GENERAL NOTES:

1. DEVELOPER:

   EFFINGHAM COUNTY BOARD OF COMMISSIONERS
   601 N LAUREL STREET
   SPRINGFIELD, GA 31329
   CONTACT: CHARLES L. GEORGE, P.E.
   (912) 754-8060

2. ENGINEER/SURVEYOR:

   INTEGRATED SCIENCE & ENGINEERING, INC.
   1039 SULLIVAN ROAD, STE. 200
   NEWNAN, GA 30265
   CONTACT: DAN DAVIS, P.E
   (678) 552-2106

3. PROPERTY OWNER:

   EFFINGHAM COUNTY BOARD OF COMMISSIONERS
   601 N LAUREL STREET
   SPRINGFIELD, GA 31329
   CONTACT: CHARLES L. GEORGE, P.E.
   (912) 754-8060

4. ZONING: I-1, INDUSTRIAL

5. TOTAL SITE AREA = 318 AC.
   DISTURBED AREA = 10.50 AC.
   IMPERVIOUS AREA = 0.0 AC.

6. 24 HOUR CONTACT: CHARLES L. GEORGE, P.E, 912-754-8060

7. STATE WATERS ARE NOT PRESENT ON THIS PROJECT SITE AND ARE NOT AFFECTED BY THIS DEVELOPMENT.

8. WETLANDS WERE IDENTIFIED WITHIN THE PROPERTY BOUNDARIES, CONTAINED WITHIN THE 100 YEAR FLOOD PLAIN UNLESS OTHERWISE NOTED, AND ARE NOT AFFECTED BY THIS DEVELOPMENT.

9. PROJECT SITE IS NOT LOCATED WITHIN A GROUND WATER RECHARGE AREA.

10. THIS PROPERTY IS LOCATED WITHIN A FLOOD HAZARD AREA ACCORDING TO F.E.M.A. FLOOD MAP FOR EFFINGHAM COUNTY COMMUNITY PANEL #13103C0333E DATED MARCH 16, 2015. AND COUNTY COMMUNITY PANEL #13103C0334E DATED MARCH 16, 2015.

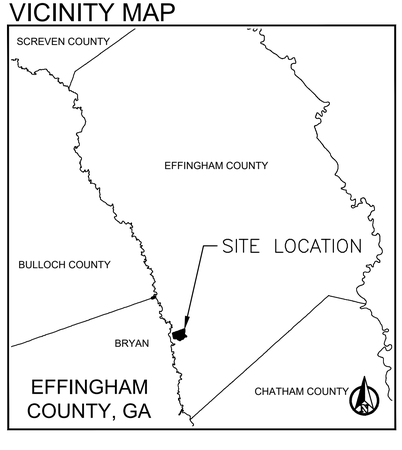
11. ALL WORK SHALL CONFORM TO EFFINGHAM COUNTY STANDARDS AND SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE PROPER OFFICIALS FOR ANY REQUIRED INSPECTIONS.

PREPARED FOR: EFFINGHAM COUNTY BOARD OF COMMISSIONERS

Sheet List Table

Sheet Number	Sheet Title
C000	COVER
C001	GENERAL NOTES
C100	EXISTING CONDITIONS
C101	DEMO AND CLEARING PLAN
C102	SAMPLING LOCATIONS
C200	SITE PLAN
C300	EXCAVATION OVERVIEW
C301	8.5'-6.5' EXCAVATION LIMITS
C302	4' EXCAVATION LIMITS
C303	3' EXCAVATION LIMITS
C304	2' EXCAVATION LIMITS
C305	1' EXCAVATION LIMITS
C306	LAKE DREDGING LIMITS
C307	FINAL GRADING AND DRAINAGE PLAN
C500	EROSION CONTROL COVER
C501	COMPREHENSIVE MONITORING PLAN
C502	N.P.D.E.S. CHECKLIST
C510	INITIAL PHASE EROSION AND SEDIMENTATION CONTROL PLAN
C520	INTERMEDIATE PHASE EROSION AND SEDIMENTATION CONTROL PLAN
C530	FINAL PHASE EROSION AND SEDIMENTATION CONTROL PLAN
C600	EROSION DETAILS
C601	EROSION DETAILS
C602	EROSION DETAILS
C700	CONSTRUCTION DETAILS

VICINITY MAP



SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

PROPERTY ADDRESS: 216 SHADY OAKS DRIVE, GUYTON GA, 31312
GPS LOCATION OF THE CONSTRUCTION EXIT: LAT: 32.1912, LONG: -81.3984

SITE LOCATION MAP

INTEGRATED Science & Engineering
1039 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2106 (F) 678.552.2107
ATLANTA/SAVANNAH
COA #: PEFC006625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR IND	11/20/20	---
1	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 1020.1802 | Design by: --- | Review by: ---

SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION
GMD 1559, EFFINGHAM COUNTY, GEORGIA

COVER

DRAWING NO. C000

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

GENERAL NOTES:

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601 N LAUREL STREET
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CONTACT: DAN DAVIS, P.E. (DDAVIS@INTSE.COM)
PHONE: (678) 552-2106

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601 N LAUREL STREET
SPRINGFIELD, GA 31329
CONTACT: CHARLES L. GEORGE, P.E.
(912) 754-8060

ZONING: I-1, INDUSTRIAL
4. SITE: TOTAL SITE AREA = 318ACRES
TOTAL DISTURBED AREA: 10.50ACRES

5. 24 HOUR CONTACT: CHARLES L. GEORGE, P.E, 912-754-8060

6. THIS PROPERTY IS LOCATED WITHIN A FLOOD HAZARD AREA ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP FOR EFFINGHAM COUNTY COMMUNITY PANEL #13103C0333E DATED MARCH 16, 2015 AND COUNTY COMMUNITY PANEL #13103C0334E DATED MARCH 16, 2015

7. NO WETLANDS ARE EFFECTED BY SITE DEVELOPMENT.

8. STORMWATER MANAGEMENT AND WATER QUALITY NOT PROVIDED WITHIN THIS PROJECT DUE TO NO IMPERVIOUS AREAS.

9. EXISTING UTILITY LOCATIONS SHOWN ARE GENERALLY SCHEMATIC IN NATURE AND MAY NOT ACCURATELY REFLECT THE SIZE AND LOCATION OF EACH PARTICULAR UTILITY. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THESE DRAWINGS. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE HIS OPERATIONS WITH ALL UTILITIES WHICH MAY BE IN CONFLICT WITH HIS WORK. THE CONTRACTOR MUST MAINTAIN AND PROTECT ALL SUCH UTILITIES, OR RELOCATE UTILITIES AS NEEDED.

10. ANY DAMAGES THAT MAY OCCUR TO REAL PROPERTY OR EXISTING IMPROVEMENTS SHALL BE RESTORED BY THE CONTRACTOR TO AT LEAST THE SAME CONDITION THAT THE REAL PROPERTY OR EXISTING IMPROVEMENTS WERE IN PRIOR TO THE DAMAGES. THIS RESTORATION SHALL BE SUBJECT TO THE OWNER'S APPROVAL; MOREOVER, THIS RESTORATION SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR. RESTORATION SHALL INCLUDE, BUT NOT BE LIMITED TO, REGRASSING, REVEGETATION, REPLACING FENCES, REPLACING TREES, ETC.

11. LOCAL PEDESTRIAN AND VEHICULAR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. TRAFFIC FLOW AND ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF THE CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC SAFETY MEASURES FOR WORK ON PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. BARRICADING AND TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND GA DOT STANDARD SPECIFICATIONS AND DRAWINGS.

12. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND PROCEDURES AND SHALL AT ALL TIMES TAKE ALL REASONABLE SAFETY PRECAUTIONS FOR THE SAFETY OF ITS EMPLOYEES ON THE PROJECT AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE, AND MUNICIPAL SAFETY LAWS AND BUILDING CONSTRUCTION CODES.

13. CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION. PONDING OF WATER IN STREETS, DRIVES, TRUCK COURTS, TRENCHES, ETC. WILL NOT BE ALLOWED.

14. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL STORM WATER POLLUTION PREVENTION LAWS AND ORDINANCES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR MAINTAINING OPERATIONS THAT MEET OR EXCEED ANY LOCAL, STATE OR FEDERAL PERMIT REQUIREMENTS. ANY PERMIT VIOLATION OR VIOLATIONS OF STATE LAWS AND REQUIREMENTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

15. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OR OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL PROVIDE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.

16. THE UTILITY PROTECTION AGENCY IS TO BE NOTIFIED 72 HOURS PRIOR TO ANY LAND DISTURBANCE ACTIVITY.

17. CONTRACTOR TO COORDINATE WITH POWER COMPANY PROVIDING TEMPORARY SERVICE FOR CONSTRUCTION FACILITIES DURING CONSTRUCTION.

18. CONTRACTOR IS TO COMPLY WITH ALL LOCAL BUILDING CODES AND REGULATIONS WHICH ARE PRESENTLY IN EFFECT.

TREE PROTECTION NOTES

1. TREE PROTECTION FENCE SHALL BE INSTALLED PRIOR TO CLEARING AND GRUBBING ACTIVITIES.

2. ALL TREE SAVE FENCE SHALL BE LOCATED OUTSIDE SILT FENCE IN APPLICABLE LOCATIONS. TREE SAVE FENCE SHALL BE INSTALLED BY CONTRACTOR AND APPROVED BY EFFINGHAM COUNTY.

3. ALL TREES WITHIN LIMITS OF GRADING SHALL BE COMPLETELY REMOVED AND MULCHED IN ACCORDANCE WITH PROJECT SPECIFICATIONS. ANY TREES DAMAGED OUTSIDE OF LIMITS OF CONSTRUCTION OR TREE PROTECTION FENCING SHALL BE REPLACED BY CONTRACTOR AT NO EXPENSE TO THE OWNER.

4. SEE SHEETS C510 - C530 FOR SITE EROSION CONTROL MEASURES.

DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND COST OF THE RELOCATION OF ALL UTILITIES ON SITE ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT, SUCH AS, BUT NOT LIMITED TO DRAINAGE STRUCTURES, TRAFFIC SIGNS, UTILITY POLES, GUY WIRES, ETC.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DEBRIS AS ACCEPTABLE TO THE OWNER IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS.

3. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.

4. ALL AREAS NOTED ON SHEET C101 SHALL BE DEMOLISHED AND REMOVED FROM THE SITE AFTER THE INSTALLATION OF EROSION CONTROL MEASURES AND PRIOR TO BEGINNING SITE WORK. CONTRACTOR SHALL COORDINATE DEMOLITION WITH OTHER SHEETS IN THIS PACKAGE. ITEMS REQUIRING DEMOLITION BASED ON PROJECT SCOPE AND NOT DETAILED ON THIS SHEET SHALL ALSO BE REMOVED BY CONTRACTOR IN ACCORDANCE WITH DEMOLITION REQUIREMENTS.

5. COMPLETLY REMOVE TREES EFFECTING NEW WORK ONLY. CONTRACTOR WILL BE REQUIRED TO REPLACE TREES TAKEN OUT THAT ARE NOT IN CONFLICT WITH SITE IMPROVEMENTS.

GRADING/DRAINAGE NOTES

1. SITE PREPARATION: ALL TREES AND UNWANTED VEGETATION SHOULD BE REMOVED, STUMPS GRUBBED AND ORGANIC TOPSOIL STRIPPED.

2. DENSITY TESTING SHOULD BE PERFORMED BY A SOILS TECHNICIAN TO DETERMINE THE DEGREE OF COMPACTION AND VERIFY COMPLIANCE WITH THE PROJECT SPECIFICATIONS. FOR UNDERFLOOR AREAS, AT LEAST ONE FIELD DENSITY TEST SHOULD BE MADE PER 5000 SQUARE FEET OF FILL AREA FOR EACH TWO FOOT LIFT. TESTING FREQUENCY SHOULD BE INCREASED IN CONFINED AREAS. AREAS WHICH DO NOT MEET THE COMPACTION SPECIFICATIONS SHOULD BE RECOMPACTED TO ACHIEVE COMPLIANCE. IN CONFINED AREAS, SUCH AS UTILITY TRENCHES, THE USE OF PORTABLE COMPACTION EQUIPMENT AND THIN LIFTS OF 3 TO 4 INCHES MAY BE REQUIRED TO ACHIEVE COMPACTION.

3. EARTHWORK SHALL BE ON AN UNCLASSIFIED BASIS. IMPORTING AND EXPORTING OF SOIL MAY BE REQUIRED TO RAISE/LOWER SITE TO FINAL GRADES. EXCAVATIONS MAY BE ACCOMPLISHED USING CONVENTIONAL HEAVY EARTHMOVING EQUIPMENT SUCH AS DOZER ASSISTED PANS, AND SIGNIFICANT EXCAVATIONS OF ROCK AND PARTIALLY WEATHERED ROCK ARE NOT ANTICIPATED.

4. PERMANENT AND TEMPORARY SLOPES SHALL BE CONSTRUCTED NO STEEPER THAN 1.5H: 1V FOR SLOPES LESS THAN 15 FEET HIGH. PERMANENT SLOPES SHOULD BE CONSTRUCTED NO STEEPER THAN 2H: 1V. ALL FINISHED SLOPES SHOULD BE SUITABLY PROTECTED FROM EROSION.

5. ALL PROPOSED CONTOURS ARE TOP OF FINISHED SURFACE.

6. SLOPES AND DISTURBED AREAS NOT COVERED BY PAVEMENT SHALL BE GRADED SMOOTH AND RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR TO PROVIDE TOPSOIL. THE AREAS SHALL BE SEEDED AND COVERED WITH MATTING AS DESIGNATED ON EROSION CONTROL FERTILIZED AND WATERED TO PROVIDE A HEARTY, MOWABLE STAND OF GRASS. SMALL ROCKS AND DEBRIS MUST BE REMOVED.

7. CLEARING LIMITS DETAILED ON THE DEMO AND CLEARING PLAN.

EXCAVATION NOTES

1. EXCAVATION TO INCLUDE THE REMOVAL, TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL. CONTRACTOR SHALL EXCAVATE THE CONTAMINATED SOILS TO THE APPROXIMATE LIMITS AND DEPTHS SHOWN IN THE PLANS ON PAGE C300-C306 AND AS DIRECTED BY THE OWNER'S LICENSED SITE PROFESSIONAL (LSP) TO ENSURE ALL IMPACTED SOIL HAS BEEN REMOVED.

2. CONTAMINATED SOIL SHALL BE EXCAVATED AND PLACED DIRECTLY INTO TRUCKS FOR TRANSPORT. IF STOCK PILING OF CONTAMINATED SOIL THE CONTRACTOR MUST INSURE ISOLATION FROM THE SURROUNDING ENVIRONMENT. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SECURITY OF THE CONTAMINATED MATERIAL DURING TRANSPORT.

3. LOADED TRUCKS LEAVING THE SITE MUST BE CLEANED AND INSPECTED FOR ANY SITE DEBRIS THAT CAN BE TRACKED OFF SITE. A TRUCK WHEEL WASHING STATION SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS ON PAGE C200.

