

SEE SHEET C2.08

Y:\041\35859\_048 Red Rock\DWG\Sheet\C2\09-SITE PLANS.dwg [Plotted on 8/13/2020 8:25 AM] by Marcus Trew

SEE SHEET C2.05

SEE SHEET C2.04

SEE SHEET C2.10

**EXISTING LEGEND**

- OUTSIDE OF PROJECT BOUNDARY
- PARCEL LINE
- ADJOINING PARCEL LINE
- FENCE LINE
- OVERHEAD UTILITY LINE
- WETLANDS
- TREE LINE
- UNPAVED ROAD
- CREEK LINE
- UNINHABITABLE BUILDING
- HABITABLE BUILDING
- TANK
- POWER POLE

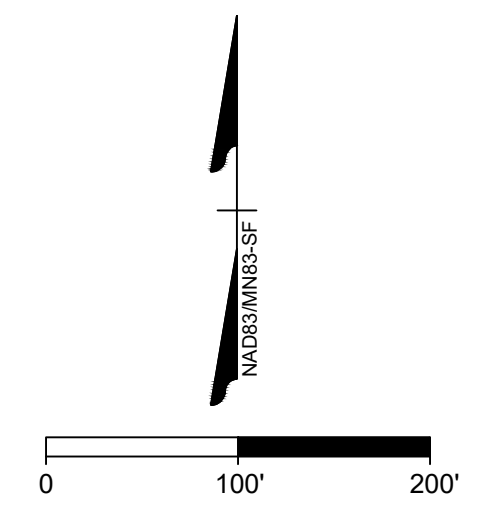
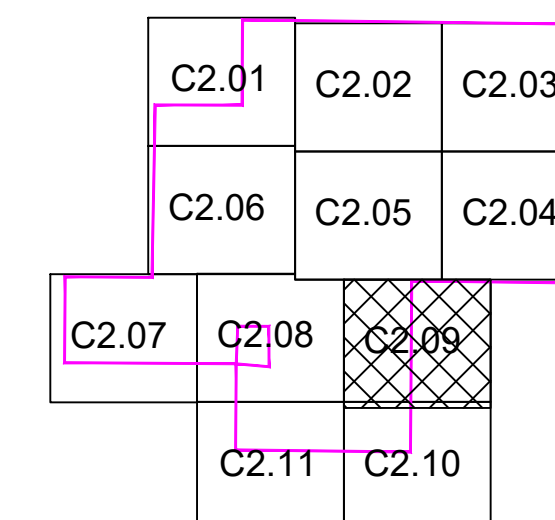
**PROPOSED LEGEND**

- MODULE SETBACK
- PERMANENT FENCE
- TRACKER
- ACCESS ROAD
- LAYDOWN AREA
- UNDERGROUND COLLECTION
- INVERTER LOCATION (15)
- JUNCTION BOX LOCATION (4)
- GATE LOCATION (9)
- DRIVEWAY ACCESS (9)
- LAYDOWN AREAS (A-C)
- PROPOSED CONTOUR
- SILT FENCE
- DIVERSION DITCH
- RIP-RAP
- LOW WATER CROSSING

**NOTES:**

1. MINOR SURFACE SMOOTHING MAY BE NECESSARY FOR SOLAR PANEL INSTALLATION.
2. CONTRACTOR SHALL INSTALL ALL PERIMETER EROSION AND SEDIMENT CONTROL DEVICES PRIOR TO UPSLOPE DISTURBANCE ACTIVITIES.
3. SITE PREPARATION INCLUDES BUT NOT LIMITED TO CLEARING/GRUBBING, MINOR GRADING, COMPACTION, MOWING OF VEGETATION, AND RESTABILIZATION OF DISTURBED AREA.
4. ACCESS ROADS WILL BE CONSTRUCTED TO MATCH THE SURROUNDING EXISTING GROUND ELEVATIONS TO ALLOW THE CONTINUATION OF DRAINAGE PATTERNS.
5. OVERALL DRAINAGE PATTERNS WILL NOT BE ALTERED WITH SOLAR DEVELOPMENT.
6. A SITE SPECIFIC SWPPP AND SPECIFIC BEST MANAGEMENT PRACTICES WILL BE PROVIDED WITH THE FINAL DESIGN.
7. DRAIN TILE TO BE AVOIDED WHERE POSSIBLE. WHEN DAMAGED, CONTRACTOR TO REPAIR/REPLACE DRAIN TILE.

