



State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL

Douglas J. Hansen
Director

December 21, 2023

Vern C. Rogers, Director of Regulatory Affairs
EnergySolutions, LLC
299 South Main Street, Suite 1700
Salt Lake City, UT 84111

RE: Federal Cell Facility Application Request for Information

Dear Mr. Rogers:

The Division of Waste Management and Radiation Control (Division) hereby provides Requests for Information (RFI) regarding the Federal Cell Facility Application dated August 4, 2022. Each individual paragraph in the attached document is numbered and represents an issue discovered in a review of the application.

When responding to an RFI, please use the assigned number representing the question. The Division will track all responses and provide regular updated information to the public and reviewers.

The current review does not represent a comprehensive evaluation of the Application's merit and additional RFI's will follow where appropriate.

If you have any questions regarding this letter, please call Otis Willoughby at 385-622-2213.

Sincerely,

Douglas J. Hansen, Director
Division of Waste Management and Radiation Control

(Over)

DJH//OHW/jk

Enclosures: Federal Cell Application Review, Request for Information or Updates to the Application
EnergySolutions “Clive Facility” – Site Facilities (Maps/Drawings) (DRC-2023-078640)
EnergySolutions “Clive” Facility – 2020 Site Utilities (Maps/Drawings)
(DRC-2023-078616)

c: Jeff Coombs, EHS, Health Officer, Tooele County Health Department
Bryan Slade, Environmental Health Director, Tooele County Health Department
EnergySolutions General Correspondence Email
LLRW General Correspondence Email

Federal Cell Application Review

Request for Information or Updates to the Application (RFI)

General

- Each RFI has been assigned an identifier with a numbering convention as follows:
 - Application/Appendix Section
 - Section/Appendix Subsection
 - Section/Appendix Subsection (when applicable)
 - Sequential numbering

Example: A question in Section 1, subsection 1, subsubsection 1 -The first RFI#1 would be 1.1.1-1., the next question in that section/subsection would be numbered 1.1.1-2

Please refer to the assigned RFI number when submitting a response.

Appendix B: Federal Cell Facility Engineering Drawings

Each of the below RFI numbers coincide with the number reflected on the Engineering Drawing Attachments 1 and 2.

▪ **B-3**

The drawing exhibits the 11e.(2) embankment design layout as one monolithic embankment. Please revise sheet to accurately depict the proposed embankment layout.

▪ **B-4**

There is a lack of detail with the existing instrumentation in both the text and in the plans. Model, functionality, installation date, location (coordinates), minimum instrumentation parameters, etc. should be abundantly clear to the reader. A summary of instrumentation should be provided within the text or the plans for clarity. Please provide a summary that elaborates on these instruments' specifics, including notes on relative drawings.

▪ **B-5**

A groundwater monitoring well to the Southeast corner (above GW-136) is not labeled correctly. Please revise to reflect correct labeling.

▪ **B-6**

Green highlighting is noticeable on this sheet. If this coloring has significance, provide notes elaborating. Otherwise, please revise the sheet to remove green highlighting.

▪ **B-7**

Section lines are not blue as shown in Legend. Please revise sheet to be consistent with Legend.

- **B-8**

These lines are not depicted in Legend nor Notes. Please revise sheet to elaborate on the significance of these lines.

- a. This line specifically appears to be different than the others (assuming this line is the same as the others).

- **B-9**

Please revise sheet to indicate the correct orientation of the North arrow.

- **B-10**

GW-38R, GW-37, GW-36 are not shown on the plan. Please ensure groundwater monitoring wells are displayed or provide a justification on this sheet indicating reasoning for excluding these wells from the plan.

- **B-11**

Please provide details on the structure “OUTFALL DISPERSION DITCH” noted in the southwestern corner of the Federal Cell. Include the function and the minimum dimensions.

- **B-12**

Crest length of 685.1’ and approx. slope depicted in cross section B of sheet 14004-C02 is not delineated on this plan.

- **B-13**

Please elaborate with background information on “Clive Monument” or provide text language that gives clarity. It is unclear as to the datum used to establish this monument as a control point.

- **B-14**

Does the calculated volume include the cover system and/or the clay liner? This conflicts with the language in Note (1) of this sheet in that information displayed is related to “CLEAN FILL.” Expand to explain and/or breakdown this parameter.

- **B-15**

It does not appear that the section line delineates the western side of the cell. Please revise the sheet to indicate the accurate section line and review all plans to ensure Property Lines and Section Lines are consistent with Sheet 18008-U04.

- **B-16**

Please revise to indicate “11e.(2) CELL” (missing period after ‘e’).

- **B-17**

Please provide clarity on what these dimensions indicate.

- **B-18**

Given the lack of detail of 11e.(2) dimensions and present-day incompleteness of the 11e.(2) embankment, it is understood that Note (5) notifies the reader that more accurate detail can be given in 11e.(2) License Drawings. However, knowledge of the proposed completed construction conditions of the 11e.(2) cell is imperative in the development of the design of the Federal Cell to correlate geometric relations between the proposed Federal Cell and the existing 11e.(2) cell. Please provide accurate dimensions of proposed 11e.(2) final proposed construction dimensions, including accurate depictions of surrounding infrastructure, in tandem with the proposed design of the Federal Cell.

- **B-19**

The term “NATURAL GRADE” is utilized in the plans. The elevations indicated appear to be elevations of the surrounding area; however, man-made infrastructure exists in these areas such as roads and berms. Please elaborate on the term “NATURAL GRADE.”

- **B-20**

The weight scale of the line for “LINER LIMITS (MINIMUM)” does not appear to be consistent with what is observed on the plan view. Please revise Legend item to be consistent as presented in the plan.

- **B-21**

Please update the sheet with a signature and seal.

- **B-22**

The centerline of the ditch appears to go off to the Northeast corner of the 11e.(2) cell. Please provide details on this anomaly.

- **B-23**

There appears to be a leader within the “DRAINAGE DITCH CENTERLINE” throughout this entire plan view. Please revise sheet to either remove the leader or explain significance.

- **B-24**

Please provide more detail on the location, purpose, and monitoring device information of B-2. Refer to RFI B-2 as an overarching comment on the lack of detail for specifications on the instrumentation.

- **B-25**

Slopes are assumed to be approximated in other areas of these drawings. Why is this dimension considered to be not approximate? Please review RFI B-18 and consider consistent dimensions precision throughout these drawings.

- **B-26**

It is assumed that the overall approximated geometry of the Top of Waste correlates to Note (5) of Sheet 14004-C01. Please provide clarity on this sheet (14004-C02) reiterating that statement with consideration of RFI B-18.

- **B-27**

Ditch invert measures to be a high point in between the Northeast corner invert and Southeastern corner invert. Please clarify or revise the dimensions with consideration of RFI B-18.

- **B-28**

Leader indicates “GROUND LEVEL” and is inconsistent with the nomenclature used in sheet 14004-C01. Please refer to RFI B-19 and revise to maintain consistent language throughout these drawings.

- **B-29**

Detail callout should indicate “REVERSE” or similar. Please revise.

- **B-30**

Detail callout is not “REVERSE” orientation as indicated in Sheet 14004-C03. Please revise.

- **B-31**

Section view indicates North is to the left and South is to the right. Please revise title of section or reorient the section and associated callouts.

- **B-32**

It is unclear if Detail 2 on Sheet 14004-C05 also indicates the Cover Detail that will be implemented along the alignment of the CREST. Please callout Detail 2 at the crest (where and if applicable) and revise the title of Detail 2 or create a detail similarly to Detail 2 indicating the cover design and tie-ins.

- **B-33**

It is unclear as to what dimension varies here. Are the Clay Liner and Liner Protective Cover the varying dimension keying into existing grade? Are these dimensions generally unknown? Please elaborate or provide notes on this sheet.

- **B-34**

Please elaborate on “natural soil” grade and slopes in Section C to establish minimum excavation dimensions. This can affect the constructability of the Borrow Material backfill and compaction operations as well as tie-ins with the cover system.

- **B-35**

Please revise to maintain consistency with nomenclature utilized throughout Application. Application text refers to “SIDE ROCK” as “side-slope riprap” and Appendix M utilizes “Side Rock.” This is particularly inconsistent when it comes to Detail 4 on this sheet where, technically, this is no longer part of the Side-Slope.

- **B-36**

Please provide clarification as to the correct nomenclature of this fill. Throughout the plans the backfill has been denoted as “CLEAN FILL”; however, this note suggests that the “CLEAN FILL” contains engineered parameters or a potential for contamination. Additionally, consider renaming this backfill to not confuse assumptions that the fill is not contaminated nor possesses radiological contamination.

- **B-37**

Please maintain consistent dimension call out with Detail C on Sheet 14004-C03.

- **B-38**

Detail C on Sheet 14004-C03 notes a minimum distance of 45’ from Ditch Centerline to Road Centerline. This suggests there should be a minimum distance required between the Ditch Centerline and the Inspection Road Centerline. If that is a correct assumption, a minimum criterion should be established here.

- **B-39**

Has grading the “shoulder” of these inspection roads to slope towards the ditches been considered? This cross section and other details have exhibited a visual of a slope. Please provide detail on the dimensions of these slopes to better visualize and understand the intent of a 12” raised roadway from “borrow material.”

- **B-40**

Is there an assumption that all the material between the existing 11e.(2) embankment and the proposed footprint of the Federal Cell must be excavated to the edges of Clay Liner? There is no true delineation of what currently exists and how EnergySolutions intends to tie into existing conditions. Please provide information to clarify.

- **B-41**

Note (5) of sheet 14004-C01 should be reiterated on this sheet to provide clarity that the 11e.(2) dimensions displayed herein are approximated and will be clarified in the 11e.(2) License Drawings. Additionally, please see RFI B-18.

- **B-42**

The “CLOSURE FENCE TYP” was called out per Detail C of Sheet 14004-C03; however, it is unclear where the fence line is located on this plan view. It is known that a present-day existing fence exists on the west and south sides of the cell but not on the north side. Please indicate where proposed fence line will be located. Additionally, elaborate on Detail C of Sheet 14004-C03 to note which sides of the cell the fence line should be considered for this detail.

- **B-43**

The limits of construction that are under the 11e.(2) license and the Federal Cell license are not clearly defined in this cross section. Please provide clarity if the road and ditches between the cells are part of their respective licenses and/or showcase the delineation within this plan set.

- **B-44**

No cross-section nor detail suggests that the filter zone will rest on the “natural ground.” Criteria should be established for subgrade material upon which cover material shall be placed atop. Please review RFI B-34.

- **B-45**

The “-8” and “-6” within these leaders should be an exponent.

- **B-46**

Note (2) can potentially leave ambiguity to the seeding methodology. If *EnergySolutions* proposes seeding within the plan set, please provide additional information on “approved seed mixture and method” or reference where the reader may locate this information.

- **B-47**

Linework is not noted in the Legend or called out on the plan.

- **B-48**

The scale does not appear to be correct. Please provide full-size sheets to the Division to verify scale and/or revise sheet to correct scale.

- **B-49**

Refer to RFI B-13. Additionally, please reiterate Note (2) of sheet 14004-C01 to provide clarity in this sheet of the characteristics of the Clive Monument as a control point for these coordinates.

- **B-50**

According to Section 3.1.11 within the text of the Application, the “Buffer Zone” is defined as “[...] buffer zone must be no less than 100 ft between the rectangle defined by the four control points that define the cell limits on Engineering Drawing 14004-U01 (Appendix B) and the perimeter fence.” It is unclear on this Sheet if the Buffer Zone adequately meets this minimum requirement due to the questionable scale of the drawing (refer to B-48), lack of dimensional callouts, and any additional notes that may provide clarity on the requirements that are highlighted in the text or relating Appendices. Please provide clarity on these characteristics at a minimum.

- **B-51**

Please consider a different line weight and type for the “FEDERAL CELL LIMITS.” Line is utilized in incorrect ways within each of these cross sections.

- **B-52**

It is unclear why these dimensions are approximated, and lack of dimensional call outs exists within these cross sections. These dimensions must indicate minimum/maximum dimensions to satisfy minimum/maximum design requirements as stated within the text of the Application and Appendices. Ambiguity within these dimensions can lead to misinterpretations of the limits of Depleted Uranium. Additionally, please provide clarifications of the dimensions and vertical offsets.

▪ **B-53**

This text refers to two different lines; however, it is unclear which paragraph is referring to a specific line. Please revise this sheet to contain two separate leaders for each paragraph and lead to associated linework.

▪ **B-54**

This sheet lacks a Legend to provide clarification of the representation of the linework on this sheet.

▪ **B-55**

The scale appears to be green. Please revise scale or provide clarification as to the significance of having the scale in this format.

▪ **B-56**

Font is very small and illegible for many of the callouts and text within linework. Please revise sheet to a consistent format scale so text is clear and legible.

▪ **B-57**

Please identify this object.

▪ **B-58**

Please provide the timeframe for when these aerial images were taken to provide insight to the timeline of construction of the utilities at the facility.

▪ **B-59**

The purpose of this drawing sheet appears to be to orient the reader to match the linework through each map. Please consider the following:

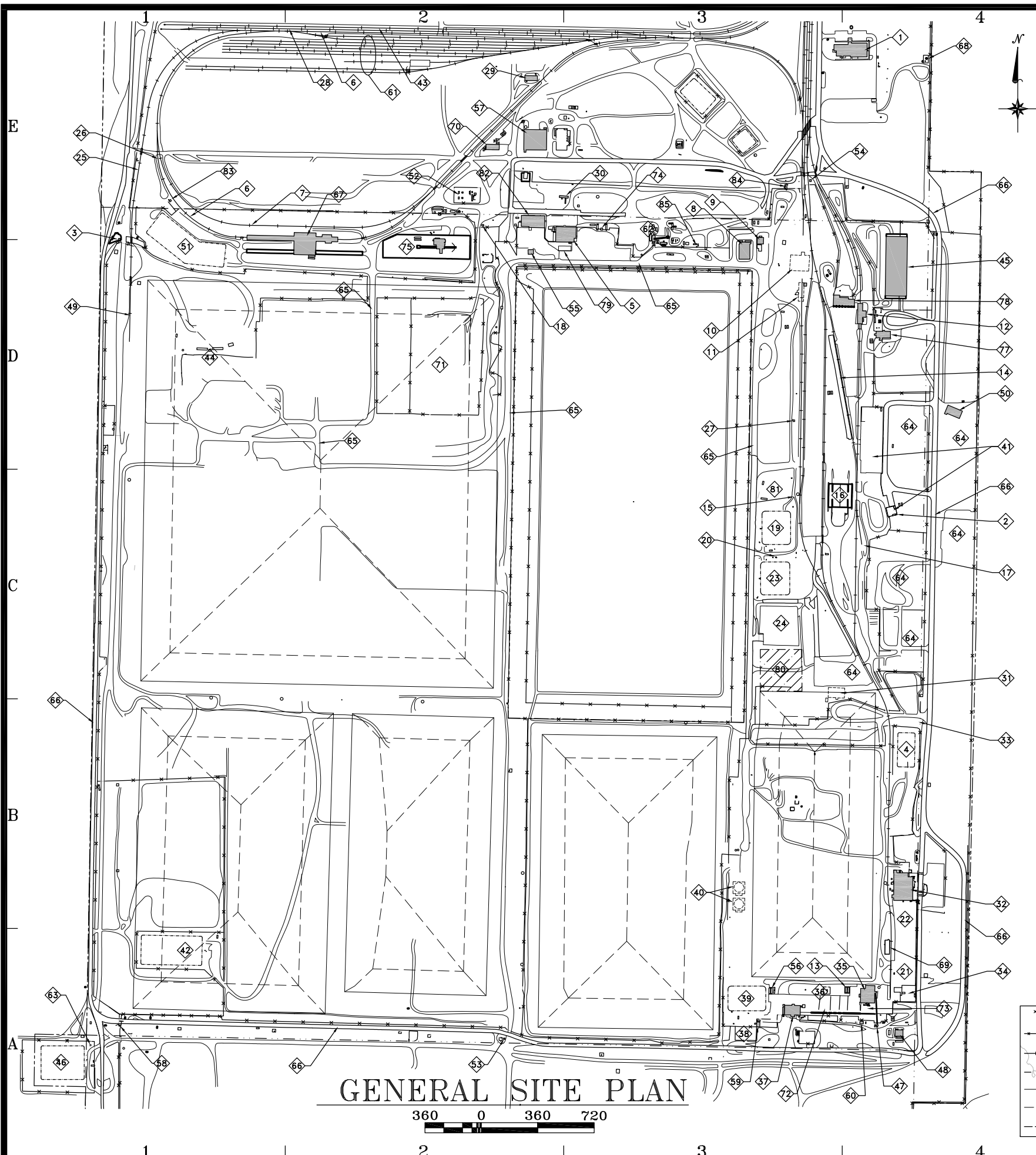
- a. Hide text and irrelevant linework on this sheet to provide a clearer picture for the reader of the facilities and delineated Utility Map sections.
- b. Provide Matchlines on the respective sheets so that it is clear to the reader the orientation of each Utility Map.

General Notes and Overarching RFIs:

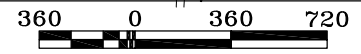
1. The Groundwater monitoring plan does not address influences of the Federal Cell construction with existing surrounding infrastructure (such as CAW and 11e.(2)). No plan sheet suggests that new Groundwater Monitoring devices will be installed as a result of this new facility. If *EnergySolutions* proposes to install additional monitoring devices (of any kind), there should be a plan sheet indicating proposed installation location, device type, depths (if applicable), etc.
2. Air monitoring radiological “array” is not clear. The array is depicted from the center of the Class A West Cell. For this application, there should be a focus on the Federal Cell and proposed monitoring instrumentation to justify the construction of the Federal Cell.
3. Based on delineated elevations, surface water appears to be flowing towards the Southeastern corner of the cell. What is *EnergySolutions* plan to manage this water from that point?
4. Drawings should be submitted in full size and originally stamped as an official submission. Some of the scales indicated in this plan sheet could not be verified though appear to be incorrect.

5. What are the geotechnical characteristics for the “Clean Fill”? Does this “Clean Fill” have a potential to be contaminated? There needs to be additional elaboration as to the context of “Clean Fill” throughout these drawings. Additionally, the word “clean” can be misinterpreted as “non-contaminated.” What are the extents of contamination within the Clean Fill from the contact point of the Depleted Uranium placement? If it is within the Application, the Drawings do not indicate any notes or references to provide clarity.
6. The extents and limits of the Depleted Uranium (waste) placement are delineated on these plans; however, there is a lack of detail on methodologies of placing the waste within the cell. It is unclear in both the plans and the text how the waste will be stacked/oriented and backfilled to confirm that the material is in complete encapsulation from the surrounding environment, provide insight on the integrity of the backfill, and all additional considerations outlined in NUREG-1200 SRP 3.
7. In light of RFI B-9, there is a question of appropriate scale and accurate geographical location and orientation throughout this Appendix. *EnergySolutions* should ensure that the drawings contain a high level of precision to orient objects and plan view.

