



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, MOBILE DISTRICT  
P.O. BOX 2288  
MOBILE, AL 36628-0001

**CESAM-RD-A**  
**PUBLIC NOTICE NO. SAM-2019-00439-JCC**

**December 17, 2019**

**JOINT PUBLIC NOTICE  
U.S. ARMY CORPS OF ENGINEERS AND  
STATE OF ALABAMA  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**PROPOSED MAINTENANCE AND SHORELINE STABILIZATION AND PROTECTION  
OF TWELVEMILE CREEK IN MOBILE COUNTY, ALABAMA**

TO WHOM IT MAY CONCERN: This District has received an application for a Department of the Army (DA) permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), and Section 404 of the Clean Water Act (33 U.S.C. 1344). Please communicate this information to interested parties.

**APPLICANT:** The City of Mobile, Alabama  
Attention: Mr. Nick Amberger, P.E.  
205 Government Street, 6<sup>th</sup> Floor South  
Mobile, Alabama 36633

**AGENT:** McCrory & Williams, Inc.  
Attention: Mr. Frank Crawford  
3207 International Drive, Suite G  
Mobile, Alabama 36606

**LOCATION OF WORK:** The proposed project is located along Twelvemile Creek; within Sections 15 and 21 of Township 4 South, Range 2 West; between Latitude 30.684433° North, Longitude -88.179625° West and Latitude 30.703669° North, Longitude -88.162114° West; in Mobile, Mobile County, Alabama.

**PROJECT PURPOSE:** The purpose of the proposed project is to reduce further bank destabilization, reduce sedimentation to Langan Park Lake and Threemile Creek, improve water quality, storm water management and flood control, and the protection of existing sanitary sewer crossings.

**PROPOSED WORK:** The applicant proposes to perform maintenance along approximately 8,200 linear feet of Twelvemile Creek. The construction activities will include the use of riprap rock to protect existing exposed sewer lines that cross the creek at several locations. The project is to include the installation of 6,400 linear feet of sheetpiling, 1,200 cubic yards of fill dirt, 1,200 cubic yards of gabions, 18,000 square feet of revet mattress, 30,719 cubic yards of riprap rock, 173 cubic yards of boulders, 60 cubic yards of grout, 60 cubic yards of concrete, and 360 linear feet of storm sewer pipe. The total placement of fill will cover 299,390 square feet (6.87 acres) of streambed and banks of Twelvemile Creek.

Construction methods will include the use of trackhoes, bulldozers, and trucks for the placement of the stabilization materials. The site will be accessed utilizing existing access roads, existing easements, and any required new temporary or permanent easements.

**AVOIDANCE & MINIMIZATION:** The applicant has indicated the fill has been minimized to the greatest extent practicable while still protecting the heavily modified creek from further erosion. The U.S. Army Corps of Engineers (USACE) has not determined the adequacy of the applicant's avoidance and minimization efforts for the proposed activity.

**COMPENSATORY MITIGATION:** Since this project would stabilize the banks of a heavily modified and eroding waterway and place no fill in wetlands or submerged aquatic vegetation beds, no mitigation has been proposed.

**WATER QUALITY / COASTAL ZONE MANAGEMENT:** The applicant has applied for certification from the State of Alabama in accordance with Section 401(a)(1) of the Clean Water Act. Upon completion of the required advertising and public comment review, a determination relative to Water Quality Certification will be made by the Alabama Department of Environmental Management.

**HISTORIC PROPERTIES:** In accordance with Section 106 of the National Historic Preservation Act and Appendix C of 33 CFR 325, the undertaking defined in this notice has been considered for the potential to affect cultural and historic properties within the permit area. Although the extent of federal control and responsibility for these considerations are confined to the limits of the permit area for this particular project, the potential indirect effects that may occur to historic properties as a result of the this undertaking have also been considered. The National Register of Historic Places will be consulted for properties listed in or eligible for the National Register which are known to exist and would be affected by the proposed work. The Mobile District is seeking comment from the State Historic Preservation Officer (SHPO) regarding the existence, or the potential for existence, of significant cultural and historic properties within the permit area. The permit area described above is currently under review by District archaeologists to provide a determination on the potential for existence of significant cultural and historic properties.

In addition to the provided comments from the SHPO (the Alabama Historical Commission), we are seeking comments from federally-recognized American Indian tribes, local historical societies, museums, universities, the U.S. Department of the Interior, National Park Service, Division of Archeological Services and concerned citizens regarding the existence or the potential for existence of significant cultural and historic properties within the permit area.

**ESSENTIAL FISH HABITAT:** This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The proposed project would impact approximately 8,200 linear feet of Twelvemile Creek. Our initial determination is that the proposed action would not have an adverse impact on EFH or federally managed fisheries due to the lack of submerged aquatic vegetation, tidal marsh wetlands, or other EFH in the project vicinity. Our final determination is subject to review by and coordination with the National Marine Fisheries Service.

**ENDANGERED SPECIES:** Preliminary review of the U.S. Department of the Interior's List of Endangered and Threatened Wildlife and Plants indicate the following listed endangered or threatened species with the potential to exist within Twelvemile Creek or the watershed of the project: wood stork (*Mycteria americana*) (T), black pine snake (*Pituophis melanoleucus lodigingi*) (T), eastern indigo snake (*Drymarchon corais couperi*) (T), and Gulf sturgeon (*Acipenser oxyrinchus desotoi*) (T). There is no designated critical habitat within the project's action area.

Preliminary review of this application and the above list of threatened or endangered species indicate the proposed activity may affect, but is not likely to adversely affect the wood stork, black pine snake, and Gulf sturgeon species within Mobile County, or any designated critical habitat. Additionally, the USACE has determined the proposed project will have no effect on the eastern indigo snake. This determination is being coordinated with the U.S. Fish and Wildlife Service and state agencies regarding any potential effects on the listed species via this Public Notice.

**PUBLIC REVIEW:** This public notice is being distributed to all known interested persons in order to assist in developing facts on which a decision by the USACE can be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and use of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state and local agencies and officials; Indian Tribes; and other interested parties in order to evaluate the impacts of this proposed activity and determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state with particularity, the reasons for holding a public hearing. Evaluation of the probable

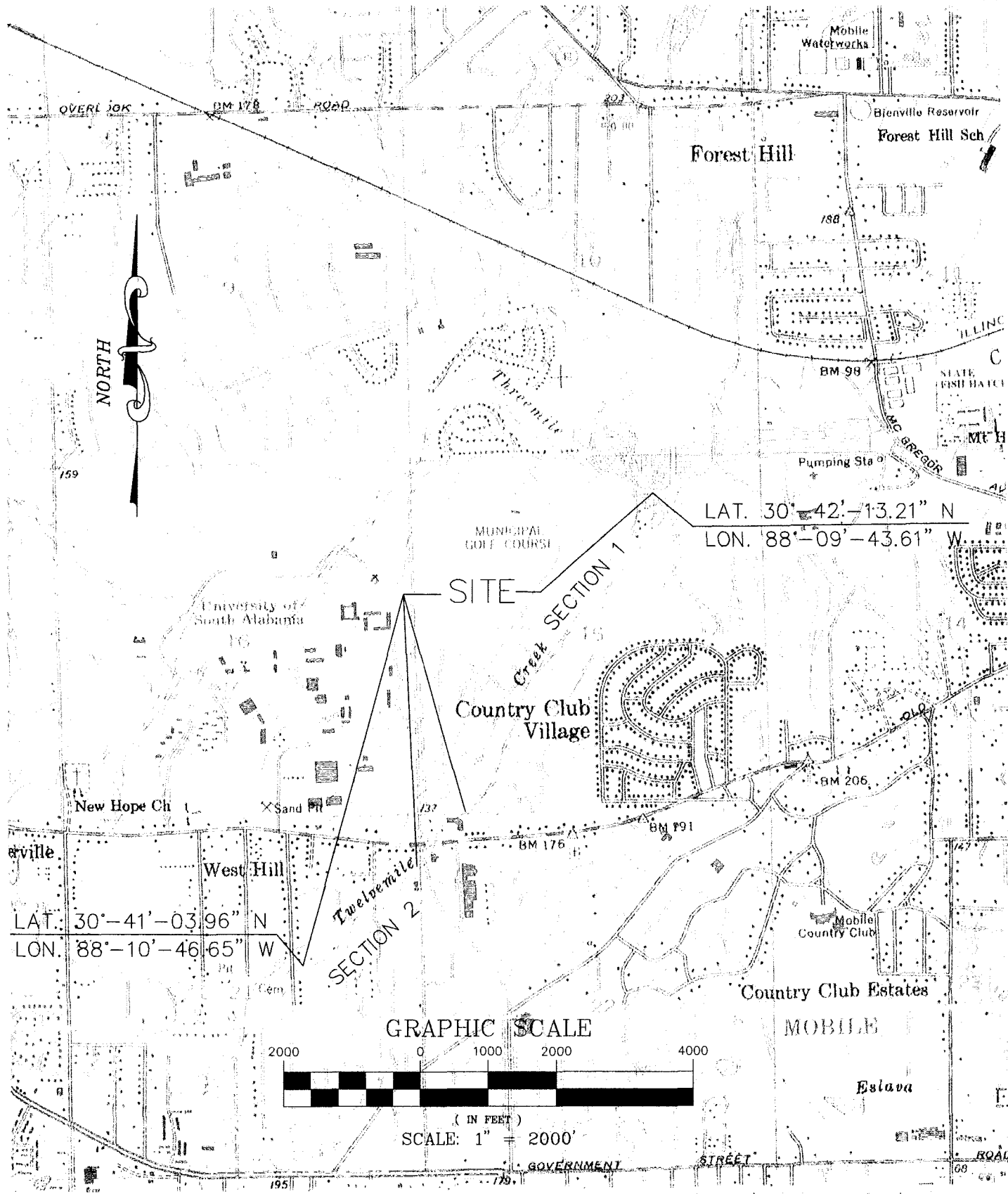
impacts involving discharges of dredged or fill material into waters of the United States will include the application of the Section 404(b)(1) guidelines established by the Administrator of the U.S. Environmental Protection Agency.

