United States Department of Agriculture
Natural Resources Conservation Service

OMB No. 0578-0030
NRCS-PDM-20

DAMAGE SURVEY REPORT (DSR)
Emergency Watershed Protection Program – Recovery

Section 1A

NRCS Entry Only
Eligible: YES X NO ____
Approved: YES X NO ____
Funding Priority Number (from Section 4) 3e
Limited Resource Area: YES ____ NO X

Date of Report: April / 03 /2007

DSR Number: 103-05-431 K Project Number: _____

Section 1B Sponsor Information

Sponsor Name: Town of Pearl River

Address: PO Box 1270

City/State/Zip: Pearl River, LA 70452

Telephone Number: 985-863-5800 / 985-863-2586 Fax: _____

Section 1C Site Location Information

County: St. Tammany State: Louisiana Congressional District: 01

Latitude: Start N 30.36513429 Longitude: Start W-89.7601941507 Section: 14 Township: 8S Range: 14E
End: N30.3591855648 End W-89.8761651147

UTM Coordinates: 16N Topo Quad: Slidell

Drainage Name: Sawmill Creek Reach 2400 LF

Damage Description: Trees and tops in channel

Section 1D Site Evaluation

All answers in this Section must be YES in order to be eligible for EWP assistance.

Site Eligibility	YES	NO	Remarks
Damage was a result of a natural disaster?*	X		
Recovery measures would be for runoff retardation or soil erosion prevention?*	X		
Threat to life and/or property?*	X		
Event caused a sudden impairment in the watershed?*	X		
Imminent threat was created by this event?**	X		
For structural repairs, not repaired twice within ten years?**	X		
Site Defensibility			
Economic, environmental, and social documentation adequate to warrant action? (Go to pages 3, 4, 5 and 6 ***)	X		
Proposed action technically viable? (Go to Page 9 ***)	X		

Have all the appropriate steps been taken to ensure that all segments of the affected population have been informed of the EWP program and its possible effects? YES X NO ____

Comments: _____

* Statutory
** Regulation
*** DSR Pages 3 through 6 and 9 are required to support the decisions recorded on this summary page. If additional space is needed on this or any other page in this form, add appropriate pages.

Approved 7/2005

DSR NO: 103-05-431 K

Section 1E Proposed Action

Describe the preferred alternative from Findings: Section 5 A:

Remove and dispose of debris and large trees from the channel using only one side of the channel for access with hand crews. The proposed action is the preferred alternative. The proposed action is the least costly alternative that achieves the restoration objectives, maximizes environmental benefits, and socially acceptable.

Total installation cost identified in this DSR: Section 3:

Section 1F NRCS State Office Review and Approval

Reviewed By: _____ Date Reviewed: 4/12/07
State EWP Program Manager

Approved By: Donald W. Gohmert Date Approved: 4/12/07
State Conservationist

PRIVACY ACT AND PUBLIC BURDEN STATEMENT

NOTE: The following statement is made in accordance with the Privacy Act of 1974, (5 U.S.C. 552a) and the Paperwork Reduction Act of 1995, as amended. The authority for requesting the following information is 7 CFR 624 (EWP) and Section 216 of the Flood Control Act of 1950, Public Law 81-516, 33 U.S.C. 701b-1; and Section 403 of the Agricultural Credit Act of 1978, Public Law 95-334, as amended by Section 382, of the Federal Agriculture Improvement and Reform Act of 1996, Public Law 104-127, 16 U.S.C. 2203. EWP, through local sponsors, provides emergency measures for runoff retardation and soil erosion control to areas where a sudden impairment of a watershed threatens life or property. The Secretary of Agriculture has delegated the administration of EWP to the Chief of NRCS on state, tribal and private lands.

Signing this form indicates the sponsor concurs and agrees to provide the cost-share to implement the EWP recovery measure(s) determined eligible by NRCS under the terms and conditions of the program authority. Failure to provide a signature will result in the applicant being unable to apply for or receive a grant the applicable program authorities. Once signed by the sponsor, this information may not be provided to other agencies. IRS, Department of Justice, or other State or Federal Law Enforcement agencies, and in response to a court or administrative tribunal.

The provisions of criminal and civil fraud statutes, including 18 U.S.C. 286, 287, 371, 641, 651, 1001; 15 U.S.C. 714m; and 31 U.S.C. 3729 may also be applicable to the information provided. According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0578-0030. The time required to complete this information collection is estimated to average 117/1.96 minutes/hours per response, including the time for reviewing instructions, searching existing data sources, field reviews, gathering, designing, and maintaining the data needed, and completing and reviewing the collection information.

USDA NONDISCRIMINATION STATEMENT

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.)

Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write USDA, Director of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-941 0 or call (800)795-3272 (voice) or (202)720-6382 (TDD). USDA is an equal opportunity provider and employer.

Civil Rights Statement of Assurance

The program or activities conducted under this agreement will be in compliance with the nondiscrimination provisions contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes: namely, Section 504 or the Rehabilitation Act of 1973, Title IX of the Amendments of 1972, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990. They will also be in accordance with regulations of the Secretary of Agriculture (7 CFR 15, 15a, and 15b), which provide that no person in the United States shall on the grounds of race, color, national origin, gender, religion, age or disability, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the U.S. Department of Agriculture or any agency thereof.

Section 2 Environmental Evaluation

2A Resource Concerns	2B Existing Condition	2C Alternatives and Effects		
		Proposed Action	No Action	Alternative
		Remove debris from channel using handwork	Leave debris in channel	Use mechanized equipment to remove debris from channel
		2D Effects of Alternatives		
Soil				
Bank erosion	Moderate bank erosion	Bank erosion reduced	Bank erosion continues at current rate	Bank erosion reduced
Soil quality	Soil quality reduced	Soil quality improved	Soil quality reduced	Soil quality improved
Water				
DO	Low DO from decreased water flow	Increased DO	Low DO	Increased DO
BOD	High BOD from debris decomposition	Lower BOD	High BOD	Lower BOD
Air				
Particulate Matter	Attainment	Slight increase during removal	Attainment	Slight increase during removal
Plant				
Aquatic Plant Community	Poor due to debris hindering growth	Improved growth and health	Poor due to debris hindering growth	Improved growth and health
Animal				
Herptofauna	Habitat quality improved	Habitat quality decreased	Habitat quality improved	Habitat quality decreased
Other				
Aesthetics	Poor due to clutter	Enhanced visual effects	Poor visual effects	Enhanced visual effects

Section 2E Special Environmental Concerns

Resource Consideration	Existing Condition	Alternatives and Effects		
		Proposed Action	No Action	Alternative
Clean Water Act Waters of the U.S.	CWA Jurisdiction. No CWA permit will be needed if debris is left in channel.	Improved water quality; CWA permit required.	Decrease water quality; increase blockage/clutter Debris affecting water quality	Improve water quality; short term increase in damage; CWA permit required.
Coastal Zone Management Areas	N/A north of I-12.	N/A north of I-12.	N/A north of I-12.	N/A north of I-12.
Coral Reefs	N/A	N/A	N/A	N/A
Cultural Resources	None observed on-site. State Level Review.	None observed on-site. State Level Review.	None observed on-site. State Level Review.	None observed on-site. State Level Review.
Endangered and Threatened Species	(FOTG II)- No suitable habitat on-site (field investigation.)	(FOTG II)- No suitable habitat on-site (field investigation.)	(FOTG II)- No suitable habitat on-site (field investigation.)	(FOTG II)- No suitable habitat on-site (field investigation.)
Environmental Justice	N/A	N/A	N/A	N/A
Essential Fish Habitat	N/A	N/A	N/A	N/A
Fish and Wildlife Coordination	State level review by project type with USFWS & LDWF; Consultation not required for debris removal	Consultation not required for debris removal.	N/A	Consultation not required for debris removal.
Floodplain Management	Located within 100-year flood plain. Debris in bayou are increasing flood potential.	Improved function to drainage channel by restoring pre-storm hydraulic capacity.	100-year floodplain function is impaired	Improved function to drainage channel by restoring pre-storm hydraulic capacity.
Invasive Species	Common Privet, Japanese Climbing Fern and Tallow Tree noted in project area.	Invasive species will increase due to opening some areas	No effective increase	Invasive species will increase due to opening some areas
Migratory Birds	food and habitat reduced due to debris cover, thus less open water	food and cover quality improved		food and cover quality improved
Natural Areas	(FOTG II) none identified	(FOTG II) none identified	(FOTG II) none identified	(FOTG II) none identified
Prime and Unique Farmlands	(FOTG II) (Soil Survey) none present	(FOTG II) (Soil Survey) none present	(FOTG II) (Soil Survey) none present	(FOTG II) (Soil Survey) none present
Riparian Areas	Riparian area impacted by debris accumulation and altered hydrology.	Riparian area improved by debris removal; some temporary impacts resulting from access.	Riparian area impacted by debris accumulation and altered hydrology.	Riparian area improved by debris removal; some temporary impacts resulting from access.
Scenic Beauty	(FOTG II) N/A	(FOTG II) N/A	(FOTG II) N/A	(FOTG II) N/A
Wetlands	Open water containing debris. Emergent/wooded wetlands also littered with debris.	Debris removed from open water and adjacent to stream. Wetlands not adversely impacted.	Open water containing debris. Emergent/wooded wetlands also littered with debris.	Debris removed from open water and adjacent to stream. Wetlands not adversely impacted.
Wild and Scenic Rivers	(FOTG II) (LDWF scenic streams list) Sawmill Creek is not listed in project area.	((FOTG II) (LDWF scenic streams list) Sawmill Creek is not listed in project area.	(FOTG II) (LDWF scenic streams list) Sawmill Creek is not listed in project area.	(FOTG II) (LDWF scenic streams list) Sawmill Creek is not listed in project area.