4. HIGH VISIBILITY SAFETY FENCING SHALL BE PLACED AROUND ALL EXCAVATION AREAS ANYTIME THE SITE IS LEFT UNATENDED BY THE CONTRACTOR UNTIL THE AREA HAS BEEN BACKFILLED.

EROSION, SEDIMENTATION AND POLLUTION CONTROL NOTES:

24-HOUR CONTACT: CHARLES L. GEORGE, P.E, 912-754-8060

1. DISTURBED AREA: 10.50ACRES; SITE AREA: 318ACRES

2. **THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.**

3. **EROSION CONTROL MEASURES MUST BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.**

4. ALL EROSION CONTROL MEASURES ARE TO CONFORM TO THE STANDARDS SET FORTH IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" 2016 EDITION OR LATEST EDITION.

5. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM SHOWN ON THE APPROVED PLANS. IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DEVELOPER IMMEDIATELY!

6. **ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.**

7. SEDIMENT CONTROL MEASURES MUST BE INSTALLED BEFORE CLEARING AND GRADING BEGINS.

8. INSPECTIONS BY QUALIFIED PERSONNEL PROVIDED BY PRIMARY PERMITEE AND THE ASSOCIATED RECORDS SHALL BE KEPT ON SITE IN COMPLIANCE WITH NPDES PERMIT NUMBER GAR 100001.

9. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WITHIN 7 DAYS AFTER INSTALLATION.

10. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED BY THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

11. ANY AMENDMENT / REVISION TO THE ES&PC PLAN THAT HAVE A SIGNIFICANT EFFECT ON AN EROSION AND SEDIMENT CONTROL BMP THAT HAS A HYDRAULIC COMPONENT IS REQUIRED TO BE DESIGNED BY THE DESIGN PROFESSIONAL OF RECORD.

12. THE PRIMARY PERMITTEE IS REQUIRED KEEP THE ES&PC PLAN UP-TO-DATE.

13. STATE WATERS ARE LOCATED WITH 200 FEET OF THE PROJECTS BOUNDARIES, HOWEVER, WILL NOT BE AFFECTED.

14. WASTE MATERIALS SHALL NOT BE DISCHARGED TO STATE WATERS EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

15. THE ES&PC PLAN IS IN COMPLIANCE WITH ALL CURRENT WASTE DISPOSAL, SANITARY SEWER, AND/OR SEPTIC TANK REGULATIONS.

16. EROSION CONTROL SLOPE STABILIZATION, SS, IS REQUIRED ON ALL SLOPES 3:1 OR STEEPER.

17. GAB SHOULD BE PLACED IN PARKING LOT AREA AND DRIVEWAY AREAS AS SOON AS POSSIBLE FOR CONSTRUCTION TRAFFIC, WORKERS PARKING AND STAGING AREAS.

18. NO ALTERNATIVE BMP'S WERE USED IN THE DESIGN OF THE ES&PC PLAN.

19. NO CONSTRUCTION ACTIVITY WILL DISCHARGE STORM WATER INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT.

INTEGRATED Science & Engineering
1039 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2106 (F) 678.552.2107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR BID	11/20/20	---
1	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 1020.1802 | Design by: --- | Review by: ---

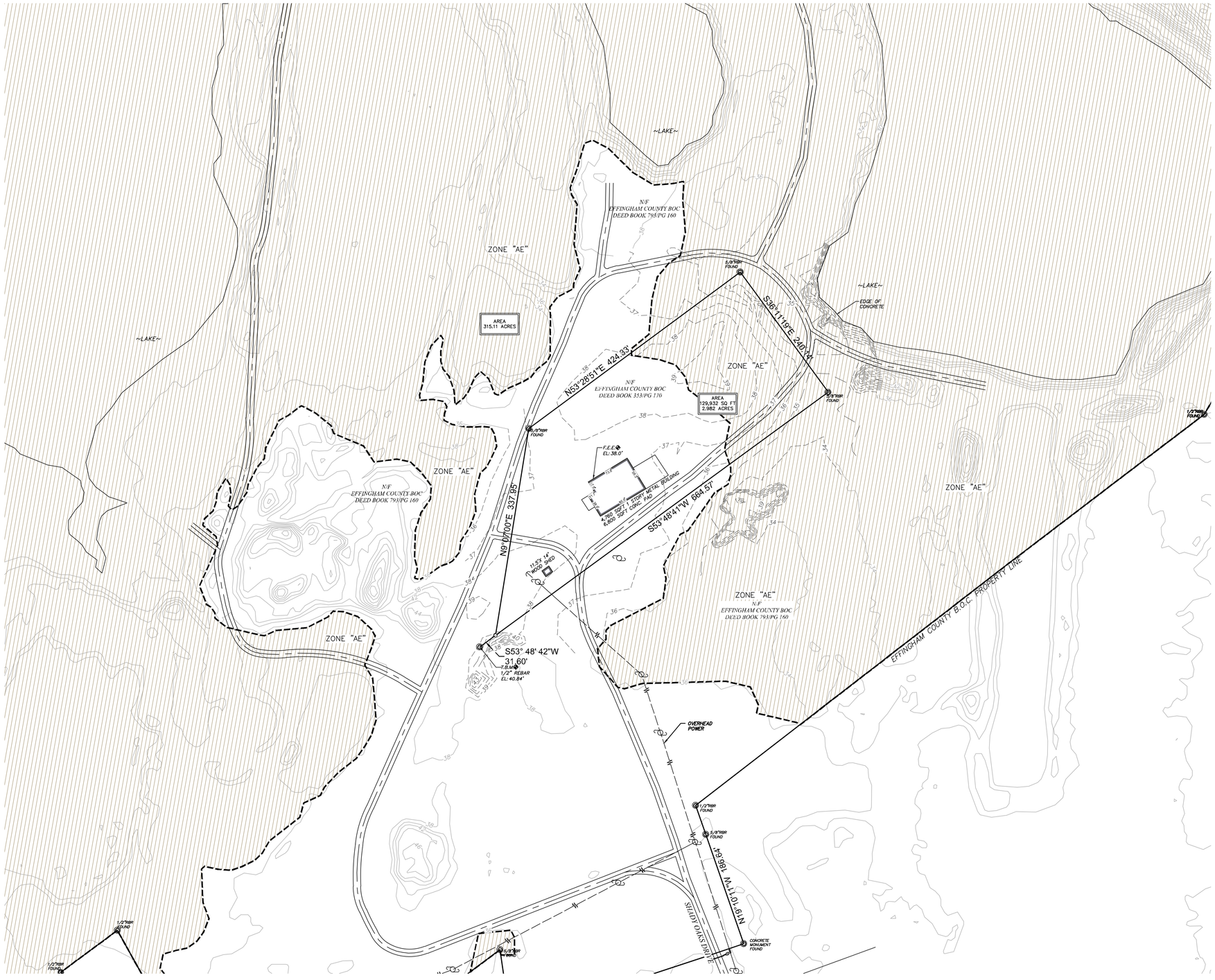
SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR
ATLAS SAND MINE REMEDIATION
GMD 1559, EFFINGHAM COUNTY, GEORGIA

GENERAL NOTES

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

DRAWING NO.
C001



NOTE:
THIS PROPERTY IS LOCATED WITHIN A FLOOD HAZARD AREA ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP FOR EFFINGHAM COUNTY COMMUNITY PANEL #13103C0333E DATED MARCH 16, 2015 AND COUNTY COMMUNITY PANEL #13103C0334E DATED MARCH 16, 2015

PLAN LEGEND :

- --900-- = EXISTING CONTOURS
- —900— = LiDAR EXISTING CONTOURS (2')
- = LIMITS OF FLOOD ZONE
- = AREA OF "AE" FLOOD ZONE

GEORGIA811
Utilities Protection Center, Inc.
Know what's below. Call before you dig.

INTEGRATED Science & Engineering
1039 SullivanRoad, Suite 200, NAVAL Georgia 30265
(912)678.552.2.1 OR (912)678.552.2.107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

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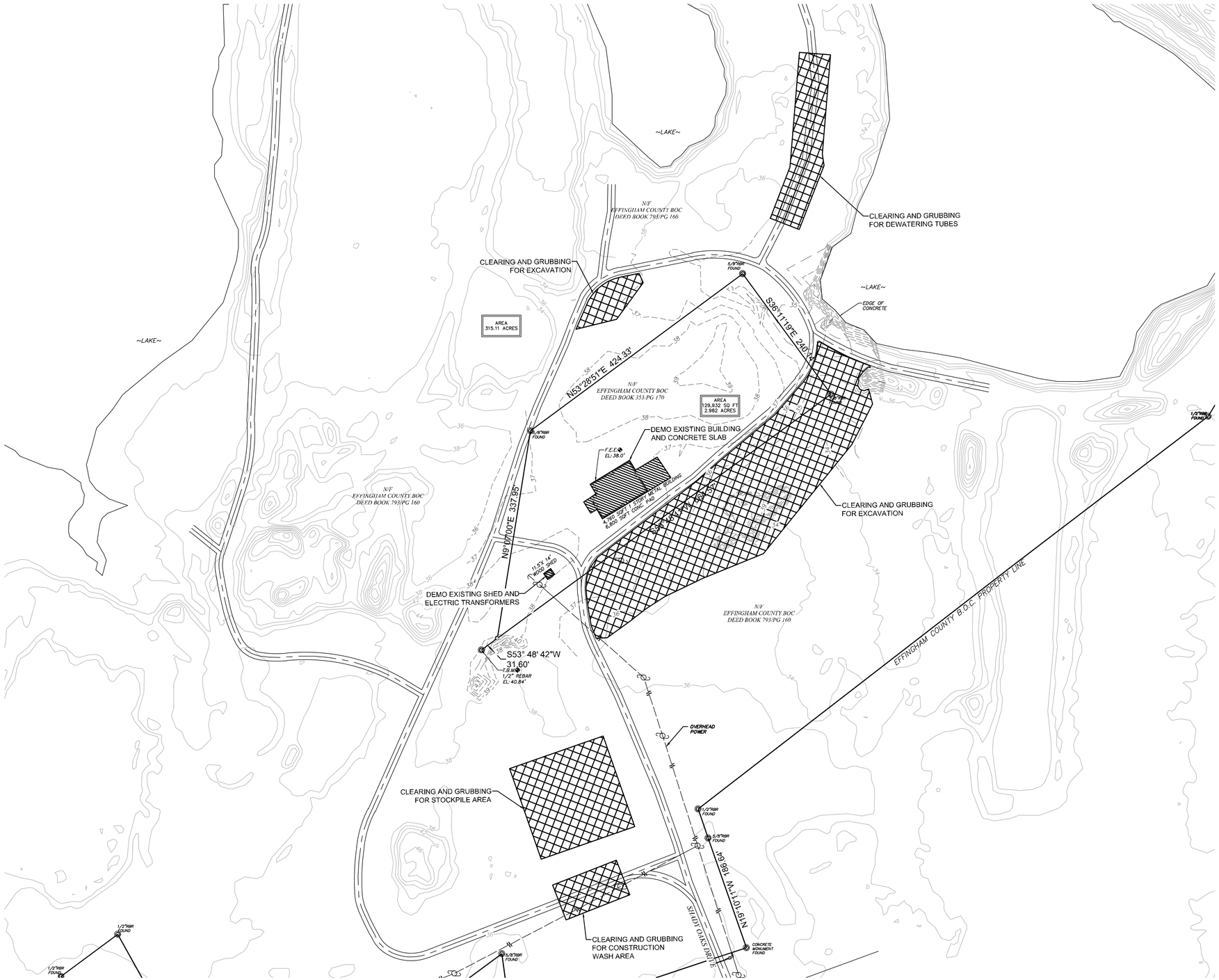
SCALE: 1" = 80' (80' 40' 0' 80')

SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

EXISTING CONDITIONS

DRAWING NO.
C100



NOTE:
ALL TREES WITHIN LIMITS OF GRADING SHALL BE COMPLETELY REMOVED AND MULCHED IN ACCORDANCE WITH PROJECT SPECIFICATIONS. ANY TREES DAMAGED OUTSIDE OF LIMITS OF CONSTRUCTION OR TREE PROTECTION FENCING SHALL BE REPLACED BY CONTRACTOR AT NO EXPENSE TO THE OWNER.

PLAN LEGEND :

- – 900 – – = EXISTING CONTOURS
- — 900 — = LiDAR EXISTING CONTOURS (2')
- = BUILDING AND FOUNDATION DEMOLITION
- = AREA OF CLEARING AND GRUBBING

GEORGIA811
Utilities Protection Center, Inc.
Know what's below. Call before you dig.

INTEGRATED Science & Engineering
1039 Sullivan Road, Suite 200, NEWNAN, Georgia 30265
(678) 552-2100 / (678) 552-2107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

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LAWRENCE H. DAVIS JR.