**KEY MAP**



**TIMMONS GROUP**  
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CLIENT  
**APEX CLEAN ENERGY**  
 310 4TH ST. NE, SUITE 300  
 CHARLOTTEVILLE, VA 22902

PROJECT NAME & ADDRESS  
**RED ROCK SOLAR**  
 COTTONWOOD COUNTY, MN

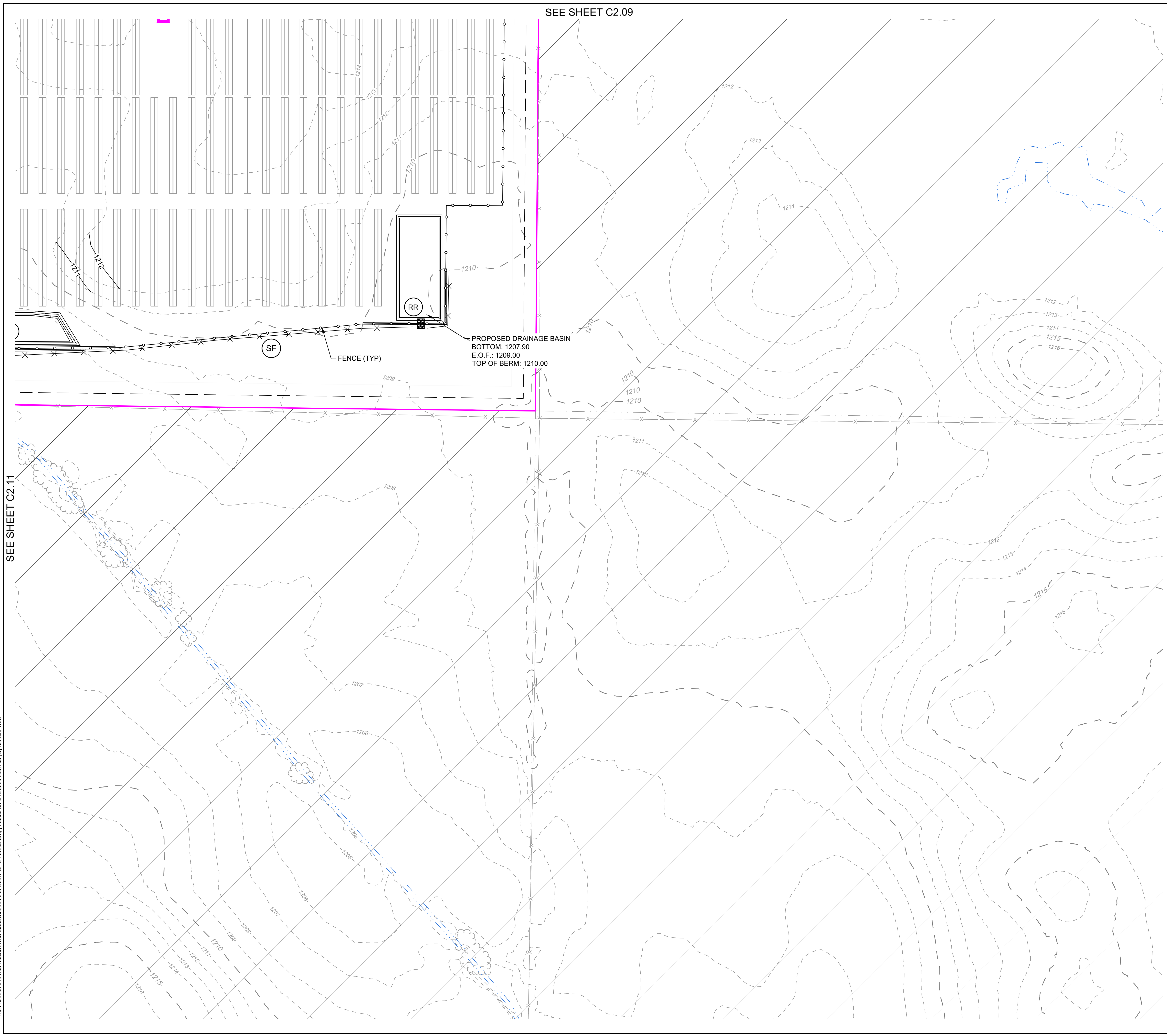
DATE	08/13/2020
PROJECT NUMBER	35859_048
PROJECT NAME	RED ROCK SOLAR
PRELIMINARY	
DESIGNED BY / DRAWN BY	M. TREW / M. TREW

