providers regarding their current source of revenue in paying for relocations. Slightly fewer than 60% of providers are currently using cash reserves as their funding source. The average debt to revenue ratio for survey

responders was 24%. Many smaller providers, including small towns indicated their debt to revenue ratio was so high that obtaining additional loans or other conventional means of obtaining funding were no longer available. This finding further substantiates the significant need to find alternative sources for funding these relocations.

**Task 2 - Determine as accurately as possible the percentage of the statewide cost estimate attributable to South Carolina Department of Transportation projects, State Transportation Infrastructure Bank projects, local-option sales tax projects involving state roads, local road projects, and County Transportation Committee projects.**

Water and wastewater utility relocations result from a number of different situations and origins. This became clear during the utility survey. In the survey, utilities were asked about the origin of relocations. A number of the more costly relocations were the result of municipal and county specific projects – many of which were aimed at enhancing economic development or were part of beautification/urban development efforts. The survey revealed that approximately 3% of the total number of projects requiring utility relocations were paid for by local options sales tax; C-funds were used for approximately 2% of the projects; and 5% fell into the “other” category. The balance, or about 90% of the total projects, were a result of SCDOT initiated work.

From a historical perspective, SCDOT has managed an average of \$900 million per year for general road maintenance and construction. This includes internal engineering, administration, and materials, as well as outsourced engineering and construction costs. It does not include non-SCDOT projects that were

## Utilities Relocation Study Committee

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managed by SCDOT. In looking back at project types that most frequently require water and wastewater utility relocations, the Utility Study Committee and SCDOT determined that almost all were associated with road widening and bridge replacement projects. This finding was further verified by the utility survey performed by the relocation cost subcommittee. SCDOT was able to look at the historical budget line items for bridges and road widening projects and determined the annual average costs for these activities over the past ten years was approximately \$250 million.

**Task 3 - Identify potential sources of sustainable funds that may be used by state agencies, counties, municipalities, local water or sewer districts, or public utilities for utility relocation costs including, but not limited to, existing state and federal loan and grant programs, appropriations from the state general fund, contributions from public utilities, and other sustainable sources.**

As noted earlier in the report, water and wastewater providers in South Carolina consist of a wide variety of entities from extremely large utility providers like Greenville Water System or Grand Strand Water and Sewer to extremely small utility providers like the Towns of Clio and Latta. In addition, municipalities, special purpose districts, county owned systems, and not-for-profit systems abound. As such, funding options for relocation costs vary significantly and include taxes; bonds; State Revolving Fund dollars; USDA – Rural Development loans; and a combination of the above. However, some are not eligible for any of these options. Many smaller towns and rural systems are so financially leveraged that they cannot qualify for any additional source of revenue to fund relocation efforts.

Large public systems are defined by the Environmental Protection Agency (EPA) as those utility providers having more than 10,000 connections or taps. Large systems comprise 12% of the total number of utility providers in South Carolina. Naturally, these larger systems in urban areas have far more latitude than smaller systems when it comes to having sources or options for revenue. Due to the urbanization trends now underway across the country, larger systems are seeing unprecedented growth – not only in residential users but commercial users as well. Typically, the residential growth is comprised of younger, growing family units with increasing incomes. New housing developments and surrounding supporting retail and commercial development provide an ever increasing customer base for water and wastewater systems. Urban population density results in more customers per linear foot of water/wastewater line than is possible in rural areas due to sparse population. This results in lower utility infrastructure costs per customer. Statistically, urban and suburban families are typically large users of water compared to rural users. The increased water usage can be attributed to larger family units (young children) and tend to focus more on lawn irrigation and an active outdoor lifestyle. This, coupled with the relatively high density (number of customers per mile) of users, provides stable operating conditions for water and wastewater providers.

Conversely, small systems, especially in rural areas are extremely limited in their ability to identify revenue sources for funding projects such as relocations. Surprisingly, small systems make up 88% of the total number of utility providers in South Carolina. Many rural areas are also dealing with a decline in residential and commercial customers. Due to the urbanization references above, rural areas are seeing a disproportionate aging of their customer base. Rural Baby Boomers are retiring and their children have left for the jobs and draw of the urban areas. The majority of South Carolinians now reside in urban areas whereas most of the state's water and wastewater infrastructure was constructed at a time when the majority of the population was rural. As a result, water usage and incomes in rural areas are down substantially. Many small towns and rural areas were at one time supported by textile mills and manufacturing jobs that were typically large water users. These entities are now long gone

# Utilities Relocation Study Committee

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and with them, the revenues they provided for water suppliers. Yet, small towns and rural systems are facing the expensive issues associated with aging systems and ultimately system replacement. In addition, customer density for rural systems is low, with customers per mile of water line routinely at ten or less. This extremely low density results in maintenance and replacement costs per customer at much higher levels than in the densely populated urban settings. It is important to realize water and wastewater line relocations required due to highway projects rarely result in new customers or additional sources of revenue. In essence, these are unfunded mandates for these providers.

The Study Committee explored a number of funding possibilities and combinations and formed a funding subcommittee (Appendix VI) to examine the feasibility of each option identified. These funding possibilities included: an increase in the motor fuel user fee; utility surcharge on per thousand gallons of water sold; utility surcharge based on number of water taps; utility surcharge based on the number of water and sewer taps; fully funded by the respective SCDOT project budgets; fully funded by a state appropriation; funded by existing state and federal loan or grant sources (Rural Infrastructure Authority, State Revolving Fund, United States Department of Agriculture), commercial loans; or a combination of any of the above (Appendix VII). The goal was to find an equitable solution for all parties that was sustainable and provided increased accountability for the utilities as well as SCDOT. It was the general consensus of the group that all involved entities should have a vested interest in the program and its outcome. The initial reaction of the utility groups involved was to have the funds for relocations to come directly from SCDOT project budgets. However, it became readily apparent that SCDOT was in no position legally or financially to accommodate this. Both sides ultimately concurred that none of these proposals were optimal nor would they lead to an equitable solution.

