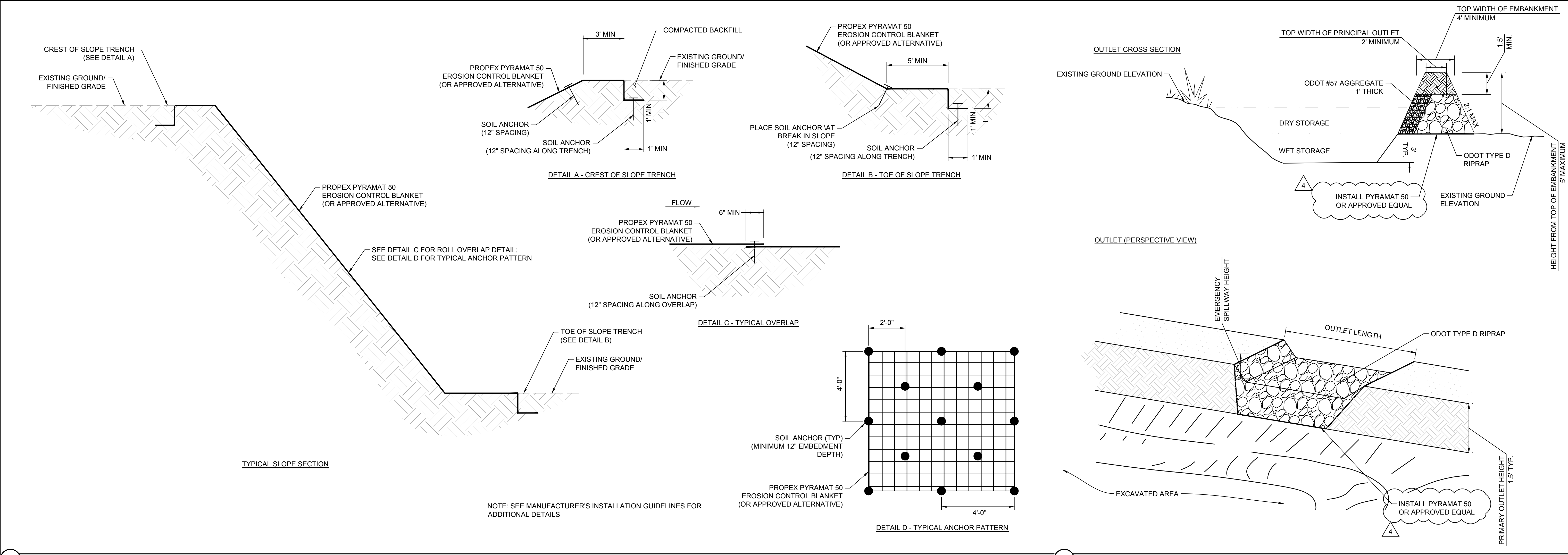


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Sediment Trap DA-006	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	2.68 AC
TOTAL DISTURBED AREA	2.02 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	4,824 CF
SEDIMENT VOLUME REQUIRED	2,020 CF
DEWATERING VOLUME PROVIDED	6,644 CF
SEDIMENT VOLUME PROVIDED	2,108 CF

1 TRAP DA-006 PARAMETERS

Sediment Trap DA-008-1	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	7.36 AC
TOTAL DISTURBED AREA	2.96 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	13,248 CF
SEDIMENT VOLUME REQUIRED	2,960 CF
DEWATERING VOLUME PROVIDED	13,287 CF
SEDIMENT VOLUME PROVIDED	4,640 CF

2 TRAP DA-008-1 PARAMETERS

Sediment Trap DA-008-2	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	4.07 AC
TOTAL DISTURBED AREA	2.48 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	7,328 CF
SEDIMENT VOLUME REQUIRED	2,480 CF
DEWATERING VOLUME PROVIDED	8,688 CF
SEDIMENT VOLUME PROVIDED	3,028 CF

3 TRAP DA-008-2 PARAMETERS

Sediment Trap DA-011	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	6.78 AC
TOTAL DISTURBED AREA	2.81 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	12,204 CF
SEDIMENT VOLUME REQUIRED	2,810 CF
DEWATERING VOLUME PROVIDED	12,514 CF
SEDIMENT VOLUME PROVIDED	3,870 CF

4 TRAP DA-011 PARAMETERS

Sediment Trap DA-012	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	10.54 AC
TOTAL DISTURBED AREA	2.46 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	18,972 CF
SEDIMENT VOLUME REQUIRED	2,460 CF
DEWATERING VOLUME PROVIDED	34,837 CF
SEDIMENT VOLUME PROVIDED	3,380 CF

5 TRAP DA-012 PARAMETERS

Sediment Trap DA-014-1	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	3.71 AC
TOTAL DISTURBED AREA	0.72 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	6,678 CF
SEDIMENT VOLUME REQUIRED	726 CF
DEWATERING VOLUME PROVIDED	8,629 CF
SEDIMENT VOLUME PROVIDED	2,276 CF

6 TRAP DA-014-1 PARAMETERS

Sediment Trap DA-014-2	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	11.78 AC
TOTAL DISTURBED AREA	1.29 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	21,204 CF
SEDIMENT VOLUME REQUIRED	1,290 CF
DEWATERING VOLUME PROVIDED	25,995 CF
SEDIMENT VOLUME PROVIDED	2,682 CF

7 TRAP DA-014-2 PARAMETERS

Sediment Trap DA-053	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	1.67 AC
TOTAL DISTURBED AREA	0.96 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	3,006 CF
SEDIMENT VOLUME REQUIRED	960 CF
DEWATERING VOLUME PROVIDED	4,170 CF
SEDIMENT VOLUME PROVIDED	3,066 CF

8 TRAP DA-053 PARAMETERS

Sediment Trap DA-054	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	4.81 AC
TOTAL DISTURBED AREA	2.29 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	8,668 CF
SEDIMENT VOLUME REQUIRED	2,290 CF
DEWATERING VOLUME PROVIDED	11,218 CF
SEDIMENT VOLUME PROVIDED	3,236 CF

9 TRAP DA-054 PARAMETERS

Sediment Trap DA-073	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	4.52 AC
TOTAL DISTURBED AREA	1.05 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	8,129 CF
SEDIMENT VOLUME REQUIRED	1,050 CF
DEWATERING VOLUME PROVIDED	8,692 CF
SEDIMENT VOLUME PROVIDED	3,163 CF

10 TRAP DA-073 PARAMETERS

Sediment Trap DA-101	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	4.45 AC
TOTAL DISTURBED AREA	1.20 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	8,006 CF
SEDIMENT VOLUME REQUIRED	1,200 CF
DEWATERING VOLUME PROVIDED	8,686 CF
SEDIMENT VOLUME PROVIDED	2,243 CF

11 TRAP DA-101 PARAMETERS

Sediment Trap DA-103	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	5.16 AC
TOTAL DISTURBED AREA	2.61 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	9,288 CF
SEDIMENT VOLUME REQUIRED	2,610 CF
DEWATERING VOLUME PROVIDED	10,145 CF
SEDIMENT VOLUME PROVIDED	3,891 CF

12 TRAP DA-103 PARAMETERS

Sediment Trap DA-125	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	1.50 AC
TOTAL DISTURBED AREA	0.85 AC
DESIGN CALCULATIONS	
DEWATERING VOLUME REQUIRED	2,700 CF
SEDIMENT VOLUME REQUIRED	850 CF
DEWATERING VOLUME PROVIDED	2,852 CF
SEDIMENT VOLUME PROVIDED	1,315 CF

13 TRAP DA-125 PARAMETERS

3 SEDIMENT TRAP PARAMETERS

SCALE: NTS

REVISIONS

No.	1	2	3	4
REVISIONS	REVISION 1	REVISION 2	REVISION 3	REVISION 4
DATE	04/20/2022	04/29/2022	06/03/2022	07/08/2022

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KHA PROJECT	192017028
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	NEL
DRAWN BY	AMC
CHECKED BY	JCC