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SCALE: 1" = 80'
80' 40' 0' 80'

SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

DEMO AND CLEARING
PLAN

DRAWING NO.
C101

NOTE:
REFERENCE

PLAN LEGEND :

- --900-- = EXISTING CONTOURS
- —900— = LiDAR EXISTING CONTOURS (2')
- X SX-XX = SITE SAMPLE LOCATION

GEORGIA811
Utilities Protection Center, Inc.
Know what's below.
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INTEGRATED Science & Engineering
1099 Sullivan Road, Suite 200, Newnan, Georgia 30265
(678) 552-2100 / (678) 552-2107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

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SCALE: 1" = 80'
80' 40' 0' 80'

SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

SAMPLING LOCATIONS

DRAWING NO.
C102

SITE PLAN LEGEND:

- --900-- = EXISTING CONTOURS
- —900— = EXISTING CONTOURS
- = EXCAVATION
- = LAKE DREDGING
- = CONSTRUCTION VEHICLE WASH STATION

INTEGRATED Science & Engineering
1098 Southern Pine, Suite 200, Norcross, Georgia 30092
(P) 678.552.2106 (F) 678.552.2107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

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80' 40' 0' 80'
SCALE: 1" = 80'

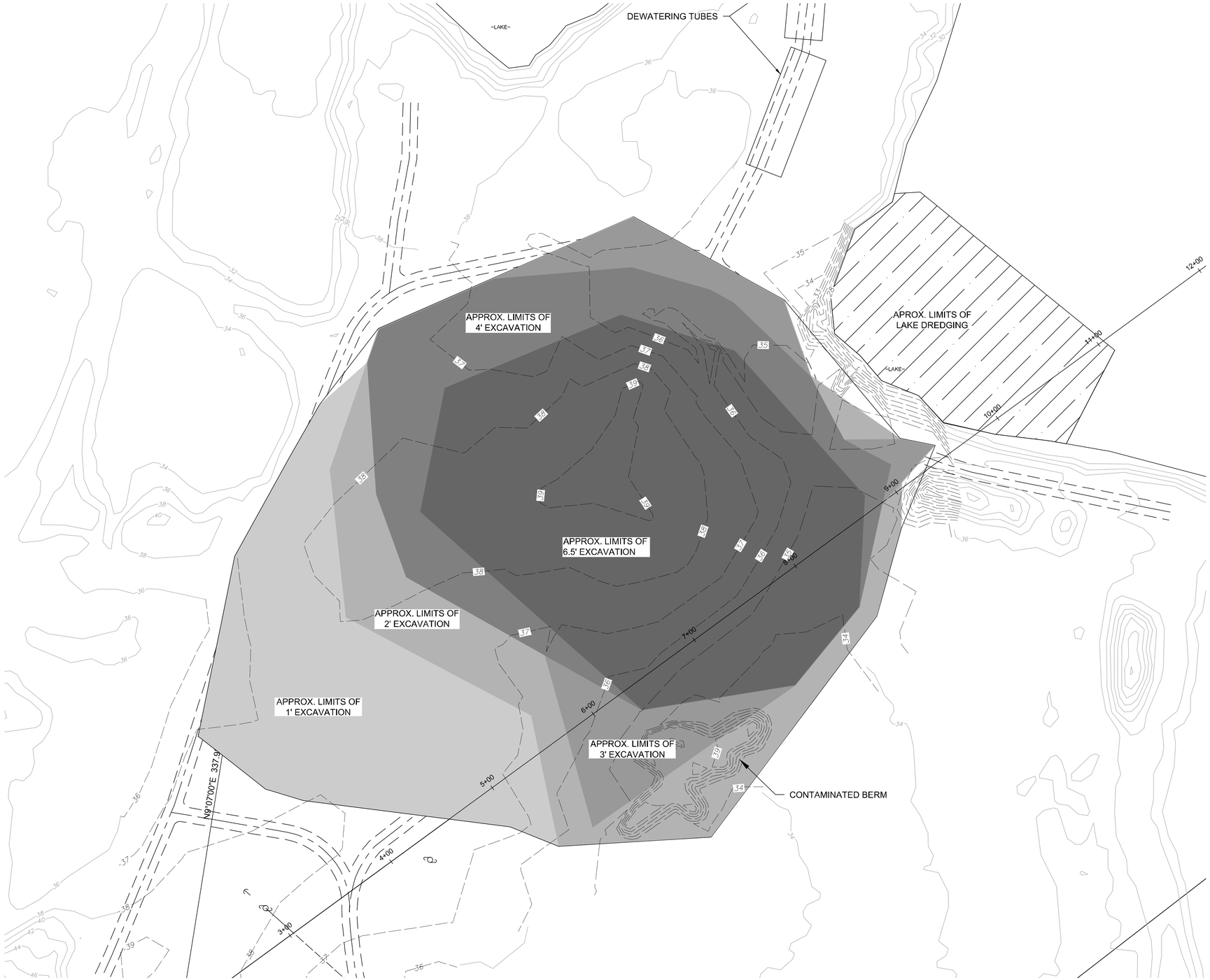
SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

SITE PLAN

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

DRAWING NO.
C200



GRADING AND DRAINAGE NOTES:

1. SEE SHEET C301-C307 FOR DETAILED EXCAVATION PLAN, AND C001 FOR ADDITIONAL GRADING AND DRAINAGE NOTES.
2. FINAL GRADING PLAN ON SHEET C307.
3. PORTIONS OF THIS PROPERTY ARE LOCATED WITHIN A "ZONE AE" FLOOD HAZARD AREA ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP FOR EFFINGHAM COUNTY COMMUNITY PANEL #13103C0334E DATED MARCH 16, 2015. AND COUNTY COMMUNITY PANEL #13103C0333E DATED MARCH 16, 2015.
4. STORMWATER MANAGEMENT AND WATER QUALITY NOT PROVIDED WITHIN THIS PROJECT DUE TO NO IMPERVIOUS AREAS.

PLAN LEGEND :

- --900-- = EXISTING CONTOUR
- —900— = EXISTING CONTOUR 2' LiDAR
- = 6.5' EXCAVATION
- = 4' EXCAVATION
- = 3' EXCAVATION
- = 2' EXCAVATION
- = 1' EXCAVATION

INTEGRATED Science & Engineering
1098 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2.1 OR (F) 678.552.2.107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR BID	11/20/20	---
1	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: ---
Project #: 10220.1802 | Design by: --- | Review by: ---

40' 20' 0' 40'
SCALE: 1" = 40'

SITE DEVELOPMENT PLANS FOR
ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

EXCAVATION OVERVIEW

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

DRAWING NO.
C300

PLAN LEGEND :

- 900 = EXISTING CONTOUR
- 900 = EXISTING CONTOUR 2' LiDAR
- = 6.5' EXCAVATION

GEORGIA811
Utilities Protection Center, Inc.
Know what's below.
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SCALE: 1" = 30'

SITE DEVELOPMENT PLANS FOR
ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

8.5'-6.5' EXCAVATION LIMITS

DRAWING NO.
C301

PLAN LEGEND :

- --900-- = EXISTING CONTOUR
- —900— = EXISTING CONTOUR 2' LIDAR
- = 4' EXCAVATION

INTEGRATED Science & Engineering
1098 Sullivan Road, Suite 200, NEWNAN, Georgia 30265
(P) 678.552.2.1 OR (F) 678.552.2.1 O7
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

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Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 1020.1802 | Design by: --- | Review by: ---

SCALE: 1" = 30'

SITE DEVELOPMENT PLANS FOR
ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

4' EXCAVATION LIMITS

GEORGIA811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

DRAWING NO.
C302

PLAN LEGEND :

- 900 = EXISTING CONTOUR
- 900 = EXISTING CONTOUR 2' LiDAR
- = 3' EXCAVATION

INTEGRATED Science & Engineering
1090 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2.1 OR (F) 678.552.2.107
ATLANTA / SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
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1	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 1020.1802 | Design by: --- | Review by: ---

30' 15' 0' 30' SCALE: 1" = 30'

SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

3' EXCAVATION LIMITS

GEORGIA 811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

DRAWING NO.
C303

PLAN LEGEND :

- – 900 – – = EXISTING CONTOUR
- — 900 — = EXISTING CONTOUR 2' LiDAR
- = 2' EXCAVATION

INTEGRATED Science & Engineering
1090 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2.1 OR (F) 678.552.2.107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR IWD	11/20/20	---
1	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 1020.1802 | Design by: --- | Review by: ---

SCALE: 1" = 30'

SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

2' EXCAVATION LIMITS

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

DRAWING NO.
C304

PLAN LEGEND :

- 900 = EXISTING CONTOUR
- 900 = EXISTING CONTOUR 2' LiDAR
- = 1' EXCAVATION

INTEGRATED Science & Engineering
1098 Sullivan Road, Suite 200, NEWNAN, Georgia 30265
(P) 678.552.2.106 (F) 678.552.2.107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

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Date: 11/04/20 | Drawn by: DCG | Check by: ---
Project #: 1020.1802 | Design by: --- | Review by: ---

30' 15' 0' 30'
SCALE: 1" = 30'

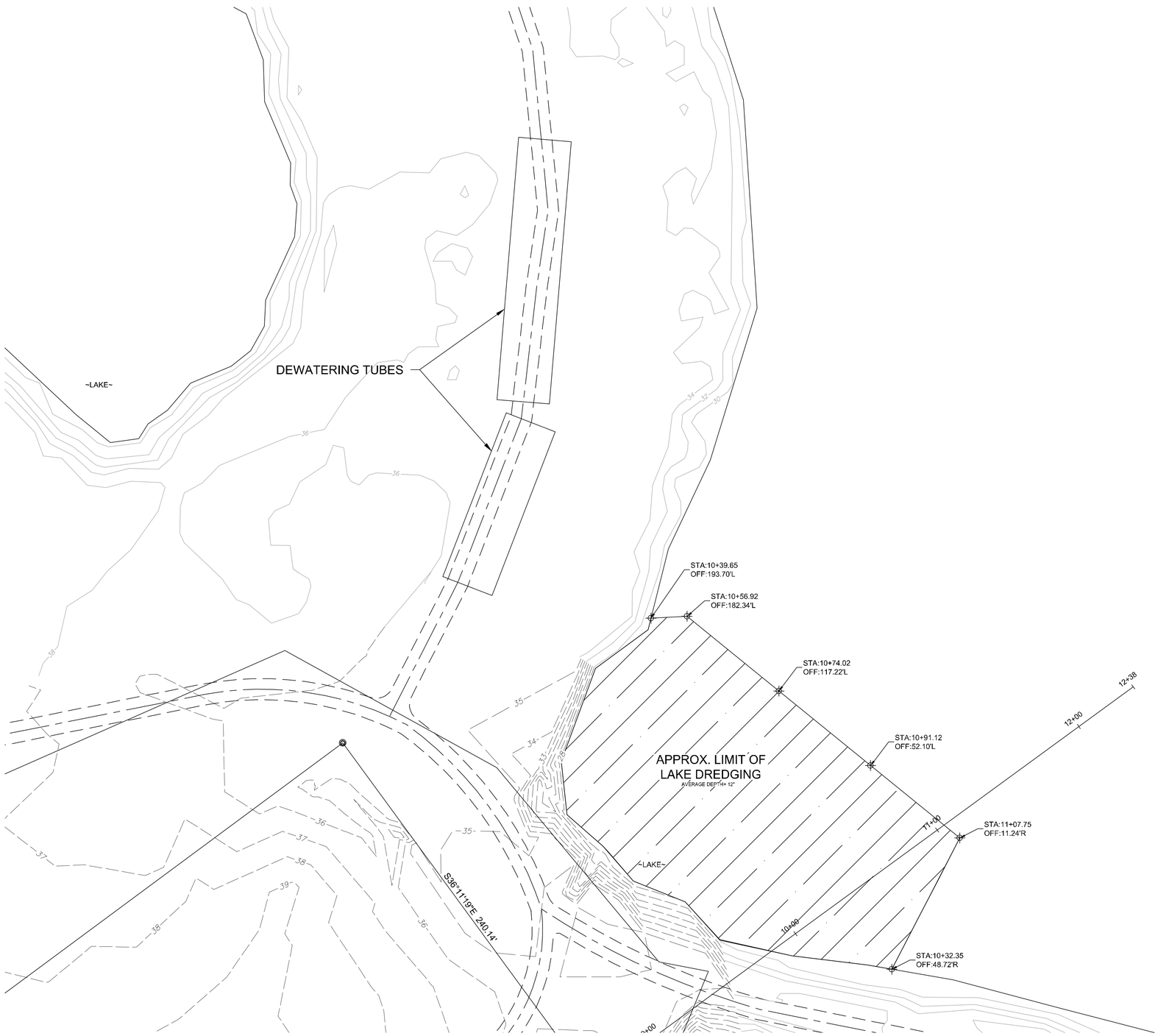
SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

1' EXCAVATION LIMITS

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

DRAWING NO.
C305



PLAN LEGEND :

- – 900 – – = EXISTING CONTOUR
- — 900 — = EXISTING CONTOUR 2' LiDAR
- = LAKE DREDGING

GEORGIA811
Utilities Protection Center, Inc.
Know what's below.
Call before you dig.

LAKE DREDGING LIMITS

DRAWING NO.
C306

SITE DEVELOPMENT PLANS
FOR
ATLAS SAND MINE
REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

Date: 11/04/20	Drawn by: DCG	Check by: ---
Project #: 1020.1802	Design by: ---	Review by: ---

30' 15' 0' 30'
SCALE: 1" = 30'

Rev.	Description	Date	Apr.
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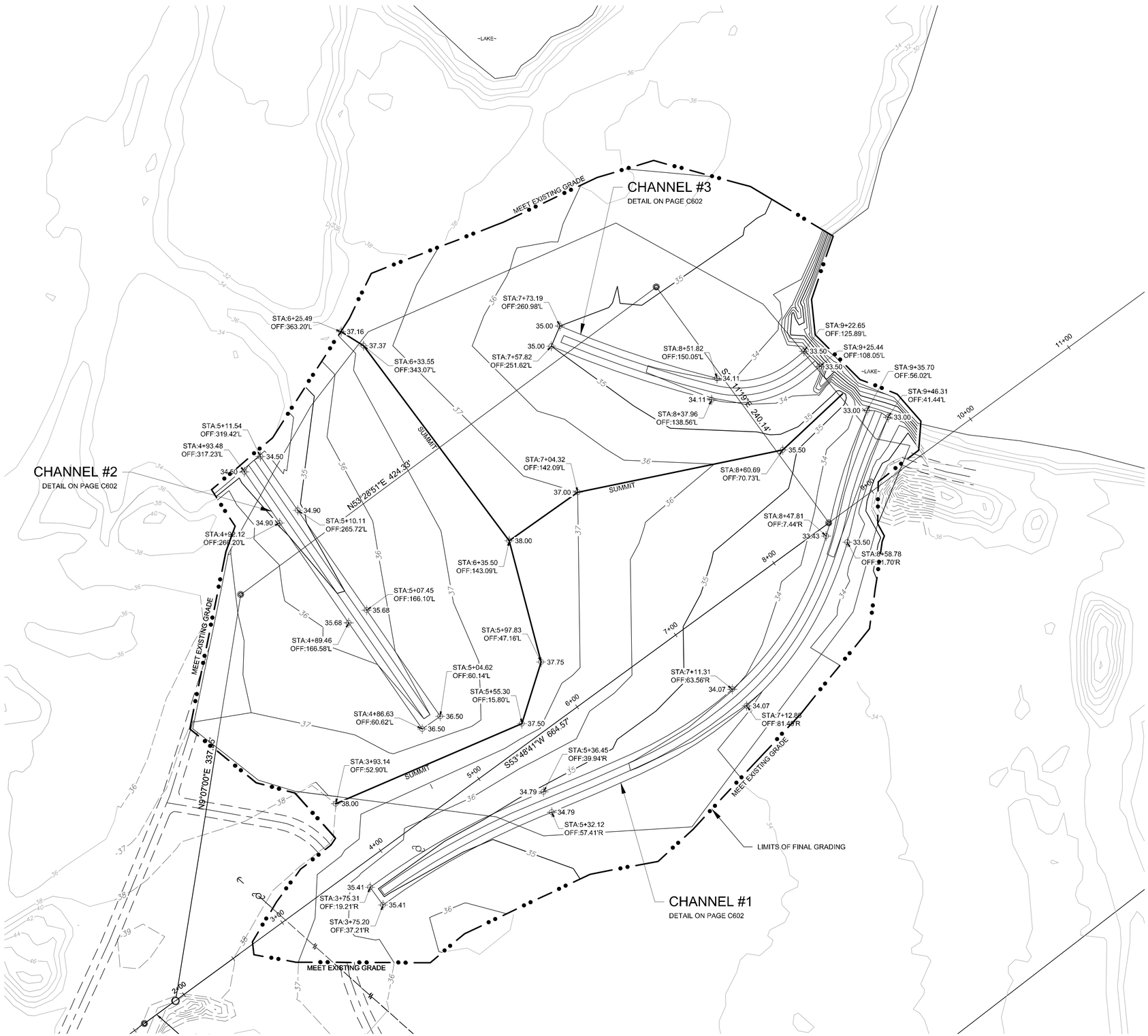
INTEGRATED Science & Engineering
1039 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2106 (F) 678.552.2107
ATLANTA/SAVANNAH
COA #: PEF002625 Exp. 6/30/2022



