Kimley»Horn

September 27, 2024

Mr. Francesco Paolo Cardi
Horus Energy
Via E-mail: francesco.cardi@horuscapital.co.uk

Re: Prospect and Janus Solar Traffic Study Letter
Weld County, Colorado

Dear Mr. Francesco Paolo Cardi:

This traffic study letter has been prepared for the proposed Prospect and Janus Solar projects located in Weld County, Colorado. The purpose of this letter is to provide trip generation, trip distribution, and project traffic assignment for the construction phase of the proposed solar projects to determine the anticipated increase in traffic attributable to the proposed projects. The proposed Prospect Solar development is located east of Weld County Road 67 (WCR-67), west of WCR-75, north of WCR-2, and south of WCR-6 in Weld County, Colorado. The proposed Janus Solar development is located east of State Highway 79 (SH-79), west of WCR-75, north of WCR-4, and south of WCR-8 in Weld County, Colorado. A vicinity map illustrating the location of Prospect and Janus Solar projects and the surrounding roadway conditions is attached as **Figure 1**.

The Prospect project will consist of a 199 MWac solar facility with supporting infrastructure, whereas the Janus project will consist of an 80 MWac solar facility with supporting infrastructure. A conceptual site plan for the proposed developments is attached. This traffic study identifies the amount of traffic associated with these proposed developments during both construction and operational phases, and the expected trip distribution and traffic assignment.

CONSTRUCTION ACTIVITY AND ACCESS

Construction activity to assemble the solar facilities is anticipated to commence in 2027 and is anticipated to take 18 months to complete. The construction activities each month may vary based on phasing and the size of the phase. This traffic study was prepared analyzing the peak construction traffic during the highest months of activity. Construction will generally follow these steps:

- Mobilization
- Civil/site preparation
- Cable plow/foundations construction
- Post install
- Racking install
- Substation construction
- Set major equipment
- Module installation
- Testing, commissioning, and energization
- Demobilization

Regional access to Prospect and Janus Solar sites will be provided by Interstate 76 (I-76), I-70, and SH-52. Primary access to the Prospect site will be provided by SH-79, WCR-71, and WCR-73, while direct access is proposed from one full movement accesses along WCR-2, three full movement access along WCR-4, one access along the extension of WCR-71, and two full movement accesses along WCR-73. Primary access to the Janus site will be provided by WCR-71, and WCR-73, while direct access is proposed from four full movement accesses along WCR-71 and two full movement accesses along WCR-73.

The preferred access route to the Prospect and Janus Solar site is via I-76 and I-70. The anticipated heavy vehicle haul route to the sites from I-76 from the northwest is to travel east on SH-52 toward the project sites. The anticipated haul route to the sites from I-76 from the north is to travel south along WCR-73 toward the project sites. The anticipated haul route to the sites from I-76 from the southwest is to travel east along 152nd Avenue, then east along 144th Avenue, then head north along SH-79 toward the project sites. The anticipated haul route to the sites from I-70 from the south is to travel north along SH-79 toward the project sites. **Figure 2** illustrates the vehicle routes to and from the site.

TRIP GENERATION

Site-generated traffic estimates are determined through a process known as trip generation. The number of trips for the Prospect and Janus Solar facilities was based on anticipated construction activity and the operational phase. In order to study the effect of construction traffic created by the solar facility, the expected trips during the peak period of construction were used as the basis for this study. The peak construction traffic activity is anticipated to occur in 2027.

Construction Traffic Generation

The typical construction peak season workday will see workers arriving during a four-hour window between 6:00 am and 10:00 am and departing during a three-hour window between 1:00 pm and 4:00 pm. The standard construction hours are anticipated to be 6:30 am to 3:30 pm. The highest proportion of workers will arrive to the site between 6:00 and 7:00 am (half) and depart between 3:00 pm to 4:00 pm (one-third), although the volume will be fairly uniform during the arrival and departure hours. It is anticipated that construction of the facility will include an average of 300 construction workers. At construction peak, there may be up to 450 workers, although the peak hour traffic volumes will remain the same as projected with the traffic spread out further over the arrival and departure peak hours. It is important to note the truck trip generation also includes the volume adjusted for the three (3) passenger car equivalents (PCE) per truck. The following **Table 1** identifies the peak construction activity trip generation for the construction of Prospect and Janus Solar facilities.

Table 1 – Trip Generation: Prospect and Janus Solar Developments

User	Weekday Vehicles Trips							
	Daily Round Trips	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Heavy Duty Trucks (15)	15	30	3	1	4	1	2	3
Water Trucks (15)	15	30	2	0	2	0	2	2
Total Trucks	30	60	5	1	6	1	4	5
PCE Trips	*90*	*180*	*15*	*3*	*18*	*3*	*12*	*15*
Passenger Vehicles (300 construction workers)	300	600	150	1	151	1	100	101
Total Vehicles	**330**	**660**	**155**	**2**	**157**	**2**	**104**	**106**
Total PCE	***390***	***780***	***165***	***4***	***169***	***4***	***112***	***116***

As shown in the table, the Prospect and Janus projects are expected to generate approximately 660 daily trips with 157 of these trips occurring during the morning peak hour and 106 of these trips occurring during the afternoon peak hour during the peak construction activities. This volume of daily traffic of 660 trips are expected to be the highest volume generated during construction of the solar facilities. It is believed that trips generated by the construction of the Prospect and Janus projects will not have major impacts on the transportation patterns or the roads in the area of the project site. Therefore, traffic impacts related to the construction of the solar plant facilities are anticipated to be temporary and accommodated within the existing roadway system.

Solar Facility Operational Phase Traffic Generation

After the Prospect and Janus projects has been constructed, the number of trips generated by the solar plants is expected to be significantly less than during the construction period. The project will be an unmanned facility with weekly site visits by operational personnel, not exceeding 10 trips per month. On the occasional day when a site visit occurs, the trip generation is anticipated to be one employee entering and exiting throughout the day. Therefore, traffic impacts related to the operation of the solar plant facility are anticipated to be insignificant and not requiring roadway improvements.

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

Trip distribution is based on the anticipated arrival location of employees along with the delivery route to be used for truck traffic. It is anticipated that truck traffic will utilize SH-52, 144th Avenue, SH-79, and WCR-73 to access the project site. Construction worker trips will be based on the arrival location from place of residence (permanent or temporary). The distribution for construction worker trips was derived based on distances to nearby cities and populations. The City of Fort Lupton is located approximately 24 miles west of the site, the City of Brighton is located approximately 29 miles southwest of the site, the City of Greeley is located approximately 43 miles northwest of the project site. Further south, approximately 47 miles southwest of the site is the City of Denver. Based on these factors, it is anticipated that 35 percent of traffic will be to and from the northwest and southwest and 15 percent of traffic will be to and from the north and south. This traffic was factored for the amount expected to arrive from I-76 and I-70. Additionally, since the sites are expected to be constructed one at

a time, it was assumed that construction traffic would only be using one construction area at a time.

Three construction sections were identified, with one area being the section surrounded by SH-79, the second area being the section surrounded by WCR-71, and the third area being the section surrounded by WCR-73. Therefore, trip distribution and traffic assignment were provided separately for accesses along SH-79, WCR-71, and WCR-73. Attached **Figure 3** illustrates the anticipated trip distribution for the SH-79 accesses, **Figure 4** shows the trip distribution for the WCR-71 accesses, and **Figure 5** shows the trip distribution for the WCR-73 accesses. The project traffic assignment for vehicles is shown in attached **Figure 6** for the SH-79 accesses, **Figure 7** for the WCR-71 accesses, and **Figure 8** for the WCR-73 accesses.

CDOT ACCESS PERMIT AND TURN LANE REQUIREMENTS

The threshold for requiring an access permit along CDOT roadways occurs when project traffic is anticipated to increase the existing access traffic volume by more than 20 percent. Based on traffic projections, the addition of project traffic on the west and east leg of WCR-4 and the west leg of WCR-2 at SH-79 are anticipated to increase existing traffic volumes by more than 20 percent. Therefore, a CDOT Access Permit is anticipated to be needed at these intersections in association with this project. Since the accesses will be used during the construction and operational phases, a new access permit will be provided instead of the temporary access permits.

Auxiliary turn lane requirements were evaluated based on the State of Colorado State Highway Access Code for the intersection of SH-79. SH-79 is categorized as R-B: Regional Highway within the study limits. According to the State Highway Access Code for category R-B roadways, the following thresholds apply for implementation of auxiliary turn lanes:

- A left turn deceleration lane with taper and storage length is required for any access with a projected peak hour left ingress turning volume greater than 10 vehicles per hour (vph). The taper length will be included within the required deceleration length.
- A right turn deceleration lane and taper length is required for any access with a projected peak hour right ingress turning volume greater than 25 vehicles per hour (vph). The taper length will be included within the required deceleration length.
- A right turn acceleration lane and taper length is required for any access with a projected peak hour right turning volume greater than 50 vehicles per hour (vph) when the posted speed on the highway is greater than 40 mph. The taper length will be included within the required acceleration length.