Correspondence concerning this Public Notice should refer to Public Notice Number **SAM-2019-00439-JCC**, and should be directed to the project manager, Ms. Jessica C. Comeaux by e-mail at [Jessica.C.Comeaux@usace.army.mil](mailto:Jessica.C.Comeaux@usace.army.mil), or to the USACE, Mobile District, Regulatory Division, Attention: Ms. Jessica C. Comeaux, Post Office Box 2288, Mobile, Alabama 36628-0001. Copies of all comments should be furnished to the Alabama Department of Environmental Management at [coastal@adem.alabama.gov](mailto:coastal@adem.alabama.gov), or sent to: Alabama Department of Environmental Management, Mobile Branch / Coastal Section, 3664 Dauphin Street, Suite B, Mobile, Alabama 36608. **All comments should be received no later than 30 days from the date of this Public Notice.**

For additional information about our Regulatory Program, please visit our web site at [www.sam.usace.army.mil/Missions/Regulatory.aspx](http://www.sam.usace.army.mil/Missions/Regulatory.aspx).

MOBILE DISTRICT  
U.S. Army Corps of Engineers

Attachments



SECTION 15 & 21, TOWNSHIP 4 SOUTH, RANGE 2 WEST  
 SPRING HILL QUADRANGLE MAP, MOBILE COUNTY, ALABAMA

**McCrary Williams**  
INCORPORATED

Engineers Surveyors

MOBILE, ALABAMA

PHONE: (251) 476-4720 FAX: (251) 476-4721

CITY OF MOBILE  
 2018 CIP TWELVEMILE CREEK BANK STABILIZATION  
 SOUTH OF MUSEUM DRIVE AND  
 TWELVEMILE CREEK REPAIRS AT EAST DRIVE  
 ( SECTION 1 & SECTION 2 )  
 PROJECT NO. 2018-3005-09

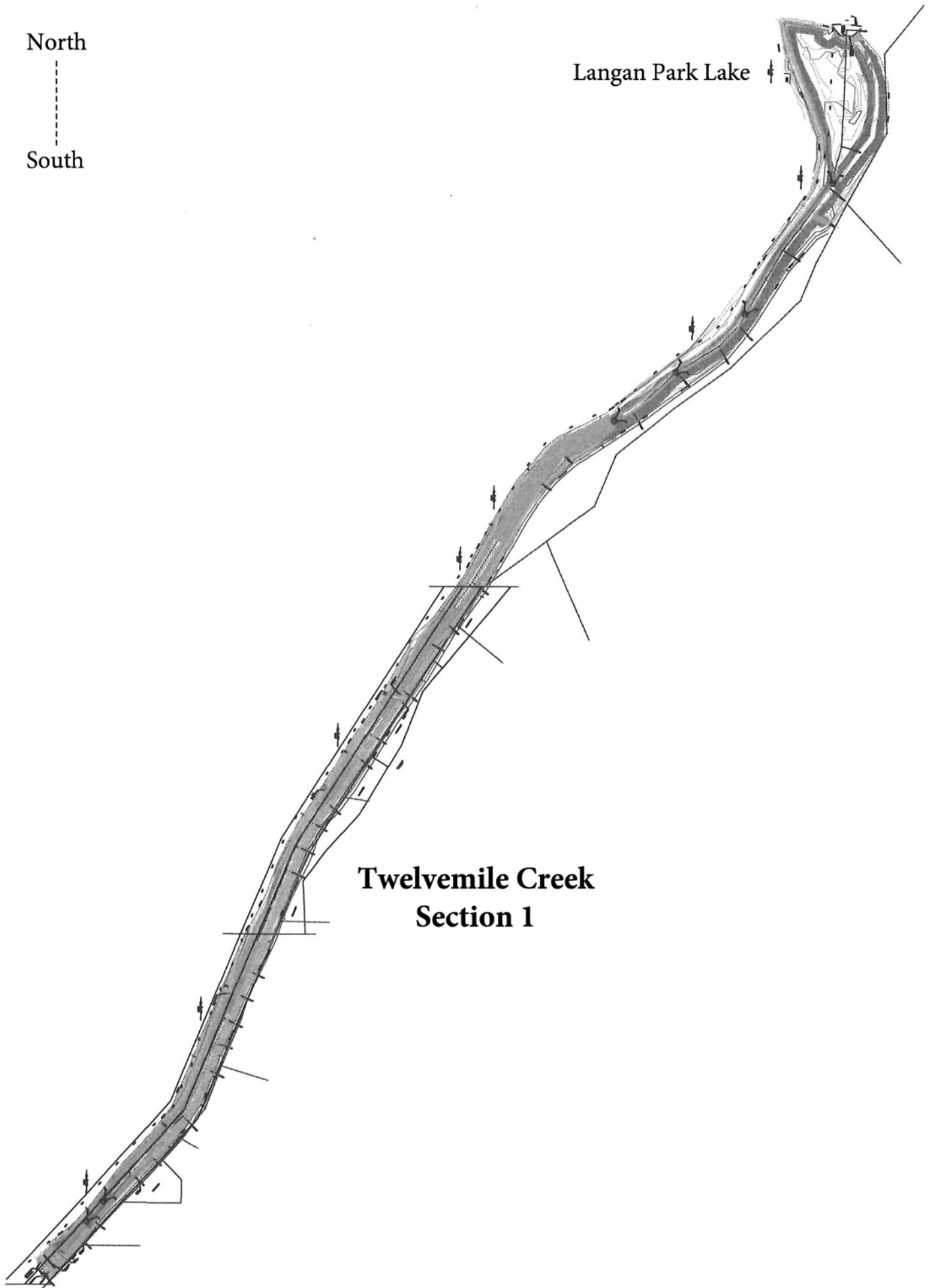
**Department of the Army // SAM-2019-00439-JCC**