Completed By: Michael Nichols Date: April 4, 2007

DSR NO: 103-05-431 K

Section 2F Economic

This section must be completed by each alternative considered (attach additional sheets as necessary).

	Future Damages ($)	Damage Factor (%)	Near Term Damage Reduction
Properties Protected (Private)			
Houses- 18 @ $300,000	**$5,400,000**	**25**	**$1,350,000**
Houses- 2 @ 25,000	**$50,000**	**25**	**$12,500**
Properties Protected (Public)			
Business Losses			
Other			
Total Near Term Damage Reduction $			**$1,362,500**
Net Benefit (Total Near Term Damage Reduction minus Cost from Section 3)			

Completed By: H McDaniel Date: 4-4-2007

Section 2G Social Consideration

This section must be completed by each alternative considered (attach additional sheets as necessary).

	YES	NO	Remarks
Has there been a loss of life as a result of the watershed impairment?		X	
Is there the potential for loss of life due to damages from the watershed impairment?		X	
Has access to a hospital or medical facility been impaired by watershed impairment?		X	
Has the community as a whole been adversely impacted by the watershed impairment (life and property ceases to operate in a normal capacity)	X		
Is there a lack or has there been a reduction of public safety due to watershed impairment?	X		Flooding of streets could limit access by emergency vehicles such as ambulance, fire protection and law enforcement

Completed By: H McDaniel Date: 04-4-2007

DSR NO: 103-05-431 K

Section 2H Group Representation Information

This section is completed only for the preferred alternative selected.

Group Representation	Number
American Indian/Alaska Native Female Hispanic	
American Indian/Alaska Native Female Non-Hispanic	
American Indian/Alaska Native Male Hispanic	
American Indian/Alaska Native Male Non-Hispanic	
Asian Female Hispanic	
Asian Female Non-Hispanic	
Asian Male Hispanic	
Asian Male Non-Hispanic	
Black or African American Female Hispanic	
Black or African American Female Non-Hispanic	
Black or African American Male Hispanic	
Black or African American Male Non-Hispanic	
Hawaiian Native/Pacific Islander Female Hispanic	
Hawaiian Native/Pacific Islander Female Non-Hispanic	
Hawaiian Native/Pacific Islander Male Hispanic	
Hawaiian Native/Pacific Islander Male Non-Hispanic	
White Female Hispanic	1
White Female Non-Hispanic	25
White Male Hispanic	1
White Male Non-Hispanic	24
Total Group	51

Census tract(s): U.S. Census Bureau , American FactFinder, Pearl River Town, Louisiana

Completed By: Herb McDaniel, Michael Nichols Date: April 4, 2007

Section 2I. Required consultation or coordination between the lead agency and/or the RFO and another governmental unit including tribes:

Easements, permissions, or permits:

-Access permission will be required.
-CWA permit will be required (USACE).
-Water Quality Certification will be required (LDEQ).

Mitigation Description:

-When necessary, barriers will be placed at ingress and egress points to prevent unauthorized vehicular access to the construction access point.
-Avoid impacts to adjacent backyards, when present.
-Removal will be done in consecutive days to minimize impacts to local wildlife.
-If any archaeological or cultural remains are located, immediately and cease work in that area contact the NRCS state archaeologist.
-Disturbed areas will be seeded to an approved seed mix. See FOTG Sec IV – Practice Standard 342 - Critical Area Planting, NRCS LA – (Standard 342 can be found in the local NRCS Field Office)
- Debris will be chipped and disposed within the work limits. Chips will be spread within the work limits to depths no greater than 6". Work limits will be 25 feet on one side of the channel and 10 feet on the other side of the channel.

Agencies, persons, and references consulted, or to be consulted:

U.S. Army Corps of Engineers
LDWF
St. Tammany Parish Government
Private Landowners
LDEQ
USFWS

Section 4 NRCS EWP Funding Priority

Complete the following section to compute the funding priority for the recovery measures in this application (see instructions on page 14).

Priority Ranking Criteria	**Yes**	**No**		**Ranking Number Plus Modifier**
1. Is this an exigency situation?		X		
2. Is this a site where there is serious, but not immediate threat to human life?		X		
3. Is this a site where buildings, utilities, or other important infrastructure components are threatened?	X			3e
4. Is this site a funding priority established by the NRCS Chief?		X		
The following are modifiers for the above criteria			**Modifier**	
a. Will the proposed action or alternatives protect or conserve federally-listed threatened and endangered species or critical habitat?				
b. Will the proposed action or alternatives protect or conserve cultural sites listed on the National Register of Historic Places?				
c. Will the proposed action or alternatives protect or conserve prime or important farmland?				
d. Will the proposed action or alternatives protect or conserve existing wetlands?				
e. Will the proposed action or alternatives maintain or improve current water quality conditions?			e	
f. Will the proposed action or alternatives protect or conserve unique habitat, including but not limited to, areas inhabited by State-listed species, fish and wildlife management area, or State identified sensitive habitats?				

Enter priority computation in Section 1A, NRCS Entry, Funding priority number.

Remarks:

Section 5A Findings

Finding: Indicate the preferred alternative from Section 2 (Enter to Section 1E):

Remove and dispose of debris and large trees from the channel using only one side of the channel for access with hand crews. The proposed action is the preferred alternative. The proposed action is the least costly alternative that achieves the restoration objectives, maximizes environmental benefits, and socially acceptable.

I have considered the effects of the action and the alternatives on the Environmental Economic, Social; the Special Environmental Concerns; and the extraordinary circumstances (40 CFR 1508.27). I find for the reasons stated below, that the preferred alternative:

__X__ Has been sufficiently analyzed in the EWP PEIS (reference all that apply)
Chapter 5.2.2.1.2
Chapter _____
Chapter _____
Chapter _____
Chapter _____

____ May require the preparation of an environmental assessment or environmental impact statement.
The action will be referred to the NRCS State Office on this date:

NRCS representative of the DSR team

Title: District Cons. Date: 4/5/07

Section 5B Comments:

Section 5C **Sponsor Concurrence:**

Sponsor Representative

Title: Mayor, Lames Lavigne Date: April 9, 2007

Section 6 Attachments:

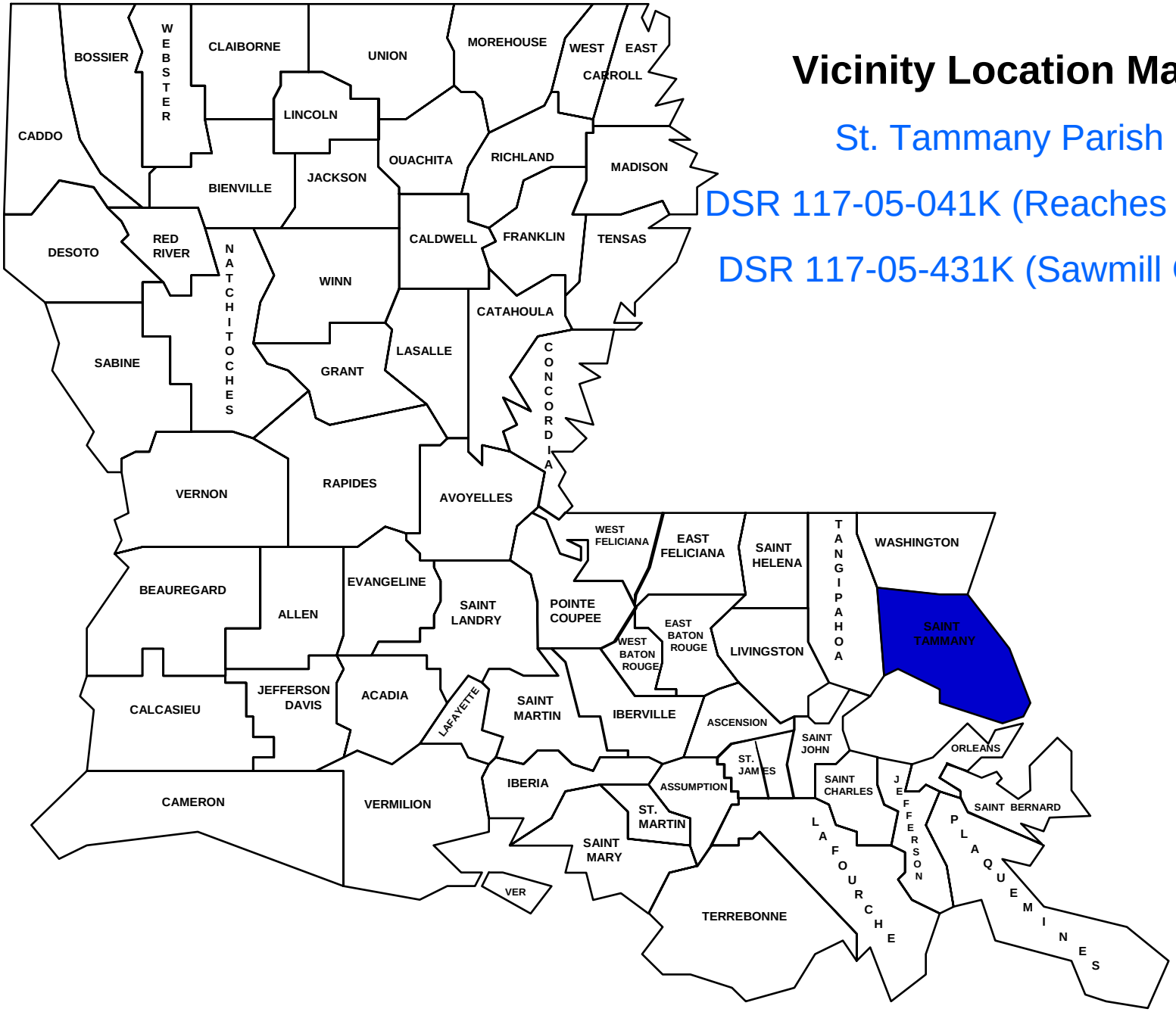
A. Location Map
B. Site Plan or Sketches
C. Other (explain)

Vicinity Location Map

St. Tammany Parish

DSR 117-05-041K (Reaches 8 & 10)

DSR 117-05-431K (Sawmill Creek)



DSR-103-05 431K

St. Tammany Parish - Town of Pearl River

Legend

Roads

sawmill creek

Topo Quad: Slidell
Sections: 14
Township: 8S
Range: 14E

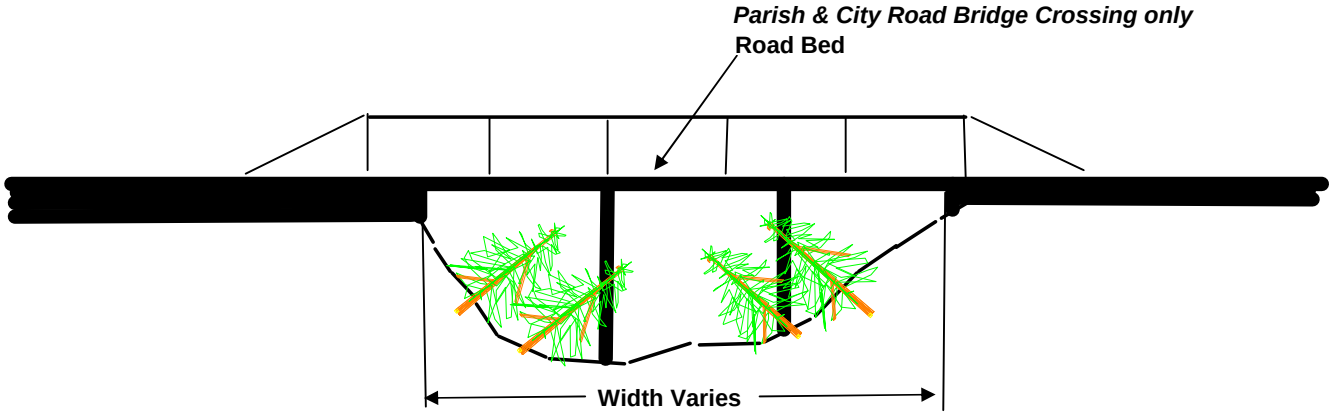
0 410820 1,640 2,460 3,280
Feet

DSR's: 103-05-041K & 103-05-431K

CHANNEL: Reaches 8 & 10, and Sawmill Creek

PARISH/SPONSOR: St. Tammany/City of Pearl River

Debris Removal



Note: Contract is to remove Debris from upstream and downstream Bridge which includes underside of bridge
Exception: All Crossing which cross State or Federal highways are not included in contract

Typical Road Bridge Crossing
Not to Scale

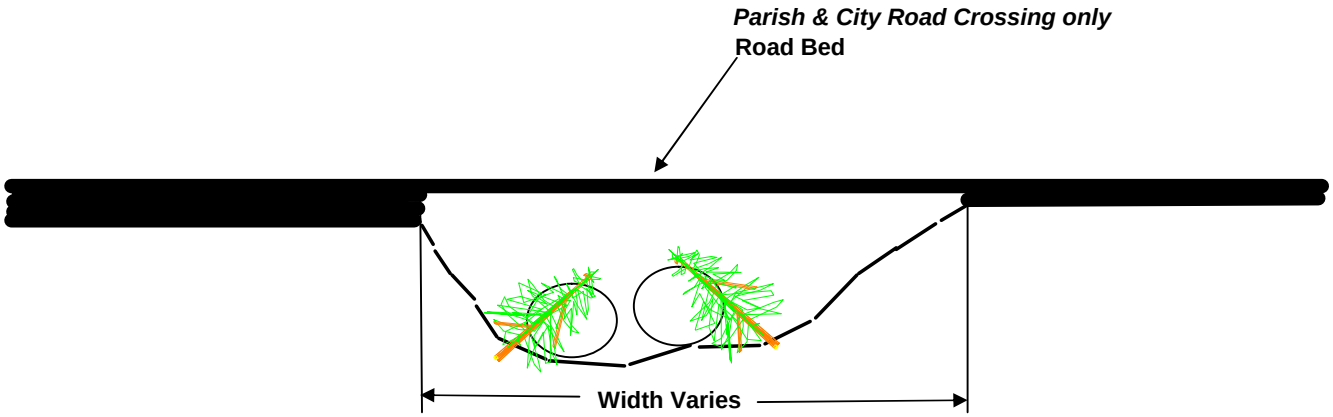
Notice:
96 Hours Before Commencement of Work
Call 1-800-272-3020

DSR's: 103-05-041K & 103-05-431K

CHANNEL: Reaches 8 & 10, and Sawmill Creek

PARISH/SPONSOR: St. Tammany/City of Pearl River

Debris Removal



Note: Contract is to remove Debris from upstream and downstream Culverts which includes inside of culverts
Exception: All Crossing which cross State or Federal highways are not included in contract

