



a global professional services company

creative thinking. custom solutions.®

5724 Summer Trees Drive | Memphis, Tennessee 38134 | Telephone 901-372-7962 | Facsimile 901-372-2454 | www.ensafe.com

February 29, 2012

Mr. Bryan Leamons, P.E.
Arkansas Department of Environmental Quality
Solid Waste Management Division
5301 Northshore Drive
North Little Rock, Arkansas 72118

AFIN: 72-00159

Pmt #: 0015-S

REC'D

SCAN



MAR 01 2012

S
W
M
D

Doc ID#: 61867

To: BL - file

Re: 15% Design Submittal
Corrective Action Re-Design
Former C&L Landfill
Fayetteville, Arkansas
Contract 4600021812

Dear Mr. Leamons:

Enclosed is the 15% design submittal for the former C&L landfill corrective action re-design. As discussed in the kickoff conference call, we have divided the project into two construction phases and the submittal includes the documents for each of the phases. The submittal for each phase consists of two full sets and one half-size set of the 15% complete construction drawings with existing conditions, waste management plan, preliminary clearing and subgrade plan, and preliminary final cap grading plan and two copies of the Project Manual's table of contents. Also enclosed is a CD with electronic copies of the documents.

If you have questions or wish to discuss these documents, please contact me at (901) 372-7962 or cbarnett@ensafe.com.

Sincerely,
EnSafe Inc.

By: Claire Barnett, PE
Project Manager

cc: Paul Stoddard, EnSafe
Brian Martin, EnSafe
Gary Martin, EnSafe

Encl.

TABLE OF CONTENTS - PHASE 1

Section 00010 / Feb-12

Division 00	Procurement and Contracting Requirements
Section 00115	List of Drawings
Section 00130	Invitation to Bid Common Bidding Mistakes
Section 00200	Instructions to Bidders
Section 00410	Bid Form
Section 00410	Bid Form Attachment A Unit Prices
Section 00430	Bid Bond
Section 00490	Bidding Addenda
Section 00520	Agreement Form
Section 00611	Consent of Surety
Section 00614	Performance and Payment Bond
Section 00625	Certificate of Substantial Completion
Section 00640	Release of Claims
Section 00700	General Conditions
Section 00825	Insurance Requirements
Section 00850	Contract and Grant Disclosure Certification Form
Section 00865	Wage Rate Requirements Certificate of Final Completion
Section 00940	Change Order Form (by reference only)

Division 01

General Requirements

Section 011000	Summary
Section 012010	Measurement and Payment
Section 012200	Unit Prices
Section 013100	Project Management and Coordination
Section 013200	Construction Progress Documentation
Section 013300	Submittal Procedures
Section 014000	Quality Requirements
Section 015000	Temporary Facilities and Controls
Section 015639	Temporary Tree Protection
Section 015713	Temporary Erosion and Sediment Controls
Section 017300	Execution
Section 017419	Construction Waste Management and Disposal
Section 017700	Closeout Procedures
Section 017839	Project Record Documents

TABLE OF CONTENTS (Continued)

Division 31

Earthwork

Section 311000	Site Clearing
Section 312001	Earth Moving - Subgrade Fill
Section 312002	Earth Moving - Barrier Soil Fill
Section 312003	Earth Moving - Topsoil
Section 313501	Geotextile Reinforcement
Section 313502	Erosion Control Matting
Section 313503	Rip-Rap

Division 32

Exterior Improvements

Section 329200	Turf and Grasses
----------------	------------------

Division 33

Utilities

Section 332001	Gas Monitoring Wells
Section 332900	Groundwater Monitoring Well Abandonment

TABLE OF CONTENTS - PHASE 2

Section 00010 / Feb-12

Division 00	Procurement and Contracting Requirements
Section 00115	List of Drawings
Section 00130	Invitation to Bid
	Common Bidding Mistakes
Section 00200	Instructions to Bidders
Section 00410	Bid Form
Section 00410	Bid Form Attachment A Unit Prices
Section 00430	Bid Bond
Section 00490	Bidding Addenda
Section 00520	Agreement Form
Section 00611	Consent of Surety
Section 00614	Performance and Payment Bond
Section 00625	Certificate of Substantial Completion
Section 00640	Release of Claims
Section 00700	General Conditions
Section 00825	Insurance Requirements
Section 00850	Contract and Grant Disclosure Certification Form
Section 00865	Wage Rate Requirements
	Certificate of Final Completion
Section 00940	Change Order Form (by reference only)
Division 01	General Requirements
Section 011000	Summary
Section 012010	Measurement and Payment
Section 012200	Unit Prices
Section 013100	Project Management and Coordination
Section 013200	Construction Progress Documentation
Section 013300	Submittal Procedures
Section 014000	Quality Requirements
Section 015000	Temporary Facilities and Controls
Section 015639	Temporary Tree Protection
Section 015713	Temporary Erosion and Sediment Controls
Section 017300	Execution
Section 017419	Construction Waste Management and Disposal
Section 017700	Closeout Procedures
Section 017839	Project Record Documents
Division 02	Existing Conditions
Section 024100	Structure Demolition

TABLE OF CONTENTS (Continued)

Division 31

Earthwork

Section 311000	Site Clearing
Section 312001	Earth Moving - Subgrade Fill
Section 312002	Earth Moving - Barrier Soil Fill
Section 312003	Earth Moving - Topsoil
Section 313501	Geotextile Reinforcement
Section 313502	Erosion Control Matting
Section 313503	Rip-Rap

Division 32

Exterior Improvements

Section 329200	Turf and Grasses
----------------	------------------

Division 33

Utilities

Section 332001	Gas Monitoring Wells
Section 332900	Groundwater Monitoring Well Abandonment

CORRECTIVE ACTION DESIGN DOCUMENTS

FOR C & L LANDFILL - PHASE #1

FOR ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

FAYETTEVILLE, WASHINGTON COUNTY, ARKANSAS

FEBRUARY 2012

ABA PROJECT NO. 9301102

DATE: FEBRUARY 28, 2012
15 % SUBMITTAL

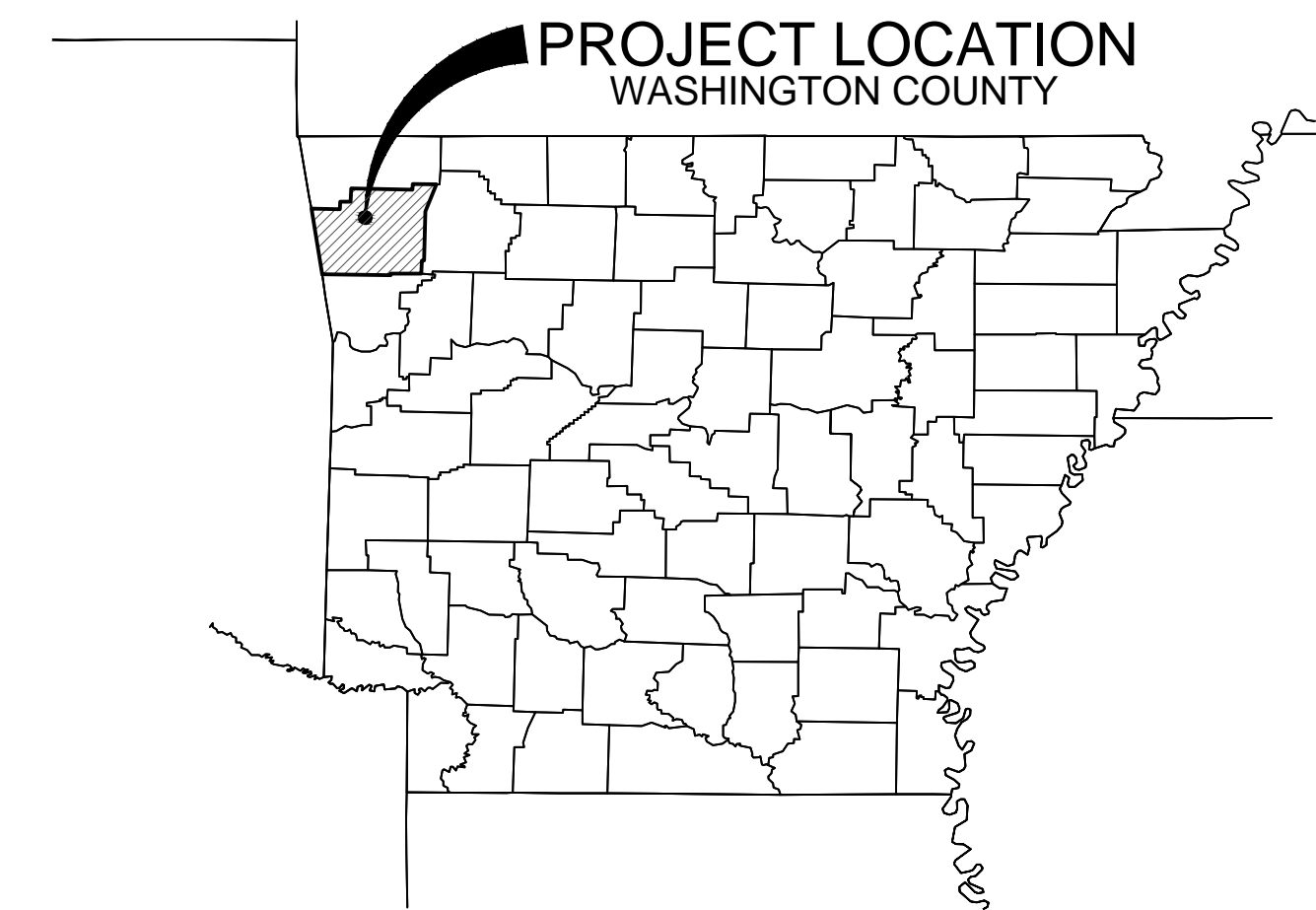


SOURCE: DeLorme Street Atlas Software

VICINITY MAP
NOT TO SCALE

DRAWING INDEX

SHEET NUMBER	SHEET TITLE
T-100	TITLE SHEET
C-101	OVERALL EXISTING CONDITIONS
C-102	WASTE MANAGEMENT PLAN
C-103	EXISTING CONDITIONS
C-104	EROSION CONTROL PLAN (NOT IN THIS SUBMITTAL)
C-105	CLEARING AND SUBGRADE PLAN
C-106	FINAL CAP GRADING PLAN
C-107	GRADING DETAILS (NOT IN THIS SUBMITTAL)
C-108	CROSS SECTION A-A' (NOT IN THIS SUBMITTAL)
C-109	CROSS SECTION B-B' (NOT IN THIS SUBMITTAL)
C-110	GRADING AT CREEK BUFFER ZONES (CONCEPTUAL)
C-111	GRADING OF OFFSITE WASTE (CONCEPTUAL)
C-112	EROSION CONTROL DETAILS (NOT IN THIS SUBMITTAL)
C-113	GENERAL DETAILS (NOT IN THIS SUBMITTAL)