Based on these thresholds and warrants contained in the Access Code, the R-A (Regional Highway) designation of SH-71, a 65-mph posted speed limit, and the anticipated project traffic volume in 2027 are as follows:

WCR-4 at SH-79

- A northbound left turn deceleration **is not** warranted based on the projected 2027 background plus project traffic being eight (8) northbound left turns during the afternoon peak hour and the threshold being 10 vehicles per hour.
- A northbound right turn deceleration lane is warranted based on the projected 2027 background plus project traffic being 39 northbound right turns during the morning

peak hour and the threshold being 25 vehicles per hour. However, according to Section 3.5: Auxiliary Turn Lanes of the CDOT Access Code, the auxiliary lanes required in the category design standards may be waived when the 20-year horizon predicted roadway volumes conflicting with the turning vehicle are below the following minimum volume thresholds. The right turn lane may be dropped if the volume in the travel lane is predicted to be below 150 directional hourly volumes (DHV). As such, this southbound right turn deceleration lane can be waived due to the adjacent travel lane volume not exceeding 150 vehicles per hour at 61 through vehicles during the same peak hour in 2022 (per CDOT continuous traffic data). Additionally, this volume is temporary for 18 -months during construction and will be considerably lower once the site is operational. Therefore, the turn lane is recommended to not be provided.

- A southbound left turn deceleration **is** warranted based on the projected 2027 background plus project traffic being 54 southbound left turns during the morning peak hour and the threshold being 10 vehicles per hour. However, like the right turn lane, CDOT identifies the left turn lane may be dropped if the opposing volume is less than 100 vehicles per hour. The opposing northbound volume is 61 vehicles per hour based on the 2022 CDOT OTIS continuous traffic counter. Additionally, the trips generated are temporary and will not be sustained once the site is in full operations. Therefore, the turn lane is recommended to not be provided.
- A southbound right turn deceleration lane **is not** warranted based on the projected 2027 background plus project traffic being eight (8) southbound right turns during the afternoon peak hour and the threshold being 25 vehicles per hour.
- An acceleration lane for the eastbound right to southbound through **is not** warranted based on the projected 2027 background plus project traffic being five (5) eastbound right turns during the peak hour and the threshold being 50 vehicles per hour.
- An acceleration lane for the westbound right to northbound through **is not** warranted based on the projected 2027 background plus project traffic being 36 westbound right turns during the peak hour and the threshold being 50 vehicles per hour.

WCR-2 at SH-79

- A northbound right turn deceleration lane **is** warranted based on the projected 2027 background plus project traffic being 39 northbound right turns during the morning peak hour and the threshold being 25 vehicles per hour. However, according to Section 3.5: Auxiliary Turn Lanes of the CDOT Access Code, the auxiliary lanes required in the category design standards may be waived when the 20-year horizon predicted roadway volumes conflicting with the turning vehicle are below the following minimum volume thresholds. The right turn lane may be dropped if the volume in the travel lane is predicted to be below 150 directional hourly volumes (DHV). As such, this southbound right turn deceleration lane can be waived due to the adjacent travel lane volume not exceeding 150 vehicles per hour at 61 through vehicles during the same peak hour in 2022 (per CDOT continuous traffic data). Additionally, this volume is temporary for 18 -months during the construction phase. Therefore, the turn lane is recommended to not be provided.
- A southbound left turn deceleration **is** warranted based on the projected 2027 background plus project traffic being 16 southbound left turns during the morning peak hour and the threshold being 10 vehicles per hour. However, like the right turn lane, CDOT identifies the left turn lane may be dropped if the opposing volume is less than 100 vehicles per hour. The opposing northbound volume is 61 vehicles per hour based

on the 2022 CDOT OTIS continuous traffic counter. Additionally, the trips generated are temporary and will not be sustained once the site is in full operations. Therefore, the turn lane is recommended to not be provided.

- An acceleration lane for the westbound right to northbound through **is not** warranted based on the projected 2027 background plus project traffic being 10 westbound right turns during the peak hour and the threshold being 50 vehicles per hour.

As mentioned previously, the project volumes may warrant turn lanes based on temporary conditions during the construction phase. However, the through volumes along SH-79 are below the CDOT volumes to allow the turn lanes to be waived. Additionally, the traffic will be temporary and will last at most 18-months during the construction of the site. The construction traffic is planned to be phased by using one access at a time. Once construction of each area is complete, all construction traffic will move to the next access. Therefore, it is recommended these turn lanes will be waived in association with the project.

CONCLUSION

In summary, it is believed the temporary construction related vehicle traffic of the Prospect and Janus Solar project can be accommodated by the existing roadway system.. Further, trips are negligible during the operational phase of the solar facility. Based on these results, the Prospect and Janus Solar projects are anticipated to have minimal traffic impact. The public street roadways and adjacent intersections are anticipated to successfully accommodate this project traffic volume.

However, three access permits will be provided for the new east leg and west leg of WCR-4 and the new east leg of WCR-2 along SH-79 in association with this project. Since the construction phases are a few years out (2027), temporary access permits will be provided if requested by Weld County. Of note, the new access permits are planned to supersede the temporary access permits at these locations. If you have any questions or require anything further, please feel free to call.

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.