North



South

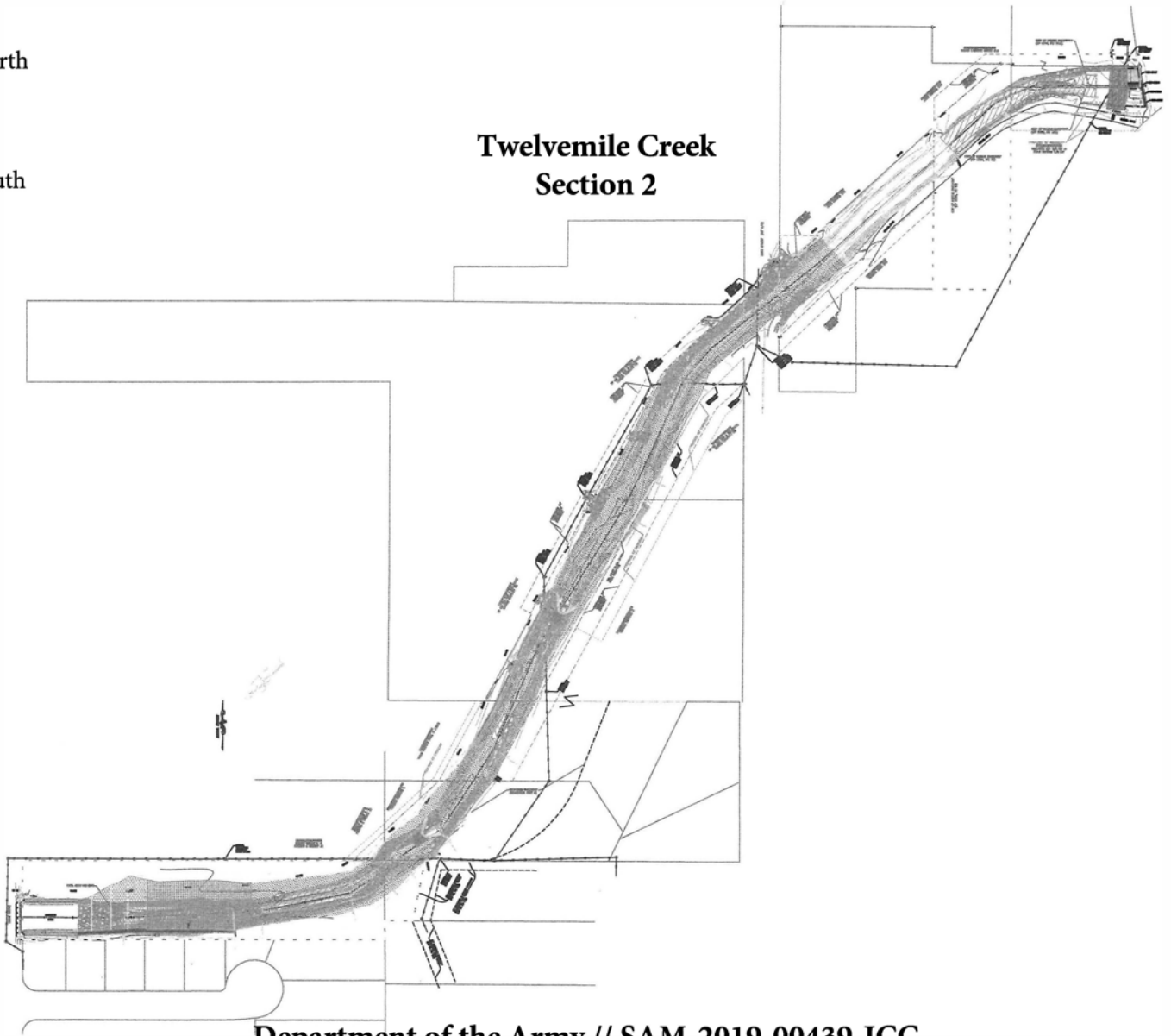
Langan Park Lake



**Twelvemile Creek  
Section 1**

North  
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South

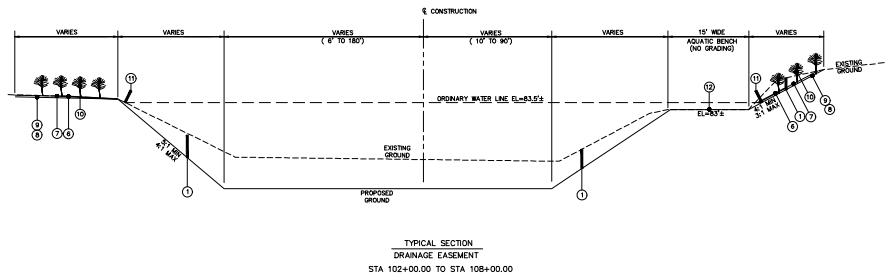
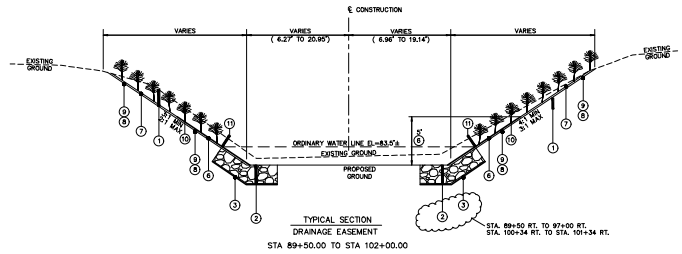
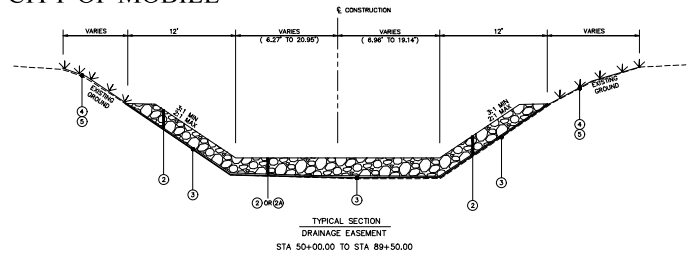
### Twelvemile Creek Section 2



Department of the Army // SAM-2019-00439-JCC

# QUANTITY / TYPICAL

## CITY OF MOBILE



SUMMARY OF QUANTITIES			
ITEM NO.	TOTAL	UNIT	DESCRIPTION
201-A	1	LS	CLEARING AND GRUBBING (APPROX. 0.5 ACRES)
210-A	12,000	CY TBM	UNCLASSIFIED EXCAVATION
210-D1	200	CY TBM	BORROW EXCAVATION (A-2-4 OR BETTER)
210-D2	400	CY TBM	BORROW EXCAVATION (SELECT BACKFILL) (A-6 OR A-7)
210-H	23,000	CY TBM	EXCAVATION FOREBAY SEDIMENT (STA. 102+00 TO 108+00)
600-A	1	LS	MOBILIZATION
610-C1	18,000	TON	LOOSE RIPRAP, CLASS 2, 12" - 24" THICK
610-C2	2,750	TON	LOOSE RIPRAP, CLASS 3, 24" THICK
610-D	16,000	SY	FILTER BLANKET, GEOTEXTILE, (NON-WOVEN)
615-B	30	CY	GROUT FOR RIPRAP
650-A	500	CY	TOPSOIL
652-A	3	ACRE	SEEDING (NATIVE SEED MIX)
652-X	2	ACRE	SPECIAL SEEDING SYSTEM - NATIVE SEEDING (PERM/TEMP SEEDING, FLEXIBLE GROWING MEDIA, BIOTIC SOIL MEDIA (STA. 100+00 TO STA. 108+00))
654-A	200	SY	SOLID SOODING (CONTINGENCY)
656-A	3	ACRE	MULCHING
657-EX	250	TON	STEP POOL (BOULDERS)
659-A	11,000	SY	ROLLED EROSION CONTROL PRODUCT (COIR FABRIC)
660-A	2	ACRE	BIOTIC SOIL MEDIA
660-C	35,000	SF	SHRUB (BARE ROOTS)
660-K	4	TON	STRAW
660-X	700	EACH	LIVE STAKES
662-A	4	ACRE	TEMPORARY SEEDING
665-B	4	ACRE	TEMPORARY MULCH
665-E	2,000	SY	POLYETHYLENE
665-I	1,000	TON	TEMPORARY RIPRAP, CLASS 2
665-J	4,000	LF	SILT FENCE
665-K	300	CY	DRAINAGE SUMP EXCAVATION
665-L	400	LF	FLATING BASIN BOOM
665-N	1	LS	TEMPORARY EROSION CONTROL PLAN
669-B	1	LS	SPOT POST - EMERGENT HERBICIDE TREATMENT
674-A	1,000	LF	CONSTRUCTION SAFETY FENCE
740-X	1	LS	TRAFFIC CONTROL PLAN
ADDITIVE BID ITEM 1			
610-C2	500	TON	LOOSE RIPRAP, CLASS 3, 32" THICK (CONTINGENCY)
ADDITIVE BID ITEM 2			
505-E	1,000	LINEAR FOOT	PERMANENT STEEL SHEET PILING (A2-18 OR EQUAL)
ADDITIVE BID ITEM 3			
533-A1	100	LINEAR FOOT	24" STORM SEWER PIPE
533-A2	80	LINEAR FOOT	48" STORM SEWER PIPE
620-A	30	CUBIC YARD	MINOR STRUCTURE CONCRETE
ADDITIVE BID ITEM 4			
999-X	1	LUMP SUM	WORK OF A SIMILAR NATURE UTILIZING BID ITEMS TO BE DETERMINED BY ENGINEER (BID AMOUNT \$50,000)

- ① ITEM 210-A UNCLASSIFIED EXCAVATION
- ② ITEM 210-D BORROW EXCAVATION (LOOSE TRUCKED MEASUREMENT) (EARTH/FILL)
- ③ ITEM 610-C1 LOOSE RIPRAP, CLASS 2, 12"-24" THICK
- ④ ITEM 610-C2 LOOSE RIPRAP, CLASS 3, 24" THICK
- ⑤ ITEM 610-D FILTER BLANKET, GEOTEXTILE, (NON-WOVEN)
- ⑥ ITEM 652-A SEEDING
- ⑦ ITEM 654-A MULCHING
- ⑧ ITEM 650-A 4" APPROVED TOPSOIL, ENGINEER APPROVED TOPSOIL (SEE SPECIFICATIONS)
- ⑨ ITEM 652-X BIOTIC SOIL MEDIA AND TYPE 4 HYDROSEEDING IN ACCORDANCE WITH SPECIFICATIONS AND AS APPROVED BY ENGINEER
- ⑩ ITEM 660-K STRAW PLACED AT 1.5 - 2 TONS PER ACRE
- ⑪ ITEM 669-A COIR FABRIC (20.6 OZ/SY / 700 LBS/1000 SQ YD) WITH 4" (MIN) BIODEGRADABLE SOIL FABRIC PING WITH ANCHOR BARS AND/OR HOOKED HEAD OR WOOD STAKES AT LEAST 12" IN LENGTH
- ⑫ ITEM 660-C ZONE 1: SHRUBS, TEMPORARY, AND PERMANENT GROUND COVER
- ⑬ ITEM 660-X LIVE STAKES: ONE ROW ALONG STREAM BANK AT BASE FLOW
- ⑭ AREAS WITHIN AQUATIC BENCH THAT ARE EXCESSIVELY COVERED IN INVASIVE SPECIES SHALL BE EXCAVATED APPROXIMATELY 18"

