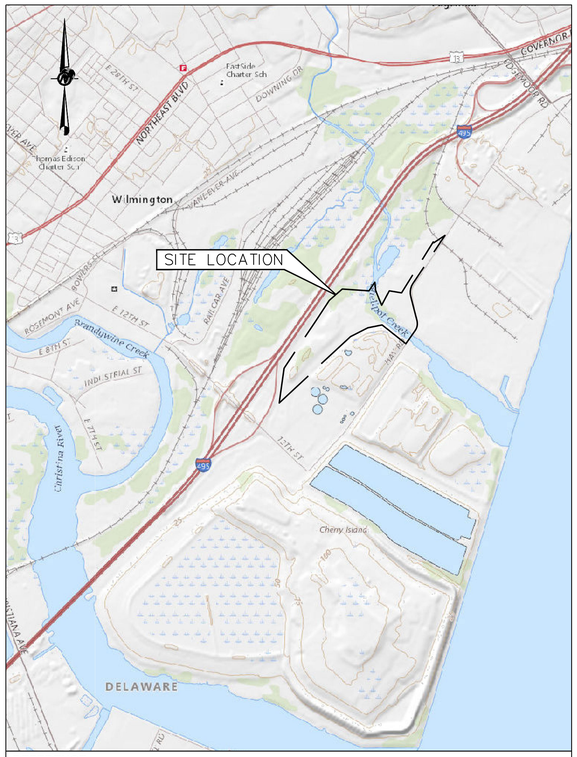
APPENDIX 5-D

ENGINEERING DRAWINGS

EDGE MOOR SITE II ASH LANDFILL CLOSURE

CONECTIV PROPERTIES AND INVESTMENTS, INC.
WILMINGTON, NEW CASTLE COUNTY, DELAWARE



REFERENCE

1.) BASE MAP TAKEN FROM USGD, DATED 2019.

2000 0 2000
SCALE FEET

LIST OF DRAWINGS

Drawing No.	Title
	Cover Sheet
A-01	EXISTING CONDITIONS
A-02	BOTTOM OF SOIL GRADING LAYER - ISOPACH
A-03	TOP OF SOIL GRADING LAYER PLAN
A-04	TOP OF FINAL COVER SYSTEM GRADING PLAN
A-05	FINAL COVER SYSTEM DETAILS (SHEET 1 OF 2)
A-06	FINAL COVER SYSTEM DETAILS (SHEET 2 OF 2)
A-07	EROSION & SEDIMENT CONTROL DETAILS (SHEET 1 OF 3)
A-08	EROSION & SEDIMENT CONTROL DETAILS (SHEET 2 OF 3)
A-09	EROSION & SEDIMENT CONTROL DETAILS (SHEET 3 OF 3)
A-10	MISCELLANEOUS DETAILS

1

JANUARY 2020
REVISED MARCH 2020

Prepared by:

GOLDER

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PROJECT No. 19129265

PAUL A. WHITE
LICENSE
No. 13809
DELAWARE
PROFESSIONAL ENGINEER

2020-04-07

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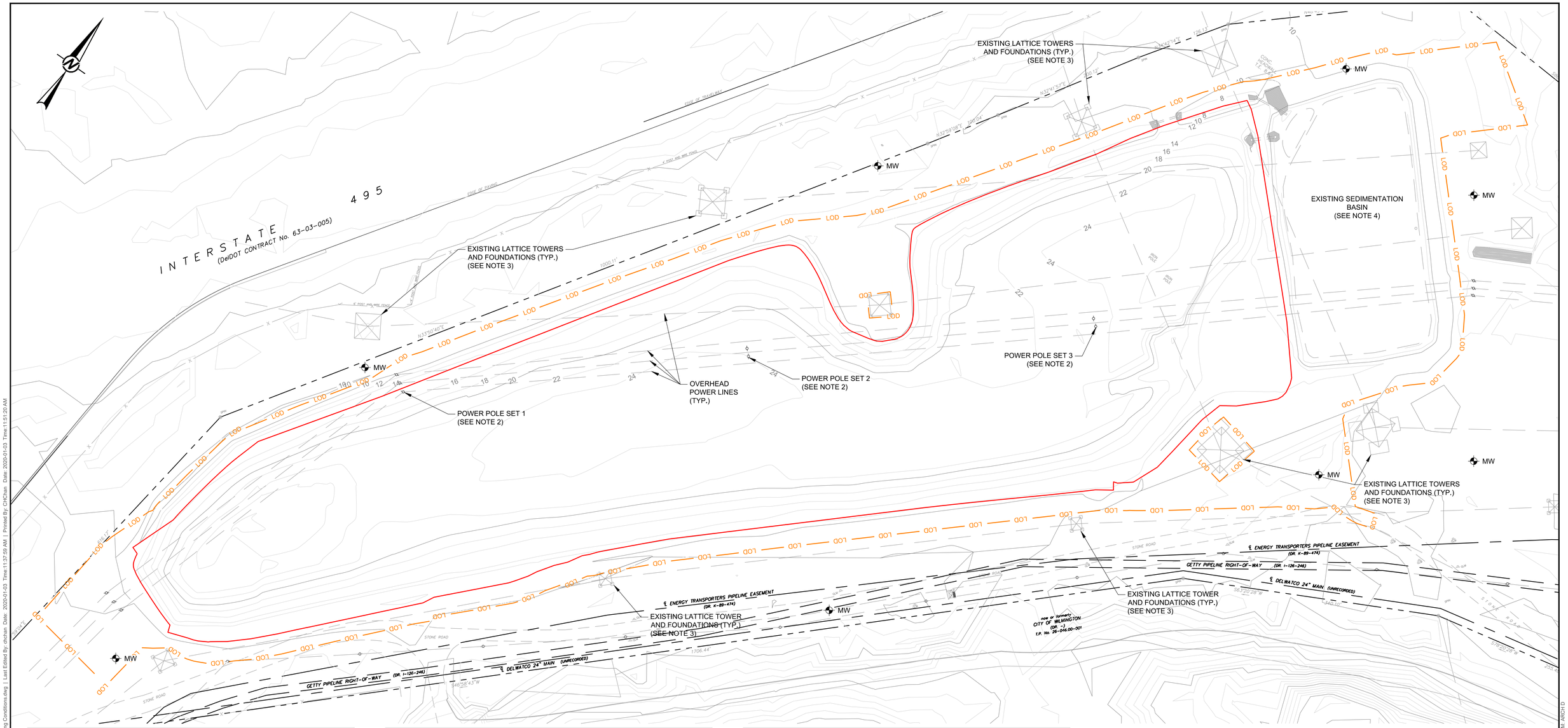

LEGEND

- 23 — EXISTING GRADE MAJOR CONTOUR
- EXISTING GRADE MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING UTILITY EASEMENT
- EXISTING OVERHEAD HIGH VOLTAGE LINE
- LOD — PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LIMIT OF GEOSYNTHETIC FINAL COVER SYSTEM
- GETTY RIGHT-OF-WAY
- MW — EXISTING GROUNDWATER MONITORING WELL (SEE NOTE 5)

NOTE(S)

1. THIS DRAWING DEPICTS THE EXISTING CONTOURS FOR THE SITE AS OF MARCH 15, 2006 (SEE REFERENCE 1) AS MERGED WITH USGS TOPOGRAPHIC DATED FEBRUARY, 2013.
2. POWER POLE SETS 1, 2 AND 3 TO BE REMOVED AND REPLACED WITH NEW UPGRADED POLES WITHIN CLOSE PROXIMITY TO THE EXISTING LOCATIONS. THE FOUNDATION FOR POLE SETS 2 AND 3 WILL BE INSTALLED DIRECTLY WITHIN THE ASH MOUND TO A DEPTH TO BE DETERMINED IN THE STRUCTURAL DESIGN.
3. THERE EXIST 11 POWER DISTRIBUTION TOWERS IN AND AROUND THE PROJECT AREA THAT WILL BE OPERATING DURING THE CLOSURE PROCESS AND MUST BE PROTECTED DURING CONSTRUCTION.
4. THE EXISTING SEDIMENTATION BASIN (NOT OPERATING) WILL BE DEWATERED AND THE SEDIMENT DISPOSED OF ON THE ASH MOUND. THE EXISTING STANDPIPE WILL BE REMOVED AND A PLATE INSTALLED AT THE ENTRANCE TO THE DISCHARGE BARREL. THE ENTIRE AREA WILL BE BACKFILLED WITH COMPACTED STRUCTURAL FILL.
5. EXISTING GROUNDWATER MONITORING WELLS SHALL BE PROTECTED DURING CONSTRUCTION.