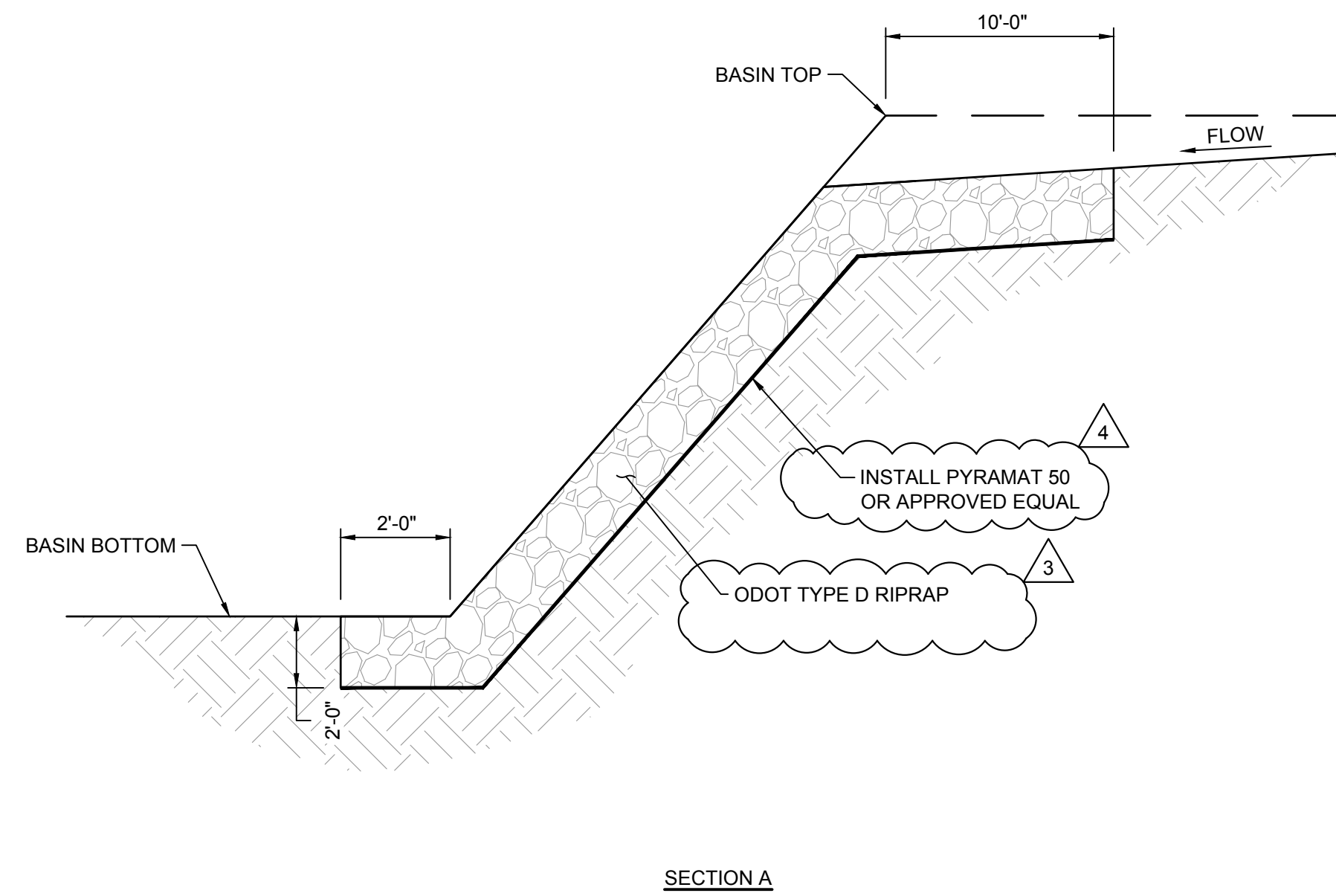
EROSION CONTROL DETAILS

196 MWAC
BIG PLAIN
SOLAR PROJECT

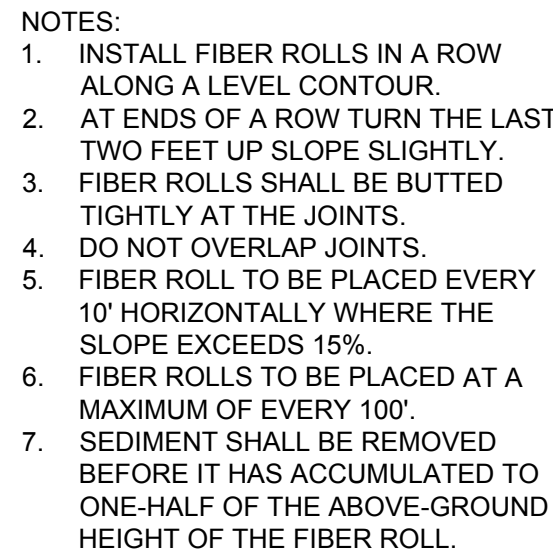
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SHEET NUMBER
C5.29

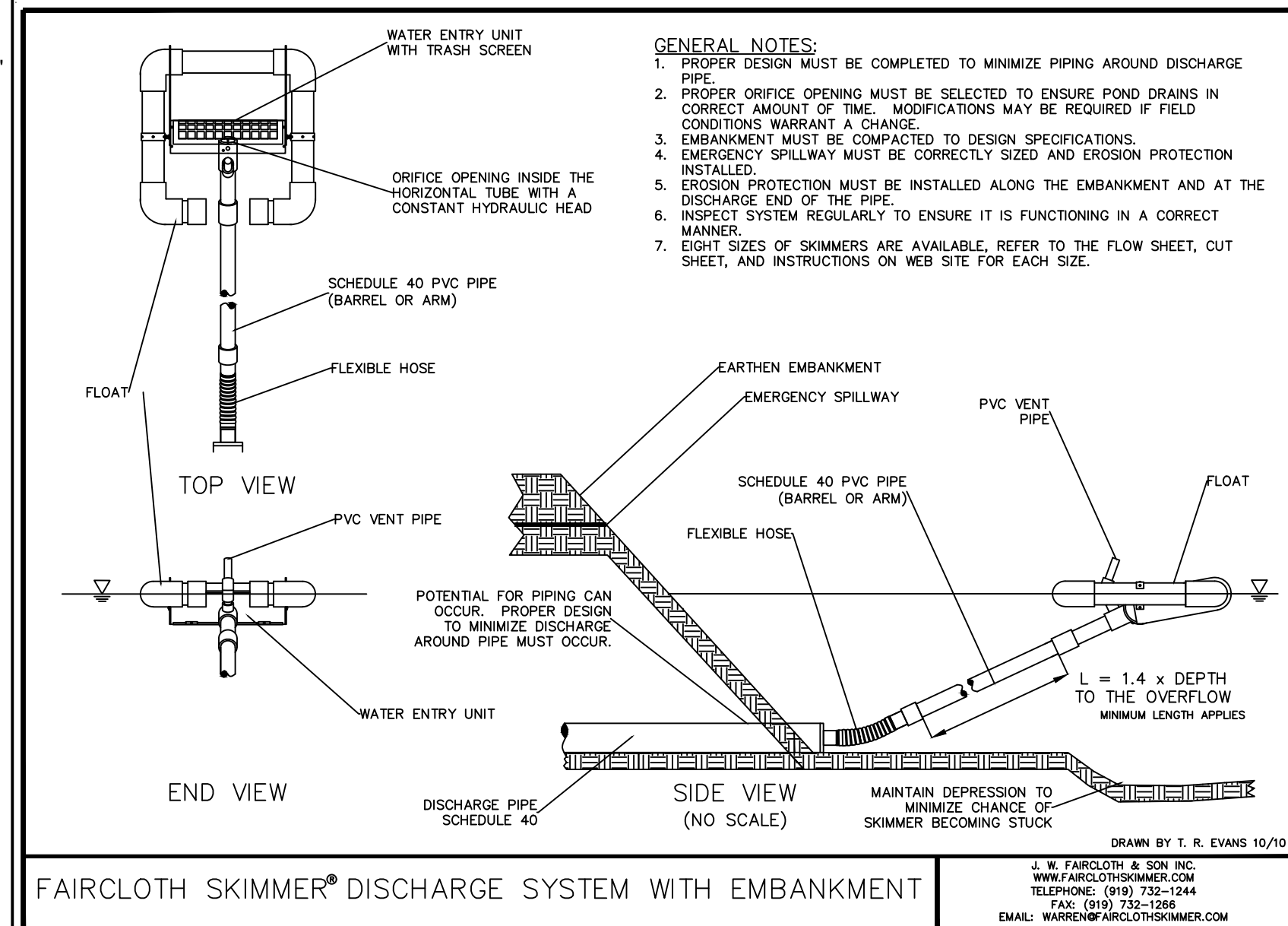
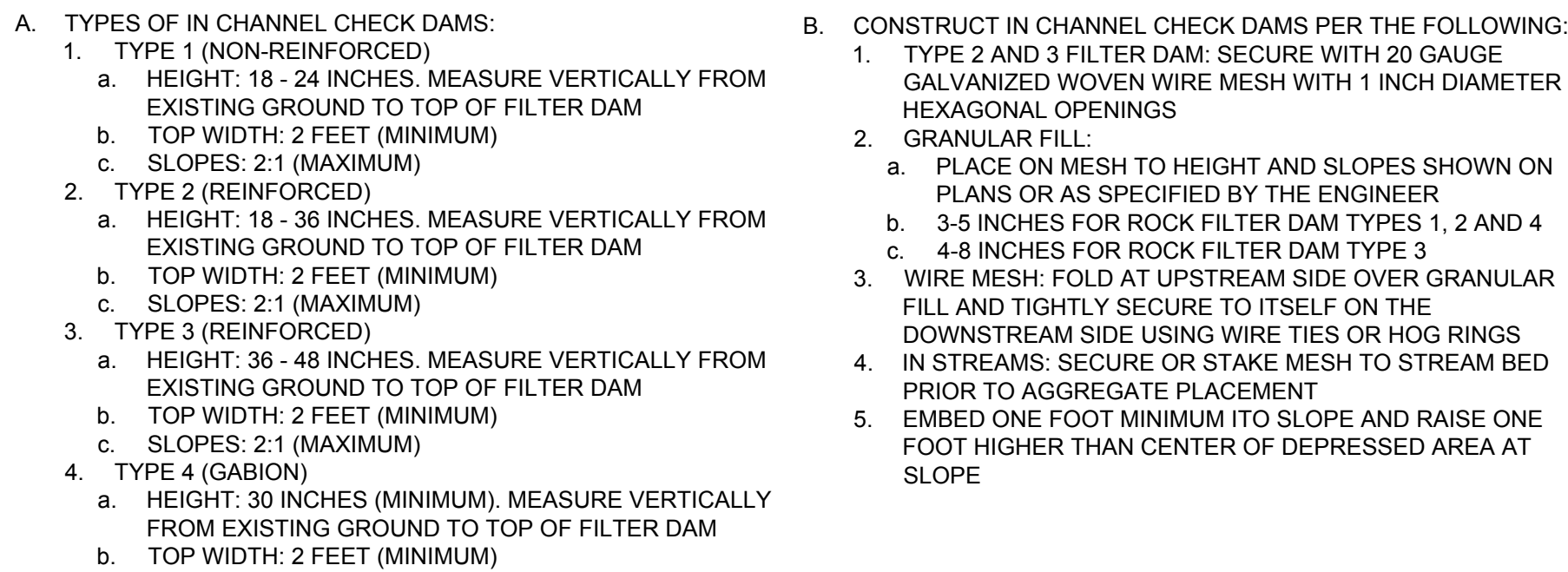
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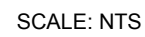


SCALE: NTS



SCALE: NTS

196 MWAC BIG PLAIN SOLAR PROJECT		EROSION CONTROL DETAILS		KHA PROJECT 192017028				 © 2022 KIMLEY-HORN AND ASSOCIATES, INC. 7965 NORTH HIGH STREET SUITE 200, COLUMBUS, OH 43225 PHONE: (614) 454-6899 WWW.KIMLEY-HORN.COM 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PHONE: (614) 454-6699
WWW.KIMLEY-HORN.COM



KHA PROJECT 192017028	DATE 07/08/2022	SCALE AS SHOWN	NEL	AMC	JCC
DESIGNED BY					
DRAWN BY					
CHECKED BY					

196 MWAC
BIG PLAIN
SOLAR PROJECT

SHEET NUMBER
C5.31



1. BERMS SHOULD BE PLACED PARALLEL WITH CONTOURS TO EFFECTIVELY DETAIN WATER AND SETTLE OUT SEDIMENT.
2. IF BERMS ARE NOT PLACED PARALLEL WITH CONTOURS, EROSION ALONG BERM OR AT OUTLET MAY OCCUR.
3. IF EROSION OCCURS, CONTOUR SHALL STABILIZE BY INSTALLING A RIP RAP DISSIPATOR AT POINTS OF EROSION AND SHALL RESTORE GRADE TO ORIGINAL CONDITION UPON STABILIZATION AND COMPLETION OF THE WORK.
4. BERMS SHALL BE COMPACTED TO 90% MINIMUM DENSITY.