PLAN LEGEND :

- – 900 – – = EXISTING CONTOUR
- — 900 — = EXISTING CONTOUR 2' LiDAR
- — 900 — = PROPOSED CONTOUR

INTEGRATED Science & Engineering
1090 Sullivan Road, Suite 200, NEWNAN, Georgia 30265
(P) 678.552.2.1 OR (F) 678.552.2.107
ATLANTA/SAVANNAH
COA #: PEF.0000625 Exp. 6/30/2022

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SCALE: 1" = 40'

SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

FINAL GRADING AND DRAINAGE PLAN

GEORGIA811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

DRAWING NO. C307

EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS
FOR
ATLAS SAND MINE REMEDIATION

LOCATED GMD 1559, EFFINGHAM COUNTY, GA
PARCEL ID NUMBER: 03010027, 03010028

GENERAL NOTES:

1. OWNER/DEVELOPER:
   EFFINGHAM COUNTY BOARD OF COMMISSIONERS
   601 N LAUREL STREET
   SPRINGFIELD, GA 31329
   CONTACT: CHARLES L. GEORGE, P.E.
   (912) 754-8060

2. ENGINEER/SURVEYOR:
   INTEGRATED SCIENCE & ENGINEERING
   1039 SULLIVAN ROAD, SUITE 200
   NEWNAN, GA 30265
   CONTACT: DAN DAVIS, P.E.
   (678) 552-2106

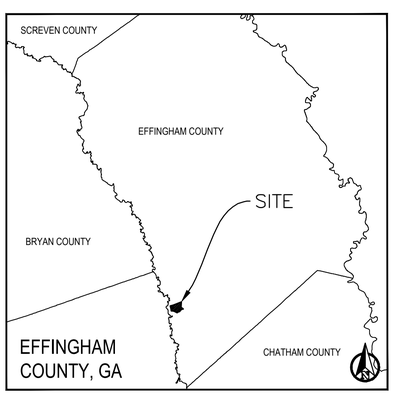
   ZONING: I-1, INDUSTRIAL

EROSION, SEDIMENTATION AND POLLUTION CONTROL NOTES:

24-HOUR CONTACT: CHARLES L. GEORGE, P.E, 912-754-8060 (#4)

1. DISTURBED AREA: 10.50 AC.; TOTAL SITE AREA: 318 AC.; TOTAL IMPERVIOUS AREA: 0.0 AC. (#6)
2. **THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.** (#19)
3. **EROSION CONTROL MEASURES MUST BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.** (#20)
4. ALL EROSION CONTROL MEASURES ARE TO CONFORM TO THE STANDARDS SET FORTH IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" LATEST EDITION.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM SHOWN ON THE APPROVED PLANS. IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DEVELOPER IMMEDIATELY!
6. **ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.** (#21)
7. SEDIMENT CONTROL MEASURES MUST BE INSTALLED BEFORE CLEARING AND GRADING BEGINS.
8. INSPECTIONS BY QUALIFIED PERSONNEL PROVIDED BY PRIMARY PERMITEE AND THE ASSOCIATED RECORDS SHALL BE KEPT ON SITE IN COMPLIANCE WITH NPDES PERMIT NUMBER GAR 100001.
9. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION. (#14)
10. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED BY THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS. (#15)
11. ANY AMENDMENT / REVISION TO THE ES&PC PLAN THAT HAVE A SIGNIFICANT EFFECT ON AN EROSION AND SEDIMENT CONTROL BMP THAT HAS A HYDRAULIC COMPONENT IS REQUIRED TO BE DESIGNED BY THE DESIGN PROFESSIONAL OF RECORD. (#17)
12. THE PRIMARY PERMITTEE IS REQUIRED TO KEEP THE ES&PC PLAN UP-TO-DATE.
13. STATE WATERS ARE NOT LOCATED ON OR WITHIN 200 FEET OF THE PROJECTS BOUNDARIES.
14. WASTE MATERIALS SHALL NOT BE DISCHARGED TO STATE WATERS EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT. (#18)
15. THE ES&PC PLAN IS IN COMPLIANCE WITH ALL CURRENT WASTE DISPOSAL, SANITARY SEWER, AND/OR SEPTIC TANK REGULATIONS.
16. EROSION CONTROL MATTING, Ss, IS REQUIRED ON ALL SLOPES 3:1 OR STEEPER.
17. NO ALTERNATIVE BMP'S WERE USED IN THE DESIGN OF THE ES&PC PLAN. (#39)
18. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT SHALL AT ALL TIMES BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

VICINITY MAP



(#5)

Primary Permittee
OWNER:
EFFINGHAM COUNTY BOARD OF COMMISSIONERS
601 N LAUREL STREET
SPRINGFIELD, GA 31329

Contact:
CONTACT: CHARLES L. GEORGE, P.E.
PHONE: (912) 754-8060
EMAIL: ABRUTON@EFFINGHAMCOUNTY.ORG

Qualified Personnel
CIVIL ENGINEER:
INTEGRATED SCIENCE & ENGINEERING
1039 SULLIVAN ROAD, SUITE 200
NEWNAN, GA 30265

Contact:
DAN DAVIS, P.E.
PHONE: (678) 552-2106

Engineer Certification (#12) (#13) (#14)

"I certify under penalty of law that this plan was prepared after a site visit to the location described herein by myself or my authorized agent, under my supervision.

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia," (published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001."

Design professional of record shall inspect the site within 7 days of the construction start. The primary permittee shall notify the design professional of the construction start date prior to that start date.

DAN DAVIS, PE P.E. #: 19988 GSWCC#: 0000016514

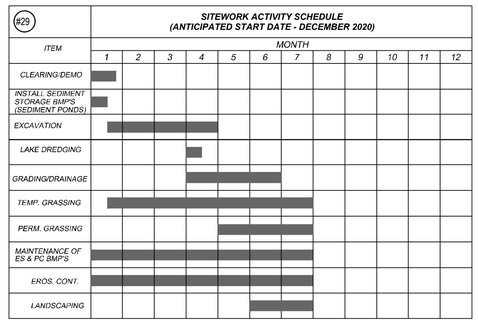
Permittee Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PERMITTEE

(#29)

SITEWORK ACTIVITY SCHEDULE
(ANTICIPATED START DATE - DECEMBER 2020)



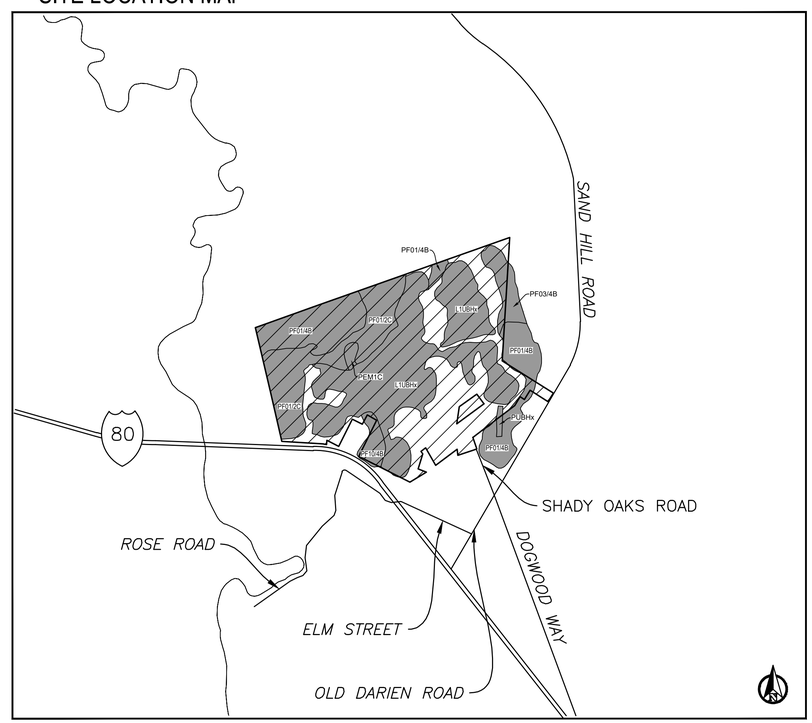
SHEET INDEX

SHEET #	TITLE
C500	ES&PC COVER
C501	COMPREHENSIVE MONITORING PLAN
C502	N.P.D.E.S. CHECKLIST
C510	PHASE I - INITIAL PERIMETER EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN
C520	PHASE II - INTERMEDIATE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN
C530	PHASE III - FINAL PHASE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN
C600	EROSION CONTROL DETAILS
C601	EROSION CONTROL DETAILS
C602	EROSION CONTROL DETAILS

PREPARED FOR: EFFINGHAM COUNTY B.O.C.

(#7)
GPS LOCATION OF
THE CONSTRUCTION EXIT
LAT: 32.1912
LONG: -81.3984

SITE LOCATION MAP



MAP LEGEND

= WETLANDS AREA (#42)

= SITE LOCTION

(#2)
DAN DAVIS, PE
GA PE #19988
GSWCC LEVEL II #0000016514

GEORGIA 811 Utilities Protection Center, Inc.
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1039 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2106 (F) 678.552.2107
ATLANTA/SAVANNAH
COA #: PE-0000625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
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Date: 11/04/20
Project #: 1020.1802
Drawn by: DCG
Design by: ---
Check by: ---
Review by: ---
SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION
GMD 1559, EFFINGHAM COUNTY, GEORGIA

EROSION CONTROL COVER

DRAWING NO.
C500

Site Description and Location:

THE SITE IS LOCATED NORTH OF THE DEAD END OF SHADY OAKS ROAD OFF OF SAND HILL ROAD EAST OF ROUTE 80. CURRENTLY, THE SITE IS MODERATELY WOODED SURROUNDING AN UNAMED BODY OF WATER RESULTING FROM A SAND MINING OPPERATION. THE PROJECT WILL CONSIST OF THE EXCAVATION OF THE CONTAMINATED SOIL, DREDGING OF A SMALL PORTION OF THE BODY OF WATER, AND REGRADING OF THE SITE FOR PROPER STORMWATER CONVEYANCE. CONSTRUCTION ACTIVITIES DO NOT INCLUDE IMPERVIOUS PAVEMENT.

Construction Site Area:

SITE AREA: 318 AC
DISTURBED AREA: 10.50 AC.

Soil Types: #47

PkA, ChA, Ud, EuA, W

Wetlands: #42

WETLANDS WERE IDENTIFIED WITHIN THE PROPERTY BOUNDARIES. CONTAINED WITHIN THE 100 YEAR FLOOD PLAIN UNLESS OTHERWISE NOTED. AND ARE NOT AFFECTED BY THIS DEVELOPMENT.

State Waters: #42

STATE WATERS ARE NOT LOCATED ON OR WITHIN 200 FEET OF THE BOUNDARIES OF THE PROJECT PROPERTY AND WILL NOT BE AFFECTED BY CONSTRUCTION ACTIVITIES.

Drainage Description: #11 #16 #41

IN ITS CURRENT STATE, THE SITE SURFACE DRAINS TO THE UNNAMED BODY OF WATER OR WETLANDS WITHIN THE PARCEL. IT GENERALLY DRAINS SOUTH TO NORTH AND NATURALLY FLOWS IN TO THE BODY OF WATER. IN THE PROPOSED CONDITION, THE SITE WILL SHEET DRAIN TO OPEN CHANNELS THAT CONVEY THE STORMWATER IN THE SAME DIRECTIONS AS EXISTING TO THE BODY OF WATER AND WETLANDS WITHIN THE PARCEL.

NO STATE WATERS BUFFER ENCROACHMENTS ARE PROPOSED. CONSEQUENTLY, NO BUFFER VARIANCES ARE NECESSARY.

Slopes After Grading:

MAXIMUM CUT AND FILL SLOPES SHALL NOT EXCEED 2H:1V UNLESS OTHERWISE INDICATED.

Erosion Control Measures:

EROSION CONTROL MEASURES STRUCTURAL AND NONSTRUCTURAL CONTROLS WILL BE USED ONSITE TO PREVENT EROSION DURING CONSTRUCTION INCLUDING TEMPORARY GRASSING AND SOD, STORM DRAIN OUTLET PROTECTION, SILT FENCING, TEMPORARY SEDIMENT TRAP, TURBIDITY CURTAIN AND OTHER MEASURES AS NECESSARY TO LIMIT SEDIMENT DISCHARGE FROM THE SITE. PLEASE REFER TO THE EROSION CONTROL PLANS FOR SPECIFIC INFORMATION.

THE PRIMARY PERMITTEE SHALL MAKE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS AVAILABLE UPON REQUEST TO DESIGNATED OFFICIALS OF THE LOCAL GOVERNMENT. INSPECTIONS SHALL BE DONE BY CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE AND THE ASSOCIATED RECORDS SHALL BE KEPT ON-SITE IN COMPLIANCE WITH GAR 100001."

1. Site Description #9 #45

A. Existing Site Conditions
The site currently consists of a moderately wooded parcel surrounding an unnamed body of water.
B. Proposed Construction Activities
The proposed project will consist of the excavation of contaminated soil, lake dredging, grading, and stabilization.
i. EXCAVATION
ii. LAKE DREDGING
iii GRADING
iv STABILIZATION

C. Construction Sequence
The proposed construction is estimated to take approximately 7 months. Sediment and erosion control will be maintained for the duration of construction. Perimeter silt fence and the construction exit will be installed prior to clearing of debris. Access to exposed soil will be limited to off-road construction equipment and construction material.

After the initial 2 weeks of clearing of debris, temporary vegetation will be provided. Rough grading will begin after clearing, along with structural controls for sediment storage and silt fence as needed. Permanent vegetation will be installed within two weeks of completion of grading activities.

Please refer to the Erosion and Sediment Control Plan, Sheet C500, for the activity schedule.

D. Hydrology
The Following runoff coefficients were calculated for the existing and proposed developed conditions of the contributing drainage basins.
Basin - 10.50 ACS.
Existing CN: 49
Proposed CN: 39

2. Controls #26 #28 #36

The following controls will be implemented at the construction site:

1) Initial perimeter BMP controls will include silt fencing, construction road stabilization, and stone pads to be used at the construction exit.
2) Intermediate grading and drainage BMPs will include silt fencing, haybale check dams, stone pads to be used at the construction exit, temporary sediment basin, surface skimmer, turbidity curtain, and temporary grassing.
3) Final BMPs will include permanent grassing by seed, permanent stormwater conveyance channels, and additional landscaping.