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REVISIONS	
#	DESCRIPTION

DRAWING DESCRIPTION  
**SITE PLAN**

SCALE	SHEET NUMBER
1" = 100'	C2.09



### EXISTING LEGEND

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### PROPOSED LEGEND

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- NOTES:
- MINOR SURFACE SMOOTHING MAY BE NECESSARY FOR SOLAR PANEL INSTALLATION.
  - CONTRACTOR SHALL INSTALL ALL PERIMETER EROSION AND SEDIMENT CONTROL DEVICES PRIOR TO UPSLOPE DISTURBANCE ACTIVITIES.
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### KEY MAP

SCALE: 1" = 100'

WHEN PLOTTED 22'X34'

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**RED ROCK SOLAR**  
 COTTONWOOD COUNTY, MN  
 PROJECT NAME & ADDRESS

DATE: 08/13/2020  
 PROJECT NUMBER: 35859.048  
 PROJECT NAME: RED ROCK SOLAR  
 PRELIMINARY  
 DESIGNED BY / DRAWN BY: M. TREW / M. TREW

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REVISIONS	
#	DESCRIPTION

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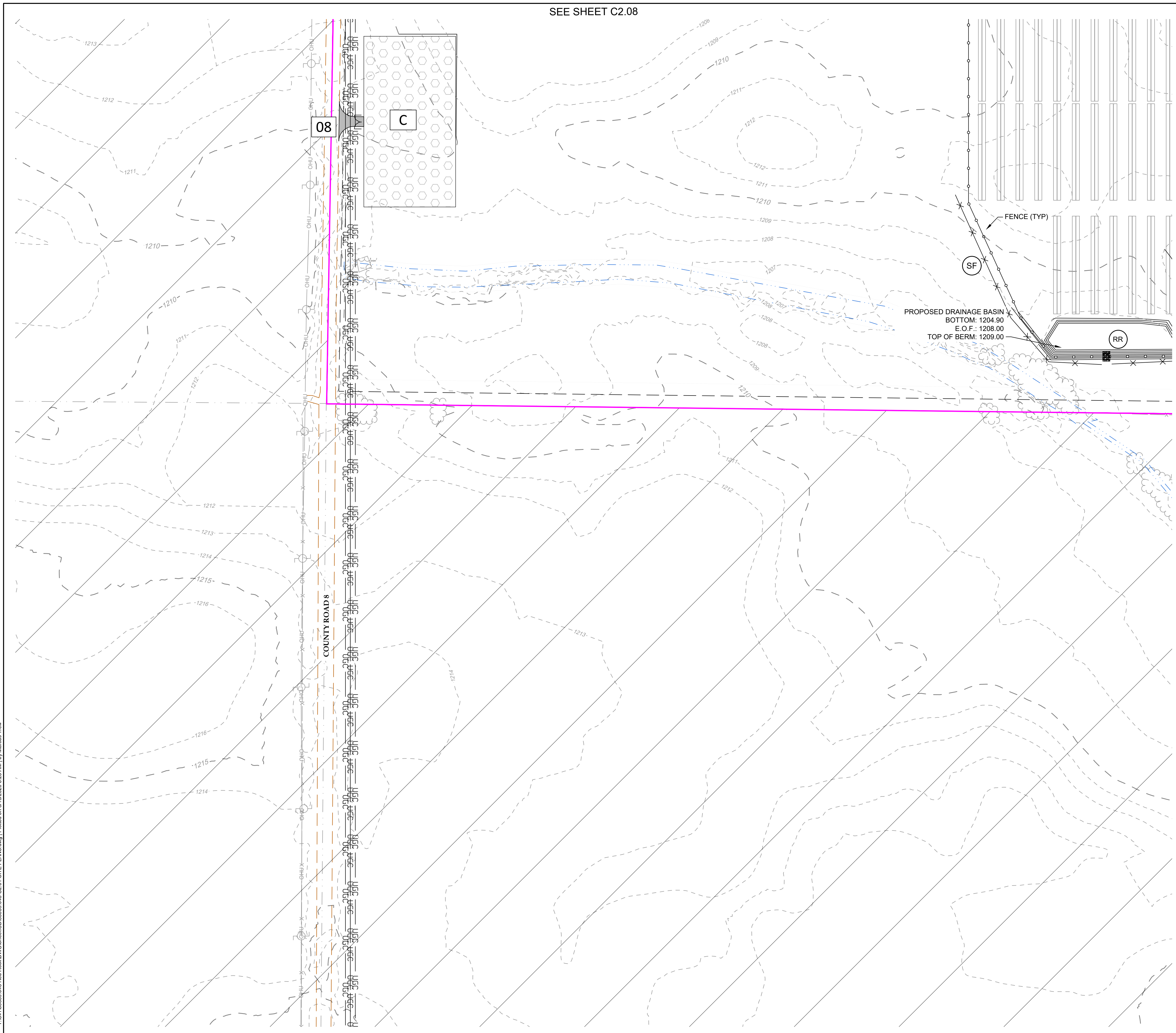
**SITE PLAN**