CONSTRUCTION NOTES:

1. ADDITIONAL RIP RAP TO BE USED AS NEEDED ACCORDING TO OBSERVED STORMWATER CONDITIONS

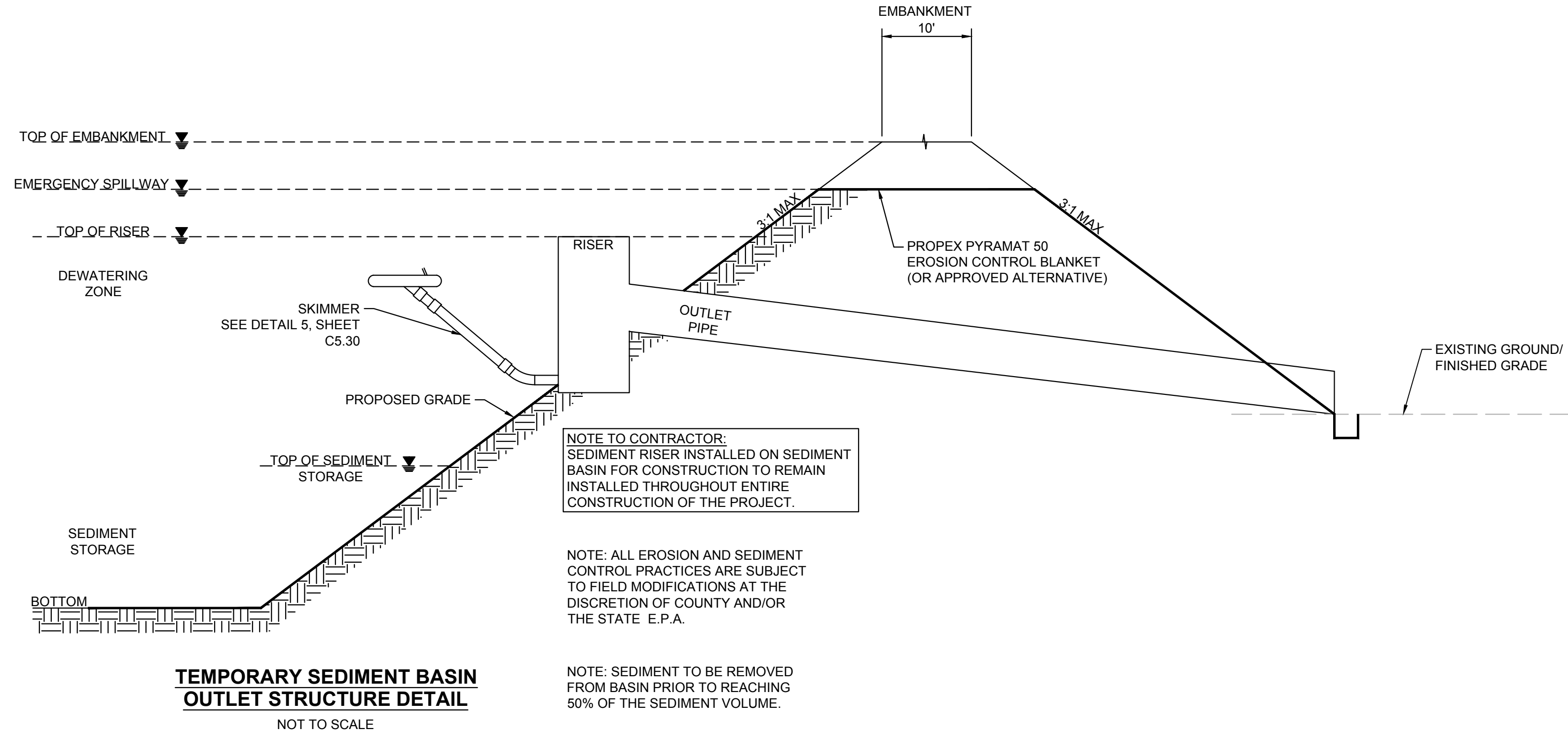
SCALE: NTS

3 NOT USED

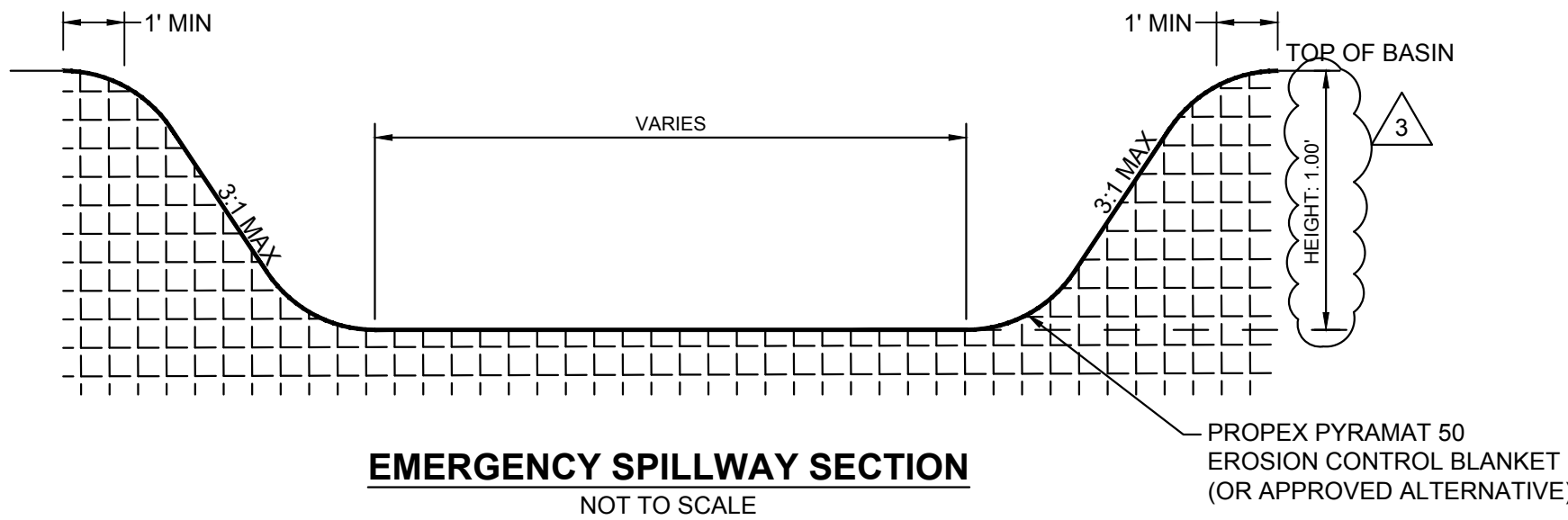
Plotted By: Zude, Jodi Sheet: Set-Kha Layout: C5.32 July 07, 2022 05:50:34pm K:\LAY-Civil\192017028-Big Plain Solar\CAO\PlanSheets\ESC-DETAILS-BigPlain.dwg This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

1 TEMPORARY SEDIMENT BASIN DETAILS

SCALE: NTS



BASIN DESIGN SUMMARY							
BASIN #	DA-005	DA-047	DA-049	DA-080	DA-082	DA-101	DA-127
BOTTOM ELEVATION	947.00	967.00	965.75	940.50	931.50	969.00	958.25
TOP OF SEDIMENT STORAGE	948.00	968.00	966.25	941.00	932.00	970.00	958.75
TOP OF RISER	951.00	971.00	969.25	944.50	933.50	972.00	959.75
EMERGENCY SPILLWAY	952.00	972.00	970.25	945.50	934.50	973.00	960.75
TOP OF DAM	953.00	973.00	971.25	946.50	935.50	974.00	961.75
NUMBER OF PRIMARY SPILLWAYS	2	2	2	1	1	2	2
RISER DIAMETER (CMP) [in.]	24	36	30	36	12	24	12
OUTLET PIPE DIAMETER (CMP) [in.]	24	30	30	36	12	21	8
EMERGENCY SPILLWAY LENGTH (ft.)	89	87	110	147	100	35	42



Sediment Basin DA-005		
DESIGN INFORMATION		
TOTAL DRAINAGE AREA	53.14	AC
TOTAL DISTURBED AREA	32.64	AC
PRE-DEVELOPMENT FLOW (Q10)	69.41	CFS
PRIMARY SPILLWAY FLOW (Q10)	38.35	CFS
EMERGENCY SPILLWAY FLOW (Q25)	87.12	CFS
DESIGN CALCULATIONS		
DEWATERING VOLUME REQUIRED	95,652	CF
SEDIMENT VOLUME REQUIRED	32,640	CF
DEWATERING VOLUME PROVIDED	115,401	CF
SEDIMENT VOLUME PROVIDED	32,831	CF
DEWATERING TIME	5.29	DAYS
SKIMMER SIZE	4.00	IN
SKIMMER ORIFICE DIAMETER	3.00	IN
BASIN GEOMETRY		
BOTTOM OF BASIN	31,453	947.00
SEDIMENT STORAGE	34,207	948.00
PRIMARY SPILLWAY	42,803	951.00
EMERGENCY SPILLWAY	45,781	952.00
TOP OF DAM	48,816	953.00
SPILLWAY DESIGN		
EMBANKMENT WIDTH	10	FT
PRIMARY SPILLWAY (RISER) CAPACITY	30.3	CFS
# OF RISERS	2	
RISER STYLE/MATERIAL	CIRCULAR, CMP	
RISER SIZE	2.0	DA (FT)
ORIFICES PER RISER	3	
ORIFICE DIAMETER	5.5	IN
ROWS OF ORIFICES	1	
COLUMNS OF ORIFICES	3	
ORIFICE ROW SPACING	-	IN, O.C.
ORIFICE COLUMN SPACING	8	IN, O.C.
ORIFICE(S) INVERT	948.00	FT
BARREL MATERIAL	CMP	
# OF BARRELS	2	
BARREL DIAMETER	2.0	FT
BARREL INLET INVERT	948.00	FT
BARREL OUTLET INVERT	946.90	FT
BARREL LENGTH	49.00	FT
BARREL SLOPE	2.24	%
ANTI FLOTATION CONCRETE	8.4	CY
EMERGENCY SPILLWAY LENGTH	89.0	FT
EMERGENCY SPILLWAY CAPACITY	88.1	CFS

