



MEMORANDUM Transportation & Development - CC Memo No. 11-020

DATE: MARCH 22, 2011

TO: MAYOR AND CITY COUNCIL

THRU: RICH DLUGAS, ACTING CITY MANAGER RD
 PATRICK MCDERMOTT, ASSISTANT CITY MANAGER ^{PM}
 R.J. ZEDER, TRANSPORTATION & DEVELOPMENT DIRECTOR ^{RJZ}
 JEFF KURTZ, PLANNING ADMINISTRATOR ^{JK}
 KEVIN MAYO, PLANNING MANAGER ^{KM}

FROM: DAVID DE LA TORRE, PRINCIPAL PLANNER ^{DDT}

SUBJECT: DVR11-0001 RDR SOLAR FARM
 Introduction and tentative adoption of Ordinance No. 4290

Request: Rezoning from Agricultural District (AG-1) to Agricultural District/Planned Area Development (AG-1/PAD) with Preliminary Development Plan approval for the installation of a 150 KW solar photovoltaic system

Location: Southwest corner of Pecos Road and Norman Way

Applicant: Randy Jackson

RECOMMENDATION

Planning Commission and Staff, upon finding the proposed use to be compatible with the surrounding land uses and upon finding consistency with the General Plan, recommend approval of rezoning and Preliminary Development Plan (PDP) subject to conditions.

BACKGROUND

The subject property is bordered by Pecos Road on the North, Norman Way on the East, and townhomes on the South and West. The property wraps around a 1,634 square foot lot owned by Qwest Corporation located on the immediate southwest corner of Pecos Road and Norman Way. Across the street on the north side of Pecos Road is the Chandler-Gilbert Community College and across the street on the east side of Norman Way is the Chandler 202 Auto Park.

The General Plan identifies the property being located in the Airpark Area Plan, which in turn, identifies the area as Public/Semi-Public Facilities and medium density residential. It is important to note that the land use designations in the Airpark Area Plan do not follow property lines, and therefore, at first glance it may appear that the subject property is designated as Regional Commercial. However, when the Rancho Del Ray subdivision was developed, it effectively moved the Regional Commercial land use designation further east to where the Chandler 202 Auto Park is currently located. The subject property was excluded from the PAD zoning at the time that Rancho Del Ray received zoning approval in 2001.

The request is to rezone the subject .547-acre site from AG-1 to AG-1/PAD to allow the installation of a 150 KW solar photovoltaic (PV) system. The requested PAD zoning overlay would allow the property owner to install the solar PV system while retaining the existing agricultural zoning rights. The proposed solar PV system includes 565 solar panels mounted on 14 ground mounted north-south axles that will enable the panels to rotate slowly throughout the day to follow the movement of the sun. The axles on which the solar panels will pivot will be 4-feet high and the highest point of the solar panels when rotated as much as 45-degrees to either side will not be higher than the surrounding property wall.

The property will be enclosed by a 6-foot high decorative masonry wall and landscaping will be installed along the streets to match the existing Rancho Del Ray development theme. Vehicular access to the site will be provided with a 20-foot sliding gate along Norman Way. An emergency only pedestrian gate will also be provided on the north side of the property.

An 8-foot wide setback has been provided along the perimeter of the site to accommodate emergency personnel in the event of an on-site emergency. The site will be finished with stabilized decomposed granite. One parking space is provided on the east side of the property for a maintenance vehicle.

DISCUSSION

The zoning code does not currently identify development standards specifically for solar energy systems. Given the unique nature of the proposal, being a solar energy system that will be completely screened from public view and will be the primary use of the property as opposed to being attached to another structure or dwelling unit, Staff did not feel that typical development standards such as a 50-foot setback from Pecos Road, 30-foot setback from Norman Way, dissimilar land use buffer, lot coverage, or parking are appropriate for the proposed use. Instead, Staff focused on two goals, safety and land use compatibility.