There are many dimensions on this sheet that are denoted as “~X”. It is assumed that *EnergySolutions* has approximated these dimensions. This is unacceptable in a plan set due to the high degree of ambiguity that can occur during construction and for reviewing information presented in the Application. It is imperative for *EnergySolutions* to consider RFI B-18 for this plan set and establish accurate or minimum and maximum dimensions for the Division to review with minimal uncertainty of *EnergySolutions*’ intentions of construction.



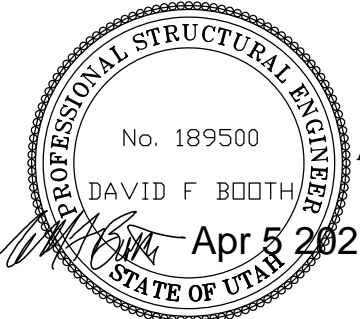
GENERAL SITE PLAN



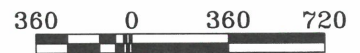
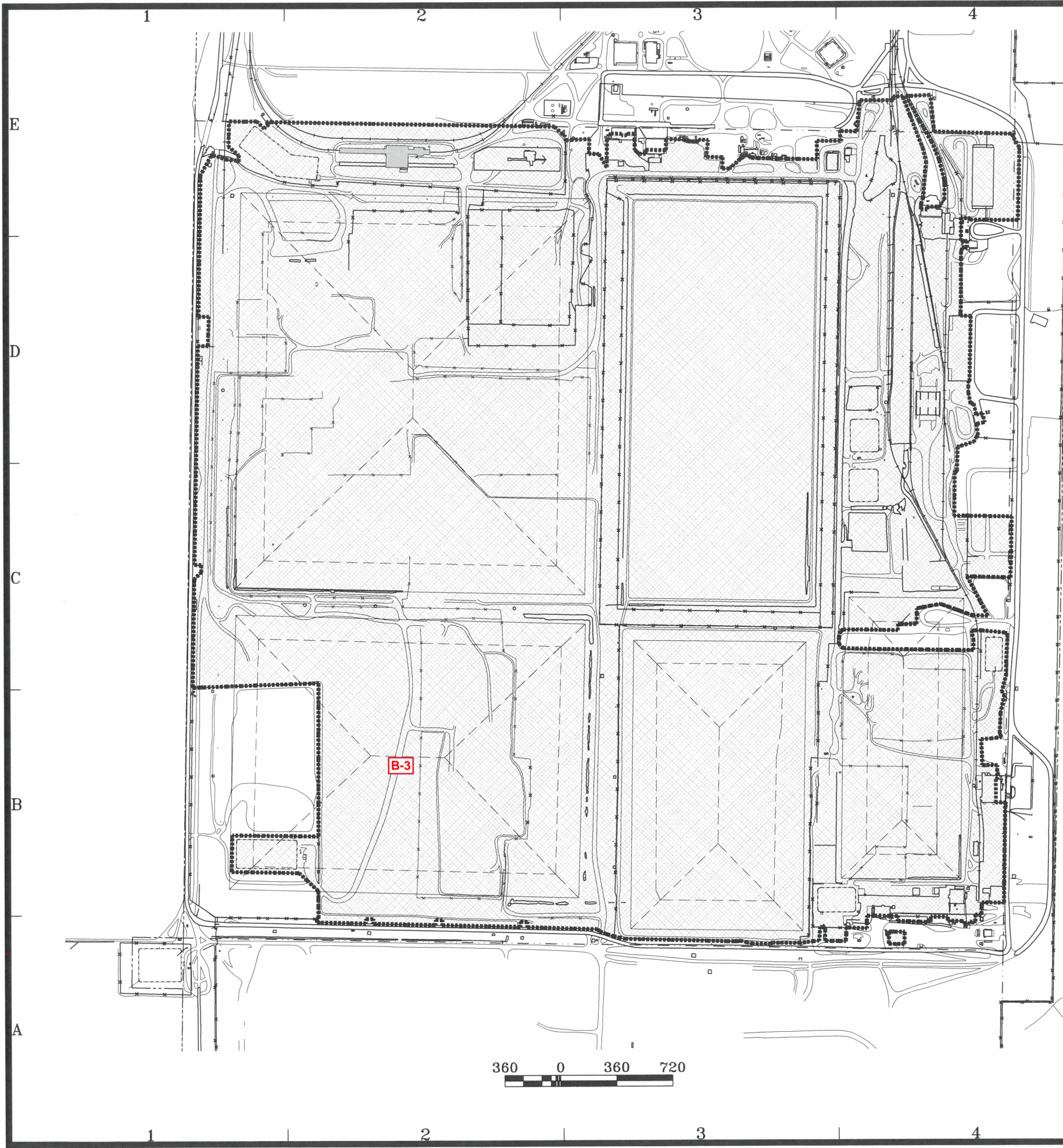
- | | |
|--|---|
| <ul style="list-style-type: none"> 1 ADMINISTRATION BUILDING
DRAWING SERIES 05041 2 EAST LLRW TRUCK UNLOADING FACILITY
HP SHACK 3 NORTH ACCESS CONTROL SHACK 4 MIXED WASTE SURFACE IMPOUNDMENT
DRAWING SERIES 11014 5 LARW OPERATIONS BUILDING
DRAWING SERIES 9532, 03049, 04014, 04021 6 TRACK A RAIL LOOP
DRAWING SERIES 05024 7 TRACK B RAIL SIDING
DRAWING SERIES 05024 8 INSIDE LLRW MAINTENANCE SHOP 9 INSIDE LLRW MAINTENANCE BAY 10 FORMER RAIL CAR ROLLOVER, (DEMOLISHED 2013)
DWG SERIES 9512, 0133, 0221, 0244, 04001, 04018 11 TRACK #2 RAIL WASH FACILITY (DEMOLISHED OCTOBER
2011) DRAWING SERIES 9513 12 TRACK #4 RAIL WASH FACILITY
DRAWING SERIES 9906, 06007 13 MIXED WASTE EVAPORATION TANKS #175 & #200
DRAWING SERIES 9535 14 RAIL CAR DIGGING FACILITY (DIGGING TRACK)
DRAWING SERIES 0107 15 INTERMODAL UNLOADING FACILITY LIFT STATION
DRAWING SERIES 9822 16 INTERMODAL UNLOADING FACILITY
DRAWING SERIES 9705, 04003 17 TRACK HOE RAMP
DRAWING SERIES 0107 18 CWF GUARD SHACK 19 97 LARW EVAPORATION POND
DRAWING SERIES 9718, 03063 20 POND DRAIN LIFT STATION
DRAWING SERIES 9817, 03063 21 MIXED WASTE CONTAINER HOLDING PAD
DRAWING SERIES 9803, 9834 22 MIXED WASTE EAST CONTAINER STORAGE AREA
DRAWING SERIES 9803, 9834 23 95 LARW EVAPORATION POND
DRAWING SERIES 9504, 03063, 08007 24 LARW CONTAINER STORAGE PAD
DRAWING SERIES 9514 25 WEST RAIL SPUR (LARGE COMPONENT TRACK)
DRAWING SERIES 0241 26 NW RAIL ACCESS CONTROL SHACK 27 STORM WATER LIFT SUMP
DRAWING SERIES 06007 28 EAST-WEST RAIL SIDING
DRAWING SERIES 05024 29 MAINTENANCE/STORAGE BUILDING 30 UTAH DWMRC OFFICE TRAILER 31 BOX WASHING FACILITY (DEMOLISHED 2014)
DRAWING SERIES 9621, 9622, 9822 32 MIXED WASTE OPERATIONS BUILDING
DRAWING SERIES 9713, 0240 33 MIXED WASTE SAND TRANSFER
ACCESS CONTROL SHACK 34 MIXED WASTE UNLOADING DOCK
DRAWING SERIES 9846 35 MIXED WASTE TREATMENT BUILDING
DWG SERIES 9317,9619,0132,0227,0249,0257,03023 36 MIXED WASTE CENTRAL CONTAINER STORAGE AREA
DRAWING SERIES 9516, 9922 37 MIXED WASTE STORAGE (VTD) BUILDING
DRAWING SERIES 9417, 9517, 0248 38 BOX COUNTING PAD
DRAWING SERIES 9833 39 MIXED WASTE EVAPORATION POND
DRAWING SERIES 9802 40 MIXED WASTE EVAPORATION TANKS #225 & #250
DRAWING SERIES 9616 (DEMOLISHED 2013) 41 EAST LLRW TRUCK UNLOADING FACILITY
DRAWING SERIES 03024, 04046, 05023 42 2000 LARW EVAPORATION POND
DRAWING SERIES 0006 43 LADDER TRACK #2
DRAWING SERIES 07010 | <ul style="list-style-type: none"> 44 CLASS A NORTH LARGE COMPONENT AREA
DRAWING SERIES 04080 & 10014 45 DU STORAGE BUILDING
DRAWING SERIES 10008 46 SOUTHWEST CORNER EVAPORATION POND
DRAWING SERIES 9721, 04047 47 PNEUMATIC REAGENT DELIVERY SYSTEM
DRAWING SERIES 9618 48 MIXED WASTE MAINTENANCE WELD SHOP 49 LARGE COMPONENT UNLOADING PAD
DRAWING SERIES 0241 50 TRUCK SURVEY FACILITY
DRAWING SERIES 15006 51 NORTHWEST CORNER EVAPORATION POND
DRAWING SERIES 06021 52 SUBSTATION
DRAWING SERIES 05056 53 SOUTH ACCESS CONTROL SHACK 54 EAST SIDE RAIL ACCESS CONTROL SHACK 55 SAFETY SUPPLY SHED 56 MIXED WASTE EVAPORATION TANKS #150 & #125
DRAWING SERIES 9519 57 PURCHASING/ WAREHOUSE/ MAINTENANCE BUILDING
DRAWING SERIES 03096 58 SOUTH GATE SECURITY SHACK 59 WASTE ASSAY COUNTING SYSTEMS BUILDING 60 MIXED WASTE FIRE PUMP BUILDING 61 RAIL STORAGE & MAINTENANCE TRACKS
(CLIVE RAIL FACILITY), DRAWING SERIES 18006 62 BATCH PLANT (2008 RE-LOCATION SHOWN)
DRAWING SERIES 03055, 04022, 07009 63 VITRO STORM WATER OUTLET
DRAWING SERIES 9721, 04047 64 EMPTY CONTAINER STORAGE AREAS 65 WASTE HAUL ROADS
DRAWING SERIES 05049 66 PERIMETER ROAD
DRAWING SERIES 05049 67 ROTARY DUMP FACILITY (THAW, ROTARY & WASH)
DRAWINGS SERIES 05006 68 METEOROLOGICAL STATION
DRAWING SERIES 06020 69 MIXED WASTE RAIL UNLOADING DOCK
DRAWING SERIES 9402 70 QC & GW LABORATORIES BUILDING
DRAWING SERIES 08006 71 CLASS A WEST CONTAINERIZED WASTE AREAS
DRAWING SERIES 04080 & 10014 72 MIXED WASTE SOUTH CONTAINER STORAGE AREA 73 MIXED WASTE SOUTHEAST CONTAINER STORAGE AREA
DRAWING SERIES 03023 74 FUELING STATION
DRAWING SERIES 17004 75 SHREDDER FACILITY
DRAWING SERIES 05056 76 RESERVED 77 DECON ACCESS CONTROL BUILDING
DRAWING SERIES 05015, 06007 78 INTERMODAL CONTAINER WASH FACILITY
DRAWING SERIES 05008, 06007 79 LARW OPERATIONS TRUCK WASH PAD
DRAWING SERIES 04011 80 BULK STORAGE PAD (DEMOLISHED JUNE, 2006)
DRAWING SERIES 9412 81 LLRW BONE YARD 82 LLRW OPERATIONS BUILDING
DRAWING SERIES 07015 83 RAIL GUARD SHACK 84 WATER TOWER (WELL/SALT WATER SUPPLY) 85 MAGNESIUM CHLORIDE STORAGE/TRANSFER |
|--|---|

LEGEND

	FENCE		BUILDING
	RAILROAD		ROAD, IMPROVED
	SECTION LINE		ROAD, GRAVEL
	PERMITTED EMBANKMENT LIMITS		PONDS
	EMBANKMENT BREAK LINES		
	PROPERTY LINE		

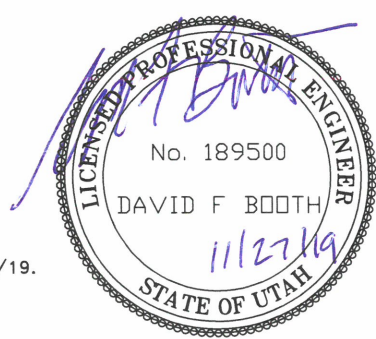


<p>ENERGYSOLUTIONS ENERGYSOLUTIONS "CLIVE" FACILITY</p>	<p>CLIVE DISPOSAL FACILITY SITE LAYOUT AND FACILITY LEGEND CLIVE, UTAH</p>
<p>FOR INFORMATION ONLY</p>	
<p>DATE: 4/5/21 REVISED TO SHOW REVISED 11e(2) & PROPOSED FEDERAL CELLS DATE: 11/26/18 REVISED 2019 UPDATE (ADDED STORAGE/MAINT TRACKS & FUEL STATION) - FOR INFORMATION ONLY</p>	<p>DATE: _____ BY: _____ DATE: _____ BY: _____</p>
<p>DRAWN BY: D. BOOTH CHECKED BY: G. DUTSON APPROVED BY: D. BOOTH</p>	<p>SCALE: AS SHOWN DATE: 03/19/08 DRAWING NO. 0801 G03</p>



- LEGEND**
- FENCE
 - RAILROAD
 - SECTION LINE
 - PERMITTED EMBANKMENT LIMITS
 - EMBANKMENT BREAK LINES
 - PROPERTY LINE
 - BUILDING
 - ROAD, IMPROVED
 - ROAD, GRAVEL
 - PONDS
 - RADIOLOGICALLY CONTROLLED AREA (RCA)

NOTE:
RCA BOUNDARY IS CURRENT AS OF 11/27/19.

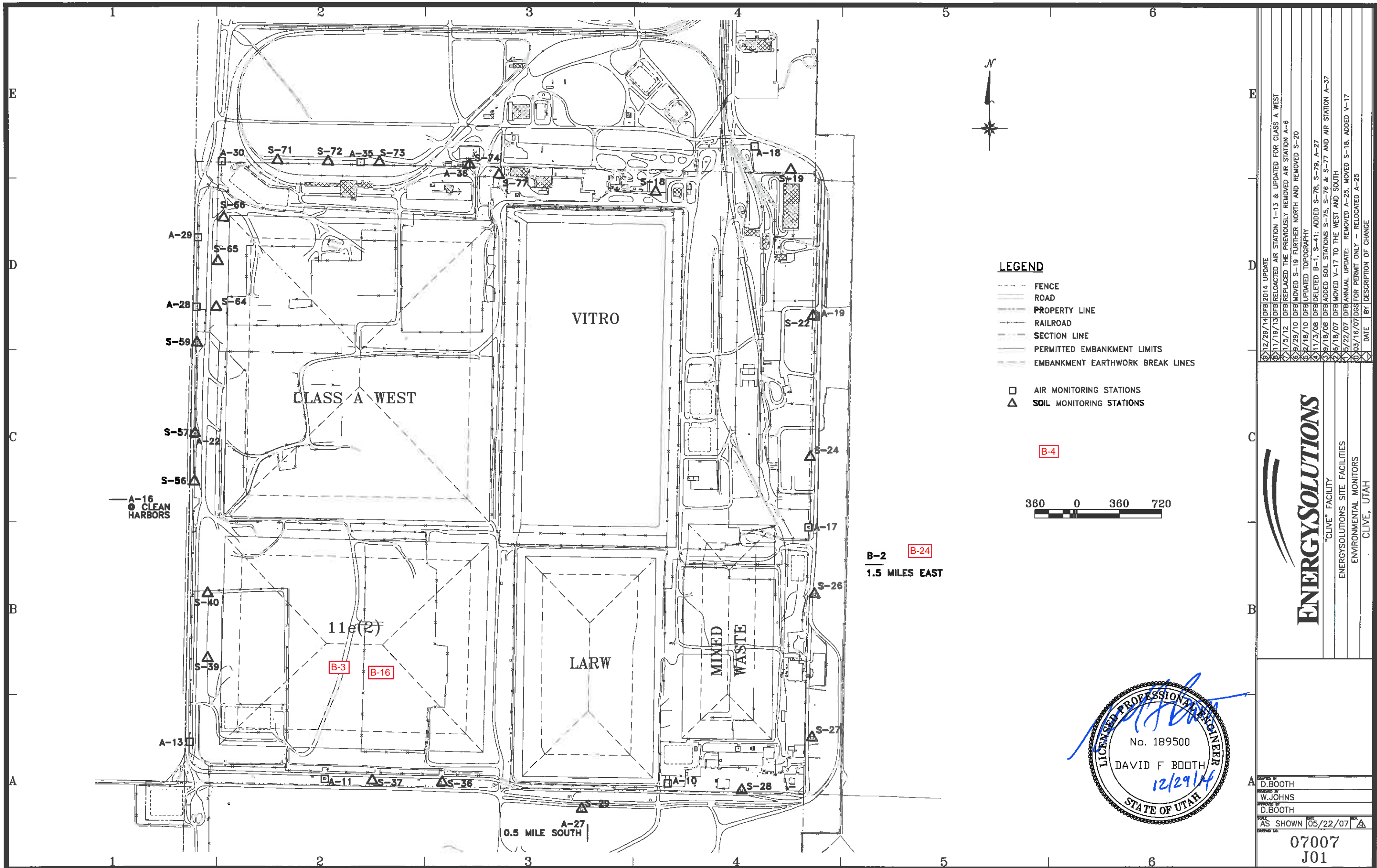


NO.	DATE	DESCRIPTION OF CHANGE
1	11/26/18	DFB/201 UPDATE (UPDATED FOR FUEL STATION) - FOR INFORMATION ONLY
2	11/26/18	DFB/2016 UPDATE - FOR INFORMATION ONLY
3	10/27/17	DFB/2017 UPDATE - FOR INFORMATION ONLY
4	12/22/14	DFB/2014 UPDATE - FOR INFORMATION ONLY
5	11/19/13	DFB/2013 UPDATE - FOR INFORMATION ONLY
6	11/29/11	DFB/2011 UPDATE (BASE MAP) - FOR INFORMATION ONLY
7	3/2/11	DFB/2010 UPDATE (AUG) - FOR INFORMATION ONLY, INCL NEW OPS & DU STORAGE BLDGS
8	2/26/10	DFB/2010 UPDATE - FOR INFORMATION ONLY
9	2/17/09	DFB/2009 UPDATE - FOR INFORMATION ONLY
10	3/26/08	DFB/2008 UPDATE - FOR INFORMATION ONLY