REFERENCE(S)

1. EXISTING CONTOURS SHOWN BASED ON BASE MAP TAKEN FROM RAMESH C. BATTA ASSOCIATES, P.A., DATED MARCH 15, 2006, MERGED WITH USGS FEBRUARY 2013; NATIONAL ELEVATION DATASET (NED) 1/9 ARC SECOND; http://ned.usgs.gov
2. EXISTING BASE FEATURES INCLUDING EXISTING UTILITIES SHOWN TAKEN FROM RAMESH C. BATTA ASSOCIATES, P.A., DATED MARCH 15, 2006
3. EXISTING GROUNDWATER MONITORING WELLS SURVEYED BY VARGO ASSOCIATES, NOVEMBER 13, 2017
4. HORIZONTAL CONTROL: DE NAD83
5. DATUM: NAVD 88

0 60 120 180
SCALE FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
0	2020-01-03		CHC	CHC	JPG	PAW

SEAL

PAUL A. WHITTAKER LICENSE No. 13209 PROFESSIONAL ENGINEER STATE OF DELAWARE

2020-01-03

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PROJECT
EDGE MOOR SITE II ASH LANDFILL CLOSURE

TITLE
EXISTING CONDITIONS

PROJECT NO.	CONTROL	REV.	of	DRAWING
19129265	A001	0		01

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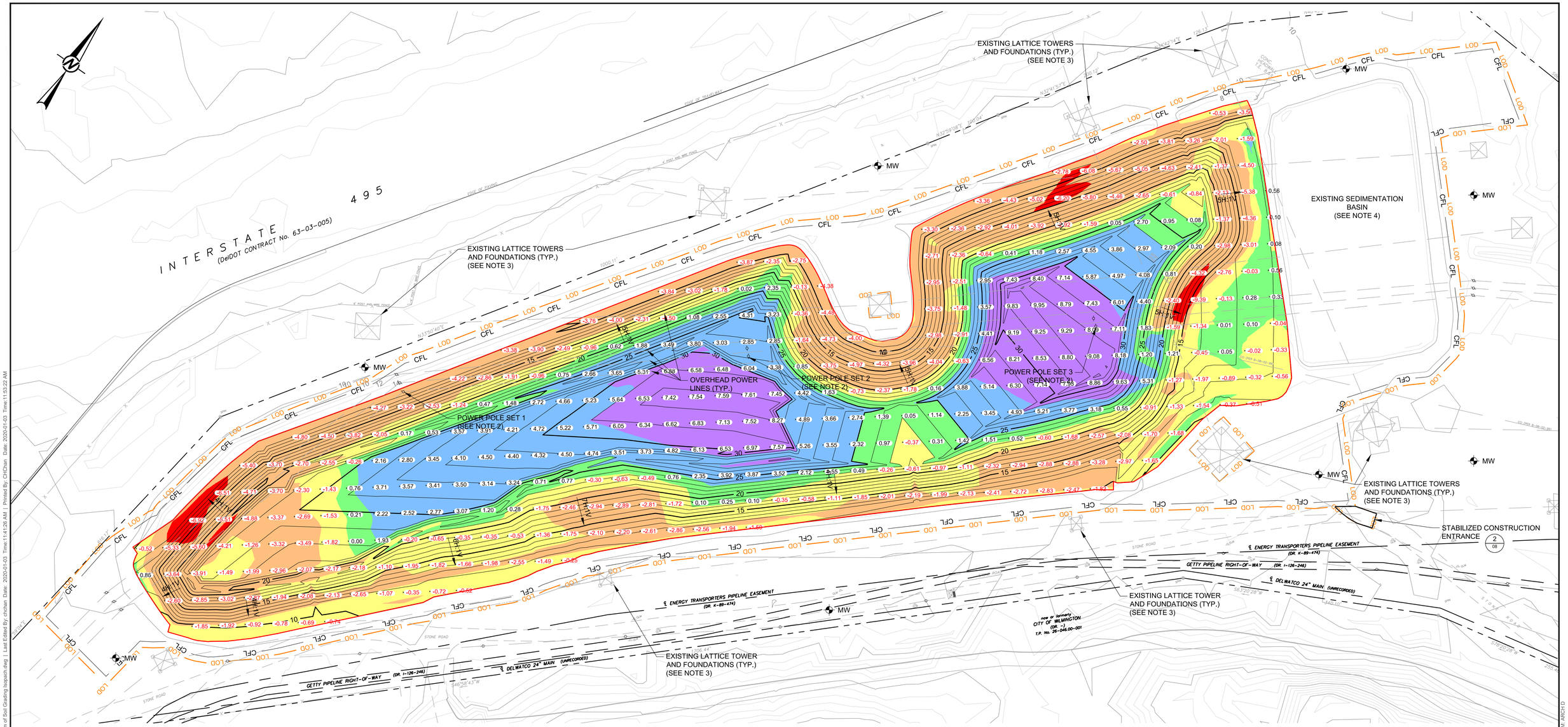