Typical Road Culvert type Crossing
Not to Scale

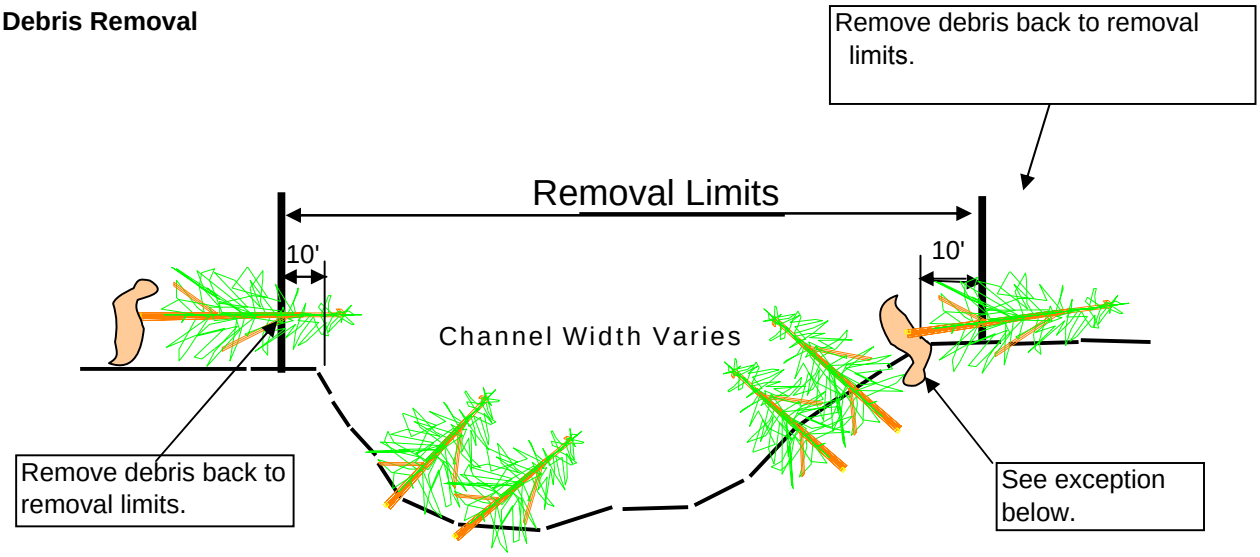
Notice:
96 Hours Before Commencement of Work
Call 1-800-272-3020

DSR's: 103-05-041K & 103-05-431K

CHANNEL: Reaches 8 & 10, and Sawmill Creek

PARISH/SPONSOR: St. Tammany/City of Pearl River

Debris Removal



Stream Typical Section

Not to Scale

Applies to working from either side

Notice:
96 Hours Before Commencement of Work
Call 1-800-272-3020

***Note**: Work to be performed from within the channel with marsh buggy or barge mounted equipment where floation is possible. Otherwise work from one side only, from 10' of top bank on the non-work side to 25' from top bank on the work side.*

***Exception.** Only rootballs that have been 50% or more dislodged from the stream bank shall be removed and disposed of as per specification.*

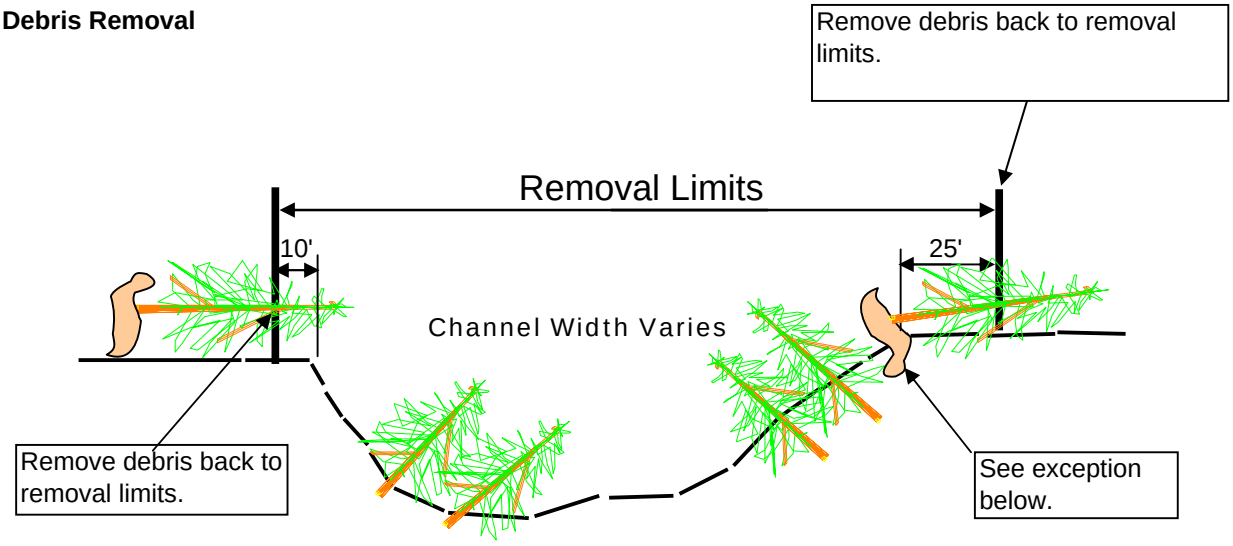
NOTE: This removal limit drawing shall apply to where work is done by hand labor only, no equipment. Otherwise, work from one side only, from 10' of top bank on non-work side to 25' from top bank on the work side.

DSR's: 103-05-041K & 103-05-431K

CHANNEL: Reaches 8 & 10, and Sawmill Creek

PARISH/SPONSOR: St. Tammany/City of Pearl River

Debris Removal



Typical Section

Not to Scale

Applies to working from either side

Notice:
96 Hours Before Commencement of Work
Call 1-800-272-3020

***Note** : Access can be obtained from either side; however work will only be performed from one side in any stretch of the channel, as concurred in by COTR.*

***Exception.** Only rootballs that have been 50% or more dislodged from the stream bank shall be removed and disposed of as per specification.*

DSR 103-05-041K (Reaches 8 & 10)
DSR 103-05-431K (Sawmill Creek)
Town of Pearl River
St. Tammany Parish

CONSTRUCTION SPECIFICATIONS

NUMBER	TITLE	PAGE	THROUGH
5	Pollution Control	5-1	5-4
6	Seeding, Sprigging and Mulching	6-1	6-5
8	Mobilization and Demobilization	8-1	8-2
9	Traffic Control	9-1	9-4
203	Channel Obstruction Removal	203-1	203-5

DRAWINGS	1 of 7	7 of 7
SPECIAL PROVISIONS	1 of 1	

SPECIAL PROVISIONS

1. Not all pipelines and other utilities are shown on the plans. It is the responsibility of the contractor to contact **Louisiana One Call at 1-800-272-3020** and the appropriate owner of any utility within the work area to assist him/her in the location of unmarked utilities prior to the start of his/her work. By State law, amended effective June 15, 2006, this must be done at least 96 hours before working in the following parishes: St. Tammany, Orleans, St. Bernard, Jefferson, Plaquemines, Lafourche, Terrebonne, St. Mary, Iberia, Vermilion, Cameron and Calcasieu. The notification period remains 48 hours in all other parishes.

2. When performing work in the vicinity of utilities and/or other structures the contractor shall take extreme care not to damage said utilities and/or structures. Any damages resulting from improper construction will be the responsibility of the contractor, and repairs of such damages will be made by the contractor at his/her expense. The contractor shall further restore at his/her own expense all injured property caused by any negligent act of omission or commission on his/ her part or on the part of his/her agent, including sidewalks, curbing, sodding, shrubs, pipes, conduits, sewers, buildings, fences, property boundary markers, bridges, retaining walls, tanks, power lines, levees or any other building or private property to a condition as good as it was when he/she entered upon the right of way.

3. The convenience of the general public and of residents along the work shall be provided for in a reasonably adequate and satisfactory manner. Where existing roads are not available for use as detours, all traffic shall be permitted to pass through the work. In such cases the vehicles of the traveling public shall have precedence over the contractor's vehicles to the end that the traveling public's vehicles shall not be unduly delayed for the convenience of the contractor. The contractor shall provide and station competent flagmen whose sole duties shall consist of directing and controlling the movement of public traffic either through or around the work. A flagman shall also be stationed wherever equipment, trucks, etc., enter or leave a thoroughfare from the construction area. The design and application of all signals, pavement markings, channelizing devices and warning sign shall conform the " Louisiana Manual on Uniform Traffic Control Devices", 1988 edition, as revised.

4. The contractor shall arrange his/her work so that no undue or prolonged blocking of business establishments or private residences will occur. Material and equipment stored on the right of way and project site shall be so placed, and the work at all times shall be so conducted, as to insure minimum danger and obstruction to the traveling public.

5. When transporting equipment, supplies, and material to and from the construction site, the contractor shall take the most direct route when leaving a major thoroughfare.