ENERGYSOLUTIONS
"CLIVE" FACILITY
ENERGYSOLUTIONS SITE FACILITIES
RADIOLOGICALLY CONTROLLED AREA
CLIVE, UTAH

FOR INFORMATION ONLY

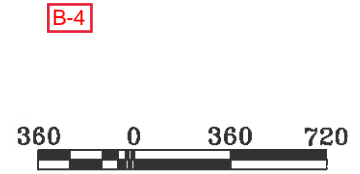
DESIGNED BY	D. BOOTH
REVIEWED BY	G. DUTSON
APPROVED BY	D. BOOTH
SCALE	AS SHOWN
DATE	03/19/08
DRAWING NO.	0801 G04



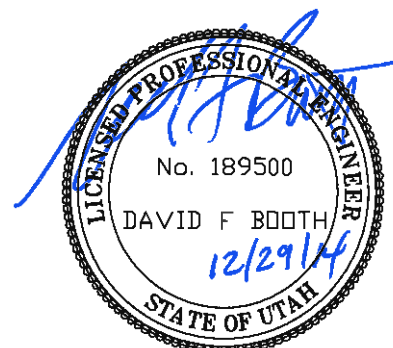
LEGEND

- FENCE
- ROAD
- PROPERTY LINE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT EARTHWORK BREAK LINES

- AIR MONITORING STATIONS
- △ SOIL MONITORING STATIONS



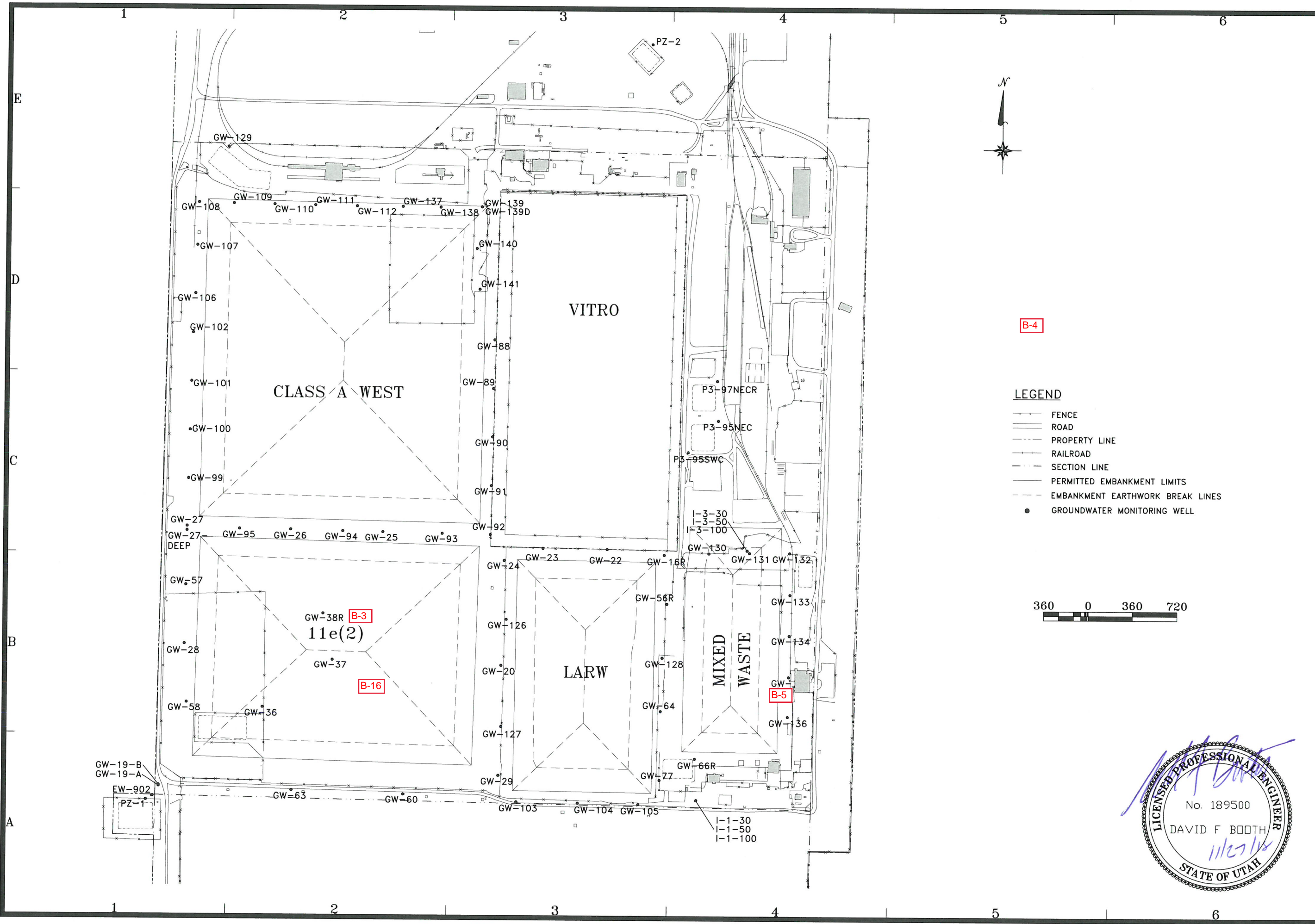
B-2 B-24
1.5 MILES EAST



DATE	DESCRIPTION OF CHANGE
12/29/14	DFB 2014 UPDATE
11/19/13	DFB RELOCATED AIR STATION 1-13 & UPDATED FOR CLASS A WEST
11/5/12	DFB REPLACED THE PREVIOUSLY REMOVED AIR STATION A-6
8/29/10	DFB MOVED S-19 FURTHER NORTH AND REMOVED S-20
5/2/10	DFB UPDATED TOPOGRAPHY
11/3/08	DFB DELETED B-1, S-41; ADDED S-78, S-79, A-27
8/18/08	DFB ADDED SOIL STATIONS S-75, S-76 & S-77 AND AIR STATION A-37
8/18/07	DFB MOVED V-17 TO THE WEST AND SOUTH
5/22/07	DFB ANNUAL UPDATE: REMOVED A-25, MOVED S-18, ADDED V-17
03/16/07	DFB FOR PERMIT ONLY - RELOCATED A-25

ENERGYSOLUTIONS
"CLIVE" FACILITY
ENERGYSOLUTIONS SITE FACILITIES
ENVIRONMENTAL MONITORS
CLIVE, UTAH

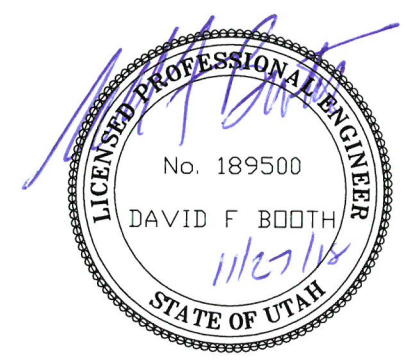
DESIGNED BY	D. BOOTH
DRAWN BY	W. JOHNS
CHECKED BY	D. BOOTH
SCALE	AS SHOWN
DATE	05/22/07
PROJECT NO.	07007 J01



B-4

LEGEND

- FENCE
- ROAD
- - - PROPERTY LINE
- - - RAILROAD
- - - SECTION LINE
- - - PERMITTED EMBANKMENT LIMITS
- - - EMBANKMENT EARTHWORK BREAK LINES
- GROUNDWATER MONITORING WELL



"CLIVE" FACILITY ENERGYSOLUTIONS SITE FACILITIES GROUNDWATER MONITORING WELLS CLIVE, UTAH	
11/27/18 DFB REMOVED WELLS 81, 82, 83, 84, 85, 86 & UNMATED 2018 SITE SURVEY	10/7/15 DFB UPDATED FOR CAW & MW EMBANKMENTS & 2015 SITE SURVEY
3/2/11 DFB REMOVED GW 41, 42, 55, 67, 68, 68R, 69, 69R, 70, 113, 114, 115, 116, 117, 118, 119, 121, 122, 123R, 124, 125	2/2/18/10 DFB ADDED WELLS GW-130 THROUGH GW-141
10/15/07 DFB ADDED GW-129	3/26/07 DGS FOR PERMIT ONLY
DATE	BY DESCRIPTION OF CHANGE
DRAWN BY: D. BOOTH CHECKED BY: R. SOBOCINSKI APPROVED BY: D. BOOTH	SCALE: AS SHOWN DATE: 3/26/07 REV: A
07007 J02	

1 2 3 4 5 6

E

D

C

B

A

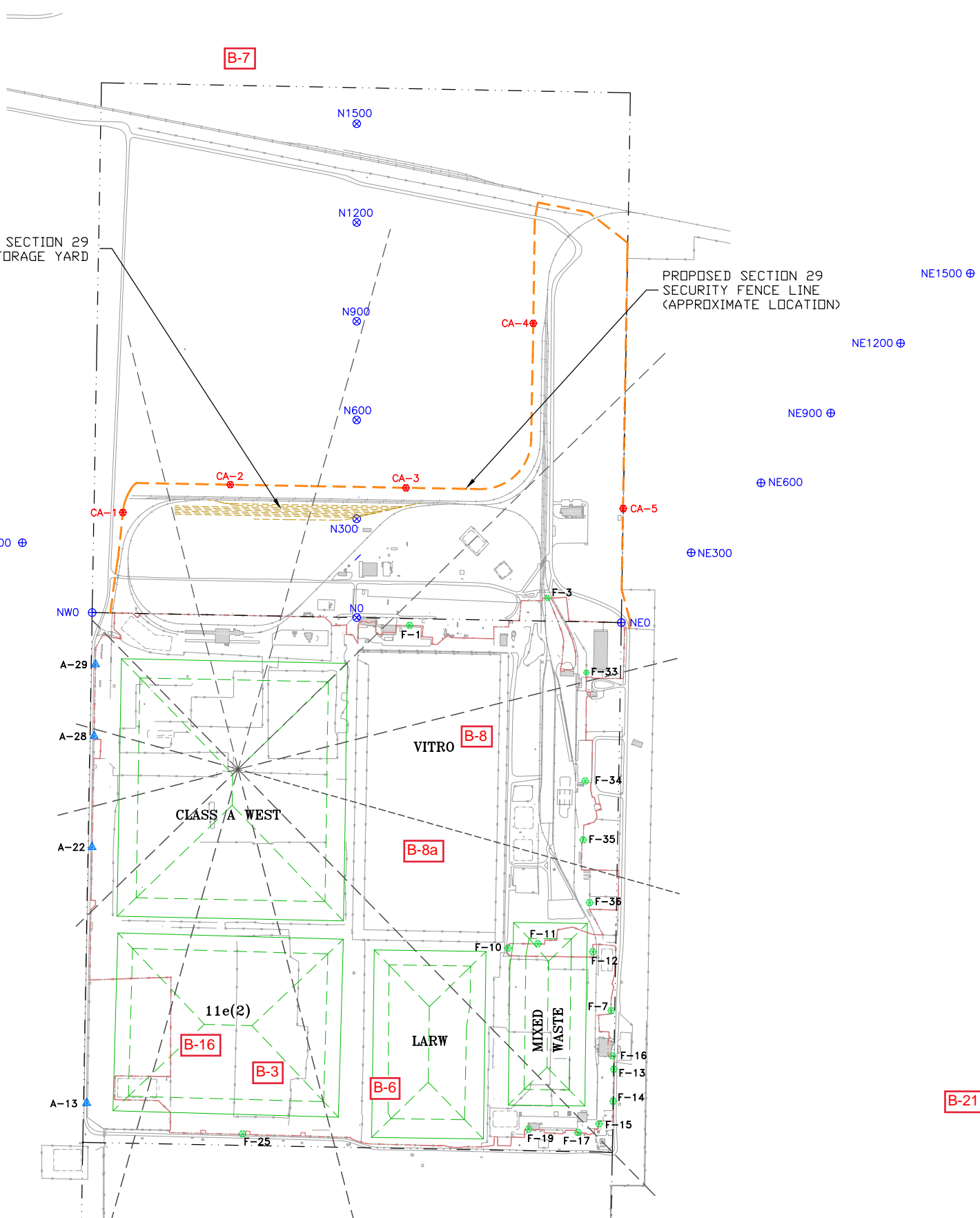
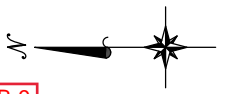
E

D

C

B

A



LEGEND

- SECTION LINE
- RESTRICTED AREA BOUNDARY
- PROPOSED SECTION 29 FENCING
- GAMMA (TLD/OSL) MONITORING STATIONS
- PROPOSED GAMMA (TLD/OSL) MONITORING STATIONS
- BIRD HOUSE (TLD/OSL) MONITORING STATIONS
- RADIAL SOIL SAMPLE STATIONS



B-4

B-9

B-6

B-7

B-8

B-8a

CLASS A WEST

B-6

B-16

B-3

B-6

B-21

PROPOSED SECTION 29
RAIL STORAGE YARD

PROPOSED SECTION 29
SECURITY FENCE LINE
(APPROXIMATE LOCATION)

ENERGYSOLUTIONS

"CLIVE" FACILITY
ENERGYSOLUTIONS - SITE FACILITIES
FENCELINE TLDs
CLIVE, UTAH

5/18/18 DFBI REVISED MONITORING PLAN (FORMERLY 0801-J03(R2))
DATE BY DESCRIPTION OF CHANGE

DRAFTED BY
G. ALLDREDGE

REVIEWED BY
S. GURR

APPROVED BY
D. BOOTH

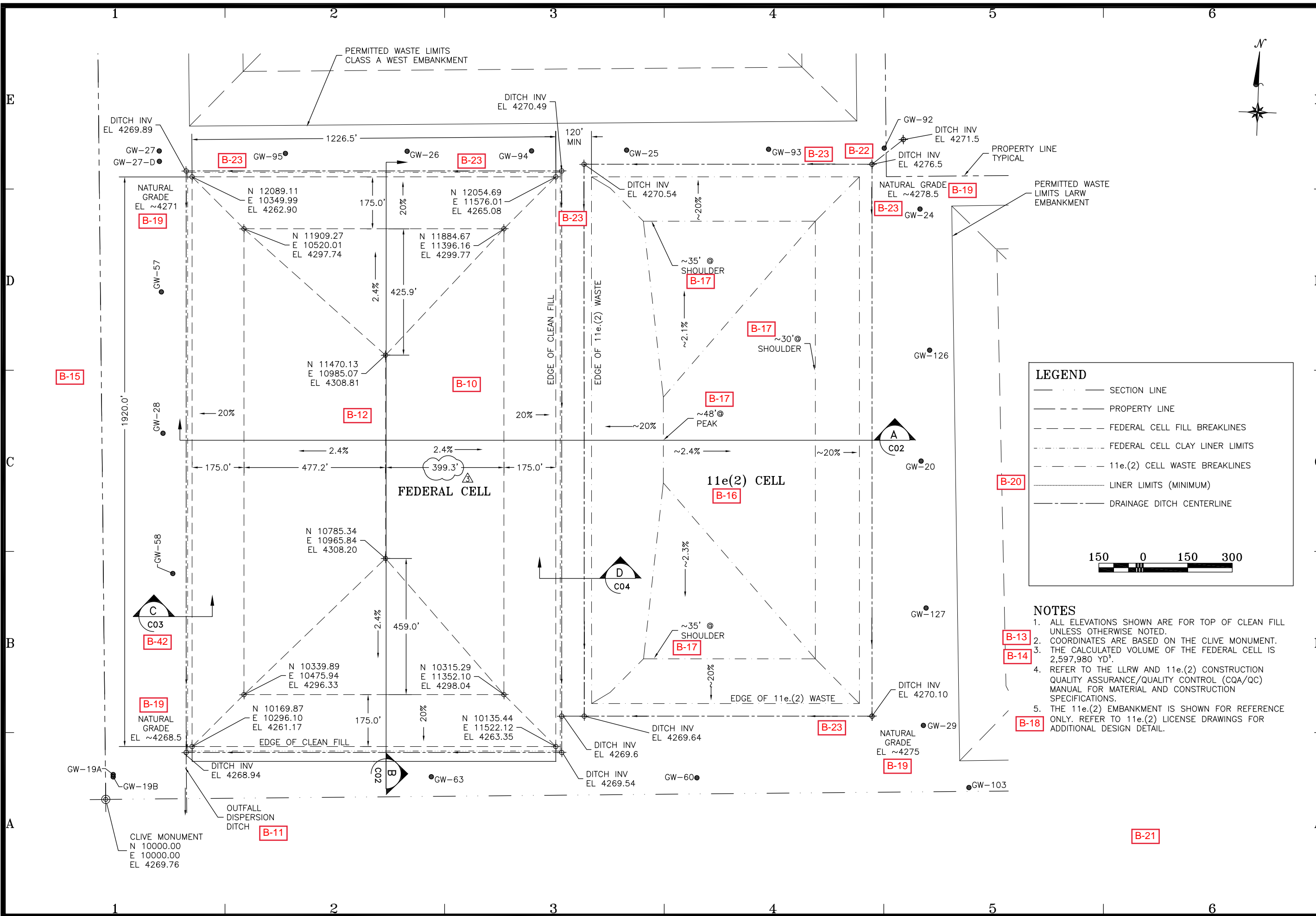
SCALE
AS SHOWN

DATE
05/17/18

REV.
A

DRAWING NO.
07007
J03

1 2 3 4 5 6



LEGEND

- SECTION LINE
- PROPERTY LINE
- - - FEDERAL CELL FILL BREAKLINES
- - - FEDERAL CELL CLAY LINER LIMITS
- - - 11e.(2) CELL WASTE BREAKLINES
- - - LINER LIMITS (MINIMUM)
- - - DRAINAGE DITCH CENTERLINE