ARKANSAS LOCATION MAP
NOT TO SCALE

PREPARED BY:



creative thinking.
custom solutions. SM

engineering | environment | health & safety | technology

Telephone (800) 588-7962 | www.ensafe.com

a global professional services company

CLIENT:

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTSHORE DRIVE
NORTH LITTLE ROCK, ARKANSAS

CLIENT CONTACT:

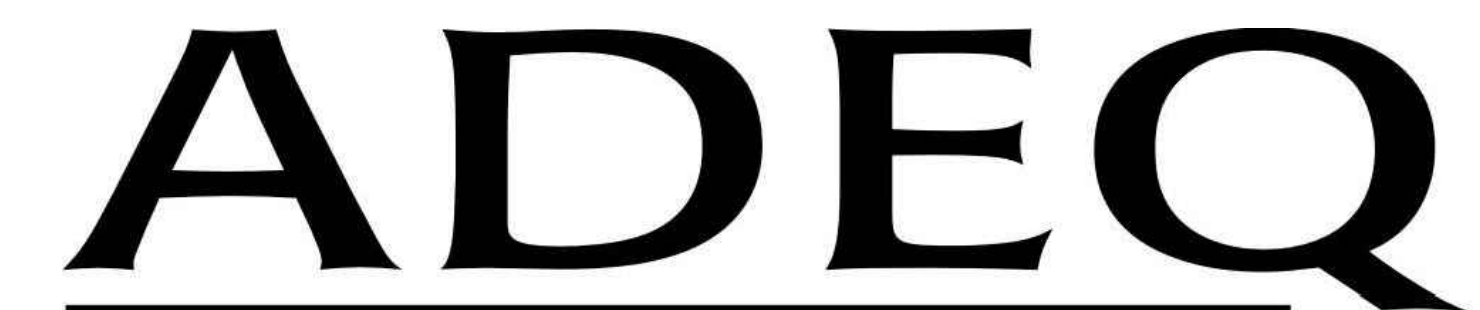
BRYAN LEAMONS, P.E.
SOLID WASTE MANAGEMENT DIVISION
CONTACT PHONE: (501) 682-0601

DESIGN PROFESSIONAL:

ENSAFE INC.
5724 SUMMER TREES DRIVE
MEMPHIS, TENNESSEE. 38134

DESIGN PROFESSIONAL CONTACT:

CLAIRE BARNETT, P.E - PROJECT MANAGER
(901) 372-7962



A R K A N S A S
Department of Environmental Quality



Know what's below.
Call before you dig.

JOB NO. 11443
CONTRACT NO. 4600011696
AFIN 72-00159

SHEET NUMBER
T-100



PROPERTY CORNER LOCATION

PROVIDED BY BLEW & ASSOCIATES: 06/11/2008

PROPERTY CORNER NO. NORTHING EASTING

1	624028.1737	658609.3880
2	624033.1858	658609.7751
3	624127.2337	658617.0395
4	624305.0469	658719.6800
5	624324.5630	658695.7477
6	624140.3543	658394.4248
7	624209.3186	658390.0172
8	624294.2336	658445.7570
9	624438.0239	658414.8428
10	624508.1977	658297.1121
11	624645.2115	658330.2537
12	624722.9643	658429.8064
13	624796.6751	658473.1935
14	624909.9181	658464.4906
15	625032.5256	658484.4843
16	625093.0005	658529.7010
17	625119.5598	658617.5312
18	625347.6406	658725.8752
19	625491.0187	658708.4588
20	625514.8425	658563.1904
21	625558.5661	658566.1557
22	625606.6849	658692.1915
23	625750.1652	658740.3413
24	625846.2086	658838.6961
25	625867.0381	658944.5564
26	625908.5608	659053.2152
27	625700.0395	659133.8176
28	625647.1757	659253.2742
29	625634.7153	659380.5105
30	625601.4854	659465.6892
31	625611.0104	659582.7543
32	625488.8538	659656.3087
33	625386.1747	659635.7757
34	625365.9102	659588.2572
35	625332.0071	659581.4135
36	625233.7684	659673.0806
37	625140.5869	659664.8312
38	625068.0859	659540.5901
39	625009.7729	659539.6912
40	624989.2444	659636.3432
41	624886.1287	659772.1916
42	624502.2454	659747.4161
43	624468.7598	659625.6495
44	624474.5682	659167.6113
45	624093.1119	659229.8973
46	624091.0954	659310.4080
47	623990.1628	659410.8049

LEGEND

- PROPERTY CORNER REFERENCE NUMBER
- GROUNDWATER MONITOR WELL
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPERTY BOUNDARY
- APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE
- APPROXIMATE LIMITS OF LANDFILL WASTE
- APPROXIMATE CREEK CENTERLINE
- CENTERLINE OF ROAD
- ROADWAY EASEMENT

15 % SUBMITTAL

REVISIONS
 NO. DATE DESCRIPTION

ENSAFE
 creative thinking. custom solutions.sm
 engineering | environment | health & safety | technology
 Telephone (800) 588-7962 | www.ensafe.com
 a global professional services company

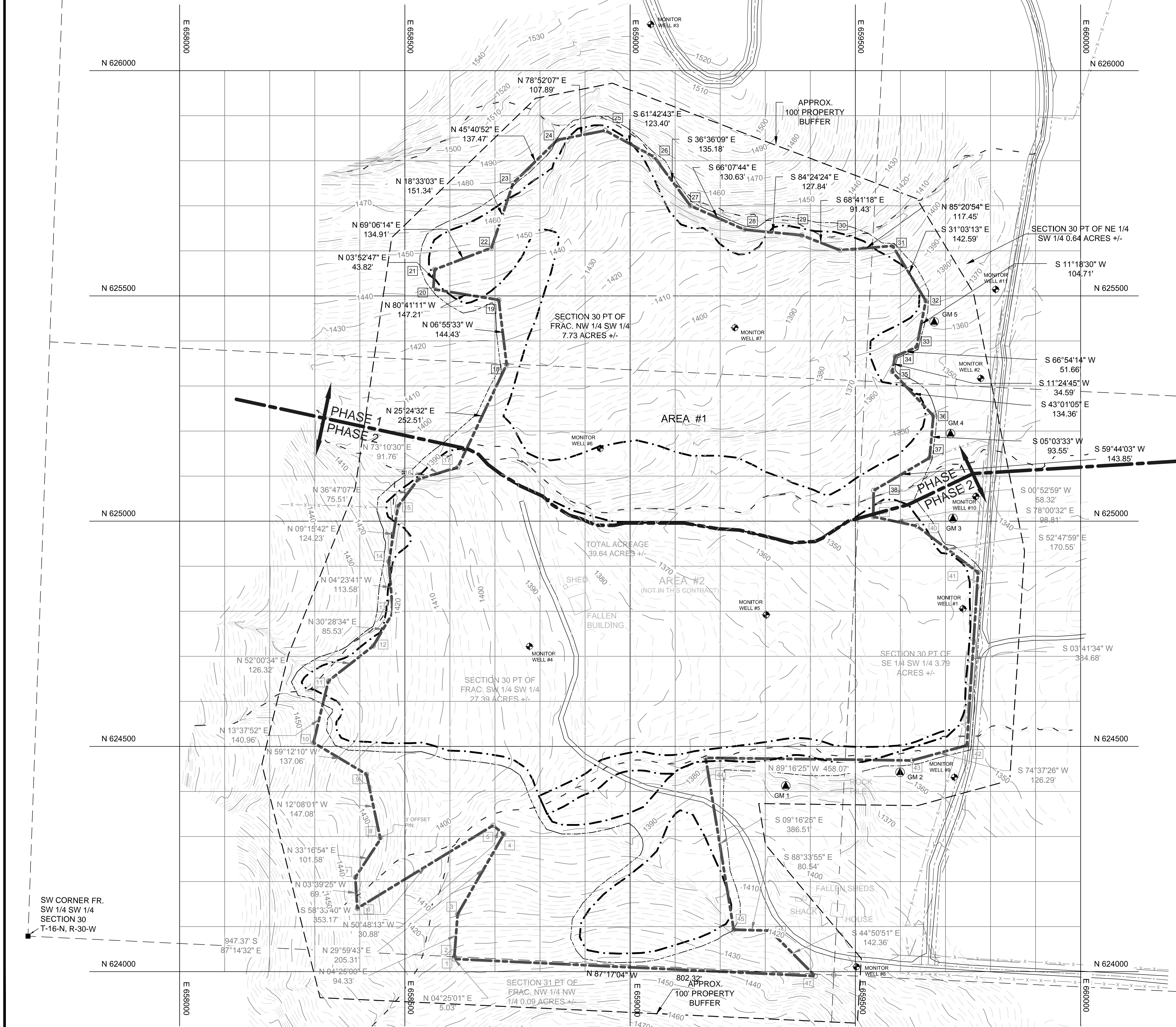
**CORRECTIVE ACTION DESIGN
 C & L LANDFILL - PHASE 1**
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY

SEAL

SHEET NAME
OVERALL EXISTING CONDITIONS

SHEET NUMBER
C-101



NO.	DATE	DESCRIPTION

ENS SAFE
 creative thinking. custom solutions.SM
 engineering | environment | health & safety | technology
 Telephone (800) 588-7962 | www.ensafe.com
 a global professional services company