Mary Gormley, P.E.
Traffic Engineer

Figures

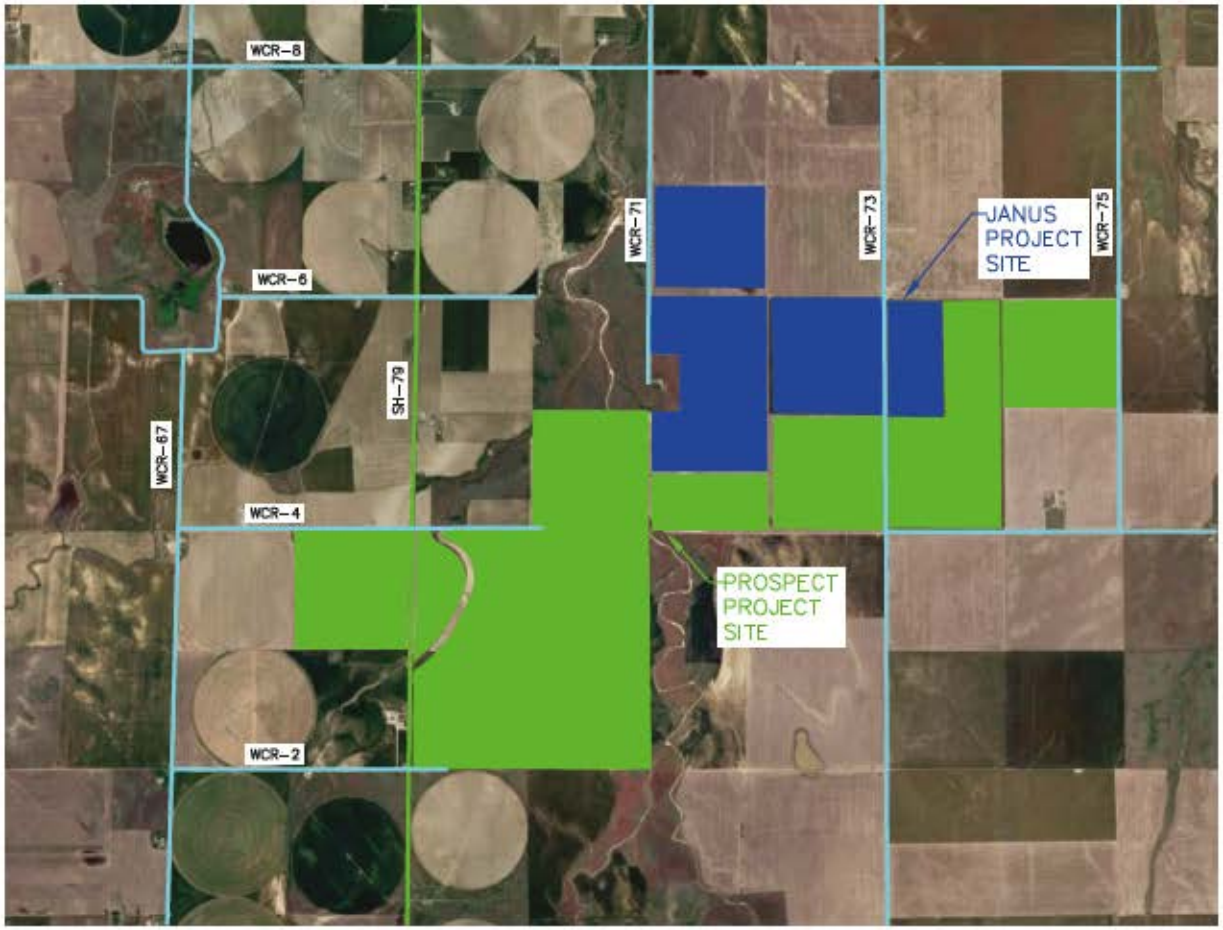


FIGURE 1
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
VICINITY MAP

LEGEND

Paved Roadway

Gravel/Dirt Roadway

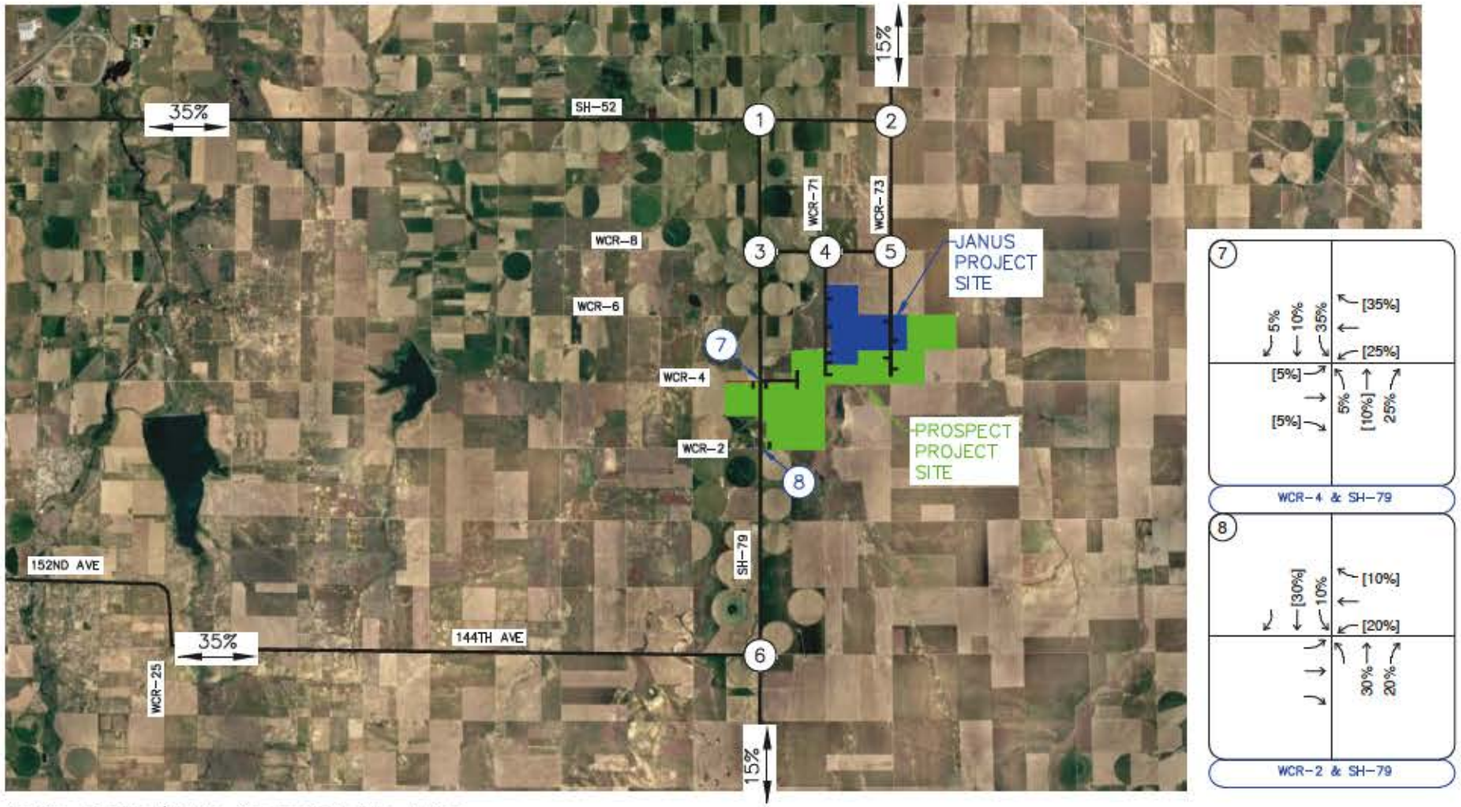
Kimley»Horn
NORTH
NTS 196835000

FIGURE 2
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
HAUL ROUTE

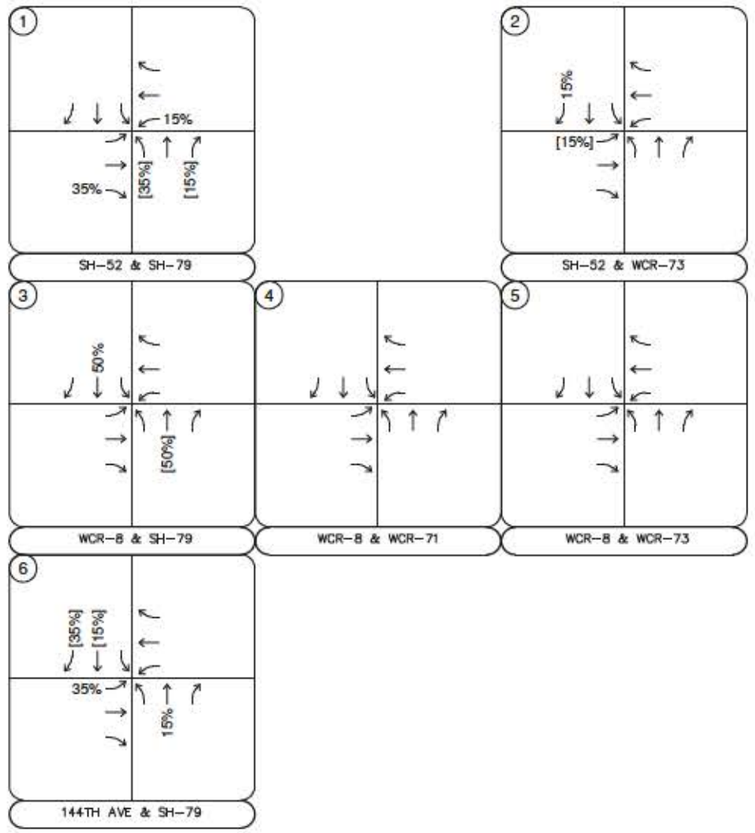
LEGEND
Proposed Haul Route

Kimley»Horn

Kimley»Horn
NORTH
NTS 196027007



Traffic entering/exiting the project sites during construction was assumed to only use one access at a time. Once construction of each area is complete all traffic will be shifted to the next access.

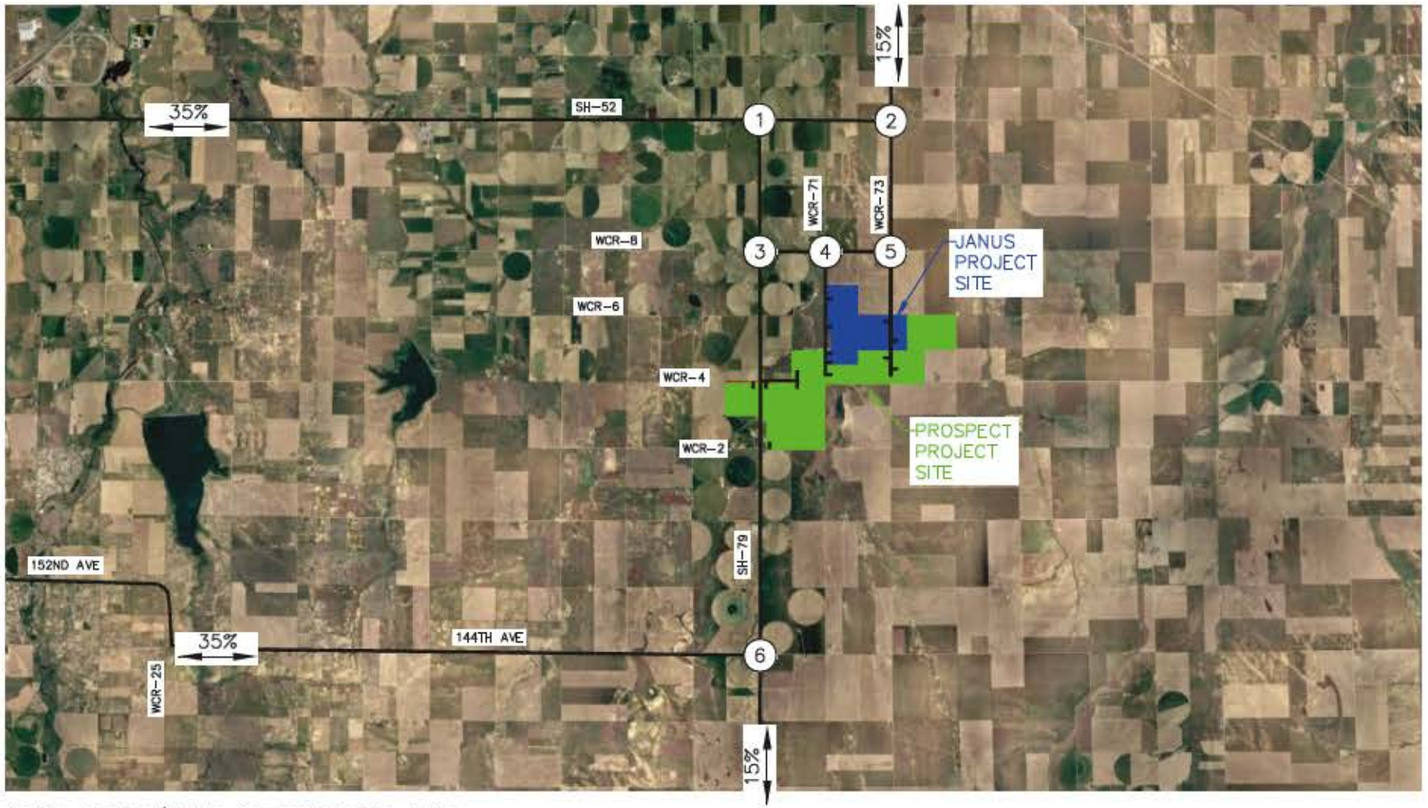


LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage

FIGURE 3
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
SH-79 ACCESS PROJECT TRIP DISTRIBUTION (CONSTRUCTION ACTIVITY ONLY)

