South Carolina
Department of Transportation

Debris Management Plan

Prepared By:

Director of Maintenance Office

Original November 2007

Revised September 27, 2017

SCDOT
DEBRIS MANAGEMENT PLAN

Table of Contents

Summary of Changes

Following are the changes in this edition of the *Vegetation Management Guidelines* (versus the most recent, previous edition dated **August 4, 2016**):

Section	Description of Change
2.0	Updated staff contacts.
4.01	Updated staff contacts.
4.02.01	Updated staff contacts.
4.02.02	Updated staff contacts.
4.02.03	Updated staff contacts.
4.02.05	Updated staff contacts.
4.02.06	Updated staff contacts.
4.04	Website link updated.
7.01.03	Updated staff contacts.

1. Purpose and Overview

The purpose of this debris management plan is to expedite restoration of South Carolina's transportation system that is managed by the South Carolina Department of Transportation to a level that is safe and efficient by establishing procedures for addressing debris associated with a declared natural disaster. **This plan is designed to facilitate and coordinate the removal, collection, and disposal of debris deposited within SCDOT right-of-way by SCDOT forces or its agents following a disaster, and to mitigate against any potential threat to the health, safety, and welfare of the impacted employees and citizens, and to expedite recovery efforts in the impacted area.**

This plan is designed to address functions and responsibilities for SCDOT staff employed at headquarters and to provide guidance to SCDOT districts and SCDOT county maintenance offices for respective plan development.

2. Contact Information – State Assistance

The following table provides a list of agencies and respective contact persons who may be contacted for assistance to the South Carolina Department of Transportation during a declared event.

Agency	Contact Person	Address	Phone / Mobile /Email
SC Emergency Management Division	Elizabeth Ryan Chief of Recovery & Mitigation	2779 Fish Hatchery Rd West Columbia, SC 29172	(803) 737-8774 eryan@emd.sc.gov
Federal Emergency Management Agency	Public Infrastructure Branch Chief State Program Manager	FEMA-Region IV-Atlanta 3003 Chamblee-Tucker Rd Atlanta, GA 30341	PADebrisTeam@aol.com
US Army Corps of Engineers	Charleston District Office	69A Hagood Ave Charleston, SC 29403	843-329-8123
Federal Highway Administration	Stephen Ikerd	Strom Thurmond Fed Bldg 1835 Assembly St Columbia, SC 29201	803-253-3885 Stephen.Ikerd@fhwa.dot.gov
SC Department of Health and Environmental Control	General Spills Air Quality Water	2600 Bull St Columbia, SC 29201	803-898-8940 888-481-0125 803-898-4123 803-898-4300
SC Department of Natural Resources	Director	1000 Assembly St Columbia, SC 29201	803-734-4007
Natural Resources Conservation Service	State Conservationist	Strom Thurmond Fed Bldg 1835 Assembly St, Rm 950 Columbia, SC 29201	803-253-3935

3. Storm Types and Debris Types

Several storm types can potentially affect the South Carolina Department of Transportation and generate debris. The following table indicates the type of events likely to affect the SCDOT and the resulting debris types likely to occur.

Storm Type	Debris Types							
	Vegetative	Construction & Demolition	Personal Property / Household Items	White Goods	Soil, Mud, and Sand	Vehicles and Vessels	Dead Animals	Hazardous Waste
Snow/Ice	✓							
Hurricane	✓	✓	✓	✓	✓	✓	✓	✓
Tornado	✓	✓	✓	✓	✓	✓	✓	✓
Flood	✓	✓	✓	✓	✓	✓	✓	✓
Earthquake	✓	✓	✓	✓	✓		✓	✓

To facilitate the debris management process, all debris will be classified and segregated by type as follows. **SCDOT will only manage debris that is deposited within its right-of-way. SCDOT and SCDOT-contracted vendors will only remove debris along federal and state-owned rights-of-way.**

Vegetative Debris:

Vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks, and other leafy materials deriving from vegetation. All downed or fallen vegetative debris within SCDOT right-of-way will be collected and charged per weight (tons) or volume (cubic yards).

Hazardous Trees:

Individual trees deemed as hazardous that are not completely downed or fallen will be collected and charged per each unit. A tree is considered hazardous if its condition was caused by the disaster; it is an immediate threat to lives, public health and safety, or improved property; it has a diameter breast height of six inches or greater; and one or more of the following criteria are met:

- More than 50 percent of the crown is damaged or destroyed;
- A split trunk or broken branches expose the heartwood;
- It has fallen or been uprooted within a public-use area;
- It is leaning at an angle greater than 30 degrees.

Trees determined to be hazardous and that have less than 50 percent of the root-ball exposed should be cut flush at the ground level. The cut portion will be included as vegetative debris.

SCDOT will not grind stumps.

Hazardous Limbs:

The portion of the limb considered hazardous will be removed if the limb is:

- Located on improved public property;
- Greater than two (2) inches in diameter at the point of breakage; AND
- Still hanging in a tree and threatening a public-use area.

Hazardous Tree Stumps:

A stump may be removed if it is determined to be hazardous by meeting the following criteria:

- It has 50 percent or more of the root-ball exposed;
- It is greater than 24 inches in diameter, as measured 24 inches above the ground;
- It is on improved public property or a public right-of-way; AND
- It poses an immediate threat to life, and public health and safety.

Stumps determined to be hazardous and that have less than 50 percent of the root-ball exposed should be cut flush at the ground level. The cut portion will be included as vegetative debris.

Construction & Demolition Debris:

Construction and demolition debris consists of damaged components of buildings and structures such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting and floor coverings, window coverings, pipe, concrete, fully cured asphalt, equipment, furnishings, and fixtures.

Personal Property / Household Items:

Debris classified as personal property/household items includes items such as clothes, books, furniture, mattresses, etc.

White Goods:

White goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, and water heaters. Certified technicians must extract refrigerants from white goods before they are disposed of or recycled. Local debris management plans should include contact information for certified technicians who are qualified to provide this service.

Soil, Mud, and Sand:

Only soil, mud, and sand that were deposited within the right-of-way due to the disaster will be removed.

Vehicles and Vessels:

Vehicles and vessels include automobiles and boats. Vehicles and vessels will only be collected when:

- It presents a hazard or immediate threat that blocks ingress/egress in a public-use area;
- It is abandoned (it is not on the owner's property and ownership is undetermined);
- SCDOT follows local ordinances and State law to secure ownership; AND
- SCDOT verified chain of custody, transport, and disposal of the vehicle or vessel.

Dead Animals:

Disposal of dead animals must be in compliance with applicable Federal, State, and local requirements. Mass removal/disposal of animal carcasses will be accomplished through contracts with qualified vendors.

Hazardous Waste:

Hazardous waste is any waste with properties that make it potentially harmful to human health or the environment. It may be ignitable, corrosive, reactive, or toxic. Examples of hazardous waste include paints, pesticides, and solvents. Only certified hazardous waste technicians should handle, capture, recycle, reuse, and dispose of hazardous waste. The occurrence of hazardous waste debris within SCDOT right-of-way is anticipated to be quite low. However, when hazardous waste is encountered, the first contact should be the **South Carolina Department of Health and Environmental Control (SCDHEC) hotline at 888-481-0125,** who will mobilize a team (HazMat). Additionally, any waste classified as hazardous shall be reported immediately to the respective SCDOT Safety Coordinator **(Section 7.03.01).**

4. Staff Roles and Responsibilities

4.01 Staffing Organizational Chart

SCDOT Headquarters will serve as the central location for the coordination of all debris management activities. The following table lists staff roles/responsibilities necessary to accomplish this mission.

SCDOT HEADQUARTERS - 955 Park Street - Columbia, SC 29202				
Role / Responsibility	**Office**	**Contact Person / Title**	**Room Number**	**Phone/Mobile/Email**
Debris Project Manager	Director of Maintenance	David Cook Director of Maintenance	324	803-737-1291 803-351-8568 CookDB@scdot.org
Administration	Office of Financial Management	Brian Keys Deputy Secretary of Finance & Administration	304	803-737-1240 KeysBW@scdot.org
Contracting & Procurement	Procurement	Sherry Barton Chief Procurement Officer	304	803-737-1474 BartonSD@scdot.org
		Norma Hall Asst. Chief Procurement Officer for Commodities & Contract Services	101	803-737-1483 HallNJ@scdot.org
Legal	Legal	Linda McDonald Chief Counsel	343	803-737-1347 803-530-5154 McDonaldLC@scdot.org
Operations	Director of Maintenance	David Cook Director of Maintenance	324	803-737-1291 803-351-8568 CookDB@scdot.org
Engineering	Director of Maintenance	David Cook Director of Maintenance	324	803-737-1291 803-351-8568 CookDB@scdot.org
Public Information Specialist	Communications	Pete Poore Director of Communications	338	803-737-1270 PooreJP@scdot.org

4.02 Roles and Responsibilities

4.02.01 Debris Project Manager

The SCDOT Debris Project Manager serves as the primary decision maker and should be knowledgeable of the debris management process, procedures, personnel, resources, and limitations. The SCODT Debris Project Manager has overall responsibility for the debris management planning, operations, coordination, logistics, monitoring and reporting. SCDOT will have a State Debris Project Manager, a District Debris Project Manager for each respective SCDOT district, and a County Debris Project Manager for each respective SCDOT maintenance facility. The SCDOT State Debris Project Manager will be assigned by the Director of Maintenance. The SCDOT District Debris Project Managers will be assigned by the respective District Engineering Administrator. The SCDOT County Debris Project Managers will be assigned by the respective SCDOT Resident Maintenance Engineer. SCDOT District and County Debris Management Plans should include a list of all critical personnel with their contact information. All SCDOT Debris Project Managers will be on-call when an event threatens the agency.

Debris Project Managers			
Office	**Contact Person / Title**	**Address**	**Phone/Mobile/Email**
Headquarters	David Cook Director of Maintenance	955 Park Street Columbia, SC 29201	803-737-1291 803-351-8568 CookDB@scdot.org
District 1	Robert Dickinson District Engineering Administrator	1400 Shop Road Columbia, SC 29201	803-737-6658 DickinsoRC@scdot.org
District 2	Kevin McLaughlin District Engineering Administrator	510 W Alexander St Greenwood, SC 29646	864-227-6971 McLaughlKR@scdot.org
District 3	Stephanie Jackson-Amell District Engineering Administrator	252 S Pleasantburg Dr Greenville, SC 29611	864-241-1010 864-590-1377 JacksonAS@scdot.org
District 4	John McCarter District Engineering Administrator	1232 JA Cochran Bypass Chester, SC 29706	803-377-4155 803-374-0371 McCarterJM@scdot.org
District 5	Kyle Berry District Engineering Administrator	3018 East Palmetto St Florence, SC 29503	843-661-4710 BerryWK@scdot.org
District 6	Tim Henderson District Engineering Administrator	6355 Fain Blvd, Bldg C North Charleston, SC 29406	843-746-6714 HendersoTR@scdot.org
District 7	Kevin Gantt District Engineering Administrator	1724 Charleston Hwy Orangeburg, SC 29116	803-531-6850 GanttKL@scdot.org

4.02.02 Administration

The role of administration is to establish a records management system in order to collect and keep all documentation necessary for financial assistance/reimbursement. The following table lists responsibilities.

ADMINISTRATION SCDOT HEADQUARTERS - 955 Park Street - Columbia, SC 29202				
Role/Responsibility	**Office**	**Contact Person Title**	**Room Number**	**Phone/Mobile/Email**
Billing and Invoices, Emergency Budget, Track Expenses	Finance	Bryan Keys Deputy Secretary of Finance & Administration	304	803-737-1240 KeysBW@scdot.org
Labor and equipment timesheets and summaries	Director of Maintenance	David Cook Director of Maintenance	324	803-737-1291 803-351-8568 CookDB@scdot.org
Safety procedures	Customer Relations	Ryan Cole	341	803-737-2314 ColeRA@scdot.org
	Employee Safety & Health	Kenny Eargle Director of Employee Safety & Health	217	803-737-1529 EargleKB@scdot.org
Personnel Policies	Human Resources	Karl McCottry Human Resources Director	115	803-737-1321 MccotrryKM@scdot.org
Environmental Permits (for SCDOT-owned sites)	Director of Maintenance	Tim Hunter	324	803-737-1290 HunterTL@scdot.org

All timesheets and summaries will be recorded and tracked using the Highway Maintenance Management System (HMMS).

4.02.03 Contracting and Procurement

Contracting and procurement will be the responsibility of the SCDOT Procurement Office. The primary role of this office is to have debris contracts ready for advertisement or have pre-qualified contractors in place prior to an event. Tasks and responsible parties are provided in the following table.

NOTE: Refer to federal procurement requirements as outlined in CFR 44 Section 13.36.
See APPENDIX 11.14 CODE OF FEDERAL REGULATIONS TITLE 44, SECTION 13.36 EMERGENCY MANAGEMENT AND ASSISTANCE.