First and foremost, Staff analyzed the project from a safety standpoint. The applicant's initial proposal did not include an 8-foot setback around the perimeter nor a second access point for emergency personnel. Upon Staff's request, these were added after meeting with Transportation and Development and Fire Department Staff.

Glare was also initially a concern, however, after further analysis Staff believes glare will not be an issue for the following reasons:

- In the morning and evening hours when the sun is located closer to the east and west horizons, the solar panels will be tilted at a 45-degree angle facing the sun thus deflecting any glare away from the property located west of the subject site and east along Norman Way.
- The nearest townhome unit, which is approximately 15-feet from the western property line does not have 2nd story windows that face the property.
- According to the reflection elevation included in the Electrical Drawings tab in the back of the attached booklet, on Dec. 21st, the time of year with the lowest sun angle, the line of reflection from the sun will be approximately 15-feet high over the area where the sidewalk curb ends and the southern-most traffic lane on Pecos Road begins. The line of reflection continues higher as it moves north over Pecos Road.
- According to a solar guide issued by the Federal Aviation Administration (FAA), "Technical Guidance for Evaluating Selected Solar Technologies on Airports" dated November 2010, solar PV employs glass panels that are designed to maximize absorption and minimize reflection to increase the efficiency of electricity production. The report states that modern solar panels reflect as little as 2% of the incoming sunlight, compared to 17% from wood shingles and 30% from bare soil. The report provides this information as background to place the reflectivity of different surfaces into perspective, but does not imply that solar panels will never create a glare problem.

With respect to security, the property will be lit at night by streetlights along Pecos Road, Norman Way and a private drive that abuts the south side of the property. Per stipulation 7 added by Planning Commission, the property will also be monitored by a security camera system. Regular landscape maintenance will also help by having someone physically present at the property to keep an eye on the property.

From a land use compatibility standpoint, Staff finds that the proposed use will generate no traffic, except for the occasional maintenance visit once or twice a year. Further, the solar system will not emit any noise, fragrance or light. Aesthetically, the proposal does not include any signage and the perimeter wall and landscaping is designed to match the existing development theme so that it will be integrated with the abutting subdivision. For these reasons, Staff finds that there are no significant negative land use externalities from the proposed solar energy system, and therefore is a compatible land use as well as a creative solution given the size and location constraints of the property.

PUBLIC/NEIGHBORHOOD NOTIFICATION

- This request was noticed in accordance with the requirements of the Chandler Zoning Code.
- A neighborhood meeting was held on 02/22/2011 at the Chandler Community Center. A representative from DK Chandler Auto LLC, who owns vacant lots in the Chandler 202 Auto Park and the property located on the immediate northwest corner of Pecos & Gilbert Roads was in attendance. No other neighbors attended and no opposition was received.
- Staff received three phone calls from residential property owners. Two requested more information and were not opposed. The third is a member of the Board of Directors for the

Rancho Del Ray HOA who expressed security and maintenance concerns. This gentleman spoke at the Planning Commission hearing and his concerns were satisfied with the stipulations added by Planning Commission.

PLANNING COMMISSION VOTE REPORT

Motion to Approve:

In Favor: 6 Opposed: 0 Absent: 1 (Baron)

Planning Commission added stipulations 6, 7 & 8. Stipulation 6 was added to ensure that no part of the solar system, including the solar panels, will be visible above the perimeter wall at any time regardless of the angle of the solar panels. Stipulations 7 & 8 were added after Planning Commission emphasized the applicant's responsibility for regularly keeping an eye on the condition of the property to ensure the security of the property as well as to make certain that it is maintained in a weed and debris free manner. In doing so, Planning Commission stressed that neighbors should not be held responsible for the property's security and maintenance by relying on their complaints to the city.