Kimley»Horn



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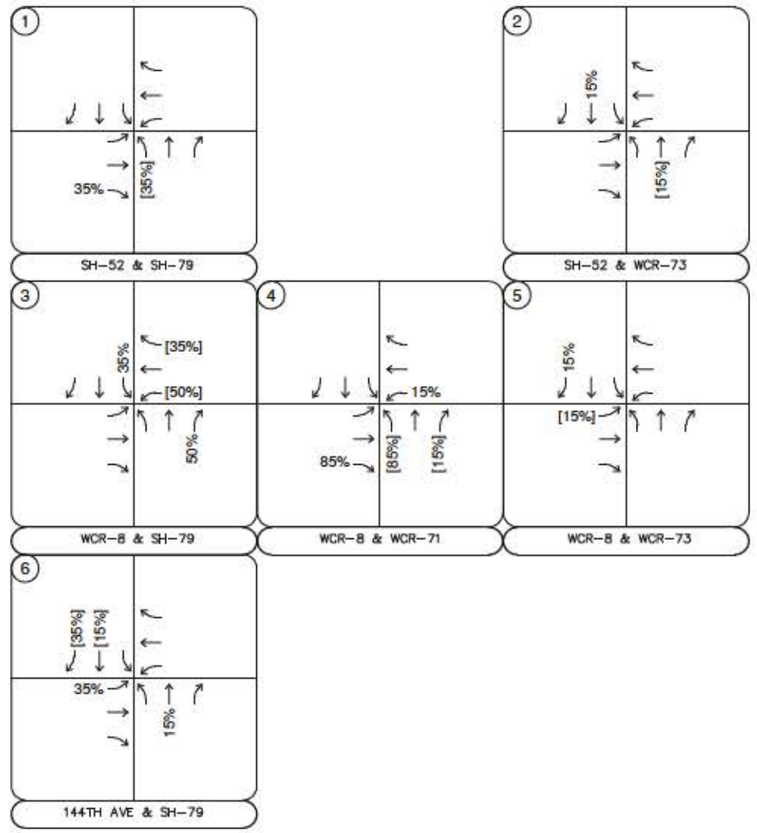


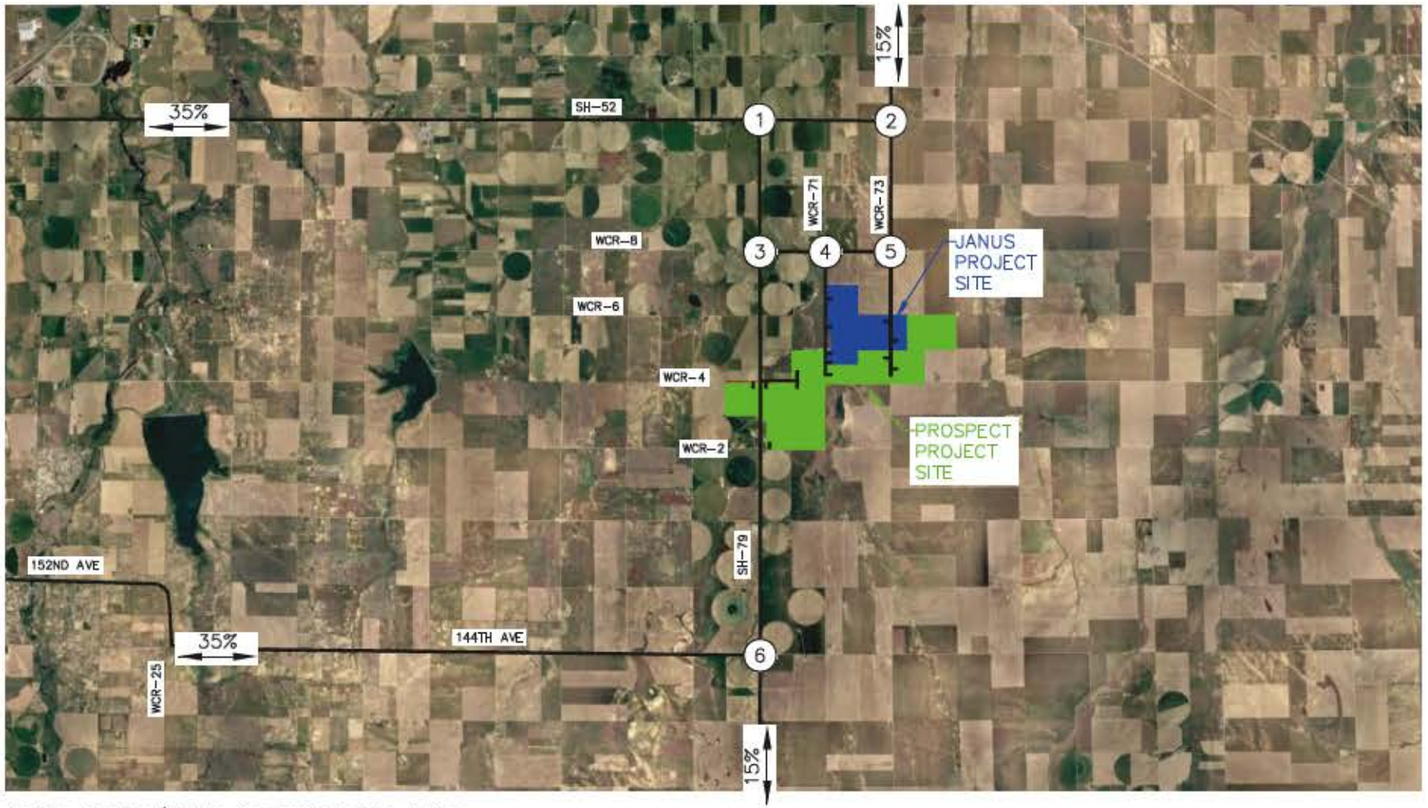
LEGEND

(X) Study Area Key Intersection

XX% External Trip Distribution Percentage

XX%[XX%] Entering[Exiting] Trip Distribution Percentage

FIGURE 4
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
WCR-71 ACCESS PROJECT TRIP DISTRIBUTION (CONSTRUCTION ACTIVITY ONLY)



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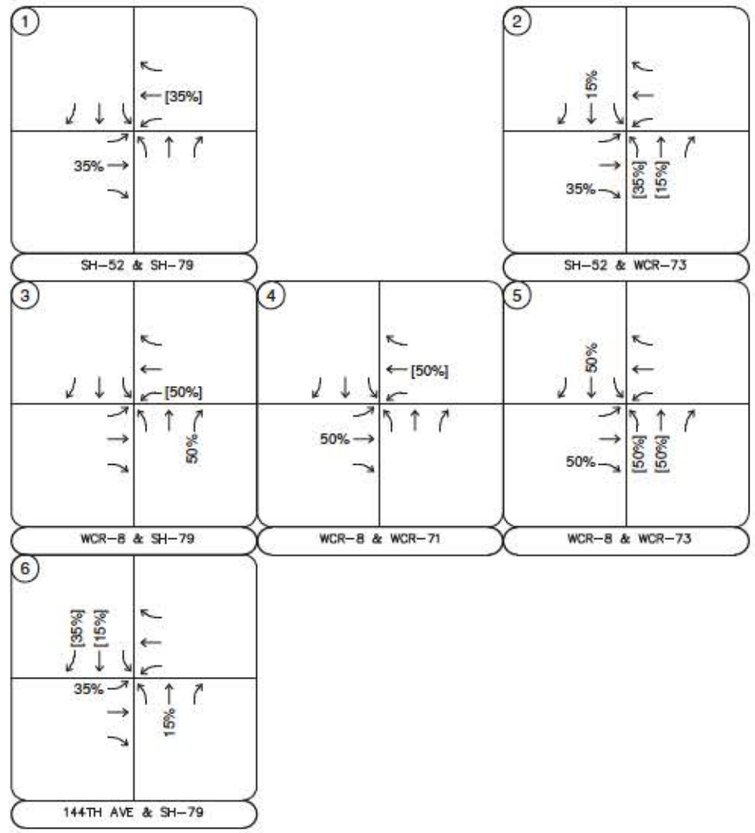


LEGEND

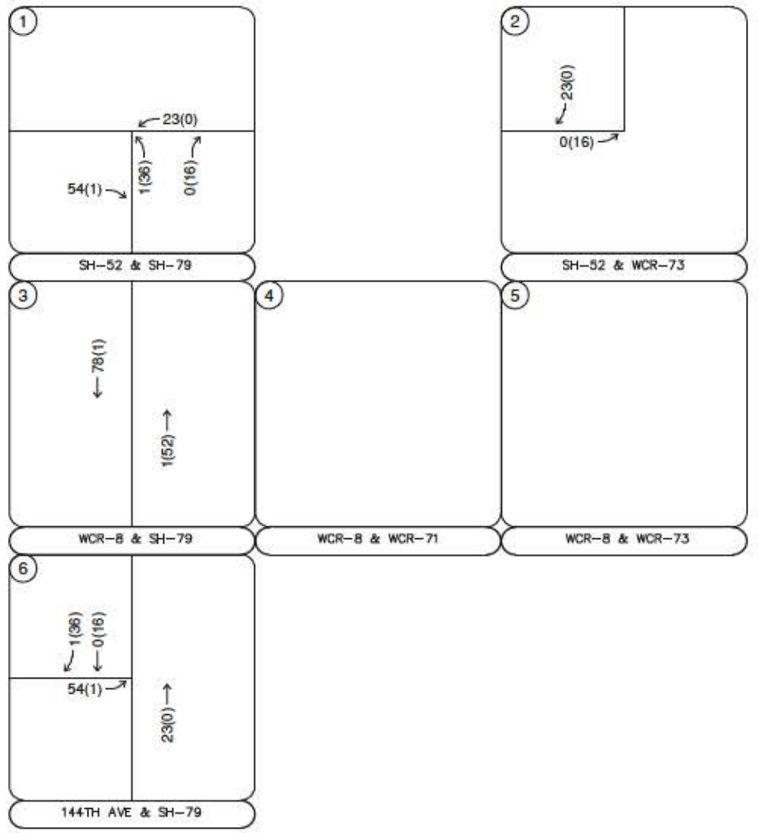
(X) Study Area Key Intersection

XX% External Trip Distribution Percentage

XX%[XX%] Entering[Exiting] Trip Distribution Percentage

FIGURE 5
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
WCR–73 ACCESS PROJECT TRIP DISTRIBUTION (CONSTRUCTION ACTIVITY ONLY)