CONTRACTING and PROCUREMENT				
Role/Responsibility	**Location / Office**	**Contact Person Title**	**Room Number**	**Phone/Mobile/Email**
Distribute instructions to bidders, advertise bids, establish pre-event list of pre-qualified contractors, establish a post-event contracting procedure	Headquarters Procurement	Sherry Barton Chief Procurement Officer	304	803-737-1474 BartonSD@scdot.org
		Norma Hall Asst. Chief Procurement Officer for Commodities & Services	101	803-737-1483 HallNJ@scdot.org
Develop contract specifications, establish contractor qualifications,	Headquarters Director of Maintenance	David Cook Director of Maintenance	324	803-737-1291 803-351-8568 CookDB@scdot.org
Manage the contract scope of work	Respective SCDOT District & County Maintenance Offices			

4.02.04 Legal

The SCDOT Legal Office will lead the review process for all legal matters in the debris management planning process. The legal office's responsibilities are provided in the following table.

LEGAL				
Role/Responsibility	**Location / Office**	**Contact Person Title**	**Room Number**	**Phone/Mobile/Email**
Review contracts	Headquarters Legal	Linda McDonald Chief Counsel	343	803-737-1347 803-530-5154 McDonaldLC@scdot.org
Review and establish process for land acquisition				
Review insurance policies				
Ensure environmental and historic preservation				
Ensure site restoration and closure (for SCDOT-owned sites)				
Building condemnation process				
Private property demolition procedure				
Right-of-entry and hold harmless agreements				

4.02.05 Operations

Operations staff will be responsible for the supervision of government and contract resources and overall project implementation. Operations staff is responsible for implementing the entire debris removal operation. Operations tasks and responsibilities are provided in the following table.

OPERATIONS				
Task	**Location / Office**	**Contact Person Title**	**Room Number**	**Phone/Mobile/Email**
Position equipment and resources for debris removal	Director of Maintenance	Jeff Terry State Maintenance Engineer	324	803-737-1268 803-646-2241 TerryJS@scdot.org
Develop staff schedules and strategies	Director of Maintenance	Jeff Terry State Maintenance Engineer	324	803-737-1268 803-646-2241 TerryJS@scdot.org
Provide communication facilities, services, equipment, and materials	Supply and Equipment	John White Director of Supply and Equipment	1512 Shop Road Columbia, SC 29201	803-737-6675 WhiteJF@scdot.org
Monitor and direct force account and contract labor	Director of Maintenance	Jeff Terry State Maintenance Engineer	324	803-737-1268 803-646-2241 TerryJS@scdot.org
Distribute response and recovery resources	Director of Maintenance	Jeff Terry State Maintenance Engineer	324	803-737-1268 803-646-2241 TerryJS@scdot.org
Operate and manage debris collection Operate the debris management site and disposal strategies (for SCDOT-owned sites)	Respective SCDOT District and Local Debris Project Managers			
Create a demolition strategy for structures	Director of Maintenance	Mark Hunter State Bridge Maintenance Engineer	325	803-737-1269 803-429-3045 HunterMW@scdot.org
Report progress	Director of Maintenance	Jeff Terry State Maintenance Engineer	324	803-737-1268 803-646-2241 TerryJS@scdot.org

4.02.06 Engineering

The Engineering staff supports all other debris management sections in a technical role. Engineering will provide debris quantity assumptions, economic analysis, and feasible solutions for the debris operations. Tasks and responsibilities are stated in the following table.

ENGINEERING				
Role/Responsibility	**Location / Office**	**Contact Person Title**	**Room Number**	**Phone/Mobile/Email**
Forecast debris volume based on disaster type	Director of Maintenance	David Cook Director of Maintenance	324	803-737-1291 803-351-8568 CookDB@scdot.org
Develop a strategy for estimating post-disaster debris quantities	Director of Maintenance	David Cook Director of Maintenance	324	803-737-1291 803-351-8568 CookDB@scdot.org
Strategize and map debris haul routes	Respective SCDOT District and Local Debris Project Managers			
Select debris management sites and design the site layout (for SCDOT-owned sites)	Respective SCDOT District and Local Debris Project Managers			
Determine reduction and recycling means and methods (for SCDOT-owned sites)	Respective SCDOT District and Local Debris Project Managers			
Identify and coordinate environmental issues and permits (for SCDOT-owned sites)	Director of Maintenance & Respective SCDOT District and Local Debris Project Managers	Tim Hunter & Respective SCDOT District and Local Debris Project Managers	324	803-737-1290 HunterTL@scdot.org
Assess available landfill space	Respective SCDOT District and Local Debris Project Managers			
Develop the debris collection strategy	Respective SCDOT District and Local Debris Project Managers			
Write contract scopes of work and specifications	Director of Maintenance	Assistant State Maintenance Engineer	324	
Coordinate with local and State jurisdictions for road clearance and operations	Respective SCDOT District and Local Debris Project Managers			

4.02.07 Public Information Specialist

The SCDOT Public Information Specialist will coordinate prepare pre-scripted information for press releases, serve as the media contact, and prepare public notices regarding debris management operations.

PUBLIC INFORMATION SPECIALIST				
Role/Responsibility	**Location / Office**	**Contact Person Title**	**Room Number**	**Phone/Mobile/Email**
Public Information Announcements	Communications	Pete Poore	338	803-737-1270 PooreJP@scdot.org

4.03 Emergency Communications Plan

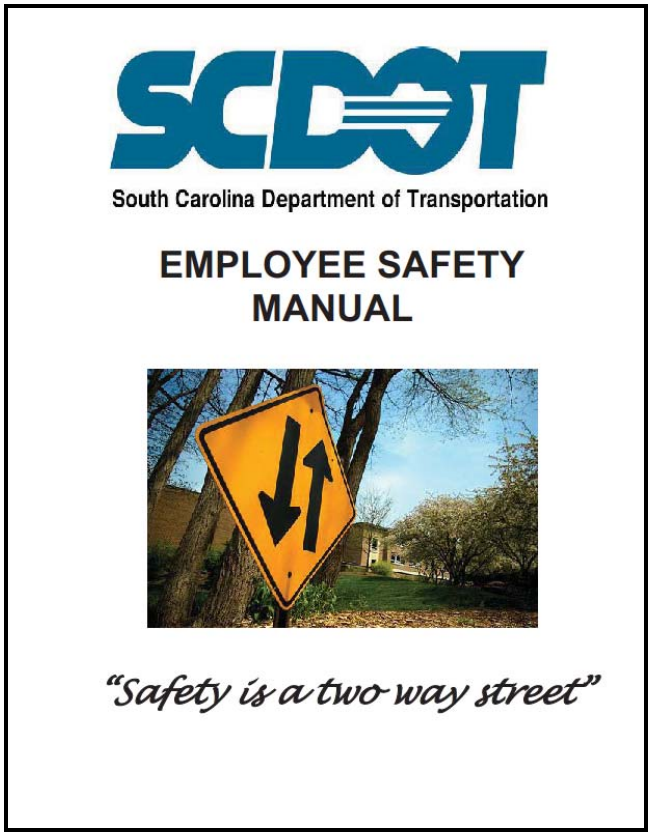
The following modes of communication will be used, as operable.

Mode of Communication	Office	Contact Person Title	Room Number	Phone Mobile Email
Telephone - land	IT Services	Anne Futch	G15	803-737-1670
Telephone - cellular	IT Services	Anne Futch	G15	803-737-1670
Email - computer	IT Services	Lee Foster	G15	803-737-1670
Fax	IT Services	Anne Futch	G15	803-737-1670
Radio	Radio Shop	Tim Davidson Communication Manager	1512 Shop Road Columbia, SC 29201	803-737-6642 DavidsonTW@scdot.org

4.04 Health and Safety Plan and Procedures

Guidance contained in the current edition of SCDOT Employee's Safety Manual will be followed during all debris management operations. A copy of the manual is available via the following website:

http://iwww.dot.state.sc.us/Occupational_Safety_Health/pdf/safety_manual/SCDOT_Safety_Manual_January_2017.pdf



While each safety topic addressed in this manual is important for the employee's safety, the following chapters and/or sections address issues pertinent to debris management:

Title	Chapter (Section)
Asbestos Program	7 (9)
Personal Protective Equipment	8 (All Sections)
Backhoes	9 (9)
Loaders	9 (10)
Grade Alls & Excavators	9 (11)
Equipment (Chippers)	9 (16)
Tools (Chain Saws)	18 (7)
Overhead Powerlines	20 (6)
Lifting	24 (4)
Confined Space Entry Program	29 (All Sections)
Hazard Communication Program	30 (All Sections)
Bloodborne Pathogens Program	31 (All Sections)
Lockout Tagout Program	32 (All Sections)
Hearing Conservation Program	34 (All Sections)

**February 2011 edition.*

4.05 Training Schedule

The following training schedule has been established for debris management operations:

The **State Debris Project Manager** shall participate in training as follows:

WHEN: Annually, as available

WHERE: SCEMD, West Columbia, South Carolina, tentative

WHAT: Planning, Monitoring, Recordkeeping, Safety, Equipment

INSTRUCTOR: South Carolina Emergency Management Division, tentative

SCDOT Course ID: N/A

The **District Debris Project Managers** shall participate in training as follows:

WHEN: Annually

WHERE: SCDOT Headquarters, Columbia, SC

WHAT: Planning, Monitoring, Recordkeeping, Safety, Equipment

INSTRUCTOR: State Debris Project Manager

SCDOT Course ID: TBD

The **Local Debris Project Managers** shall participate in training as follows:

WHEN: Annually

WHERE: at location within the respective district

WHAT: Planning, Monitoring, Recordkeeping, Safety, Equipment

INSTRUCTOR: District Debris Project Managers

SCDOT Course ID: TBD

5. Situation and Assumptions

5.01 Design Disaster Event

Snow/Ice:

Debris from snow or ice storms consists of significant amounts of vegetative debris and overhead utility service components.

Hurricane:

A hurricane is a severe tropical cyclone with winds exceeding 74 miles per hour (up to 150 miles per hour) and usually involves heavy rains, storm surge, and wave action. The most severe damage frequently occurs in the shore lands adjacent to the ocean. The resultant debris consists primarily of vegetative debris, construction and demolition debris, personal property/household items, white goods, soil and mud and sand, vehicles and vessels (notably marine vessels), dead animals, and hazardous waste.

Tornado:

Damage from tornadoes is caused by high-velocity rotating winds. Tornado debris will most likely consist of vegetative debris, construction and demolition debris, personal property/household items, white goods, soil and mud and sand, vehicles and vessels (notably marine vessels), dead animals, and hazardous waste.

Flood:

Flooding may be caused by severe rainstorms or due to events that result in reservoir failure. Flood debris may include vegetative debris, construction and demolition debris, personal property/household items, white goods, soil and mud and sand, vehicles and vessels (notably marine vessels), dead animals, and hazardous waste.

Earthquake:

Seismic forces along fault lines generate shock waves that cause ground shaking, surface ruptures, liquefaction, landslides, mudflows and earth cracking. Damage may be localized at the epicenter or widespread across adjoining areas. Secondary effects of earthquakes such as aftershocks, fires, explosions, and landslides cause further damage. Debris from an earthquake can consist of vegetative debris, construction and demolition debris, personal property/household items, white goods, soil and mud and sand, dead animals, and hazardous waste.

5.02 Forecasted Debris

5.02.01 Forecasted Types

Storm Type	Debris Types							
	Vegetative	Construction & Demolition	Personal Property / Household Items	White Goods	Soil, Mud, and Sand	Vehicles and Vessels	Dead Animals	Hazardous Waste
Snow/Ice	✓							
Hurricane	✓	✓	✓	✓	✓	✓	✓	✓
Tornado	✓	✓	✓	✓	✓	✓	✓	✓
Flood	✓	✓	✓	✓	✓	✓	✓	✓
Earthquake	✓	✓	✓	✓	✓		✓	✓

NOTE: Utility related debris such as power transformers, utility poles, cable, and other utility material will be the responsibility of the respective utility company or cooperative. SCDOT District and SCDOT county maintenance office must include local utility contact information in the respective debris management plans.