**McCrorry Williams**  
INCORPORATED  
Engineers Surveyors

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MOBILE, ALABAMA  
36606  
PHONE: (251) 476-4720  
FAX: (251) 476-4721  
EMAIL: mail@mcwinc.com

QUANTITY / TYPICAL  
TWELVE MILE CREEK  
BANK STABILIZATION REPAIRS  
CITY OF MOBILE

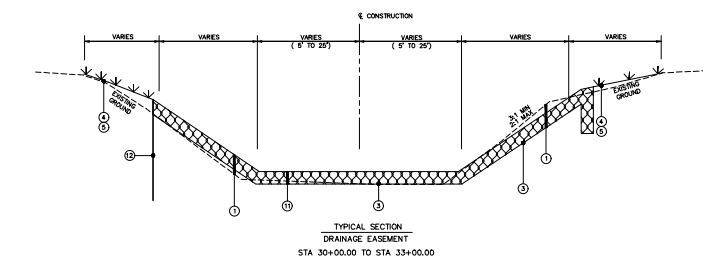
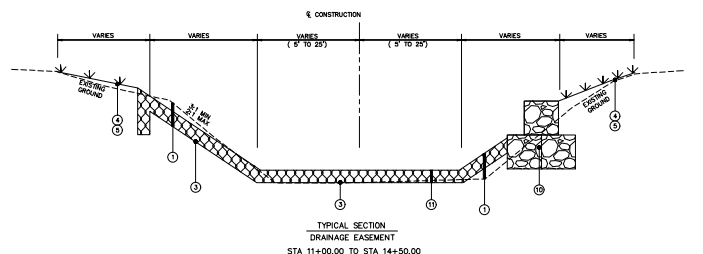
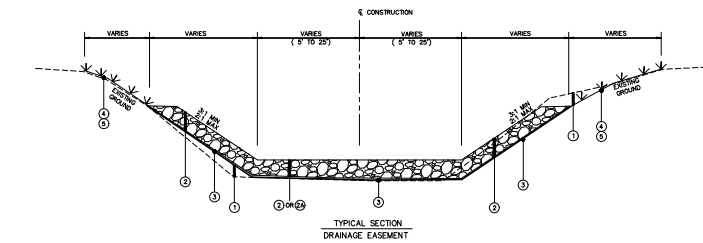
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Department of the Army // SAM-2019-00439-JCC - Section 1 Typical



## QUANTITY / TYPICAL CITY OF MOBILE

SUMMARY OF QUANTITIES			
ITEM NO.	TOTAL	UNIT	DESCRIPTION
201-A	1	LUMP SUM	CLEARING AND GRUBBING
210-A	11,000	CUBIC YARD(TBM)	UNCLASSIFIED EXCAVATION
210-A	1	LUMP SUM	EXCAVATION AND SITE PREP FOR PILE PLACEMENT
505-E	1,300	LINEAR FOOT	PERMANENT STEEL SHEET PILING AZ-18 (OR APPROVED EQUAL)
210-A	2	LUMP SUM	EXCAVATION AND SITE PREP FOR PILE PLACEMENT (STEP DOWN WALL)
505-E	3,300	LINEAR FOOT	EXCAVATION AND SITE PREP FOR PILE PLACEMENT (STEP DOWN WALL)
210-D1	200	CUBIC YARD(TBM)	BORROW EXCAVATION (A-3+4 OR BETTER)
210-D2	400	CUBIC YARD(TBM)	BORROW EXCAVATION (SELECT BACKFILL(A-6 OR A-7))
505-E	900	LINEAR FOOT	SLOPE PROTECTION STEEL SHEET PILING STA 11+25
505-E	1,600	LINEAR FOOT	SLOPE PROTECTION STEEL SHEET PILING STA 23+25
505-E	1,500	LINEAR FOOT	SLOPE PROTECTION STEEL SHEET PILING STA 30+25
600-A	1	LUMP SUM	MOBILIZATION
609-C	1,200	CUBIC YARD	GABIONS
609-D	2,000	SQUARE YARD	KEYT (RENO) MATTRESS, 9" THICK
610-C1	11,000	TON	LOOSE RIPRAP, CLASS 2, 12" - 18" THICK
610-C2	3,000	TON	LOOSE RIPRAP, CLASS 3, 24" THICK
610-D	16,000	SQUARE YARD	FILTER BLANKET, GEOTEXTILE, (NON-WOVEN)
615-B	30	CUBIC YARD	GROUPT FOR RIPRAP
650-A	500	CUBIC YARD	TOPSOIL
652-A	3	ACRE	SEEDING (NATIVE SEED MIX)
654-A	500	SQUARE YARD	SOLID SOODING (CONTINGENCY)
656-A	3	ACRE	MULCHING - EROSION CONTROL NETTING
657-EX	100	TON	STEP POOL (BOULDERS)
658-A	10,000	SQUARE YARD	ROLLED EROSION CONTROL PRODUCT (COR FABRIC)
660-A	2	ACRE	BIOTIC SOIL MEDIA
665-A	4	ACRE	TEMPORARY SEEDING
665-B	4	ACRE	TEMPORARY MULCH
665-E	2,000	SQUARE YARD	POLYETHYLENE
665-I	1,000	TON	TEMPORARY RIPRAP, CLASS 2
665-J	3,000	LINEAR FOOT	SILT FENCING, TYPE A
665-H	300	CUBIC YARD	DRAINAGE SUMP EXCAVATION
665-L	400	LINEAR FOOT	FLOATING BASIN BODM
665-X	1	LUMP SUM	TEMPORARY EROSION CONTROL PLAN
674-A	1,000	LINEAR FOOT	CONSTRUCTION SAFETY FENCE
740-X	1	LUMP SUM	TRAFFIC CONTROL PLAN
ADDITIVE BID ITEM 1			
505-E	1,000	LINEAR FOOT	SEWER CROSSING SHEET PILING (AZ-18 OR EQUAL)
ADDITIVE BID ITEM 2			
533-A1	100	LINEAR FOOT	24" STORM SEWER PIPE, ALUMINIZED METAL
533-A2	80	LINEAR FOOT	48" STORM SEWER PIPE, ALUMINIZED METAL
620-A	30	CUBIC YARD	MINOR STRUCTURE CONCRETE
ADDITIVE BID ITEM 3			
999-X	1	LUMP SUM	WORK OF A SIMILAR NATURE UTILIZING BID ITEMS TO BE DETERMINED BY ENGINEER



- ① ITEM 210-A UNCLASSIFIED EXCAVATION (LOOSE TRUCKED MEASUREMENT) (EARTH/FILL)
- ② ITEM 610-C1 LOOSE RIPRAP, CLASS 2, 12" - 24" THICK
- ③ ITEM 610-C2 LOOSE RIPRAP, CLASS 3, 24" THICK
- ④ ITEM 610-D FILTER BLANKET, GEOTEXTILE, (NON-WOVEN)
- ⑤ ITEM 652-A SEEDING
- ⑥ ITEM 656-A MULCHING
- ⑦ ITEM 650-A 4" APPROVED TOPSOIL ENGINEER APPROVED TOPSOIL (SEE SPECIFICATIONS)
- ⑧ ITEM 652-X BIOD SOIL MEDIA AND TYPE 4 WORKING IN ACCORDANCE WITH SPECIFICATIONS AND AS APPROVED BY ENGINEER.
- ⑨ ITEM 660-K STRAW PLACED AT 1.5 - 2 TONS PER ACRE.
- ⑩ ITEM 658-A COR FABRIC (20.6 OZ/SY / 700 g/m<sup>2</sup>) WITH 6" (150) BIODEGRADABLE SOIL FABRIC PILING WITH ANCHOR BARRIS AND/OR HOOKED HEAD OR BODM STAKES AT LEAST 12" IN LENGTH
- ⑪ ITEM 609-C GABIONS
- ⑫ ITEM 609-D KEYT (RENO) MATTRESS, 9" THICK
- ⑬ ITEM 505-E SLOPE PROTECTION STEEL SHEET PILING