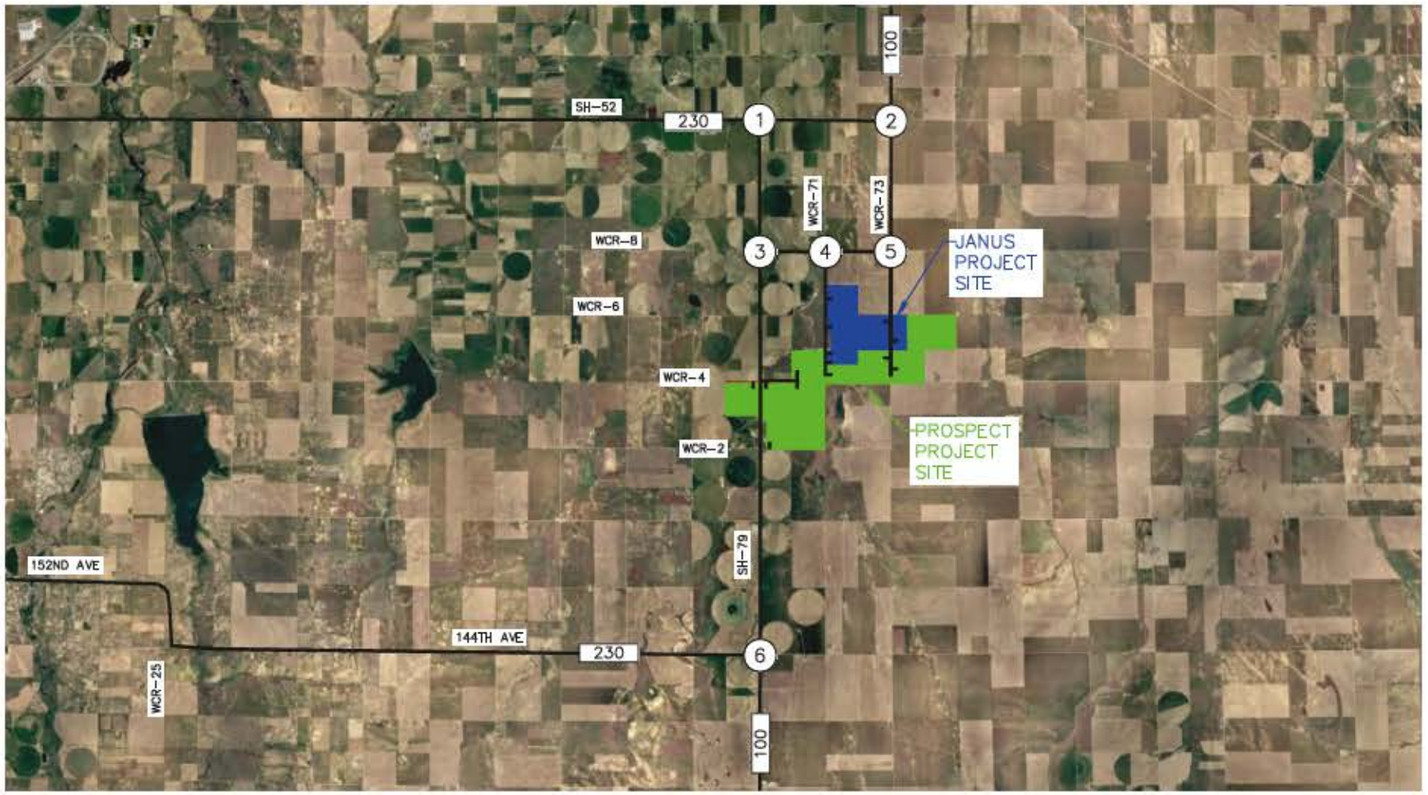
Traffic entering/exiting the project sites during construction was assumed to only use one access at a time. Once construction of each area is complete all traffic will be shifted to the next access.



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,XOO Estimated Daily Traffic Volume

FIGURE 6
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
SH-79 ACCESS PROJECT TRAFFIC ASSIGNMENT (CONSTRUCTION ACTIVITY ONLY)



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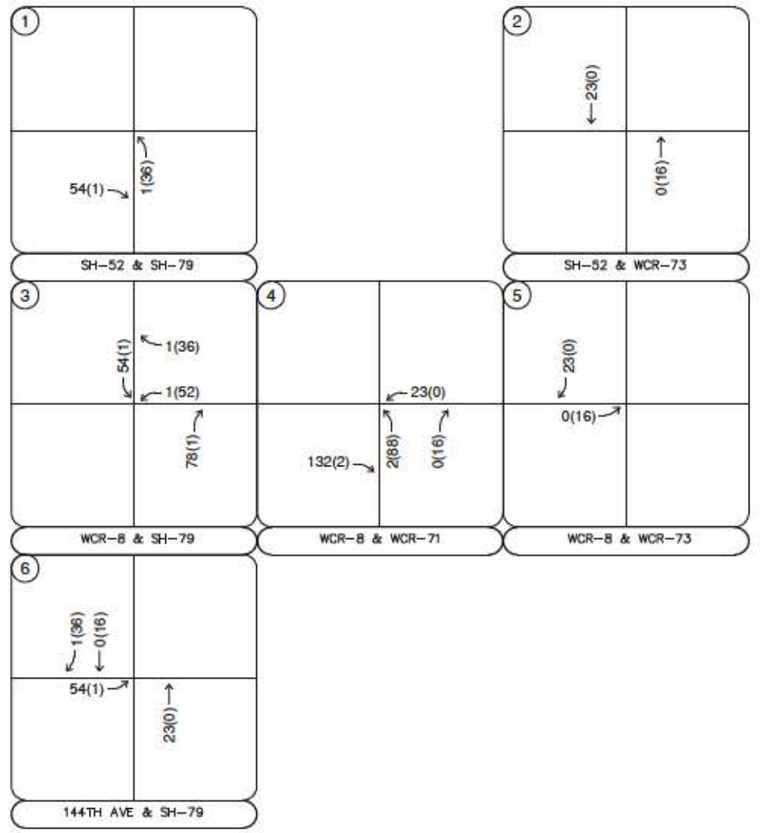