5.02.02 Forecasted Locations

While all SCDOT locations are required to have plans established to address debris management operations for each type of event, the most likely SCDOT locations subject to these events are as follows:

Snow/ Ice	Hurricane	Tornado	Flood	Earthquake	DISTRICT	COUNTY	FACILITY
✓		✓	✓	✓	HQ	Richland	HQ/ Equiptment Depot/ HQ Radio /State Sign Shop
✓		✓	✓	✓	1	Kershaw	Kershaw Mnt / Bethune SS
✓	✓	✓	✓	✓	1	Lee	Lee Mnt
✓		✓	✓	✓	1	Lexington	Lexington Mnt / Leesville SS / Pelion SS / WColumbia SS
✓		✓	✓	✓	1	Richland	D1 Office/Richland Mnt / Ballentine SS / Eastover SS / D1 Signal
✓	✓		✓	✓	1	Sumter	Sumter Mnt
✓			✓		2	Abbeville	Abbeville Mnt
✓			✓		2	Anderson	Anderson Mnt / Belton SS / Old Anderson SS
✓			✓		2	Edgefield	Edgefield Mnt / Meriweather SS
✓			✓		2	Greenwood	D2 Office /Greenwood Mnt / D2 Signal / D2 Radio
✓			✓		2	Laurens	Laurens Mnt / Clinton SS
✓			✓		2	McCormick	McCormick Mnt / Mt Carmel SS
✓			✓		2	Newberry	Newberry Mnt
✓			✓		2	Saluda	Saluda Mnt
✓			✓		3	Greenville	D3 Office /Greenville Mnt / Forshoa SS / NGreenville SS / Pleasant Hill SS / Simpson SS / D3 Radio /
✓			✓		3	Oconee	Oconee Mnt
✓			✓		3	Pickens	Pickens Mnt
✓			✓		3	Spartanburg	Spartanburg Mnt / Campobello SS / Woodruff SS / D3 SaltS
✓			✓		4	Cherokee	Cherokee Mnt/ Blacksburg SS
✓			✓		4	Chester	D4 Office /Chester Maint / Rgreatf SS / Richburg SS / D4 Radio / D4 Traffic
✓	✓		✓		4	Chesterfield	Chesterfield Mnt/ Cheraw SS/ McBee SS/ Pageland SS
✓			✓		4	Fairfield	Fairfield Mnt
✓			✓		4	Lancaster	Lancaster Mnt/ Kershaw SS
✓			✓		4	Union	Union Mnt/ Union2 SS
✓			✓		4	York	York Mnt/ Hickory Grove SS/ Rock Hill SS
	✓	✓	✓		5	Darlington	Darlington Mnt/ Hartsville SS
	✓	✓	✓		5	Dillon	Dillon Mnt
	✓	✓	✓		5	Florence	D5 Office / Florence Mnt/ Lake City SS/ D5 Radio / D5 Traffic
	✓	✓	✓		5	Georgetown	Georgetown Mnt/ Andrews SS
	✓	✓	✓		5	Horry	Horry Mnt/ Longs SS / MBeach SS / Aynor SS / Greensea SS / OldSea SS
	✓	✓	✓		5	Marion	Marion Mnt
	✓	✓	✓		5	Marlboro	Marlboro Mnt
	✓	✓	✓		5	Williamsburg	Williamsburg Mnt/ Hemingway SS/ OldWils SS
	✓	✓	✓	✓	6	Beaufort	Beaufort Mnt/ Hilton Head SS
	✓	✓	✓	✓	6	Berkeley	Berkeley Mnt/ Huger SS/ Jamestown SS/ Stephen SS
	✓	✓	✓	✓	6	Charleston	D6 Office / Charleston Mnt/ Parkers SS/ Pinehaven SS/ D6 Bridge/ D6 Traffic
	✓	✓	✓	✓	6	Colleton	Colleton Mnt/ Ruffin SS/ D6 Radio
	✓	✓	✓	✓	6	Dorchester	Dorchester Mnt/ ShopYard SS / D6 Radio
	✓	✓	✓	✓	6	Jasper	Jasper Mnt
✓		✓	✓	✓	7	Aiken	Aiken Mnt/ Beislan SS / Wagener SS
✓	✓	✓	✓		7	Allendale	Allendale Mnt
✓	✓	✓	✓		7	Bamberg	Bamberg Mnt
✓	✓	✓	✓		7	Barnwell	Barnwell Mnt
✓	✓	✓	✓		7	Calhoun	Calhoun Mnt
✓	✓	✓	✓		7	Clarendon	Clarendon Mnt
✓	✓	✓	✓		7	Hampton	Hampton Mnt
✓	✓	✓	✓		7	Orangeburg	D7 Office/Orangeburg Mnt/Holly Hill Mnt/ D7 Radio/ Branchville SS / Springfield SS

5.02.03 Forecasted Quantities

Forecasted quantities of debris may be determined either by historical data collected from experience with like events or by using models, such as those developed by the US Army Corps of Engineers. Current models may be found on the internet at: www.englink.usace.army.mil

Snow/Ice:

Each local SCDOT office has a Snow and Ice Plan. Forecasted quantities of debris resulting from snow/ice events will be based upon historical data.

Tornado:

Forecasted quantities of debris resulting from tornado events are not currently available.

Flood:

Forecasted quantities of debris resulting from flood events are not currently available.

Earthquake:

Forecasted quantities of debris resulting from earthquake events are not currently available.

Hurricane:

The formula for estimating debris quantity for HURRICANES is: **Q = H(C)(V)(B)(S)**

ITEM	DEFINITION	How Measured
H	Households	Population / 3
C	Category of Storm	Factor (see table)
V	Vegetation Multiplier	Factor (see table)
B	Commercial Density Multiplier	Factor (see table)
S	Precipitation Multiplier	Factor (see table)

HURRICANE CATEGORY	VALUE OF "C" FACTOR
1	2 CY
2	8 CY
3	26 CY
4	50 CY
5	80 CY
VEGETATIVE COVER	**VALUE OF "V" MULTIPLIER**
Light	1.1
Medium	1.3
Heavy	1.5
COMMERCIAL DENSITY	**VALUE OF "B" MULTIPLIER**
Light	1.0
Medium	1.2
Heavy	1.3
PRECIPITATION	**VALUE OF "S" MULTIPLIER**
None to Light	1.0
Medium to Heavy	1.3

Once the amount of debris has been estimated, SCDOT will require temporary storage sites the size of which can be determined by taking the following factors into consideration:

- The debris pile shall be stacked to a height of no more than 10 feet (= 3.33 yards).
- 60% of the temporary storage site land area will be devoted to roads, safety buffers, burn pits, and household hazardous waste. (= x 1.66)
- 1 acre = 4,840 square yards
- Total volume per acre = 4,840 square yards/acre x 3.33 yards = 16, 133 cubic yards/acre

Given a Category 5 hurricane, heavy vegetation cover, heavy commercial density, and heavy precipitation, the amount of acres needed for temporary storage is: **Q = H(C)(V)(B)(S)**

H= Population/3 = 500,000/3 = 167,000
C = Category 5 = 80 CY
V = Heavy = 1.5
B = Heavy = 1.3
S = Heavy = 1.3

Q = (167,000)(80)(1.5)(1.3)(1.3)
Q = 33,867,600 cubic yards of debris
Q / 16,133 cubic yards/acre = 2,099 acres of debris
Q x 1.66 = 3,485 acres needed for temporary debris storage

6. Debris Collections Plan

6.01 Priorities

The debris removal process must be conducted in an orderly, effective manner in order to restore the SCDOT transportation system and SCDOT properties to their pre-event state without compromising the health and safety of employees, hired contractors, and the public. Priority for debris management within SCDOT right-of-way following any declared event will be as follows:

1. Interstates Routes and bridges
2. Primary Routes and bridges
3. Secondary Routes and bridges
4. SCDOT Facilities

6.02 Response Operations

All SCDOT district offices and SCDOT county maintenance offices statewide will be on-call and available for mobilization to the affected area, if needed. SCDOT will utilize its **Emergency Operation Readiness System (EROS)** as a device for response operations.

To clear roadways, SCDOT will mobilize staff as defined in the **Hurricane Storm Assistance Plan** (a copy of the **Plan** is provided in **Appendix 11.12**). For an event considered significant enough to qualify for federal assistance, SCDOT HQ will activate the **General Protocol for Implementation of Debris Management Consultants and the Debris Removal Contractors** as shown in **Appendix 11.13**. Initiation of the **Protocol** will result in the mobilization of contract/consultant services to provide responsive basic system function as soon as possible and a systematic long-term cleanup of debris.

Four levels of response are identified and will be applied during each event type:

Response Level 1: Alert

The SCDOT State Debris Project Manager will notify the SCDOT District Debris Project Managers of the response level. The SCDOT State and District Debris Project Managers will:

- Review the respective Debris Management Plan
- Check equipment and supplies
- Conduct communications checks with computer, telephone, cell phone, & radio
- Monitor events

Response Level 2: Heightened Alert

The SCDOT State Debris Project Manager will notify the SCDOT District Debris Project Managers of the response level. The SCDOT District Debris Project Managers will:

- Notify SCDOT County Debris Project Managers
- Review the Debris Management Plan
- Test communications

Response Level 3: Event Imminent or Occurring

The SCDOT State Debris Project Manager will notify the SCDOT District Debris Project Managers of the response level. The SCDOT State, District and County Debris Project Managers will:

- Implement the respective Debris Management Plan

Response Level 4: Event Complete

The SCDOT State Debris Project Manager will notify the SCDOT District Debris Project Managers of the response level. The SCDOT State Debris Project Manager will:

- Conduct Event Feedback Session
- Make adjustments to the respective Debris Management Plan as necessary

6.03 Recovery Operations

SCDOT District Debris Project Managers in conjunction with SCDOT County Debris Project Managers shall ensure that the event area is safe and that power lines do not pose a hazard before mobilizing employees or contractors to begin collecting or moving debris. Therefore, initial debris clearance will typically occur within 24 to 48 hours following an event.

Debris shall be hauled to Debris Management Sites identified in the respective debris management plan.

Removal of debris should be conducted in a manner to minimize the impacts to wetlands and streams, creeks, rivers, etc.

6.03.01 Estimating Staff, Procedures and Assignments

The SCDOT State Debris Project Manager in conjunction with the SCDOT District Debris Projects Managers and the SCDOT County Debris Project Managers are responsible for the coordination, oversight, and monitoring of all debris removal and disposal operations occurring within SCDOT right-of-way. The communication relay between these individuals is critical to the success of the debris management operations.

Impact assessments and debris estimates will be performed by the SCDOT County Debris Project Manager. This information will be communicated to the SCDOT District Debris Project Manager and will be used to prioritize impacted areas and resource needs. Based upon feedback from the SCDOT District Debris Project Managers, the SCDOT State Debris Project Manager will determine if additional internal forces are necessary for mobilization into the affected area. The SCDOT State Debris Project Manager will coordinate mobilization of internal forces from non-event areas via communication with the respective SCDOT District Debris Project Manager.

If the SCDOT State Debris Project Manager determines that the quantity of debris generated exceeds SCDOT's capabilities to clear, remove and dispose of it, then the SCDOT State Debris Project Manager will notify SCEMD and FEMA to request supplemental support.

Each respective SCDOT County Debris Project Manager will be responsible for estimating staff, procedures and assignments for their respective level. Additionally, each SCDOT County Debris Project Manager will be responsible for:

- Site inspection, quality control, and internal and contractor oversight
- Receiving and reviewing and recording all Debris Load Tickets in HMMS
- Make recommendations and report progress to the SCDOT District Debris Project Manager
- Assigning Local Monitors for Debris Loading Sites and Debris Management Sites (SCDOT-owned and non-SCDOT owned sites)

6.03.02 Collection Method

Debris will be collected utilizing SCDOT forces and equipment. Based upon feedback from the SCDOT District Debris Project Manager, the SCDOT State Debris Project Manager will activate the debris contractors as necessary.

Each SCDOT County Debris Management Plan will contain a list of equipment to be utilized for debris management operations.

Curbside Collection

SCDOT will only manage event debris that is deposited within its property (i.e., right-of-way) therefore, will not be performing curbside collection of debris.

Collection Centers

SCDOT will not establish public collection centers for event debris.

6.03.03 Collecting Hazardous Waste and White Goods

Information regarding collection of hazardous waste and white goods is addressed in **Chapter 3**.

6.03.04 Monitoring Staff and Assignments

Each SCDOT County Debris Project Manager shall assign Local SCDOT Monitors. Four types of monitors will be assigned:

1) SCDOT Debris Estimating Monitor
2) SCDOT Debris Loading Monitor
3) SCDOT Debris Management Site (Unloading) Monitor (for SCDOT-owned sites and non-SCDOT sites)
4) SCDOT Debris Management Site (Environmental) Monitor (for SCDOT-owned sites)

The SCDOT Debris Estimating Monitor will:

- Visit the assigned SCDOT right-of-way area weekly and determine estimated quantities of debris remaining. (Refer to *APPENDIX 11.06* for Debris Estimation guidance)
- Coordinate and verify the location of the loading sites each day.

The SCDOT Debris Loading Site Monitor will:

- Monitor debris loading operations (internal and contracted) within their assigned SCDOT right-of-way area; NOTE: monitor to ensure that excessive water or excavated mud/sand/soil is NOT added to the load.
- Ensure that debris collection operations cause minimum impact to wetlands, streams, creeks, rivers, etc.
- Document each SCDOT and Contractor truck's number and load dimensions. Take photographs of all trucks and trailers.
- Complete the **loading portion** of the Debris Load Ticket (*See APPENDIX 11.05*)

The SCDOT Debris Management Site (Unloading) Monitor will (at SCDOT-owned sites and non-SCDOT owned sites):

- Direct debris haulers to the appropriate dump location.
- Monitor debris unloading operations (internal and contracted) within their assigned area.
- Document each SCDOT and Contractor truck's number and load dimensions. Take photographs of all trucks and trailers.
- Complete the **unloading portion** of the Debris Load Ticket (See *APPENDIX 11.05*)
- Report appropriate information to the SCDOT Debris Project Manager

The SCDOT Debris Management Site (Environmental) Monitor will (at SCDOT-owned sites):

- Monitor environmental conditions at the SCDOT-owned Debris Management Site
- Ensure proper cleanup of spills
- Monitor to ensure that setbacks for debris piles are adequate
- Monitor to ensure air curtain burners are compliant with operational conditions and setbacks

The primary tracking mechanism for all debris loaded and hauled to the Debris Management Sites will be the Debris Load Ticket (see *APPENDIX 11.05*). Debris Load Tickets will be initiated at the debris loading site and closed-out upon drop-off of each load at the Debris Management Site. The Debris Load Ticket shall be used for all loads hauled whether by SCDOT forces or by contracted forces. The Debris Load Ticket serves as documentation for Contractor payment as well as requests for FEMA reimbursement. The load ticket will be a form similar to the one shown in *APPENDIX 11.05*.