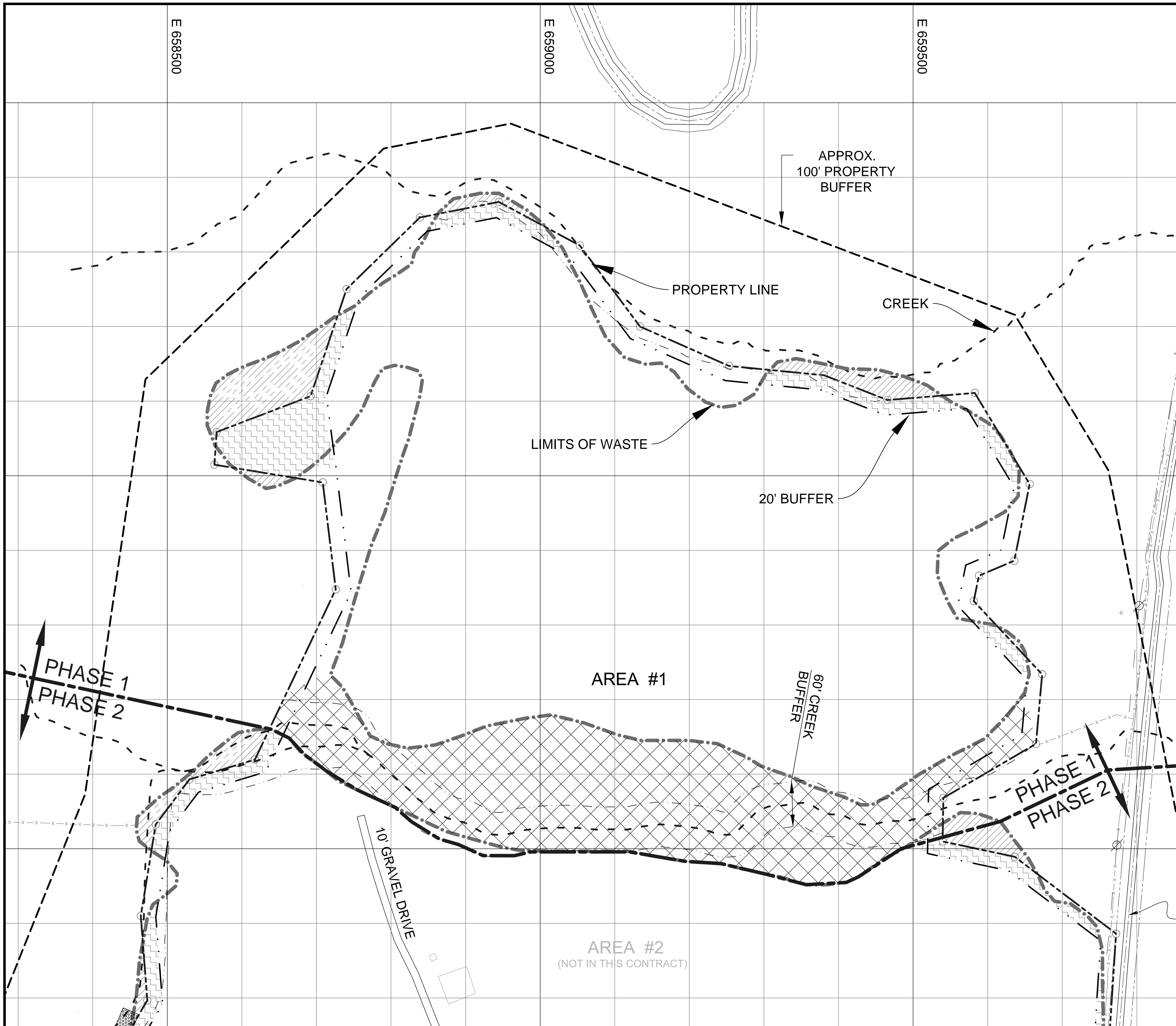
**CORRECTIVE ACTION DESIGN
 C & L LANDFILL - PHASE 1**
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS
 Department of Environmental Quality

SEAL

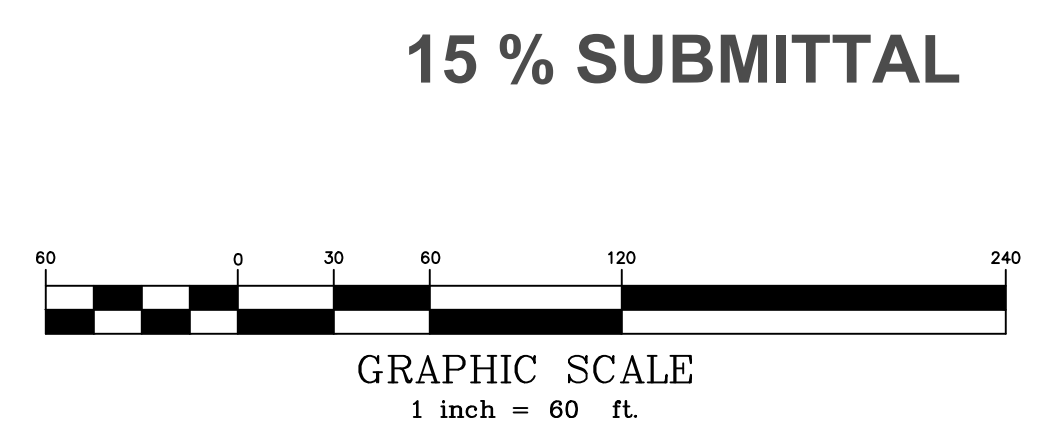
SHEET NAME
**WASTE
 MANAGEMENT
 PLAN**

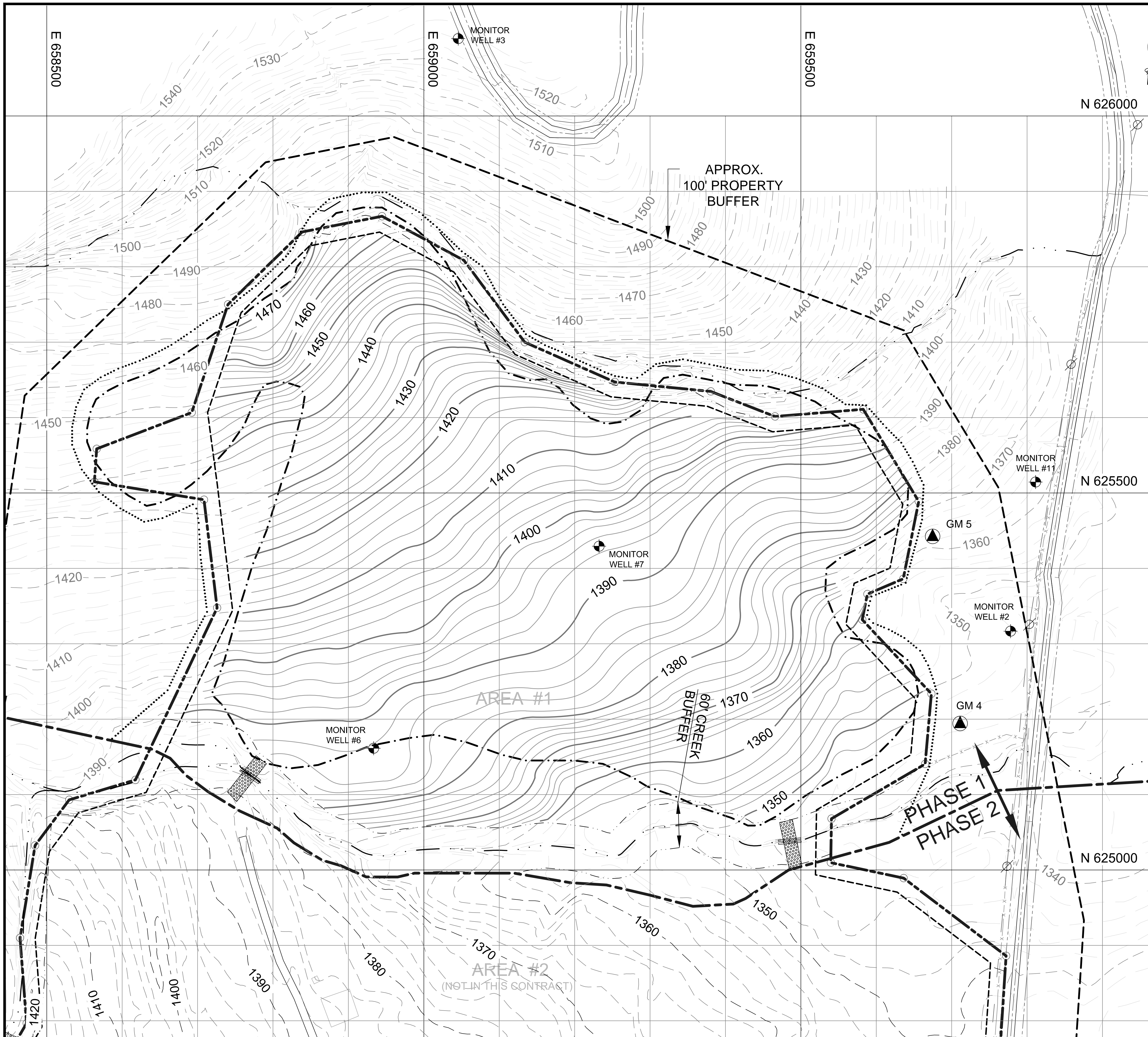
SHEET NUMBER
C-102



- LEGEND**
- 20-FOOT BUFFER ZONE INSIDE PROPERTY LINE
 - - - - - APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE
 - · - · - APPROXIMATE LIMITS OF EXISTING LANDFILL WASTE
 - - - - - APPROXIMATE CREEK CENTERLINE
 - · - · - APPROXIMATE CREEK BUFFER 30' FROM CENTERLINE OF CREEK EACH SIDE, (CONTRACTOR TO FIELD VERIFY)
 - PROPERTY BOUNDARY
 - [Cross-hatched box] CREEK RESTORATION AREA
 - [Diagonal lines box] APPROXIMATE LIMITS OF LANDFILL WASTE OUTSIDE OF SITE PROPERTY LINE. CONTRACTOR TO REMOVE WASTE FROM OFF SITE AREAS AND PLACE WASTE WITHIN CAP DESIGN AREA, MIN. 20 FEET WITHIN SITE PROPERTY LINE.
 - [Wavy lines box] BUFFER ZONE INSIDE PROPERTY LINE TO BE CLEARED OF WASTE. LANDFILL MATERIAL WITHIN THIS ZONE TO BE GRADED INTO CAP DESIGN AREA.