1 BASIN DA-005 PARAMETERS

Sediment Basin DA-047		
DESIGN INFORMATION		
TOTAL DRAINAGE AREA	77.21	AC
TOTAL DISTURBED AREA	16.58	AC
PRE-DEVELOPMENT FLOW (Q10)	68.41	CFS
PRIMARY SPILLWAY FLOW (Q10)	58.21	CFS
EMERGENCY SPILLWAY FLOW (Q25)	85.41	CFS
DESIGN CALCULATIONS		
DEWATERING VOLUME REQUIRED	138,978	CF
SEDIMENT VOLUME REQUIRED	16,580	CF
DEWATERING VOLUME PROVIDED	150,768	CF
SEDIMENT VOLUME PROVIDED	45,031	CF
DEWATERING TIME	6.95	DAYS
SKIMMER SIZE	4.00	IN
SKIMMER ORIFICE DIAMETER	3.00	IN
BASIN GEOMETRY		
BOTTOM OF BASIN	43,759	967.00
SEDIMENT STORAGE	46,305	968.00
PRIMARY SPILLWAY	54,283	971.00
EMERGENCY SPILLWAY	57,056	972.00
TOP OF DAM	59,885	973.00
SPILLWAY DESIGN		
EMBANKMENT WIDTH	10	FT
PRIMARY SPILLWAY (RISER) CAPACITY	58.4	CFS
# OF PRIMARY SPILLWAYS	2	
RISER STYLE/MATERIAL	CIRCULAR, CMP	
RISER SIZE	3.0	DA (FT)
ORIFICES PER RISER	1	
ORIFICE DIAMETER	3.0	IN
ROWS OF ORIFICES	1	
COLUMNS OF ORIFICES	1	
ORIFICE ROW SPACING	-	IN, O.C.
ORIFICE COLUMN SPACING	-	IN, O.C.
ORIFICE(S) INVERT	968.00	FT
BARREL MATERIAL	CMP	
# OF BARRELS	2	
BARREL DIAMETER	2.5	FT
BARREL INLET INVERT	968.00	FT
BARREL OUTLET INVERT	966.00	FT
BARREL LENGTH	51.00	FT
BARREL SLOPE	2.16	%
ANTI FLOTATION CONCRETE	20.1	CY
EMERGENCY SPILLWAY LENGTH	87.0	FT
EMERGENCY SPILLWAY CAPACITY	86.1	CFS

2 BASIN DA-047 PARAMETERS

Sediment Basin DA-049		
DESIGN INFORMATION		
TOTAL DRAINAGE AREA	96.65	AC
TOTAL DISTURBED AREA	16.58	AC
PRE-DEVELOPMENT FLOW (Q10)	87.17	CFS
PRIMARY SPILLWAY FLOW (Q10)	50.19	CFS
EMERGENCY SPILLWAY FLOW (Q25)	35.44	CFS
DESIGN CALCULATIONS		
DEWATERING VOLUME REQUIRED	173,970	CF
SEDIMENT VOLUME REQUIRED	16,580	CF
DEWATERING VOLUME PROVIDED	240,413	CF
SEDIMENT VOLUME PROVIDED	37,283	CF
DEWATERING TIME	4.77	DAYS
SKIMMER SIZE	5.00	IN
SKIMMER ORIFICE DIAMETER	6.00	IN
BASIN GEOMETRY		
BOTTOM OF BASIN	73,786	965.75
SEDIMENT STORAGE	75,348	966.25
PRIMARY SPILLWAY	139,729	941.50
EMERGENCY SPILLWAY	88,339	970.25
TOP OF DAM	91,729	971.25
SPILLWAY DESIGN		
EMBANKMENT WIDTH	10	FT
PRIMARY SPILLWAY (RISER) CAPACITY	30.3	CFS
# OF PRIMARY SPILLWAYS	2	
RISER STYLE/MATERIAL	CIRCULAR, CMP	
RISER SIZE	2.5	DA (FT)
ORIFICES PER RISER	6	
ORIFICE DIAMETER	6.0	IN
ROWS OF ORIFICES	2	
COLUMNS OF ORIFICES	3	
ORIFICE ROW SPACING	7	IN, O.C.
ORIFICE COLUMN SPACING	10	IN, O.C.
ORIFICE(S) INVERT	966.25	FT
BARREL MATERIAL	CMP	
# OF BARRELS	2	
BARREL DIAMETER	2.5	FT
BARREL INLET INVERT	966.25	FT
BARREL OUTLET INVERT	966.00	FT
BARREL LENGTH	40.00	FT
BARREL SLOPE	0.63	%
ANTI FLOTATION CONCRETE	7.4	CY
EMERGENCY SPILLWAY LENGTH	110.0	FT
EMERGENCY SPILLWAY CAPACITY	108.9	CFS

3 BASIN DA-049 PARAMETERS

Sediment Basin DA-080		
DESIGN INFORMATION		
TOTAL DRAINAGE AREA	135.78	AC
TOTAL DISTURBED AREA	36.17	AC
PRE-DEVELOPMENT FLOW (Q10)	179.21	CFS
PRIMARY SPILLWAY FLOW (Q10)	41.66	CFS
EMERGENCY SPILLWAY FLOW (Q25)	68.06	CFS
DESIGN CALCULATIONS		
DEWATERING VOLUME REQUIRED	244,404	CF
SEDIMENT VOLUME REQUIRED	36,170	CF
DEWATERING VOLUME PROVIDED	512,525	CF
SEDIMENT VOLUME PROVIDED	67,884	CF
DEWATERING TIME	0.00	DAYS
SKIMMER SIZE	5.00	IN
SKIMMER ORIFICE DIAMETER	4.00	IN
BASIN GEOMETRY		
BOTTOM OF BASIN	134,454	940.50
SEDIMENT STORAGE	137,084	941.00
PRIMARY SPILLWAY	139,729	941.50
EMERGENCY SPILLWAY	161,396	945.50
TOP OF DAM	166,954	946.50
SPILLWAY DESIGN		
EMBANKMENT WIDTH	10	FT
PRIMARY SPILLWAY (RISER) CAPACITY	29.2	CFS
# OF PRIMARY SPILLWAYS	1	
RISER STYLE/MATERIAL	CIRCULAR, CMP	
RISER SIZE	3.0	DA (FT)
ORIFICES PER RISER	8	
ORIFICE DIAMETER	6.0	IN
ROWS OF ORIFICES	4	
COLUMNS OF ORIFICES	2	
ORIFICE ROW SPACING	8	IN, O.C.
ORIFICE COLUMN SPACING	18	IN, O.C.
ORIFICE(S) INVERT	941.00	FT
BARREL MATERIAL	CMP	
# OF BARRELS	1	
BARREL DIAMETER	3.00	FT
BARREL INLET INVERT	941.00	FT
BARREL OUTLET INVERT	940.25	FT
BARREL LENGTH	52.00	FT
BARREL SLOPE	1.44	%
ANTI FLOTATION CONCRETE	20.1	CY
EMERGENCY SPILLWAY LENGTH	147.0	FT
EMERGENCY SPILLWAY CAPACITY	224.0	CFS

4 BASIN DA-080 PARAMETERS

Sediment Basin DA-127		
DESIGN INFORMATION		
TOTAL DRAINAGE AREA	13.26	AC
TOTAL DISTURBED AREA	4.67	AC
PRE-DEVELOPMENT FLOW (Q10)	32.06	CFS
PRIMARY SPILLWAY FLOW (Q10)	2.08	CFS
EMERGENCY SPILLWAY FLOW (Q25)	40.59	CFS
DESIGN CALCULATIONS		
DEWATERING VOLUME REQUIRED	23,868	CF
SEDIMENT VOLUME REQUIRED	4,670	CF
DEWATERING VOLUME PROVIDED	33,066	CF
SEDIMENT VOLUME PROVIDED	15,594	CF
DEWATERING TIME	5.17	DAYS
SKIMMER SIZE	3.00	IN
SKIMMER ORIFICE DIAMETER	2.00	IN
BASIN GEOMETRY		
BOTTOM OF BASIN	30,569	959.25
SEDIMENT STORAGE	31,806	959.75
PRIMARY SPILLWAY	34,326	959.75
EMERGENCY SPILLWAY	36,901	960.75
TOP OF DAM	39,534	961.75
SPILLWAY DESIGN		
EMBANKMENT WIDTH	10	FT
PRIMARY SPILLWAY (RISER) CAPACITY	3.8	CFS
# OF PRIMARY SPILLWAYS	2	
RISER STYLE/MATERIAL	CIRCULAR, CMP	
RISER SIZE	1.0	DA (FT)
ORIFICES PER RISER	1	
ORIFICE DIAMETER	3.0	IN
ROWS OF ORIFICES	1	
COLUMNS OF ORIFICES	1	
ORIFICE ROW SPACING	-	IN, O.C.
ORIFICE COLUMN SPACING	-	IN, O.C.
ORIFICE(S) INVERT	958.75	FT
BARREL MATERIAL	CMP	
# OF BARRELS	2	
BARREL DIAMETER	0.75	FT
BARREL INLET INVERT	958.75	FT
BARREL OUTLET INVERT	958.05	FT
BARREL LENGTH	48.00	FT
BARREL SLOPE	1.46	%
ANTI FLOTATION CONCRETE	0.7	CY
EMERGENCY SPILLWAY LENGTH	42.0	FT
EMERGENCY SPILLWAY CAPACITY	41.6	CFS

5 BASIN DA-127 PARAMETERS

Sediment Basin DA-082		
DESIGN INFORMATION		
TOTAL DRAINAGE AREA	25.10	AC
TOTAL DISTURBED AREA	7.50	AC
PRE-DEVELOPMENT FLOW (Q10)	63.86	CFS
PRIMARY SPILLWAY FLOW (Q10)	2.87	CFS
EMERGENCY SPILLWAY FLOW (Q25)	79.40	CFS
DESIGN CALCULATIONS		
DEWATERING VOLUME REQUIRED	45,180	CF
SEDIMENT VOLUME REQUIRED	7,500	CF
DEWATERING VOLUME PROVIDED	77,421	CF
SEDIMENT VOLUME PROVIDED	24,006	CF
DEWATERING TIME	0.00	DAYS
SKIMMER SIZE	4.00	IN
SKIMMER ORIFICE DIAMETER	3.00	IN
BASIN GEOMETRY		
BOTTOM OF BASIN	47,120	931.50
SEDIMENT STORAGE	48,904	932.00
PRIMARY SPILLWAY	54,338	933.50
EMERGENCY SPILLWAY	58,032	934.50
TOP OF DAM	61,783	935.50
SPILLWAY DESIGN		
EMBANKMENT WIDTH	10	FT
PRIMARY SPILLWAY (RISER) CAPACITY	15.1	CFS
# OF PRIMARY SPILLWAYS	1	
RISER STYLE/MATERIAL	CIRCULAR, CMP	
RISER SIZE	1.0	DA (FT)
ORIFICES PER RISER	2	
ORIFICE DIAMETER	4.0	IN
ROWS OF ORIFICES	1	
COLUMNS OF ORIFICES	2	
ORIFICE ROW SPACING	-	IN, O.C.
ORIFICE COLUMN SPACING	6	IN, O.C.
ORIFICE(S) INVERT	932.00	FT
BARREL MATERIAL	CMP	
# OF BARRELS	1	
BARREL DIAMETER	1.00	FT
BARREL INLET INVERT	932.00	FT
BARREL OUTLET INVERT	931.70	FT
BARREL LENGTH	58.00	FT
BARREL SLOPE	0.52	%
ANTI FLOTATION CONCRETE	4.2	CY
EMERGENCY SPILLWAY LENGTH	100.0	FT
EMERGENCY SPILLWAY CAPACITY	99.0	CFS