6. Fire hydrants shall be accessible at all times to the Fire Department. No materials or other obstructions shall be placed closer to a fire hydrant than permitted by ordinances, rules or regulations. In the absence of such ordinances, rules or regulations, obstructions shall not be placed within fifteen (15) feet of a fire hydrant.

7. Material Certifications shall be provided to the Government Representative for all materials used in this contract prior to installation.

8. The Estimated Quantities shown on the drawings are based on quantities derived from preliminary survey data. Variations in these quantities may be possible when the work is actually performed. However, modification to the contract will not be made for work performed in excess of these Estimated Quantities

Construction Specification 5—Pollution Control

1. Scope

The work consists of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air from construction activities.

2. Material

All material furnished shall meet the requirements of the material specifications listed in section 8 of this specification.

3. Erosion and sediment control measures and works

The measures and works shall include, but are not limited to, the following:

Staging of earthwork activities—The excavation and moving of soil materials shall be scheduled to minimize the size of areas disturbed and unprotected from erosion for the shortest reasonable time.

Seeding—Seeding to protect disturbed areas shall occur as soon as reasonably possible following completion of that earthwork activity.

Mulching—Mulching to provide temporary protection of the soil surface from erosion.

Diversions—Diversions to divert water from work areas and to collect water from work areas for treatment and safe disposition. They are temporary and shall be removed and the area restored to its near original condition when the diversions are no longer required or when permanent measures are installed.

Stream crossings—Culverts or bridges where equipment must cross streams. They are temporary and shall be removed and the area restored to its near original condition when the crossings are no longer required or when permanent measures are installed.

Sediment basins—Sediment basins collect, settle, and eliminate sediment from eroding areas from impacting properties and streams below the construction site(s). These basins are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

Sediment filters—Straw bale filters or geotextile sediment fences trap sediment from areas of limited runoff. Sediment filters shall be properly anchored to prevent erosion under or around them. These filters are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

Waterways—Waterways for the safe disposal of runoff from fields, diversions, and other structures or measures. These works are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

Other—Additional protection measures as specified in section 8 of this specification or required

by Federal, State, or local government.

4. Chemical pollution

The contractor shall provide watertight tanks or barrels or construct a sump sealed with plastic sheets to dispose of chemical pollutants, such as drained lubricating or transmission fluids, grease, soaps, concrete mixer washwater, or asphalt, produced as a by-product of the construction activities. At the completion of the construction work, sumps shall be removed and the area restored to its original condition as specified in section 8 of this specification. Sump removal shall be conducted without causing pollution.

Sanitary facilities, such as chemical toilets, or septic tanks shall not be located next to live streams, wells, or springs. They shall be located at a distance sufficient to prevent contamination of any water source. At the completion of construction activities, facilities shall be disposed of without causing pollution as specified in section 8 of this specification.

5. Air pollution

The burning of brush or slash and the disposal of other materials shall adhere to state and local regulations.

Fire prevention measures shall be taken to prevent the start or spreading of wildfires that may result from project activities. Firebreaks or guards shall be constructed and maintained at locations shown on the drawings.

All public access or haul roads used by the contractor during construction of the project shall be sprinkled or otherwise treated to fully suppress dust. All dust control methods shall ensure safe construction operations at all times. If chemical dust suppressants are applied, the material shall be a commercially available product specifically designed for dust suppression and the application shall follow manufacturer's requirements and recommendations. A copy of the product data sheet and manufacturer's recommended application procedures shall be provided to the engineer 5 working days before the first application.

6. Maintenance, removal, and restoration

All pollution control measures and temporary works shall be adequately maintained in a functional condition for the duration of the construction period. All temporary measures shall be removed and the site restored to near original condition.

7. Measurement and payment

Method 1—For items of work for which specific unit prices are established in the contract, each item is measured to the nearest unit applicable. Payment for each item is made at the contract unit price for that item. For water or chemical suppressant items used for dust control for which items of work are established in section 8 of this specification, measurement for payment will not include water or chemical suppressants that are used inappropriately or excessive to need. Such payment will constitute full compensation for the completion of the work.

Method 2—For items of work for which lump sum prices are established in the contract, payment is made as the work proceeds and supported by invoices presented by the contractor that reflect actual costs. If the total of all progress payments is less than the lump sum contract price for this item, the balance remaining for this item will be included in the final contract payment. Payment of the lump sum contract price will constitute full compensation for completion of the

work.

Method 3—For items of work for which lump sum prices are established in the contract, payment will be prorated and provided in equal amounts on each monthly progress payment estimate. The number of months used for prorating shall be the number estimated to complete the work as outlined in the contractor's approved construction schedule. The final month's prorate amount will be provided with the final contract payment. Payment as described will constitute full compensation for completion of the work.

All Methods—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items, and the items to which they are made subsidiary, are identified in section 8 of this specification.

8. Items of work and construction details

(See next page.)

8. Items of work and construction details

Items of work to be performed in conformance with this specification and the construction details therefor are:

a. Subsidiary Item, Pollution Control

(1) This item shall consist of all work necessary to control erosion and sediment pollution, chemical pollution, water pollution and air pollution during the period of this contract.

(2) The Contractor shall perform the work in a manner that will reduce erosion, minimize sediments and other pollutants to the water and streams and create a minimum of air pollution consistent with standard construction operations.

(3) The contractor shall perform work in such a manner that all Local, State and Federal regulations regarding pollution (i.e. air, water, etc.) are adhered to.

(4) No separate payment will be made for this item. Compensation for this subsidiary item shall be included in Specification 203, Channel Obstruction Removal.

Construction Specification 6—Seeding, Sprigging, and Mulching

1. Scope

The work consists of preparing the area for treatment; furnishing and placing seed, sprigs, mulch, fertilizer, inoculant, lime, and other soil amendments; and anchoring mulch in designated areas as specified.

2. Material

Seed—All seed shall conform to the current rules and regulations of the state where it is being used and shall be from the latest crop available. It shall meet or exceed the standard for purity and germination listed in section 7.

Seed shall be labeled in accordance with the state laws and the U.S. Department of Agriculture rules and regulations under the Federal Seed Act in effect on the date of invitations for bids. Bag tag figures are evidence of purity and germination. No seed will be accepted with a test date of more than 9 months before the delivery date to the site.

Seed that has become wet, moldy, or otherwise damaged in transit or storage will not be accepted. The percent of noxious weed seed allowable shall be as defined in the current State laws relating to agricultural seeds. Each type of seed shall be delivered in separate sealed containers and fully tagged unless exception is granted in writing by the contracting officer.

Fertilizer—Unless otherwise specified, the fertilizer shall be a commercial grade fertilizer. It shall meet the standard for grade and quality specified by State law. Where fertilizer is furnished from bulk storage, the contractor shall furnish a supplier's certification of analysis and weight. When required by the contract, a representative sample of the fertilizer shall be furnished to the contracting officer for chemical analysis.

Inoculants—The inoculant for treating legume seeds shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species and shall not be used later than the date indicated on the container or as otherwise specified. A mixing medium, as recommended by the manufacturer, shall be used to bond the inoculant to the seed. Two times the amount of the inoculant recommended by the manufacturer shall be used except four times the amount shall be used when seed is applied using a hydraulic seeder. Seed shall be sown within 24 hours of treatment and shall not remain in the hydraulic seeder longer than 4 hours.

Lime and other soil amendments—Lime shall consist of standard ground agriculture limestone, or approved equivalent. Standard ground agriculture limestone is defined as ground limestone meeting current requirements of the State Department of Agriculture. Other soil amendments shall meet quality criteria and application requirements specified in section 7.

Mulch tackifiers—Asphalt emulsion tackifiers shall conform to the requirements of ASTM D 977, Specification for Emulsified Asphalt. The emulsified asphalt may be rapid setting, medium setting, or slow setting. Nonasphaltic tackifiers required because of environmental considerations shall be as specified in section 7.

Straw mulch material—Straw mulch shall consist of wheat, barley, oat or rye straw, hay, grass cut from native grasses, or other plants as specified in section 7. The mulch material shall be air-

dry, reasonably light in color, and shall not be musty, moldy, caked, or otherwise of low quality. The use of mulch that contains noxious weeds is not permitted. The contractor shall provide a method satisfactory to the contracting officer for determining weight of mulch furnished.

Other mulch materials—Mulching materials, such as wood cellulose fiber mulch, mulch tackifiers, synthetic fiber mulch, netting, and mesh, are other mulching materials that may be required for specialized locations and conditions. These materials, when specified, must be accompanied by the manufacturer's recommendations for methods of application.