RECOMMENDED ACTION

Planning Commission and Staff, upon finding the proposed use to be compatible with the surrounding land uses and upon finding consistency with the General Plan, recommend approval of the rezoning and PDP in case DVR11-0001 RDR SOLAR FARM, subject to the following conditions:

1. Development shall be in substantial conformance with Exhibit A, Development Booklet, entitled "RDR Solar Farm" kept on file in the City of Chandler Current Planning Division, in file number DVR11-0001, except as modified by condition herein.
2. The landscaping in all open spaces and rights-of-way shall be maintained by the adjacent property owner.
3. Approval by the Director of Transportation and Development of plans for landscaping (open spaces and rights-of-way) and perimeter walls.
4. Construction shall commence above foundation walls within three (3) years of the effective date of the ordinance granting this rezoning or the City shall schedule a public hearing to take administrative action to extend, remove or determine compliance with the schedule for development or take legislative action to cause the property to revert to its former zoning classification.
5. Completion of the construction, where applicable, of all required off-site street improvements including but not limited to paving, landscaping, curb, gutter and sidewalks, median improvements and street lighting to achieve conformance with City codes, standard details, and design manuals.

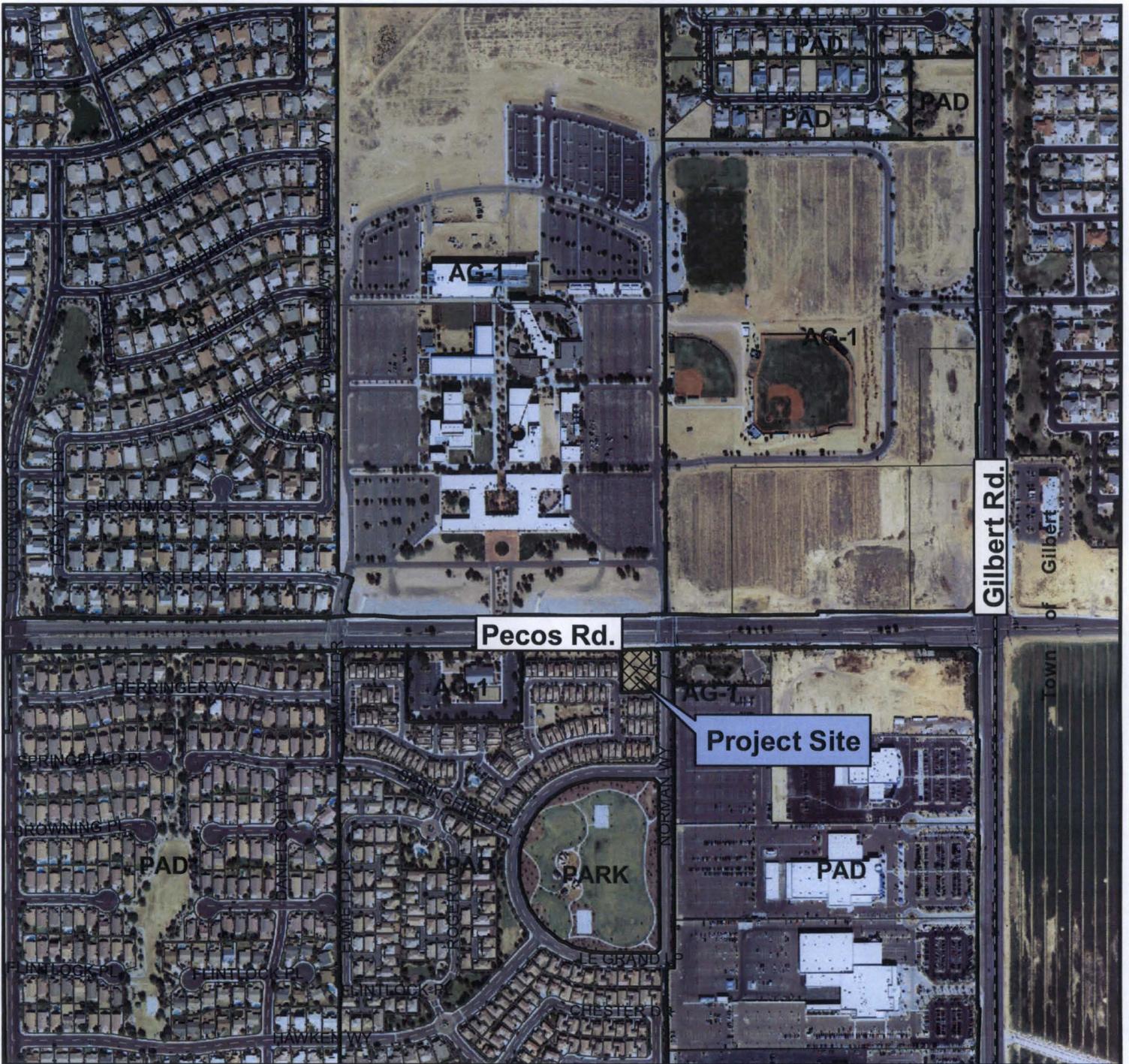
6. All mechanical devices shall be completely screened from view.
7. A security camera system shall be installed on the property.
8. The landscaping and property shall be continuously maintained in a weed free manner and kept in a debris free manner at all times.