6 BASIN DA-082 PARAMETERS

Sediment Basin DA-101		
DESIGN INFORMATION		
TOTAL DRAINAGE AREA	7.50	AC
TOTAL DISTURBED AREA	3.00	AC
PRE-DEVELOPMENT FLOW (Q10)	24.82	CFS
PRIMARY SPILLWAY FLOW (Q10)	18.39	CFS
EMERGENCY SPILLWAY FLOW (Q25)	30.79	CFS
DESIGN CALCULATIONS		
DEWATERING VOLUME REQUIRED	13,500	CF
SEDIMENT VOLUME REQUIRED	3,000	CF
DEWATERING VOLUME PROVIDED	14,652	CF
SEDIMENT VOLUME PROVIDED	5,669	CF
DEWATERING TIME	0.00	DAYS
SKIMMER SIZE	2.00	IN
SKIMMER ORIFICE DIAMETER	1.50	IN
BASIN GEOMETRY		
BOTTOM OF BASIN	5,140	969.00
SEDIMENT STORAGE	6,198	970.00
PRIMARY SPILLWAY	8,483	972.00
EMERGENCY SPILLWAY	9,711	973.00
TOP OF DAM	10,995	974.00
SPILLWAY DESIGN		
EMBANKMENT WIDTH	10	FT
PRIMARY SPILLWAY (RISER) CAPACITY	15.1	CFS
# OF PRIMARY SPILLWAYS	2	
RISER STYLE/MATERIAL	CIRCULAR, CMP	
RISER SIZE	2.0	DA (FT)
ORIFICES PER RISER	1	
ORIFICE DIAMETER	3.0	IN
ROWS OF ORIFICES	1	
COLUMNS OF ORIFICES	1	
ORIFICE ROW SPACING	-	IN, O.C.
ORIFICE COLUMN SPACING	-	IN, O.C.
ORIFICE(S) INVERT	970.00	FT
BARREL MATERIAL	CMP	
# OF BARRELS	2	
BARREL DIAMETER	1.75	FT
BARREL INLET INVERT	970.00	FT
BARREL OUTLET INVERT	969.80	FT
BARREL LENGTH	50.00	FT
BARREL SLOPE	0.40	%
ANTI FLOTATION CONCRETE	6.3	CY
EMERGENCY SPILLWAY LENGTH	35.0	FT
EMERGENCY SPILLWAY CAPACITY	34.6	CFS

7 BASIN DA-101 PARAMETERS

2 TEMPORARY SEDIMENT BASIN PARAMETERS

SCALE: NTS

196 MWAC
BIG PLAIN
SOLAR PROJECT

MADISON COUNTY, OH

SHEET NUMBER
C5.32

SCALE: NTS

TEMPORARY
SEDIMENT BASIN
DESIGN DETAILS

KHA PROJECT
192017028
DATE
07/08/2022
SCALE
AS SHOWN
DESIGNED BY
NEL
DRAWN BY
AMC
CHECKED BY
JCC

REVISION 4
07/08/2022

REVISION 3
06/03/2022

REVISION 2
04/29/2022

REVISION 1
04/20/2022

No.

REVISIONS

DATE

SOLV
ENERGY

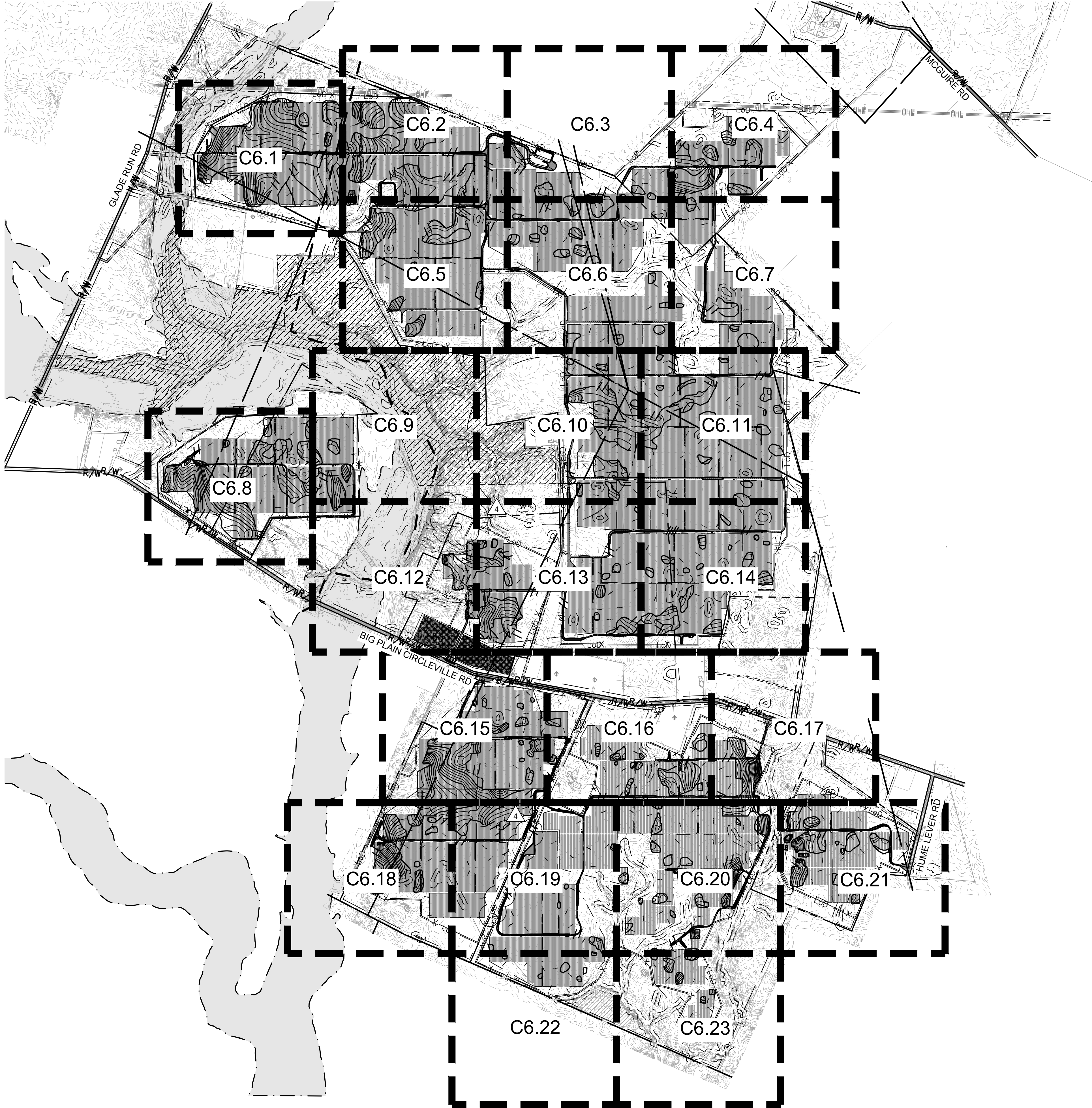
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7965 NORTH HIGH STREET SUITE 200, COLUMBUS, OH 43235
PHONE: (614) 454-6699
WWW.KIMLEY-HORN.COM

REGISTERED PROFESSIONAL ENGINEER
JASON C. COOPER
87591
STATE OF OHIO

Plotted By: Zade, Jod Sheet Set: Kha Layout: C6.0 July 07, 2022 08:50:52pm K:\NAV-Civil\192017028-Big Plain Solar\CAD\PlanSheets\CD_BigPlan.dwg

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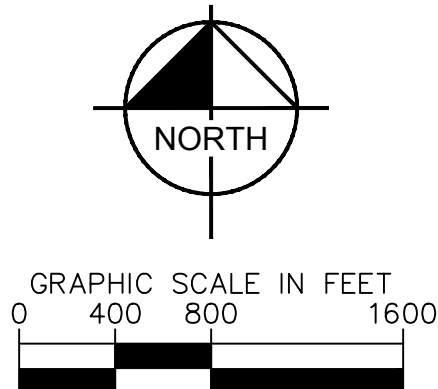
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	CONSERVATION EASEMENT
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	PROPOSED MATERIAL LAYDOWN AREA
	PROPOSED ARRAY BLOCK OUTLINE
	DAYLIGHT LINE
	FEMA ZONE A
	NESTING AREA
	ARCHAEOLOGICAL RESOURCE AREA
	EXISTING WETLAND
	WETLAND BUFFER
	APPROXIMATE CIVIL LIMIT OF WORK

CONSTRUCTION NOTES:

- 1 AGGREGATE BASE ACCESS ROAD WITH SHOULDERS, SEE DETAIL 1, SHEET C7.0
- 2 8' TALL DEER FENCE PER DETAIL 1, SHEET C7.1
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- 11 INSTALL RIP RAP DITCH OUTLET, SEE DETAIL 4, SHEET C7.2
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- 14 INSTALL 24" CMP CULVERT
- 15 INSTALL 30" CMP CULVERT
- 16 INSTALL 36" CMP CULVERT

GENERAL NOTES:

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3. CONTRACTOR TO ENSURE ALL SLOPES ARE BUILT WITH APPROPRIATE BENCHING PER DETAIL 1, SHEET C7.2.
4. CONTRACTOR TO REPAIR OR REPLACE ALL DRAIN TILE DAMAGED DURING GRADING ACTIVITIES PER DETAIL 3, SHEET C7.3.