3. Seeding mixtures, sod, sprigs, and dates of planting

The application rate per acre for seed mixtures, sprigs, or sod and date of seeding or planting shall be as shown on the plans or as specified in section 7.

4. Seedbed preparation and treatment

Areas to be treated shall be dressed to a smooth, firm surface. On sites where equipment can operate on slopes safely, the seedbed shall be adequately loosened (4 to 6 inches deep) and smoothed. Depending on soil and moisture conditions, disking or cultipacking, or both, may be necessary to properly prepare a seedbed. Where equipment cannot operate safely, the seedbed shall be prepared by hand methods by scarifying to provide a roughened soil surface so that broadcast seed will remain in place.

If seeding is to be accomplished immediately following construction operations, seedbed preparation may not be required except on a compacted, polished, or freshly cut soil surface.

Rocks larger than 6 inches in diameter, trash, weeds, and other debris that will interfere with seeding or maintenance operations shall be removed or disposed of as specified in section 7.

Seedbed preparation shall be discontinued when soil moisture conditions are not suitable for the preparation of a satisfactory seedbed as determined by the contracting officer's technical representative (COTR).

5. Seeding, sprigging, fertilizing, mulching, and stabilizing

All seeding or sprigging operations shall be performed in such a manner that the seed or sprigs are applied in the specified quantities uniformly in the designated areas. The method and rate of seed application shall be as specified in section 7. Unless otherwise specified, seeding or sprigging shall be accomplished within 2 days after final grading is completed and approved.

Fertilizer, lime, and other soil amendments shall be applied as specified in section 7. When specified, the fertilizer and soil amendments shall be thoroughly incorporated into the soil immediately following surface application.

The rate, amount, and kind of mulching or mesh shall be as specified in section 7. Mulches shall be applied uniformly to the designated areas. They shall be applied to areas seeded not later than 2 working days after seeding has been performed. Straw mulch material shall be stabilized within 24 hours of application using a mulch crimper or equivalent anchoring tool or by a suitable tackifier. When the mulch crimper or equivalent anchoring tool is used, it shall have straight blades and be the type manufactured expressly for and capable of firmly punching the mulch into the soil. Where the equipment can be safely operated, it shall be operated on the contour. Hand methods shall be used where equipment cannot safely operate to perform the work required.

The tackifier shall be applied uniformly over the mulch material at the specified rate, or it shall be injected into the mulch material as it is being applied. Mesh or netting stabilizing materials shall be applied smoothly, but loosely on the designated areas. The edges of these materials shall be buried or securely anchored using spikes or staples as specified in section 7.

The contractor shall maintain the mesh or netting areas until all work under the contract has been completed and accepted. Maintenance shall consist of the repair of areas damaged by water erosion, wind, fire, or other causes. Such areas shall be repaired to reestablish the intended condition and to the design lines and grades required by the contract. The areas shall be refertilized, reseeded, and remulched before the new application of the mesh or netting.

6. Measurement and payment

Method 1—For items of work for which specific unit prices are established in the contract, each area treated is measured as specified in section 7 and the area calculated to the nearest 0.1 acre. Payment for treatment is made at the contract unit price for the designated treatment, which will constitute full compensation for completion of the work.

When specified as an item of work, mesh or netting is measured to the nearest square yard of surface area covered and accepted. Payment is made at the contract unit price and will constitute full compensation for completion of the work.

Method 2—For items of work for which specific lump sum prices are established in the contract, the quantity of work will not be measured for payment. Payment for this item is made at the contract lump sum price for the item and will constitute full compensation for the completion of the work.

Method 3—For items of work for which lump sum prices are established in the contract, payment is made as the work proceeds. Progress payments will be determined as specified in section 7. Payment of the lump sum contract price will constitute full compensation for completion of the work.

All Methods—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items and the item(s) to which they are made subsidiary are identified in section 7.

7. Items of work and construction details

(See next sheet)

7. Items of work and construction details

Items of work to be performed in conformance with this specification and the construction details therefor are:

Subsidiary Item, Permanent Vegetation Seeding, Fertilization and Mulching

a. Seeding

(1) This item will consist of furnishing and applying seed according to the following specifications:

(2) Seeding for permanent cover will be done on all bare areas such as channel slopes, berms, spoil placement areas and any other disturbed areas that are not covered with chips. Seed will not be applied to areas with perennial ponded water.

(a) Seeding for temporary cover will be done on disturbed areas where chipping or permanent seeding will be delayed for a period greater than 21 days. Temporary seeding will be applied at the following rates:

Seeding Period	Species	Minimum % Pure Live Seed	Pure Live Seed (1b/ac)	Minimum Quality Seed (lb/ac)
Mar 1 - Aug 31	Brown Top Millet (hulled)	72	35	45
Sep 1 - Feb 28	Ryegrass	82	40	50

(3) **All ruts** created by the debris removal operation shall be filled in and left in a smooth condition prior to the seeding and fertilization of the site.

(4) No seedbed preparation will be required if the construction equipment has produced a scarified surface and the seeding is done the day the areas to be seeded are worked. If the construction equipment has produced a slick surface, or seeding is not done the day the areas are worked, a seedbed will be prepared by scarifying the soil surface with a spike-tooth harrow or similar implement to a depth of one (1) inch. When more than one species of vegetation is required, each species shall be seeded separately. Permanent vegetation seeding will be applied at the following rates:

Seeding Period	**Species**	**Minimum % pure Live Seed**	**Pure Live Seed (lb./ac)**
Mar 1 - Aug 31	Alamo Switch Grass	85	20
Sep 1 - Dec 31	Rye Grass	82	35
Jan 1 - Feb 28	Alamo Switch Grass and Rye Grass	85 82	20 35

b. Fertilization

(1) No fertilization will be required on this contract.

c. Mulching

(1) No mulching will be required on this contract.

d. No separate payment will be made for this item. Compensation for this subsidiary item shall be included in Specification 203, Channel Obstruction Removal.

Construction Specification 8—Mobilization and Demobilization

1. Scope

The work consists of the mobilization and demobilization of the contractor's forces and equipment necessary for performing the work required under the contract. It does not include mobilization and demobilization for specific items of work for which payment is provided elsewhere in the contract. Mobilization will not be considered as work in fulfilling the contract requirements for commencement of work.

2. Equipment and material

Mobilization shall include all activities and associated costs for transportation of contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the contractor's operations at the site; premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable; and other items specified in section 4 of this specification.

Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal, and site cleanup of offices, buildings, and other facilities assembled on the site specifically for this contract.

This work includes mobilization and demobilization required by the contract at the time of award. If additional mobilization and demobilization activities and costs are required during the performance of the contract as a result of changed, deleted, or added items of work for which the contractor is entitled to an adjustment in contract price, compensation for such costs will be included in the price adjustment for the item or items of work changed or added.

3. Payment

Payment will be made as the work proceeds, after presentation of paid invoices or documentation of direct costs by the contractor showing specific mobilization and demobilization costs and supporting evidence of the charges of suppliers, subcontractors, and others. When the total of such payments is less than the lump sum contract price, the balance remaining will be included in the final contract payment. Payment of the lump sum contract price for mobilization and demobilization will constitute full compensation for completion of the work.

Payment will not be made under this item for the purchase costs of materials having a residual value, the purchase costs of materials to be incorporated in the project, or the purchase costs of operating supplies.

4. Items of work and construction details

(See next page.)

4. Items of work and construction details

Items of work to be performed in conformance with this specification and the construction details therefor are:

a. Subsidiary Item, Mobilization and Demobilization

(1) This item shall consist of mobilizing and demobilizing personnel and equipment in preparation to perform the work within the scope of this contract.

(2) This item shall not include transportation of personnel, equipment and operating supplies between and within the work limit areas of this Contract.

(3) Fences, which must be cut or removed for access, shall be repaired or replaced by the Contractor at his/her expense to equal or exceed the quality of fencing that was in place prior to cutting or removal.

(4) Access shall be as shown on the drawings. If alternate routes are obtained by the Contractor, they must be approved by the NRCS prior to use. All access routes shall be restored, by the Contractor, to a condition equal to or better than the condition prior to the commencement of work under this contract.

(5) No separate payment will be made for this item. Compensation for this subsidiary item shall be included in Specification 203, Channel Obstruction Removal.