PROPOSED MOTION

Move to introduce and tentatively adopt Ordinance No. 4290 rezoning from AG-1 to AG-1/PAD with Preliminary Development Plan approval as represented in case DVR11-0001 THE RDR SOLAR FARM subject to conditions recommended by Planning Commission and Staff.

Attachments

1. Vicinity Maps
2. Site Plan
3. Ordinance No. 4290
4. Preliminary Development Plan Booklet

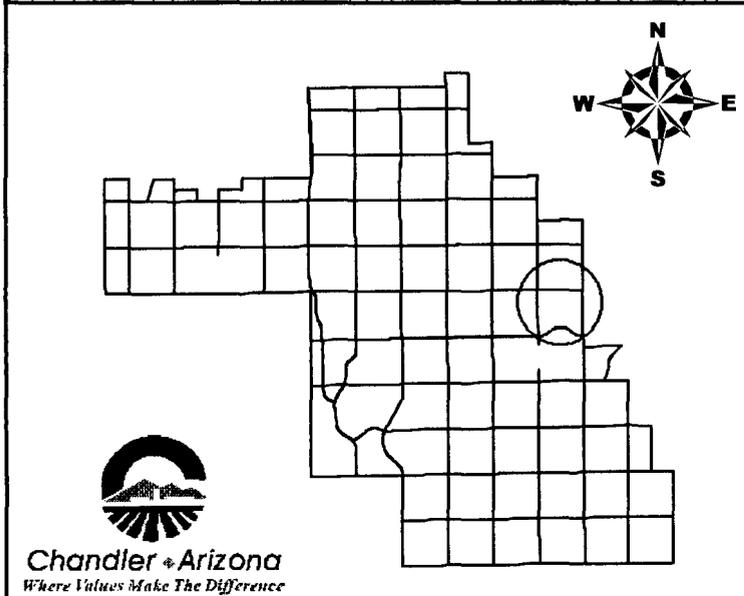
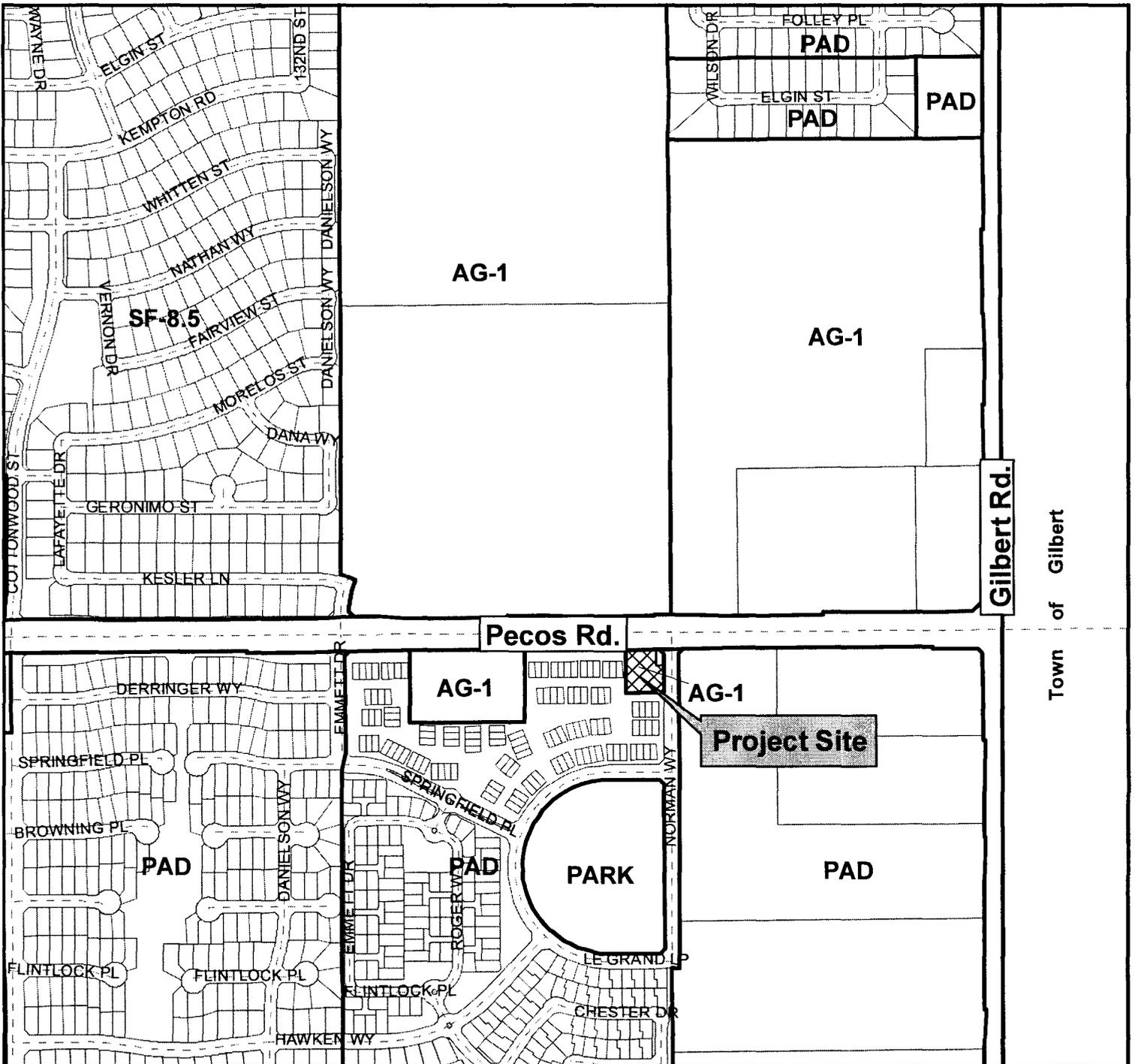