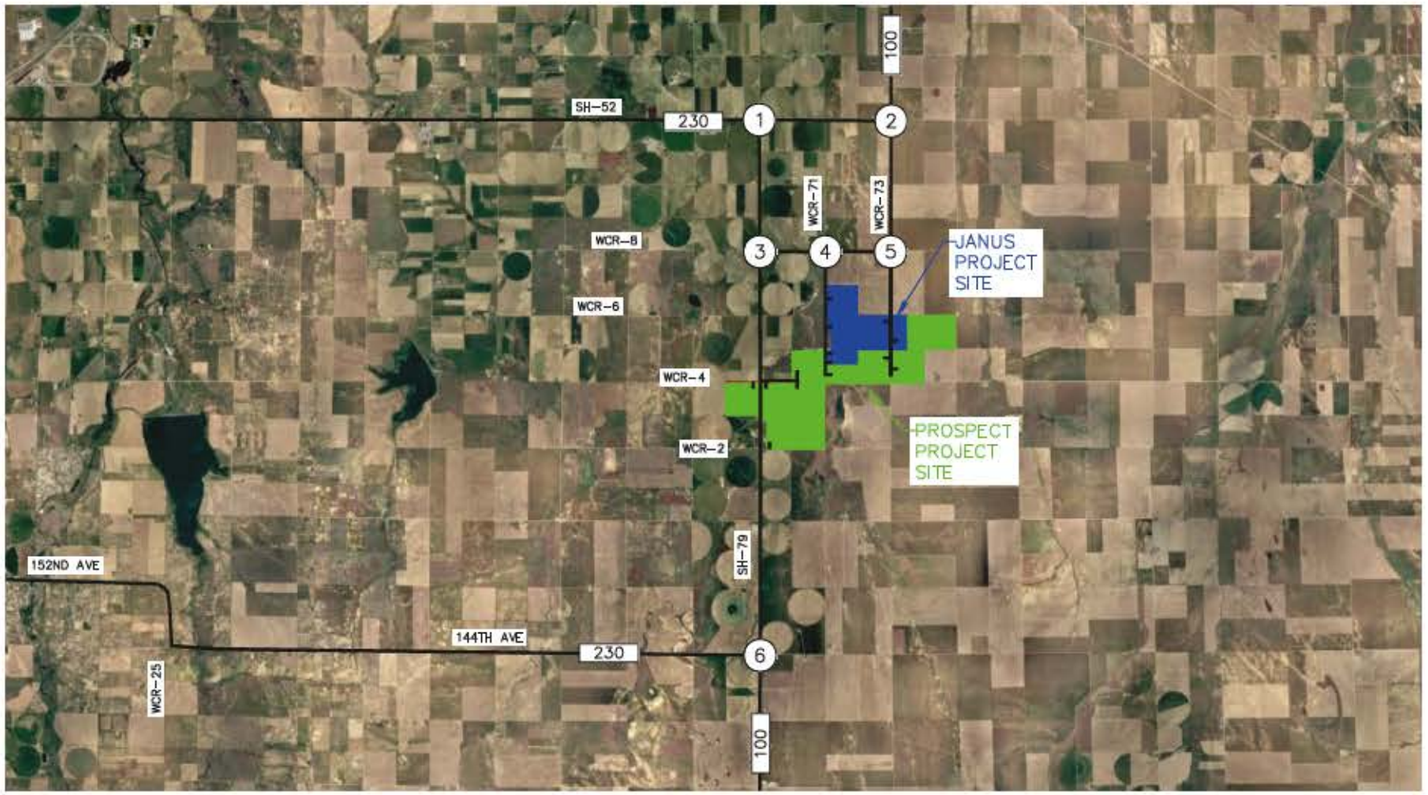
LEGEND

(X) Study Area Key Intersection

XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes

XX,X00 Estimated Daily Traffic Volume

FIGURE 7
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
WCR-71 ACCESS PROJECT TRAFFIC ASSIGNMENT (CONSTRUCTION ACTIVITY ONLY)



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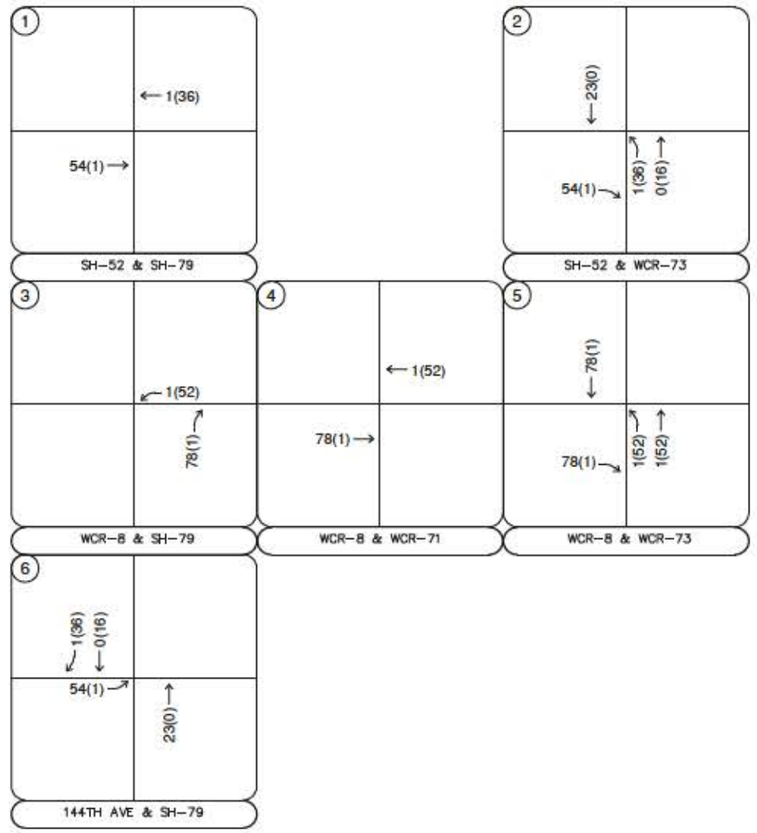


LEGEND

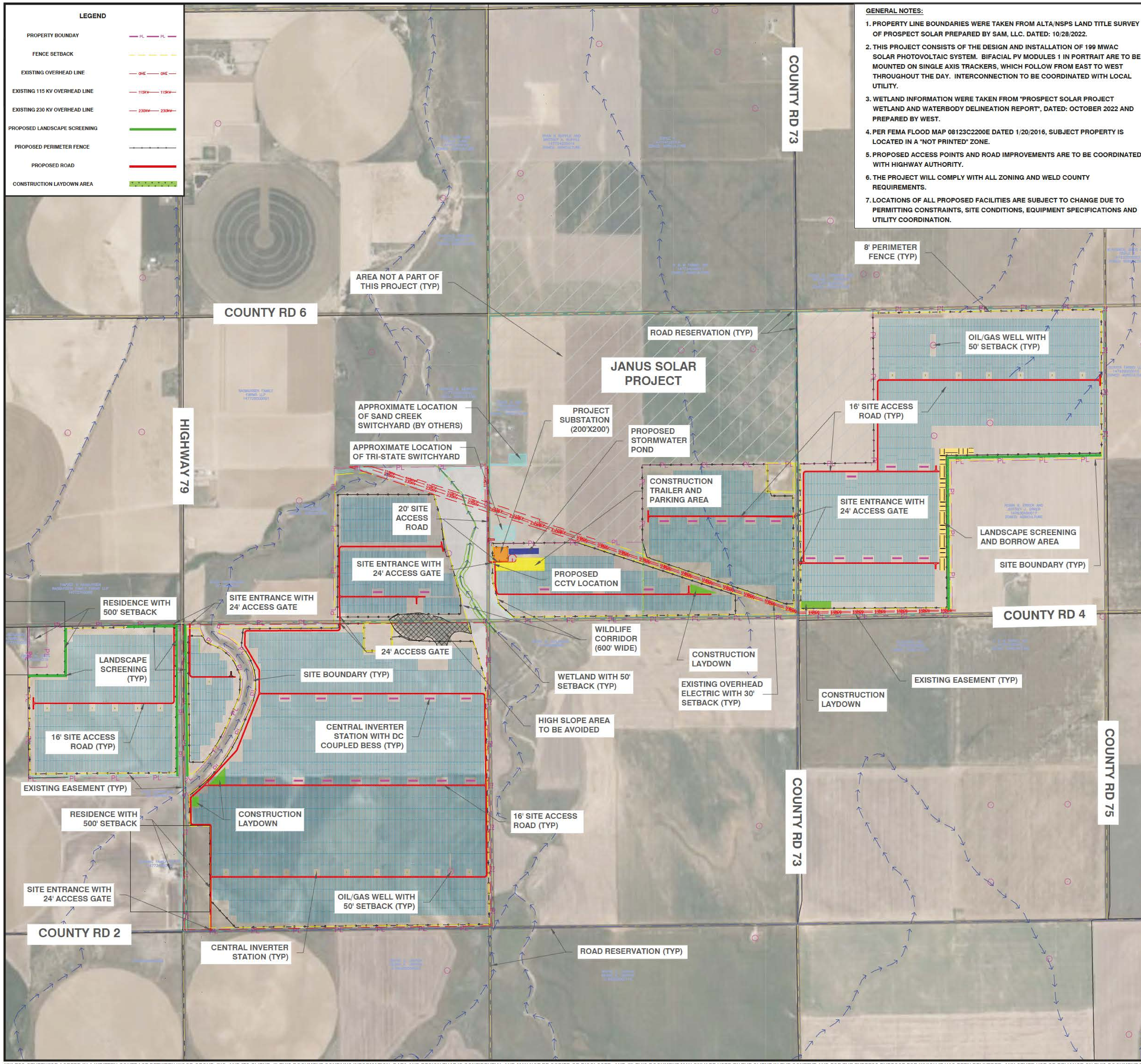
(X) Study Area Key Intersection

XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes

XX,X00 Estimated Daily Traffic Volume

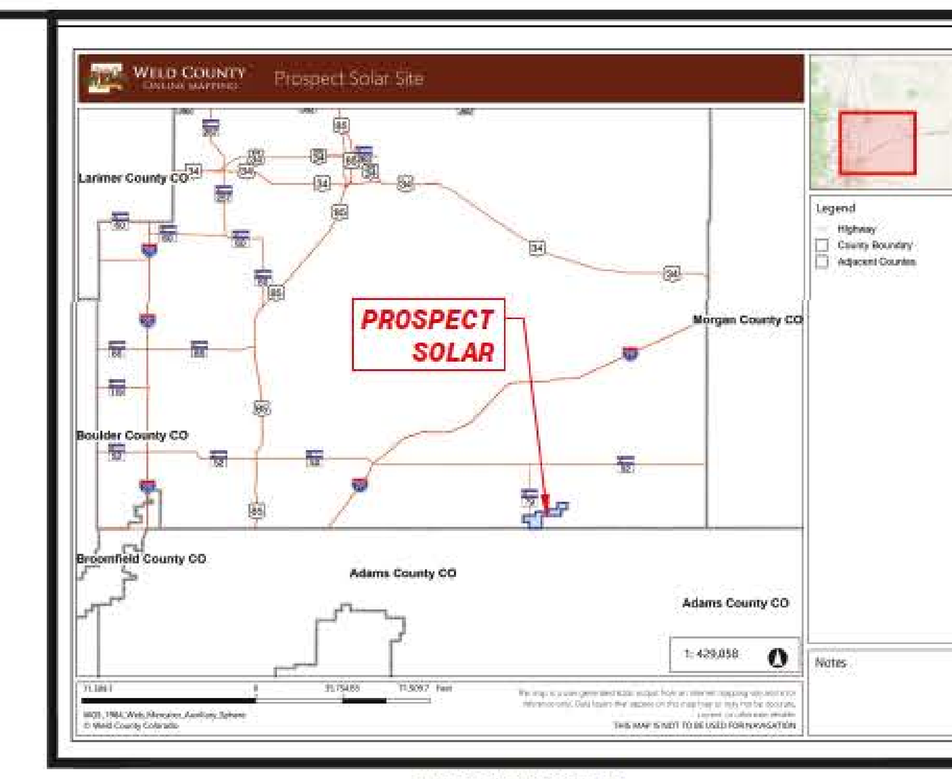
FIGURE 8
PROSPECT & JANUS SOLAR
WELD COUNTY, COLORADO
WCR-73 ACCESS PROJECT TRAFFIC ASSIGNMENT (CONSTRUCTION ACTIVITY ONLY)