A. Erosion and Sediment Controls

(1) Stabilization measures. Stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover or other adverse weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity will resume on a portion of the site within 21 days from when activities ceased, (i.e., the total time period that construction activity is temporarily ceased is less than 21 days) then stabilization measures do not have to be initiated on that portion of the site by the 14h day after construction activity temporarily ceased.

(2) Structural Practices. Structural practices will be implemented to divert flows from exposed soils or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. The practices, identified on Sheets C510 through C530, include but may not be limited to silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, temporary or permanent sediment basins and other measures design and implemented in accordance with the Manual for Erosion and Sediment Control in Georgia, latest edition. The installation of these devices may be subject to Section 404 of the CWA.

B. Storm Water Management
Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Operators are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have been eliminated from the site.

C. OTHER CONTROLS

(1) Waste disposal. Solid materials, including building materials, will not be discharged to waters of the state, except as authorized by a section 404 permit.
(2) Off-site vehicle tracking of dirt, solids, and sediments and the generation of dust will be eliminated to the maximum extent practical.
(3) The permittee is in compliance with the state and local waste disposal, sanitary sewer, and septic tank regulations.
(4) Petroleum Spills and Leaks
#25 a. Best management practices for prevention of petroleum spills: All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any petroleum to be stored in tanks will have be surrounded by an earthen berm as a secondary protective measure. Any Asphalt substances used onsite will be applied according to the manufacture's recommendations. All petroleum products shall be stored and used in area that provides a secondary containment feature, and shall be located in an area with the least foreseeable impact if a catastrophic event should occur. Emergency contact numbers and procedures for spills shall be available on-site.
b. Best management practices for remediation of petroleum spills:
Spill Cleanup and Control Practices
- Local, State and manufacturer's recommended methods for spill cleanup will be clearly posted and procedures will be made available to site personnel.
- Materials and equipment necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, goggles, cat litter, sand, sawdust and properly labeled plastic and metal waste containers.
- Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent future spills.
- All spills will be cleaned up immediately upon discovery. Ail spills will be reported as required by local, State, and Federal regulations.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT **1 _ 800 - 424 - 8802 or 1 - 202 - 426 - 2675**
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT **1 - 800 - 424 - 8802 or 1 - 202 - 426 - 2675.**
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE GEORGIA E.P.D. WILL BE CONTACTED WITHIN 24 HOURS
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

The contractor shall notify the licensed professional who prepared this Plan if more than 1320 gallons of petroleum is stored onsite (this includes capacities of equipment) or if any one piece of equipment has a capacity greater than 660 gallons. The contractor will need a Spill Prevention Containment and Countermeasures Plan prepared by that licensed professional.
(NOTE: CONTACT NUMBERS HAVE CHANGED. HIGHLIGHTED BOLD CONTACT NUMBERS ARE CORRECT)
(5) Product Specific Practices
a. Petroleum Based Products - Containers for products such as fuels, lubricants, and tars will be inspected daily for leaks and spills. This includes onsite vehicles and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from State Waters, natural drains, and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils, fuels, and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and State regulations.
b. Petroleum storage shall be done in accordance with one of the two following methods to prevent storm water discharges on the site.
a. All petroleum storage containers shall be covered with plastic sheeting or be located under a temporary roof.
b. All petroleum storage containers shall be located in a secondary containment area.
c. Paints/Finishes/Solvents - All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products, and product containers will be disposed of according to manufacturer's specifications and recommendations.
#24 d. Concrete Truck Washing - NO concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water onsite.
e. Fertilizer/Herbicides - These products will be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers.
f. Building Materials - No building or construction materials will be buried or disposed of onsite. All such material will be disposed of in proper waste disposal procedures.
#27 g. Cover - Building materials will be stored in a staging area and covered with appropriate tarps or lean-to, to ensure no pollution of storm water can occur. All materials to be stored on stone base. All liquids, solvents, fuels, or similar to be kept in appropriate water tight containers to ensure no leakage or commingling with storm water will occur.

3. Inspections #30

A. **Primary Permittee**

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking .. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure rainfall once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday until a Notice of Termination is submitted. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site ; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.
4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is received by EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.
(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of not been properly installed and/or maintained as described have best management practices that in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

4. Maintenance

A. Inspections by a qualified personnel provided by the primary permittee and the associated records shall be kept on-site in compliance with GAR. 100001.
B. Inspections of erosion control measures will be performed and corrective action taken when needed as required by the plan.
C. The permittee shall maintain all erosion control measures until permanent vegetation has been established.
D. The permittee shall clean out all sediment storage areas when required by the "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
E. Accumulated silt shall be removed when the silt is within 12" of the top of the silt fence utilized for erosion control.

5. Sampling Requirements #31 #33 #34

A. Sampling Requirements
Sampling will occur at the outfall from the dewatering area. (See the Erosion and Sediment Control Plan, Sheet C520 for Sampling Location).

B. Sample Type
All sampling will be collected by "grab samples" and the analysis of these samples will be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved; the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

The following sampling practices will be followed in accordance with the requirements of GAR100001:

(1) Sample containers should be labeled prior to collecting the samples.

(2) Samples should be well mixed before transferring to a secondary container.

(3) Large mouth, clean and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4) Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.
(5) Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.B.

C. Sampling Points
Sampling Points will be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the storm water outfalls using the following minimum guidelines:

(1) The upstream sample for each receiving water(s) will be taken immediately upstream of the confluence of the first storm water discharge from the permitted activity (i.e., the discharge farther upstream at the site) but downstream of any other storm water discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

(2) The downstream sample for each receiving water(s) will be taken downstream of the confluence of the last storm water discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other storm water discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

(3) Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the storm water outfall channel(s).

(4) Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water channel(s).

(5) The sampling container should be held so that the opening faces upstream.

(6) The samples should be kept free from floating debris.

(7) Permittee's do not have to sample sheetflow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, for unpaved areas and areas not covered by permanent structures, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been used. Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; a crop of perennial; vegetation appropriate for the time of year and region; or a crop of annual vegetation and a seeding of target crop perennials appropriate for the region. Final stabilization applies to each phase of construction.

(8) All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether storm water runoff from the facility/site is in compliance with the standard set forth in Parts 111.C.3. or 111.C.4., whichever is applicable.

D. Sampling Frequency

(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and/or from a monitored outfall location within in forty-five (45) minutes or as soon as possible.
(2) . However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.
(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;
(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;
(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;
(d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and
(e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b) . Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

E. Turbidity Limitations

1. In-stream discharge is not to increase turbidity in the receiving stream by more than twenty-five (25) nephelometric units (NTU) for waters supporting warm water fisheries, as stated in GAR 100001 Part III.C.3.
2. The outfall discharge from the NPDES Sample Location Point(s) is not to exceed the maximum allowable NTU value shown below as stated in GAR 100001 Part III.C.4 and from Appendix B.

Turbidity Requirements for Outfall From Sediment Basin Appendix B:

SURFACE WATER DRAINAGE AREA: < 4.99 SQUARE MILES
SITE SIZE: 1 to 10 ACRES

MAXIMUM ALLOWABLE NTU = 75

6. Non-Stormwater Discharges

Non-Stormwater discharge is not anticipated on this project.

7. Reporting #29

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any storm water discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.
2. All sampling reports shall include the following information:
a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified personnel who performed the analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
i. Certification statement that sampling was conducted as per the Plan.
3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

8. Retention of Records #32

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:
a. A copy of all Notices of Intent submitted to EPD;
b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
c. The design professional's report of the results of the inspection conducted in accordance with Part IVA5. of this permit;
d. A copy of all sampling information, results, and reports required by this permit;
e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2). of this permit.
2. Copies of all Notices of Intent, Notices of Termination , inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI. of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

9. Report Submittal

All written correspondence required by this permit shall be submitted by ***return receipt certified mail*** (or similar service) to the appropriate District Office of the EPD. See address below:

EPD COASTAL DISTRICT OFFICE (BRUNSWICK)
400 COMMERCE DRIVE
BRUNSWICK, GA 31523-8251

INTEGRATED Science & Engineering
1039 Sullivan Road, Suite 200, Newnan, Georgia 30265
(P) 678.552.2.1 OR (F) 678.552.2.107
ATLANTA/SAVANNAH
COA #: PE-COO0625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR RED	11/20/20	---
1	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 10220.1802 | Design by: --- | Review by: ---
SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR
ATLAS SAND MINE REMEDIATION
GMD 1559, EFFINGHAM COUNTY, GEORGIA

COMPREHENSIVE MONITORING PLAN

DAN DAVIS, PE
GA PE #19988
GSWCC LEVEL II #0000016514

GEORGIA 811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

DRAWING NO.
C501

EROSION, SEDIMENTATION & POLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS
SWCD: OGEECHEE RIVER CONSERVATION DISTRICT

PROJECT NAME: ATLAS SAND MINE REMEDIATION   ADDRESS: 216 SHADY OAKS DRIVE
CITY/COUNTY: GUYTON / EFFINGHAM   DATE ON PLANS: ____________
NAME & EMAIL OF PERSON FILLING OUT CHECKLIST: DAN DAVIS, P.E. - DDAVIS@INTSE.COM

TO BE SHOWN ON ES&PC PLAN

Plan Page #	Included Y/N	
C502	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
C500	Y	2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
	N/A	3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist. * (A copy of the written approval by EPD must be attached to the plan for the Plan to be reviewed.)
C500	Y	4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
C500	Y	5 Provide the name, address, **email address**, and phone number of primary permittee.
C500	Y	6 Note total and disturbed acreage of the project or phase under construction.
C500	Y	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
		8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
C501	Y	9 Description of the nature of construction activity.
C500	Y	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
C501	Y	11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
C500	Y	12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 19** of the permit.
C500	Y	13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on **Part IV page 19** of the permit. *
C500	Y	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with **Part IV.A.5 page 25** of the permit. *
C500	Y	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
C501	Y	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
C500	Y	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
C500	Y	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
C500	Y	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
C500	Y	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
C500	Y	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
	N/A	22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
	N/A	23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
C500	Y	24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
C501	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.
C501	Y	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *

EROSION, SEDIMENTATION & POLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS
CONTINUED

Plan Page #	Included Y/N	
C501	Y	27 Description of practices to provide cover for building materials and building products on site. *
C501	Y	28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *
C500	Y	29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
C501	Y	30 Provide complete requirements of inspections and record keeping by the primary permittee. *
C501	Y	31 Provide complete requirements of sampling frequency and reporting of sampling results. *
C501	Y	32 Provide complete details for retention of records as per Part IV.F. of the permit. *
C501	Y	33 Description of analytical methods to be used to collect and analyze the samples from each location. *
C501	Y	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
C520	Y	35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *
C501	Y	36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *
C510	Y	37 Graphic scale and North arrow.
C510	Y	38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

Plan Page #	Included Y/N	
C500	N/A	39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
	N/A	40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
C501	N/A	41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
C500	Y	42 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
C501	Y	43 Delineation and acreage of contributing drainage basins on the project site.
	N/A	44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
C501	Y	45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
C601	Y	46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
C510	Y	47 Soil series for the project site and their delineation.
C510	Y	48 The limits of disturbance for each phase of construction.
		49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
C510	Y	50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
C600	Y	51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
C600	Y	52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia.

* If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the * checklist items would be N/A.

Effective January 1, 2020

DAN DAVIS, PE
GA PE #19988
GSWCC LEVEL II #0000016514

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ATLANTA/SAVANNAH
COA #: PEF000625 EXP. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

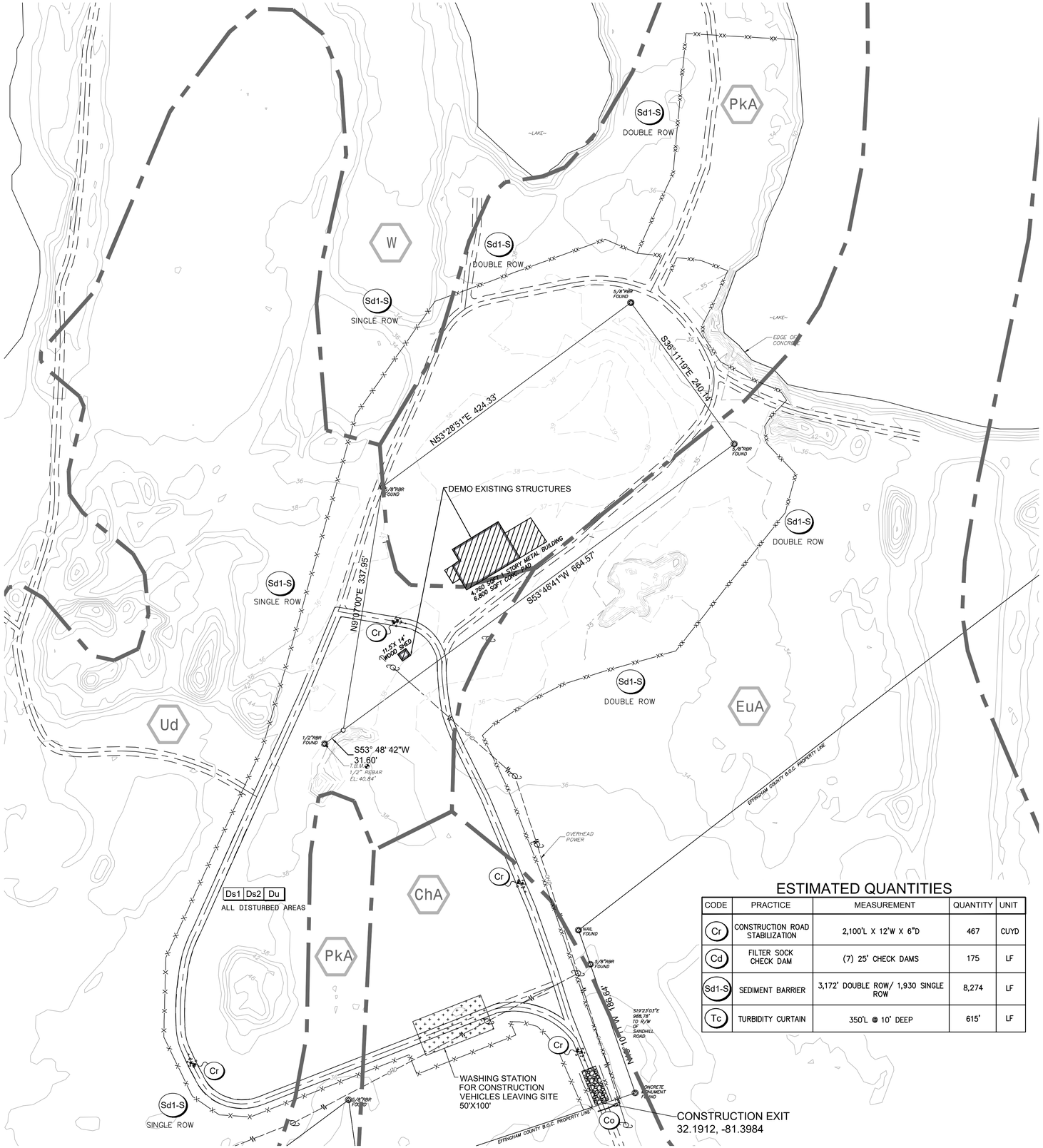
Rev.	Description	Date	Apr.
2	ISSUED FOR BID	11/20/20	
1.	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: ---
Project #: 1020.1802 | Design by: --- | Review by: ---
SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION
GMD 1559, EFFINGHAM COUNTY, GEORGIA

N.P.D.E.S. CHECKLIST

DRAWING NO. C502



INITIAL PHASE EROSION AND SEDIMENT CONTROL:

- INITIAL PHASE WILL BEGIN BEFORE ANY LAND DISTURBANCE ACTIVITIES.
- CONSTRUCTION EXIT, CONSTRUCTION ROAD STABILIZATION AND SILT FENCE TO BE INSTALLED BEFORE GRUBBING AND CLEARING OR ANY OTHER LAND DISTURBANCE ACTIVITIES START.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co (LABEL)	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION		Cr	A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Sd1	SEDIMENT BARRIER		(Sd1-S)	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.