**1,603,380**  
(Number of Water Taps in South Carolina per SC DHEC)

All parties agreed that SCDOT needs as much funding as possible to deal with the highway situation in South Carolina. Additionally, SCDOT funds are frequently used as match funds for federal dollars, and any diversion of state dollars from the agency's already cash-strapped operations could result in the loss of federal dollars due to an inability to provide matching funds. The current statewide estimated costs for SCDOT related relocations is estimated to be approximately \$16 million annually. This annual average figure is based on a statewide survey conducted by the Relocation Study Committee reviewing actual relocation expenditures over the past ten years.

After examining numerous options for funding relocations, the funding subcommittee determined the optimal and most equitable funding solution to serve the economic interests of the state. This proposed solution is an annual appropriation by the General Assembly of approximately \$7.0 million to be used only by relocation-impacted small utility providers, serving 10,000 water and sewer taps or less, to off-

**General Appropriation Calculation**

\$16.0 million - Annual Average Relocation Expense  
88% of Utility Providers are Reimbursement Eligible (260 of 295)  
\$14.0 Million - 88% of \$16 million  
**\$7.0 Million** - 50% Reimbursement Rate for small Utility Providers



## Utilities Relocation Study Committee

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set one half of their total relocation expenses. The State's fifty percent share of the costs would be adjusted annually based upon actual relocation requirements and costs. These small utilities would be responsible for the other half of their specific total relocation expense by whatever means necessary. Expenditures would be limited to relocation costs for participating small utility providers who are required by SCDOT to relocate lines within the state rights-of-way due to SCDOT highway projects. The fund would cover one-half of relocation expenses for SCDOT-mandated water and wastewater relocations only and not projects resulting from State Transportation Infrastructure Bank, municipal or county initiatives. Allowable costs would be for like facilities. Upgrades/betterments would not be eligible for funding.

SCDOT will benefit because small utility providers will be better prepared financially, when large projects are planned in their respective areas. Small rural and municipal utility providers would have the assurance that they are not going to be as severely impacted by huge relocation expenses that they often cannot afford due to a dwindling customer base and income-to-debt ratios that preclude additional large loans.

### **Task 4 - Identify any legal obstacles that impact the ability of state agencies, counties, municipalities, or local water or sewer districts to fund the relocation of utilities.**

Due to the myriad of organizational entity types that supply public water and wastewater services in South Carolina, there are numerous barriers to obtain funds for expansion and system enhancements, not to mention, revenues to finance relocations due to SCDOT highway projects. Loan programs often do not have adequate funds available, and those that do, have numerous procedural hurdles that can impose significant timing delays. Many such programs come with federal "strings" which add further substantial costs as well as administrative and transactional timing delays. Commercial loans typically are cost prohibitive or unobtainable due to lack of collateral and/or due to the stressed financial state of the requesting utility. Other commonly used financial programs have their issues as well, such as:

- USDA funding requires that utility providers exhaust cash reserves before applying for grants or loans, thus leaving no cash reserves for relocations.
- Not-for-profit water companies are not eligible for State Revolving Fund or Rural Infrastructure Authority funds directly – although they may receive Rural Infrastructure Authority funds as a pass through.
- Community Development Block Grants may be used only for new lines, not relocation of existing lines.
- Condemnation and procurement laws result in a disjointed process for securing right-of-way to accommodate both highway and utilities, and using a single contractor to improve efficiencies during the construction process.
- The drinking water State Revolving Fund is already oversubscribed and the US Environmental Protection Agency recently rejected the State's effort to shift a portion of the funds from the wastewater to drinking water fund.
- The municipal bond market is often out of reach for most small public utilities due to the costs of obtaining a rating, the transactional costs associated with issuing bonds, and the cost of such borrowing for smaller systems.

## Utilities Relocation Study Committee

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The Relocation Study Committee recommends that the enabling legislation ensures all eligible water and wastewater providers are authorized to participate in the program including direct funding of approved relocation projects. This is critical to the overall success of the program.

**Task 5 - Investigate the creation of a utilities relocation trust fund to assist in relocation costs either through loans, grants, matching funds, or other means, and recommend the appropriate entity to house and administer the trust fund, the terms and conditions under which funding might be provided, and the general criteria used for evaluating funding applications.**

The Relocation Study Committee recommends that utility relocation costs be funded by an annual appropriation from the General Assembly. The enabling legislation would designate these funds be placed in a Utility Relocation Trust Fund, which would operate as a restricted account, separate and distinct from the State General Fund. The funds would be managed by the State Treasurer, with accrued interest remaining in the Fund.

The Committee further recommends that the Utility Relocation Trust Fund Administering agency be the Rural Infrastructure Authority (RIA), which is governed by an eight member Board, or similar existing organization. This recommendation has not yet been endorsed by the RIA. The RIA is experienced in administrating infrastructure funds and in dealing with many of the entities that would be participating in this program. Legislation would clarify that the Administering Agency's existing funds and state appropriations for other specified purposes could not be used for the Utility Relocation Trust Fund. The Administrative expenses for the Department of Revenue and the administering agency are not expected to exceed 2% of the total fund annually and would be allowed to be paid from the Utility Relocation Trust Fund. Program expenditures would be limited to relocation costs for participating utility providers who must relocate lines within the state rights-of-way due to SCDOT highway projects and costs would be reimbursed to the contracting agency within 30 days of submittal of verified invoices. If a utility provider elects to purchase or obtain their own easement outside of the SCDOT right-of-way due to a SCDOT relocation project, the relocation costs would be covered by but not the easement procurement costs.