KHA PROJECT 192017028	DATE 07/08/2022	SCALE AS SHOWN	DESIGNED BY NEL	DRAWN BY AMC	CHECKED BY JCC		Kimley»Horn	© 2022 KIMLEY-HORN AND ASSOCIATES, INC. 7965 NORTH HIGH STREET SUITE 200, COLUMBUS, OH 43235 PHONE: (614) 454-6699 WWW.KIMLEY-HORN.COM		REVISION 4	07/08/2022	No.	REVISIONS	DATE
										REVISION 3	06/03/2022			
										REVISION 2	04/29/2022			
										REVISION 1	04/20/2022			
196 MWAC BIG PLAIN SOLAR PROJECT MADISON COUNTY, OH										SHEET NUMBER C6.0				

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MATCHLINE - SEE SHEET C6.1

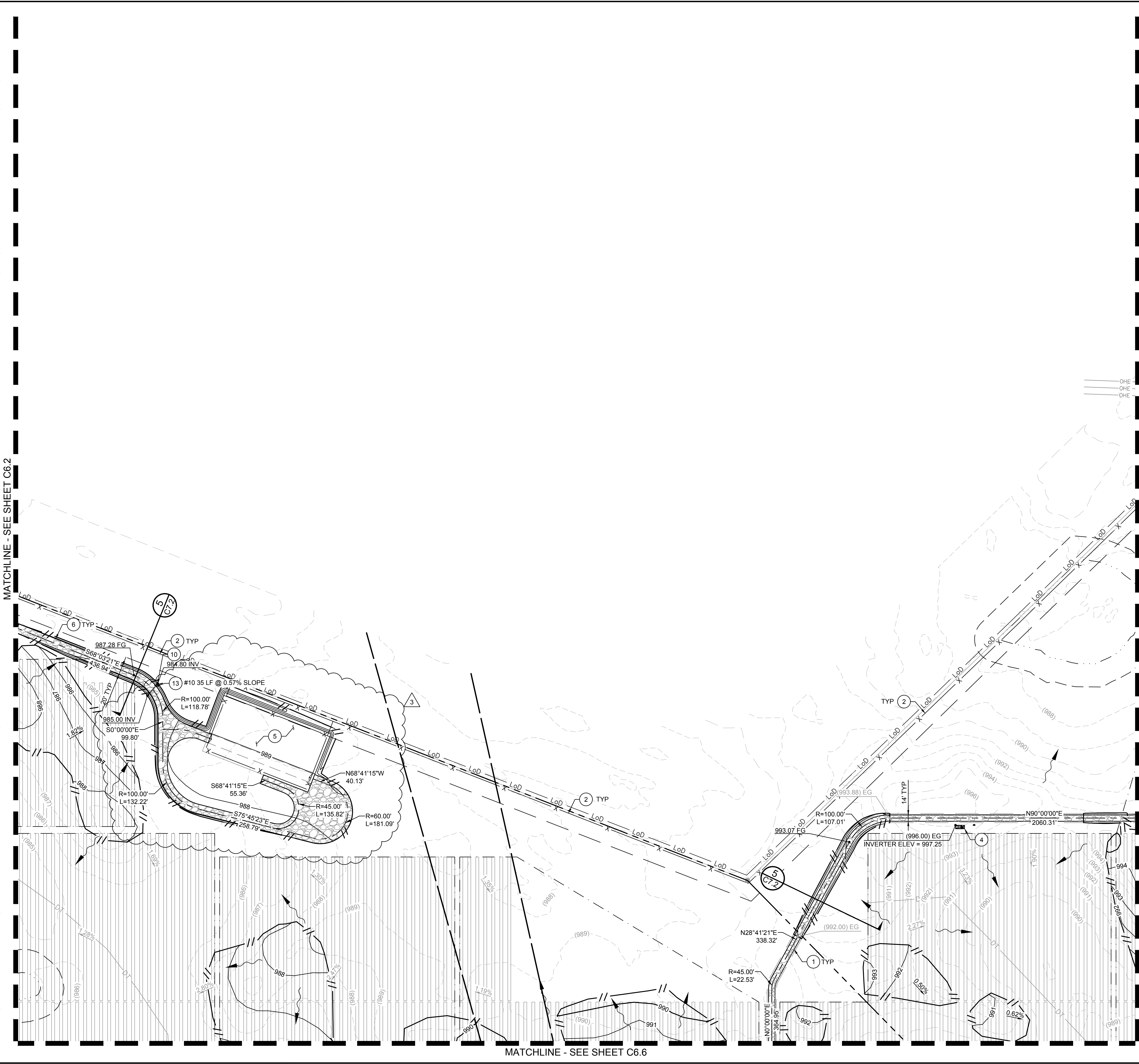
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	SHEET NUMBER	C6.2															
196 MWAC BIG PLAIN SOLAR PROJECT	MADISON COUNTY, OH	KHA PROJECT 192017028															
GRADING PLAN		DATE 07/08/2022															
		SCALE AS SHOWN															
		DESIGNED BY NEL															
		DRAWN BY AWC															
		CHECKED BY JCC															
		JASON C. COOPER 87591 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO															
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		SOLVY ENERGY ENERGY															
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4	REVISION 4	07/08/2022															

CIVIL IMPROVEMENT PLAN - JULY 8, 2022 - ISSUED FOR CONSTRUCTION

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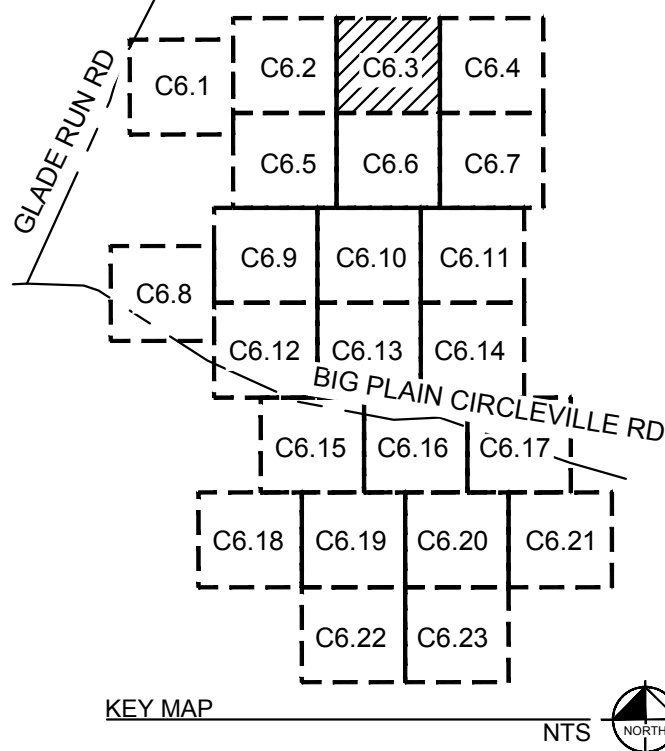
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	PROPERTY LINE
	LEASE LINE
	TOWNSHIP LINE
	SETBACK
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	PROPOSED CONTOUR
	EASEMENT LINE
	CONSERVATION EASEMENT
	EXISTING TELEPHONE LINE
	EXISTING OVERHEAD POWER LINE
	EXISTING FENCE
	EXISTING DRAIN TILE MAIN
	EXISTING GROUNDWATER WELL
	PROPOSED SECURITY FENCE
	PROPOSED AGGREGATE ACCESS ROAD
	PROPOSED MATERIAL LAYDOWN AREA
	PROPOSED ARRAY BLOCK OUTLINE
	DAYLIGHT LINE
	FEMA ZONE A
	NESTING AREA
	ARCHAEOLOGICAL RESOURCE AREA
	EXISTING WETLAND
	WETLAND BUFFER
	APPROXIMATE CIVIL LIMIT OF WORK

CONSTRUCTION NOTES:

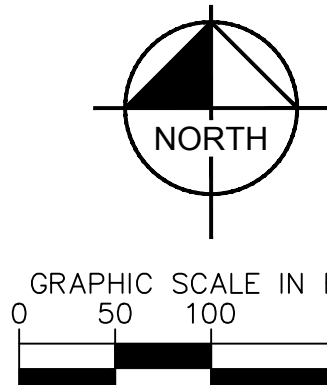
- 1 AGGREGATE BASE ACCESS ROAD WITH SHOULDERS, SEE DETAIL 1, SHEET C7.0
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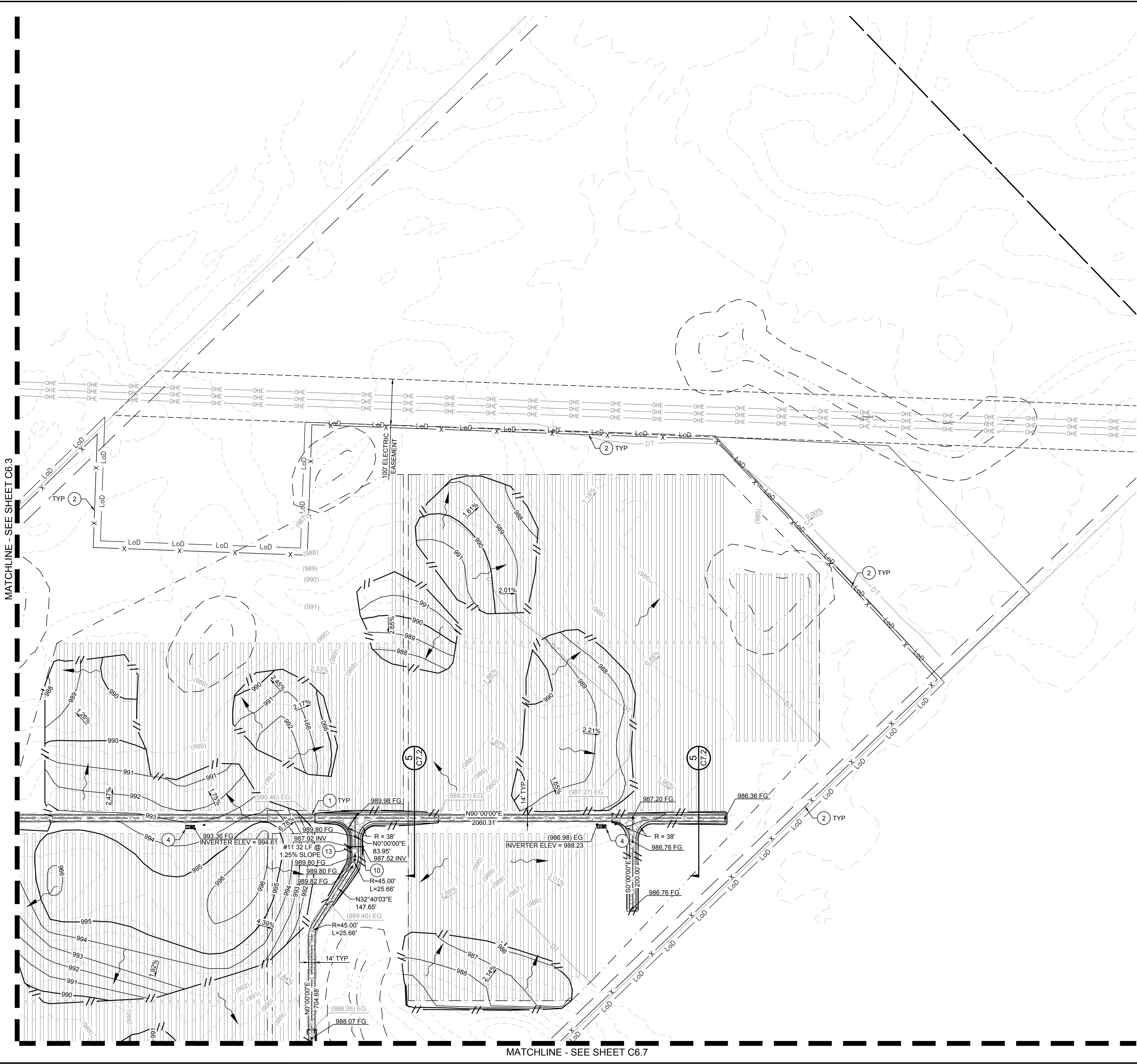