Conceptual Site Plans



GENERAL NOTES:

1. PROPERTY LINE BOUNDARIES WERE TAKEN FROM ALTA/NSPS LAND TITLE SURVEY OF PROSPECT SOLAR PREPARED BY SAM, LLC. DATED: 10/28/2022.
2. THIS PROJECT CONSISTS OF THE DESIGN AND INSTALLATION OF 199 MWAC SOLAR PHOTOVOLTAIC SYSTEM. BIFACIAL PV MODULES 1 IN PORTRAIT ARE TO BE MOUNTED ON SINGLE AXIS TRACKERS, WHICH FOLLOW FROM EAST TO WEST THROUGHOUT THE DAY. INTERCONNECTION TO BE COORDINATED WITH LOCAL UTILITY.
3. WETLAND INFORMATION WERE TAKEN FROM "PROSPECT SOLAR PROJECT WETLAND AND WATERBODY DELINEATION REPORT", DATED: OCTOBER 2022 AND PREPARED BY WEST.
4. PER FEMA FLOOD MAP 08123C2200E DATED 1/20/2016, SUBJECT PROPERTY IS LOCATED IN A "NOT PRINTED" ZONE.
5. PROPOSED ACCESS POINTS AND ROAD IMPROVEMENTS ARE TO BE COORDINATED WITH HIGHWAY AUTHORITY.
6. THE PROJECT WILL COMPLY WITH ALL ZONING AND WELD COUNTY REQUIREMENTS.
7. LOCATIONS OF ALL PROPOSED FACILITIES ARE SUBJECT TO CHANGE DUE TO PERMITTING CONSTRAINTS, SITE CONDITIONS, EQUIPMENT SPECIFICATIONS AND UTILITY COORDINATION.

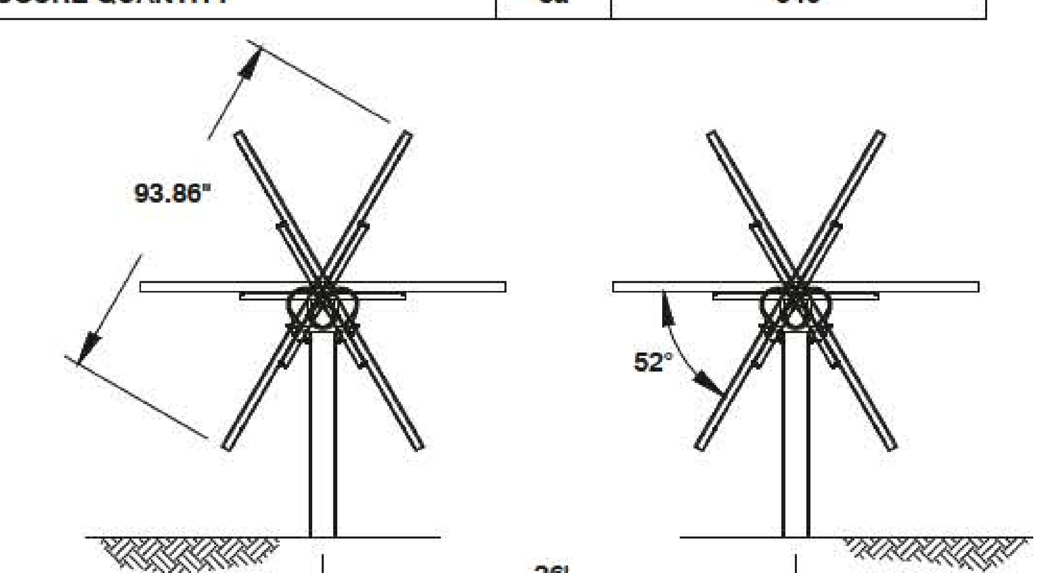


VINCINITY MAP

PROJECT SITE DETAILS	
LATITUDE	40.02710
LONGITUDE	-104.3955
INTERCONNECTION VOLTAGE	230 KV
PROJECT AREA	1,584.3 ACRES
PARCEL ID'S:	147726000003, 147725000007, 147725200002, 147725000008, 147930100014, 147930000001, 147734000020, 147735000005
OWNER	HORUS ENERGY
EXISTING ZONING	AGRICULTURE
EXISTING USE	AGRICULTURE
PROPOSED USE	SOLAR PV GENERATION
FENCED AREA	1,329 ACRES
FENCE LENGTH	82,168 LF
ACCESS GATE (2 @ 12')	8 LOCATIONS
16' ACCESS RD	51,328 LF
20' ACCESS RD	2,053 LF

SYSTEM SPECIFICATION

SYSTEM		ENTIRE POWER PLANT
SYSTEM SIZE AC (@POI)	kWac	199,000
SYSTEM SIZE AC (UNITY PF)	kWac	235,200
SYSTEM SIZE AC (@PF)	kWac	217,560
SYSTEM SIZE DC	Wdc	267,632,300
INVERTER MANUFACTURER		POWER ELECTRONICS
INVERTER MODEL		FS4200M
RATED POWER	kWac	4,200
INVERTER QUANTITY	EA	56
DC/AC RATIO (SYSTEM SIZE DC/SYSTEM SIZE AC)	POI	1.34
MODULE MANUFACTURER		TRINA
MODULE		TSM-DEG21C.20-650
RATED POWER (Pmp)	W	650
MODULES PER STRING	EA	29
TOTAL STRINGS	EA	14,198
TOTAL MODULES	EA	411,742
RACK TYPE		TRACKER
TRACKER MANUFACTURER		GAME CHANGE
TRACKER ROTATION / TILT	°	52
AZIMUTH	°	180
ROW WIDTH ON CENTER (PITCH)	FT	26
GCR	%	30.1
ESS CONFIGURATION		DC-COUPLED
ESS MANUFACTURER		POWIN
ESS MODEL		STACK 750E
ESS USABLE POWER CAPACITY (@POI)	kWac	100,000
ESS USABLE ENERGY CAPACITY (@POI @PF @BOL)	kWhac	400,000
ESS DURATION	hrs	4
DC-COUPLED ESS INVERTER QUANTITY	ea	32
ESS ENCLOSURE QUANTITY	ea	640



PV RACK ARRANGEMENT SIDE VIEW
N.T.S.

WORK SAFELY

wood.

WOOD
RENEWABLES, PROJECT DEVELOPMENT & ENGINEERING
3636 Executive Center Drive, Suite 100
Austin, TX 78731
WEB: WWW.WOODPLC.COM

REVISION	DATE	ISSUE / REVISION DESCRIPTION	ISSUED	APPROVED
D	10APR2024	UPDATED BACKGROUND TO MATCH PLOT PLANS	MSN	HI
C	10OCT2023	ISSUED FOR INFORMATION	MSN	HI
B	29SEP2023	ISSUED FOR INFORMATION	KV	HI
A	05SEP2023	ISSUED FOR INFORMATION	KV	HI