SCALE: 1" = 100'

SHEET NUMBER: C2.10

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SEE SHEET C2.08



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### PROPOSED LEGEND

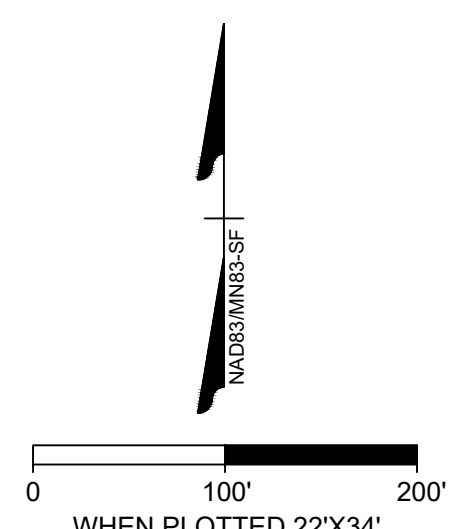
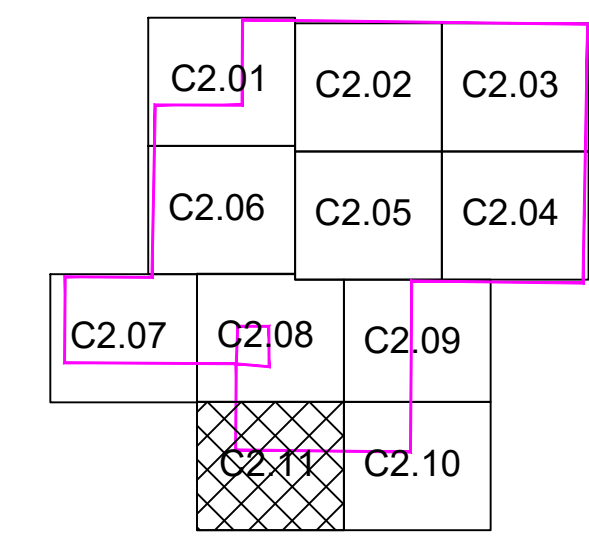
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KEY MAP



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PROJECT NAME & ADDRESS  
**RED ROCK SOLAR**  
 COTTONWOOD COUNTY, MN