LEGEND

- 23 — EXISTING GRADE MAJOR CONTOUR
- EXISTING GRADE MINOR CONTOUR
- 23 — PROPOSED BOTTOM OF SOIL GRADING LAYER MAJOR CONTOUR
- PROPOSED BOTTOM OF SOIL GRADING LAYER MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING UTILITY EASEMENT
- LOD — PROPOSED LIMIT OF DISTURBANCE
- CFL — PROPOSED COMPOST FILTER LOG (OFFSET FROM LOD FOR CLARITY)
- PROPOSED LIMIT OF GEOSYNTHETIC FINAL COVER SYSTEM
- GETTY RIGHT-OF-WAY
- 4H:1V — SLOPE GRADIENT

ISOPACH LEGEND

- EXCAVATION GREATER THAN 6 FEET
- EXCAVATION BETWEEN 2 AND 6 FEET
- EXCAVATION BETWEEN 0 AND 2 FEET
- FILL BETWEEN 0 AND 2 FEET
- FILL BETWEEN 2 AND 6 FEET
- FILL GREATER THAN 6 FEET
- 2.85 / -0.85 — ELEVATION DIFFERENCE BETWEEN BOTTOM OF SOIL GRADING LAYER AND EXISTING GROUND (FEET)

NOTE(S)

1. THIS DRAWING DEPICTS THE REQUIRED EXCAVATION AND FILL ELEVATIONS TO ACHIEVE THE REQUIRED LEVEL FOR THE BOTTOM OF THE SIX (6) INCH GRADING LAYER ON WHICH THE GEOSYNTHETIC FINAL COVER SYSTEM IS INSTALLED. ANY ASH ENCOUNTERED OUTSIDE THE LIMITS OF THE GEOSYNTHETIC FINAL COVER SYSTEM WILL BE EXCAVATED AND PLACED WITHIN THE ASH MOUND BELOW THE GEOSYNTHETIC CAP. ANY EXCAVATED AREAS WILL BE BACKFILLED WITH STRUCTURAL FILL.
2. POWER POLE SETS 1, 2 AND 3 TO BE REMOVED AND REPLACED WITH NEW UPGRADED POLES WITHIN CLOSE PROXIMITY TO THE EXISTING LOCATIONS. THE FOUNDATION FOR POLE SETS 2 AND 3 WILL BE INSTALLED DIRECTLY WITHIN THE ASH MOUND TO A DEPTH TO BE DETERMINED IN THE STRUCTURAL DESIGN.
3. THERE EXIST 11 POWER DISTRIBUTION TOWERS IN AND AROUND THE PROJECT AREA THAT WILL BE OPERATING DURING THE CLOSURE PROCESS AND MUST BE PROTECTED DURING CONSTRUCTION.
4. THE EXISTING SEDIMENTATION BASIN (NOT OPERATING) WILL BE DEWATERED AND THE SEDIMENT DISPOSED OF ON THE ASH MOUND. THE EXISTING STANDPIPE WILL BE REMOVED AND A PLATE INSTALLED AT THE ENTRANCE TO THE DISCHARGE BARREL. THE ENTIRE AREA WILL BE BACKFILLED WITH COMPACTED STRUCTURAL FILL.
5. EXTREME CAUTION MUST BE TAKEN WHEN GRADING AROUND THE POWER POLES AND UNDER THE POWER LINES AS THE SYSTEM WILL REMAIN ACTIVE DURING CLOSURE CONSTRUCTION.