Vicinity Map



DVR11-0001
RDR Solar Farm





Vicinity Map

DVR11-0001

RDR Solar Farm

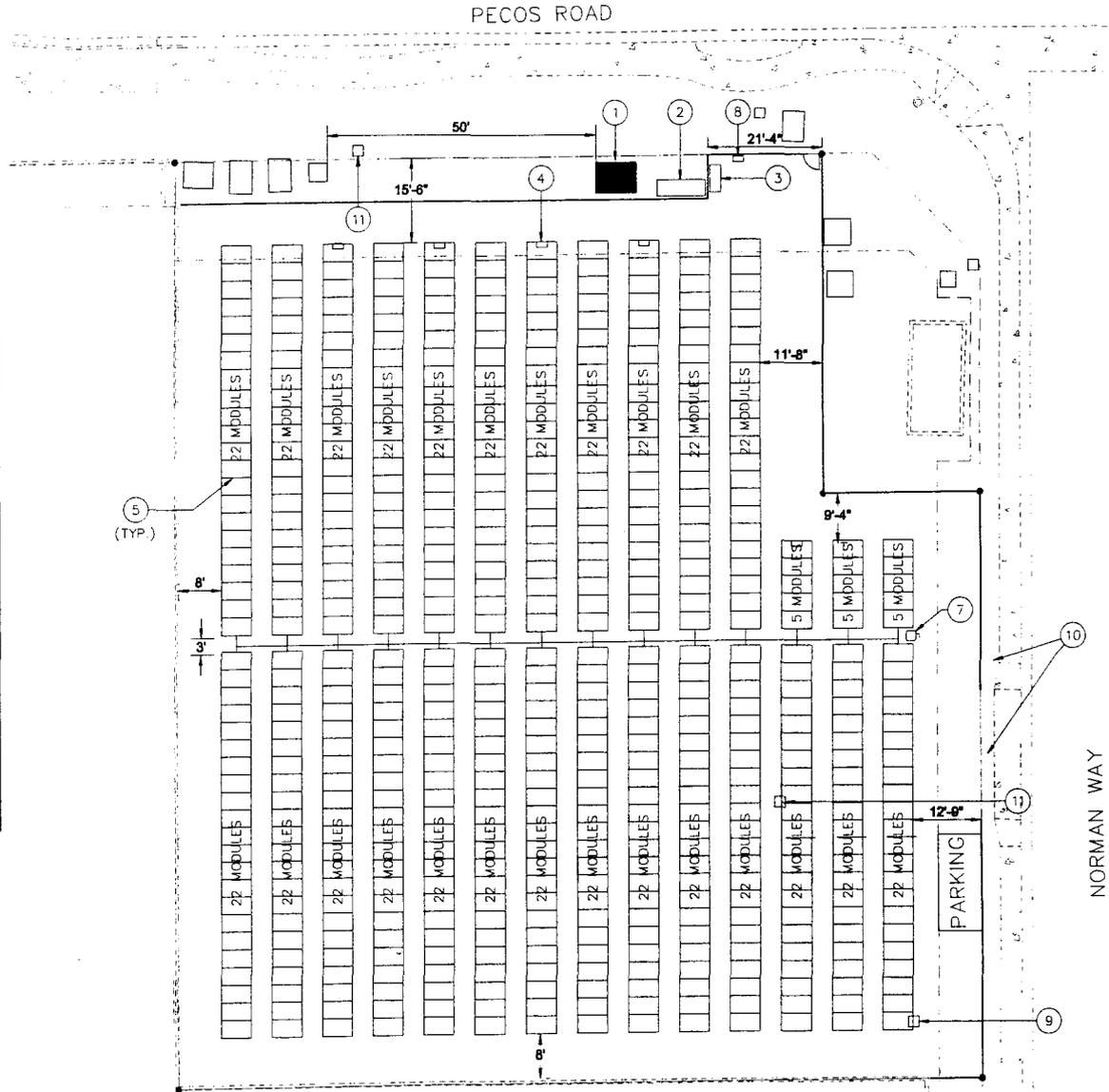
CITY OF CHANDLER 1/27/2011

PROJECT NARRATIVE.

PROJECT CONSISTS OF AN 150KW DC/135KW AC SOLAR FARM UTILIZING A SINGLE-AXIS GROUND MOUNTED TRACKING SYSTEM TO PRODUCE ELECTRICAL POWER ONTO THE SRP UTILITY GRID. MAJOR COMPONENTS INCLUDE APPROX. 565 235W SOLAR PV MODULES, A 135KW INVERTER, AND A 400A 480V 3-PHASE ELECTRICAL SERVICE. THE ARRAY IS TO BE GROUND MOUNTED ON A SYSTEM OF 14 SETS OF AXLES ON VERTICAL SUPPORTS APPROX. 4' ABOVE THE GROUND AND WILL ROTATE SLOWLY THROUGHOUT THE DAY TO FOLLOW THE PATH OF THE SUN FROM EAST TO WEST.