7. Debris Management Sites

Debris Management Sites will be identified, by physical address, in the respective District Debris Management Plans and in the Local Debris Management Plans prepared by the SCDOT county maintenance facilities. Sites identified shall include non-SCDOT sites as well as SCDOT-owned properties that can serve as debris management sites. The SCDOT-owned properties shall be utilized as a last resort. Debris will be collected and hauled to the nearest designated Debris Management Site.

7.01 Site Management

Sites not owned by SCDOT will be managed by the respective owner of the site.

Regarding SCDOT-owned sites:

There should be no significant accumulation of debris at the Debris Management Sites. These sites will be used to temporarily store/hold, sort and reduce debris (i.e., chip/grind, recycle or burn). Debris should be constantly removed and submitted to final disposal destination such as recycler or landfill.

Sites should be located outside of identifiable or known floodplain and flood prone areas. Sites identified as wetlands should be avoided.

Unloading areas for debris should be at a minimum 100 feet from all surface waters of the state (i.e., creeks, streams, ditches, ponds, wetlands, etc.). Storage areas for debris should be at least 100 feet from the site property boundaries, on-site buildings, structures, septic tanks, and wells.

Plastic lined areas should be established for ash, household waste, fuels and other materials that may contaminate soils and groundwater. Plastic liners should also be placed under generators and mobile lighting plants.

Provisions should be made to prevent unauthorized access to the Debris Management Site when not in operation.

The approved methods of debris reduction are:

- Chipping/Grinding
- Burning

The approved methods of debris disposal are:

- Recycling
- Landfill
- Land application

7.01.01 Site Manager

Sites not owned by SCDOT will be managed by the respective owner of the site.

Regarding SCDOT-owned sites:

The SCDOT District Debris Project Managers shall determine and identify in their SCDOT District Debris Management Plan who will serve as the SCDOT Debris Site Manager for each respective SCDOT-owned Debris Management Site within their district. Likewise, each SCDOT County Debris Management Plan shall identify employees who will serve as the SCDOT County Debris Site Manager. The SCDOT Debris Site Managers shall verify all Debris Load Tickets (See *APPENDIX 11.05*).

7.01.02 Monitoring Staff and Assignments

Sites not owned by SCDOT will be managed by the respective owner of the site.

Regarding SCDOT-owned sites:

The SCDOT District Debris Project Managers shall determine who will serve as SCDOT District Monitors. The SCDOT County Debris Project Managers shall determine who will serve as monitors. For each event, the SCDOT County Debris Project Manager shall at a minimum assign the following monitors:

- SCDOT Debris Estimating Monitor
- SCDOT Debris Loading Site Monitor
- SCDOT Debris Management Site (Unloading) Monitor
- SCDOT Debris Management Site (Environmental) Monitor

7.01.03 Safety Personnel

Each SCDOT district has an employee who serves as a safety coordinator.

Safety Personnel			
Office	**Contact Person Title**	**Address**	**Phone/Mobile/Email**
Headquarters	Kenny Eargle	955 Park Street Columbia, SC 29201	803-737-1519 EargleKB@scdot.org
District 1	Aaron Williams	1400 Shop Road Columbia, SC 29201	803-737-6710 WilliamsHA@scdot.org
District 2	Karen Neighbors	510 W Alexander St Greenwood, SC 29646	864-227-6971 864-993-1954 NeighborKK@scdot.org
District 3	Donna Osborne	252 S Pleasantburg Dr Greenville, SC 29611	864-250-5924 864-360-1101 OsborneDK@scdot.org
District 4	Edward Moore	1232 JA Cochran Bypass Chester, SC 29706	803-377-4155 MooreEO@scdot.org
District 5	Michael Miller	3018 East Palmetto St Florence, SC 29503	843-661-4710 843-992-4404 MillerMW@scdot.org
District 6	Sheila James	6355 Fain Blvd, Bldg C North Charleston, SC 29406	843-746-6740 843-834-4270 JamesSD@scdot.org
District 7	Danny Simmons	1724 Charleston Hwy Orangeburg, SC 29116	803-707-1183 803-395-7165 SimmonsD@scdot.org

7.02 Establishment and Operations Planning

7.02.01 Permits

Permits for sites not owned by SCDOT will be obtained by the respective owner of the site.

Regarding SCDOT-owned sites:
Permits to establish and operate SCDOT-owned Debris Management Sites will be acquired as needed. Typically, permit acquisition will be necessary from the South Carolina Department of Health and Environmental Control and from local municipalities. Employees responsible for acquiring permits are identified on page 16 of this plan. Potential permits may be necessary for the following associated debris management activities: Burning, Waste processing and recycling, Temporary land-use, Land use variances, Air quality, Water quality, Coastal commission land use, and Hazardous waste.

7.02.02 Locations

The list of Debris Management Sites as well as landfill sites will be identified in the respective SCDOT Local Debris Management Plans prepared for/by each SCDOT Maintenance Office.

Baseline Data for Each Location

Baseline data for sites not owned by SCDOT will be obtained by the respective owner of the site.

Regarding SCDOT-owned sites: The following checklist will be used to establish baseline data for each SCDOT-owned Debris Management Site:

Before Event Occurs:

- ❑ Create a sketch of the Site, noting features such as structures, fences, culverts, detention ponds, etc.
- ❑ Take photographs of the Site
- ❑ Take random soil samples
- ❑ Take random groundwater samples
- ❑ Take water samples from wells
- ❑ Check the site for volatile organic compounds

During Event:

- ❑ Establish groundwater monitoring wells
- ❑ Take groundwater samples
- ❑ Take soil samples at each segregated waste pile/area
- ❑ Take photographs

After Event:

- ❑ Update sketch
- ❑ Take photographs
- ❑ Take random soils samples
- ❑ Take groundwater samples
- ❑ Take water samples from wells and groundwater monitoring wells
- ❑ Check the site for volatile organic compounds

Ingress/Egress for Sites

Ingress and egress for sites not owned by SCDOT will be determined by the respective owner of the site.

Regarding SCDOT-owned sites:
Ingress and egress to and from SCDOT-owned Debris Management Sites will be determined by the Local Debris Project Manager and will be identified in each respective Local Debris Management Plan.

7.02.03 Site Layouts

Site layouts for sites not owned by SCDOT will be determined by the respective owner of the site.

Regarding SCDOT-owned sites:
The layouts of SCDOT-owned Debris Management Sites will be included in the respective SCDOT Local Debris Management Plans prepared for/by each SCDOT Maintenance Office.

7.02.04 Site Preparation

Preparation of sites not owned by SCDOT will be conducted by the respective owner of the site.

Regarding SCDOT-owned sites:
Site preparation of SCDOT-owned Debris Management sites should be initiated upon notification of Response Level 1: Alert (**See Section 6.02**).

7.02.05 Volume Reduction Methods

Regarding SCDOT-owned sites:
The following methods will be utilized to reduce the volume of debris:

- Incineration
- Grinding and chipping

Incineration

The following guidelines are presented for conducting debris burning at SCDOT-owned Debris Management Sites:

- Only air curtain burning is permitted.
- A minimum buffer of 500 feet from the air curtain burner device to homes, dwellings and other structures is required. A minimum buffer of 250 feet from roadways is required.
- Contact the local fire marshal or fire department for input into location selection in order to minimize the potential for fire hazards and the ensure that adequate fire protection resources are available in the event of a burning-related emergency.
- The air curtain burner should be located outside of identifiable or known floodplain and flood prone areas.
- The storage area for pre-burned debris should be at a minimum 100 feet from all surface waters of the state (i.e., creeks, streams, ditches, ponds, wetlands, etc.), site property boundaries, on-site buildings, structures, septic tanks, and wells.
- Wood ash shall be wetted prior to removal from the air curtain burner and temporarily stored in the Debris Management Site at least 200 feet from all other debris within the site.
- Wood ash to be land applied shall be incorporated into the soil by the end of the operational day. Wood ash shall not be applied in wetlands.
- A setback of at least 1,000 feet should be maintained between the debris piles and the incineration area. Keep at least 1,000 feet between the incineration area and buildings or structures. A fence should be used to separate the incineration area from the rest of the Debris Management Site.
- The fire should be extinguished approximately two hours before anticipated removal from the ash mound. The ash mound should be removed when it reaches two feet below the lip of the incineration pit.
- The incineration area should be placed in an above ground or below ground pit that is no wider than 8 feet and between 9 and 14 feet deep.
- Above ground incineration pits should be constructed with limestone and reinforced with earth anchors or wire mesh to support the weight of the loaders. There should be a 1-foot impervious layer of clay or limestone on the bottom of the pit to seal the ash from the aquifer.
- The ends of the pits should be sealed with dirt or ash to a height of 4 feet.
- A 12-inch dirt seal should be placed on the lip of the incineration pit area to seal the blower nozzle. The nozzle should be 3 to 6 inches from the end of the pit.
- There should be 1-foot high, unburnable warning stops along the edge of the pit's length to prevent the loader from damaging the lip of the incineration pit.
- Do not place hazardous or contaminated ignitable material into the pit.
- The airflow should hit the wall of the pit about 2 feet below the top edge of the pit, and the debris should not break the path of the airflow except during dumping.
- The pit should be no longer than the length of the blower system and the pit should be loaded uniformly.

Grinding and Chipping

The following guidelines are presented for conducting chipping/grinding at SCDOT-owned Debris Management Sites:

- The chipping/grinding area should be located outside of identifiable or known floodplain and flood prone areas.
- The temporary storage area for pre-chipped/pre-grinded debris should be at a minimum 100 feet from all surface waters of the state (i.e., creeks, streams, ditches, ponds, wetlands, etc.), site property boundaries, on-site buildings, structures, septic tanks, and wells.
- Put chipped/ground vegetative debris into wind rows (i.e., piles) no greater than 5 to 6 feet high and 8 to 10 feet wide, to reduce the possibility of spontaneous combustion. Monitor pile temperature and turn piles when the temperature reaches or exceeds 160 degrees Fahrenheit.
- Keep chipped/ground debris piles away from structures, buildings and wooded areas.
- Do not compact the piles (i.e., avoid driving or operating heavy equipment on piles).

7.02.06 Recycling

SCDOT does not intend to recycle debris due to limited-to-no markets in the state for such recyclable materials.

7.02.07 Landfill

Landfill sites that accept debris types presented in this plan will be identified in each SCDOT County Debris Management Plan.

7.02.08 Land Application

The following guidelines are presented for land application of debris that is burned at SCDOT-owned Debris Management Sites (i.e., wood ash):

- Whenever possible, soil test data and waste analysis of the ash should be available to determine appropriate application rate. In the absence of test data, application should be limited to 2 to 4 tons per acre/one-time event.
- Ash should not be applied during periods of high wind.
- For application sites stabilized with vegetation, ash should not be applied within 25 feet of surface waters or within 5 feet of drainage ways or ditches. For application sites not stabilized with vegetation, ash should not be applied within 50 feet of surface waters or within 10 feet of drainage ways or ditches.
- Keep records to indicate where ash is applied and the quantities applied. Local Debris Management Plan.

7.02.09 Environmental Monitoring Program

SCDOT must ensure that Debris Management Site operations at SCDOT-owned sites are conducted in ways that minimize impacts to the environment and comply with current regulations. Each Debris Project Manager shall be responsible for ensuring environmental monitoring during all aspects of the debris management operation. The State Environmental Permits Manager (See Section 4.02.02) will serve as the State Debris Environmental Monitor. Respective districts and local maintenance offices will assign this responsibility for their areas.

7.02.10 Site Closure

Site closure for sites not owned by SCDOT will be conducted by the respective owner of the site.

Regarding SCDOT-owned sites:

Each SCDOT-owned Debris Management Site that is utilized during an event will eventually be emptied of all debris and be restored to its previous condition and use. Before activities begin, ground and aerial photos will be taken, important features such as structures, fences, culverts, and landscaping will be noted. Random soil samples and well water samples will be taken. The site will be checked for volatile organic compounds.

After activities begin, constant monitoring of air quality and soil and water samples will take place. Photos, maps, and sketches of the site will be updated and fuel spills will be noted.

At close-out, final testing of soil, water, and air quality will be compared to original conditions. Any remediation actions necessary will be taken.

The Site Closure Form (See *APPENDIX 11.11*) will be used to close each SCDOT-owned Debris Management Site.