REFERENCE(S)

1. EXISTING CONTOURS SHOWN BASED ON BASE MAP TAKEN FROM RAMESH C. BATTA ASSOCIATES, P.A., DATED MARCH 15, 2006, MERGED WITH USGS FEBRUARY 2013; NATIONAL ELEVATION DATASET (NED) 1/9 ARC SECOND; http://ned.usgs.gov
2. EXISTING BASE FEATURES INCLUDING EXISTING UTILITIES SHOWN TAKEN FROM RAMESH C. BATTA ASSOCIATES, P.A., DATED MARCH 15, 2006
3. EXISTING GROUNDWATER MONITORING WELLS SURVEYED BY VARGO ASSOCIATES, NOVEMBER 13, 2017
4. HORIZONTAL CONTROL: DE NAD83
5. DATUM: NAVD 88

0 60 120 180
SCALE FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
0	2020-01-03		CHC	CHC	JPG	PAW

SEAL

PAUL A. WHITE LICENSED No. 13209 PROFESSIONAL ENGINEER DELAWARE

2020-01-03

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PROJECT
EDGE MOOR SITE II ASH LANDFILL CLOSURE

TITLE
BOTTOM OF SOIL GRADING LAYER ISOPACH

PROJECT NO.	CONTROL	REV.	of	DRAWING
19129265	A002	0		02

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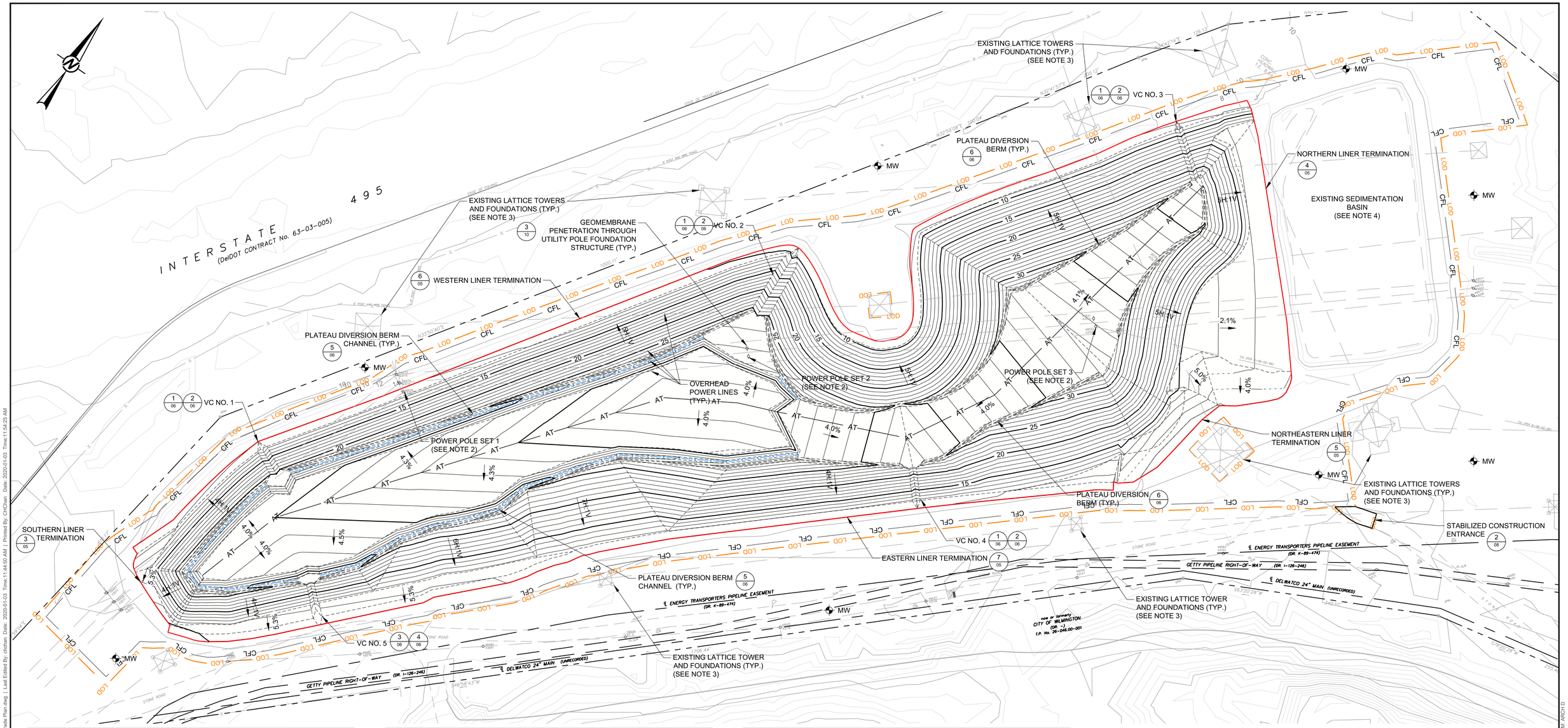