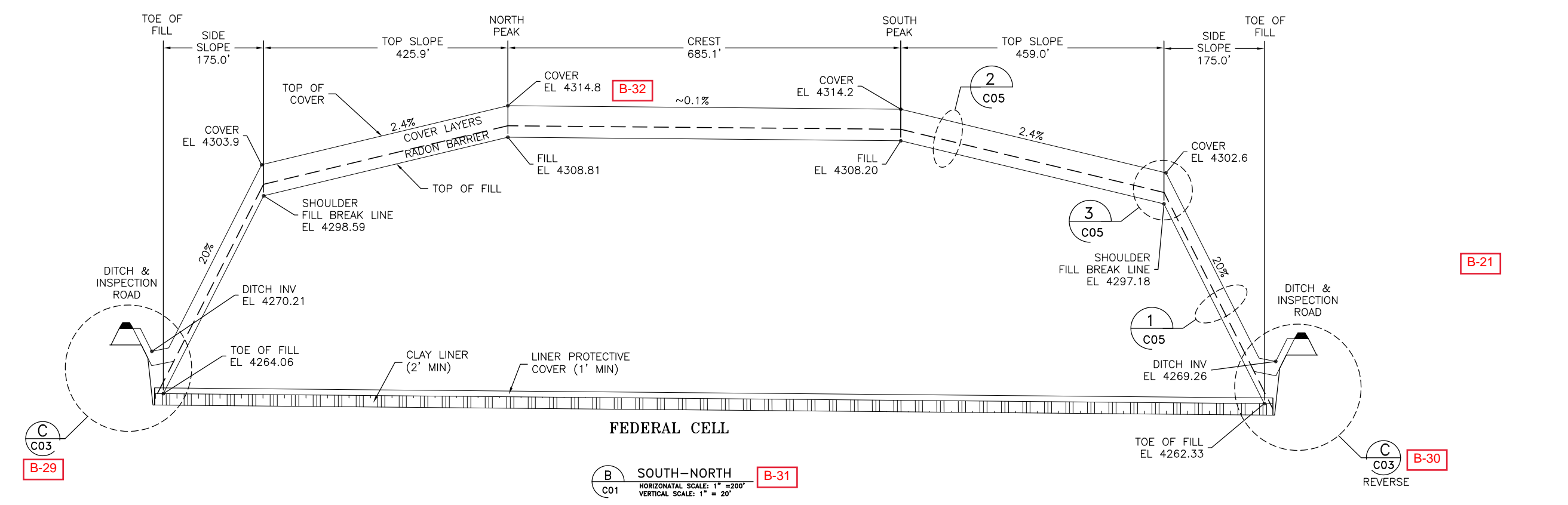
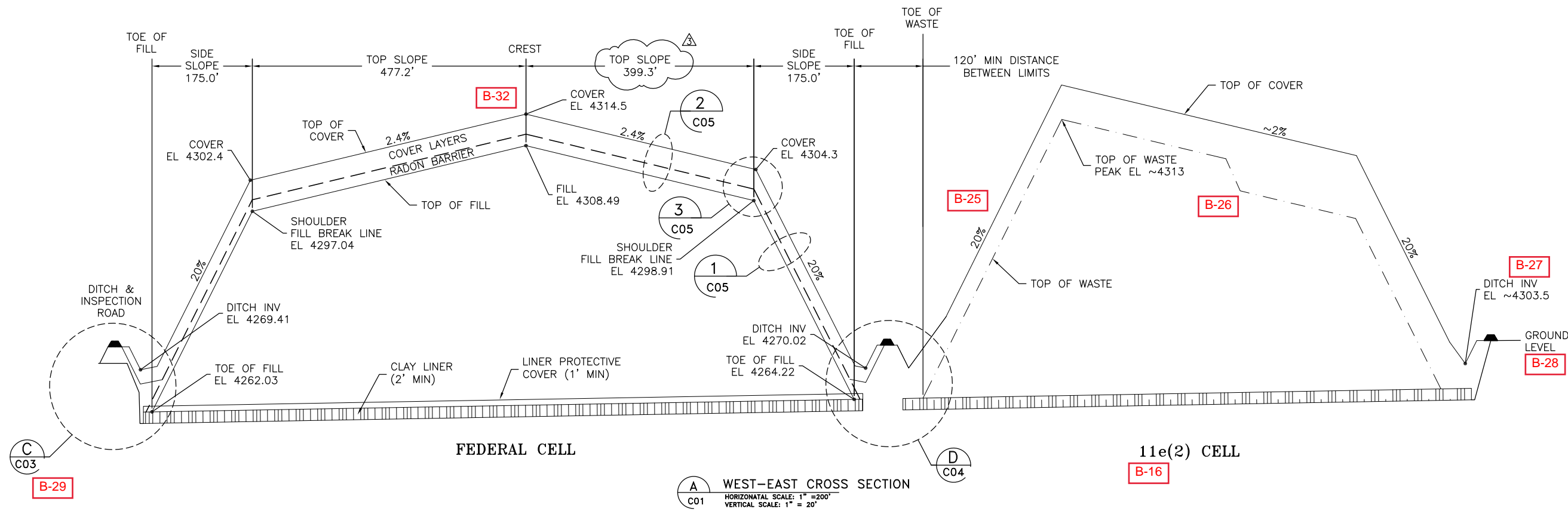
150 0 150 300

- NOTES**
1. ALL ELEVATIONS SHOWN ARE FOR TOP OF CLEAN FILL UNLESS OTHERWISE NOTED.
 2. COORDINATES ARE BASED ON THE CLIVE MONUMENT.
 3. THE CALCULATED VOLUME OF THE FEDERAL CELL IS 2,597,980 YD³.
 4. REFER TO THE LLRW AND 11e.(2) CONSTRUCTION QUALITY ASSURANCE/QUALITY CONTROL (CQA/QC) MANUAL FOR MATERIAL AND CONSTRUCTION SPECIFICATIONS.
 5. THE 11e.(2) EMBANKMENT IS SHOWN FOR REFERENCE ONLY. REFER TO 11e.(2) LICENSE DRAWINGS FOR ADDITIONAL DESIGN DETAIL.

6/22/21	DFBI FOR LICENSE APPLICATION -- CORRECTED DIMENSION
2/19/21	DFBI FOR LICENSE APPLICATION -- TEXT REVISIONS
2/12/21	DFBI FOR LICENSE APPLICATION -- REVISED WASTE LIMITS
1/16/20	DFBI FOR LICENSE APPLICATION
	DATE BY DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
CLIVE FACILITY
FEDERAL WASTE CELL
EMBANKMENT FEATURES AND CONTROLS
CLIVE, UTAH

DRAWN BY: D. BOOTH
REVIEWED BY: T. ORTON
APPROVED BY: D. BOOTH
SCALE: AS NOTED DATE: 01/08/20 INV: A
DRAWING NO.: 14004 C01

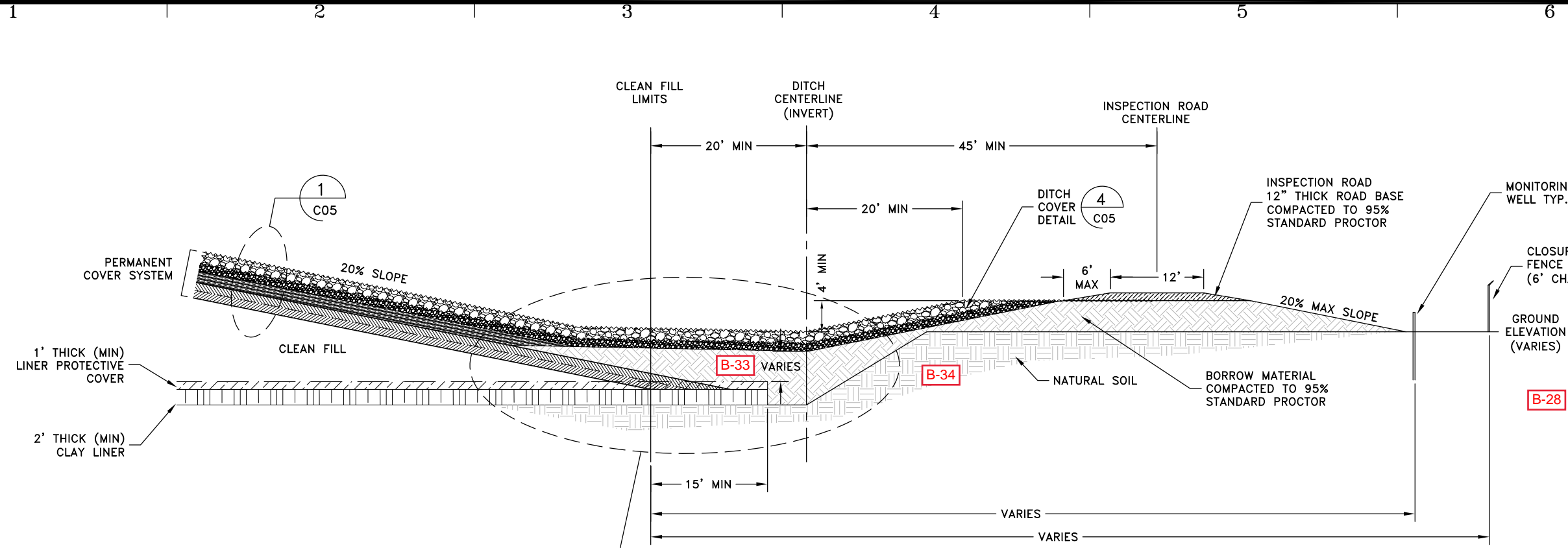


DATE	BY	DESCRIPTION OF CHANGE
6/22/21	DFBI	FOR LICENSE APPLICATION - CORRECTED DIMENSION & TEXT REVISIONS
2/19/21	DFBI	FOR LICENSE APPLICATION - TEXT REVISIONS
2/12/21	DFBI	FOR LICENSE APPLICATION - REVISED WASTE LIMITS
1/16/20	DFBI	FOR LICENSE APPLICATION

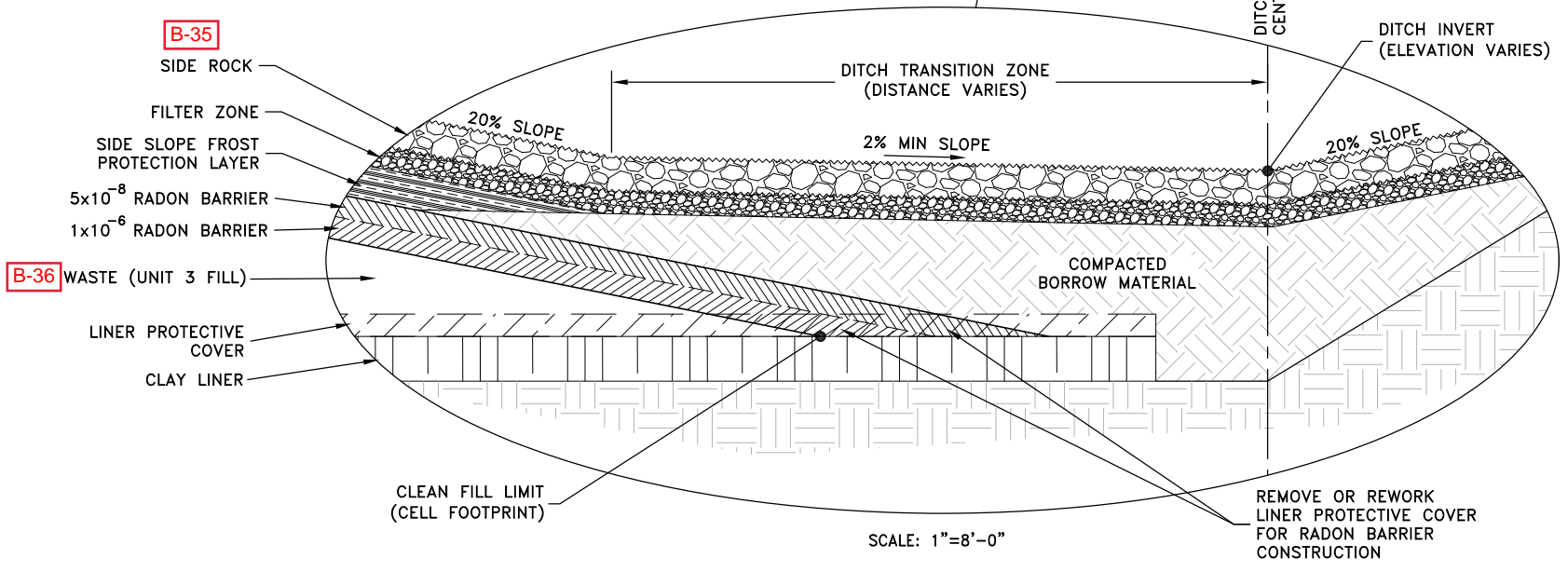
ENERGYSOLUTIONS
 CLIVE FACILITY
 FEDERAL WASTE CELL
 EMBANKMENT CROSS SECTIONS
 CLIVE, UTAH

DRAWN BY	D. BOOTH
REVIEWED BY	T. ORTON
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	01/08/20
INSTRUMENT	AS NOTED

14004
 C02



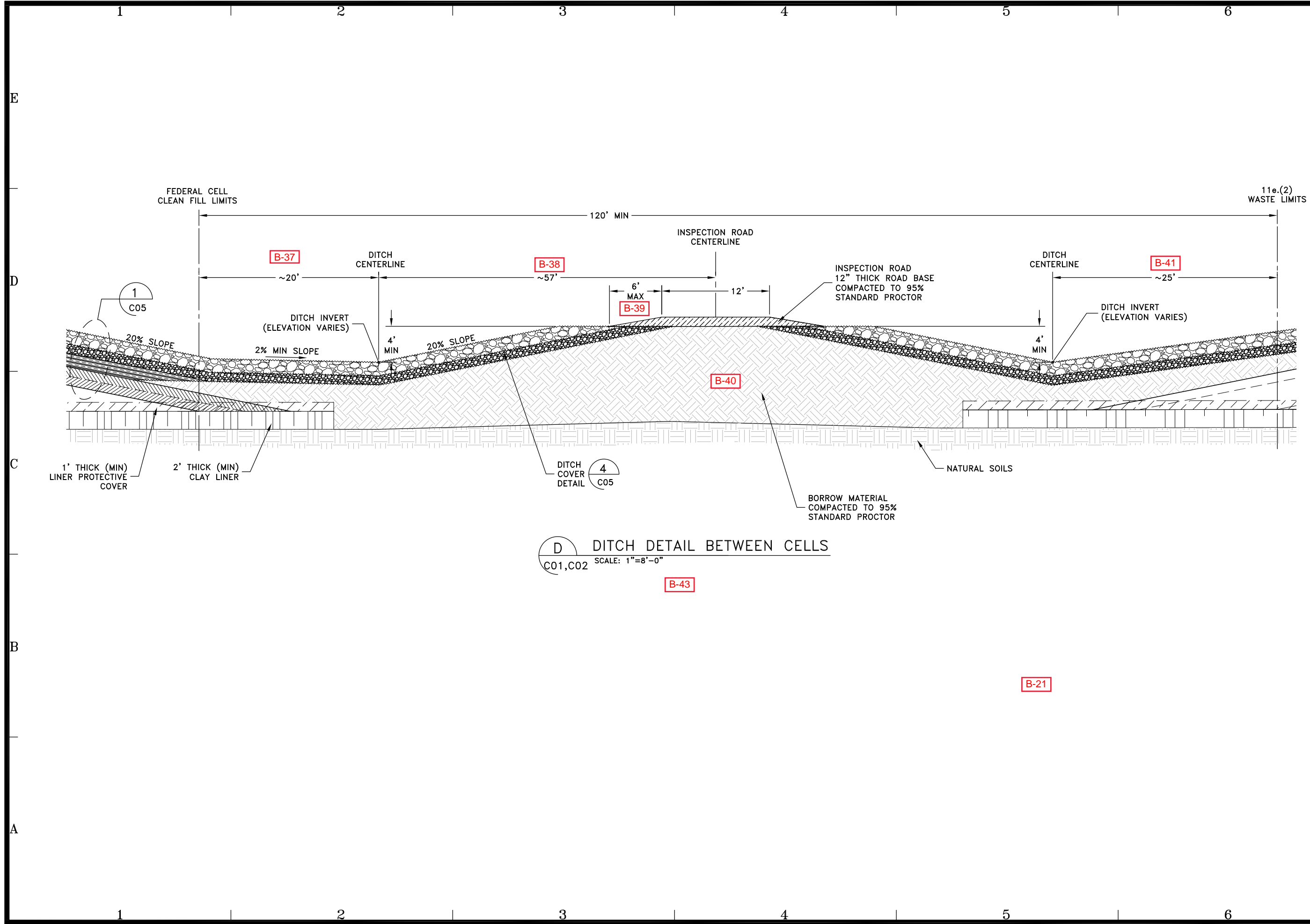
C DITCH & ROAD DETAIL TYP.
 C01, C02 SCALE: 1"=16'-0"



DATE	BY	DESCRIPTION OF CHANGE
2/19/21	DFB	FOR LICENSE APPLICATION - REVISED TEXT
1/16/20	DFB	FOR LICENSE APPLICATION

ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 FEDERAL WASTE CELL
 SECTIONS AND DETAILS, 1 OF 3
 CLIVE, UTAH

DRAWN BY	D. BOOTH
REVIEWED BY	T. ORTON
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	01/13/20
INVT	△
DRAWING NO.	14004 C03



D DITCH DETAIL BETWEEN CELLS
C01,C02 SCALE: 1"=8'-0"

ENERGYSOLUTIONS	ENERGYSOLUTIONS "CLIVE" FACILITY
	FEDERAL WASTE CELL
	SECTIONS AND DETAILS, 2 OF 3
	CLIVE, UTAH
DATE	BY
2/19/21	DFB FOR LICENSE APPLICATION - REVISED TEXT
2/12/21	DFB FOR LICENSE APPLICATION - REVISED WASTE LIMITS
1/16/20	DFB FOR LICENSE APPLICATION
	DATE
	BY
	DESCRIPTION OF CHANGE
DRAFTED BY: D. BOOTH CHECKED BY: T. ORTON APPROVED BY: D. BOOTH	
SCALE	DATE
AS NOTED	01/14/20
DRAWING NO.	
14004	
C04	

COVER MATERIAL SPECIFICATIONS

SURFACE LAYER, TOP SLOPE LAYER:
 85% UNIT 4 MATERIAL AMENDED WITH 15% ($\pm 3\%$),
 BY VOLUME, GRAVEL. GRAVEL IS SPECIFIED AS
 FOLLOWS.
 $D_{100} \leq 3$ INCH
 $D_{30} \leq .85$ INCH (40 mm)

EVAPORATIVE ZONE LAYER:
 UNIT 4 CLAY MATERIAL. NO COMPACTION
 SPECIFICATION.