**McCrorry Williams**  
INCORPORATED  
Engineers Surveyors

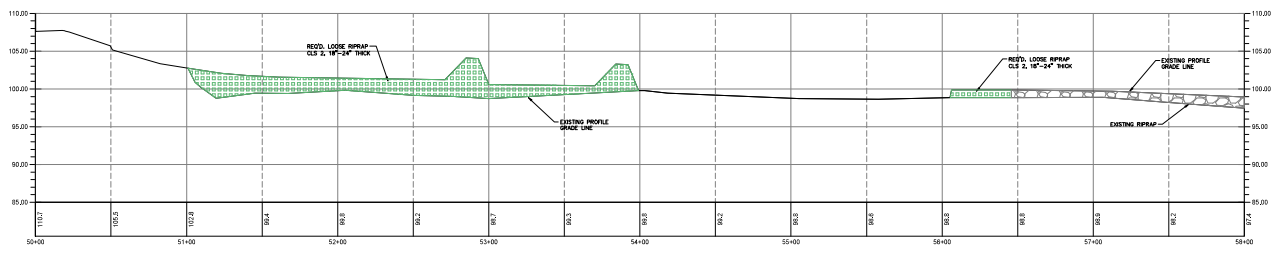
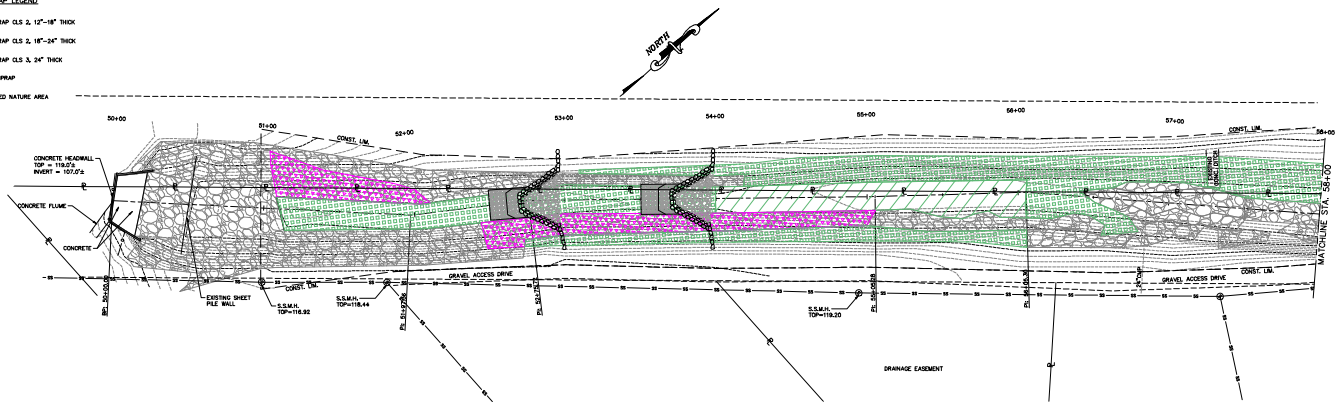
3207 INTERNATIONAL DR., SUITE G  
MOBILE, ALABAMA  
36606  
PHONE: (251) 476-4720  
FAX: (251) 476-4721  
EMAIL: mail@mcwinc.com

QUANTITY / TYPICAL TWELVE MILE CREEK BANK STABILIZATION REPAIRS			
CITY OF MOBILE			
SCALE: 1"=30'	DATE: Sep. 11, 2019	DRAWN BY: NAR	APPROVED BY:
			SHEET 4 OF 36

### Department of the Army // SAM-2019-00439-JCC - Section 2 Typical

PLOTTED ON 09/11/2019 4:03 PM

- RRRAP LEGEND**
- LOOSE RRRAP 0.5 & 12"-18" THICK
  - LOOSE RRRAP 0.5 & 18"-24" THICK
  - LOOSE RRRAP 0.5 & 24" THICK
  - EXISTING RRRAP
  - UNDISTURBED NATURAL AREA



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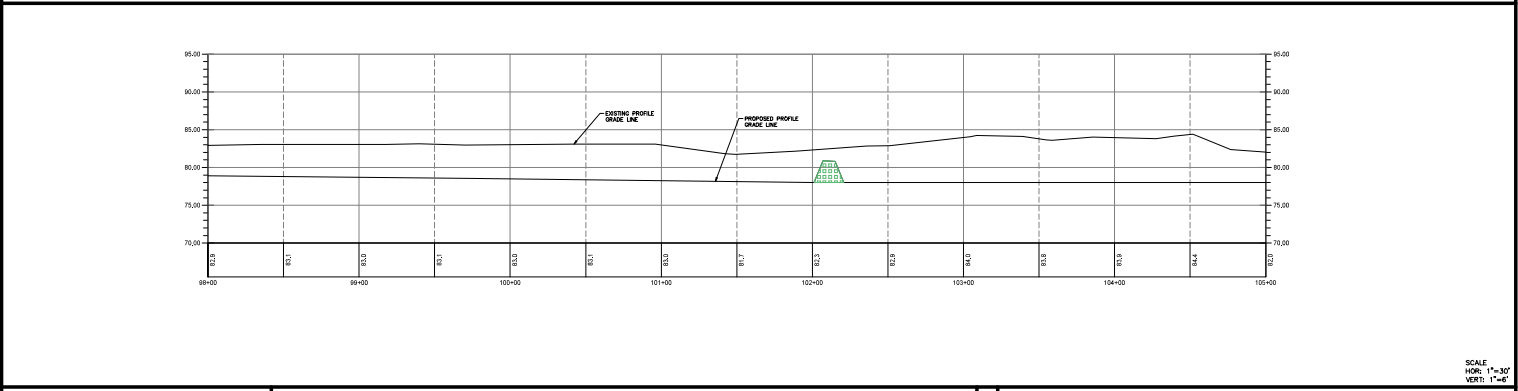
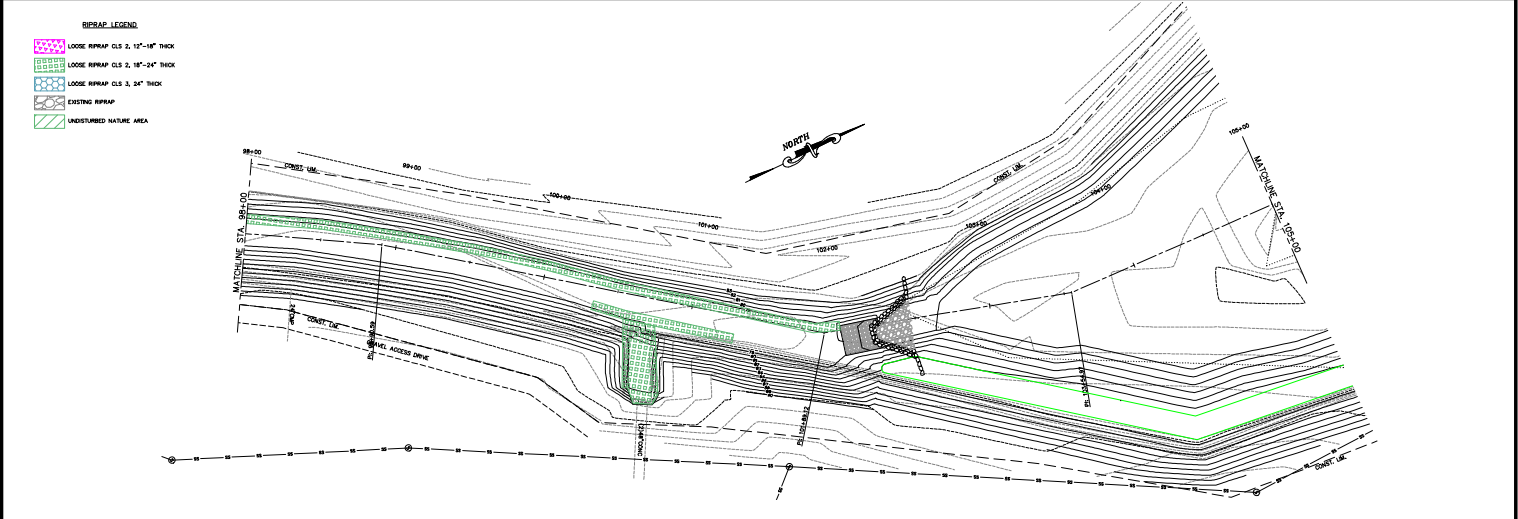
NO.	REVISION

**McCrary Williams**  
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PLAN / PROFILE TWELVE MILE CREEK BANK STABILIZATION REPAIRS			
CITY OF MOBILE			
SCALE: 1"=30'	DATE: Aug. 29, 2019	DRAWN BY: NAR	APPROVED BY:
MSTD-2182			SHEET 6 OF 71

Department of the Army // SAM-2019-00439-JCC



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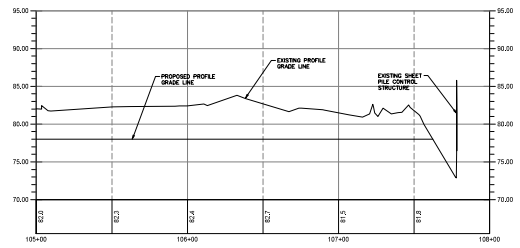
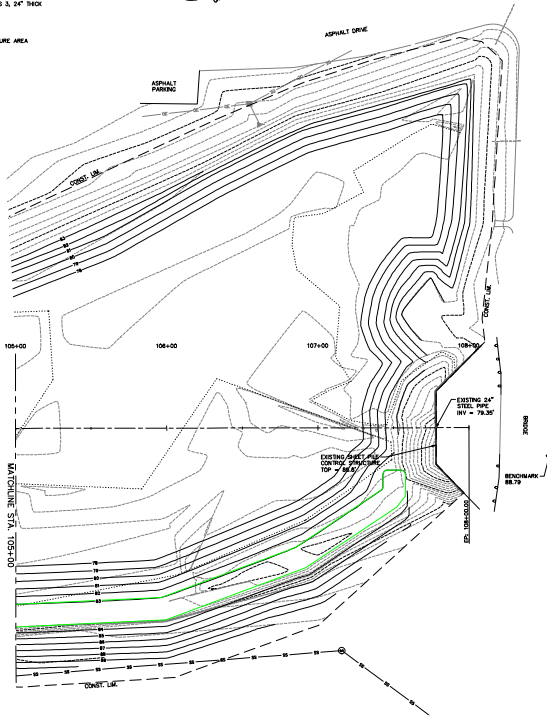
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INCORPORATED  
**Engineers Surveyors**