KHA PROJECT 192017028		DATE 07/08/2022		SCALE AS SHOWN		DESIGNED BY NEL		DRAWN BY AMC		CHECKED BY JCC	
196 MWAC BIG PLAIN SOLAR PROJECT		GRADING PLAN		SHEET NUMBER C6.3		KIMLEY-HORN AND ASSOCIATES, INC. 7965 NORTH HIGH STREET SUITE 200, COLUMBUS, OH 43235 PHONE: (614) 454-6699 WWW.KIMLEY-HORN.COM		SOLV ENERGY		REVISIONS 4 REVISION 4 07/08/2022 3 REVISION 3 06/03/2022 2 REVISION 2 04/29/2022 1 REVISION 1 04/20/2022	
										DATE	

CIVIL IMPROVEMENT PLAN - JULY 8, 2022 - ISSUED FOR CONSTRUCTION

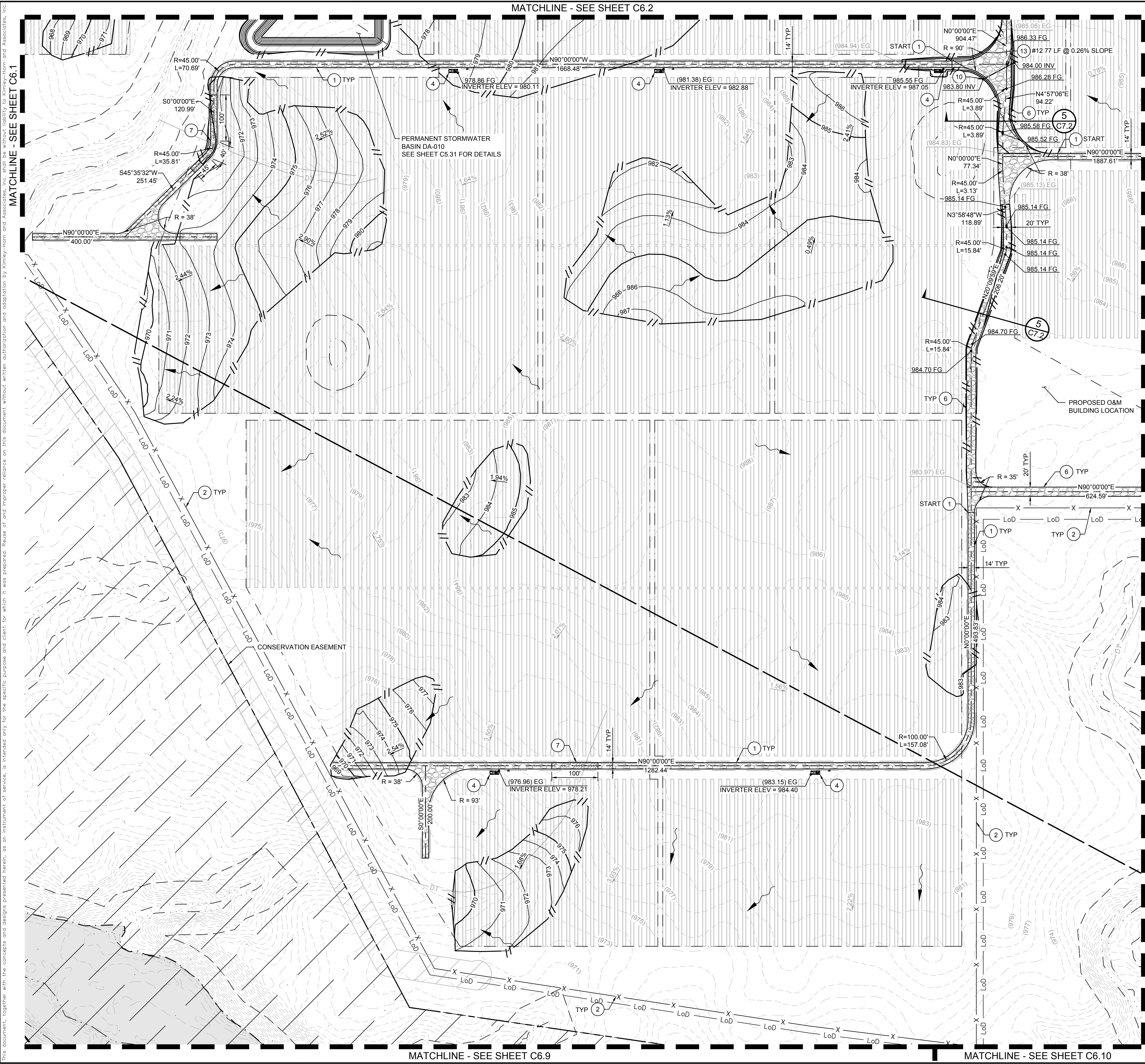
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	WETLAND BUFFER
	APPROXIMATE CIVIL LIMIT OF WORK

CONSTRUCTION NOTES:

- 1 AGGREGATE BASE ACCESS ROAD WITH SHOULDERS, SEE DETAIL 1, SHEET C7.0
- 2 8' TALL DEER FENCE PER DETAIL 1, SHEET C7.1
- 3 24' WIDE VEHICLE MANUAL SWING GATE PER DETAIL 3, SHEET C7.1
- 4 INVERTER SKID (SHOWN FOR REFERENCE ONLY). SEE DETAIL 4, SHEET C7.0 FOR GRADING DETAIL AND DETAIL 3, SHEET C7.0 FOR MAXIMUM SWITCH HEIGHT
- 5 SUBSTATION TO BE CONSTRUCTED UNDER SEPARATE PLAN SET, SEE SHEET C6.24 FOR GRADING DETAIL
- 6 AGGREGATE BASE ACCESS ROAD, SEE DETAIL 2, SHEET C7.0
- 7 LOW WATER CROSSING, SEE DETAIL 2, SHEET C7.2
- 8 INSTALL 18" CMP CULVERT
- 9 CONSTRUCT SUBSTATION DITCH, SEE DETAIL 1, SHEET C6.24
- 10 INSTALL RIP RAP PIPE OUTLET PROTECTION, SEE DETAIL 3, SHEET C7.2
- 11 INSTALL RIP RAP DITCH OUTLET, SEE DETAIL 4, SHEET C7.2
- 12 INSTALL CHECK DAM AT MINIMUM EVERY 100', SEE DETAIL 4, SHEET C5.30
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- 14 INSTALL 24" CMP CULVERT
- 15 INSTALL 30" CMP CULVERT
- 16 INSTALL 36" CMP CULVERT

GENERAL NOTES:

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3. CONTRACTOR TO ENSURE ALL SLOPES ARE BUILT WITH APPROPRIATE BENCHING PER DETAIL 1, SHEET C7.2
4. CONTRACTOR TO REPAIR OR REPLACE ALL DRAIN TILE DAMAGED DURING GRADING ACTIVITIES PER DETAIL 3, SHEET C7.3.

KEY MAP

KEY MAP showing the project location within a grid of sheets C6.1 to C6.23. The current sheet C6.5 is highlighted.

GRAPHIC SCALE IN FEET

GRAPHIC SCALE IN FEET: 0, 50, 100, 200

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07/08/2022	REVISION 4	4	No.	REVISIONS	DATE
06/03/2022	REVISION 3	3			
04/29/2022	REVISION 2	2			
04/20/2022	REVISION 1	1			

Kimley»Horn

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PHONE: (614) 454-6699
WWW.KIMLEY-HORN.COM

KHA PROJECT	192017028
DATE	07/08/2022
SCALE	AS SHOWN
DESIGNED BY	NEL
DRAWN BY	AMC
CHECKED BY	JCC

GRADING PLAN

196 MWAC
BIG PLAIN
SOLAR PROJECT

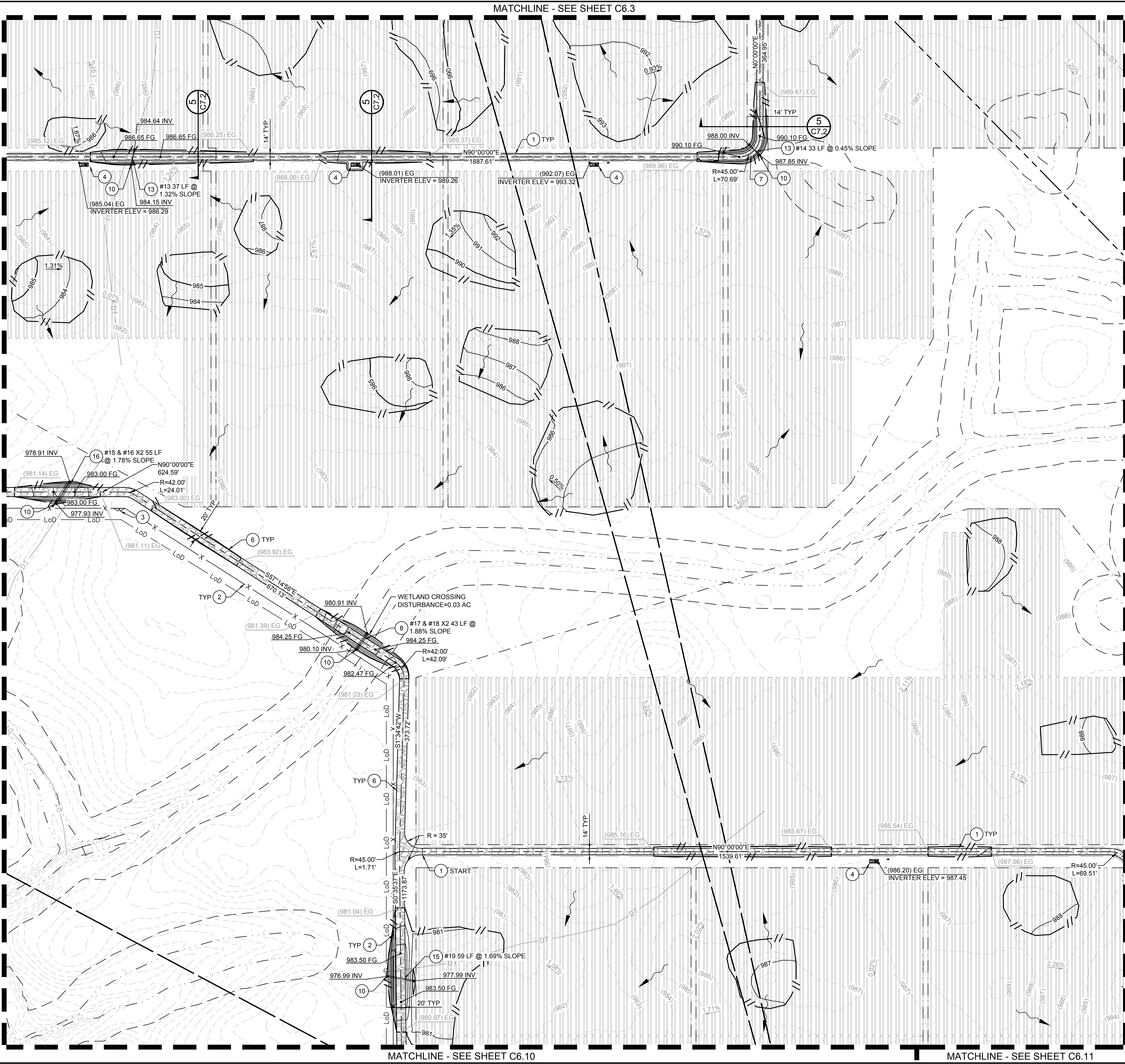
MADISON COUNTY, OH

SHEET NUMBER
C6.5

CIVIL IMPROVEMENT PLAN - JULY 8, 2022 - ISSUED FOR CONSTRUCTION

Plotted By: Jada, Jada Sheet Set: KHA Layout: C6.6 July 07, 2022 08:53:07pm K:\LAV-Civil\192017028-Big Plain Solar\CAD\PlanSheets\C6.6.dwg
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MATCHLINE - SEE SHEET C6.5