Site closure should be accomplished within 30 days of receiving the last load of debris. Closure is not considered complete until the following occurs:

- All debris shall be removed from the site and deposited in a properly approved solid waste management site (i.e., landfill) or surrendered to an approved recycler.
- Burn residues (i.e., ash piles) shall be removed and deposited in a properly approved solid waste management site (i.e., landfill) or land applied in accordance with guidelines.

Sites not successfully closed within the 30 days will require approval for long-term storage. Sites shall be managed and monitored in accordance with the South Carolina Department of Health and Environmental Control to prevent threats to the environment or public health.

8. Contracted Services

A contract for debris removal on SCDOT maintained roads has been established through the SCDOT Procurement Office. (See *APPENDIX 11.04* for details.)

NOTE: Refer to federal procurement requirements as outlined in CFR 44 Section 13.36.
See APPENDIX 11.14 CODE OF FEDERAL REGULATIONS TITLE 44, SECTION 13.36 EMERGENCY MANAGEMENT AND ASSISTANCE.

8.01 Emergency Contracting / Procurement Procedures

In the event that additional emergency contracting is needed, the SCDOT State Debris Project Manager shall contact the SCDOT Director of Procurement regarding.

8.02 Debris Operations to be Outsourced

Current debris operations to be outsourced include debris removal and disposal. Debris monitoring services are also likely to be outsourced.

8.03 General Contract Provisions

Current contract provisions (i.e., specifications) are provided as an attachment to this plan. The Director of Maintenance will be responsible for developing contract specifications and ensuring establishment through the SCDOT Procurement Office.

8.04 Qualification Requirements

Successful contractors will provide evidence of capability and sufficient equipment.

8.05 Solicitation of Contractors

Solicitation of contractors will be handled by the SCDOT Procurement Office.

9. Private Property Demolition and Debris Removal

The South Carolina Department of Transportation has no legal authority to enter private property for purposes of debris removal. SCDOT will not remove debris from private property.

10. Public Information Plan

10.01 Public Information Officer

The SCDOT Director of Communications and the SCDOT employee staffed at the South Carolina Emergency Management Division during the event will serve as the Public Information Officers. (See Section 4.01). Additionally, SCDOT will operate a call center to answer general public questions about road closures, bridge closures, detours, and re-opening of closed facilities.

10.02 Pre-scripted Information

Per the Governor's approval, the SCDOT Director of Communications will be responsible for preparing information and public announcements regarding the agency's debris management operations.

10.03 Distribution Plan

The SCDOT Director of Communications will be responsible for establishing a plan to distribute information and public announcements about the agency's debris management operations. Under the current plan information will be faxed and emailed to all media outlets (print and broadcast) in South Carolina, per the Governor's approval.

11. Appendices

APPENDIX 11.01 DEBRIS MANAGEMENT PLAN STAGES

11.01.01 Normal Operations

- Develop local and regional resource list of contractors who can assist in all phases of debris management.
- Develop contracts with scopes of work.
- Develop mutual aid agreements with other State agencies and local governments.
- Obtain potential non-SCDOT owned Debris Management Sites for the type and quantity of debris anticipated during a declared event from the county public works department. Identify potential SCDOT-owned Debris Management Sites.
- Identify critical routes.
- Identify and coordinate with appropriate regulatory agencies regarding potential regulatory issues and emergency response needs.
- Develop right of entry and hold harmless agreements indemnifying all levels of government against any potential claims.
- Establish debris assessment process to define scope of problem.
- Develop and coordinate pre-scripted announcements with the SCDOT Communications Office regarding debris removal process, collection times, temporary storage sites, use of contractors, environmental and health issues, etc.

11.01.02 Increased Readiness for Threatening Event

- Review and update plans, standard operating procedures, contracts, and checklists.
- Alert district offices to ensure that personnel, facilities, and equipment are ready and available.
- Relocate personnel and resources in safe places where they can be effectively mobilized.
- Review Debris Management Sites.
- Review contractor list and notify them to be on alert.

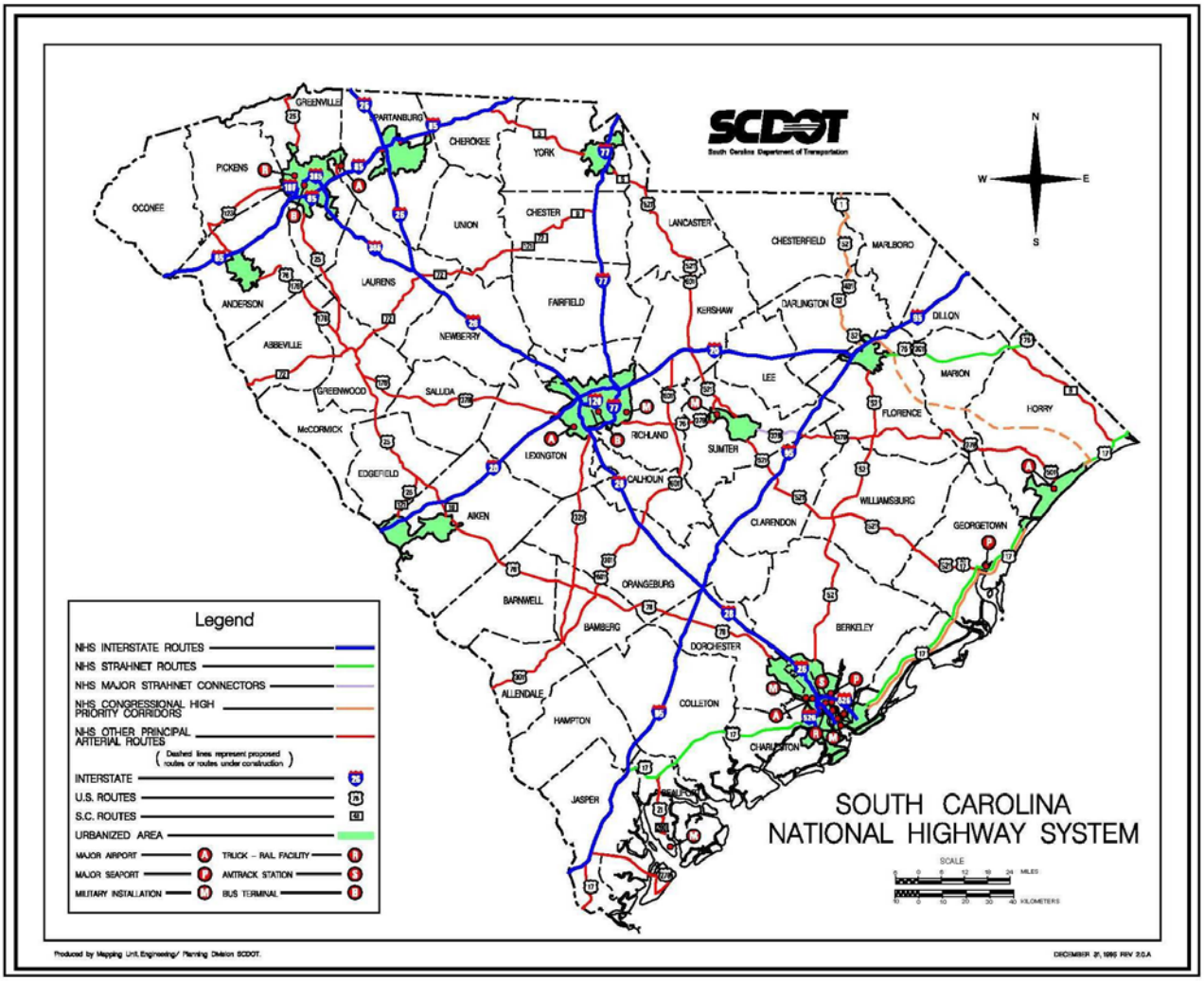
11.01.03 Response

- Activate debris management plan.
- Begin documenting costs.
- Coordinate and track resources
- Establish priorities regarding allocation and use of available resources.
- Identify Debris Management Sites that will be used.
- Address any legal, environmental, and health issues relating to debris removal.
- Keep the public informed.

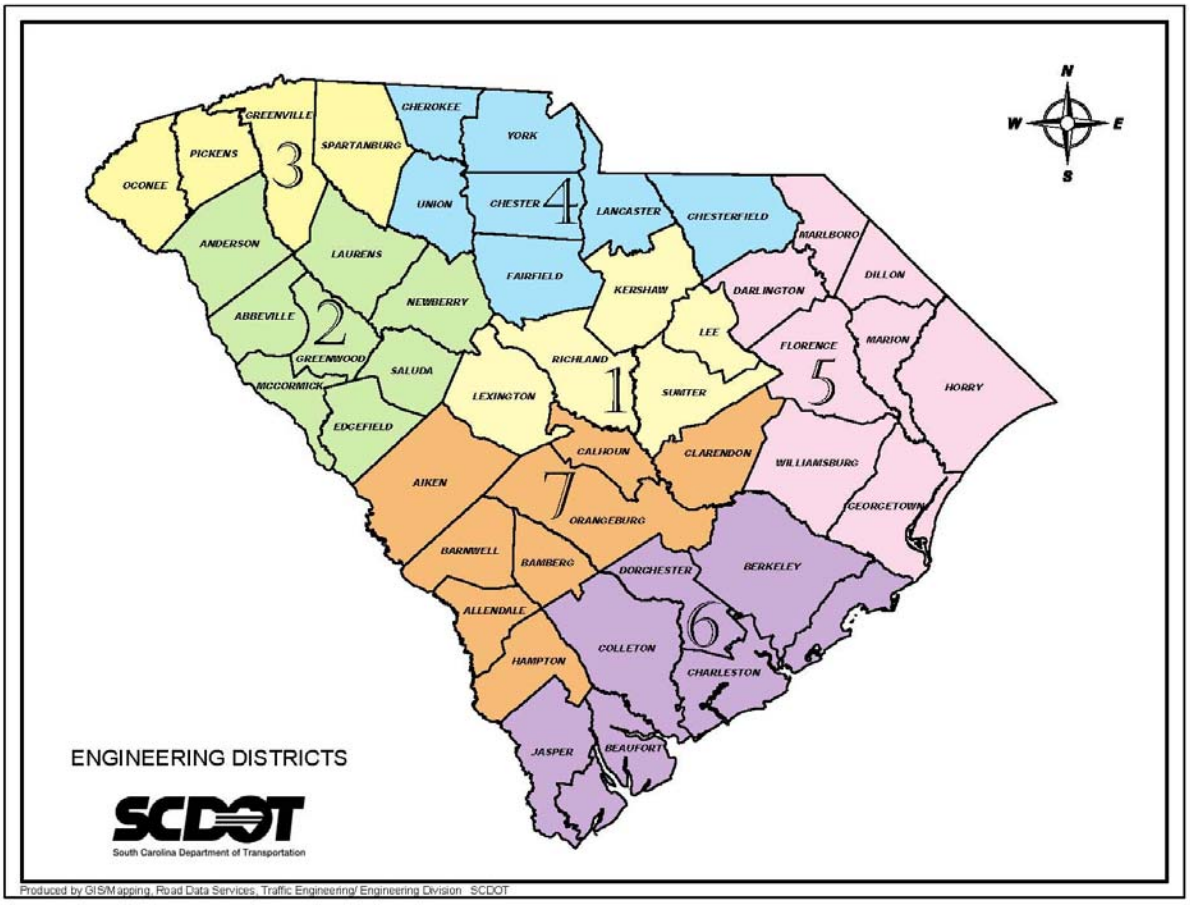
11.01.04 Recovery

- Continue debris management.
- Continue to document costs.
- Upon completion of debris removal, close out SCDOT-owned Debris Management Sites by implementing the necessary restoration actions.
- Perform necessary audits of operation and submit claim for Federal assistance.

APPENDIX 11.02 MAPS OF JURISDICTIONS AND PRIORITIES



APPENDIX 11.03 SCDOT ENGINEERING DISTRICTS MAP



APPENDIX 11.04 DEBRIS REMOVAL CONTRACTORS AND SPECIFICATIONS

A current list of debris removal contractors and specifications are available on the Director of Maintenance intranet website via the following link:

http://iwww.dot.state.sc.us/Maintenance/documents/irvm/ContractSpecs-Debris%20Removal.pdf

Debris Load Ticket		Ticket No.
Applicant **SCDOT**		Contractor
District	County	Contract No.

Truck Information

Truck Make & Model/ Truck No. / Trailer No.	Capacity (in cubic yards)
Truck Driver Name	

Loading Information

Date	Time	Monitor Name	Employee ID

Location (Route Type and Number)	Mile Marker

When Using GPS Coordinates use Decimal Degrees (N xx.xxxxx)

N	**W**

	Debris Type (check one)	**Estimated %, Cubic Yards, or Weight**
	Vegetative	
	Construction/Demolition	
	Personal Prop./Household Items	
	White Goods	
	Soil, Mud, Sand	
	Vehicles/Vessels	
	Dead Animals	
	Hazardous Waste	
	Other, Explain.	