NOTE: WASTE IN 100' OUTSIDE BUFFER ZONE TO BE PLACED IN AREA 1



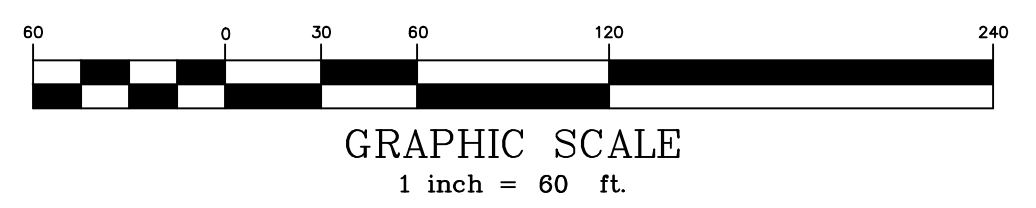


- GRADING AND DRAINAGE NOTES:**
1. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, DIMENSIONS, ELEVATIONS, AND LOCATION OF EXISTING FEATURES AFFECTED BY THE WORK. CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
 2. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO ANY LAND-DISTURBING ACTIVITY. EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL PERMANENT GROUND COVER HAS BEEN ESTABLISHED ON ALL DISTURBED AREAS.
 3. CONTRACTOR SHALL INSPECT SEDIMENT CONTROL STRUCTURES IN TIME INTERVALS WHICH MEET THE STATE OF ARKANSAS EROSION CONTROL REGULATIONS.
 4. CONTRACTOR SHALL EMPLOY GEOTECHNICAL CONSULTANT TO OBSERVE PROOF ROLLING, CHECK DENSITIES, AND IDENTIFY SOIL MATERIALS.
 5. PREVENT STORM WATER CONTAMINATION FROM THE EQUIPMENT USED DURING CONSTRUCTION. THIS INCLUDES PREVENTING SPILLS OF OIL, FUELS, COOLANTS, HYDRAULIC FLUIDS, AND ANY OTHER HARMFUL SPILLS.
 6. SOLID WASTE GENERATED BY THE CONTRACTOR SHALL BE PROPERLY DISPOSED OF OFFSITE.
 7. MAXIMUM PROPOSED SLOPES TO BE 5:1 (PREFERRED) - 4:1 (MAXIMUM)
 8. GROUNDWATER MONITOR WELLS 3, 6 AND 7 AT THE LANDFILL SHALL BE ABANDONED BY THE CONTRACTOR AS PER STATE OF ARKANSAS WELL ABANDONMENT GUIDELINES. GROUNDWATER MONITOR WELLS 2 AND 11 SHALL REMAIN.
 9. AS FEASIBLE, SALVAGE TIMBER FOR SALE. FOR TIMBER NOT SUITABLE FOR SALE, CHIP AND USE ONSITE IN MULCH SOCKS OR AS SITE MULCH. COORDINATE WITH OWNER FOR TERMS OF TIMBER SALE.
 10. CREEK RESTORATION AREA REQUIRES RELOCATION OF ALL LANDFILL DEBRIS MATERIAL INCLUDING SUBSURFACE AND SURFACE MATERIAL TO AREA #1. ALL DISTURBED AREAS SHALL BE RESTORED INCLUDING FILL WITH CLEAN SOIL AND VEGETATIVE COVER.
 11. SURVEY COMPLETED SUBGRADE (ON 50 FOOT GRID) TO ESTABLISH BASE CONTOURS BEFORE PLACEMENT OF BARRIER SOIL LAYER.
 12. EXISTING SUBGRADE SOIL IS TO BE COMPACTED TO A MINIMUM OF 85% STANDARD PROCTOR. MOISTURE CONTENT MUST BE MAINTAINED BETWEEN OPTIMUM AND PLUS 3%.
 13. PROPOSED CONTOURS SHOWN ARE TO PROVIDE GENERAL DESIGN INTENT AND SHOULD NOT BE USED FOR CONSTRUCTION STAKING DUE TO UNKNOWN QUANTITIES OF LANDFILL MATERIAL OFFSITE AND WITHIN 20 FOOT BUFFER ZONE BROUGHT INTO AREA #1. FINAL FIELD FINDINGS WILL DETERMINE FINAL GRADE FOR BOTH SUBGRADE AND FINISH GRADE.
 14. IT IS ANTICIPATED THAT LANDFILL MATERIAL TO BE RELOCATED AND INCORPORATED INTO AREA #1 IS ON THE SURFACE OR SHALLOW BURIED.

GAS MONITORING WELL LOCATION DATA

WELL NO.	NORTHING	EASTING
GM 4	625194.3681	659711.1759
GM 5	625442.4531	659674.7332

- LEGEND**
- ⊕ GROUNDWATER MONITOR WELL
 - ▲ GM 5 PROPOSED GAS MONITORING WELL
 - EXISTING MAJOR CONTOURS
 - - - EXISTING MINOR CONTOURS
 - 20' BUFFER ZONE LINE
 - PROPERTY BOUNDARY
 - - - APPROXIMATE LIMITS OF LANDFILL WASTE
 - ⋯ APPROXIMATE LIMITS OF DISTURBANCE
 - - - APPROXIMATE CREEK CENTERLINE
 - - - APPROXIMATE CREEK BUFFER 30' FROM CENTERLINE OF CREEK EACH SIDE, (CONTRACTOR TO FIELD VERIFY, TYP)
 - PROPOSED FINAL GRADE - MAJOR
 - PROPOSED FINAL GRADE - MINOR
 - - - APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE



JOB NO. 11443
 DATE: 02/28/12
 DRAWN BY: AN
 DESIGNED BY: BM
 REVIEWED BY: CB
 SCALE: 1" = 60'

NO.	DATE	DESCRIPTION

ENSURE creative thinking. custom solutions.™
 engineering | environment | health & safety | technology
 Telephone (800) 588-7662 | www.ensure.com
 a global professional services company

CORRECTIVE ACTION DESIGN
C & L LANDFILL - PHASE 1
 ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

SEAL

SHEET NAME
CLEARING AND SUBGRADE PLAN

SHEET NUMBER
C-105

NO.	DATE	DESCRIPTION

ENSAGE
 creative thinking. custom solutions.SM
 engineering | environment | health & safety | technology
 Telephone (800) 588-7962 | www.ensafe.com
 a global professional services company

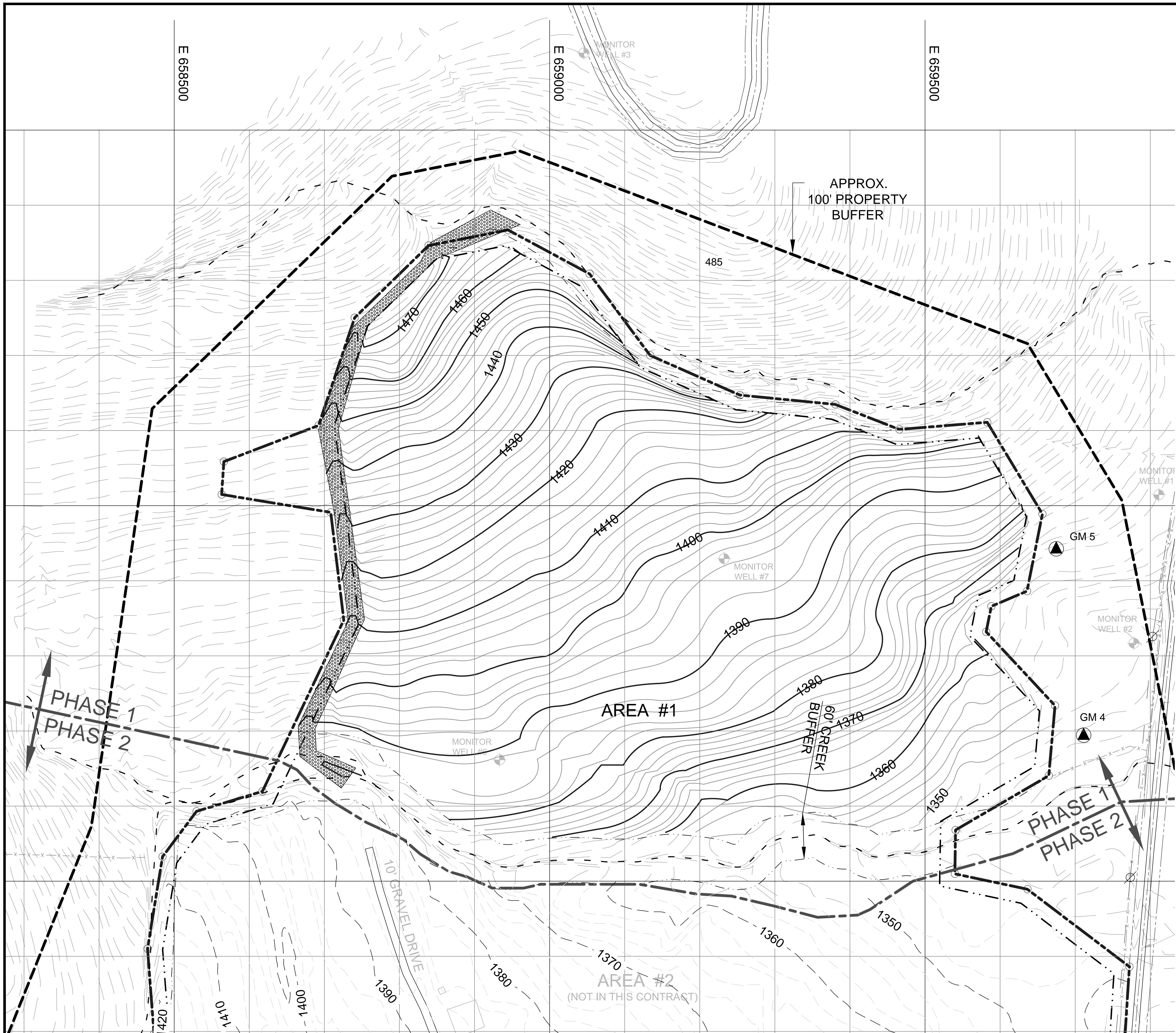
CORRECTIVE ACTION DESIGN
C & L LANDFILL - PHASE 1
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS
 Department of Environmental Quality