The Utility Relocation Study Committee further recommends the establishment of an advisory group or committee to assist in developing the initial guidelines for the program. The eight member advisory group would be comprised of representatives from the major water and wastewater professional associations (SC Water Utilities Council, SC Association of Special Purpose Districts, SC Association of Counties, SC Rural Water Association, and SC Water Quality Association, the SC Municipal Association), an RIA representative, and SCDOT. The primary goals of this advisory committee are as follows:

- Establish guidelines for relocation requests to ensure that funds are only used for like-for-like replacements and not for betterments or upgrades.
- Review the procedures for calculating the annual (or semi-annual) ratio for utility relocation costs (based on historical data) and the proposed SCDOT budget for highway construction prior to submitting the annual budget request to the State Budget Office.
- For the initial two year period, the advisory group will periodically review the accuracy and validity of the utility relocation to construction cost ratio and recommend adjustments accordingly.

## Utilities Relocation Study Committee

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- Develop guidance to verify that requesting utilities are meeting their commitments to participate early and have ongoing involvement in the SCDOT planning process. One of the primary goals of this program is to ensure active participation by water and wastewater utility providers with SCDOT planning and preclude as much utility relocation expenses as possible. A procedure must be established to ensure that utility providers receive meeting notifications. Those utilities that fail to provide input and participate in the planning process would be ineligible for reimbursement. Likewise, if SCDOT fails to involve impacted utilities into the planning process from project inception, they would bear the relocation costs from the construction project budget.

The annual contribution to the Utility Trust Fund is estimated to be \$7.0 million from the State General Fund. It is recommended that funding for year one of the program commence at the start of the fiscal year 2014-2015, with the first \$7.0 million appropriation from the General Assembly beginning in January, 2015. The actual program start would be in January, 2015, with eligibility for participation determined by the award date of each highway construction contract. This would allow for adequate initial capitalization of the fund and certainty/stability in the early fund years. In subsequent years, the state appropriation will be adjusted to equal the amount appropriated by utility providers based on projected SCDOT highway construction spending. The total amount will vary each year based on the SCDOT road widening and bridge replacement project planning budget and actual expenditures. The advisory committee will work with SCDOT's Finance Office to calculate the funds required for the Utility Relocation Trust Fund and communicate it to the State Budget Office and General Assembly in the early fall of each year. Contribution rates will be reviewed and adjusted annually for the first two years, then every three years, based on actual calculated spending ratios.

It is recommended that disbursement amounts for each relocation project be based on the annual ratio for relocation expenses established from historical SCDOT highway construction costs and used for annual budget requests. Eligibility for disbursements would be based on pre-established project milestones. Because the process includes mandatory extensive cooperation between the utility providers and the SCDOT, milestones can be established early in each project with anticipated expenditures projected far into the future. Pay requests would be submitted by the contracting agency, whether it be SCDOT or the individual utility provider, to the administering agency. Reimbursements would be made within 30 days. Only actual expenses would be paid. Budget over-run resolution must be mutually agreed upon by both the utility provider and SCDOT.

The enabling legislation will have to be written such that SCDOT and utility providers would not be left with unfunded or underfunded mandates in the future. The legislation would provide for periodic mandatory funding reviews with adjustments to the general appropriation. Any excess funding would be carried over year-to-year and also be subject to periodic review with contribution rates adjusted as needed. Additionally, the enabling legislation must include language that precludes the use of these funds for any other purposes other than those for which they were originally intended.

**Task 6 & 7 - Identify ways to improve coordination and reduce impacts through the use of communication, technology and improved management techniques and (7) recommend changes to public policy, regulations, or statutes that would improve funding or reduce costs associated with utility relocations resulting from road and bridge projects.**

## Utilities Relocation Study Committee

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The Process Subcommittee (Appendix VIII) was tasked with identifying ways to improve coordination and reduce impacts through the use of communication, technology and improved management techniques and recommending changes to public policy, regulations or statutes that would improve funding or reduce costs associated with the relocations resulting from SCDOT road and bridge projects.

The Process Subcommittee focused on ways to minimize the conflicts between utility providers and SCDOT that may arise on SCDOT construction projects.

Utility providers that provide essential services to communities (e.g., water and sewer services) often utilize the existing rights-of-way associated with SCDOT highways and bridges to co-locate their infrastructure (e.g., piping, valves, and access areas). This enables utility providers to utilize an existing public right-of-way and often expedites the process of locating utility infrastructure with minimum controversy and reduced costs to the utility provider and the public. This practice is commonly used by public utility providers across South Carolina but can become a challenge when SCDOT highway and bridge projects require the relocation of public utility infrastructure. As highway and bridge improvement projects increase across South Carolina, so will the need for utility providers to relocate their infrastructure. According to the U.S. General Accounting Office, about half of all highway and bridge projects eligible for federal funding involve the relocation of utilities.

If a utility is located on a private easement or private property outside the SCDOT right-of-way, relocation costs are covered as an eligible reimbursed expense. However, when a utility provider has infrastructure located within the right-of-way, it becomes the utility provider's responsibility to pay for the relocation unless the utility provider has prior rights in the area of construction. This expense is especially burdensome to utility providers due to the aging infrastructure across the United States.

Beyond the expense of relocating public utility infrastructure, the coordination of utility infrastructure relocation and associated activities often affects the cost and duration of the project (i.e., increased costs and extended delays) and can create frustrating impacts to drivers and nearby businesses. Moreover, utility providers faced with relocating infrastructure rarely profit from relocation work as infrastructure that has not reached the end of its useful life is often relocated and the utility rarely gains new customers from the infrastructure relocation.