ESTIMATED QUANTITIES

CODE	PRACTICE	MEASUREMENT	QUANTITY	UNIT
Cr	CONSTRUCTION ROAD STABILIZATION	2,100'L X 12'W X 6"D	467	CUYD
Cd	FILTER SOCK CHECK DAM	(7) 25' CHECK DAMS	175	LF
Sd1-S	SEDIMENT BARRIER	3,172' DOUBLE ROW/ 1,930 SINGLE ROW	8,274	LF
Tc	TURBIDITY CURTAIN	350'L @ 10' DEEP	615'	LF

LEGEND

900 = EXISTING CONTOURS

900 = EXISTING CONTOURS 2' LiDAR

xx xx = PROPOSED SILT FENCE

= SOILS LIMITS

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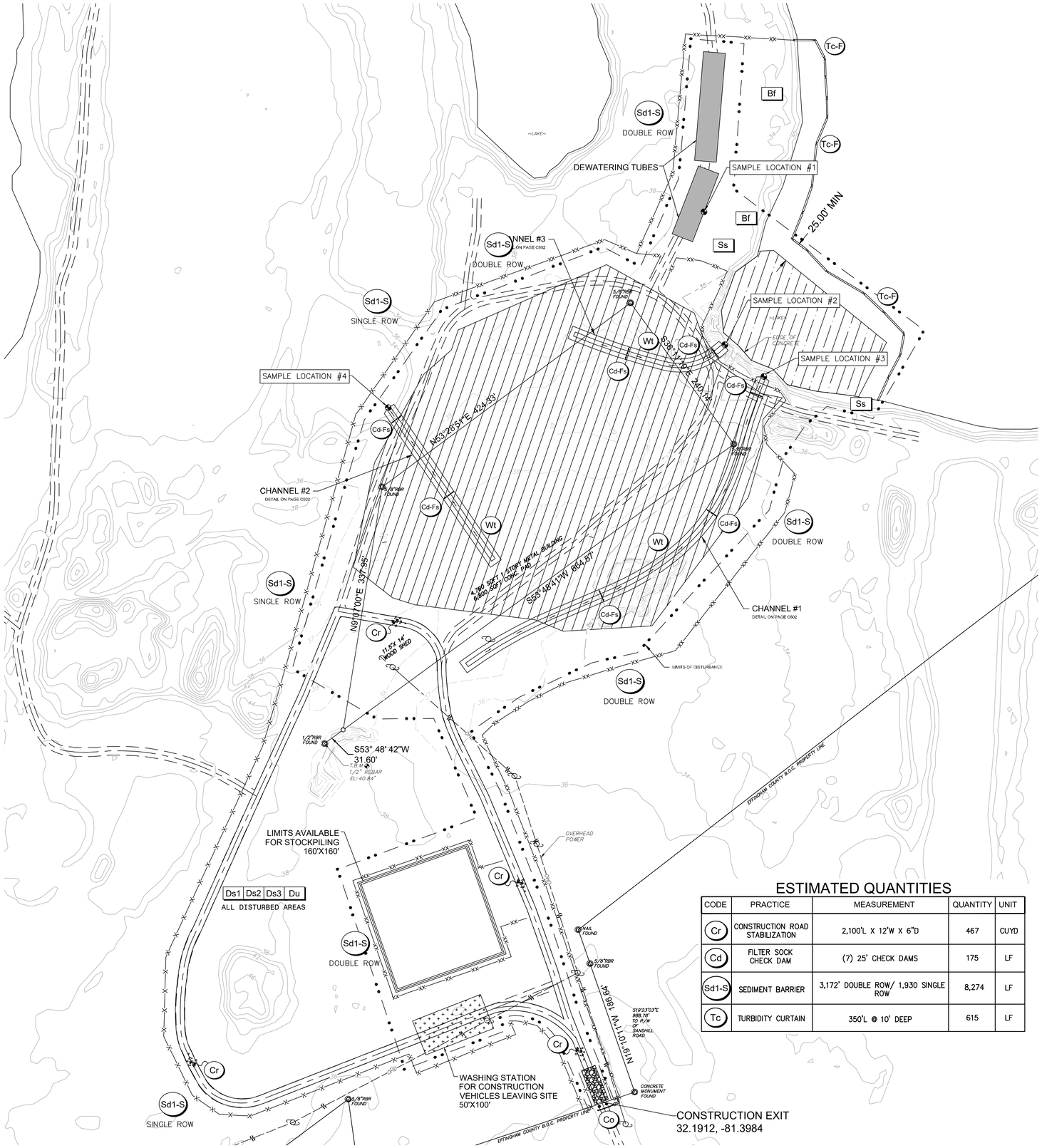
SCALE: 1" = 70' (70' 35' 0' 70')

SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

INITIAL PHASE EROSION AND SEDIMENTATION CONTROL PLAN

DRAWING NO. C510



INTERMEDIATE PHASE EROSION AND SEDIMENT CONTROL:

- INTERMEDIATE PHASE WILL BEGIN ONCE THE PROJECT MOVES INTO FULL LAND DISTURBANCE.
- EXCAVATED SEDIMENT BASIN (Sd3) WILL BE IMPLEMENTED AROUND THE LAKE DREDGING OPERATION AS SHOWN HEREIN.
- ALL AREAS OF DISTURBANCE WILL RECEIVE TEMPORARY GRASSING IF LEFT IDLE.
- DUST CONTROL WILL BE UTILIZED AS NECESSARY.
- SILT FENCE AND SEDIMENT TRAPS WILL BE CLEANED OUT OR EXCAVATED ONCE ONE-THIRD OF THE STORAGE DEPTH IS OBTAINED.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Co	CONSTRUCTION EXIT		Co (LABEL)	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION		Cr	A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Sd1	SEDIMENT BARRIER		(INDICATE TYPE)	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Tc	TURBIDITY CURTAIN		Tc	A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE		Bf (LABEL)	Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.

ESTIMATED QUANTITIES

CODE	PRACTICE	MEASUREMENT	QUANTITY	UNIT
Cr	CONSTRUCTION ROAD STABILIZATION	2,100'L X 12'W X 6"D	467	CUYD
Cd	FILTER SOCK CHECK DAM	(7) 25' CHECK DAMS	175	LF
Sd1-S	SEDIMENT BARRIER	3,172' DOUBLE ROW/ 1,930 SINGLE ROW	8,274	LF
Tc	TURBIDITY CURTAIN	350'L @ 10' DEEP	615	LF

LEGEND

- 900 = EXISTING CONTOURS
- 900 = EXISTING CONTOURS 2' LiDAR
- xx xx = PROPOSED SILT FENCE
- = LIMITS OF DISTURBANCE
- = EXCAVATION
- = LAKE DREDGING

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SCALE: 1" = 70' (0', 35', 70')

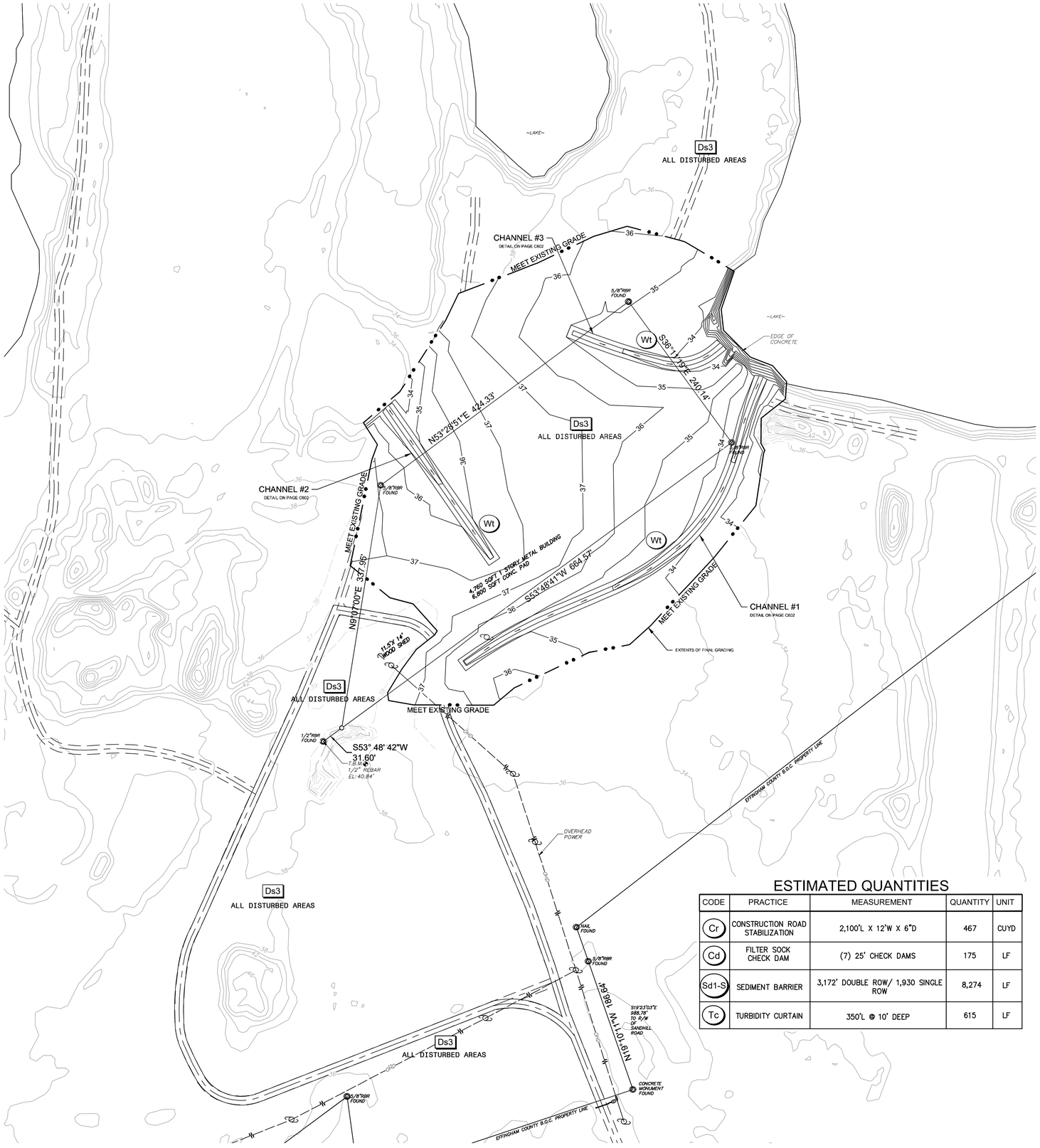
SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

INTERMEDIATE PHASE EROSION AND SEDIMENTATION CONTROL PLAN

GEORGIA811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

DRAWING NO. C520



FINAL PHASE EROSION AND SEDIMENT CONTROL:

- THE FINAL PHASE OCCURS ONCE THE SITE IS FULLY STABILIZED WITH PERMANENT GRASSING.
- ONCE SITE IS FULLY STABILIZED, ALL SEDIMENT TRAPS AND BASINS WILL BE REMOVED.
- ALL CONSTRUCTION DEBRIS TO BE COLLECTED AND DISPOSED OF.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.

ESTIMATED QUANTITIES

CODE	PRACTICE	MEASUREMENT	QUANTITY	UNIT
Cr	CONSTRUCTION ROAD STABILIZATION	2,100'L X 12'W X 6"D	467	CUYD
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LEGEND

- 900 = EXISTING CONTOURS
- 900 = EXISTING CONTOURS 2' LiDAR
- 900 = PROPOSED INDEX CONTOURS
- 900 = PROPOSED INTERVAL CONTOURS
- = LIMITS OF FINAL GRADING

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70' 35' 0' 70'

SCALE: 1" = 70'

SITE DEVELOPMENT PLANS FOR ATLASS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

FINAL PHASE EROSION AND SEDIMENTATION CONTROL PLAN

DRAWING NO. C530

Ds1 MULCHING SPECIFICATIONS:

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH , DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATION TECHNIQUES SHALL BE EMPLOYED.

SITE PREPARATION
1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS, TERRACES, AND SEDIMENT BARRIERS.
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

APPLYING MULCH
WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.
1. DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL VEGETATION, 20–30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.
3. CUTBACK ASPHALT SHALL BE APPLIED UNIFORMLY . CARE SHOULD BE TAKEN IN AREAS OF PEDESTRIAN TRAFFIC DUE TO PROBLEMS OF "TRACKING IN" OF DAMAGE TO SHOES, CLOTHING, ETC.
4. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

ANCHORING MULCH
1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER DISK". DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN ERECT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER–TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE–5 OR SS–1). THE ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OR WATER PER TON OF MULCH. TACKIFIERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLEASE REFER TO SPECIFICATION Tb–TACKIFIERS AND BINDERS. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
3. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

Ds2 TEMPORARY SEEDING SPECIFICATIONS:

A. GRADING AND SHAPING
1. EXCESSIVE WATER RUNOFF MUST BE CONTROLLED BY PLANNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS CLOSED DRAINS, DITCHES,
DIKES, DIVERSIONS, SEDIMENT BASINS, AND OTHERS.

B. SEEDBED PREPARATION
1. WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED.
2. WHEN USING CONVENTIONAL OR HAND–SEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL.
3. WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH UNDISTURBED CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED, OR OTHERWISE
SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.

C. LIME AND FERTILIZER
1. AGRICULTURAL LIME IS NOT REQUIRED.
2. ON REASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED.
3. ON SOILS OF VERY LOW FERTILITY, USE 500 TO 700 POUNDS 10–10–10 FERTILIZER OR THE EQUIVALENT PER ACRE (12–16 lbs./1000 sq. ft.). IF THE SITE WILL PERMIT,
APPLY BEFORE LAND PREPARATION AND DISK, RIP, OR CHISEL TO INCORPORATE.

D. SEEDING
1. SELECT A GRASS OR GRASS–LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR.
2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER–SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER).
DRILL OR CULTIPACKER–SEEDERS SHOULD NORMALLY PLACE SEED ONE–HALF TO ONE INCH DEEP.