Destination

Address	Phone

Unloading Information

Date	Time	Monitor Name	Employee ID

Debris Management Site Name and Location			
Cubic Yards	Weight	**Reduction**	**Disposal**
		☐ Chip/Grind	☐ Recycled
		☐ Burn	☐ Landfill
		☐ No Reduction	☐ Land applied

APPENDIX 11.06 ESTIMATING DEBRIS QUANTITIES

Estimating Rules of Thumb

- 15 trees with 8 inches diameter = 40 cubic yards
- Tree root system (8 ft to 10 ft diameter) = 1 flatbed trailer to move

Formulas

- 27 cubic feet = 1 cubic yard
- 1 mile = 5,280 feet = 1,760 yards
- Debris pile formula: (Length' x Width' x Feet')/27 = cubic yards of debris

Conversion Factors from Cubic Yards to Tons

- Construction & Demolition Debris = 500 lbs/CY OR CYx0.25 = Tons
- Vegetation = 300 lbs/CY OR CY/0.15 = Tons
- Concrete = 2,000 lbs/CY OR CYx1.0 = Tons
- Sand = 2,600 lbs/CY OR CYx1.3 = Tons
- Land Clearing (root balls with dirt) = 1,500 lbs/CY OR CYx0.75 = Tons

Log Estimations

Trunk Diameter (feet)	Length (feet)	Cubic Yards	Length (feet)	Cubic Yards	Length (feet)	Cubic Yards	Length (feet)	Cubic Yards
2 to 3	5 to 8	2	8 to 12	3	12 to 16	4	16 to 20	5
3 to 4	5 to 8	4	8 to 12	6	12 to 16	7	16 to 20	9
4 to 5	5 to 8	6	8 to 12	9	12 to 16	12	16 to 20	15
5 to 6	5 to 8	8	8 to 12	13	12 to 16	17	16 to 20	21
6 to 7	5 to 8	11	8 to 12	17	12 to 16	23	16 to 20	29

APPENDIX 11.07 DEBRIS MONITOR REPORT - LOADING

DEBRIS LOADING SITE MONITORING REPORT

Date	Arrival Time	Depart Time	District	County	Loading Site Location

Is the Truck Information and the Loading Information portion of the Debris Load Ticket filled out properly?
___YES ___NO
If NO, explain actions taken.

Is eligible debris being loaded? ___YES ___NO
If NO, explain actions taken.

Is debris only being loaded from SCDOT right-of-way? ___YES ___NO
If NO, explain actions taken.

Are trucks being loaded to capacity? ___YES ___NO
If NO, explain actions taken.

Identify truck numbers observed:

Obtain photographs of the loading site.

General notes and comments:

Monitor Name (Print)	Employee ID	Signature

APPENDIX 11.08 DEBRIS MONITOR REPORT - UNLOADING

DEBRIS MANAGEMENT SITE (UNLOADING) MONITORING REPORT

Date	Arrival Time	Depart Time	District	County	Unloading Site Location

Is the Truck Information and the Unloading Information portion of the Debris Load Ticket filled out properly? ___YES ___NO
If NO, explain actions taken.

Is the Debris Unload Monitor attaching a copy of the Weight Ticket to the Load Ticket? ___YES ___NO
If NO, explain actions taken.

Is only eligible debris being unloaded? ___YES ___NO
If NO, explain actions taken.

Are trucks loaded to capacity? ___YES ___NO
If NO, explain actions taken.

Identify truck numbers observed:

Obtain photographs of the Debris Management (unloading) site.

General notes and comments:

Monitor Name (Print)	Employee ID	Signature

APPENDIX 11.09 TRUCK CERTIFICATION LIST

Truck /Trailer Number	Driver Name	Truck Make/Model	Truck Tag #	Tare Weight	Capacity (cubic yards)

Before debris loading begins, measure and photograph every truck and trailer and obtain a tare weight.

APPENDIX 11.10 TRUCK CERTIFICATION FORM

TRUCK CERTIFICATION FORM

General Information

Applicant: _____ Monitor: _____

Contractor: _____ Date: _____

Measurement Location: _____ County: _____

Declaration Number: _____

Truck Information

Make	Year	Color	License

Truck Measurements

Performed By: _____ Date: _____

Volume Calculated By: _____ Date: _____

Both Checked by: _____ Date: _____

Driver Information

Name: _____

Address: _____

Phone Number: _____

Owner Information

Name: _____

Address: _____

Phone Number: _____

Truck Identification

Truck Capacity

Photo

(See reverse for calculation worksheet)

TRUCK CERTIFICATION FORM

DUMP TRUCK

Measurements

Truck Measurements — Length (L) = ____ Width (W) ft = ____ Height (H) ft = ____

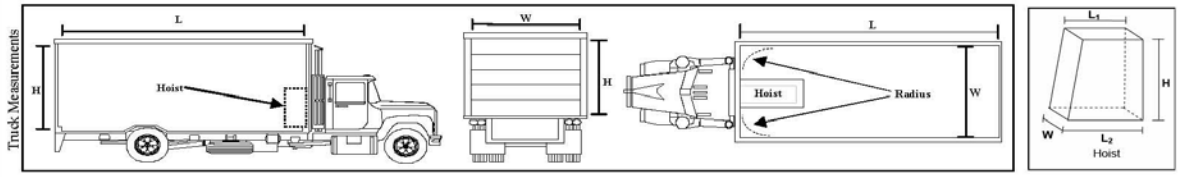
Hoist Measurement — $Length_1$ (L_1) ft = ____ $Length_2$ (L_2) ft = ____ $WidthH$ (W_H) ft = ____ $Height_H$ (H_H) ft = ____

Radius — Radius ft = ____ Height (H) = ____

Calculations

Bed Volume (Basic)	(LxWxH)/27 =	+	cyd
Hoist Volume	((L1+L2/2) x W_H x H_H)/27 =	-	cyd
Radius Volume	(3.14xR^2xH)/27 =	-	cyd
	Total =		cyd

Cubic Yards



EXTRA TRAILER

Measurements

Truck Measurements (Basic) — Length (L) = ____ Width (W) ft = ____ Height (H) ft = ____

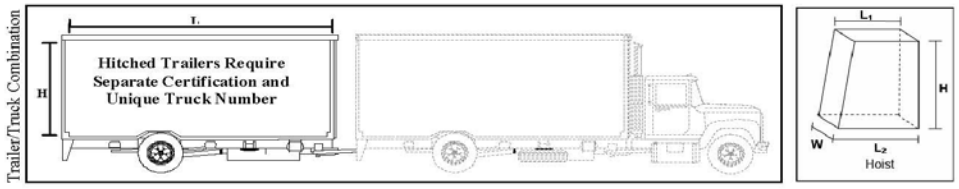
Hoist Measurement — $Length_1$ (L_1) ft = ____ $Length_2$ (L_2) ft = ____ $WidthH$ (W_H) ft = ____ $Height_H$ (H_H) ft = ____

Radius — Radius ft = ____ Height (H) = ____

Calculations

Bed Volume (Basic)	(LxWxH)/27 =	+	cyd
Hoist Volume	((L_1+L_2/2) x W_H x H_H) =	-	cyd
Radius Volume	(3.14xR^2xH)/27 =	-	cyd
	Total =		cyd

Cubic Yards



ROUND BOTTOM TRUCK

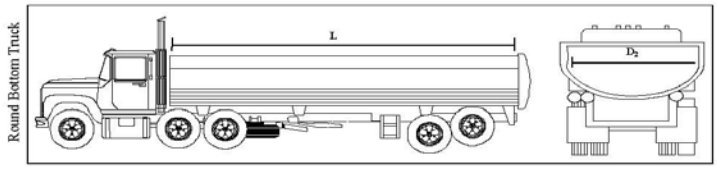
Measurements

Truck Measurements — Length (L) ft = ____ Diameter (D) ft = ____

Calculations

Approx. Volume $(3.14 \times (D/2)^2 \times L) /27$ = ____ cyd (round bottom portion only)

Cubic Yards



SCDOT-OWNED DEBRIS MANAGEMENT SITE CLOSURE FORM			
DISTRICT	COUNTY	SITE NO.	LOCATION

ITEM	DATE COMPLETED
All event debris removed.	
Contractor equipment removed.	
Temporary structures removed.	
Ash piles removed.	
All spills remediated.	
Comparison of baseline information to current information.	

NAME	EMPLOYEE ID	DATE	SIGNATURE

SCOPE:

This plan establishes mobilization plans for providing assistance to the coastal districts for hurricane/tropical storm road debris removal. The plan is initiated in varying degrees by the forecast of storm landfall and intensity. The assistance is primarily for all coastal counties with limited assistance for some counties adjacent to the coastal counties. Additional assistance is provided to urban areas and counties with interstates. The plan establishes general protocol for post storm mobilization and deployment to clear roadways to open access routes for emergency response as a priority.

LEVELS OF ACTIVATION:

1. **Minimal Event –** Mild to moderate tropical storm or tropical depression with a minimal amount of storm debris.
2. **Moderate Event** – When the weather forecast calls for a minimal hurricane (Category 1 or 2) or large tropical storm, a scaled down plan may be utilized depending upon factors such as landfall location, wind speeds, potential for flooding, etc. In some cases, a storm that "rides" the coastline but doesn't make landfall could even require assistance plan activation. This storm event would create a moderate amount of debris that would necessitate assistance from other counties in order to respond in a timely manner.
3. **Major Event** - A major event will be defined as any forecast of a hurricane of a Category 3 or above with direct landfall. During this type of event, major storm debris would be expected and the maximum response level will likely be implemented. There may be occasions when a small diameter cyclone will only affect a small area and a scaled down response may be adequate.

The Director of Maintenance will activate the plan based on the 48 hour forecast, however actual mobilization/deployment will not be initiated until tropical force winds subside. (A combination of forecasting models will be used to include: NOAA, Intellicast ®, and Meterologix ® along with discussions with their meteorologists.) The Director of Maintenance may implement full or partial activation based on the projected needs and the area of the state that is expected to be impacted.

TIME OF ACTIVATION:

36 to 48 hour forecast: Districts will conduct equipment review/ maintenance, loading, employee preparations, etc.

12 hour forecast: If the 12 hour forecast indicates potential for a moderate or major event, then the Director of Maintenance (with input from the DEAs) will notify the designated assisting districts to prepare for deployment. The assisting county crews will be instructed to go home and rest and prepare for deployment. Deployments at night should be avoided when possible. Assisting counties/districts are to monitor the forecasts for their local area and their assigned coastal areas. (If the event significantly affects any of the designated assisting counties, then those counties will not deploy.) The 12 hour notification will require the assisting counties to be prepared to possibly depart for their destination approximately only two to three hours after the event is expected to be over; however the mobilization schedule by necessity will have to be flexible. Until the storm has actually passed, specific needs of the recipient counties cannot be completely confirmed. It is contingent upon the DEA of the receiving county to notify the DOM as to when the assistance will be most effective. Some crews may have to delay deployment since they will be involved in extensive lane reversal activities. These crews should have an appropriate amount of time for rest prior to deployment (at least 12 hours). The Director of Maintenance will give final approval for deployment.

If the forecast(s) changes and we are confident no event/ very minor event will occur, then a "stand down" status will apply and will be communicated to the districts from the Director of Maintenance.

Once deployed, crews will clear priority roads for emergency response traffic and to clear the right of way. After the roads are clear, then work should begin on right-of-way clearing and debris removal. All work will be performed based on the priorities established by the receiving county.

The crew descriptions below are meant to be approximate. Make your own determinations as to the personnel and equipment that you believe are most effective and safe. It is recommended that 40 to 50% of your crews should include a backhoe or a front end loader.

BACKHOE CREW:

Personnel

- 4 - 5 qualified employees.

Equipment

- Supplies/clothing/medications (including Meals-Ready-to-Eat (MREs)) to be self-sustaining for at least three days.
- Global Positioning System (GPS) unit and/or county maps.
- 1 – Tandem 8 to 10 CY truck with snowplow attachment.
- 1 – Dump truck to haul backhoe.
- 1 – Equipment Trailer.
- 1 – Backhoe.
- 1 – Pickup truck and/or utility body truck.
- 4 – Chainsaws with safety equipment.
- Supplies such as spare chains, fuel, and chain lube for chainsaws.

ADDITIONAL CREWS:

Personnel

- 4 – 5 qualified employees.

Equipment

- Supplies/clothing/medications (including MREs) to be self-sustaining for at least three days.
- Global Positioning System (GPS) unit and/or county maps.
- 2 – Dump Trucks (8 or 10 CY preferable) with snowplow attachments (should be hauled instead of mounted for installation later as needed) and a trailer.
- 1 – Crew-cab Pickup truck and/or service body truck**.**
- 4 – Chainsaws with safety equipment.
- Supplies such as spare chains, fuel, and chain lube for chainsaws.

OTHER:

Management Personnel – One Resident Maintenance Engineer (RME), Assistant Resident Maintenance Engineer (ARME), or Resident Maintenance Foreman (RMF) should be sent from each assisting county along with the county's crews. Other management personnel such as RCEs, ARCEs, Safety Coordinators, etc. may be called on to assist as well.

Traffic Signal Crews - Each assisting district will need to send most of their Traffic Signal Crews with a Signal Supervisor. These crews need a detailed response plan of preparation and action in conjunction with their District Management and with every coastal district. *These plans, when complete will be included with this plan as addenda.* The receiving districts will prepare plans to properly utilize the assisting signal crews.