SEAL

SHEET NAME
**FINAL CAP
 GRADING PLAN**

SHEET NUMBER
C-106

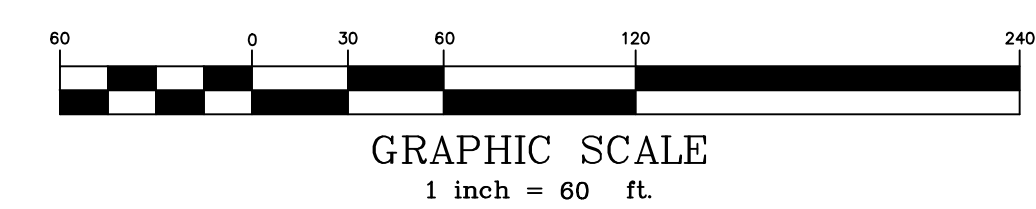


GAS MONITORING WELL LOCATION DATA

WELL NO.	NORTHING	EASTING
GM 4	625194.3681	659711.1759
GM 5	625442.4531	659674.7332

- LEGEND**
- GM 5 PROPOSED GAS MONITORING WELL
 - EXISTING MAJOR CONTOURS
 - EXISTING MINOR CONTOURS
 - 20' BUFFER ZONE LINE
 - PROPERTY BOUNDARY
 - APPROXIMATE CREEK CENTERLINE
 - APPROXIMATE CREEK BUFFER
 - 30' FROM CENTERLINE OF CREEK EACH SIDE, (CONTRACTOR TO FIELD VERIFY)
 - PROPOSED FINAL GRADE - MAJOR
 - PROPOSED FINAL GRADE - MINOR
 - APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE

15 % SUBMITTAL



CORRECTIVE ACTION DESIGN DOCUMENTS

FOR C & L LANDFILL PHASE #2

FOR ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

FAYETTEVILLE, WASHINGTON COUNTY, ARKANSAS

FEBRUARY 2012

ABA PROJECT NO. 9301102

DATE: FEBRUARY 28, 2012
15 % SUBMITTAL

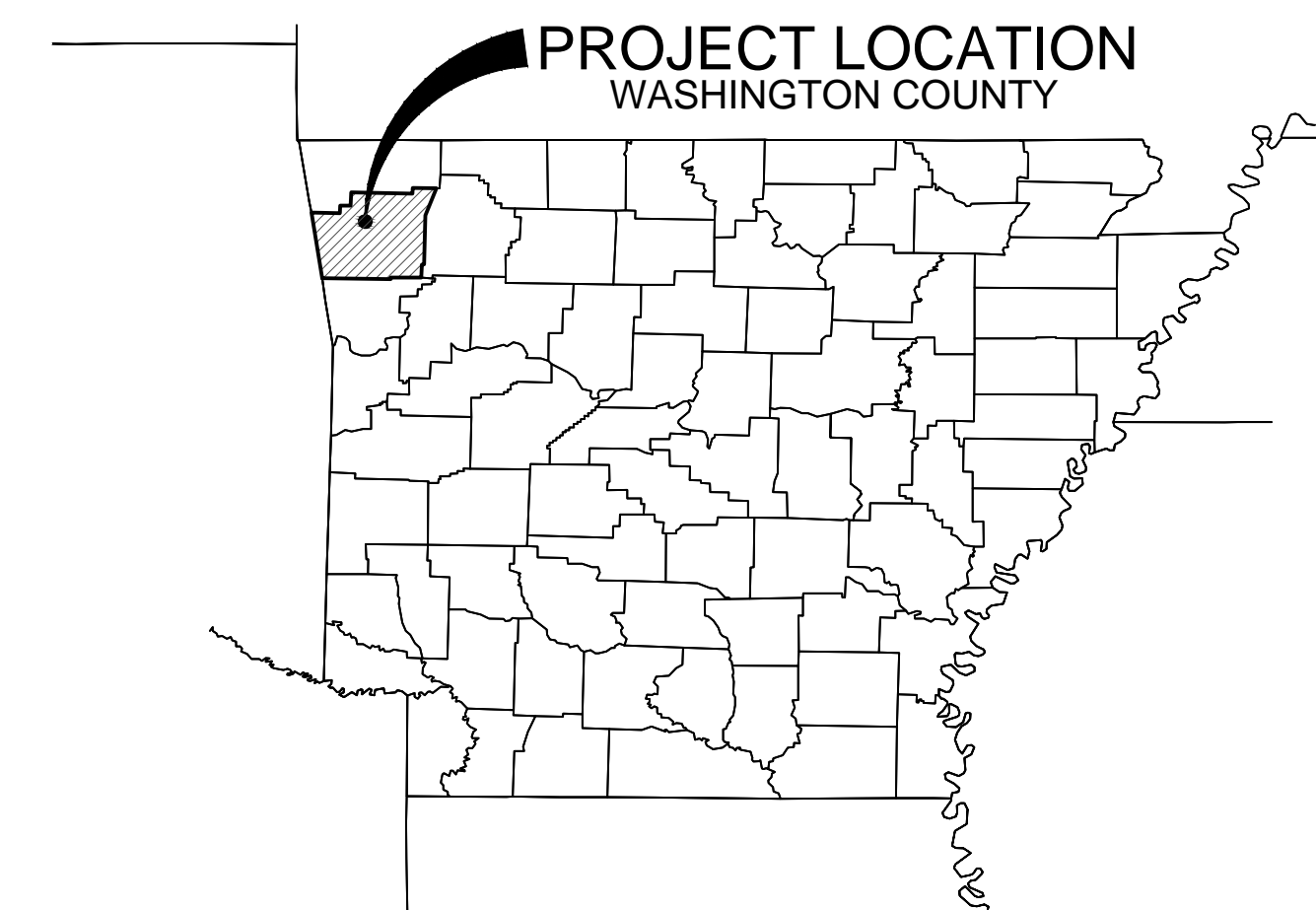


SOURCE: DeLorme Street Atlas Software

VICINITY MAP
NOT TO SCALE

DRAWING INDEX

SHEET NUMBER	SHEET TITLE
T-200	TITLE SHEET
C-201	OVERALL EXISTING CONDITIONS
C-202	WASTE MANAGEMENT PLAN
C-203	EXISTING CONDITIONS
C-204	EROSION CONTROL PLAN (NOT IN THIS SUBMITTAL)
C-205	CLEARING AND SUBGRADE PLAN
C-206	FINAL CAP GRADING PLAN
C-207	GRADING DETAILS (NOT IN THIS SUBMITTAL)
C-208	CROSS SECTION A-A (NOT IN THIS SUBMITTAL)
C-209	CROSS SECTION C-C (NOT IN THIS SUBMITTAL)
C-210	GRADING AT CREEK BUFFER ZONES (CONCEPTUAL)
C-211	GRADING OF OFFSITE WASTE (CONCEPTUAL)
C-212	EROSION CONTROL DETAILS (NOT IN THIS SUBMITTAL)
C-213	GENERAL DETAILS (NOT IN THIS SUBMITTAL)



ARKANSAS LOCATION MAP
NOT TO SCALE

PREPARED BY:



creative thinking.
custom solutions. SM

engineering | environment | health & safety | technology

Telephone (800) 588-7962 | www.ensafe.com

a global professional services company

CLIENT: ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTSHORE DRIVE
NORTH LITTLE ROCK, ARKANSAS

CLIENT CONTACT: BRYAN LEAMONS, P.E.
SOLID WASTE MANAGEMENT DIVISION
CONTACT PHONE: (501) 682-0601

DESIGN PROFESSIONAL: ENSAFE INC.
5724 SUMMER TREES DRIVE
MEMPHIS, TENNESSEE. 38134

DESIGN PROFESSIONAL CONTACT: CLAIRE BARNETT, P.E - PROJECT MANAGER
(901) 372-7962

ADEQ

A R K A N S A S
Department of Environmental Quality



Know what's below.
Call before you dig.

JOB NO. 11443
CONTRACT NO. 4600011696
AFIN 72-00159

SHEET NUMBER
T-200

NO.	DATE	DESCRIPTION

ENSAGE
 creative thinking. custom solutions.SM
 engineering | environment | health & safety | technology
 Telephone (800) 588-7962 | www.ensafe.com
 a global professional services company

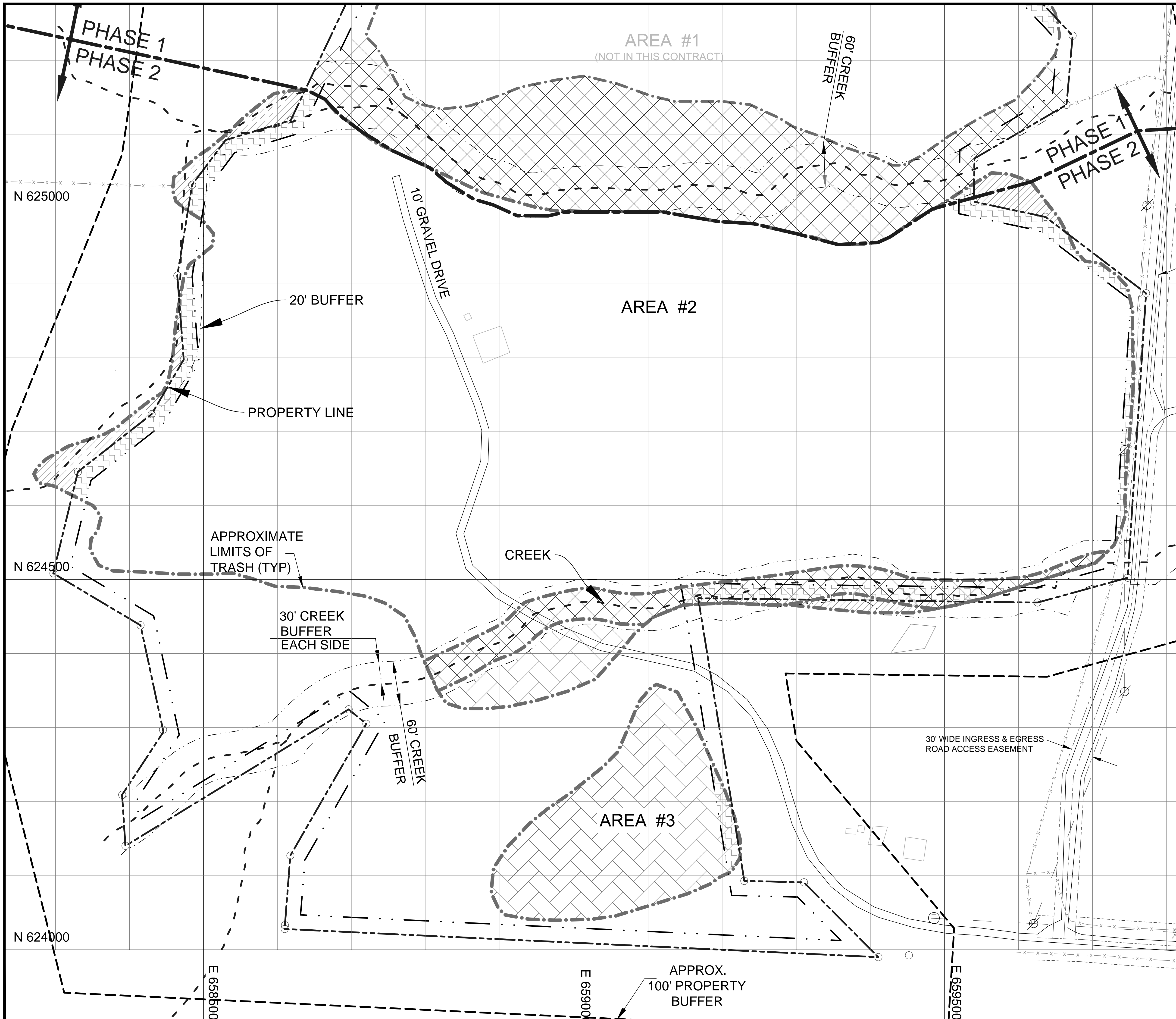
CORRECTIVE ACTION DESIGN
C & L LANDFILL - PHASE 2
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY

SEAL

SHEET NAME
WASTE MANAGEMENT PLAN

SHEET NUMBER
C-202



LEGEND

- 20-FOOT BUFFER ZONE INSIDE PROPERTY LINE
- APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE
- APPROXIMATE LIMITS OF EXISTING LANDFILL WASTE
- APPROXIMATE CREEK CENTERLINE
- APPROXIMATE CREEK BUFFER 30' FROM CENTERLINE OF CREEK EACH SIDE, (CONTRACTOR TO FIELD VERIFY)
- PROPERTY BOUNDARY
- CREEK RESTORATION AREA
- APPROXIMATE LIMITS OF LANDFILL WASTE OUTSIDE OF SITE PROPERTY LINE. CONTRACTOR TO REMOVE WASTE FROM OFF SITE AREAS AND PLACE WASTE WITHIN CAP DESIGN AREA, MIN. 20 FEET WITHIN SITE PROPERTY LINE.
- BUFFER ZONE INSIDE PROPERTY LINE TO BE CLEARED OF WASTE. LANDFILL MATERIAL WITHIN THIS ZONE TO BE GRADED INTO CAP DESIGN AREA.
- TO BE GRUBBED, CLEARED AND HAVE LANDFILL WASTE MOVED INTO AREA #2. REPLACE EXISTING GRADE WITH FILL AND ENSURE POSITIVE SLOPE. CONTRACTOR TO MINIMIZE GRADING AND CLEARING IN AREAS REQUIRING ONLY SURFACE MATERIAL REMOVAL.

NOTE: WASTE IN 100' OUTSIDE BUFFER ZONE TO BE PLACED IN AREA 2

15 % SUBMITTAL

GRAPHIC SCALE
 1 inch = 60 ft.

MONITORING WELL AND CONTROL INFORMATION

PROVIDED BY BLEW & ASSOCIATES: 06/11/2008

NORTHING:	EASTING:	TOP OF CASING ELEVATION	DESCRIPTION:
624805.434	659738.561	1357.05	MONITOR WELL #1
625316.769	659778.157	1352.61	MONITOR WELL #2
626102.664	659045.653	1528.74	MONITOR WELL #3
624722.003	658776.479	1398.51	MONITOR WELL #4
624791.992	659302.014	1369.69	MONITOR WELL #5
625161.454	658933.445	1392.25	MONITOR WELL #6
625429.395	659232.421	1396.05	MONITOR WELL #7
624563.546	659618.828	1357.81	MONITOR WELL #8
624804.756	659470.828	1320.89	MONITOR WELL #9
625054.748	659767.390	1339.79	MONITOR WELL #10
625514.497	659811.329	1361.38	MONITOR WELL #11

NOTES:

1. TOPOGRAPHIC SURVEY INFORMATION SHOWN PROVIDED BY THE CITY OF FAYETTEVILLE, ARKANSAS.
2. BOUNDARY AND SITE FEATURE SURVEY INFORMATION PROVIDED BY BLEW & ASSOCIATES.
3. NO PORTION OF THIS PROPERTY IS LOCATED WITHIN FLOOD ZONE "A" OR "AE" AS DETERMINED BY THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR WASHINGTON COUNTY, ARKANSAS. (FIRM PANEL #05143C0095D DATED JULY 21, 1999).
4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. IN THE EVENT EXISTING CONDITIONS DIFFER FROM THOSE SHOWN IN THIS DRAWING, THEN THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND DESIGN PROFESSIONAL.
5. MAJOR CONTOUR INTERVAL SHOWN IS 10 FEET. MINOR CONTOUR INTERVAL SHOWN IS 2 FEET.

JOB NO.	11443
DATE:	02/28/12
DRAWN BY:	AN
DESIGNED BY:	BM
REVIEWED BY:	CB
SCALE:	1" = 80'

PROPERTY CORNER LOCATION

PROVIDED BY BLEW & ASSOCIATES: 06/11/2008

PROPERTY CORNER NO.	NORTHING	EASTING
---------------------	----------	---------

1	624028.1737	658609.3880
2	624033.1858	658609.7751
3	624127.2337	658617.0395
4	624305.0469	658719.6800
5	624324.5630	658695.7477
6	624140.3543	658394.4248
7	624209.3186	658390.0172
8	624294.2336	658445.7570
9	624438.0239	658414.8428
10	624508.1977	658297.1121
11	624645.2115	658330.2537
12	624722.9643	658429.8064
13	624796.6751	658473.1935
14	624909.9181	658464.4906
15	625032.5256	658484.4843
16	625093.0005	658529.7010
17	625119.5598	658617.5312
18	625347.6406	658725.8752
19	625491.0187	658708.4588
20	625514.8425	658563.1904
21	625558.5661	658566.1557
22	625606.6849	658692.1915
23	625750.1652	658740.3413
24	625846.2086	658838.6961
25	625867.0381	658944.5564
26	625808.5608	659053.2152
27	625700.0395	659133.8176
28	625647.1757	659253.2742
29	625634.7153	659380.5105
30	625601.4854	659465.6892
31	625611.0104	659582.7543
32	625488.8538	659656.3087
33	625386.1747	659635.7757
34	625365.9102	659588.2572
35	625332.0071	659581.4135
36	625233.7684	659673.0806
37	625140.5869	659664.8312
38	625068.0859	659540.5901
39	625009.7729	659539.6912
40	624989.2444	659636.3432
41	624886.1287	659772.1916
42	624502.2454	659747.4161
43	624468.7598	659625.6495
44	624474.5662	659167.6113
45	624093.1119	659229.8973
46	624091.0954	659310.4080
47	623990.1628	659410.8049

REVISIONS

NO.	DATE	DESCRIPTION

ENS SAFE
 creative thinking. custom solutions.sm
 engineering | environment | health & safety | technology
 Telephone (800) 588-7662 | www.ensafe.com
 a global professional services company

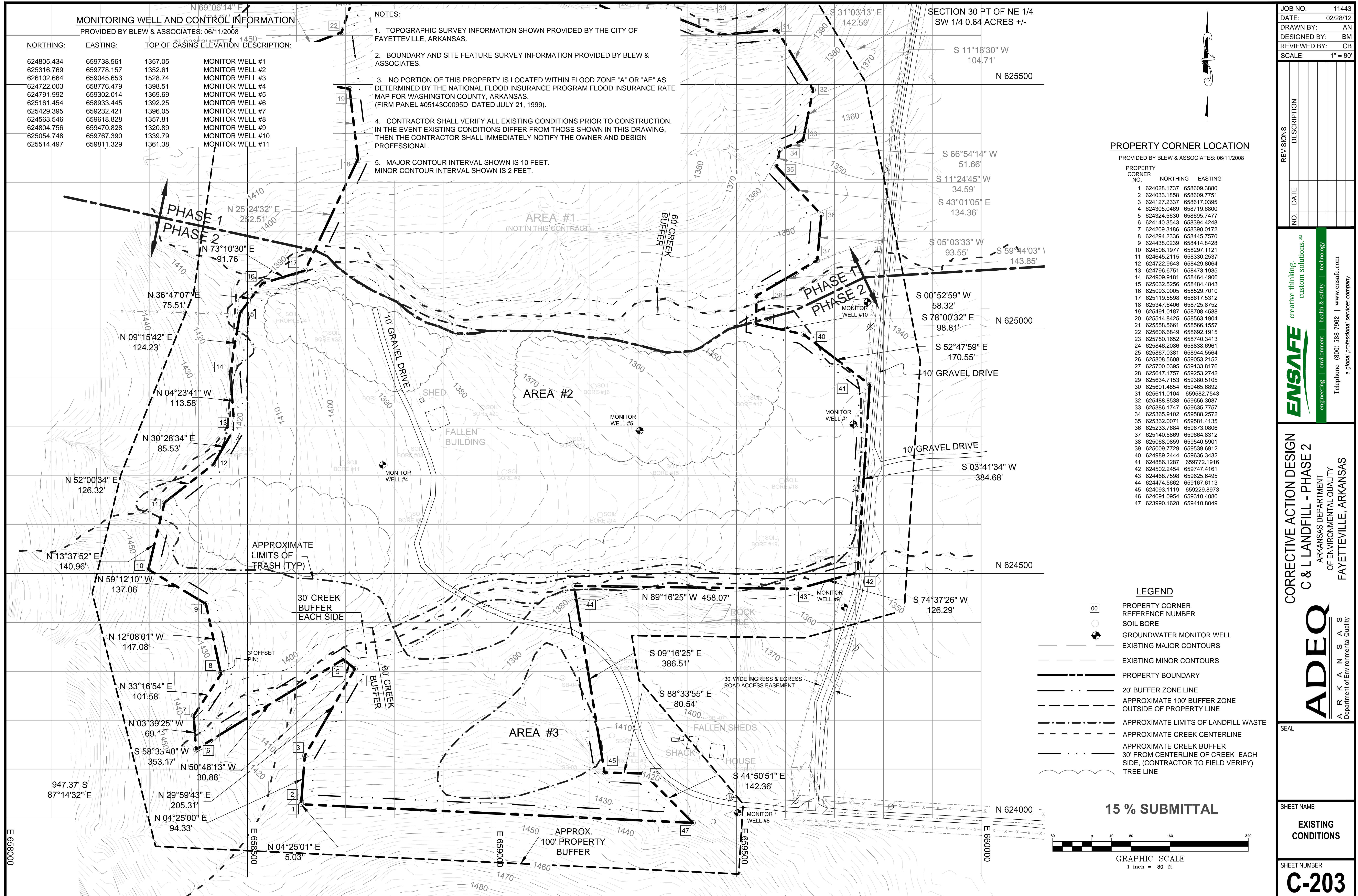
CORRECTIVE ACTION DESIGN
C & L LANDFILL - PHASE 2
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY

SEAL

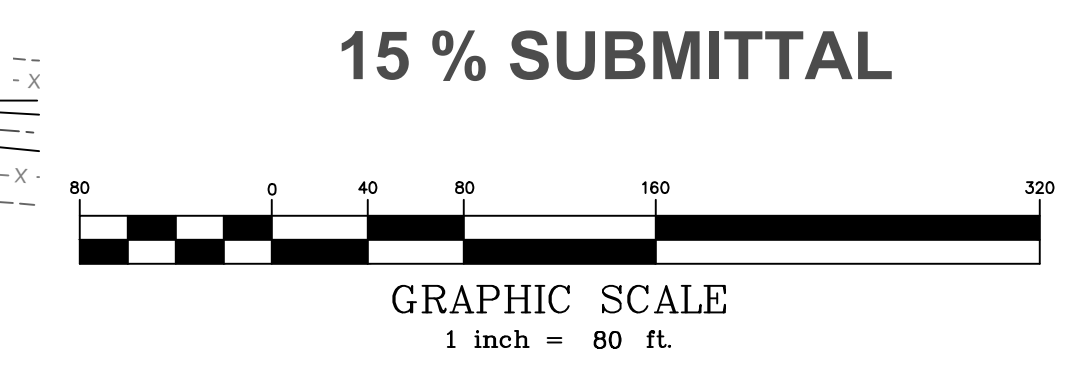
SHEET NAME
EXISTING CONDITIONS

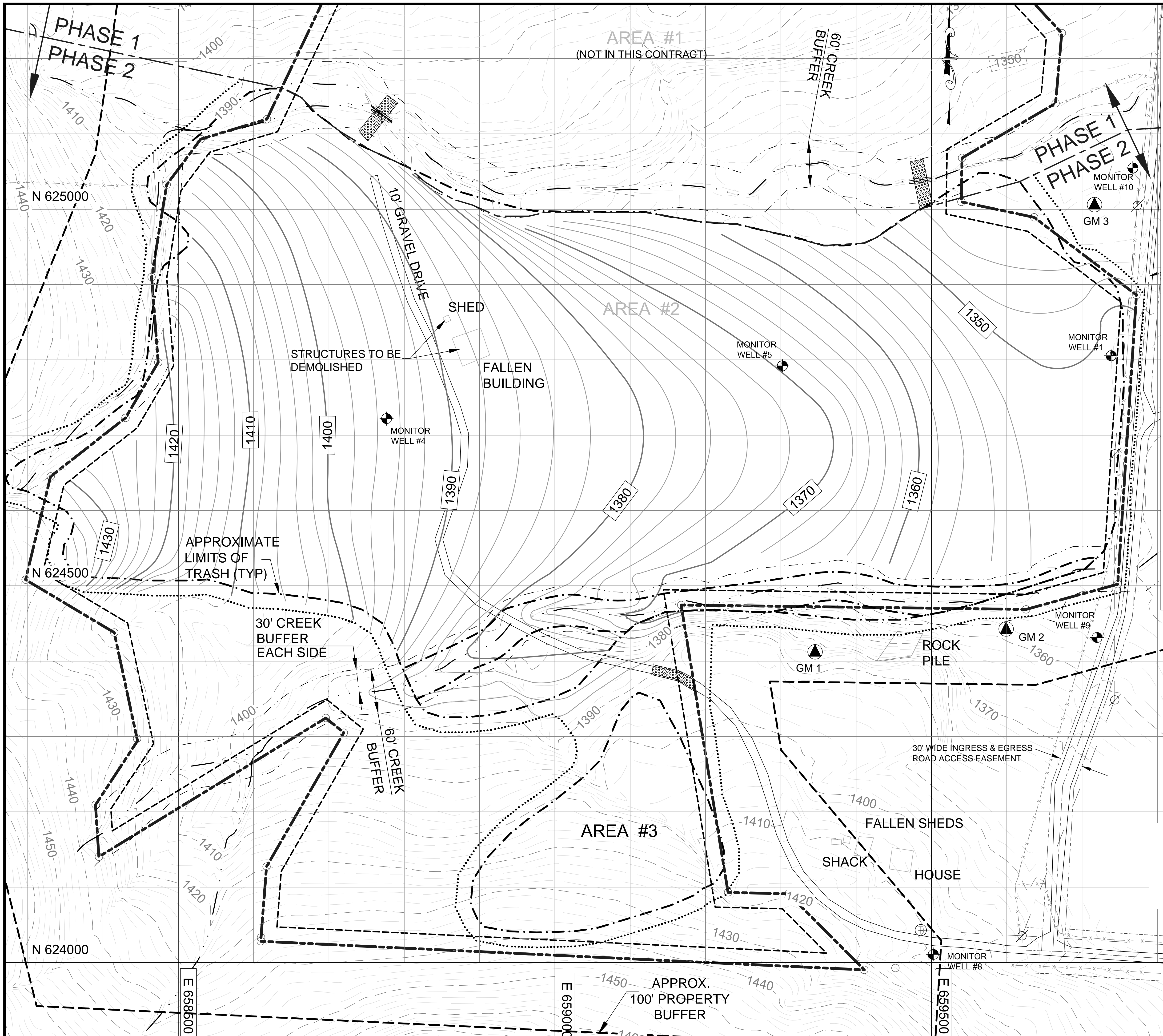
SHEET NUMBER
C-203



LEGEND

- 00 PROPERTY CORNER REFERENCE NUMBER
- SOIL BORE
- ⊕ GROUNDWATER MONITOR WELL
- EXISTING MAJOR CONTOURS
- - - EXISTING MINOR CONTOURS
- PROPERTY BOUNDARY
- 20' BUFFER ZONE LINE
- - - APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE
- - - APPROXIMATE LIMITS OF LANDFILL WASTE
- - - APPROXIMATE CREEK CENTERLINE
- APPROXIMATE CREEK BUFFER 30' FROM CENTERLINE OF CREEK EACH SIDE, (CONTRACTOR TO FIELD VERIFY)
- TREE LINE