FROST PROTECTION LAYER:
 BANK RUN COBBLE/GRAVEL/SOIL MATERIAL.
 WELL GRADED
 $D_{100} \leq 16$ INCH

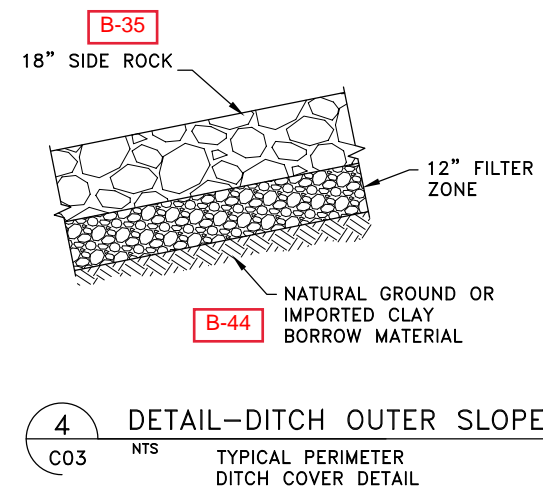
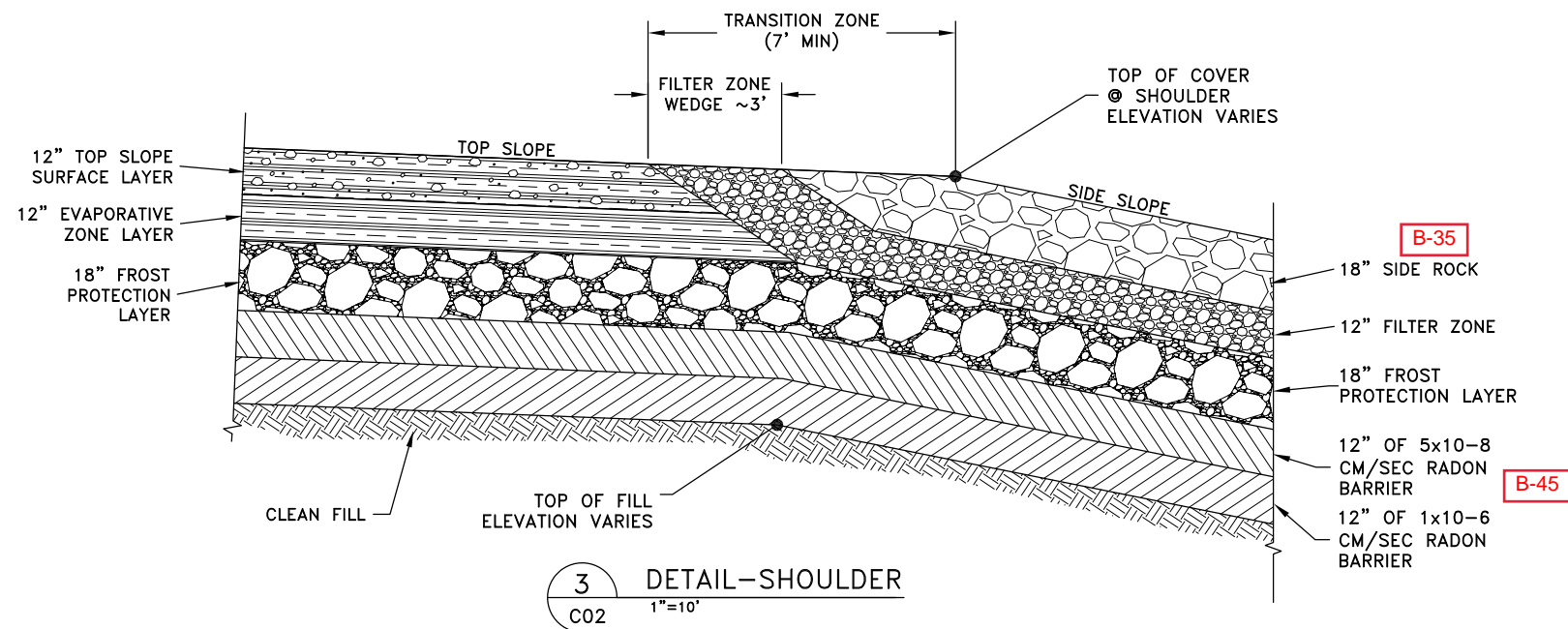
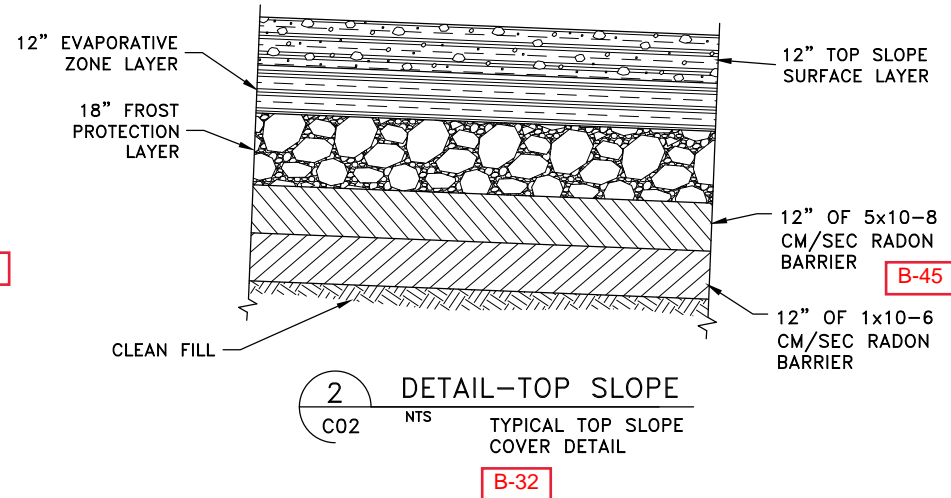
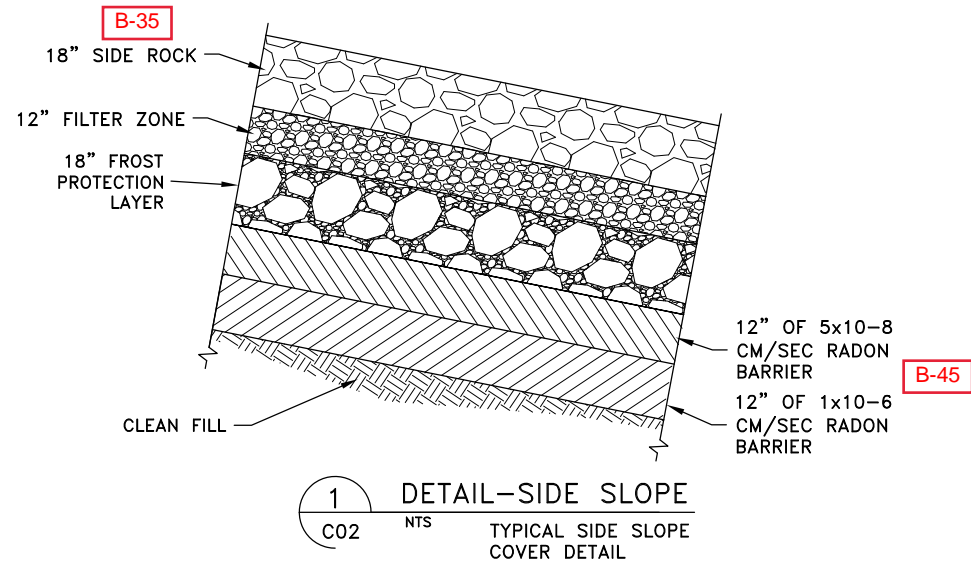
SIDE ROCK: B-35
 $D_{100} = 12$ TO 16 INCH
 $D_{95} = 8$ TO 12 INCH
 $D_{50} = 4.5$ TO 8 INCH
 $D_{15} = 2$ TO 4 INCH
 $D_5 \geq$ NO. 200 SIEVE

FILTER ZONE
 $D_{100} = 1.5$ TO 3 INCH
 $D_{85} = 1$ TO 2.5 INCH
 $D_{50} = 0.75$ TO 2 INCH
 $D_{15} = 0.3125$ TO 0.625 INCH
 $D_{10} \geq$ NO. 10 SIEVE (2mm)
 $D_5 \geq$ NO. 200 SIEVE

NOTES:

1. REFER TO THE CURRENT APPROVED LLRW & 11e.(2)
 CQA/QC MANUAL FOR ADDITIONAL MATERIAL
 SPECIFICATIONS, GRADATIONS, CONSTRUCTION AND
 TESTING REQUIREMENTS.
2. SEED THE TOP SLOPE SURFACE LAYER WITH AN
 APPROVED SEED MIXTURE AND METHOD.

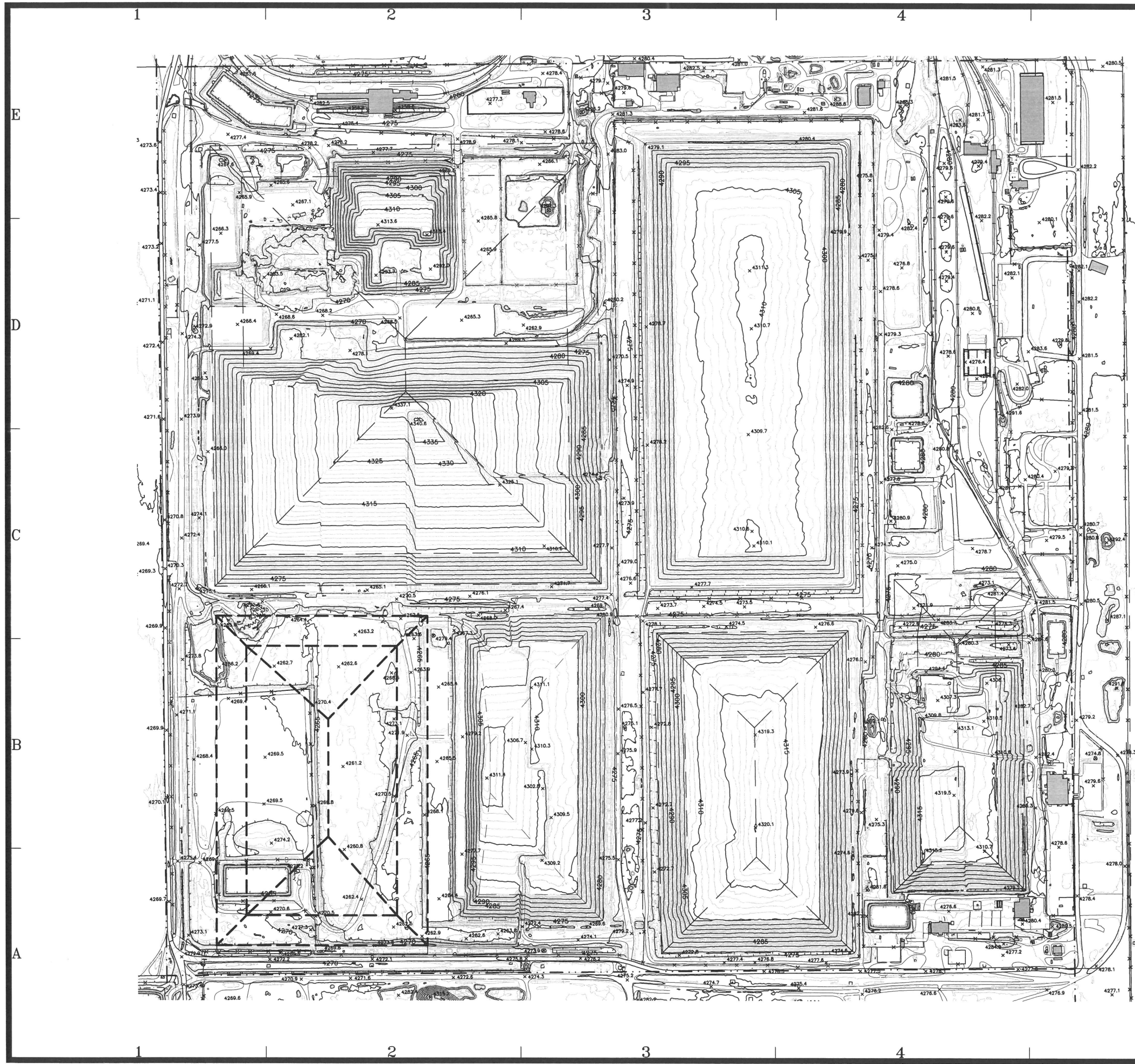
B-46



2/17/21	DFBI FOR LICENSE APPLICATION - REVISED TEXT
2/12/21	DFBI FOR LICENSE APPLICATION - REVISED COVER
1/16/20	DFBI FOR LICENSE APPLICATION
DATE	BY DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 FEDERAL WASTE CELL
 SECTIONS AND DETAILS, 3 OF 3
 CLIVE, UTAH

DRAWN BY	D. BOOTH
REVIEWED BY	T. ORTON
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	01/09/20
INVT	△
DRAWING NO.	14004 C05

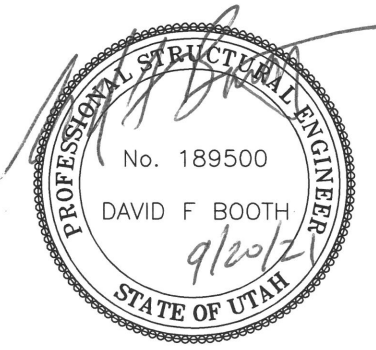


LEGEND

- SECTION LINE
- - - - - PROPERTY LINE
- - - - - FEDERAL CELL FILL BREAKLINES
- - - - - OTHER DISPOSAL EMBANKMENTS
- - - - - 11e.(2) CELL WASTE BREAKLINES

300 0 300 600

- NOTES**
1. TOPOGRAPHY IS BASED ON THE OCTOBER 1, 2020 ANNUAL AERIAL SURVEY.
 2. THE 11e.(2) EMBANKMENT IS SHOWN FOR REFERENCE ONLY. REFER TO 11e.(2) LICENSE DRAWINGS FOR ADDITIONAL DESIGN DETAIL.



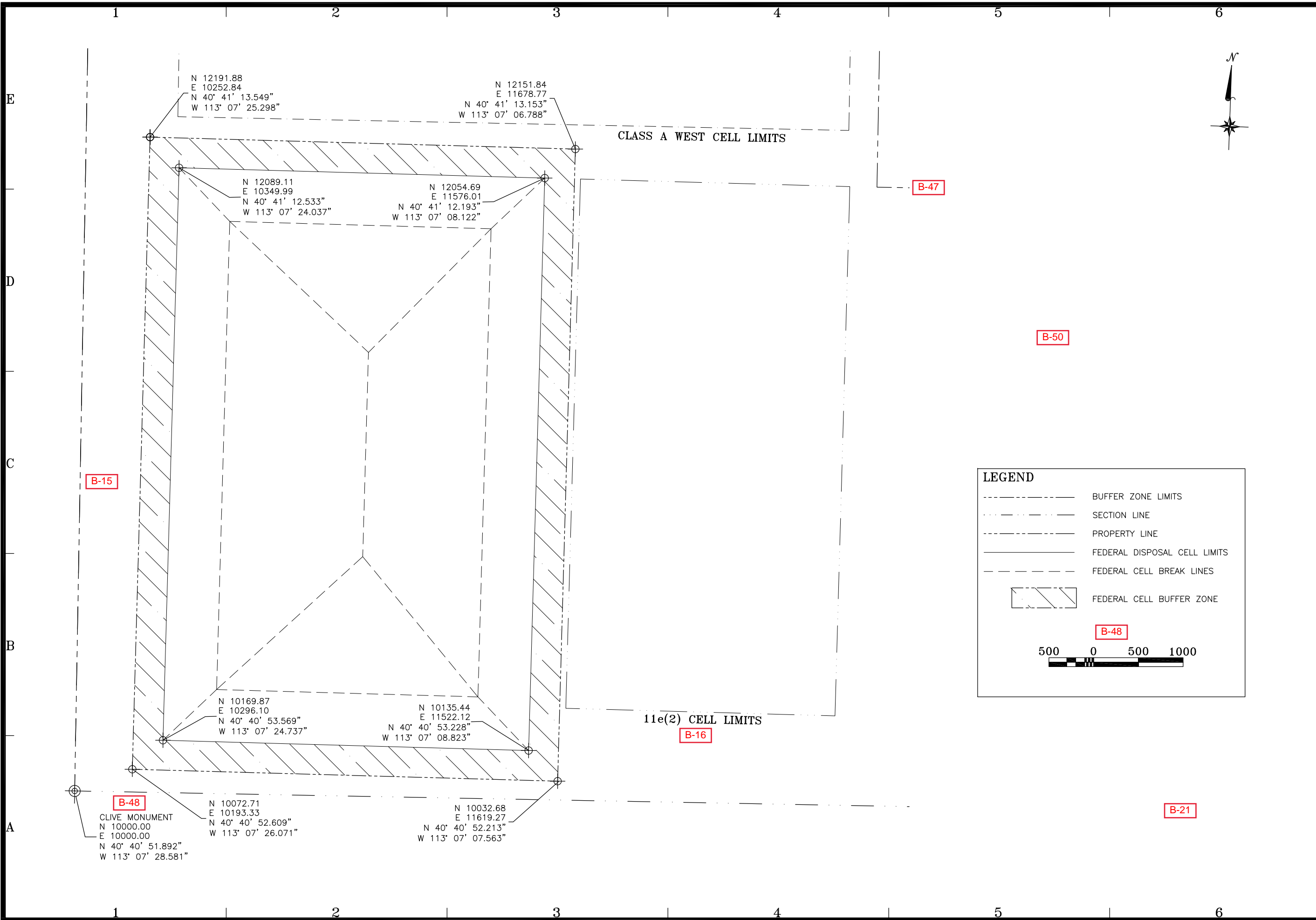
DATE	9/20/21	DFB FOR LICENSE APPLICATION
BY	DAVID F. BOOTH	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS

CLIVE FACILITY
FEDERAL WASTE CELL
EMBANKMENT LOCATION MAP & TOPO
CLIVE, UTAH

**FINAL
DRAWING**

DESIGNED BY	D. BOOTH
CHECKED BY	V. ROGERS
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	09/20/21
DRAWING NO.	14004 L01