KEYED NOTES

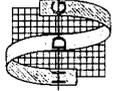
- 1 UTILITY XFMR
- 2 ELECTRICAL SERVICE ENTRANCE SECTION AND UTILITY METER.
- 3 "SATCON" PVS-135KW PAD MOUNTED GRID CONNECTED INVERTER.
- 4 DC COMBINER PANEL, TYP. OF 5
- 5 PHOTOVOLTAIC PANEL ARRAYS GROUND MOUNTED ON SINGLE-AXIS TRACKER.
- 6 NOT USED
- 7 TRACKING MOTOR: ESTIMATED @ 480V, 3 ϕ 3.0HP. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN.
- 8 SRP REMOTE DISCONNECT RTU.
- 9 OWEST TERMINATION CABINET TO BE RELOCATED.
- 10 BLOCK WALL TO MATCH EXISTING WITH ACCESS GATES AS SHOWN.
- 11 EXISTING UNUSED ELECTRICAL SERVICE TO BE REMOVED.



SITE PLAN
SCALE: 1" = 10'-0"

All drawings, designs and specifications are the property of the engineer. No part of this drawing shall be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the engineer.

HAYMS DESIGN GROUP, INC.
ELECTRICAL CONSULTING ENGINEER
252 SOUTH WASHINGTON, SUITE 107
MESA, ARIZONA 85201
PH: 480.833.9000 FAX: 480.833.9001
E-MAIL: info@haymsdesign.com



Project Name and Address:
RDR SOLAR FARM
8700 S. NORMAN WAY
CHANDLER, ARIZONA 85286
DESIGN REVIEW SET - NOT FOR CONSTRUCTION
ELECTRICAL PHOTOVOLTAIC SITE PLAN
& MODULE ARRAY DIAGRAM

Project Name

Date

Scale



Project Number: 1945
Project Designer / Checker: RDR

Sheet

ORDINANCE NO. 4290

AN ORDINANCE OF THE CITY OF CHANDLER, ARIZONA, AMENDING THE ZONING CODE AND MAP ATTACHED THERETO, BY REZONING A PARCEL FROM AGRICULTURAL (AG-1) TO AGRICULTURAL/PLANNED AREA DEVELOPMENT (AG-1/PAD) (DVR11-0001 RDR SOLAR FARM) LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF CHANDLER, ARIZONA.

WHEREAS, application for rezoning involving certain property within the corporate limits of Chandler, Arizona, has been filed in accordance with Article XXVI of the Chandler Zoning Code; and

WHEREAS, the application has been published in a local newspaper with general circulation in the City of Chandler, giving fifteen (15) days notice of time, place and date of public hearing; and

WHEREAS, a notice of such hearing was posted on the property at least seven (7) days prior to said public hearing; and

WHEREAS, a public hearing was held by the Planning and Zoning Commission as required by the Zoning Code

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Chandler, Arizona, as follows:

SECTION I. Legal Description of Property:

See Attachment 'A'.

Said parcel is hereby rezoned from Agricultural (AG-1) to Agricultural/Planned Area Development (AG-1/PAD), subject to the following conditions:

1. Development shall be in substantial conformance with Exhibit A, Development Booklet, entitled "RDR Solar Farm" kept on file in the City of Chandler Current Planning Division, in file number DVR11-0001, except as modified by condition herein.
2. The landscaping in all open spaces and rights-of-way shall be maintained by the adjacent property owner.

3. Approval by the Director of Transportation and Development of plans for landscaping (open spaces and rights-of-way) and perimeter walls.
4. Construction shall commence above foundation walls within three (3) years of the effective date of the ordinance granting this rezoning or the City shall schedule a public hearing to take administrative action to extend, remove or determine compliance with the schedule for development or take legislative action to cause the property to revert to its former zoning classification.
5. Completion of the construction, where applicable, of all required off-site street improvements including but not limited to paving, landscaping, curb, gutter and sidewalks, median improvements and street lighting to achieve conformance with City codes, standard details, and design manuals.
6. All mechanical devices shall be completely screened from view.
7. A security camera system shall be installed on the property.
8. The landscaping and property shall be continuously maintained in a weed free manner and kept in a debris free manner at all times.