Mobile Fueling Services - Mobile fueling services will be available by contract. Coordinate any remote fueling needs that you have through the DOM office. Remote fueling trucks can be stationed in remote areas so crews can refuel without returning to the maintenance shop. SCDOT fuel service trucks or foreman trucks with diesel nurse tanks should be assigned to backhoe and debris crews where available.

Mechanics – One mechanic with basic tools should be provided from each assisting county. Additional Mechanics may be called upon to work in all recipient shops as required.

Relief Crews - Relief crews that mirror the original crews should be prepared to relieve the first crew after approximately 72 hours. Logistics for replacement of crews should be coordinated with the receiving county.

Bridge Inspections – Seismic Response Plan (See Intranet) will be activated as necessary by the Director of Maintenance to respond to bridge inspection needs.

ROAD CLEARING PHASE:

Road Clearing – Road clearing operations will be performed during daylight hours only. The intent of this phase of the operation is to clear debris from all travel lanes to open routes for emergency response. Snow plows attached to dump trucks may be used during this phase of the operation where the roads are being cleared of debris. Plows should only be used to gently push from the roadway trees and debris that have been cut into manageable lengths to ensure that damage is not caused to the plow or the dump truck.

Repair shop operations should be divided into two shifts and work 24 hours per day during critical times to help ensure equipment is operational. This will allow for the efficient use of the additional mechanics in the repair shops. This will also provide an opportunity for mechanics to work on critical equipment while it is not in demand by the road crews. Purchasing will be available through Headquarters to assist with your needs for parts/repairs and food/accommodations during the crisis period. Delivery of parts and supplies will be coordinated through Supply Depot as necessary.

Depending upon the extent of the storm, the debris removal contractors can be utilized to a large degree if the need is anticipated. The Director of Maintenance Office will manage this based on your input. In the case of an event that affects most of our state (Hugo), the debris removal contractors will become a significant part of the road clearing operations. These contractors are self-sustaining. The Resident Maintenance Engineer of his/her designee will need to be prepared to provide road clearing assignments to the contract crews and document the hours worked by the contract crews.

DEBRIS REMOVAL PHASE:

The majority of the debris removal from the right-of-way will most likely be performed by debris removal contractors using the on-call contract. It is anticipated that most of the assisting crews will be released at the completion of the road clearing phase.

A contract for monitoring services has been established to assist with oversight and documentation of debris removal operations. It is likely that this contract will be activated and utilized as the primary resource for documentation of recovery operations. The Resident Maintenance Engineer or his/her designee will need to be prepared to provide general oversight to the monitoring firm as well as contractor operations. SCDOT presence to verify the quality and scope of work is essential to an efficient operation. Daily involvement by a local SCDOT representative will improve communication and keep SCDOT immediately aware of challenges or issues that may arise.

ACCOMMODATIONS:

The Receiving Districts will need to locate accommodations relatively close to the county shops that will accept direct billing. This needs to be established before the hurricane season at several locations. Two employees should be assigned to each room as applicable. Plans should be developed to purchase meals by purchase order either from available restaurants and/or from grocers as needed in the event that credit cards are not operational.

It is likely that basic services such as electricity and water may not the available in the affected area. Restaurants and hotels may not be open for business. Cots/blankets, etc. should be carried with the assisting crews in case the maintenance facilities have to be used for accommodations. Assisting crews shall go to their assigned locations prepared to be self-sustaining for a minimum of three (3) days.

COMMUNICATIONS:

Since every low-band radio can be used in every county in the state by switching channels, communication should not be a problem. However, if one is available, every assisting crew should be supplied with one cell phone from the home county if at all possible.

METHODOLOGY:

It is imperative that every crew knows exactly what is expected of them with minimal instruction during an actual impending event. The receiving counties should have some roads assignment planned with alternates since it is impossible to predict specific damage locations. The county plans should be shared and rehearsed so that all crews are familiar with their general areas of responsibility. This can be accomplished with partnerships between receiving and assisting counties. The schedules below are for lower coastal or upper coastal hurricane events. There is some overlap built into the plan.

Again, since hurricanes vary greatly in size and intensity and direction and timing, this plan will be subject to many changes as necessary depending on the needs at the time. Make sure everyone is aware that we are totally subject to coordination with the Electrical Utility Companies. In addition to this plan, please prepare for assistance as available within the district. (i.e., Jasper, Beaufort assisting Charleston, Berkeley, etc.) Develop a plan for in-district assistance.

1. **Lower Coastal** is defined as affected areas including Jasper, Beaufort, Colleton, Dorchester, Charleston, and Berkeley.

2. **Upper Coastal** is defined as affected areas including Berkeley, Charleston, Dorchester, Georgetown, Williamsburg, and Horry.

Lower Coastal Event

Receiving County	Assisting County	Moderate Event # Crews	Major Event # Crews
Jasper	Allendale	3	2
	Barnwell	3	3
	Bamberg	3	2
	Aiken	4	5
	Calhoun	0	3
	Chester	0	3
Dorchester	Edgefield	3	3
	Newberry	3	4
	Laurens	3	4
	Saluda	2	3
	Florence	3	4
Charleston	Spartanburg	5	7
	Richland	5	2
	Lexington	5	2
	Kershaw	3	2
	Pickens	4	6
	Greenville	5	8
	Oconee	3	4
Colleton	Anderson	4	7
	Abbeville	3	4
	McCormick	2	4
	Greenwood	4	6
Berkeley	Dillon	2	3
	Darlington	2	3
	Marion	3	3
	Lee	3	3
	Sumter	3	4
Beaufort	Fairfield	3	4
	Union	3	5
	York	5	8
	Chesterfield	3	4
	Cherokee	3	5
TOTAL		100	130

Upper Coastal Event

Receiving County	Assisting County	Moderate Event # Crews	Major Event # Crews
Horry	Laurens	4	5
	Newberry	4	5
	Richland	6	8
	Lexington	6	8
Georgetown	Fairfield	2	3
	Union	4	5
	York	4	8
	Cherokee	4	5
Williamsburg	Edgefield	3	5
	Saluda	3	3
	Kershaw	4	5
Charleston	Spartanburg	5	8
	Pickens	5	6
	Greenville	6	8
	Oconee	4	7
Dorchester	Aiken	5	8
	Allendale	3	3
	Barnwell	3	3
	Bamberg	3	3
	Hampton	3	3
Berkeley	McCormick	3	4
	Greenwood	6	8
	Anderson	6	8
	Abbeville	4	5
TOTAL		100	134

TRAINING/PREPARATION:

It is imperative for the assisting crews to be fully incorporated into your plan. This would include the personnel, equipment, and shift assignments. The assisting crew will essentially become a part of the county operation until their help is no longer needed. The county may need assistance post storm for up to two weeks. Mobilizations for extended tree removal will necessarily vary.

- The crew training will take place in the host counties in April or May every year. Districts need to coordinate with your partner counties to plan local schedules for this training. The assisting county should provide a listing of employee names and associated equipment numbers, radio call signs and any cell numbers to the receiving county for inclusion in their plan. A general listing of route assignments will also be documented in each receiving county.

- Create a checklist for mobilizations.

- The assisting crews will travel to their host counties in crew cab pickups (or similar arrangement) for the on-site training sessions. Since most of the assisting crews will have no knowledge of the areas they will be assigned, the field training by the receiving county must essentially involve priority roads. However, until the event occurs, specific route assignments are impractical (but general areas are not). The GPS unit should be loaded with shop locations, assigned routes, accommodations, fueling sites, highlighted county maps, etc. Communications should be practiced.

- The on-site training should also ensure:
    - Familiarity with the GPS unit and mobile communication with the county.
    - Equipment checks- what to bring and how to make sure it works correctly.
    - Mechanic training and shift arrangements should be set.
    - Safety precautions.
    - Familiarity of potential accommodations, meal locations.
    - Resupply locations.

APPENDIX 11.13 GENERAL PROTOCOL FOR IMPLEMENTATION OF DEBRIS MANAGEMENT CONSULTANTS AND THE DEBRIS REMOVAL CONTRACTORS (Revised October 8, 2012)

GENERAL

Given the complex variables associated with tropical system forecasting and impact, this guideline is to provide basic controls to mobilize contract/consultant services to provide responsive basic system function as soon as possible and a systematic long-term cleanup of debris. This plan is subject to adjustments predicated by the event.

RESPONSIBILITIES

We have connected each debris management consultant with one of the large debris removal contractors so that each group will further develop their working relationship and communication ties prior to an actual event. SCDOT will provide direction and requirements for this process as necessary. A primary area made up of coastal counties will be assigned to each of the Debris Management / Debris Removal teams. The acronym for this team will be identified as DMDR team(s) for future reference.

Below is the listing of connected entities and the assigned counties:

- Thompson Engineering / Phillips and Jordon, North Carolina – Assignment: Charleston and Berkeley Counties
- Metric Engineering / J. B. Coxwell Contracting, Florida – Assignment: Horry and Georgetown Counties
- Neal Schaffer Engineering / DRC Emergency Services, Alabama – Assignment: Colleton and Beaufort Counties

Additional approved debris removal contractors will be utilized as needed and inland counties will be assigned to a DMDR team as considered necessary.

IMPLEMENTATION

It is the intent that the steps in this response plan will be triggered by the Operating Condition (OPCON) Level of Readiness as determined by the South Carolina Emergency Management Division (See Appendix A). This will ensure an adequate time for successful implementation of this pre-deployment plan. The plan items below may be added as deemed appropriate to SCDOT's Emergency Operations Readiness System (EORS).

Plan for Mobilization:

- ✓ OPCON 4: 72 hours before planned evacuation – Notify one (1) and up to three (3) of the debris monitoring consults and the associated debris removal contractors (DMDR teams) to be on notice for possible mobilization. Verify contact information and maintain periodic communication.

In general, the number of DMDR teams (and the related number of work crews) to be notified for potential mobilization will be based on the following criteria:

- Projected Category One or Two Hurricane - One DMDR team mobilized unless the storm has large circumference that would affect more than one district. The projected need would be up to 50 work crews initially.
- Projected Category Three Hurricane – All Three DMDR teams mobilized with a projected need of up to 100 crews initially.
- Projected Category Four or Five Hurricane - All Three DMDR teams mobilized with a projected need of up to 150 crews initially.

✓ OPCON 3: 36 hours before planned evacuation – Based on predicted landfall location, direction, intensity and size notify the DMDR team to prepare for mobilization within 12 hours of notice. The goal is to have the DMDR team staged before the evacuation order is issued. Since a projected category one or two Hurricane generally will not mandate lane reversal, the decision to mobilize the DMDR teams can be moved forward. The specific staging locations / equipment drops will be determined by the DMDR teams with input from the districts and the Director of Maintenance (DOM) office based on predictions. This must be coordinated with the planning stage of directing the SCDOT Hurricane Assistance Plan. Plans are entirely flexible at this point.

✓ OPCON 2: 25 hours before planned evacuation – Order mobilization of the DMDR team based on predictions of storm speed, size, intensity, and direction. The DOM office will make the decision with verbal approval of the Chief Engineer for Operations and/or the Deputy Secretary for Engineering within 2 -3 hours after declaration of OPCON 2.

Finalize plans for staging DMDR teams as a coordinated effort based upon:

- Storm Intensity Projection
- Road Clearing Priorities
- Possible Accessibility Impact to SCDOT Facilities
- SCDOT Hurricane Assistance Crew Utilization

During the 12 to 16 hours before the evacuation order is given as DMDR teams are arriving, make adjustments to staging plans as needed. DMDR teams will demonstrate readiness for "first push" (FHWA reimbursable) and subsequent debris removal (FEMA reimbursable) documentation.

Note: Upon mobilization, this is when monies will be expended. The projected expenditure will be in the range of $300,000 to $600,000* (or more) including both the debris management consultants and the debris removal contractor crews.

- ✓ OPCON 1: 0 to 6 hours - Begin First Push operations. Present planned locations and specifics for debris processing and reduction locations. Determine if work load will correspond to the number of crews and make recommendations for adjustments for timely performance.

- ✓ Ongoing cleanup progress reporting:
    - Prepare daily work report including conditions and progress referenced by road sections- note end of "first push" process and transition to debris removal phase
    - Beginning of debris removal phase – include daily work report including conditions and progress referenced by road sections
    - Productivity management insuring maximum reimbursable work output- report weekly on cost and reimbursable- make adjustments

*Calculated Estimates:

- Category 1 or 2 Storm- mobilizing 50 crews (200 workers with equipment) X 2 days (48 hours) X $30/ hr. = $300,000
- Category 3 storm – mobilizing 100 crews = $600,000

Appendix A – OPCON Definitions

Operational Conditions (OPCONS) - South Carolina uses a system of Operating Condition (OPCON) levels. These OPCONs increase the State's level of readiness on a scale from 5 to 1. Each OPCON level is declared when a pre-determined set of criteria has been met. OPCONs will not necessarily progress sequentially from 5 to 1. The OPCON placed in effect at any given time will be the appropriate one for existing conditions at the time. The SCEMD Director will assign OPCON levels and needed.