The Process Subcommittee referenced process and communication efficiency examples from the states of California, Indiana, Virginia and Wisconsin regarding ways to improve the process of utility relocations during highway projects. From this review and the review of existing SCDOT policies and procedures, the subcommittee developed the following recommendations:

***SCDOT should endeavor to obtain sufficient Right-of-Way to accommodate utility relocations.***

The lack of sufficient right-of-way to accommodate both needed highway improvements and the placement of utilities hinders efficient road construction and creates added frustration to the public impacted by the right-of-way acquisition process. Common problems associated with right-of-way

### Aging Infrastructure

*The American Society of Civil Engineers (ASCE), in their "2013 Report Card for America's Infrastructure" noted that approximately \$1 trillion of investment is needed in the United States' drinking water infrastructure over the next 25 years and that over \$300 billion of investment is needed in the United States' wastewater infrastructure over the next 20 years.*

## Utilities Relocation Study Committee

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acquisitions for highway construction projects include: (1) Limited space on public rights-of-ways for utility facilities (especially in urban areas); (2) SCDOT project delays resulting from utility providers having to acquire their own right-of-way; (3) Frustration of the public impacted by multiple agents acquiring rights-of-ways in the same area; (4) Some utility providers do not have adequate staff to secure the needed rights-of-ways for utility relocations.

Currently, SCDOT is not legally allowed to acquire right-of-way for utility providers. If this recommendation is accepted, then legislation would be required to allow SCDOT to acquire right-of-way to accommodate utility providers. Moreover, a process will need to be developed to determine the appropriate cost-sharing methodologies between SCDOT and utility providers for right-of-way acquisitions. In addition, a methodology must be developed to identify the hierarchy for relocation of utilities within the new utility right-of-way and whether right-of-way is necessary on both sides of the road. If the statutes are changed to allow SCDOT to acquire this right-of-way, then the Right-of-Way Acquisition Manual must be updated. Any right-of-way obtained by SCDOT must follow the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act).

### ***Process improvement opportunities would result from SCDOT updating the SCDOT Utilities Accommodations Manual and Project Design Process.***

The subcommittee acknowledges that SCDOT recently underwent an update of their Utilities Accommodations Manual but recommends that further improvements are needed to reflect the recommendations of the Utilities Relocation Study Committee and to enhance construction project communication, consistency, and efficiency. The Project Design Process will require updating to require early communication with affected utility providers. Specific improvements to enhance communication and efficiency throughout the highway construction project include the following:

- SCDOT should continue to work with utility providers to identify ways to improve participation in the pre-planning process of all highway and bridge construction projects. A robust coordination process should be developed that focuses on the benefits of utility providers participating in projects.
- SCDOT should ensure that the processes (e.g., website, email communications) that are used to communicate highway and bridge construction projects and schedules are current, easily accessible and valued as a resource by utility providers. Likewise, utility providers should work to educate themselves on the resources that SCDOT provides relative to website postings and project planning meetings.
- The SCDOT Utilities Accommodations Manual and Project Design Process should encourage the modification of highway and bridge designs to avoid and/or minimize utility relocations when feasible. Any design modifications must take costs into consideration, including environmental impacts, design impacts, and other considerations to ensure the proposed modification does not cost more than the relocation, either due to construction costs, property acquisitions, environmental issues, or other contributing factors. Developing processes that assess the impacts on utility providers at the earliest stages of a project offers the best opportunity to modify the design in ways that benefit the highway project, the utilities and the public that is impacted by the construction work.

## Utilities Relocation Study Committee

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- The SCDOT Utilities Accommodations Manual should encourage improved locating of existing underground utilities such that the process by which utilities provide location information to SCDOT is completed early in the design phase of the project. The Project Design Process should be modified to include a reference to the One-Call Ticket issued by the SC811 organization in accordance with the Underground Facility Damage Prevention Act. The location of utilities within the existing right-of-way must come before SCDOT initiates a request for surveys. Once the location information is received from the utility provider, a meeting can be held to review the information. If the utility provider cannot provide exact locations for the utilities, SCDOT should request the utility provider to “pothole” or provide Subsurface Utility Engineering (SUE) information to determine a vertical and horizontal location. Likewise, the use of SUE technology by both parties should be encouraged so that an accurate mapping of the underground utilities can be developed and the avoidance or minimization of utility relocations is realized.

***Enhanced communication and education between SCDOT and SC Public Utilities should be encouraged to minimize the need for utility relocations and maximize the design opportunities for SCDOT highway and bridge construction projects.***

One of the benefits realized from the Utility Relocation Study Committee is a deeper understanding of the needs of SCDOT in regards to highway construction projects and the challenges (financial and staffing) that SC Public Utilities face when utility relocations are required. To further this understanding and enhance communication between SCDOT and SC Public Utilities the following is recommended:

- Encourage the participation of SCDOT in annual conferences and/or educational workshops offered by SC Rural Water Association, SC Water Quality Association, SC Water Utility Council, the Municipal Association of SC, the SC Association of Counties and the SC Association of Special Purpose Districts to discuss SCDOT highway construction projects, resources provided by SCDOT in regards to highway construction projects and the design process for such projects.
- Encourage the SCDOT Engineering districts to participate in local meetings of the abovementioned organizations to strengthen the relationship between local utilities and district SCDOT personnel.