DATE	08/13/2020
PROJECT NUMBER	35859.048
PROJECT NAME	RED ROCK SOLAR
PRELIMINARY	
DESIGNED BY / DRAWN BY	M. TREW / M. TREW

**NOT FOR CONSTRUCTION**

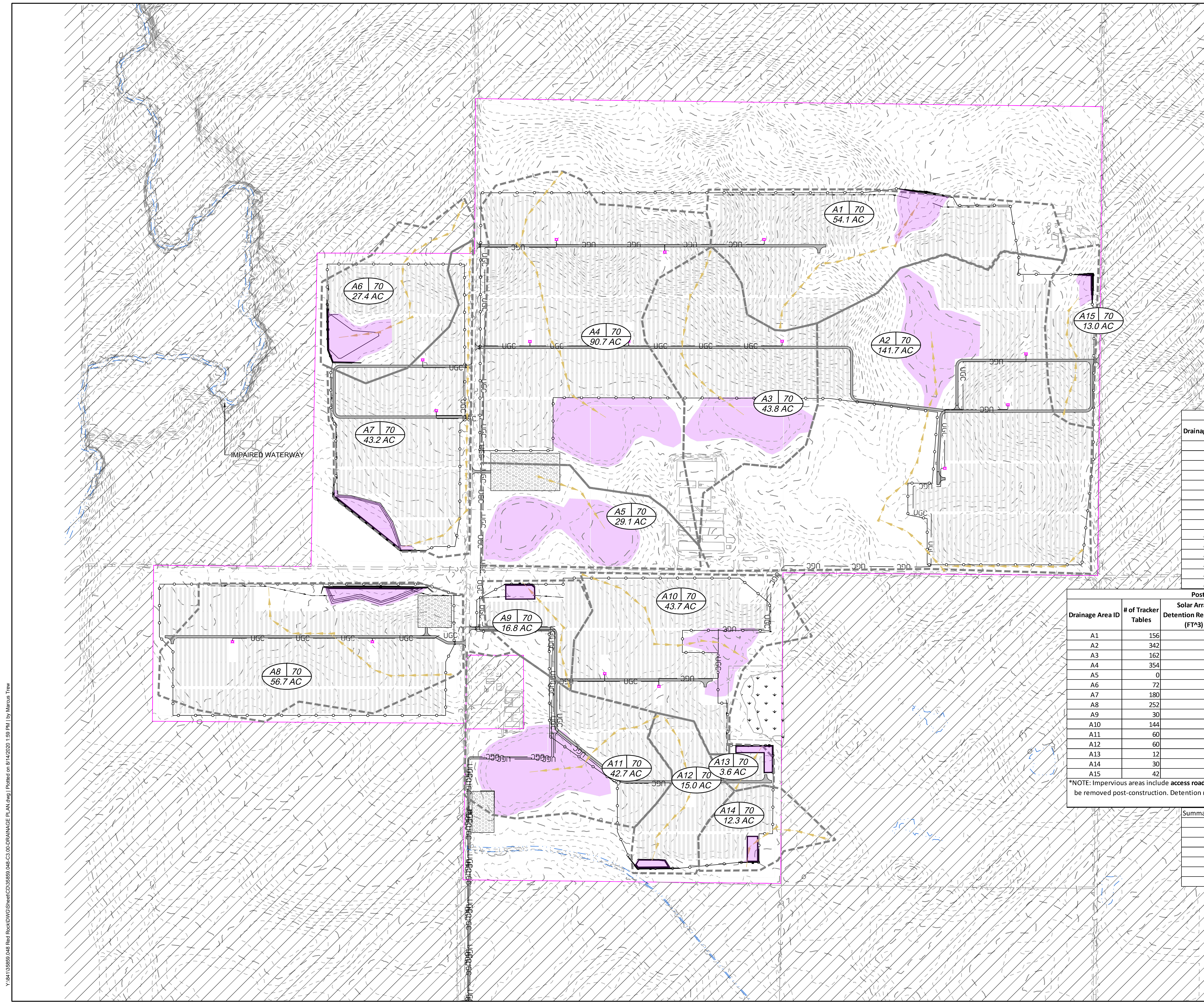
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REVISIONS	
NO.	DESCRIPTION