Construction Specification 9—Traffic Control

1. Scope

The work shall consist of establishing traffic control and maintaining safe, convenient use of public roads and rights-of-way.

2. Traffic and access

The contractor's operations shall cause no unnecessary inconvenience to the public. The public rights-of-way shall be maintained at all times unless interruption is authorized by proper local authority. Contractor's authorized closing or detour plans shall be provided to the engineer for approval.

Safe and adequate access shall be provided and maintained to all public protection devices and to all critical utility control locations. Facility access shall be continuous and unobstructed unless otherwise approved.

3. Storage of equipment and material in public streets

Construction materials and equipment shall not be stored or parked on public streets, roads, or highways. During any material or equipment loading or unloading activities that may temporarily interfere with traffic, an acceptable detour shall be provided for the duration of the activity. Any associated expense for this activity is the responsibility of the contractor.

Excavated material, including suitable material that is intended for adjacent trench backfill or other earth backfill as specified in section 5 of this specification, shall not be stored on public streets, roads, or highways that remain in service for the public. Any waiver of this requirement must be obtained from the proper local authority and approved by the engineer. All excess and unsuitable material shall be removed from the site as soon as possible. Any spillage shall be removed from roadways before they are used by the public.

4. Street closures, detours, and barricades

The contractor shall comply with the requirements of all applicable responsible units of government for closure of any street, road, or highway. The contractor shall provide the required barriers, guards, lights, signs, temporary bridges, and flaggers together with informing the public of any detours and construction hazards by the most suitable means available, such as local newspapers or radio stations. The contractor is also responsible for compliance with additional public safety requirements that may arise during construction. The contractor shall furnish, install, and, upon completion of the work, promptly remove all signs, warning devices, and other materials used in the performance of this work.

Unless otherwise specified, the contractor shall notify, in writing, the fire chief, police chief, county sheriff, state patrol, schools that operate school buses, or any other government official as may be appropriate no less than 7 days before closing, partly closing, or reopening any street, road, or highway.

Unless otherwise specified, the contractor shall furnish to the engineer a written plan showing the proposed method of signing, barricading for traffic control, and safety for street detours and closures.

All temporary detours will be maintained to ensure use of public rights-of-way is provided in a safe manner. This may include dust control, grading, and graveling as required in section 7 of this specification.

5. General and specific references

All signs, signals, barricades, use of flaggers, and other traffic control and public safety devices shall conform to the general requirements set forth in the Manual of Uniform Traffic Control Devices (MUTCD) and the latest edition of *Standard Highway Signs and Standard Alphabets for Highway Signs* and/or OSHA *Construction Industry Standards (29 CFR Part 1926), Subpart G, Signs, Signals, and Barricades* unless otherwise specified in section 7 of this specification.

6. Measurement and payment

For items of work for which specific lump sum prices are established in the contract, payment for the work is made at the contract lump sum price. Progress payments will be made based upon the percentage of estimated total time that traffic control will be required unless otherwise specified in section 7 of this specification. Payment will constitute full compensation for all flaggers, labor, materials, equipment, and all other items necessary and incidental to completion of the work.

Compensation for any item of work described in the contract, but not listed in the bid schedule will be included in the payment for the item of work to which it is made subsidiary. Such items and items to which they are made subsidiary are identified in section 7 of this specification.

7. Items of work and construction details

(See next page.)

7. Items of Work

Items of work to be performed in conformance with this specification are:

a. Subsidiary Item, Traffic Control

(1) This item shall consist of providing the necessary traffic control devices (signs, signals, markings, personnel, etc.) where needed, to allow for the safe and expeditious movement of traffic through and adjacent to the construction area for the completion of this contract.

(2) The contractor, shall have a comprehensive traffic control plan. The plan shall address, as a minimum, the following requirements:

(a) The design and application of all signals, pavement markings, channelizing devices, and warning signs shall conform to the *"Louisiana Manual on Uniform Traffic Control Devices*", 1988 Edition, as revised.

(b) Channelizing and delineation devices shall be used to mark all construction areas. These shall be Type II and/or Type III barricades, and/or barrels, all fully reflectional with lights, and weighted with sandbags.

(c) Any traffic control devices (signs, signals, markings) which exist as part of the normal pre-construction scheme, and that do not apply to an appropriate situation, or are in the way of construction, shall be covered, removed, or relocated by the contractor.

(d) The roadway and all traffic control devices shall be restored to original conditions by the contractor.

(e) All excavations shall be covered, backfilled, or protected, (see “b”, above) at night and when work is not in progress. Excavated pits, etc., shall be fully fenced or barricaded (see “b”, above) to prevent access by pedestrians.

(f) All materials/machines shall be stored outside of the road surface, creating no sight distance problems, and fully delineated as in “b”, above.

(g) If sections of roadway are totally closed, the contractor shall notify the sheriff's traffic division, 911 operators, the fire department, and any major traffic generators (i.e. schools, etc.). A three working day, minimum, advance notice will be required.

(h) On totally closed sections of the roadway, the contractor shall provide access for local traffic only.

(i) The contractor shall check traffic control devices on a daily basis as a minimum when beginning and ending the work day, to insure adherence to the plans and proper adequacy of devices for day and night visibility. On weekends, devices shall be checked a minimum once per day.

(j) Flagman and/or sheriff's control shall be provided as specified by the COTR.

(k) Yellow, high visibility pennant barrier flagging (nylon rope with plastic pennants) shall be strung between Type II barricades and barrels/drums, only as directed by the COTR.

(l) This traffic control device plan indicates general traffic control devices to be used on this project. It is anticipated that conditions will vary depending on the phase under construction and that the arrangement of those devices will be reviewed on a daily basis. Should the contractor have any question as to the arrangement of those devices, the COTR shall be notified to make an inspection of the site.

(m) Contractor shall provide for the movement of pedestrians for the entire length of the contract. As much as possible, the contractor shall not obstruct existing sidewalks, thereby obstructing pedestrian movements. If existing sidewalks must be obstructed, the contractor shall provide for the movement of pedestrians by posting appropriate signing, such as, "Sidewalk Closed-Use Other Side of Street". Signing shall be reflectorized and lighted at night.

(n) Also, where trenches are excavated outside the roadway surface, the contractor shall provide each dwelling at least one accessible crossing of the backfilled trench area, for use by pedestrians.

(o) As much as possible, the contractor shall provide access to area businesses.

(3) No separate payment will be made for this item. Compensation for this subsidiary item shall be included in Specification 203, Channel Obstruction Removal.

Construction Specification 203—Channel Obstruction Removal

1. Scope

The work shall consist of the cleanup of designated channel areas consisting of the removal and disposal of trees, logs, stumps, brush, tops, rubbish, debris and other items as specified in Section 8 deposited in the channel.

2. Access

Access shall be designated by NRCS unless alternate routes are obtained by the Contractor in writing and approved by NRCS. All access routes shall be restored, by the Contractor, to the condition prior to the commencement of work under this contract. A permit modification will not be required for an existing access road to a channel providing no improvements, such as land clearing, widening, placing fill, or surfacing, are required. A contract modification will be required where improvements such as land clearing, widening, placing fill, surfacing of an existing trail, or where there is no trail, and access is through a wetland. In addition, a contract modification will be required for the additional access route providing a permit is granted by the appropriate regulatory agencies.

3. Limits of Work

The beginning and ending work limits are as shown on the "Site Location Maps". Each end of each reach of the channel and its tributaries designated for obstruction removal will be referenced to identified roads or other structures or landmarks or be marked by the Government Representative by means of stakes, flags, or other suitable markers.

The work limits are as shown on the project drawings. Generally, the work limits are established in the project drawings as 25 feet from the top bank on the work side and 10 feet on the off side. Exceptions to this are work performed by floating within the channel and work accomplished entirely by hand. In these cases the work limits are established as 10 feet from top bank on both work side and off side.

When debris removal is required at bridge and culvert locations, the work limits shall be the distance necessary to remove all floating and submerged accumulated debris. At bridges and culverts, both sides of the channel may be used as work sides if conditions warrant.

4. Removal

Flow obstructions shall be removed by methods including, but not limited to, sawing, cabling, winching, lifting, or dragging. No excavation for floatation or any other reasons will be allowed.