SECTION II. Except where provided, nothing contained herein shall be construed to be an abridgment of any other ordinance of the City of Chandler.

SECTION III. The Transportation & Development Department of the City of Chandler is hereby directed to enter such changes and amendments as may be necessary upon the Zoning Map of said Zoning Code in compliance with this ordinance.

INTRODUCED AND TENTATIVELY APPROVED by the City Council this _____ day of _____, 2011.

ATTEST:

CITY CLERK

MAYOR

PASSED AND ADOPTED by the City Council this _____ day of _____,
2011.

ATTEST:

CITY CLERK

MAYOR

CERTIFICATION

I, HEREBY CERTIFY, that the above and foregoing Ordinance No. 4290 was duly passed and adopted by the City Council of the City of Chandler, Arizona, at a regular meeting held on the _____ day of _____, 2011, and that a quorum was present thereat.

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY *GAB*

PUBLISHED:

Attachment A
Ordinance No. 4290

LEGAL DESCRIPTION OF RECORD:

A PORTION OF FARM UNITS "H" AND "J" OR THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 2 SOUTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER CORNER OF SAID SECTION 1; THENCE NORTH 89° 27' 31" EAST, ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1, A DISTANCE OF 1,321.32 FEET; THENCE DEPARTING SAID NORTH LINE, SOUTH 00°12' 57" EAST A DISTANCE OF 91.17 FEET; THENCE NORTH 89° 47' 03" WEST, A DISTANCE OF 30.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 00° 12' 57" EAST, A DISTANCE OF 151.00 FEET; THENCE SOUTH 89° 27' 31" WEST, A DISTANCE OF 150.00 FEET; THENCE NORTH 00° 12' 57" WEST A DISTANCE OF 171.00 FEET; THENCE NORTH 89° 27' 31" EAST, PARALLEL TO AND 71.00 FEET SOUTH OF THE NORTH LINE OF SAID SECTION 1, A DISTANCE OF 130.00 FEET; THENCE SOUTH 45°22' 43" EAST, A DISTANCE OF 28.20 FEET TO THE TRUE POINT OF BEGINNING;

EXCEPT THE NORTH 33 FEET;

EXCEPT THAT PORTION DEEDED TO THE CITY OF CHANDLER IN WARRANTY DEED RECORDED IN DOCUMENT NO. 2003-1416939, RECORDS OF MARICOPA COUNTY, ARIZONA;

EXCEPT THAT PORTION DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 1; THENCE SOUTH 89°27' 31" WEST ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1, ACCORDING TO THE FINAL PLAT OF RANCHO DEL RAY, RECORDED IN BOOK 648 OF MAPS, PAGE 50, RECORDS OF MARICOPA COUNTY, ARIZONA, A DISTANCE OF 1321.32 FEET; THENCE DEPARTING SAID NORTH LINE, SOUTH 00° 12' 57" EAST A DISTANCE OF 91.17 FEET; THENCE SOUTH 89° 47' 03" WEST A DISTANCE OF 30.00 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 00° 12' 57" EAST, A DISTANCE OF 42.57 FEET; THENCE SOUTH 89° 27' 31" WEST A DISTANCE OF 29.31 FEET; THENCE NORTH 00° 12' 57" WEST, A DISTANCE OF 62.57 FEET TO A POINT ON A LINE WHICH IS PARALLEL WITH AND 71.00 FEET SOUTHERLY, AS MEASURED AT RIGHT ANGLES FROM THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 1; THENCE NORTH 89° 27' 31" EAST, ALONG SAID PARALLEL LINE, A DISTANCE OF 9.31 FEET; THENCE SOUTH 45° 22' 43" EAST, A DISTANCE OF 28.20 FEET TO THE POINT OF BEGINNING.