***Integration of water and wastewater line relocation work into the SCDOT project management process would enhance efficiencies and reduce schedule delays.***

The Study Committee sees merit in the concept of integrating water and wastewater line relocations into the overall SCDOT project management process. Integration of this portion of the work should minimize project work delays and unclear lines of responsibility because all contract work would be under a single general contractor working under the direction of SCDOT. The public utility would still perform the engineering function including all specifications ranging from design work to material selection, bid terms and list of recommended contractors. These documents would be submitted to the SCDOT Project Manager according to an agreed schedule, to be included in the overall project bid process. The general contractor would obtain bids from the list provided by the utility provider for the water/wastewater line work. When the bids are received, the utility provider will be forwarded the bid tabulations from the contractor for review and approval. This arrangement will be addressed in a Memorandum of Agreement signed by both parties. Once approved, the general contractor will be held accountable by SCDOT for schedule and milestone compliance. In doing this, the utility will not be held responsible for delaying or adversely impacting a project schedule and because they authored the

## Utilities Relocation Study Committee

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original specification, the work would be performed to their standards. This should also make the milestone completion and payment draw process much simpler for reimbursement from the utility relocation fund. It is the recommendation of the Study Committee that SCDOT continue to study this concept, which is already in use in certain situations, and expand its use to broader applications.

***An ongoing working group comprised of SCDOT and Utility Representatives should be established to ensure continuous communications and improvement.***

At the completion of the work of the Utilities Relocation Study Committee, a joint committee of SCDOT and representatives from SC Public Utilities should meet on an ongoing basis to further identify efficiencies and enhance coordination and communication related to highway construction projects.

As can be clearly seen in the aforementioned recommendations, enhanced and ongoing communications are the key to improving the efficiency of the SCDOT and utility interface. Interviews and conversations with utility officials as well as SCDOT officials mentioned the various degrees of effective communication and involvement around the state. With an organization as large as the SCDOT and as diverse as the make-up of water and wastewater providers is, this inconsistency is not unexpected. Together, through improved ongoing communications and demonstrated efficiency gains and cost avoidances, these relationships should improve considerably over time.

# Utilities Relocation Study Committee

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## Summary

Historically, water and wastewater providers have struggled to pay for moving utilities in SCDOT right-of-way to accommodate highway projects. For many, utility relocations due to highway projects come during budget cycles making funding difficult procedurally and financially. The vast majority of water and wastewater providers in South Carolina are small rural systems or towns. Most of these systems are unable to deal with the high costs of relocations, particularly without substantial advance notice. These relocations rarely, if ever, result in new sources of revenue and are an unfunded expense to the utility provider. The majority of these smaller utility providers have no means of funding these projects because commercial loans are not available (no collateral) and most are already so leveraged that additional large loans are not an option. In these cases, road projects are often delayed for months or years due to the lack of funds and ultimately aging water and wastewater utilities are left under new pavement resulting in more maintenance issues for SCDOT in the future. Sharing of relocation costs and enhanced planning and communication between the SCDOT and local utility providers will ensure that such costs are minimized where public utility relocation is necessary.

A Study Committee was formed to examine methods of minimizing relocation costs comprised of members of water and wastewater utility organizations and SCDOT representatives as well as House and Senate members and a representative from the Governor's office. The Study Committee looked at three primary focus areas: 1) process changes/improvements; 2) relocation cost estimates based on historical data; 3) possible sources for funding.

The recommended process changes focused on five primary areas for improvement:

- 1) SCDOT obtaining right-of-way to accommodate both the highway relocation and water and wastewater relocations. The committee recommends this specific item be further evaluated through a Joint Stakeholder Working Group for more detailed study and likely statute refinements.
- 2) Updating the Utilities Accommodations Manual and Project Design Process.
- 3) Enhancing communications between utility providers and SCDOT.
- 4) Integration of utility relocations into the overall SCDOT project and bid process (consolidating contracts).
- 5) Set-up an ongoing Utility and SCDOT Joint Stakeholder Working Group.

Implementation of these five items should not only help reduce the number of water and wastewater relocations, but also minimize the economic and schedule impacts of the unavoidable relocations.

Relative to costs and funding SCDOT expends an average \$250 million dollars annually on bridge and road widening projects. These two activities are by far the predominate contributors to utility relocation expenses. Based on a Study Committee utility survey spanning back 10 years, utility providers expend an average of \$16 million/annually on relocation expenses associated with SCDOT projects. This excludes city and county originated and funded projects. This equates to a ratio of approximately 15.6:1 with regard to construction costs and relocation expenses. In other words, for every \$1 million of



## Utilities Relocation Study Committee

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SCDOT road widening and bridge work, approximately \$64,000 is spent on water and wastewater line relocations.

The funding group looked at a number of options for providing revenue for these expenses. This proposed solution is an annual appropriation by the General Assembly of approximately \$7.0 million to be used only by relocation impacted small utility providers, serving less than 10,000 water and sewer taps, to off-set one half of their total relocation expenses. The State's fifty percent share of the costs would be adjusted annually based upon actual relocation requirements and costs. These small utilities would be responsible for the other half of their specific total relocation expense by whatever means necessary. For-profit providers and utility providers serving greater than 10,000 taps would be ineligible for this program.

The fund would cover all relocation expenses for SCDOT-mandated water and wastewater relocations and not projects resulting from State Transportation Infrastructure Bank, municipal or county initiatives. To be eligible for relocation funding, utilities would have to be active participants in the planning process from the beginning to end. It is the opinion of the Study Committee that a great deal of economies (as well as pure cost avoidances) can be garnered by better cooperation and communications in the planning and implementation process between utility providers and the SCDOT.