The following guidelines will be used to determine which trees, stumps, and brush to remove. **The final determination will be made by the Government Representative.**

a. All downed trees, brush, limbs, tops, vines, and other washed-in woody vegetative materials lying completely or partially within the stream banks shall be removed.

b. Undermined or storm damaged trees within or outside the banks which are still standing but likely to fall into the stream shall be removed.

c. Stumps of downed trees within the channel banks shall not be removed unless otherwise noted in Section 8 of this specification.

All building materials, manufactured items, and other loose foreign debris lying completely or partially within the limits of designated areas shall be removed.

5. Disposal

All material produced from "Channel Obstruction Removal", shall be hauled to the nearest public landfill or disposed of as specified in Section 8 of this specification.

Sediment removed from the watercourses shall be placed and spread as specified in Section 8. No sediment shall be placed on improved property except where directed or allowed by NRCS to fill stump holes, ruts, and other local depressions. Alternate methods of disposal proposed by the Contractor must be approved by NRCS.

Temporary or permanent placement of logs/debris into tributaries, side ditches, floodplains or other defined water entrances to the watercourse being cleaned will not be allowed for any reason. Should the contractor need to cross such water entrances as part of his/her debris removal operation then the contractor shall bridge such watercourses using temporary bridging materials, such as equipment mats, which will not obstruct the flow of the side drains. Should the contractor need to cross the watercourse being cleaned, the same crossing methods shall be utilized. All swales and low areas that are wet or subject to rutting will be crossed using mats. If these same areas are dry and rutting is minimal to none when crossing, mats will not be required.

6. Special Requirements

Travel paths constructed in the work areas shall be kept to the minimum necessary. Bush-hogging or clearing of the entire work limit will not be allowed. Bush-hogging of a narrow path for access to the storm related debris is allowable. The contractor shall prosecute his work to prevent avoidable damage to the maximum extent possible.

A five (5) foot wide buffer along top bank will be left on the work side. The contractor shall make every effort possible to minimize destruction of trees and vegetation within the buffer. Some destruction of trees and vegetation may occur during debris removal however, the impact should be minimal to the top bank and the area adjacent to the top bank. The five (5) foot dimension for the buffer shall be measured on the work side from the top bank to a point five (5) feet away from the channel. No benching of the channel sides will be permitted.

All saw cuts shall be made parallel to and as close to ground level as the cutting tools will permit, but no higher than 6” – 10” above the ground.

The Contractor shall take reasonable precautions to prevent further damage to the channel and its environment to include channel banks, fishery resources, and undamaged trees. The Contractor shall provide tanks or barrels to be used for off-site disposal of chemical pollutants such as drained lubricating or transmission oils, greases, etc. produced as a by product of this work. Washing, fueling, or servicing of equipment shall be avoided where spillage or wash water can enter the watercourse.

Equipment, with the exception of barges or marsh buggies, shall not be allowed to operate within the channel. Barge mounted equipment or marsh buggies can only be used within the channel providing there is sufficient depth of water for the barge or marsh buggy to float.

The number of channel crossings shall be kept to a minimum. Materials used to form channel crossings shall be removed once the work for the subject reach is completed.

The Contractor shall backfill holes in the channels and channel banks resulting from stump removal **in**

residential and other landscaped areas. Backfill shall be the best fill material available from within fifty (50) feet of the stump hole (excluding the channel). Upon occasion, spoil may not be available. In such cases, suitable fill material as concurred in by the COTR shall be hauled into the site to fill the stump holes. In residential or other landscaped areas, the fill used to backfill the stump holes shall be topsoil. All track or wheel ruts created as a result of the debris removal operations shall be removed by dressing the area or by backfilling as prescribed above for stump holes.

All track or wheel ruts created as a result of the debris removal operations within the removal limits along the channel, access routes, and disposal sites shall be removed by dressing the area or by backfilling as prescribed above for stump holes. Upon completion of dressing operations all these areas shall be seeded in accordance with Specification 6.

Fences which must be cut or removed for access shall be repaired or replaced by the Contractor at his expense to equal or exceed the quality of fencing that was in place prior to cutting or removal.

The Contractor shall take all reasonable precautions to prevent further damage to structures, utilities, or other fixed improvements and shall promptly repair or replace at his expense any such improvements damaged by his operations.

The Contractor shall coordinate with the appropriate road department, the methods and manners of traffic control.

7. Measurement and payment

Payment will be made on a lump sum basis. Such payment shall be considered full compensation for all materials, labor, equipment, tools, seeding and other items necessary and incidental to complete the work.

8. Items of work and construction details

Items of work to be performed in conformance with this specification and the construction details therefore are:

a. Bid Item 1, Channel Obstruction Removal

1) This item shall consist of the removal and disposal of all obstructions caused by Hurricane Katrina and/or Rita from within the specified limits shown on the drawing or as staked in the field. Other native debris and/or natural obstructions in the stream are not to be removed.

2) **No dozers or log skidders of any size shall be allowed to be used. No equipment in excess of 30,000 lbs. or 9 ft. in width shall be allowed.** Rotary drum chippers/mulchers/grinders/shredders are not allowed. This includes equipment of the Gyro Trac and Fecon type.

3) Storm related woody debris caused by Hurricane Katrina or Rita within the work limits shall be removed. In landscaped areas or maintained (mowed or manicured) yards all storm debris within the work limits shall be removed. For channels in wooded areas with a top bank width of greater than 20 feet and in which a boat can be floated at the time of the debris removal, vegetative debris longer than 4 feet and a diameter greater than 4 inches within the work limits shall be removed. For channels in all other areas with a top bank width of less than 20 feet or in which a boat can not be floated at the time of debris removal, vegetative debris longer than 18 inches and a diameter greater than 2 inches within the work limits shall be removed. This is to include, but is not limited to all debris (trees, root balls which have been displaced, etc.) that is a part of the debris within the work limits. Accumulated

debris, regardless of size, resulting from Katrina or Rita forming an obstruction at culverts, bridges, and at any other location within the channel shall be removed.

4) Leaning trees, (those which are leaning over the channel and are identified for removal by the COTR or his/her representative), shall be cut off at the ground line leaving the root mass in place. If any part of a downed or leaning tree, identified for removal, is within the removal limits, the tree shall be removed back to the removal limits. If the root mass of such tree is outside the work limits, the tree shall be cut off at the removal limits and the root mass shall remain. The root mass of any tree, within the removal limits, designated for removal, shall only be left in place if 50% or more of the root mass is still in direct contact with the soil. Root masses of trees, within the removal limits, that are designated for removal and which are less than 50% in contact with the soil shall be removed, unless the removal of such root mass would cause a potentially erosive condition as determined by the COTR. Any hanging tree tops or limbs within the work limits which pose a safety issue to the contractor's employees shall be removed and disposed of. The contractor shall take necessary precautions not to damage any existing trees; however if any trees are damaged by the debris removal operations, they shall be removed and disposed of as directed by the COTR. Trees damaged during the debris removal operation will be treated with a tree wound treatment product consisting of an asphalt based emulsion as directed by the COTR.

5) The contractor is responsible for any debris, which his operation may dislodge and cause to float downstream of the work area.

6) Prior to the contractor being issued a notice to proceed, the contractor shall submit to NRCS in writing the method of woody debris disposal which he/she intends to use. The proposed method must be approved by NRCS prior to the start of work. Any of the following methods of disposal may be used, if approved by NRCS:

   a) All woody debris removed from within the work limits may be disposed of by airlifting or floating debris to staging areas obtained by the contractor and approved by NRCS, outside of the stream buffer zone. From there the debris shall be loaded and hauled to any federal, state or locally approved public landfill. The contractor is responsible for payment of any tipping fees unless otherwise specified in the contract.

   b) All woody debris including dislodged stumps shall be chipped. Logs and stumps too large for the size chipper that the contractor has chosen to use shall be cut into a size which said chipper will handle. Chips shall be blown and spread evenly onto the top bank (work side work area) and into the adjacent wooded areas. At no time shall chips be more than 6 inches deep. Placing chips within the flow lines of any mainline or side channels will not be allowed. The chipping operation shall be such that it will not allow the chips to re-enter the channel being worked. The only exception to chipping operation shall be that woody debris removed from within the work limits, which cannot be chipped due to proximity to home sites as concurred in by the COTR, may be disposed of by loading and hauling to any federal, state or locally approved public landfill. The contractor is responsible for payment of any tipping fees.

7) All noncombustibles and material not acceptable for chipping removed from within the work limits shall be disposed of by loading and hauling to any federal, state or locally approved public landfill. The contractor is responsible for payment of any tipping fees unless specified otherwise in the contract.