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 FAX: (251) 476-4721  
 EMAIL: mail@mccwinc.com

PLAN / PROFILE TWELVE MILE CREEK BANK STABILIZATION REPAIRS CITY OF MOBILE			
SCALE: 1"=30'	DATE: Aug. 29, 2019	DRAWN BY: NAR	APPROVED BY:
MSTD-2322			SHEET 12 OF 71

**Department of the Army // SAM-2019-00439-JCC**

- REPAIR LEGEND**
- LOOSE REPAIR CLS 2, 12"-18" THICK
  - LOOSE REPAIR CLS 2, 18"-24" THICK
  - LOOSE REPAIR CLS 3, 24" THICK
  - EXISTING REPAIR
  - UNDISTURBED NATURAL AREA



BASE DATA - 2019 - 12 - MILE.CAD

REVISION

**McCrary Williams**  
INCORPORATED  
**Engineers Surveyors**

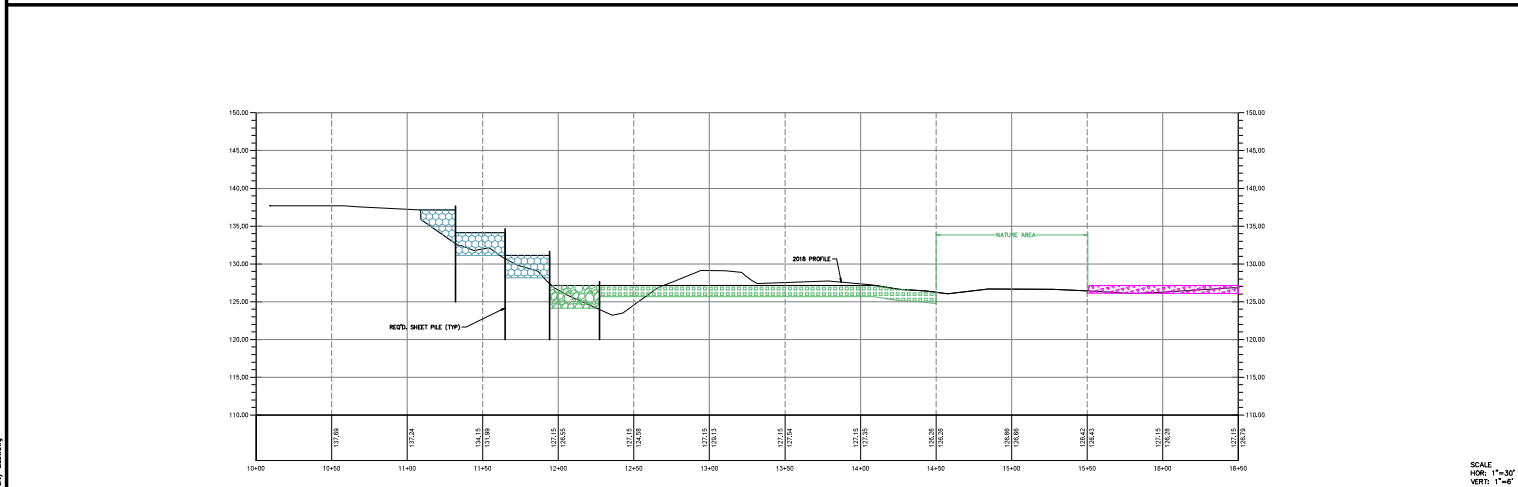
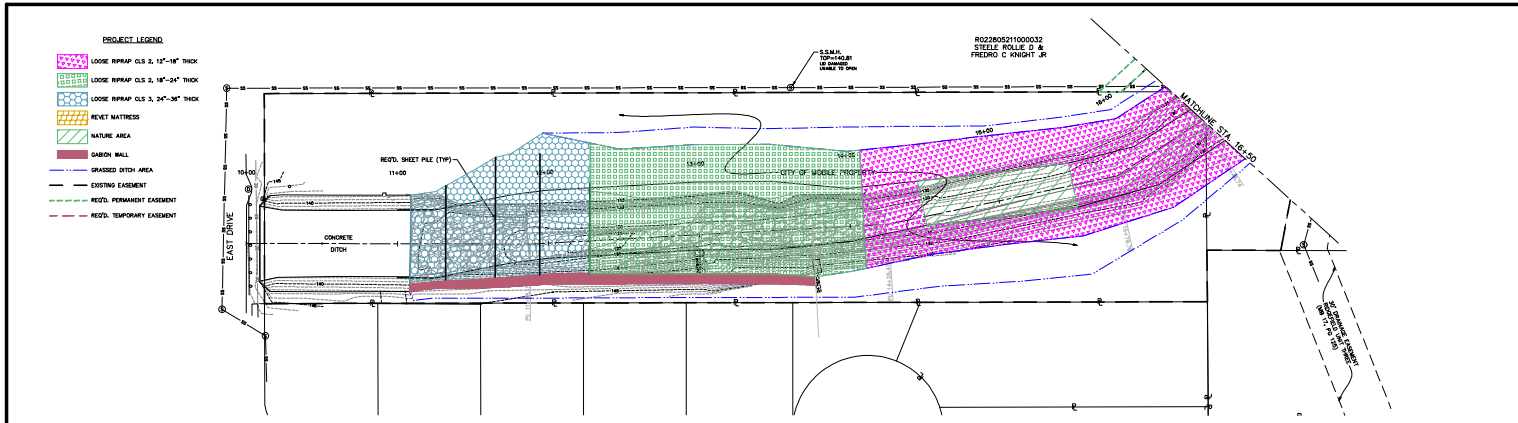
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**MOBILE, ALABAMA**  
 36606  
 PHONE: (251) 476-4720  
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 EMAIL: mail@mcwinc.com

MOB10-2122

<b>PLAN / PROFILE</b> TWELVE MILE CREEK BANK STABILIZATION REPAIRS CITY OF MOBILE				
SCALE: 1"=30'	DATE: Aug. 29, 2019	DRAWN BY: NAR	APPROVED BY:	SHEET 13 OF 71

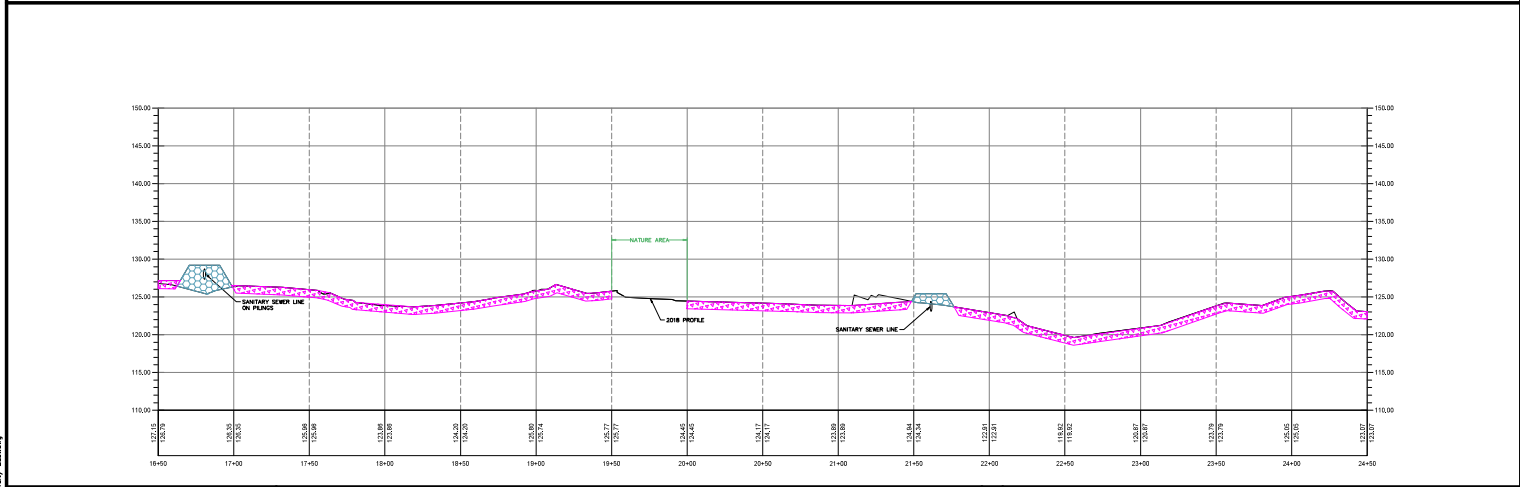
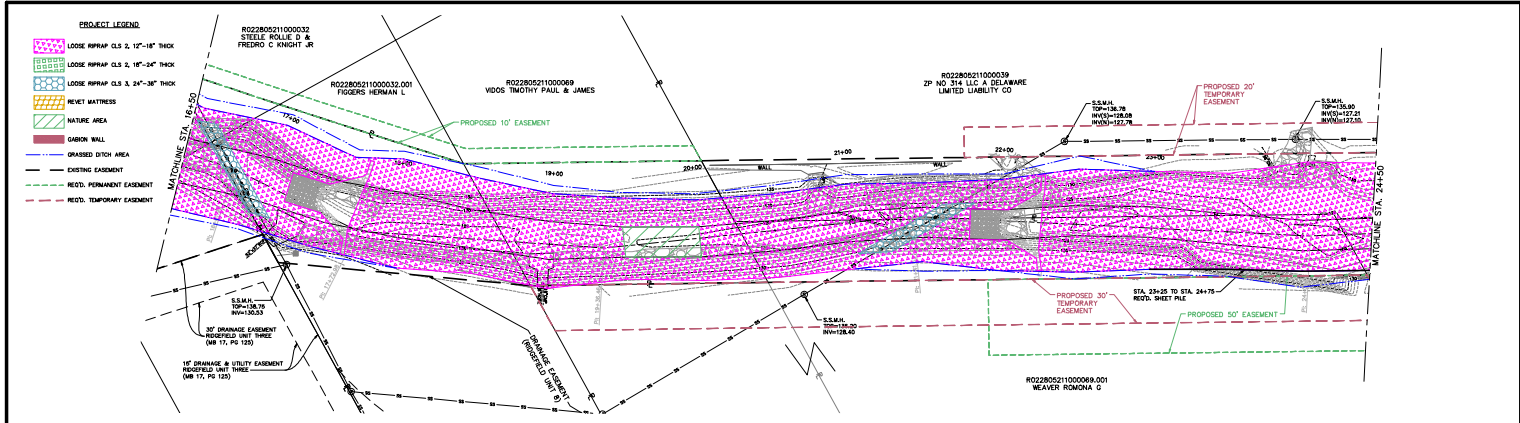
SCALE  
 HOR: 1"=30'  
 VERT: 1"=4'