DATE	BY	DESCRIPTION OF CHANGE
4/5/21	DFBI	CORRECTED WASTE SW CLIVE COORDINATE
2/19/21	DFBI	FOR LICENSE APPLICATION--REVISED BOUNDARY
1/16/20	DFBI	FOR LICENSE APPLICATION

ENERGYSOLUTIONS

CLIVE FACILITY
FEDERAL WASTE CELL
DISPOSAL CELL BUFFER ZONE
CLIVE, UTAH

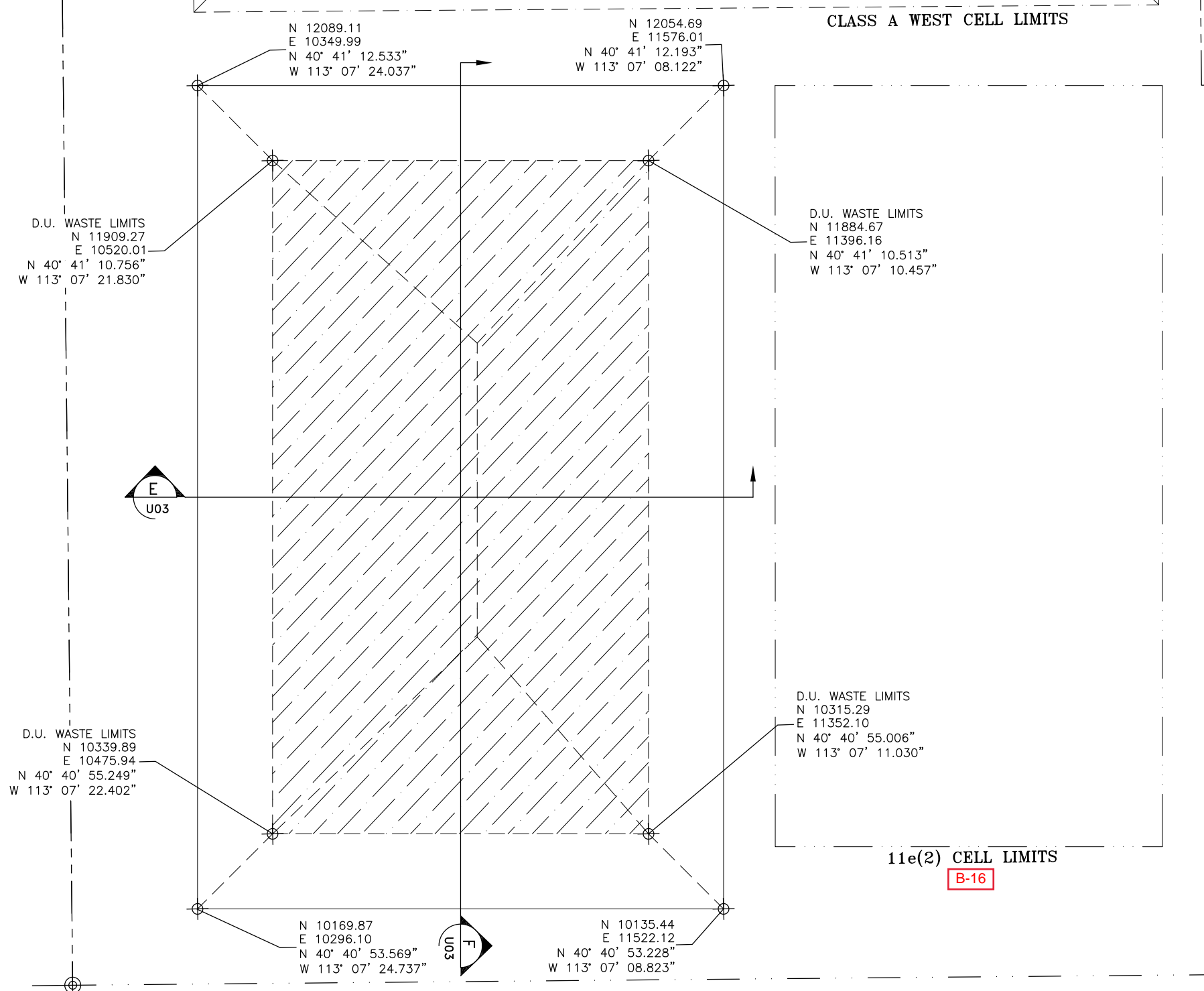
LEGEND

- BUFFER ZONE LIMITS
- SECTION LINE
- PROPERTY LINE
- FEDERAL DISPOSAL CELL LIMITS
- FEDERAL CELL BREAK LINES
- FEDERAL CELL BUFFER ZONE

B-48

500 0 500 1000

DRAPPED BY:	D. BOOTH
REVIEWED BY:	T. ORTON
APPROVED BY:	D. BOOTH
SCALE:	AS NOTED
DATE:	01/14/20
DRAWING NO.:	14004 U01



B-47

B-16

B-21

D.U. WASTE LIMITS
N 11909.27
E 10520.01
N 40° 41' 10.756"
W 113° 07' 21.830"

D.U. WASTE LIMITS
N 10339.89
E 10475.94
N 40° 40' 55.249"
W 113° 07' 22.402"

CLIVE MONUMENT
N 10000.00
E 10000.00
N 40° 40' 51.892"
W 113° 07' 28.581"
B-48

N 12089.11
E 10349.99
N 40° 41' 12.533"
W 113° 07' 24.037"

N 12054.69
E 11576.01
N 40° 41' 12.193"
W 113° 07' 08.122"

D.U. WASTE LIMITS
N 11884.67
E 11396.16
N 40° 41' 10.513"
W 113° 07' 10.457"

D.U. WASTE LIMITS
N 10315.29
E 11352.10
N 40° 40' 55.006"
W 113° 07' 11.030"

N 10169.87
E 10296.10
N 40° 40' 53.569"
W 113° 07' 24.737"

N 10135.44
E 11522.12
N 40° 40' 53.228"
W 113° 07' 08.823"

LEGEND

— FEDERAL CELL LIMITS

- - - FEDERAL CELL BREAK LINES

· · · SECTION LINE

- · - · - PROPERTY LINE

D.U. CYLINDER & DRUM DISPOSAL AREA (D.U. WASTE LIMITS)

150 0 150 300

NOTES

1. THE 11e(2) EMBANKMENT IS SHOWN FOR REFERENCE ONLY. REFER TO 11e(2) LICENSE DRAWINGS FOR ADDITIONAL DESIGN DETAIL.
2. D.U. CYLINDERS AND DRUMS DISPOSED OF WITHIN THE FEDERAL CELL ARE LIMITED TO THE AREA SHOWN. ALL CYLINDERS AND DRUMS SHALL BE DISPOSED OF AT OR BELOW THE ORIGINAL GROUND SURFACE.

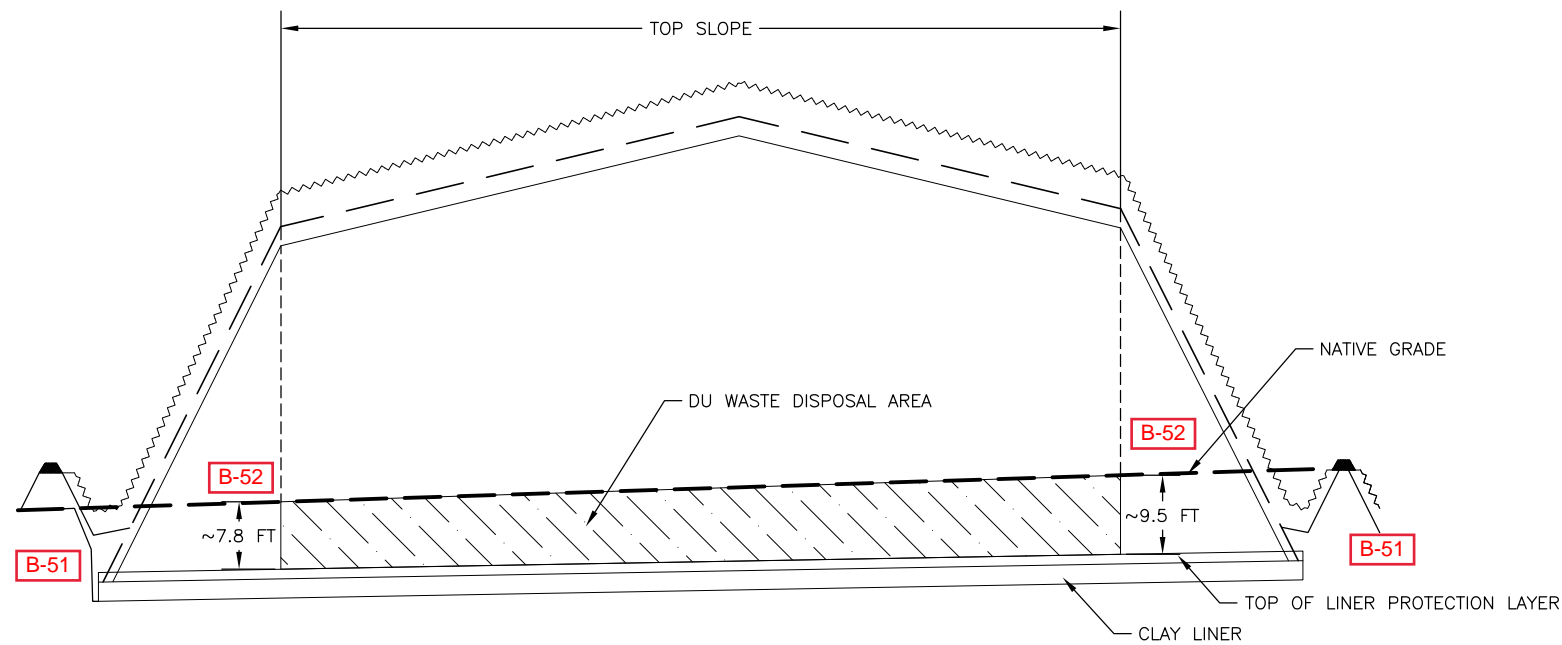
			FOR LICENSE APPLICATION--ADDED CROSS SECTIONS
			FOR LICENSE APPLICATION--REVISED WASTE LIMITS
			FOR LICENSE APPLICATION
		DATE	BY DESCRIPTION OF CHANGE
6/22/21	DFBI		
2/19/21	DFBI		
1/16/20	DFBI		

ENERGYSOLUTIONS

CLIVE FACILITY
FEDERAL WASTE CELL
DISPOSAL CELL WASTE LIMITS--LATITUDES & LONGITUDES
CLIVE, UTAH

DRAFTED BY	D. BOOTH
REVIEWED BY	T. ORTON
APPROVED BY	D. BOOTH
SCALE	AS SHOWN
DATE	01/14/20
REV	
DRAWING NO.	14004 U02

14004
U02



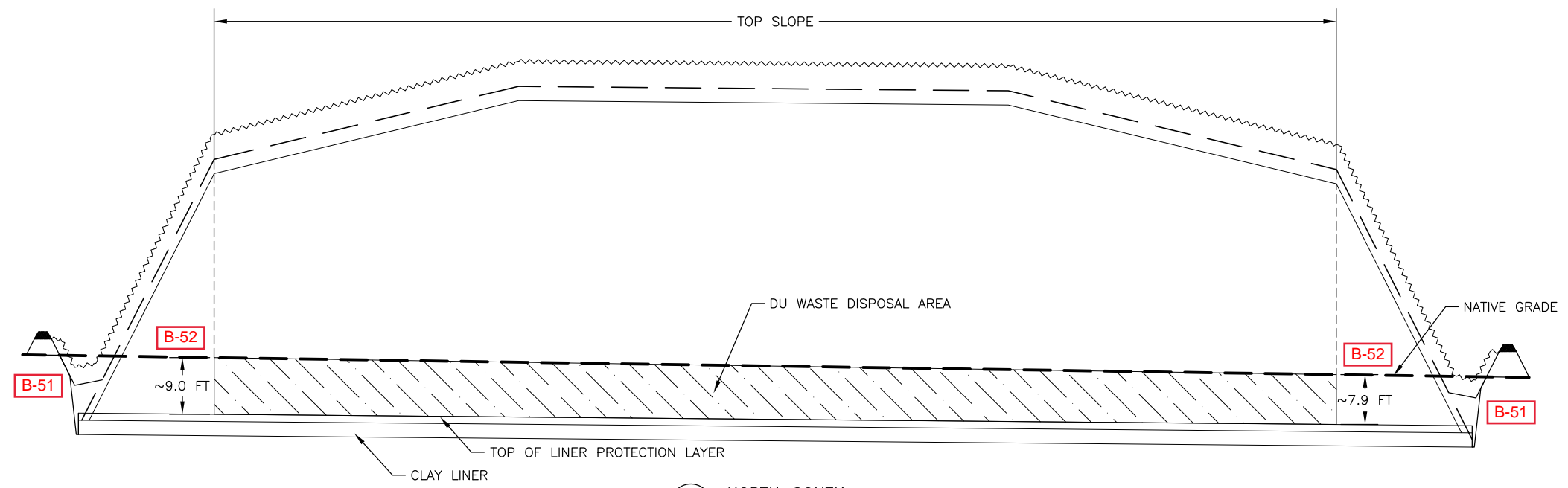
E WEST-EAST CROSS SECTION
 U02 HORIZONTAL SCALE: 1" = 200'
 VERTICAL SCALE: 1" = 20'

LEGEND

- B-51 FEDERAL CELL LIMITS
- NATIVE GRADE
- - - TOP OF RADON BARRIER
- ~ ~ ~ TOP OF COVER
- D.U. CYLINDER & DRUM DISPOSAL AREA (D.U. WASTE LIMITS)

NOTES

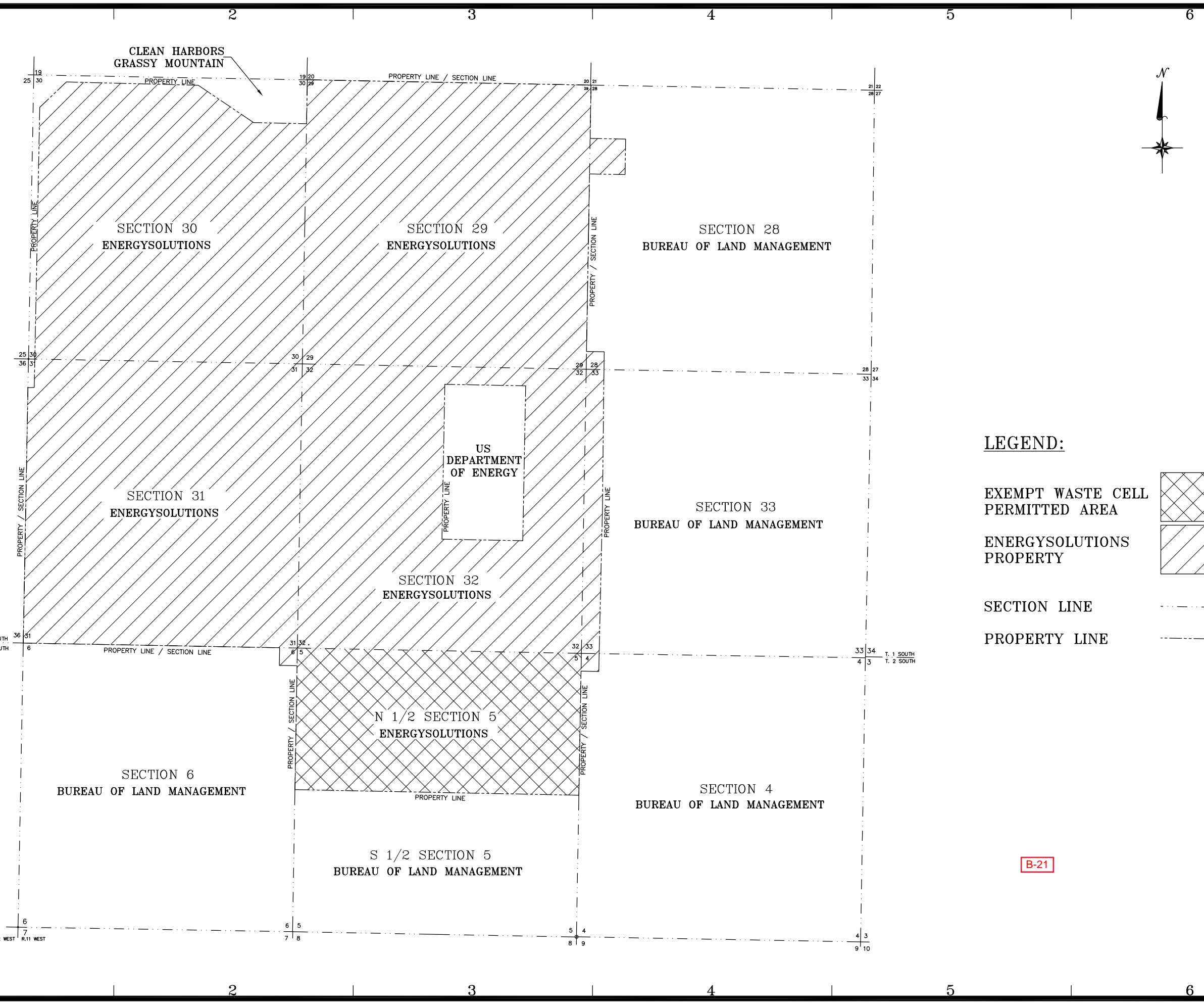
1. D.U. CYLINDERS AND DRUMS DISPOSED OF WITHIN THE FEDERAL CELL ARE LIMITED TO THE AREA SHOWN. ALL CYLINDERS AND DRUMS SHALL BE DISPOSED OF AT OR BELOW THE ORIGINAL GROUND SURFACE AND UNDERNEATH THE TOP SLOPE.