Operating Condition (OPCON) Level 5 - Indicates the SEOC is at normal, day-to-day operations to include normal training and exercises.

Operating Condition (OPCON) Level 4 - Once an event or hazard poses a possible threat to South Carolina, the SEOC will move to OPCON 4. The primary events that will occur at this level are the notification of key personnel of the hazard and initiation of preparatory activities. The SEOC will be under "Partial Activation," primarily staffed by SCEMD personnel.

Operating Condition (OPCON) Level 3 - Once an event or hazard poses a significant threat to South Carolina, the SEOC will move to OPCON Level 3. The SEOC will be under "Limited Activation," staffed by SCEMD personnel and key SERT agencies.

Operating Condition (OPCON) Level 2 – When a disaster or emergency situation is in effect; this is a maximum preparedness level. A "Full Activation" of the SEOC normally will be directed at this time.

Operating Condition (OPCON) Level 1 - Disaster or emergency situation in effect; full-fledge emergency response operations on going. This is the highest state of emergency operations.

SECTION 13.36 Procurement.

(a) *States.* When procuring property and services under a grant, a State will follow the same policies and procedures it uses for procurements from its non-Federal funds. The State will ensure that every purchase order or other contract includes any clauses required by Federal statutes and executive orders and their implementing regulations. Other grantees and subgrantees will follow paragraphs (b) through (i) in this section.

(b) *Procurement standards.* (1) Grantees and subgrantees will use their own procurement procedures which reflect applicable State and local laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in this section.

(2) Grantees and subgrantees will maintain a contract administration system which ensures that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.

(3) Grantees and subgrantees will maintain a written code of standards of conduct governing the performance of their employees engaged in the award and administration of contracts. No employee, officer or agent of the grantee or subgrantee shall participate in selection, or in the award or administration of a contract supported by Federal funds if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when:

(i) The employee, officer or agent,

(ii) Any member of his immediate family,

(iii) His or her partner, or

(iv) An organization which employs, or is about to employ, any of the above, has a financial or other interest in the firm selected for award. The grantee's or subgrantee's officers, employees or agents will neither solicit nor accept gratuities, favors or anything of monetary value from contractors, potential contractors, or parties to subagreements. Grantee and subgrantees may set minimum rules where the financial interest is not substantial or the gift is an unsolicited item of nominal intrinsic value. To the extent permitted by State or local law or regulations, such standards or conduct will provide for penalties, sanctions, or other disciplinary actions for violations of such standards by the grantee's and subgrantee's officers, employees, or agents, or by contractors or their agents. The awarding agency may in regulation provide additional prohibitions relative to real, apparent, or potential conflicts of interest.

(4) Grantee and subgrantee procedures will provide for a review of proposed procurements to avoid purchase of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.

(5) To foster greater economy and efficiency, grantees and subgrantees are encouraged to enter into State and local intergovernmental agreements for procurement or use of common goods and services.

(6) Grantees and subgrantees are encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.

(7) Grantees and subgrantees are encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.

(8) Grantees and subgrantees will make awards only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration

will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

(9) Grantees and subgrantees will maintain records sufficient to detail the significant history of a procurement. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.

(10) Grantees and subgrantees will use time and material type contracts only—

(i) After a determination that no other contract is suitable, and

(ii) If the contract includes a ceiling price that the contractor exceeds at its own risk.

(11) Grantees and subgrantees alone will be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to source evaluation, protests, disputes, and claims. These standards do not relieve the grantee or subgrantee of any contractual responsibilities under its contracts. Federal agencies will not substitute their judgment for that of the grantee or subgrantee unless the matter is primarily a Federal concern. Violations of law will be referred to the local, State, or Federal authority having proper jurisdiction.

(12) Grantees and subgrantees will have protest procedures to handle and resolve disputes relating to their procurements and shall in all instances disclose information regarding the protest to the awarding agency. A protestor must exhaust all administrative remedies with the grantee and subgrantee before pursuing a protest with the Federal agency. Reviews of protests by the Federal agency will be limited to:

(i) Violations of Federal law or regulations and the standards of this section (violations of State or local law will be under the jurisdiction of State or local authorities) and

(ii) Violations of the grantee's or subgrantee's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the grantee or subgrantee.

(c) *Competition.* (1) All procurement transactions will be conducted in a manner providing full and open competition consistent with the standards of section 13.36. Some of the situations considered to be restrictive of competition include but are not limited to:

(i) Placing unreasonable requirements on firms in order for them to qualify to do business,

(ii) Requiring unnecessary experience and excessive bonding,

(iii) Noncompetitive pricing practices between firms or between affiliated companies,

(iv) Noncompetitive awards to consultants that are on retainer contracts,

(v) Organizational conflicts of interest,

(vi) Specifying only a “brand name” product instead of allowing “an equal” product to be offered and describing the performance of other relevant requirements of the procurement, and

(vii) Any arbitrary action in the procurement process.

(2) Grantees and subgrantees will conduct procurements in a manner that prohibits the use of statutorily or administratively imposed in-State or local geographical preferences in the evaluation of bids or proposals, except in those cases where applicable Federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts State licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criteria provided its

application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.

(3) Grantees will have written selection procedures for procurement transactions. These procedures will ensure that all solicitations:

(i) Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured. Such description shall not, in competitive procurements, contain features which unduly restrict competition. The description may include a statement of the qualitative nature of the material, product or service to be procured, and when necessary, shall set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a "brand name or equal" description may be used as a means to define the performance or other salient requirements of a procurement. The specific features of the named brand which must be met by offerors shall be clearly stated; and

(ii) Identify all requirements which the offerors must fulfill and all other factors to be used in evaluating bids or proposals.

(4) Grantees and subgrantees will ensure that all prequalified lists of persons, firms, or products which are used in acquiring goods and services are current and include enough qualified sources to ensure maximum open and free competition. Also, grantees and subgrantees will not preclude potential bidders from qualifying during the solicitation period.

(d) *Methods of procurement to be followed*—(1) *Procurement by small purchase procedures.* Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that do not cost more than the simplified acquisition threshold fixed at 41 U.S.C. 403(11) (currently set at $100,000). If small purchase procedures are used, price or rate quotations shall be obtained from an adequate number of qualified sources.

(2) Procurement by *sealed bids* (formal advertising). Bids are publicly solicited and a firm-fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in §13.36(d)(2)(i) apply.

(i) In order for sealed bidding to be feasible, the following conditions should be present:

(A) A complete, adequate, and realistic specification or purchase description is available;

(B) Two or more responsible bidders are willing and able to compete effectively and for the business; and

(C) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

(ii) If sealed bids are used, the following requirements apply:

(A) The invitation for bids will be publicly advertised and bids shall be solicited from an adequate number of known suppliers, providing them sufficient time prior to the date set for opening the bids;

(B) The invitation for bids, which will include any specifications and pertinent attachments, shall define the items or services in order for the bidder to properly respond;

(C) All bids will be publicly opened at the time and place prescribed in the invitation for bids;

(D) A firm fixed-price contract award will be made in writing to the lowest responsive and responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost,

and life cycle costs shall be considered in determining which bid is lowest. Payment discounts will only be used to

determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and

(E) Any or all bids may be rejected if there is a sound documented reason.

(3) Procurement by *competitive proposals.* The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed-price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:

(i) Requests for proposals will be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals shall be honored to the maximum extent practical;

(ii) Proposals will be solicited from an adequate number of qualified sources;

(iii) Grantees and subgrantees will have a method for conducting technical evaluations of the proposals received and for selecting awardees;

(iv) Awards will be made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and

(v) Grantees and subgrantees may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.

(4) Procurement by *noncompetitive proposals* is procurement through solicitation of a proposal from only one source, or after solicitation of a number of sources, competition is determined inadequate.

(i) Procurement by noncompetitive proposals may be used only when the award of a contract is infeasible under small purchase procedures, sealed bids or competitive proposals and one of the following circumstances applies:

(A) The item is available only from a single source;

(B) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;

(C) The awarding agency authorizes noncompetitive proposals; or

(D) After solicitation of a number of sources, competition is determined inadequate.

(ii) Cost analysis, i.e., verifying the proposed cost data, the projections of the data, and the evaluation of the specific elements of costs and profits, is required.

(iii) Grantees and subgrantees may be required to submit the proposed procurement to the awarding agency for pre-award review in accordance with paragraph (g) of this section.

(e) *Contracting with small and minority firms, women's business enterprise and labor surplus area firms.* (1) The grantee and subgrantee will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.

(2) Affirmative steps shall include:

(i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;

(iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;

(v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and

(vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (e)(2) (i) through (v) of this section.

(f) *Contract cost and price.* (1) Grantees and subgrantees must perform a cost or price analysis in connection with every procurement action including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, grantees must make independent estimates before receiving bids or proposals. A cost analysis must be performed when the offeror is required to submit the elements of his estimated cost, e.g., under professional, consulting, and architectural engineering services contracts. A cost analysis will be necessary when adequate price competition is lacking, and for sole source procurements, including contract modifications or change orders, unless price resonableness can be established on the basis of a catalog or market price of a commercial product sold in substantial quantities to the general public or based on prices set by law or regulation. A price analysis will be used in all other instances to determine the reasonableness of the proposed contract price.

(2) Grantees and subgrantees will negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration will be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

(3) Costs or prices based on estimated costs for contracts under grants will be allowable only to the extent that costs incurred or cost estimates included in negotiated prices are consistent with Federal cost principles (see §13.22). Grantees may reference their own cost principles that comply with the applicable Federal cost principles.

(4) The cost plus a percentage of cost and percentage of construction cost methods of contracting shall not be used.

(g) *Awarding agency review.* (1) Grantees and subgrantees must make available, upon request of the awarding agency, technical specifications on proposed procurements where the awarding agency believes such review is needed to ensure that the item and/or service specified is the one being proposed for purchase. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the grantee or subgrantee desires to have the review accomplished after a solicitation has been developed, the awarding agency may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

(2) Grantees and subgrantees must on request make available for awarding agency pre-award review procurement documents, such as requests for proposals or invitations for bids, independent cost estimates, etc. when:

(i) A grantee's or subgrantee's procurement procedures or operation fails to comply with the procurement standards in this section; or

(ii) The procurement is expected to exceed the simplified acquisition threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation; or

(iii) The procurement, which is expected to exceed the simplified acquisition threshold, specifies a "brand name" product; or

(iv) The proposed award is more than the simplified acquisition threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or

(v) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the simplified acquisition threshold.

(3) A grantee or subgrantee will be exempt from the pre-award review in paragraph (g)(2) of this section if the awarding agency determines that its procurement systems comply with the standards of this section.

(i) A grantee or subgrantee may request that its procurement system be reviewed by the awarding agency to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews shall occur where there is a continuous high-dollar funding, and third-party contracts are awarded on a regular basis.

(ii) A grantee or subgrantee may self-certify its procurement system. Such self-certification shall not limit the awarding agency's right to survey the system. Under a self-certification procedure, awarding agencies may wish to rely on written assurances from the grantee or subgrantee that it is complying with these standards. A grantee or subgrantee will cite specific procedures, regulations, standards, etc., as being in compliance with these requirements and have its system available for review.

(h) *Bonding requirements.* For construction or facility improvement contracts or subcontracts exceeding the simplified acquisition threshold, the awarding agency may accept the bonding policy and requirements of the grantee or subgrantee provided the awarding agency has made a determination that the awarding agency's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:

(1) *A bid guarantee from each bidder equivalent to five percent of the bid price.* The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.

(2) *A performance bond on the part of the contractor for 100 percent of the contract price.* A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

(3) *A payment bond on the part of the contractor for 100 percent of the contract price.* A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

(i) *Contract provisions.* A grantee's and subgrantee's contracts must contain provisions in paragraph (i) of this section. Federal agencies are permitted to require changes, remedies, changed conditions, access and records retention, suspension of work, and other clauses approved by the Office of Federal Procurement Policy.

(1) Administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate. (Contracts more than the simplified acquisition threshold)

(2) Termination for cause and for convenience by the grantee or subgrantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of $10,000)

(3) Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of $10,000 by grantees and their contractors or subgrantees)

(4) Compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3). (All contracts and subgrants for construction or repair)

(5) Compliance with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts in excess of $2000 awarded by grantees and subgrantees when required by Federal grant program legislation)

(6) Compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction contracts awarded by grantees and subgrantees in excess of $2000, and in excess of $2500 for other contracts which involve the employment of mechanics or laborers)

(7) Notice of awarding agency requirements and regulations pertaining to reporting.

(8) Notice of awarding agency requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.

(9) Awarding agency requirements and regulations pertaining to copyrights and rights in data.

(10) Access by the grantee, the subgrantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

(11) Retention of all required records for three years after grantees or subgrantees make final payments and all other pending matters are closed.

(12) Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and subgrants of amounts in excess of $100,000)

(13) Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

[53 FR 8078, 8087, Mar. 11, 1988, as amended at 60 FR 19639, 19645, Apr. 19, 1995]

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