**Department of the Army // SAM-2019-00439-JCC**



<p><b>McCrory Williams</b> INCORPORATED Engineers Surveyors</p>		<p>3207 INTERNATIONAL DR., SUITE G MOBILE, ALABAMA 36606 PHONE: (251) 476-4720 FAX: (251) 476-4721 EMAIL: mail@mcwinc.com</p>		<p>PLAN / PROFILE TWELVE MILE CREEK BANK STABILIZATION REPAIRS CITY OF MOBILE</p>	
<p>REVISION</p>		<p>MOBILE-2828</p>		<p>SCALE: 1"=30'</p>	
<p>DATE: Sep. 11, 2019</p>		<p>DRAWN BY: NAR</p>		<p>APPROVED BY:</p>	
<p>PLOTTED ON 09/11/2019 4:03 PM</p>		<p>SHEET 5 OF 36</p>		<p>SCALE: HORIZ: 1"=30' VERT: 1"=4'</p>	

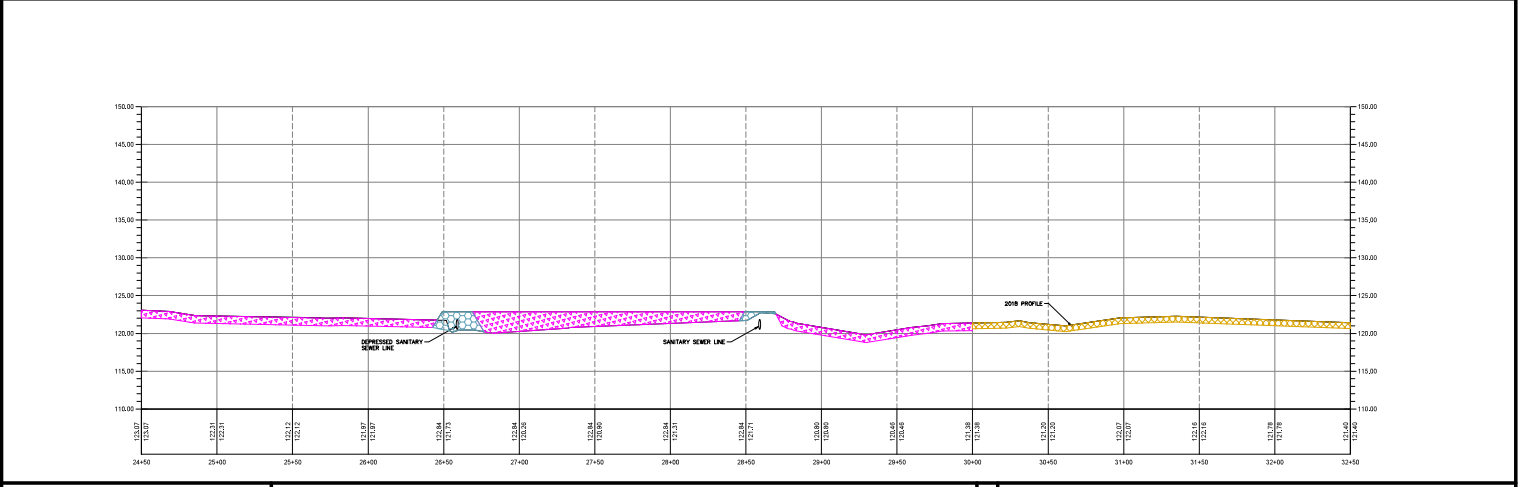
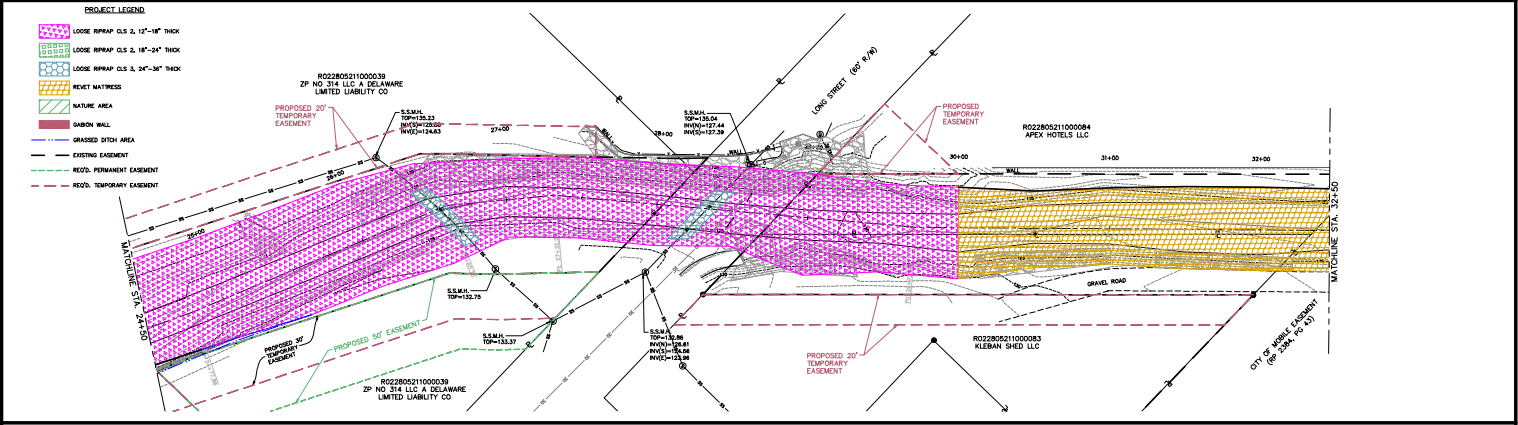
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	<h1 style="margin: 0;">McCrory Williams</h1> <p style="margin: 0;">INCORPORATED</p> <p style="margin: 0;">Engineers Surveyors</p>	<p style="margin: 0; font-size: small;">           3207 INTERNATIONAL DR., SUITE G            MOBILE, ALABAMA 36606            PHONE: (251) 476-4720            FAX: (251) 476-4721            EMAIL: mail@mcwinc.com         </p>	<p style="margin: 0; font-size: small;">           PLAN / PROFILE            TWELVE MILE CREEK            BANK STABILIZATION REPAIRS            CITY OF MOBILE         </p>									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">REVISION</th> <th style="width: 50%;">DATE</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISION	DATE			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">SCALE: 1"=50'</td> <td style="width: 25%;">DATE: Sep. 11, 2019</td> <td style="width: 25%;">DRAWN BY: NAR</td> <td style="width: 25%;">APPROVED BY:</td> </tr> </table>	SCALE: 1"=50'	DATE: Sep. 11, 2019	DRAWN BY: NAR	APPROVED BY:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">MOTD-2162</td> <td style="width: 50%;">SHEET 6 OF 36</td> </tr> </table>	MOTD-2162	SHEET 6 OF 36
REVISION	DATE											
SCALE: 1"=50'	DATE: Sep. 11, 2019	DRAWN BY: NAR	APPROVED BY:									
MOTD-2162	SHEET 6 OF 36											