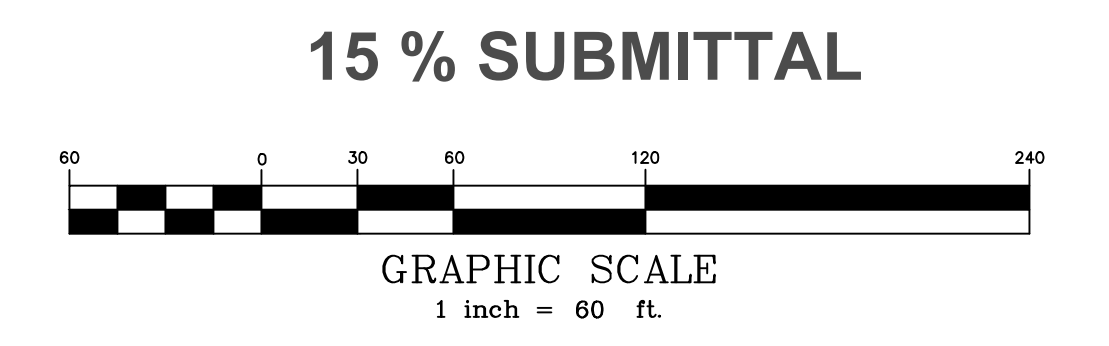


- GRADING AND DRAINAGE NOTES:**
1. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, DIMENSIONS, ELEVATIONS, AND LOCATION OF EXISTING FEATURES AFFECTED BY THE WORK. CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
 2. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO ANY LAND-DISTURBING ACTIVITY. EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL PERMANENT GROUND COVER HAS BEEN ESTABLISHED ON ALL DISTURBED AREAS.
 3. CONTRACTOR SHALL INSPECT SEDIMENT CONTROL STRUCTURES IN TIME INTERVALS WHICH MEET THE STATE OF ARKANSAS EROSION CONTROL REGULATIONS.
 4. CONTRACTOR SHALL EMPLOY GEOTECHNICAL CONSULTANT TO OBSERVE PROOF ROLLING, CHECK DENSITIES, AND IDENTIFY SOIL MATERIALS.
 5. PREVENT STORM WATER CONTAMINATION FROM THE EQUIPMENT USED DURING CONSTRUCTION. THIS INCLUDES PREVENTING SPILLS OF OIL, FUELS, COOLANTS, HYDRAULIC FLUIDS, AND ANY OTHER HARMFUL SPILLS.
 6. SOLID WASTE GENERATED BY THE CONTRACTOR SHALL BE PROPERLY DISPOSED OF OFFSITE.
 7. MAXIMUM PROPOSED SLOPES TO BE 5:1 (PREFERRED) - 4:1 (MAXIMUM)
 8. GROUNDWATER MONITOR WELLS 4 AND 5 AT THE LANDFILL SHALL BE ABANDONED BY THE CONTRACTOR AS PER STATE OF ARKANSAS WELL ABANDONMENT GUIDELINES. GROUNDWATER MONITOR WELLS 1, 8, 9, AND 10 SHALL REMAIN.
 9. AS FEASIBLE, SALVAGE TIMBER FOR SALE. FOR TIMBER NOT SUITABLE FOR SALE, CHIP AND USE ONSITE IN MULCH SOCKS OR AS SITE MULCH. COORDINATE WITH OWNER FOR TERMS OF TIMBER SALE.
 10. CREEK RESTORATION AREA REQUIRES RELOCATION OF ALL LANDFILL DEBRIS MATERIAL INCLUDING SUBSURFACE AND SURFACE MATERIAL TO AREA #2. ALL DISTURBED AREAS SHALL BE RESTORED INCLUDING FILL WITH CLEAN SOIL AND VEGETATIVE COVER.
 11. SURVEY COMPLETED SUBGRADE (ON 50 FOOT GRID) TO ESTABLISH BASE CONTOURS BEFORE PLACEMENT OF BARRIER SOIL LAYER.
 12. EXISTING SUBGRADE SOIL IS TO BE COMPACTED TO A MINIMUM OF 85% STANDARD PROCTOR. MOISTURE CONTENT MUST BE MAINTAINED BETWEEN OPTIMUM AND PLUS 3%.
 13. PROPOSED CONTOURS SHOWN ARE TO PROVIDE GENERAL DESIGN INTENT AND SHOULD NOT BE USED FOR CONSTRUCTION STAKING DUE TO UNKNOWN QUANTITIES OF LANDFILL MATERIAL OFFSITE AND WITHIN 20 FOOT BUFFER ZONE BROUGHT INTO AREA #2. FINAL FIELD FINDINGS WILL DETERMINE FINAL GRADE FOR BOTH SUBGRADE AND FINISH GRADE.
 14. IT IS ANTICIPATED THAT LANDFILL MATERIAL TO BE RELOCATED AND INCORPORATED INTO AREA #2 IS ON THE SURFACE OR SHALLOW BURIED.

GAS MONITORING WELL LOCATION DATA

WELL NO.	NORTHING	EASTING
GM 1	624412.2942	659345.3958
GM 2	624442.7019	659599.1653
GM 3	625006.0657	659716.4907

- LEGEND**
- GROUNDWATER MONITOR WELL
 - PROPOSED GAS MONITORING WELL
 - EXISTING MAJOR CONTOURS
 - EXISTING MINOR CONTOURS
 - 20' BUFFER ZONE LINE
 - PROPERTY BOUNDARY
 - APPROXIMATE LIMITS OF LANDFILL WASTE
 - APPROXIMATE LIMITS OF DISTURBANCE
 - APPROXIMATE CREEK CENTERLINE
 - APPROXIMATE CREEK BUFFER
 - 30' FROM CENTERLINE OF CREEK EACH SIDE, (CONTRACTOR TO FIELD VERIFY, TYP)
 - PROPOSED FINAL GRADE - MAJOR
 - PROPOSED FINAL GRADE - MINOR
 - APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE



JOB NO. 11443
 DATE: 02/27/12
 DRAWN BY: AN
 DESIGNED BY: BM
 REVIEWED BY: CB
 SCALE: 1" = 60'

NO.	DATE	DESCRIPTION

creative thinking. custom solutions.™
 ENSAFE engineering | environment | health & safety | technology
 Telephone (800) 588-7662 | www.ensafe.com
 a global professional services company

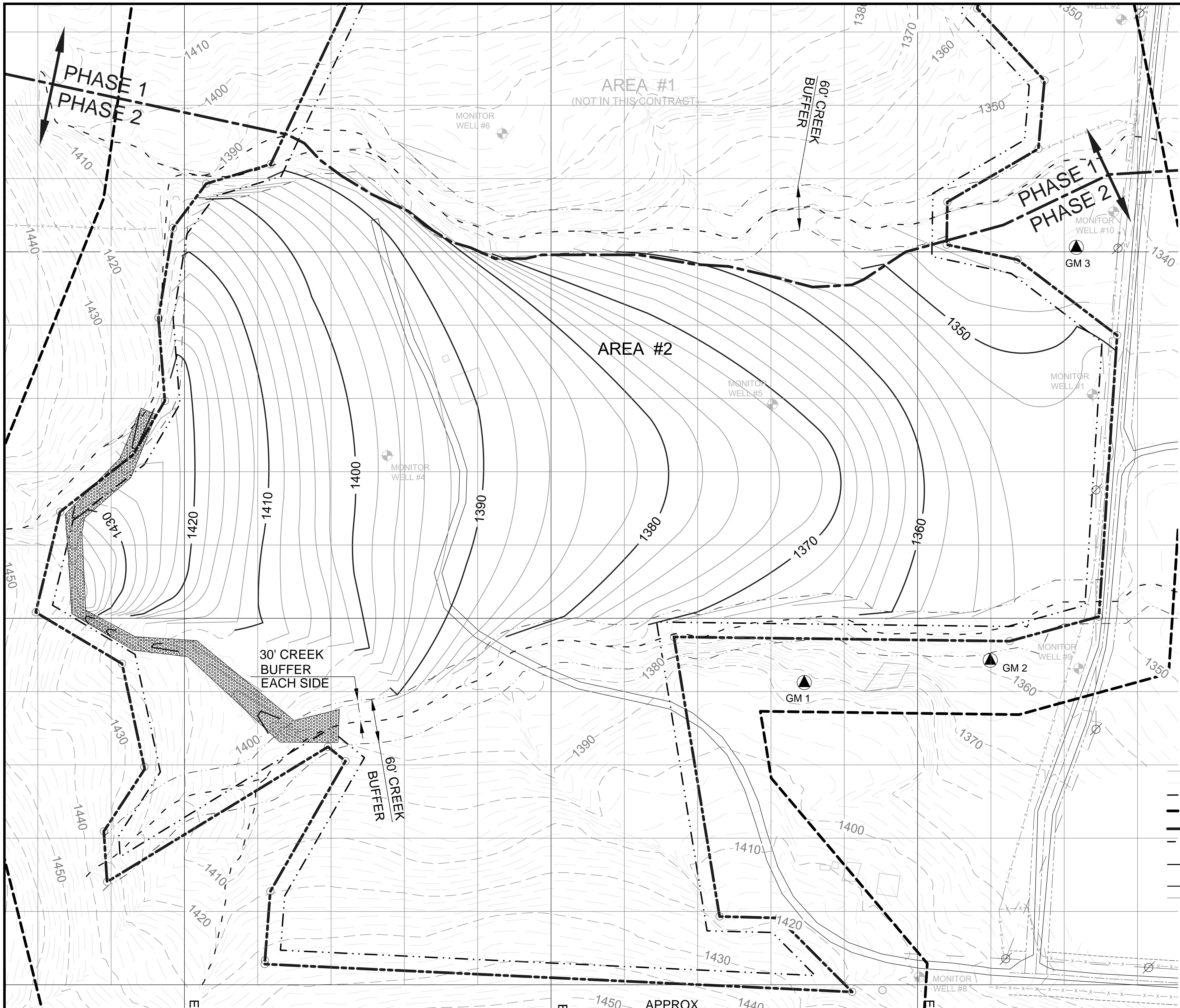
CORRECTIVE ACTION DESIGN
C & L LANDFILL - PHASE 2
 ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

SEAL

SHEET NAME
CLEARING AND SUBGRADE PLAN

SHEET NUMBER
C-205



JOB NO. 11443
 DATE: 02/28/12
 DRAWN BY: AN
 DESIGNED BY: BM
 REVIEWED BY: CB
 SCALE: 1" = 60'

NO.	DATE	DESCRIPTION

ENSAGE
 creative thinking. custom solutions.sm
 engineering | environment | health & safety | technology
 Telephone (800) 588-7962 | www.ensafe.com
 a global professional services company

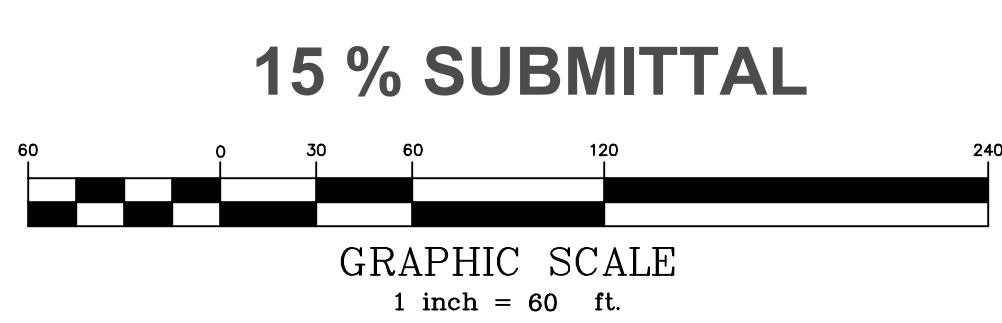
GAS MONITORING WELL LOCATION DATA

WELL NO.	NORTHING	EASTING
GM 1	624412.2942	659345.3958
GM 2	624442.7019	659599.1653
GM 3	625006.0657	659716.4907

CORRECTIVE ACTION DESIGN
C & L LANDFILL - PHASE 2
 ARKANSAS DEPARTMENT
 OF ENVIRONMENTAL QUALITY
 FAYETTEVILLE, ARKANSAS

ADEQ
 ARKANSAS
 Department of Environmental Quality

- LEGEND**
- ▲ GM 5 PROPOSED GAS MONITORING WELL
 - EXISTING MAJOR CONTOURS
 - EXISTING MINOR CONTOURS
 - - - 20' BUFFER ZONE LINE
 - - - APPROXIMATE 100' BUFFER ZONE OUTSIDE OF PROPERTY LINE
 - PROPERTY BOUNDARY
 - - - APPROXIMATE CREEK CENTERLINE
 - · - · - APPROXIMATE CREEK BUFFER 30' FROM CENTERLINE OF CREEK EACH SIDE, (CONTRACTOR TO FIELD VERIFY)
 - PROPOSED FINAL GRADE - MAJOR
 - PROPOSED FINAL GRADE - MINOR



SEAL

SHEET NAME
FINAL CAP GRADING PLAN

SHEET NUMBER
C-206