E. MULCHING
TEMPORARY VEGETATION CAN, IN MOST CASES, BE ESTABLISHED WITHOUT THE USE OF MULCH. MULCH WITHOUT SEEDING SHOULD BE CONSIDERED FOR SHORT
TERM PROTECTION. SEE Ds1 – DISTURBED AREA STABILIZATION (WITH MULCHING ONLY).

F. IRRIGATION
IF WATER IS APPLIED, IT MUST BE AT A RATE NOT CAUSING RUNOFF AND EROSION. THOROUGHLY WET THE SOIL TO A DEPTH THAT WILL INSURE GERMINATION OF
THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

* REVISED 7/01 PER 5TH EDITION OF MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.

Ds3 PERMANENT SEEDING SPECIFICATIONS:

A. GRADING AND SHAPING
1. GRADING AND SHAPING IS NOT NORMALLY REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENTS.

B. SEEDBED PREPARATION
1. SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED.
2. WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS:
A. BROADCAST PLANTING
1. TILLAGE AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 INCHES; ALLEVIATE COMPATION;INCORPORATE LIME AND FERTILIZER; SMOOTH AND
FIRM THE SOIL; ALLOW FOR THE PROPER PLACEMENT OF SEED SPRIGS, OR PLANTS; AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS TO BE USED.

C. LIME AND FERTILIZER – RATES AND ANALYSIS
1. WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED, AGRICULTURAL LIME SHALL BE APPLIED AS INDICATED BY SOIL TEST OR AT THE RATE OF 1 TO 2 TONS PER ACRE. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE.
2. LIME SPREAD BY CONVENTIONAL EQUIPMENT WILL BE "GROUND LIMESTONE". GROUND LIMESTONE IS CALCITIC OR DOLOMITIC LIMESTONE GROUND SO THT 90 PERCENT OF THE MATERIAL WILL PASS THROUGH A 10–MESH SIEVE AND NOT LESS THAN 25 PERCENT WILL PASS THROUGH A 100–MESH SIEVE.
3. AGRICULTURAL LIME SPREAD BY HYDRAULIC SEEDING EQUIPMENT WILL BE "FINELY GROUND LIMESTONE." FINELY GROUND LIMESTONE IS CALCITIC OR DOLOMITIC LIMESTONE GROUND SO THAT 98 PERCENT OF THE MATERIAL WILL PASS THROUGH A 20–MESH SIEVE AND NOT LESS THAN 70 PERCENT WILL PASS THROUGH A 100–MESH SIEVE.

D. LIME AND FERTILIZER – APPLICATION
1. WHEN HYDRAULIC SEEDING EQUIPMENT IS USED:
A. THE INITIAL FERTILIZER WILL BE MIXED WITH SEED, INOCULANT (IF NEEDED) AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH AND APPLIED IN A SLURRY. THE SLURRY WILL BE AGITATED DURING APPLICATION TO KEEP THE INGREDIENTS THOROUGHLY MIXED. THE MIXTURE WILL BE SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR
AFTER BEING PLACED IN THE HYDROSEEDER.
B. FINELY GROUND LIMESTONE WILL BE MIXED WITH WATER AND APPLIED IMMEDIATELY AFTER MULCHING IS COMPLETED OR IN COMBINATION WITH THE TOP DRESSING.

2. WHEN CONVENTIONAL PLANTING IS TO BE DONE, LIME AND FERTILIZER WILL BE APPLIED UNIFORMLY IN ONE OF THE FOLLOWING WAYS:
A. APPLY BEFORE LAND PREPARATION SO THAT IT WILL BE MIXED WITH THE SOIL DURING SEEDBED PREPARATION; OR,
B. MIX WITH THE SOIL USED TO FILL THE HOLES, DISTRIBUTE IN FURROWS; OR,
C. BROADCAST AFTER STEEP SURFACES AND SCARIFIED, PITTED OR TRENCHED.
D. A FERTILZER PELLET WILL BE PLACED AT ROOT DEPTH.

* REVISED 7/01 PER 5TH EDITION OF MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.

Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDINGS)

PLANTING RATES BY RESOURCE AREA PLANTING DATES: ━ OPTIMUM; — PERMISSIBLE BUT MARGINAL

SPECIES	BROADCAST RATES 2/ – PLS 3/ PER ACRE	PER 1000 SQ. FT.	RESOURCE AREA	J	F	M	A	M	J	J	A	S	O	N	D	REMARKS
MILLET, PEARL (PENNESETUM GLAUCUM) ALONE	50 LBS	1.1 LB	M–L, P, C													88,000 SEED PER POUND. QUICK DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.
RYEGRESS, ANNUAL (LOLIUM TEMULENTUM) ALONE	40 LBS	0.9 LB	M–L, P, C													227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES
SUDANGRASS (SORGHUM SUDANESE) ALONE	60 LBS	1.4 LB	M–L, P, C													55,000 SEED PER POUND. GOOD ON DROUGHTY SITES. NOT RECOMMENDED FOR MIXTURES.
MILLET, BROWNTOP (PANICUM FASCICULATUM) ALONE / IN MIXTURES	40 LBS / 10 LBS	0.9 LB / 0.2 LB	M–L, P, C													137,000 SEED PER POUND. QUICK DENSE COVER. WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDED AT HIGH RATES.

Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDINGS)

PLANTING RATES BY RESOURCE AREA PLANTING DATES: ━ OPTIMUM; — PERMISSIBLE BUT MARGINAL

SPECIES	BROADCAST RATES 2/ – PLS 3/ PER ACRE	PER 1000 SQ. FT.	RESOURCE AREA	J	F	M	A	M	J	J	A	S	O	N	D	REMARKS
BERMUDA, COMMON (CYNODON DACTYLON) HULLED SEED ALONE / WITH OTHER PERENNIALS	10 LBS / 6 LBS	0.2 LB / 0.1 LB	P, C													1,787,000 SEED PER POUND. QUICK COVER. LOW GROWING AND SOD FORMING. FULL SUN. GOOD FOR ATHLETIC FIELDS.
BERMUDA, COMMON (CYNODON DACTYLON) UNHULLED SEED WITH TEMPORARY COVER / WITH OTHER PERENNIALS	10 LBS / 6 LBS	0.2 LB / 0.1 LB	P, C													PLANT WITH WINTER ANNUALS. PLANT WITH TALL FESCUE.
CENTIPEDE (EREMOCHLOA OPHIUROIDES)	BLOCK SOD ONLY		P, C													DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE ADJACENTTO CONCRETE AND IN CONCENTRATED FLOW AREAS. IRRIGATION AS NEEDED UNTIL FULLY ESTABLISHED. DO NOT PLANT NEAR PASTURES. WINTERHARDY AS FAR NORTH AS ATHENS AND ATLANTA.
FESCUE, TALL (FESTUCA ARUNDINACEA) ALONE / WITH OTHER PERENNIALS	50 LBS / 30 LBS	1.1 LB / 0.7 LB	M–L, P													227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZAS OR CROWNVETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTINGS. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.
LESPEDEZA, SERICEA (LESPEDEZA CUNEATA) SCARIFIED	60 LBS	1.4 LB	M–L, P, C													350,000 SEED PER POUND. WIDELY ADAPTED. LOW MAINTENANCE. MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, OR TALL FESCUE. TAKES 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED. EXCELLENT ON ROAD BANKS. INOCULATE SEED WITH EL INOCULANT.
UNSCARIFIED	75 LBS	1.7 LB	M–L, P, C													MIX WITH TALL FESCUE OR WINTER ANNUALS.
SEED–BEARING HAY	3 TONS	138 LB	M–L, P, C													CUT WHEN SEED IS MATURE. BUT BEFORE IT SHATTERS. TALL FESCUE OR WINTER ANNUALS.
LOVEGRASS, WEEPING (ERAGROSTIS CURVULA) ALONE / WITH OTHER PERENNIALS	4 LBS / 2 LBS	0.1 LB / 0.05 LB	M–L, P, C													1,500,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS.

#52

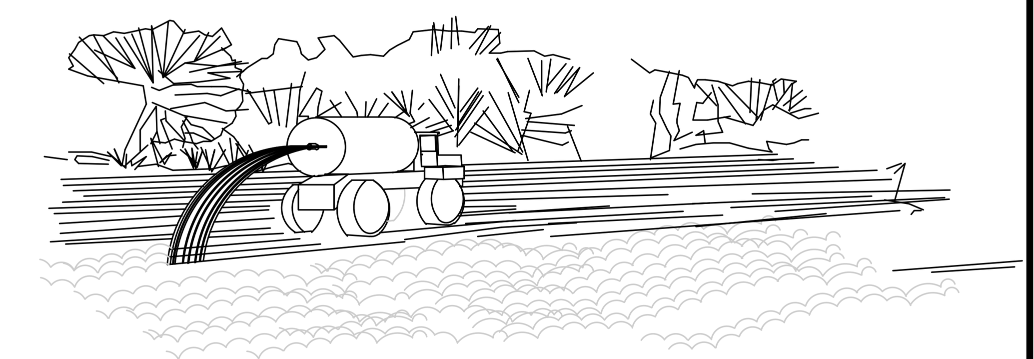
Ds1 | Ds2 | Ds3

DISTURBED AREA STABILIZATION WITH MULCHING, TEMPORARY SEEDINGS AND PERMANENT SEEDINGS

SCALE: NTS DATE:1/24/04

PERMANENT METHODS:
PERMANENT VEGETATION – REFER TO Ds3 (DISTURBED AREA STABILIZATION WITH PERMANENT VEGETATION)
TOPSOILING – COVERING THE SURFACE WITH A LESS EROSIVE SOIL MATERIAL
STONE – SURFACE WITH CRUSHED STONE OR COARSE GRAVEL (SEE Cr – CONSTRUCTION ROAD STABILIZATION)

TEMPORARY METHODS:
MULCHES – REFER TO Ds1 (DISTURBED AREA STABILIZATION)
VEGETATIVE COVER – REFER TO Ds2 (DISTURBED AREA STABILIZATION WITH TEMPORARY SEEDING)
TILLAGE – ROUGHEN AND BRING CLODS TO THE SURFACE BY USE OF CHISEL–TYPE PLOWS SPACED ABOUT 12 INCHES APART
IRRIGATION – SITE SPRINKLED WITH WATER UNTIL WET. REPEAT AS NEEDED
BARRIERS – FENCES, HAY BALES, AND CRATE WALLS PLACED AT INTERVALS 15 TIMES THEIR HEIGHT AND PERPENDICULAR TO AIR CURRENTS
CALCIUM CHLORIDE – APPLY TO KEEP SURFACE WET. REPEAT AS NEEDED.



DUST CONTROL

N.T.S.

Du

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1039 SULLIVAN ROAD, SUITE 200, NEWNAN, GEORGIA 30265
(P)678.552.2106 (F)678.552.2107
ATLANTA/SAVANNAH
COA #: PEF000625 EXP. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR BID	11/20/20	
1.	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: ---
Project #: 1020.1802 | Design by: --- | Review by: ---

SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

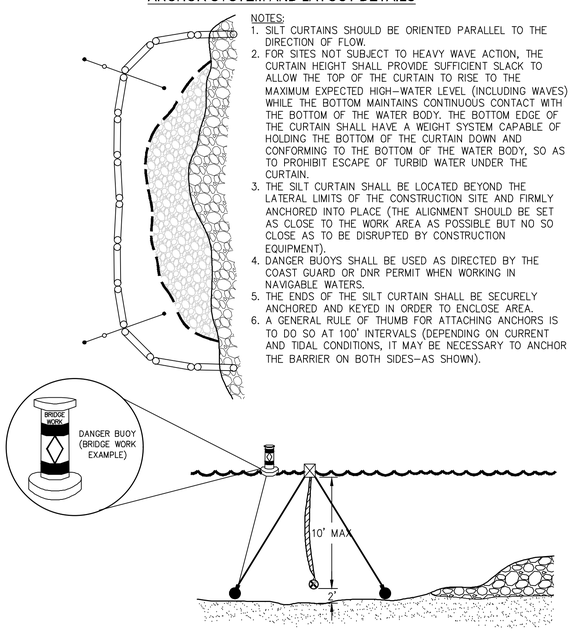
#53 EROSION DETAILS

GEORGIA 811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

DRAWING NO. C600

TURBIDITY CURTAIN SYSTEM

ANCHOR SYSTEM AND LAYOUT DETAILS



NOTES:
1. SILT CURTAINS SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF FLOW.
2. FOR SITES NOT SUBJECT TO HEAVY WAVE ACTION, THE CURTAIN HEIGHT SHALL PROVIDE SUFFICIENT SLACK TO ALLOW THE TOP OF THE CURTAIN TO RISE TO THE MAXIMUM EXPECTED HIGH–WATER LEVEL (INCLUDING WAVES) WHILE THE BOTTOM MAINTAINS CONTINUOUS CONTACT WITH THE BOTTOM OF THE WATER BODY. THE BOTTOM EDGE OF THE CURTAIN SHALL HAVE A WEIGHT SYSTEM CAPABLE OF HOLDING THE BOTTOM OF THE CURTAIN DOWN AND CONFORMING TO THE BOTTOM OF THE WATER BODY, SO AS TO PROHIBIT ESCAPE OF TURBID WATER UNDER THE CURTAIN.
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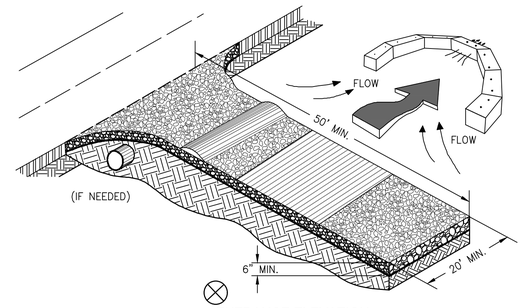
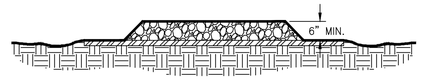
4. DANGER BUOYS SHALL BE USED AS DIRECTED BY THE COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERS.
5. THE ENDS OF THE SILT CURTAIN SHALL BE SECURELY ANCHORED AND KEYED IN ORDER TO ENCLOSE AREA.
6. A GENERAL RULE OF THUMB FOR ATTACHING ANCHORS IS TO DO SO AT 100' INTERVALS (DEPENDING ON CURRENT AND TIDAL CONDITIONS, IT MAY BE NECESSARY TO ANCHOR THE BARRIER ON BOTH SIDES–AS SHOWN).