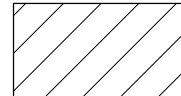


F NORTH-SOUTH
 U02 HORIZONTAL SCALE: 1" = 200'
 VERTICAL SCALE: 1" = 20'

B-21

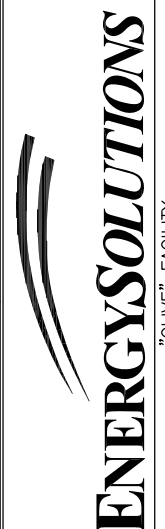
<p>ENERGYSOLUTIONS CLIVE FACILITY FEDERAL WASTE CELL DISPOSAL CELL WASTE LIMITS - CROSS SECTIONS CLIVE, UTAH</p>	<p>6/22/21 DATE 6/22/21 DATE FOR LICENSE APPLICATION BY DESCRIPTION OF CHANGE</p>
<p>DRAFTED BY: D. BOOTH REVIEWED BY: T. ORTON APPROVED BY: D. BOOTH SCALE: AS SHOWN DATE: 06/22/21 INV: </p>	
<p>14004 U03</p>	



LEGEND:

- EXEMPT WASTE CELL PERMITTED AREA 
- ENERGYSOLUTIONS PROPERTY 
- SECTION LINE 
- PROPERTY LINE 

B-21

 <p>ENERGYSOLUTIONS "CLIVE" FACILITY EXEMPT WASTE CELL SURROUNDING PROPERTY OWNERSHIP MAP CLIVE, UTAH</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">DATE</td> <td style="width: 50%; text-align: center;">BY</td> </tr> <tr> <td style="text-align: center;">8/27/21</td> <td style="text-align: center;">DFB</td> </tr> <tr> <td colspan="2" style="text-align: center;">ISSUED FOR LICENSING</td> </tr> <tr> <td colspan="2" style="text-align: center;">DESCRIPTION OF CHANGE</td> </tr> </table>	DATE	BY	8/27/21	DFB	ISSUED FOR LICENSING		DESCRIPTION OF CHANGE							
DATE	BY														
8/27/21	DFB														
ISSUED FOR LICENSING															
DESCRIPTION OF CHANGE															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DRAFTED BY</td> <td style="width: 50%;">D. BOOTH</td> </tr> <tr> <td>REVIEWED BY</td> <td>C. BUCK</td> </tr> <tr> <td>APPROVED BY</td> <td>D. BOOTH</td> </tr> <tr> <td>SCALE</td> <td>NTS</td> </tr> <tr> <td>DATE</td> <td>08/27/21</td> </tr> <tr> <td>REV.</td> <td>1</td> </tr> <tr> <td>DRAWING NO.</td> <td>18008 U04</td> </tr> </table>		DRAFTED BY	D. BOOTH	REVIEWED BY	C. BUCK	APPROVED BY	D. BOOTH	SCALE	NTS	DATE	08/27/21	REV.	1	DRAWING NO.	18008 U04
DRAFTED BY	D. BOOTH														
REVIEWED BY	C. BUCK														
APPROVED BY	D. BOOTH														
SCALE	NTS														
DATE	08/27/21														
REV.	1														
DRAWING NO.	18008 U04														



RESERVATIONS, RIGHTS-OF-WAY AND EASEMENTS AS DISCLOSED IN THAT CERTAIN INSTRUMENT BY THE UNITED STATES OF AMERICA, GRANTOR AND BROKEN ARROW INCORPORATED, GRANTEE, RECORDED FEBRUARY 24, 1995, AS ENTRY NO. 072175, IN BOOK 390, AT PAGE 798 OF OFFICIAL RECORDS. (FIBER OPTIC CABLE AND TELEPHONE LINE)

B-53

RESERVATIONS, RIGHTS-OF-WAY AND EASEMENTS AS DISCLOSED IN THAT CERTAIN INSTRUMENT BY THE UNITED STATES OF AMERICA, GRANTOR AND BROKEN ARROW INCORPORATED, GRANTEE, RECORDED MARCH 14, 1995, AS ENTRY NO. 072592, IN BOOK 391, AT PAGE 826 OF OFFICIAL RECORDS. (FIBER OPTIC CABLE AND TELEPHONE LINE)



B-55

B-54

B-58



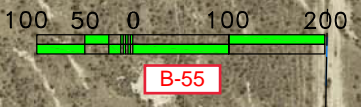
DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 2020 SITE UTILITIES
 UTILITY MAP 1
 CLIVE, UTAH

FOR INFORMATION ONLY

DRAWN BY	B. DICK
DESIGNED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	20005 C01

PROFESSIONAL STRUCTURAL ENGINEER
 No. 189500
 DAVID F. BOOTH
 Nov 30 2020
 STATE OF UTAH



B-55
 B-54
 B-58

ADMINISTRATION BUILDING

UNDERGROUND WATER TANK

DWMRC OFFICE

UNDERGROUND WATER TANK

MAINTENANCE

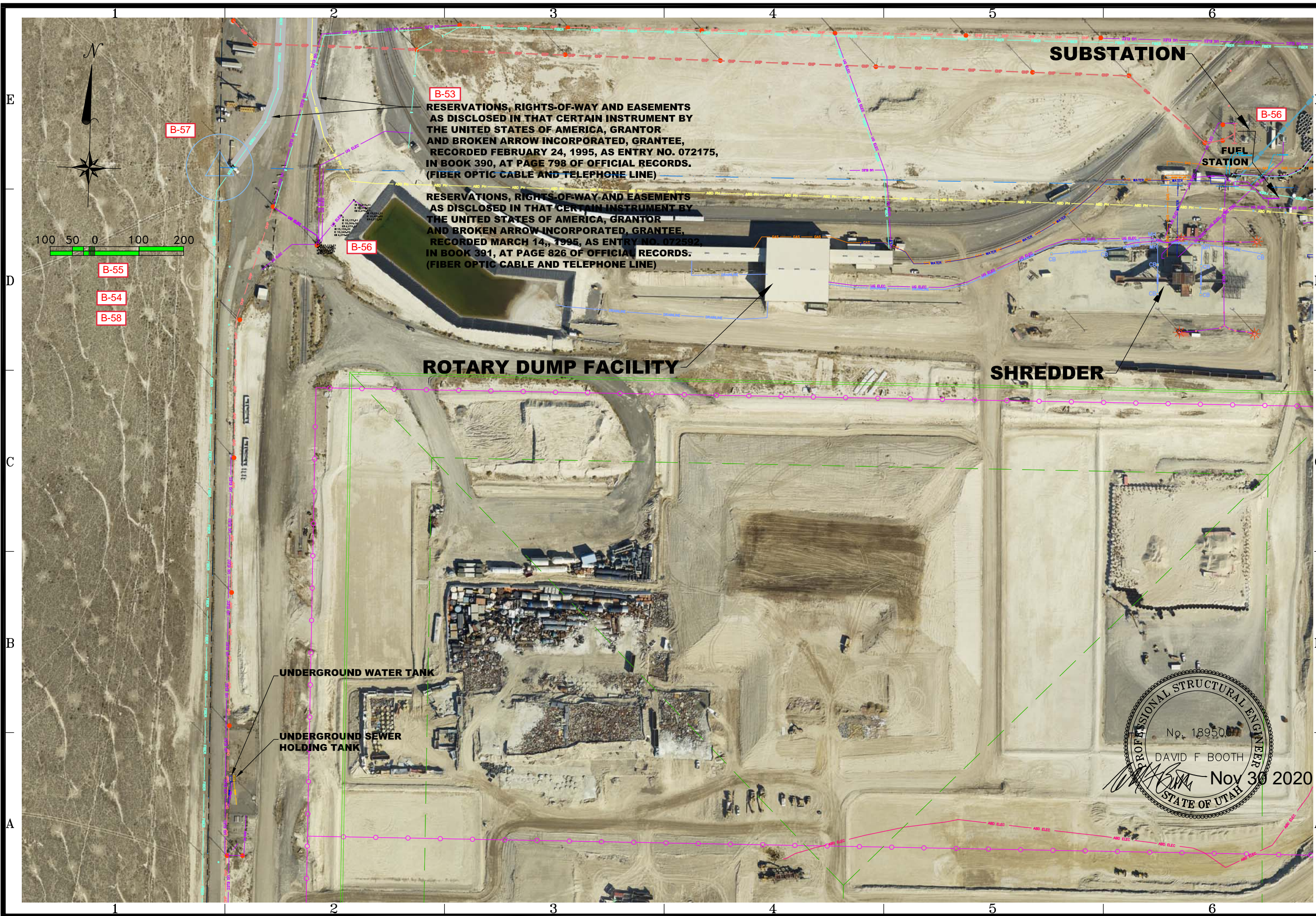
B-56

ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 2020 SITE UTILITIES
 UTILITY MAP 2
 CLIVE, UTAH

FOR INFORMATION ONLY

DRAWN BY	B. DICK
DESIGNED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	20005 C02

DATE BY DESCRIPTION OF CHANGE



B-57

B-55

B-54

B-58

B-53
 RESERVATIONS, RIGHTS-OF-WAY AND EASEMENTS
 AS DISCLOSED IN THAT CERTAIN INSTRUMENT BY
 THE UNITED STATES OF AMERICA, GRANTOR
 AND BROKEN ARROW INCORPORATED, GRANTEE,
 RECORDED FEBRUARY 24, 1995, AS ENTRY NO. 072175,
 IN BOOK 390, AT PAGE 798 OF OFFICIAL RECORDS.
 (FIBER OPTIC CABLE AND TELEPHONE LINE)

B-56

B-56
 RESERVATIONS, RIGHTS-OF-WAY AND EASEMENTS
 AS DISCLOSED IN THAT CERTAIN INSTRUMENT BY
 THE UNITED STATES OF AMERICA, GRANTOR
 AND BROKEN ARROW INCORPORATED, GRANTEE,
 RECORDED MARCH 14, 1995, AS ENTRY NO. 072592,
 IN BOOK 391, AT PAGE 826 OF OFFICIAL RECORDS.
 (FIBER OPTIC CABLE AND TELEPHONE LINE)

SUBSTATION

B-56

FUEL STATION

ROTARY DUMP FACILITY

SHREDDER

UNDERGROUND WATER TANK

UNDERGROUND SEWER HOLDING TANK

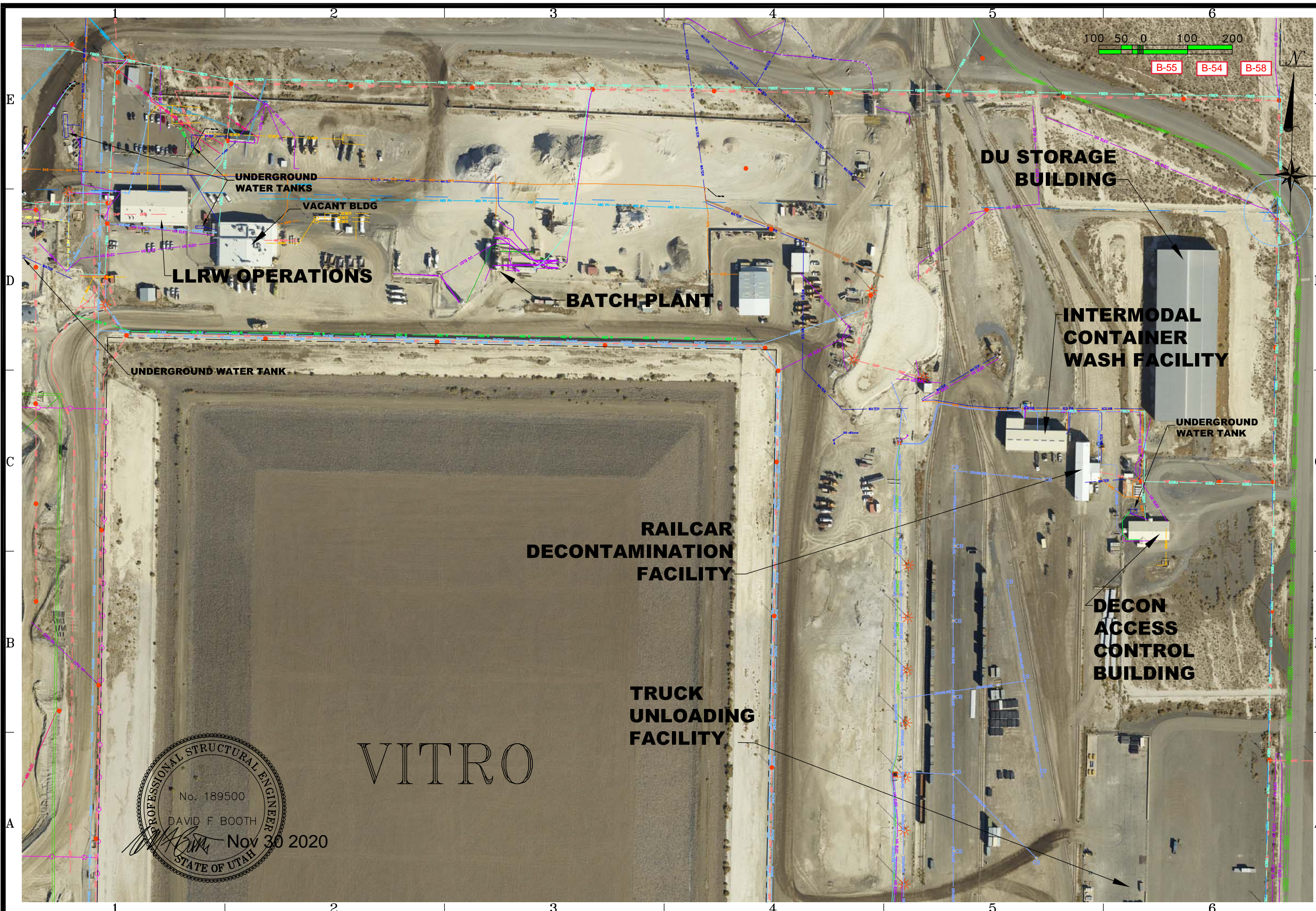


DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 2020 SITE UTILITIES
 UTILITY MAP 3
 CLIVE, UTAH

FOR INFORMATION ONLY

DRAWN BY	B. DICK
DESIGNED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	20005 C03



VITRO

NO.	DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
ENERGYSOLUTIONS "CLIVE" FACILITY
2020 SITE UTILITIES
UTILITY MAP 4
CLIVE, UTAH

FOR INFORMATION ONLY

DRAWN BY	B. DICK
DESIGNED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	20005 C04



CLASS A WEST

B-55
B-54
B-58

PROFESSIONAL STRUCTURAL ENGINEER
No. 189500
DAVID F. BOOTH
Nov 20 2020
STATE OF UTAH

DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
ENERGYSOLUTIONS "CLIVE" FACILITY
2020 SITE UTILITIES
UTILITY MAP 5
CLIVE, UTAH

FOR INFORMATION ONLY

DRAWN BY	B. DICK
DESIGNED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	20005 C05



INTERMODAL UNLOADING FACILITY

97 EVAPORATION POND

95 EVAPORATION POND

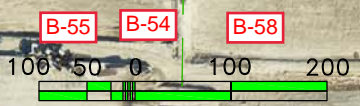
**N 12,495
E 14,295
(APPROX CAP LOCATION)**

**N 12,494
E 14,290
(APPROX CAP LOCATION)**

**N 12,469
E 14,294
(APPROX CAP LOCATION)**

**N 12,481
E 14,558
(APPROX CAP LOCATION)**

**ALL DRAIN PIPES
WITHIN BOX REMOVED
AS OF JUNE 12, 2006**



B-57

B-55

B-54

B-58

NO.	DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS "CLIVE" FACILITY
2020 SITE UTILITIES
UTILITY MAP 6
CLIVE, UTAH

FOR INFORMATION ONLY

DRAWN BY B. DICK CHECKED BY D. BOOTH APPROVED BY D. BOOTH	DATE 11/23/20 INV.
--	--------------------------

20005
C06



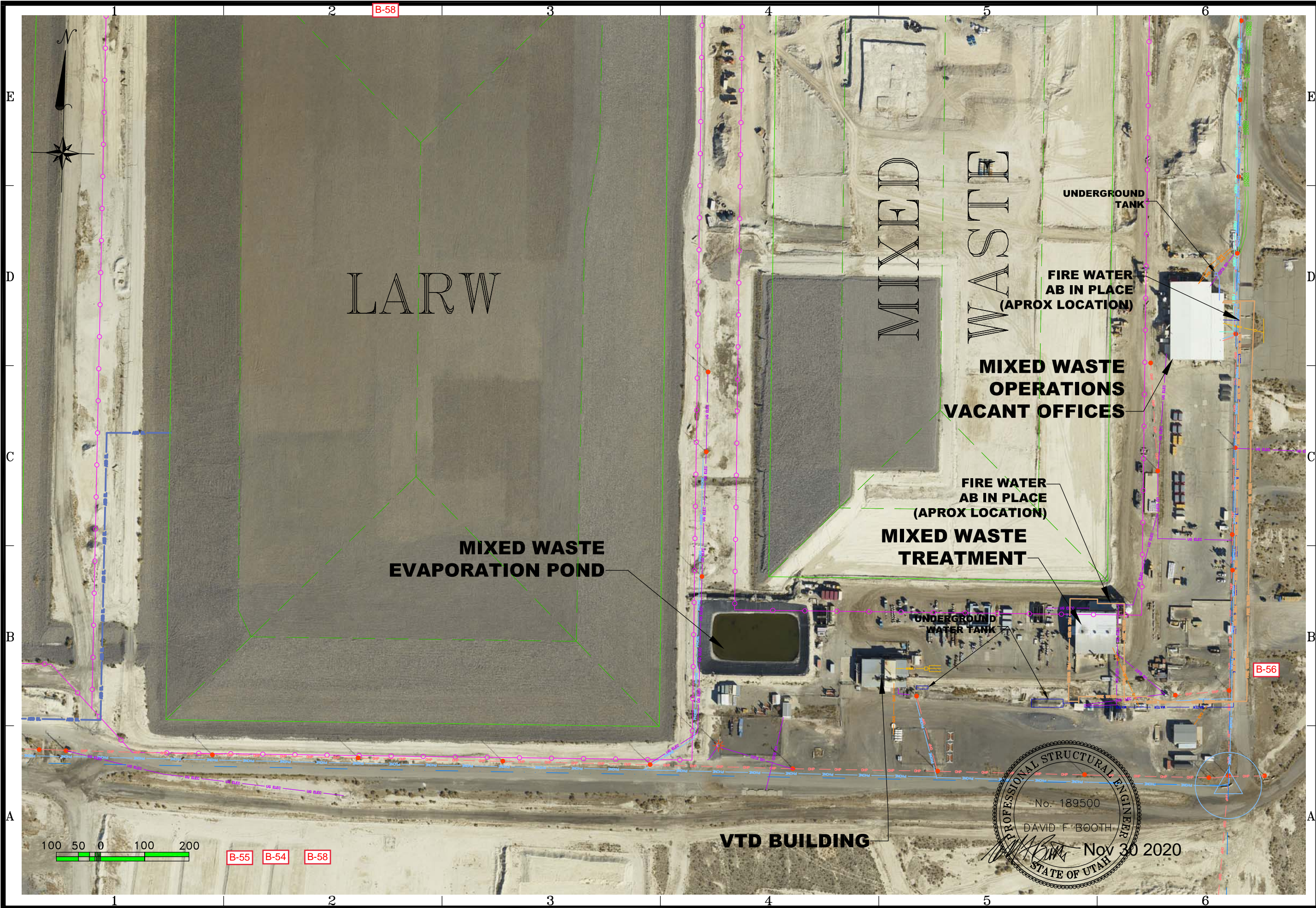
NO.	DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 2020 SITE UTILITIES
 UTILITY MAP 7
 CLIVE, UTAH