PROJECT: PROSPECT SOLAR PV & BESS PROJECT WELD COUNTY, COLORADO

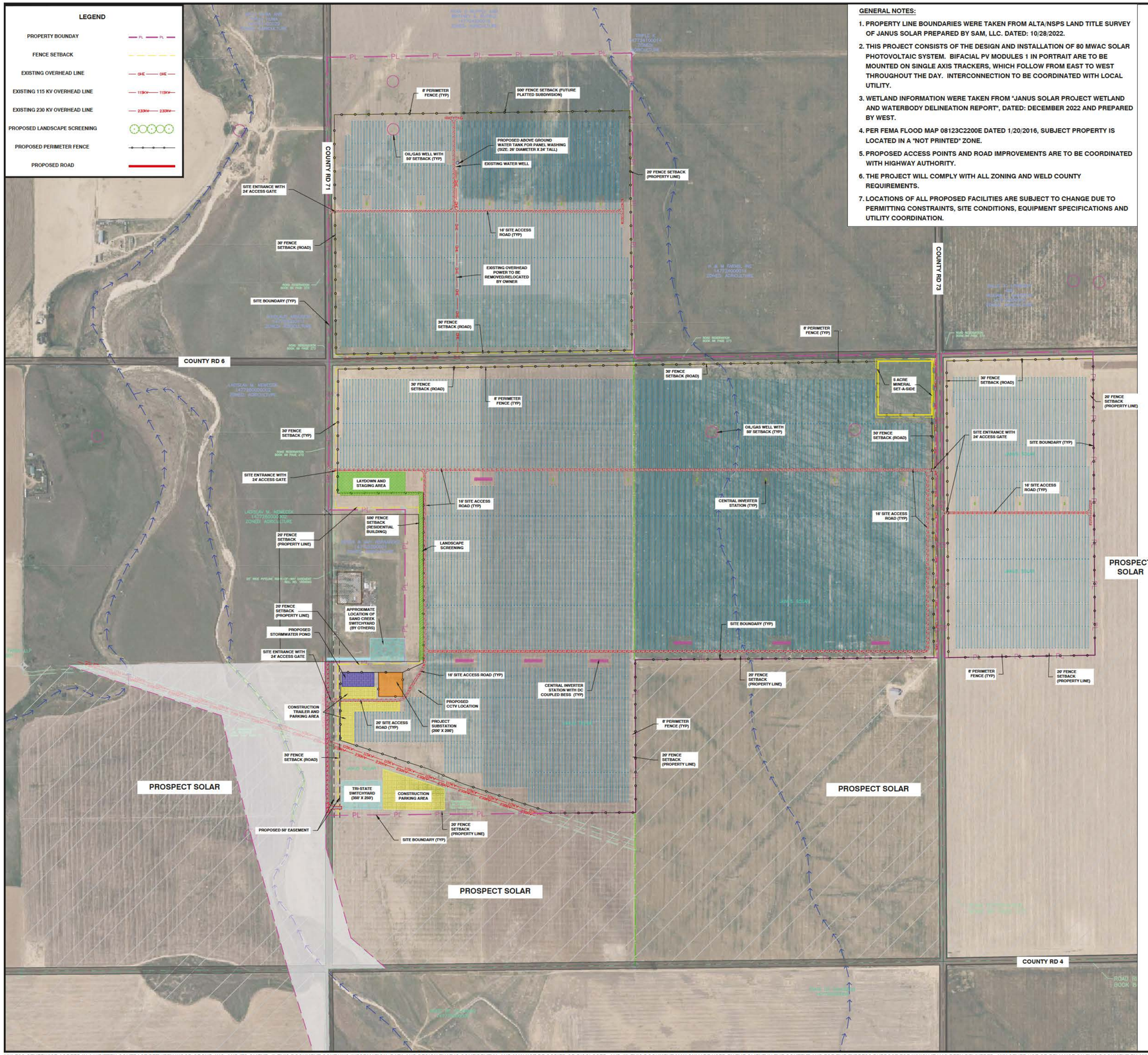
TITLE: CONCEPTUAL SITE PLAN

CLIENT: HORUS ENERGY

SEAL: PRELIMINARY NOT FOR CONSTRUCTION

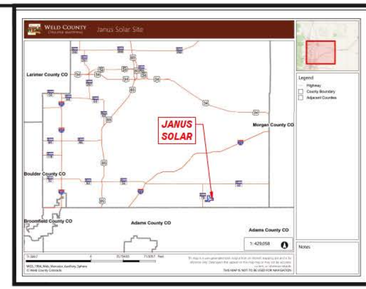
CIVIL DESIGN BY: KV	SOLAR DESIGN BY: HJ
CHECKED BY: AR	SCALE: 1" = 800'
PROJECT NUMBER: 25544006	
DRAWING NUMBER: 25544006-US-PD-DWG-C100	
SHEET NUMBER: C100	

SAVED: 09-Apr-24 1:36 PM PLOTTED: — — USER: NEWMAN, MARC



GENERAL NOTES:

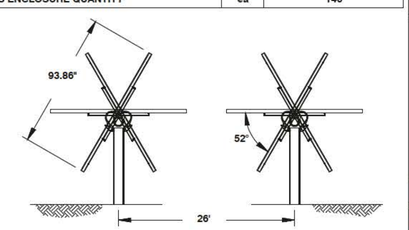
1. PROPERTY LINE BOUNDARIES WERE TAKEN FROM ALTA/NSPS LAND TITLE SURVEY OF JANUS SOLAR PREPARED BY SAM, LLC. DATED: 10/28/2022.
2. THIS PROJECT CONSISTS OF THE DESIGN AND INSTALLATION OF 80 MWAC SOLAR PHOTOVOLTAIC SYSTEM. BIFACIAL PV MODULES 1 IN PORTRAIT ARE TO BE MOUNTED ON SINGLE AXIS TRACKERS, WHICH FOLLOW FROM EAST TO WEST THROUGHOUT THE DAY. INTERCONNECTION TO BE COORDINATED WITH LOCAL UTILITY.
3. WETLAND INFORMATION WERE TAKEN FROM "JANUS SOLAR PROJECT WETLAND AND WATERBODY DELINEATION REPORT", DATED: DECEMBER 2022 AND PREPARED BY WEST.
4. PER FEMA FLOOD MAP 08123C2200E DATED 1/20/2016, SUBJECT PROPERTY IS LOCATED IN A "NOT PRINTED" ZONE.
5. PROPOSED ACCESS POINTS AND ROAD IMPROVEMENTS ARE TO BE COORDINATED WITH HIGHWAY AUTHORITY.
6. THE PROJECT WILL COMPLY WITH ALL ZONING AND WELD COUNTY REQUIREMENTS.
7. LOCATIONS OF ALL PROPOSED FACILITIES ARE SUBJECT TO CHANGE DUE TO PERMITTING CONSTRAINTS, SITE CONDITIONS, EQUIPMENT SPECIFICATIONS AND UTILITY COORDINATION.



VICINITY MAP

PROJECT SITE DETAILS	
LATITUDE	40.02710
LONGITUDE	-104.3955
INTERCONNECTION VOLTAGE	230 KV
PROJECT AREA	619.8 ACRES
PARCEL ID'S:	147724300016, 147725200002, 147725100011, 147930000001, 147725000007
OWNER	HORUS ENERGY
EXISTING ZONING	AGRICULTURE
EXISTING USE	AGRICULTURE
PROPOSED USE	SOLAR PV GENERATION
FENCED AREA	562.78 ACRES
FENCE LENGTH	36,645 LF
ACCESS GATE (2 @ 12')	5 LOCATIONS
16' ACCESS RD	18,838 LF
20' ACCESS RD	684 LF

SYSTEM SPECIFICATION		
SYSTEM		ENTIRE POWER PLANT
SYSTEM SIZE AC (@POI)	kWac	80,000
SYSTEM SIZE AC (UNITY PF)	kWac	96,600
SYSTEM SIZE AC (@PF)	kWac	81,521
SYSTEM SIZE DC	Wdc	110,479,850
INVERTER MANUFACTURER		POWER ELECTRONICS
INVERTER MODEL		FS4200M
RATED POWER	kWac	4,200
INVERTER QUANTITY	EA	23
DC/AC RATIO (SYSTEM SIZE DC/SYSTEM SIZE AC)	POI	1.38
MODULE MANUFACTURER		TRINA
MODULE		TSM-DEG21C.20-650
RATED POWER (Pmp)	W	650
MODULES PER STRING	EA	29
TOTAL STRINGS	EA	5,861
TOTAL MODULES	EA	169,969
RACK TYPE		TRACKER
TRACKER MANUFACTURER		GAME CHANGE
TRACKER ROTATION / TILT	°	52
AZIMUTH	°	180
ROW WIDTH ON CENTER (PITCH)	FT	26
GCR	%	30.1
ESS CONFIGURATION		DC-COUPLED
ESS MANUFACTURER		POWIN
ESS MODEL		STACK 750E
ESS USABLE POWER CAPACITY (@POI)	kWac	20,000
ESS USABLE ENERGY CAPACITY (@POI @PF @BOL)	kWhac	80,000
ESS DURATION	hrs	4
DC-COUPLED ESS INVERTER QUANTITY	ea	7
ESS ENCLOSURE QUANTITY	ea	140



PV RACK ARRANGEMENT SIDE VIEW
N.T.S.

0 100'200' 400' 800'
1"=400'-0"

WORK SAFELY

wood.
WOOD RENEWABLES, PROJECT DEVELOPMENT & ENGINEERING
3636 Executive Center Drive, Suite 100
Austin, TX 78731
WEB: WWW.WOODPLC.COM

REVISION	DATE	ISSUE / REVISION DESCRIPTION	ISSUED	APPROVED
E	10APR2024	UPDATED BACKGROUND TO MATCH PLOT PLANS	MSN	HI
D	19OCT2023	ISSUED FOR INFORMATION	MSN	HI
C	10OCT2023	ISSUED FOR INFORMATION	MSN	HI
B	29SEP2023	ISSUED FOR INFORMATION	KV	HI
A	08SEP2023	ISSUED FOR INFORMATION	MSN	HI

PROJECT: JANUS SOLAR PV & BESS PROJECT
WELD COUNTY, COLORADO

TITLE: CONCEPTUAL SITE PLAN

CLIENT: HORUS ENERGY

SEAL:
PRELIMINARY
NOT FOR CONSTRUCTION

CIVIL DESIGN BY:	SOLAR DESIGN BY:
MSN	HJ
CHECKED BY:	SCALE:
AR	1" = 400'

PROJECT NUMBER: 25544007

DRAWING NUMBER: 25544007-US-PD-DWG-C100

SHEET NUMBER: C100

DATA:E:\CUSERS\MARC.NEWMAN\ONEDRIVE - WOOD PLC\DPAE_PROJ\HORUS\JANUS\04_CIVIL & DESIGN\DWG\C4D\25544007-US-PD-DWG-CONCEPTUAL LAYOUT_REVE.DWG

SAVED: 10-Apr-24 10:38 AM PLOTTED: — — USER: NEWMAN, MARC