(Co) CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



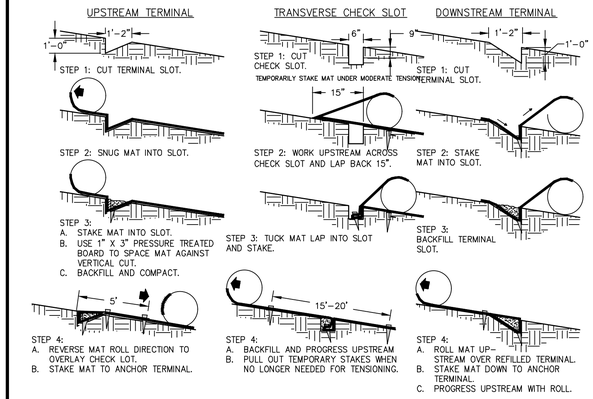
ENTRANCE ELEVATION



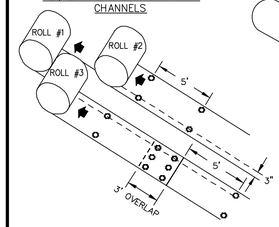
NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R–2 (1.5"–3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%..
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Ss

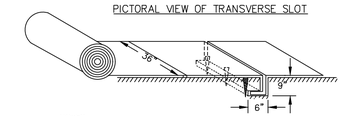
BLANKET AND MATTING CROSS-SECTIONS



SEQUENTIAL ROLL RUN OUT IN CHANNELS



PICTORAL VIEW OF TRANSVERSE SLOT

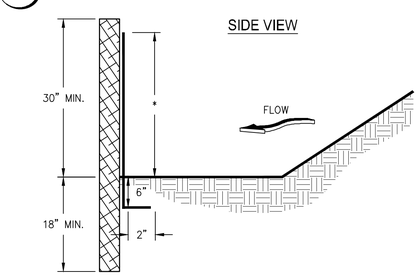


NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID–CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
6. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

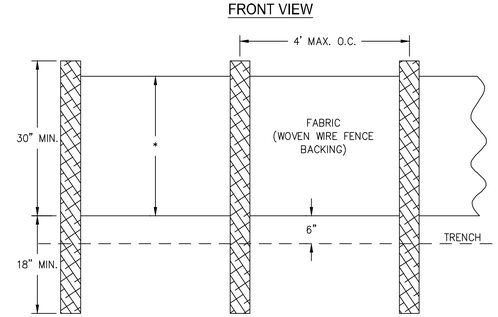
SLOPE STABLIZATION

(Sd1-S) SILT FENCE - TYPE SENSITIVE

SIDE VIEW



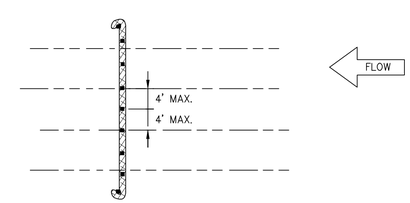
FRONT VIEW



NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

COMPOST SOCKS FOR CHECK DAMS

TYPICAL PLAN



NOTES:
1. ALL MATERIAL TO MEET SPECIFICATIONS.
2. PLACE ONE STAKE AT THE CENTER OF THE DITCH/CHANNEL. ALSO PLACE STAKES AT THE BED/BANK JUNCTION AND AT END OF THE DEVICE NOT SPACED MORE THAN 4 FEET APART.
3. SEDIMENT SHOULD BE REMOVED FROM BEHIND THE CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED ½ THE HEIGHT OF THE CHECK DAM.
4. CHECK DAMS CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
5. MINIMUM STAKING DEPTH FOR SAND, SILT, AND CLAY SHALL BE 18".

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ATLANTA/SAVANNAH
COA #: PEC006025 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR BID	11/20/20	---
1	ISSUED FOR REVIEW	11/09/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 1020.18012 | Design by: --- | Review by: ---

SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR ATLAS SAND MINE REMEDIATION

GMD 1559, EFFINGHAM COUNTY, GEORGIA

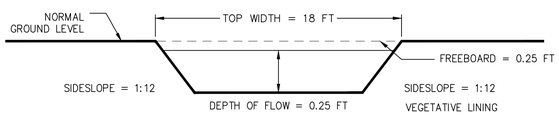
(#53) EROSION DETAILS

GEORGIA811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

DRAWING NO. C601

STORMWATER CONVEYANCE CHANNEL #1

TRAPEZOIDAL



STORMWATER CONVEYANCE CHANNEL DESIGN SHEET
Vegetated Trapezoidal

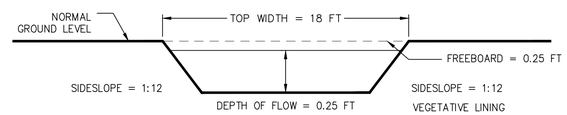
Computed by_____ Date _____
Checked by_____ Date _____

Project Name ATLAS SAND MINE REMEDIATION

Q25 = 2.26 cfs
Grade = 0.41 %
Vegetative cover = BERMUDA SOD
The retardance class for capacity is B and the unmowed plant height is 6 in.
The retardance class for stability is D and the mowed plant height is 2.5 in.
Maximum permissible velocity, V1, is 4 fps.
For a grade of 0.41 % and Q25 of 2.26 cfs,
Side slopes (z:1) = 12:1
Bottom width, B = 6 ft
Design depth, d = 0.50 ft
Area of channel, A = 6 sf.
Constructed depth, D = 0.50 ft + 0.25 ft
Constructed depth, D = 0.75 ft
Top width, T = 18 ft

STORMWATER CONVEYANCE CHANNEL #2

TRAPEZOIDAL



STORMWATER CONVEYANCE CHANNEL DESIGN SHEET
Vegetated Trapezoidal

Computed by_____ Date _____
Checked by_____ Date _____

Project Name ATLAS SAND MINE REMEDIATION

Q25 = 1.51 cfs
Grade = 0.80 %
Vegetative cover = BERMUDA SOD
The retardance class for capacity is B and the unmowed plant height is 6 in.
The retardance class for stability is D and the mowed plant height is 2.5 in.
Maximum permissible velocity, V1, is 4 fps.
For a grade of 0.80 % and Q25 of 1.51 cfs,
Side slopes (z:1) = 12:1
Bottom width, B = 6 ft
Design depth, d = 0.50 ft
Area of channel, A = 6 sf.
Constructed depth, D = 0.50 ft + 0.25 ft
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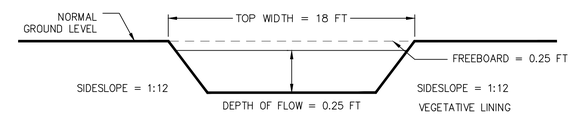
STORMWATER CONVEYANCE CHANNEL #3

TRAPEZOIDAL



STORMWATER CONVEYANCE CHANNEL DESIGN SHEET
Vegetated Trapezoidal

Computed by_____ Date _____
Checked by_____ Date _____

Project Name ATLAS SAND MINE REMEDIATION

Q25 = 1.34 cfs
Grade = 0.70 %
Vegetative cover = BERMUDA SOD
The retardance class for capacity is B and the unmowed plant height is 6 in.
The retardance class for stability is D and the mowed plant height is 2.5 in.
Maximum permissible velocity, V1, is 4 fps.
For a grade of 0.70 % and Q25 of 1.34 cfs,
Side slopes (z:1) = 12:1
Bottom width, B = 6 ft
Design depth, d = 0.50 ft
Area of channel, A = 6 sf.
Constructed depth, D = 0.50 ft + 0.25 ft
Constructed depth, D = 0.75 ft
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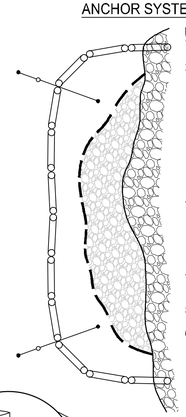
TURBIDITY CURTAIN SYSTEM

ANCHOR SYSTEM AND LAYOUT DETAILS



NOTES:
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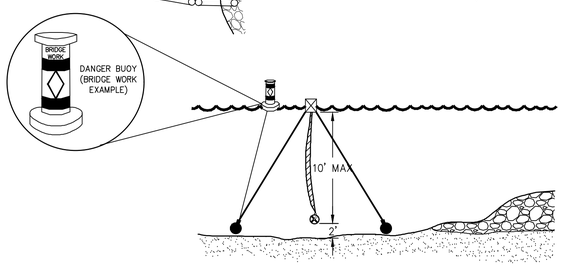

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COA #: PE-0006625 Exp. 6/30/2022

GEORGIA REGISTERED No 19888 PROFESSIONAL ENGINEER LAWRENCE H. DAVIS JR.

Rev.	Description	Date	Apr.
2	ISSUED FOR BID	11/20/20	---
1	ISSUED FOR REVIEW	11/04/20	---

Date: 11/04/20 | Drawn by: DCG | Check by: --- | Project #: 1020.1802 | Design by: --- | Review by: ---

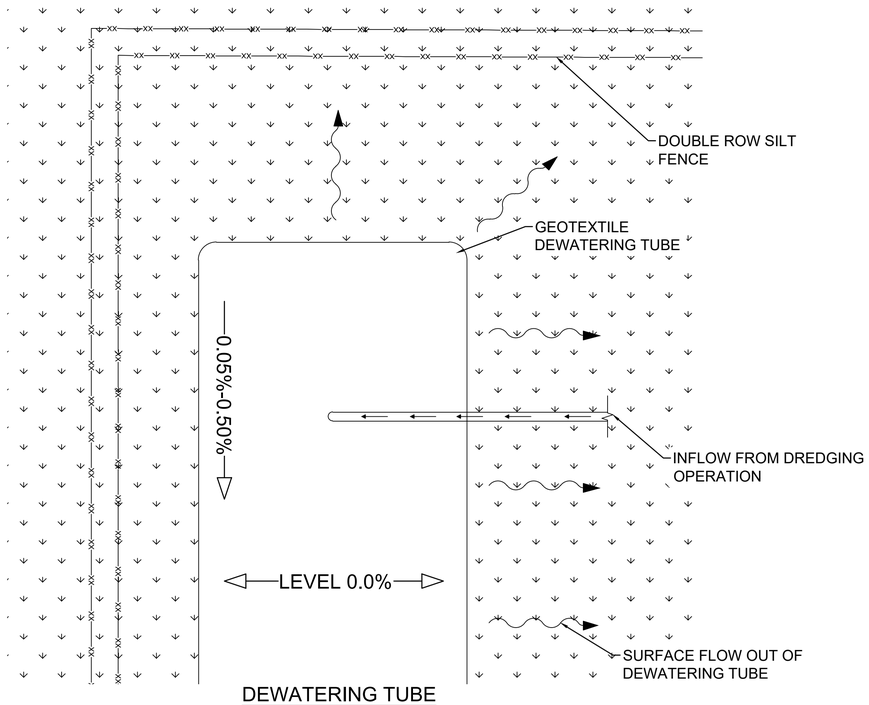
SCALE: N.T.S.

SITE DEVELOPMENT PLANS FOR
ATLAS SAND MINE REMEDIATION
GMD 1559, EFFINGHAM COUNTY, GEORGIA

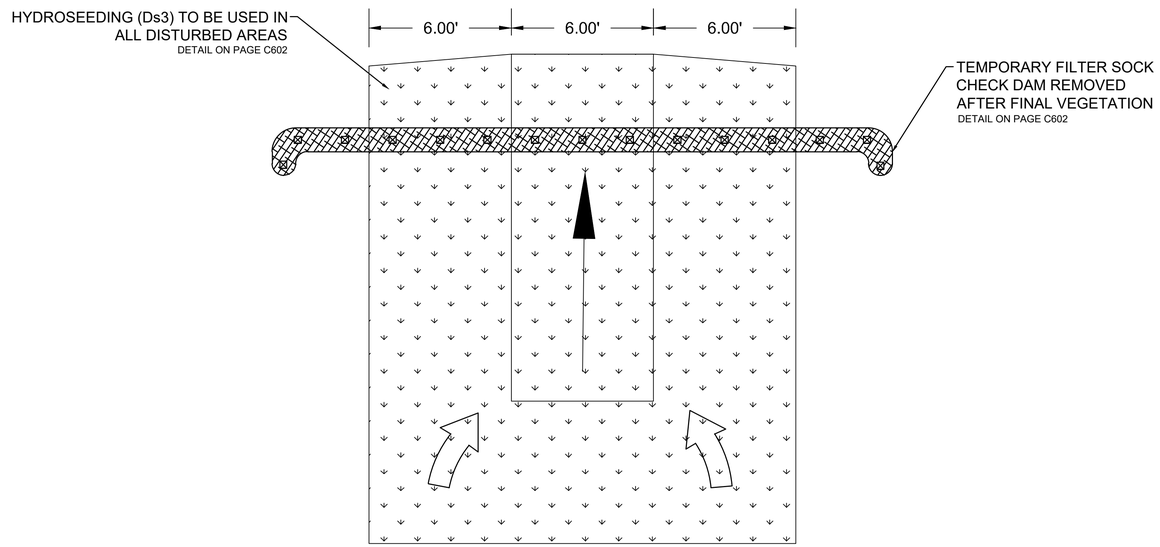
#53 EROSION DETAILS

GEORGIA811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

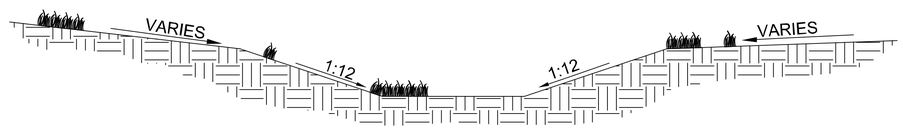
DRAWING NO.
C602



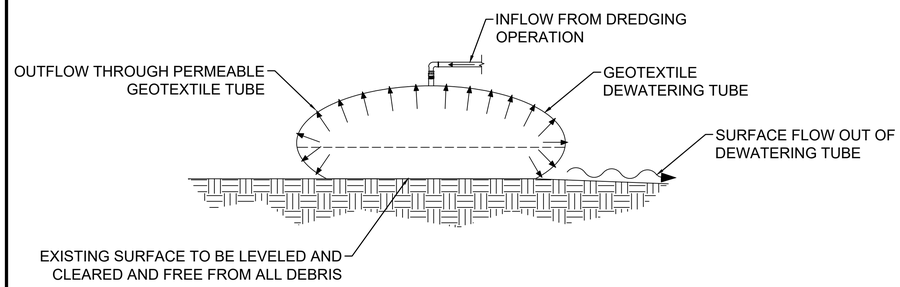
DEWATERING TUBE
PLAN VIEW



PERMANENT VEGETATED WATERWAY
PLAN VIEW



PERMANENT VEGETATED WATERWAY
PROFILE VIEW



DEWATERING TUBE
PROFILE VIEW

INTEGRATED Science & Engineering
1089 Sullivan Road, Suite 200, Newnan, Georgia 30265
(678) 552-2100 / (678) 552-2107
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COA #: PEF002625 Exp. 6/30/2022

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SITE DEVELOPMENT PLANS FOR
ATLAS SAND MINE REMEDIATION
GMD 1559, EFFINGHAM COUNTY, GEORGIA

CONSTRUCTION DETAILS

GEORGIA811 Utilities Protection Center, Inc.
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DRAWING NO.
C700