LEGEND

23	EXISTING GRADE MAJOR CONTOUR
	EXISTING GRADE MINOR CONTOUR
23	PROPOSED TOP OF SOIL GRADING LAYER MAJOR CONTOUR
	PROPOSED TOP OF SOIL GRADING LAYER MINOR CONTOUR
	EXISTING PROPERTY LINE
	EXISTING UTILITY EASEMENT
LOD	PROPOSED LIMIT OF DISTURBANCE
CFL	PROPOSED COMPOST FILTER LOG (OFFSET FROM LOD FOR CLARITY)
	PROPOSED LIMIT OF GEOSYNTHETIC FINAL COVER SYSTEM
AT	PLATEAU ANCHOR TRENCH (SEE NOTE 6)
	GETTY RIGHT-OF-WAY
4H:1V	SLOPE GRADIENT
VC NO. 5	VERTICAL CHANNEL DESIGNATION
	PLATEAU DIVERSION BERM CHANNEL

NOTE(S)

1. THIS DRAWING DEPICTS THE TOP OF THE SIX (6) INCH GRADING LAYER ON WHICH THE GEOSYNTHETIC CAP IS PLACED.
2. POWER POLE SETS 1, 2 AND 3 TO BE REMOVED AND REPLACED WITH NEW UPGRADED POLES WITHIN CLOSE PROXIMITY TO THE EXISTING LOCATIONS. THE FOUNDATION FOR POLE SETS 2 AND 3 WILL BE INSTALLED DIRECTLY WITHIN THE ASH MOUND TO A DEPTH TO BE DETERMINED IN THE STRUCTURAL DESIGN.
3. THERE EXIST 11 POWER DISTRIBUTION TOWERS IN AND AROUND THE PROJECT AREA THAT WILL BE OPERATING DURING THE CLOSURE PROCESS AND MUST BE PROTECTED DURING THE CONSTRUCTION.
4. THE EXISTING SEDIMENTATION BASIN (NOT OPERATING) WILL BE DEWATERED AND THE SEDIMENT DISPOSED OF ON THE ASH MOUND. THE EXISTING STANDPIPE WILL BE REMOVED AND A PLATE INSTALLED AT THE ENTRANCE TO THE DISCHARGE BARREL. THE ENTIRE AREA WILL BE BACKFILLED WITH COMPACTED STRUCTURAL FILL.
5. EXTREME CAUTION MUST BE TAKEN WHEN GRADING AROUND THE POWER POLES AND UNDER THE POWER LINES AS THE SYSTEM WILL REMAIN ACTIVE DURING CLOSURE CONSTRUCTION.
6. IF CONVENTIONAL ROLL LENGTHS PREVENT THE GEOMEMBRANE PANELS FROM BEING CONTINUOUS FROM ONE SIDE OF THE ASH MOUND TO THE OTHER, AN ANCHOR TRENCH MAY BE INSTALLED ALONG THE RIDGE LINE OF THE PLATEAU TO TEMPORARILY ANCHOR THE GEOMEMBRANE (SEE DETAIL 2 OF DRAWING 05).