MATCHLINE - SEE SHEET C6.10

MATCHLINE - SEE SHEET C6.11

LEGEND

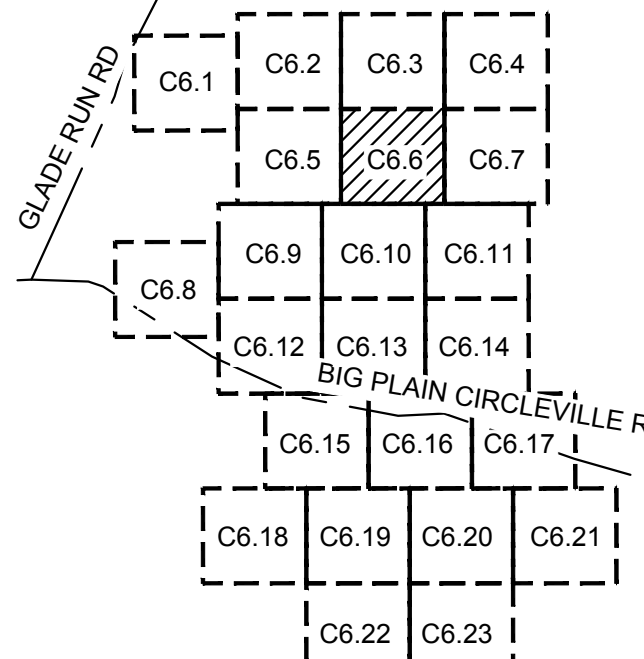
- SURVEY LINE
- R/W
- RIGHT OF WAY LINE
- PROPERTY LINE
- LEASE LINE
- TOWNSHIP LINE
- SETBACK
- (XXXX)
- XXXX
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EASEMENT LINE
- CONSERVATION EASEMENT
- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING FENCE
- EXISTING DRAIN TILE MAIN
- EXISTING GROUNDWATER WELL
- PROPOSED SECURITY FENCE
- PROPOSED AGGREGATE ACCESS ROAD
- PROPOSED MATERIAL LAYDOWN AREA
- PROPOSED ARRAY BLOCK OUTLINE
- DAYLIGHT LINE
- FEMA ZONE A
- NESTING AREA
- ARCHAEOLOGICAL RESOURCE AREA
- EXISTING WETLAND
- WETLAND BUFFER
- APPROXIMATE CIVIL LIMIT OF WORK

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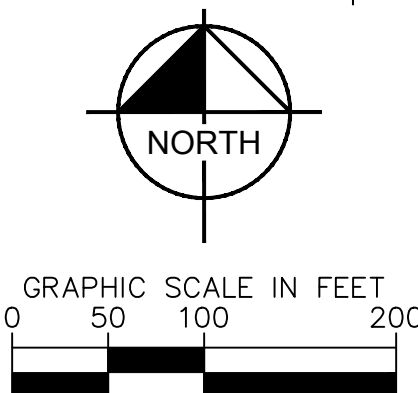
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KHA PROJECT		DATE		SCALE		DESIGNED BY		DRAWN BY		CHECKED BY	
192017028		07/08/2022		AS SHOWN		NEL		AMC		JCC	
KIMLEY-HORN & ASSOCIATES, INC.		JASON C. COOPER		REGISTERED PROFESSIONAL ENGINEER		87591		STATE OF OHIO			
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REVISION 4		07/08/2022		REVISION 3		06/03/2022		REVISION 2		04/29/2022	
REVISION 1		04/20/2022		REVISION 1		04/20/2022		REVISIONS		DATE	
No.											

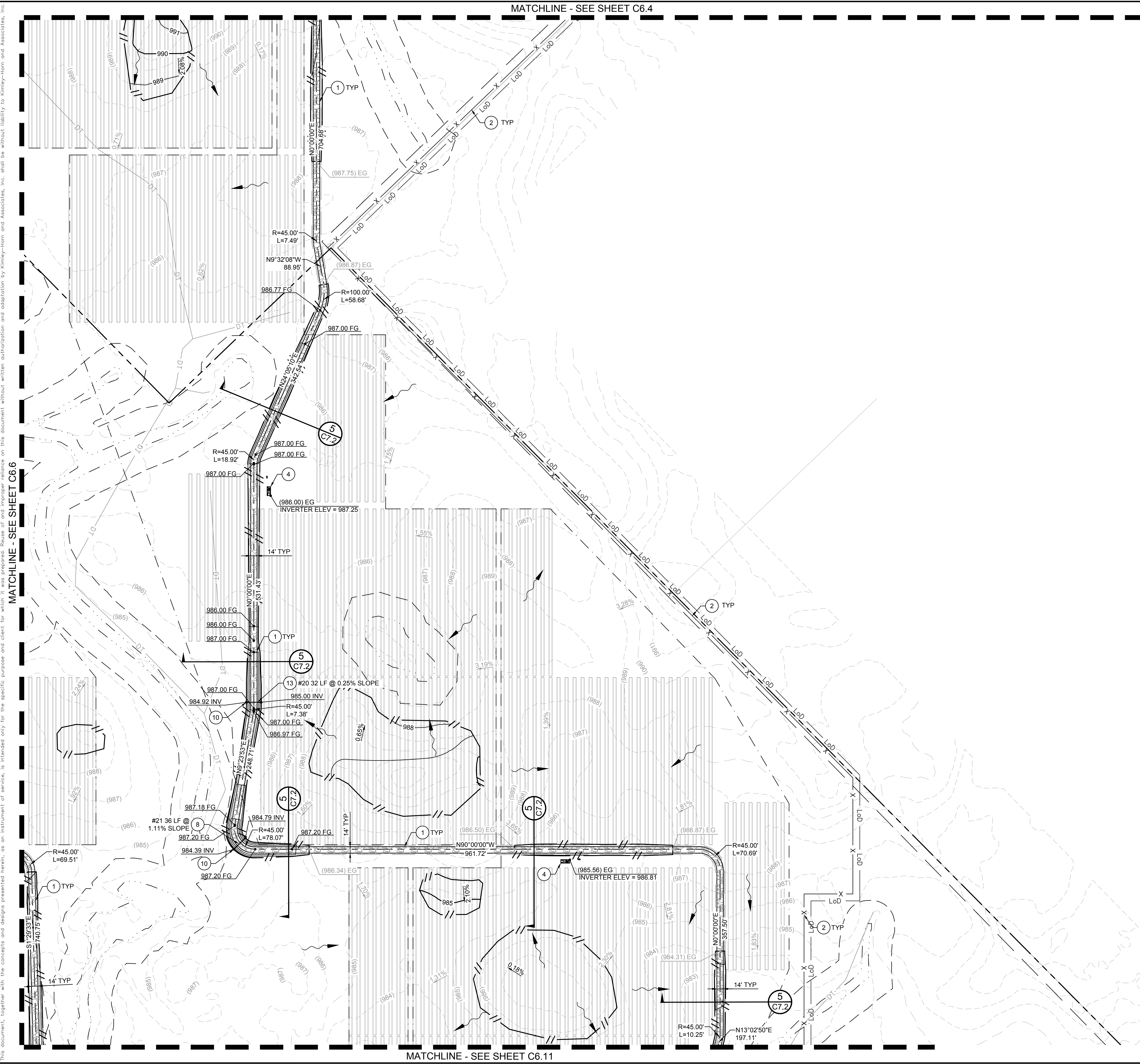
196 MWAC
BIG PLAIN
SOLAR PROJECT
MADISON COUNTY, OH

GRADING PLAN

SHEET NUMBER
C6.6

CIVIL IMPROVEMENT PLAN - JULY 8, 2022 - ISSUED FOR CONSTRUCTION

Plotted By: Jada, Jada Sheet Set: KHA Layout: C6.7 July 07, 2022 08:53:29pm K:\NAV-Civil\192077028-Big Plain Solar\CAD\PlanSheets\CD_BigPlain.dwg This document, together with the concepts and designs presented herein, is an instrument of service, as an instrument of service, and shall be without liability to Kimley-Horn and Associates, Inc.



LEGEND

	SURVEY LINE
	RIGHT OF WAY LINE
	PROPERTY LINE
	LEASE LINE
	TOWNSHIP LINE
	SETBACK
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EASEMENT LINE
	CONSERVATION EASEMENT
	EXISTING TELEPHONE LINE
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	EXISTING FENCE
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KEY MAP

KEY MAP showing the project location within a grid of sheets C6.1 to C6.23. The project area is highlighted in the center-right.

NTS

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GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

KHA PROJECT 192077028		DATE 07/08/2022		SCALE AS SHOWN		DESIGNED BY NEL		DRAWN BY AMC		CHECKED BY JCC	
196 MWAC BIG PLAIN SOLAR PROJECT		GRADING PLAN		SHEET NUMBER C6.7		DATE 07/08/2022		REVISIONS 4		DATE 07/08/2022	

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Printed By: Zafar, Jod Sheet Set: Kha Layout: C6.8 July 07, 2022 05:53:49pm K:\LAV_Civil\192017028-Big Plain Solar\CAD\PlanSheets\GD2_BigPlain.dwg



**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

9/22/2022 2:36:13 PM

in

Case No(s). 21-1196-EL-BGA, 19-1823-EL-BGN

Summary: Notice Compliance with Condition 8 - filing of detailed engineering drawings electronically filed by Mr. Joseph D Jordan on behalf of Big Plain Solar, LLC