The Study Committee determined that the enabling legislation should designate this fund specifically as a dedicated interest-bearing trust fund, separate and distinct from the State General Fund. The Study Committee further recommends the revenue be collected by the SC Department of Revenue and be maintained by the State Treasurer. Fund administration should reside in the Department of Commerce unless another organization similar to, if not, the Rural Infrastructure Authority, is selected. The Study Committee also recommends that the administrative guidelines for the distribution of these funds be established by an Advisory Committee consisting of representatives from the major water and wastewater organizations as well as SCDOT and the administering organization. These funds would only be used for replacement costs and not for betterment. If a utility provider wishes to upsize or modify an installation under this process, the utility provider would be responsible for the cost difference of the upgrade versus like-for-like replacement.

The proposed legislation would provide for periodic reviews to ensure funding adequacy in meeting relocation needs. It would also include language to preclude this from being an unfunded mandate by requiring utility providers and the General Assembly to fund the account as required such that neither incurs a disproportionate share. The review would also account for significant funding increases or decreases that may occur in highway funding from time to time.

The implementation of these measures will result in an equitable solution to a longstanding issue with regard to the high costs associated with relocating water and wastewater utilities due to highway projects. It will also result in lower relocation costs statewide due to the increased efficiencies realized by increased communications, coordination, and planning between utility providers and the SCDOT. In the end, all South Carolinians will benefit from more efficient completion of highway projects and lower costs associated with relocating water and wastewater utilities below and adjacent to them.

# Utilities Relocation Study Committee

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## Appendix I

### Utilities Relocation Study Committee Roster

Representative Jimmy Bales, representing the House Minority Leader

Mr. Bill Bingham, P.E., representing the Speaker of the House of Representatives

Mr. John Carroll, representing the Office of the Governor

Commissioner W.B. Cook, representing the SCDOT Chairman

Mr. Robert Croom, representing the SC Association of Counties

Mr. Jeff Field, representing the SC Association of Special Purpose Districts

Mr. Charlie Gray, representing the SC Rural Water Association (Relocation Study Committee Chair)

Representative Nelson Hardwick, representing the Majority Leader of the House of Representatives

Senator Shane Martin, representing the Majority Leader of the Senate

Mr. Mitchell Metts, representing SCDOT

Senator John Mathews, representing the Minority Leader of the Senate

Senator Floyd Nicholson, representing the Senate President Pro Tempore

Mr. Scott Slatton, representing the SC Municipal Association

Mr. Doug Tompkins, SC Water Quality Association

Ms. Rebecca West, Process Subcommittee Chair, representing the SC Water Utility Council

Appendix II

Proviso

**SECTION 68A - U12-DEPARTMENT OF TRANSPORTATION**

68A.10. (DOT: Utilities Relocation) (A) From the funds appropriated to the Department of Transportation, there is established the Utilities Relocation Study Committee to review, study, and make recommendations concerning the need for improved coordination and funding of the relocation of water and sewer facilities, and the facilities of public utilities as defined in Title 58 of the 1976 Code, located within the public rights-of-way when such relocation is required due to the construction or improvement of roads and bridges in the state.

(B) The Utilities Relocation Study Committee is to:

(1) identify and categorize a statewide estimate of the historical, current and anticipated costs associated with the relocation of water and sewer and public utilities inside and outside the rights-of-way owned by state agencies, counties, municipalities, or local water or sewer districts resulting from highway projects;

(2) determine as accurately as possible the percentage of the statewide cost estimate attributable to South Carolina Department of Transportation projects, State Transportation Infrastructure Bank projects, local-option sales tax projects involving state roads, local road projects, and County Transportation Committee projects;

(3) identify potential sources of sustainable funds that may be used by state agencies, counties, municipalities, local water or sewer districts, or public utilities for utility relocation costs including, but not limited to, existing state and federal loan and grant programs, appropriations from the state general fund, contributions from public utilities, and other sustainable sources;

(4) identify any legal obstacles that impact the ability of state agencies, counties, municipalities, or local water or sewer districts to fund the relocation of utilities;

(5) investigate the creation of a utilities relocation trust fund to assist in relocation costs either through loans, grants, matching funds, or other means, and recommend the appropriate entity to house and administer the trust fund, the terms and conditions under which funding might be provided, and the general criteria used for evaluating funding applications;

(6) identify ways to improve coordination and reduce impacts through the use of communication, technology and improved management techniques; and

(7) recommend changes to public policy, regulations, or statutes that would improve funding or reduce costs associated with utility relocations resulting from road and bridge projects.

(C) The Utilities Relocation Study Committee must be composed of fifteen members.

Notwithstanding the provisions of Section 8-13-770, the committee is composed of:

(1) one member appointed by the President Pro Tempore of the Senate;

(2) one member appointed by the Speaker of the House of Representatives;

(3) one member appointed by the Majority Leader of the Senate;

(4) one member appointed by the Majority Leader of the House of Representatives;

(5) one member appointed by the Minority Leader of the Senate;

(6) one member appointed by the Minority Leader of the House of Representatives;

(7) one member appointed by the Governor;

(8) the Secretary of Transportation, or his designee;

## Utilities Relocation Study Committee

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(9) the Chairman of the South Carolina Department of Transportation Commission, or his designee;

(10) one member representing the South Carolina Rural Water Association;

(11) one member representing the Water Utility Council of South Carolina;

(12) one member representing the South Carolina Water Quality Association;

(13) one member representing the Municipal Association of South Carolina;

(14) one member representing the South Carolina Association of Counties; and

(15) one member representing the South Carolina Association of Special Purpose Districts.

(D) The members of the study committee shall serve without compensation and may not receive mileage or per diem.

(E) The Utilities Relocation Study Committee shall make a report of its findings and recommendations to the General Assembly no later than June 30, 2013, at which time the study committee terminates.