REFERENCE(S)

1. EXISTING CONTOURS SHOWN BASED ON BASE MAP TAKEN FROM RAMESH C. BATTA ASSOCIATES, P.A., DATED MARCH 15, 2006, MERGED WITH USGS FEBRUARY 2013; NATIONAL ELEVATION DATASET (NED) 1/9 ARC SECOND; http://ned.usgs.gov
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3. EXISTING GROUNDWATER MONITORING WELLS SURVEYED BY VARGO ASSOCIATES, NOVEMBER 13, 2017
4. HORIZONTAL CONTROL: DE NAD83
5. DATUM: NAVD 88

0 60 120 180
SCALE FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
0	2020-01-03		CHC	CHC	JPG	PAW

SEAL

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PROJECT
EDGE MOOR SITE II ASH LANDFILL CLOSURE

TITLE
TOP OF SOIL GRADING LAYER PLAN

PROJECT NO.	CONTROL	REV.	of	DRAWING
19129265	A003	0		03

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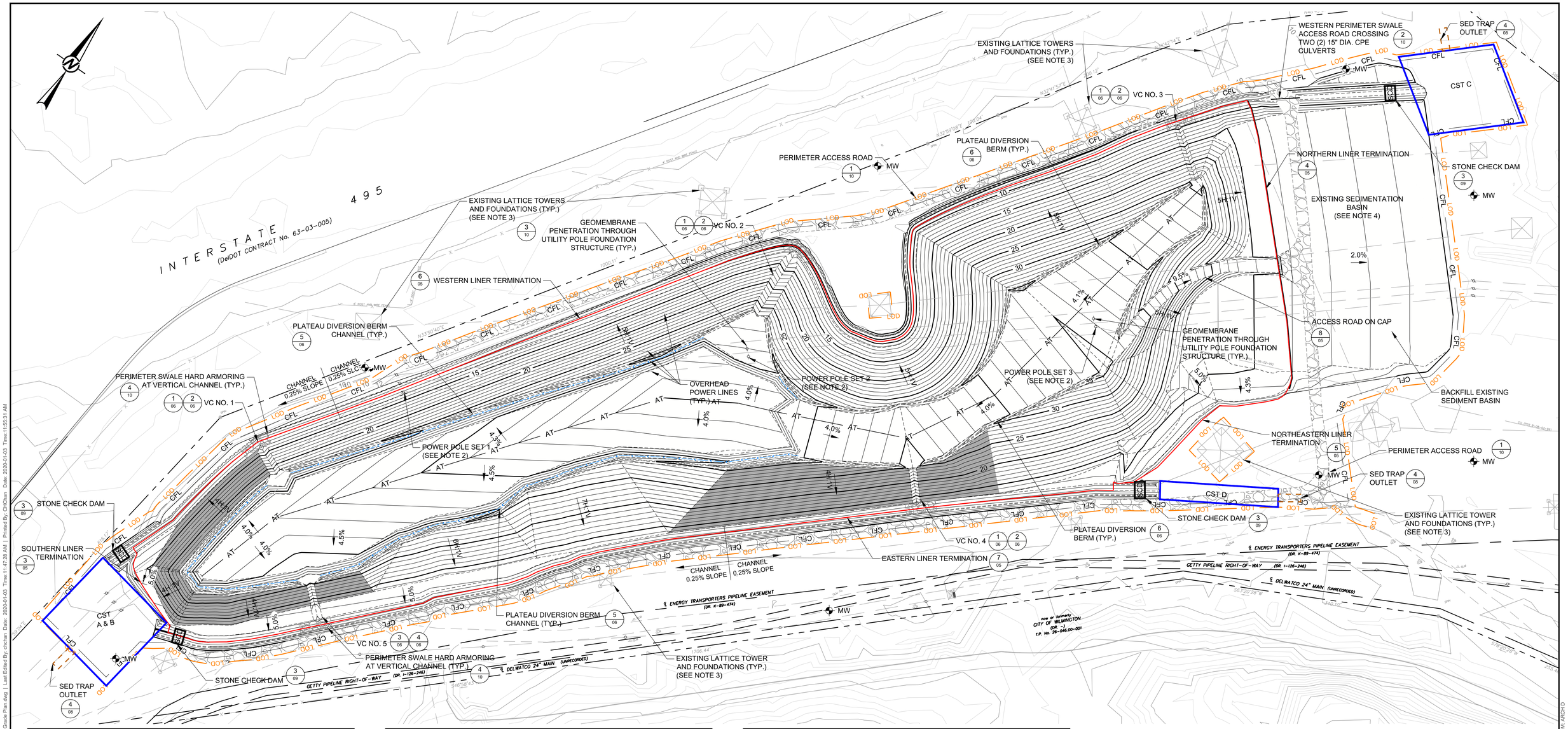