FOR INFORMATION ONLY

PROFESSIONAL STRUCTURAL ENGINEER
 No. 189500
 DAVID F. BOOTH
 Nov 30 2020
 STATE OF UTAH

DRAWN BY	B. DICK
DESIGNED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	20005 C07



NO.	DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 2020 SITE UTILITIES
 UTILITY MAP 8
 CLIVE, UTAH

FOR INFORMATION ONLY

DRAWN BY	B. DICK
REVIEWED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	20005 C08





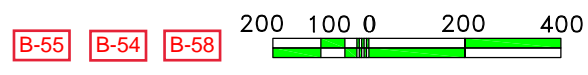
DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS
 ENERGYSOLUTIONS "CLIVE" FACILITY
 2020 SITE UTILITIES
 UTILITY MAP 9
 CLIVE, UTAH

PROFESSIONAL STRUCTURAL ENGINEER
 No. 189500
 DAVID F BOOTH
 Nov 30 2020
 STATE OF UTAH

FOR INFORMATION ONLY

DRAWN BY: B. DICK
 CHECKED BY: D. BOOTH
 APPROVED BY: D. BOOTH
 SCALE: AS NOTED DATE: 11/23/20 INV. DATE:
 DRAWING NO.: 20005 C09



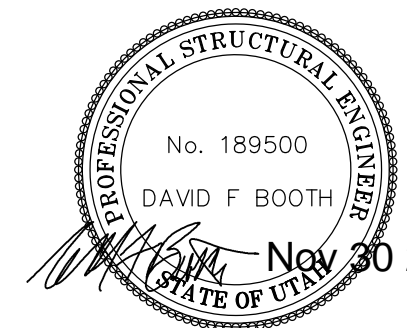


RESERVATIONS, RIGHTS-OF-WAY AND EASEMENTS AS DISCLOSED IN THAT CERTAIN INSTRUMENT BY THE UNITED STATES OF AMERICA, GRANTOR AND BROKEN ARROW INCORPORATED, GRANTEE, RECORDED FEBRUARY 24, 1995, AS ENTRY NO. 072175, IN BOOK 390, AT PAGE 798 OF OFFICIAL RECORDS, (FIBER OPTIC CABLE AND TELEPHONE LINE)

RESERVATIONS, RIGHTS-OF-WAY AND EASEMENTS AS DISCLOSED IN THAT CERTAIN INSTRUMENT BY THE UNITED STATES OF AMERICA, GRANTOR AND BROKEN ARROW INCORPORATED, GRANTEE, RECORDED MARCH 14, 1995, AS ENTRY NO. 072592, IN BOOK 391, AT PAGE 826 OF OFFICIAL RECORDS, (FIBER OPTIC CABLE AND TELEPHONE LINE)

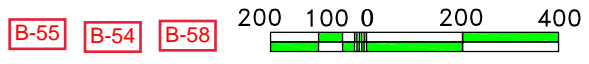
RESERVATIONS, RIGHTS-OF-WAY AND EASEMENTS AS DISCLOSED IN THAT CERTAIN INSTRUMENT BY THE UNITED STATES OF AMERICA, GRANTOR AND BROKEN ARROW INCORPORATED, GRANTEE, RECORDED FEBRUARY 24, 1995, AS ENTRY NO. 072175, IN BOOK 390, AT PAGE 798 OF OFFICIAL RECORDS, (FIBER OPTIC CABLE AND TELEPHONE LINE)

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ENERGYSOLUTIONS
 ENERGY SOLUTIONS "CLIVE" FACILITY
 2020 SITE UTILITIES
 UTILITY MAP 10
 CLIVE, UTAH

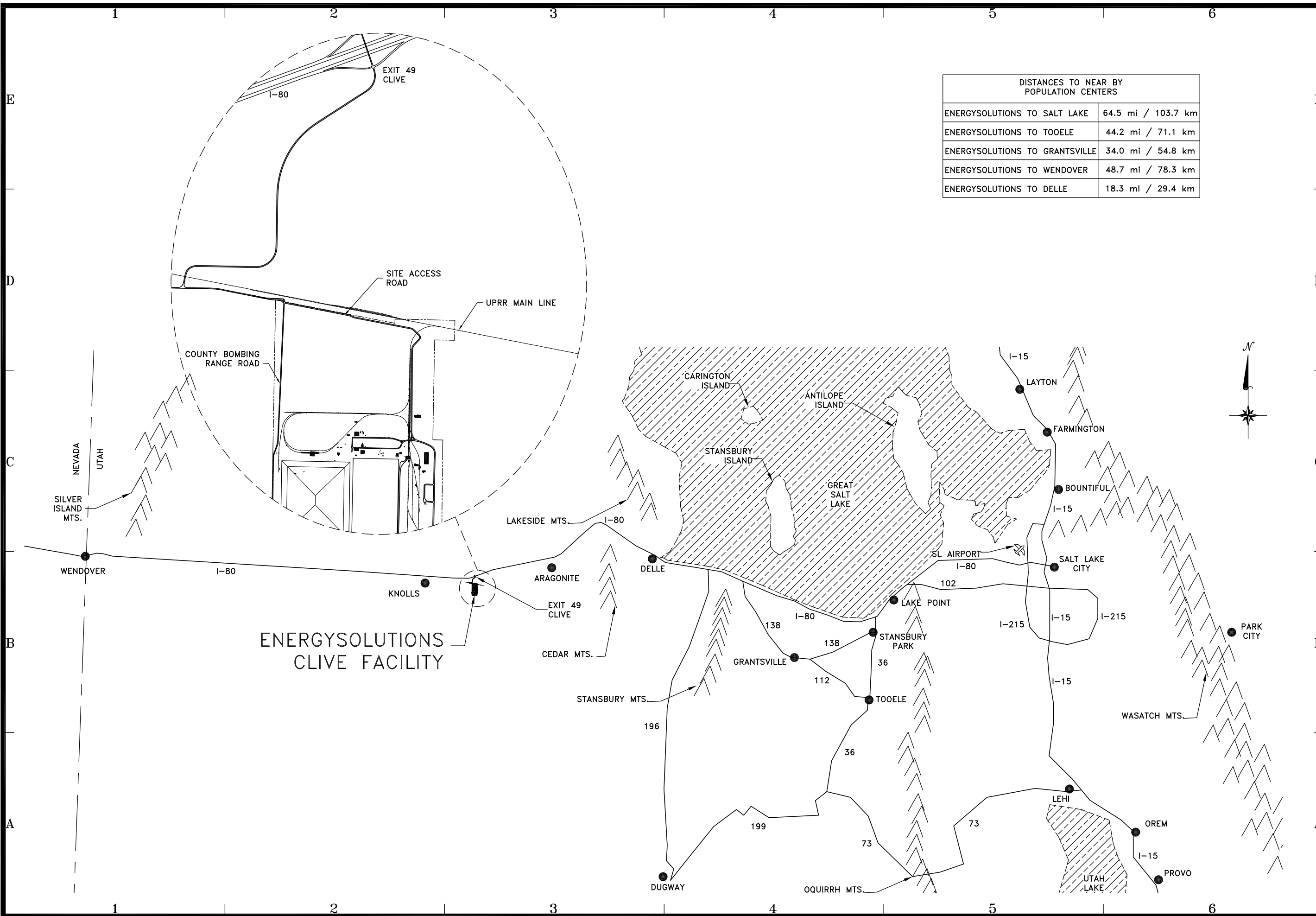
FOR INFORMATION ONLY



DRAWN BY	B. DICK
DESIGNED BY	D. BOOTH
APPROVED BY	D. BOOTH
SCALE	AS NOTED
DATE	11/23/20
DRAWING NO.	

20005
C10

DATE BY DESCRIPTION OF CHANGE



DISTANCES TO NEAR BY POPULATION CENTERS	
ENERGYSOLUTIONS TO SALT LAKE	64.5 mi / 103.7 km
ENERGYSOLUTIONS TO TOOELE	44.2 mi / 71.1 km
ENERGYSOLUTIONS TO GRANTSVILLE	34.0 mi / 54.8 km
ENERGYSOLUTIONS TO WENDOVER	48.7 mi / 78.3 km
ENERGYSOLUTIONS TO DELLE	18.3 mi / 29.4 km



DATE	BY	DESCRIPTION OF CHANGE

ENERGYSOLUTIONS

ENERGYSOLUTIONS "CLIVE" FACILITY
 RADIOACTIVE MATERIALS LICENSE
 SITE LOCATION
 CLIVE, UTAH

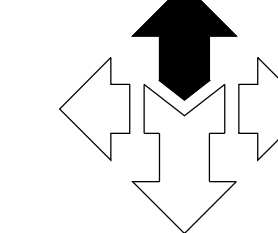
DRAWN BY D. BOOTH
DESIGNED BY V. ROGERS
APPROVED BY D. BOOTH
SCALE 1" = 360'
DATE 10/23/12
INCHES 1"
FEET 360'
DATE 10/23/12
INCHES 1"
FEET 360'
DATE 10/23/12
INCHES 1"
FEET 360'

FIGURE 1-1

FEDERAL CELL FACILITY SUBDIVISION

LOCATED IN THE SOUTHWEST QUARTER
OF SECTION 32, TOWNSHIP 1 SOUTH,
RANGE 11 WEST, SALT LAKE BASE & MERIDIAN

NORTH



SCALE: 1" = 200'



NORTHWEST CORNER OF SECTION 32,
TOWNSHIP 1 SOUTH, RANGE 11 WEST,
SALT LAKE BASE AND MERIDIAN (FOUND
BRASS CAP MONUMENT SET IN 1996 BY
DED SURVEYING, L.S. 329172)

N 17°02'41" E 2642.33'
(MEASURED)

WEST QUARTER CORNER OF SECTION 32,
TOWNSHIP 1 SOUTH, RANGE 11 WEST,
SALT LAKE BASE AND MERIDIAN (FOUND
REBAR AND CAP)

S 17°02'41" W 443.86'

ENERGYSOLUTIONS LLC
04-101-A-0004

S 88°23'30" E 1640.63'

ENERGYSOLUTIONS LLC
04-100-M-0001

SECTION 31 T.1S., R.11W.

BASIS OF BEARING N 01°02'33" E 5294.64' (MEASURED) N 07°04' W 80' CHAINS (RECORD PER GLO SURVEY)

N 1°00'42" E 2198.25'

LOT 1
CONTAINS 3,569,125 SQUARE FEET
OR 81,936 ACRES

SW 1/4 SECTION 32 T.1S., R.11W.

ENERGYSOLUTIONS LLC
04-101-A-0004

S 1°36'30" W 2183.25'

NORTH QUARTER CORNER OF SECTION 6,
TOWNSHIP 2 SOUTH, RANGE 11 WEST, SALT
LAKE BASE AND MERIDIAN (FOUND 1913 GLO
BRASS CAP MONUMENT)

ENERGYSOLUTIONS LLC
05-100-D-0001

SECTION 6 T.2S., R.11W.

SOUTHWEST CORNER OF SECTION 32,
TOWNSHIP 1 SOUTH, RANGE 11 WEST,
SALT LAKE BASE AND MERIDIAN (FOUND
1913 GLO BRASS CAP MONUMENT)

ENERGYSOLUTIONS LLC
05-100-C-0001

SECTION 5 T.2S., R.11W.

N 88°55'07" W 1617.81'

N 88°55'07" W 2642.25' (MEASURED)

TOWNSHIP 1 SOUTH
TOWNSHIP 2 SOUTH

SOUTH QUARTER CORNER OF SECTION 32,
TOWNSHIP 1 SOUTH, RANGE 11 WEST,
SALT LAKE BASE AND MERIDIAN (FOUND
MONUMENT)

NOTES

LEGEND

- SUBDIVISION BOUNDARY
- - - SECTION LINE
- SUBDIVISION BOUNDARY CORNER, COPPER PLUG OR REBAR & CAP OR NAIL & WASHER STAMPED "MCNEIL ENGR"



VICINITY MAP
SCALE: N.T.S.

SURVEYOR'S CERTIFICATE

DAVID B DRAPER DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 6861599 IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS ACT, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRIBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17 AND HAVE VERIFIED ALL MEASUREMENTS AND HAVE PLACED MONUMENT AS REPRESENTED ON THIS PLAT, AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY THE AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED HEREON, AND HAVE SUBDIVIDED SAID TRACT INTO LOTS, AND STREETS, TOGETHER WITH EASEMENTS, HEREAFTER TO BE KNOWN AS:

FEDERAL CELL FACILITY SUBDIVISION

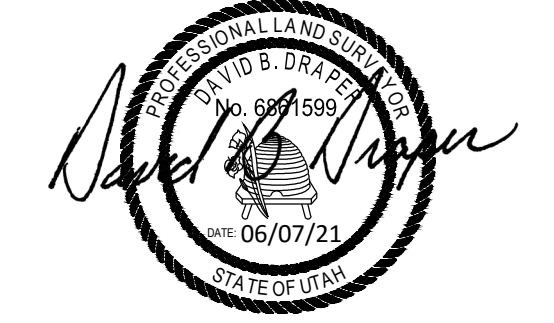
AND THAT AT THE SAME HAS BEEN CORRECTLY SURVEYED AND MARKED ON THE GROUND AS SHOWN ON THIS PLAT.

SUBDIVISION DESCRIPTION

A PARCEL OF LAND BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 32, TOWNSHIP 1 SOUTH, RANGE 11 WEST, SALT LAKE BASE & MERIDIAN, SAID PARCEL BEING DESCRIBED MORE PARTICULARLY AS FOLLOWS:

BEGINNING AT A FOUND 1913 G.L.O. BRASS CAP MONUMENT MARKING THE SOUTHWEST CORNER OF SAID SECTION 32, AND RUNNING THENCE NORTH 1°00'42" EAST ALONG THE SECTION LINE 2198.25 FEET; THENCE SOUTH 88°23'30" EAST 1640.63 FEET; THENCE SOUTH 1°36'30" WEST 2183.25 FEET TO THE SOUTH LINE OF SAID SECTION 32; THENCE NORTH 88°55'07" WEST ALONG SAID SOUTH SECTION LINE 1617.81 FEET TO THE POINT OF BEGINNING.

CONTAINS 3,569,125 SQ. FT. OR 81,936 ACRES



DAVID B DRAPER
L.S. LICENSE NO. 6861599

OWNER'S DEDICATION

KNOWN ALL MEN BY THESE PRESENT THAT THE UNDERSIGNED ARE THE OWNERS OF THE ABOVE DESCRIBED TRACT OF LAND, AND HEREBY CAUSE THE SAME TO BE DIVIDED INTO LOTS, PARCELS, AND STREETS, TOGETHER WITH EASEMENTS AS SET FORTH THE BE HEREAFTER KNOWN AS:

FEDERAL CELL FACILITY SUBDIVISION

AND DO HEREBY DEDICATE FOR PERPETUAL USE OF THE PUBLIC ALL ROADS AND OTHER AREAS SHOWN ON THIS PLAT AS INTENDED FOR PUBLIC USE. THE UNDERSIGNED OWNERS ALSO HEREBY CONVEY TO ANY AND ALL PUBLIC UTILITY COMPANIES A PERPETUAL, NON-EXCLUSIVE EASEMENT OVER THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, THE SAME TO BE USED FOR THE INSTALLATION, MAINTENANCE, AND OPERATION OF UTILITY LINES AND FACILITIES. THE UNDERSIGNED OWNERS ALSO HEREBY CONVEY ANY OTHER EASEMENTS AS SHOWN ON TO THE PARTIES INDICATED AND FOR THE PURPOSES SHOWN HEREON.

IN WITNESS WHEREOF I (WE) HAVE HEREUNTO SET OUR HAND(S) THIS _____ DAY OF _____ A.D. 20__

ENERGYSOLUTIONS, LLC

BY: _____
(PRINT NAME)
ITS: _____
(TITLE)
BY: _____
(SIGNATURE)

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH }
COUNTY OF SALT LAKE } S.S.
ON THE _____ DAY OF _____ A.D. 20__, PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC IN AND FOR SAID COUNTY OF SALT LAKE IN SAID STATE OF UTAH, _____ WHO AFTER BEING DULY SWORN, ACKNOWLEDGED TO ME THAT _____ A UTAH CORPORATION, AND THAT _____ SIGNED THE OWNER'S DEDICATION FREELY AND VOLUNTARILY FOR AND IN BEHALF OF SAID CORPORATION FOR THE PURPOSES THEREIN MENTIONED AND THAT SAID CORPORATION EXECUTED THE SAME.
MY COMMISSION EXPIRES: _____ NOTARY PUBLIC
RESIDING IN SALT LAKE COUNTY

FEDERAL CELL FACILITY SUBDIVISION

LOCATED IN THE SOUTHWEST QUARTER
OF SECTION 32, TOWNSHIP 1 SOUTH,
RANGE 11 WEST, SALT LAKE BASE & MERIDIAN

TOOELE COUNTY RECORDER

RECORD NO. _____
STATE OF UTAH, COUNTY OF TOOELE, RECORDED AND FILED AT THE REQUEST OF _____
DATE: _____ TIME: _____ BOOK: _____ PAGE: _____
FEE \$ _____ TOOELE COUNTY RECORDER

SHEET

1
OF
1

PREPARED BY:
McNEIL ENGINEERING™
Economic and Sustainable Designs, Professionals You Know and Trust
8610 South Sandy Parkway, Suite 200 Sandy, Utah 84070 801.255.7700 mcneilengineering.com
Civil Engineering • Consulting & Landscape Architecture
Structural Engineering • Land Surveying & HDS

TOOELE COUNTY TREASURER
APPROVED AS TO FORM THIS _____ DAY OF _____ A.D. 20__
TOOELE COUNTY TREASURER

COUNTY SURVEYOR DEPARTMENT
PRESENTED TO THE DRAPER CITY MAYOR THIS _____ DAY OF _____ A.D. 20__
AT WHICH TIME THIS SUBDIVISION WAS APPROVED AND ACCEPTED.
TOOELE COUNTY SURVEYOR DEPT. DIRECTOR