# Utilities Relocation Study Committee

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## Appendix III

### Cost Subcommittee Members

Mr. Jeff Field – Cost Subcommittee Chair, representing the SC Association of Special Districts

Mr. Warren Harley – representing the Municipal Association of South Carolina

Senator Floyd Nicholson

Mr. Chris Smith – representing the SC Association of Special Purpose Districts

Mr. Doug Tompkins – representing the SC Water Quality Association of South Carolina

Ms. Katherine Veldran – representing the Office of the Governor

# Utilities Relocation Study Committee

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## Appendix IV

### **The Water and Sewer Utilities Survey Sponsored by the South Carolina department of Transportation**

Welcome! Please fill out your contact information before proceeding. Thank you in advance for your timeliness in completing this survey. \*All answers are strictly confidential and will not be used by any 3rd party outside of the Committee or this project.\*

First Name

Last Name

Name of Utility:

Email Address:

Utility Relocation Survey

PART 1: Requests general and financial information about your utility.

PART 2: Requests relocation cost(s) during the last 10 years as a direct result of road construction projects. \*\*If you upgraded your line capacity as part of the project, only include the estimated cost you utility would have incurred if it was a line size for line size relocation project. Please be thorough and include all cost(s) of the project, including legal and engineering. Please complete the survey in its entirety by February 22, 2013. Thank you very much for your time and support as we work to better the future of South Carolinas water systems. Please start with the survey now by clicking on the Continue button below.

Utility Background Information (Part 1 of 2)

Your Professional Title (Ex. Manager, Engineer, etc.)

Contact Phone Number (Ex: 8641230959)

Your Utility Type:

1. City
2. County
3. Special Purpose District (SPD)
4. Commission of Public Works (CPW)
5. Non-Profit
6. Private for Profit
7. Homeowners Association

Select ALL counties where service is provided:

## Utilities Relocation Study Committee

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1. ABBEVILLE
2. AIKEN
3. ALLENDALE
4. ANDERSON
5. BAMBERG
6. BARNWELL
7. BEAUFORT
8. BERKELEY
9. CALHOUN
10. CHARLESTON
11. CHEROKEE
12. CHESTER
13. CHESTERFIELD
14. CLARENDON
15. COLLETON
16. DARLINGTON
17. DILLON
18. DORCHESTER
19. EDGEFIELD
20. FAIRFIELD
21. FLORENCE
22. GEORGETOWN
23. GREENVILLE
24. GREENWOOD
25. HAMPTON
26. HORRY
27. JASPER
28. KERSHAW
29. LANCASTER
30. LAURENS
31. LEE
32. LEXINGTON
33. MCCORMICK
34. MARION
35. MARLBORO
36. NEWBERRY
37. OCONEE
38. ORANGEBURG
39. PICKENS
40. RICHLAND
41. SALUDA
42. SPARTANBURG
43. SUMTER
44. UNION
45. WILLIAMSBURG
46. YORK

# Utilities Relocation Study Committee

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Number of Miles of Water Lines:

Current Number of Water Taps:

Number of Miles of Sewer Lines:

Current Number of Sewer Taps:

Source(s) of operating revenue (ALL revenue that is received on a reoccurring, annual basis):

1. User Fees Paid by Customers
2. Property Taxes (millage)
3. Local Option Sales Tax
4. Other

Combined Annual Water/Sewer Revenue to the nearest \$1000 (Ex: 8567000):

Combined Annual Water/Sewer Debt Service Payments to the nearest \$1000 (Ex: 2358000):

Please answer the following question in full. Enter O if not applicable.

Monthly WATER Bill (for 6,000 gallons of usage) Monthly SEWER Bill (for 6,000 gallons of usage)  
Residential Customer INSIDE Town Limits (\$)  
Residential Customer OUTSIDE Town Limits (\$)

Project Information\* (Part 2 of 2)

Please read the following directions carefully before beginning the project(s) section of the survey.--  
Please include individual project data for ALL relocation projects completed by your utility within the last 10 years (2002-2012). -- If you upgraded your line capacity as part of a project, only include the estimated cost your utility would have incurred if it was a line size for line size relocation project. Please be thorough and include all cost(s) of the project, including legal and engineering. Again, DO NOT include upgrade costs. Note: If you are entering numerical data, ONLY input numbers (no commas or dollar signs). Ex: 1234567

Project 1

Year of Project Completion:

1. 2002
2. 2003
3. 2004
4. 2005
5. 2006
6. 2007
7. 2008
8. 2009
9. 2010
10. 2011
11. 2012



## Utilities Relocation Study Committee

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Choose classification of road or bridge project that required you to relocate utilities:

1. State
2. County
3. Municipal
4. Military

Type of Construction Project:

1. Road Widening
2. Bridge Replacement
3. Intersection Modifications

Cost to relocate/repair utilities (Ex: 1234567):

Enter all source(s) of Construction Funding for this relocation/repair project. Total dollar amount should equal dollar amount in previous question. (DO NOT enter commas or symbols; only numbers. Ex: 123567) As you input numbers in each respective field, please press the ENTER key so the software can calculate the total dollar amount correctly!

- Cash Reserves (\$) \_\_\_\_\_
- Revenue Bonds (\$) \_\_\_\_\_
- General Obligation Bonds - \* (\$) \_\_\_\_\_
- State Revolving Funds (\$) \_\_\_\_\_
- USDA/Rural Development Loan (\$) \_\_\_\_\_
- USDA/Rural Development Grant (\$) \_\_\_\_\_
- State/Federal Appropriations Act - \* (\$) \_\_\_\_\_
- SCDOT - \* (\$) \_\_\_\_\_
- Local Option Sales Tax - \* (\$) \_\_\_\_\_
- "C" Funds - \* (\$) \_\_\_\_\_
- Other (\$) \_\_\_\_\_

Do you have another project to add?