LEGEND

- 23 — EXISTING GRADE MAJOR CONTOUR
- EXISTING GRADE MINOR CONTOUR
- 23 — PROPOSED TOP OF FINAL GRADE MAJOR CONTOUR
- PROPOSED TOP OF FINAL GRADE MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING UTILITY EASEMENT
- LOD — PROPOSED LIMIT OF DISTURBANCE
- CFL — PROPOSED COMPOST FILTER LOG (OFFSET FROM LOD FOR CLARITY)
- PROPOSED LIMIT OF GEOSYNTHETIC FINAL COVER SYSTEM
- AT — PLATEAU ANCHOR TRENCH (SEE NOTE 6)
- GETTY RIGHT-OF-WAY
- PLATEAU DIVERSION BERM CHANNEL
- TURF REINFORCEMENT MAT (TRM) LINED EXTERIOR SLOPES
- CST — PROPOSED COMPOST LOG SEDIMENT TRAP (3/08)
- SCD — PROPOSED STONE CHECK DAM (3/09)
- 4H-1V — SLOPE GRADIENT

NOTE(S)

1. THIS DRAWING DEPICTS THE TOP OF THE SIX (6) INCH VEGETATIVE LAYER (I.E., 24 INCHES ABOVE THE GEOSYNTHETIC CAP), OR FINAL SURFACE OF THE CAPPING SYSTEM.
2. POWER POLE SETS 1, 2 AND 3 TO BE REMOVED AND REPLACED WITH NEW UPGRADED POLES WITHIN CLOSE PROXIMITY TO THE EXISTING LOCATIONS. THE FOUNDATION FOR POLE SETS 2 AND 3 WILL BE INSTALLED DIRECTLY WITHIN THE ASH MOUND TO A DEPTH TO BE DETERMINED IN THE STRUCTURAL DESIGN.
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5. EXTREME CAUTION MUST BE TAKEN WHEN GRADING AROUND THE POWER POLES AND UNDER THE POWER LINES AS THE SYSTEM WILL REMAIN ACTIVE DURING CLOSURE CONSTRUCTION.
6. IF CONVENTIONAL ROLL LENGTHS PREVENT THE GEOMEMBRANE PANELS BEING CONTINUOUS FROM ONE SIDE OF THE ASH MOUND TO THE OTHER, AN ANCHOR TRENCH MAY BE INSTALLED ALONG THE RIDGE LINE OF THE PLATEAU TO TEMPORARILY ANCHOR THE GEOMEMBRANE (SEE DETAIL 2 OF DRAWING 05).

NOTE(S)

7. PERIMETER CHANNELS AND ALL SLOPES NOT SHOWN AS SHADED ABOVE SHALL RECEIVE TEMPORARY EROSION CONTROL BLANKETS TO ASSIST IN STABILIZING THE SURFACE UNTIL VEGETATION IS ESTABLISHED.

REFERENCE(S)

1. EXISTING CONTOURS SHOWN BASED ON BASE MAP TAKEN FROM RAMESH C. BATTA ASSOCIATES, P.A., DATED MARCH 15, 2006, MERGED WITH USGS FEBRUARY 2013; NATIONAL ELEVATION DATASET (NED) 1/9 ARC SECOND; http://ned.usgs.gov
2. EXISTING BASE FEATURES SHOWN INCLUDING EXISTING UTILITIES TAKEN FROM RAMESH C. BATTA ASSOCIATES, P.A., DATED MARCH 15, 2006
3. EXISTING GROUNDWATER MONITORING WELLS SURVEYED BY VARGO ASSOCIATES, NOVEMBER 13, 2017
4. HORIZONTAL CONTROL: DE NAD83
5. DATUM: NAVD 88

0 60 120 180
SCALE FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
0	2020-01-03		CHC	CHC	JPG	PAW

SEAL

PAUL A. WHITE LICENSED No. 13809 PROFESSIONAL ENGINEER OF DELAWARE

2020-01-03

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PROJECT
EDGE MOOR SITE II ASH LANDFILL CLOSURE

TITLE
TOP OF FINAL GRADE PLAN

PROJECT NO.	CONTROL	REV.	of	DRAWING
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