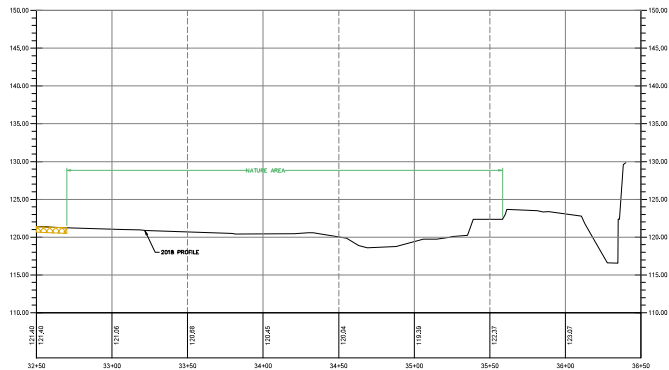
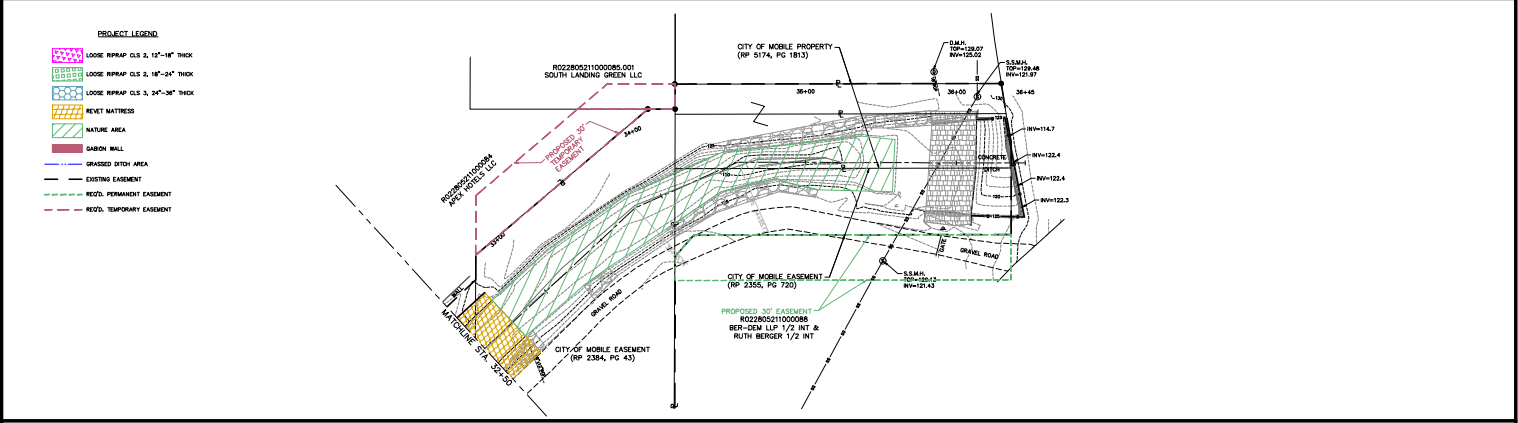
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<b>McCrory Williams</b> ENGINEERS SURVEYORS INCORPORATED	3207 INTERNATIONAL DR., SUITE G MOBILE, ALABAMA 36606 PHONE: (251) 476-4720 FAX: (251) 476-4721 EMAIL: mail@mcwinc.com	PLAN / PROFILE TWELVE MILE CREEK BANK STABILIZATION REPAIRS CITY OF MOBILE	
	SCALE: 1"=50' DATE: Sep. 11, 2019 DRAWN BY: NAR APPROVED BY:	SHEET 7 OF 36	

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 Engineers Surveyors

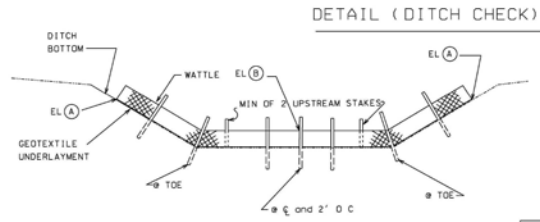
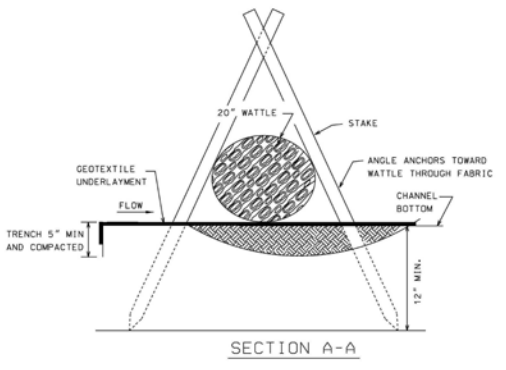
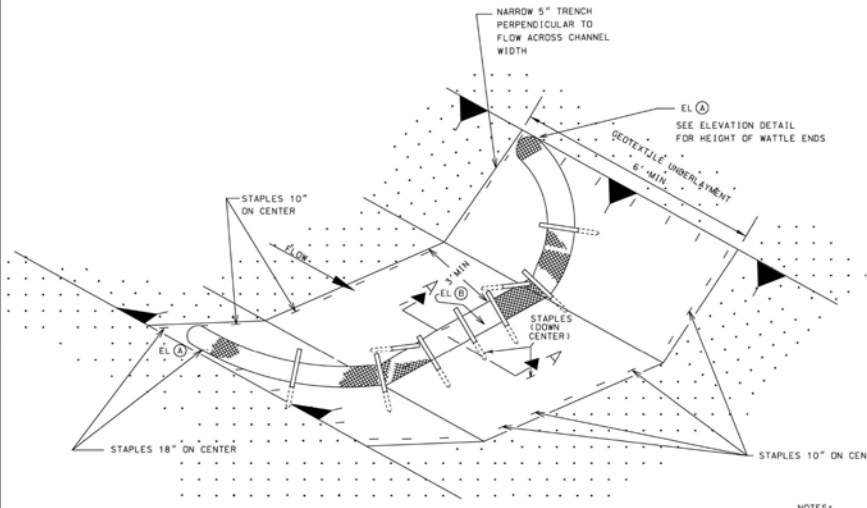
3207 INTERNATIONAL DR., SUITE G  
 MOBILE, ALABAMA 36606  
 PHONE: (251) 476-4720  
 FAX: (251) 476-4721  
 EMAIL: mail@mcwinc.com

PLAN / PROFILE TWELVE MILE CREEK BANK STABILIZATION REPAIRS				
CITY OF MOBILE				
SCALE: 1"=50'	DATE: Sep. 11, 2019	DRAWN BY: NAR	APPROVED BY:	SHEET 8 OF 36

Department of the Army // SAM-2019-00439-JCC



REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.



**ELEVATION DETAIL**  
NOTE: END POINTS (A) MUST BE HIGHER THAN FLOWLINE POINT (B)

- NOTES:
1. MINIMUM RECOMMENDED PLACEMENT INTERVAL BETWEEN WATTLE DITCH CHECK IS 100 FEET UNLESS SHOWN OTHERWISE ON THE PLANS OR APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON ESC-300-1.
  2. ANCHORING STAKES SHALL BE SIZED, SPACED, DRIVEN, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. STAKE SPACING SHALL BE A MAXIMUM OF TWO FEET.
  3. STAPLES SHOULD NOT BE USED IN HARD BOTTOM CHANNELS.
  4. STAPLES SPACED 18 INCHES APART, ALONG THE CHANNEL EDGES AND DOWN THE CENTER OF THE CHANNEL. STAPLES SPACED 10 INCHES APART, ACROSS THE UPSTREAM AND DOWNSTREAM EDGES.

**WATTLE DITCH CHECK SELECTION GUIDELINES**  
WATTLE DITCH CHECKS ARE APPROPRIATE FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS NOT EXCEEDING 1.0 CU FT/SEC.

---SPECIFICATIONS---

CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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REVISIONS:

1.	ISSUED BY: [Signature]	DATE: [Date]
2.	ISSUED BY: [Signature]	DATE: [Date]
3.	ISSUED BY: [Signature]	DATE: [Date]
4.	ISSUED BY: [Signature]	DATE: [Date]

ALABAMA DEPARTMENT OF TRANSPORTATION  
STATE COLLEGE, ALABAMA 36088-0001  
SESSION BUREAU SPECIAL DRAWING

DETAILS OF EROSION CONTROL  
WATTLE DITCH CHECK

SESSION: ESC-300-4  
INDEX NO: 1162-C

NOT TO SCALE

**McCrorry Williams** ENGINEERS SURVEYORS  
3207 INTERNATIONAL DR., SUITE G MOBILE, ALABAMA 36608  
PHONE: (251) 476-4720 FAX: (251) 476-4721 EMAIL: moli@mcwino.com

EROSION CONTROL DETAILS  
TWELVE MILE CREEK  
BANK STABILIZATION REPAIRS  
CITY OF MOBILE

SCALE: 1"=30'  
DATE: Sep. 11, 2019  
DRAWN BY: NAR  
APPROVED BY: [Signature]  
SHEET 3 OF 36

Department of the Army // SAM-2019-00439-JCC