DRAWING DESCRIPTION  
**SITE PLAN**

SCALE	SHEET NUMBER
1" = 100'	C2.11

Y:\041\35859.048 Red Rock Solar\DWG\Sheet\CDS\35859.048-C2.01-SITE PLANS.dwg | Plotted on 8/13/2020 8:25 AM | by Marcus Trew



**LEGEND**

- PERMANENT FENCE
- TRACKER
- ACCESS ROAD
- LAYDOWN AREA
- INVERTER
- DRAINAGE AREAS
- DRAINAGE FLOW PATH
- DRAINAGE AREA INFO
- DIVERSION DITCH
- OUTSIDE OF PROJECT BOUNDARY
- WETLANDS
- DRAINAGE BASIN AREAS

Construction Sediment Requirements				
Drainage Area ID	Drainage Area (Ac)	3,600 CF per Acre Value	Storage Required (Ac-Ft)	Provided Storage (Ac-Ft)
A1	54.1	194,760	4.47	4.82
A2	141.7	510,120	11.71	14.28
A3	43.8	157,680	3.62	8.95
A4	90.7	326,520	7.50	12.13
A5	29.1	104,760	2.40	12.89
A6	27.4	98,640	2.26	4.44
A7	43.2	155,520	3.57	4.50
A8	56.7	204,120	4.69	5.68
A9	16.8	60,480	1.39	1.50
A10	43.7	157,320	3.61	7.15
A11	42.7	153,720	3.53	14.24
A12	15.0	54,000	1.24	1.30
A13	3.6	12,960	0.30	1.05
A14	12.3	44,280	1.02	1.08
A15	13.0	46,800	1.07	1.13

Drainage Area ID	# of Tracker Tables	Post-Development Detention Requirements				Total Detention Required Per Drainage Area (FT <sup>3</sup> )	Detention Provided (FT <sup>3</sup> )
		Solar Array Detention Required (FT <sup>3</sup> )	Other Impervious Areas (SF)	Other Impervious Areas Detention Required (FT <sup>3</sup> )	Total Detention Required (FT <sup>3</sup> )		
A1	156	11,934	21,290	1,774	13,708	210,141	
A2	342	26,163	85,370	7,114	33,277	622,208	
A3	162	12,393	28,550	2,379	14,772	389,831	
A4	354	27,081	70,270	5,856	32,937	528,255	
A5	0	-	-	-	-	561,370	
A6	72	5,508	12,610	1,051	6,559	193,433	
A7	180	13,770	42,490	3,541	17,311	197,730	
A8	252	19,278	53,530	4,461	23,739	247,525	
A9	30	2,295	26,210	2,184	4,479	65,380	
A10	144	11,016	26,040	2,170	13,186	311,325	
A11	60	4,590	30,910	2,576	7,166	620,400	
A12	60	4,590	9,170	764	5,354	56,585	
A13	12	918	9,550	796	1,714	45,810	
A14	30	2,295	-	-	2,295	46,943	
A15	42	3,213	23,850	1,988	5,201	49,100	

\*NOTE: Impervious areas include access roads, inverters, and percentage of solar array. Gravel laydown yards temporary and to be removed post-construction. Detention requirements assume 1" depth for all impervious areas. Percentage of solar array calculation summary below.

Summary of Detention Requirements for Solar Array (Per MPCA Spreadsheet)	
Impervious Area per Table (SF)	1935.5
Pervious Area per Table (SF)	6530.4
Typical Soil Types	D
I/P Ratio	0.296
Total Performance Goal per Tracker Table (FT <sup>3</sup> )	161.29
% Performance Goal Achieved for Solar Array	52.6%
Required Detention per Tracker Table (FT <sup>3</sup> )	76.5

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DRAWING DESCRIPTION

**DRAINAGE PLAN**

SCALE: 1" = 400'  
 SHEET NUMBER: C3.00

Y:\841\35859\_048 Red Rock\DWG\Sheet\C3.00-DRAINAGE PLAN.dwg | Plotted on 8/14/2020 1:59 PM by Marcus Trew