[Completed in the last 10 years; 2002-2012]

Each additional project will request the same information.  
Please include all projects completed in the last 10 years.

# Utilities Relocation Study Committee

## Appendix V

	UNIT COST OF UTILITY RELOCATION		
	<i>Survey Results<sup>1</sup></i>		<i>Cost with Safety Factor<sup>3</sup></i>
Bridge Replacement	\$411,052		\$472,710
Intersection Modifications	\$140,263		\$161,302
Road Widening	\$179,840		\$206,816
	NUMBER OF ANNUAL PROJECTS		
	<i>Survey Results<sup>1</sup></i>	<i>Projected State-Wide Projects<sup>2</sup></i>	<i>State-Wide Projects with Safety Factor<sup>3</sup></i>
Bridge Replacement	6	11	12
Intersection Modifications	7	12	14
Road Widening (miles)	18	33	38
	PROJECTED ANNUAL COST OF UTILITY RELOCATIONS		
	<i>Unit Cost</i>	<i>State-Wide Projects</i>	<i>State-Wide Cost<sup>4</sup></i>
Bridge Replacement	\$472,710	12	\$5,838,840
Intersection Modifications	\$161,302	14	\$2,301,543
Road Widening	\$206,816	38	\$7,883,918
TOTAL			\$16,024,302
Cost per tap per year:			\$6.21
Cost per tap per month:			\$0.52 <sup>5</sup>
Cost per tap per month if General Assembly appropriates 50% of the cost:			\$0.26 <sup>5</sup>
Average SCDOT Widening and Bridge Construction Budget			\$250,000,000
Ratio of SCDOT Construction (\$) to Utility Relocation (\$):			15.6 to 1

*Notes:*

1. Annual Survey Unit Cost and Survey Projects are based on a 10 year average.
2. Survey Respondents represent 54% of water taps in state therefore assume survey projects represent 54% of the number of projects state wide.
3. Safety factor is 1.15 or 15% contingency.
4. Total State Wide Cost is determined by multiplying "Safety Factor Unit Cost" by "Safety Factor Total Projects".
5. If you provide both water and sewer service the cost per tap must be applied to each tap.

# Utilities Relocation Study Committee

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## Appendix VI

### Funding Subcommittee Members

Representative Jimmy Bales

Billy Boan – McGuire Woods and Associates

Bobby Brock – Manager, Marlboro Water Co.

SC DOT Commissioner W. B. Cook

Wes Covington – representing the SC Association of Counties

Charlie Gray – Funding Subcommittee Chair, representing the SC Rural Water Association

Senator John Mathews

# Utilities Relocation Study Committee

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## Appendix VII

### Possible Funding Matrix

FUNDING OPTIONS	COMMITTEE FINDINGS
1) Increase in state fuel tax	<ul style="list-style-type: none"> <li>- Little or no chance of approval</li> <li>- No incentive for utilities or SCDOT for improved efficiencies</li> </ul>
2) Surcharge on water sales	<ul style="list-style-type: none"> <li>- Doesn't account for sewer line relocation expenses</li> <li>- Some "sewer-only" providers would not contribute to fund</li> </ul>
3) Surcharge on water taps	<ul style="list-style-type: none"> <li>- Doesn't account for sewer line relocation expenses</li> <li>- Some "sewer-only" providers would not contribute to fund</li> </ul>
4) Surcharge on water and sewer taps	<ul style="list-style-type: none"> <li>- Has merit</li> <li>- Utilities bear entire burden of relocation costs</li> <li>- No incentive for larger utilities to participate because of increased costs for them</li> </ul>
5) Relocations funded by each SCDOT Project budget	<ul style="list-style-type: none"> <li>- No incentive for utilities to optimize relocation efforts</li> <li>- Adversely affects leveraging of federal highway dollars</li> <li>- SCDOT needs as much funding as they can get for highway improvements</li> </ul>
6) Fully Funded by a state appropriation	<ul style="list-style-type: none"> <li>- Little or no chance of approval</li> <li>- No incentive for utilities to optimize relocation efforts</li> <li>- No incentive for SCDOT and Utilities to work together on process improvements</li> </ul>
7) Funded by state or federal loan or grant programs	<ul style="list-style-type: none"> <li>- Magnitude of need would overwhelm most existing programs</li> <li>- Varied utility types limit universal funding options by existing program – not all qualify</li> <li>- Smaller utilities too leveraged to qualify for additional loans</li> <li>- No additional revenues result from relocations</li> </ul>
8) Commercial loans	<ul style="list-style-type: none"> <li>- No collateral to secure loans</li> <li>- Smaller utilities too leveraged to qualify for additional loans</li> <li>- No additional revenues result from relocations</li> </ul>

# Utilities Relocation Study Committee

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## Appendix VIII

### Process Subcommittee Members

Ms. Rebecca West, Process Subcommittee Chair, representing the SC Water Utility Council

Senator Shane Martin, representing the Majority Leader of the Senate

Representative Nelson Hardwick, representing the Majority Leader of the House of Representatives

Mr. Mitchell Metts, representing the Secretary of Transportation

Mr. Bill Bingham, P.E., representing the Speaker of the House of Representatives

Mr. Eric Budds, representing the Municipal Association of South Carolina

Mr. Mark Attaway, SCDOT

Mr. R. Christopher Kahler, P.E., Summerville CPW

Mr. Steve Price, P.E., City of Goose Creek

Mr. Eddie Twilley, Twilley, Fondren & Associates