

## STAFF REPORT FOR PLANNING COMMISSION MEETING NOVEMBER 17, 2010

FILE NO: SUP-10-091

AGENDA ITEM: H-3

STAFF AUTHOR: Jennifer Pruitt, Principal Planner

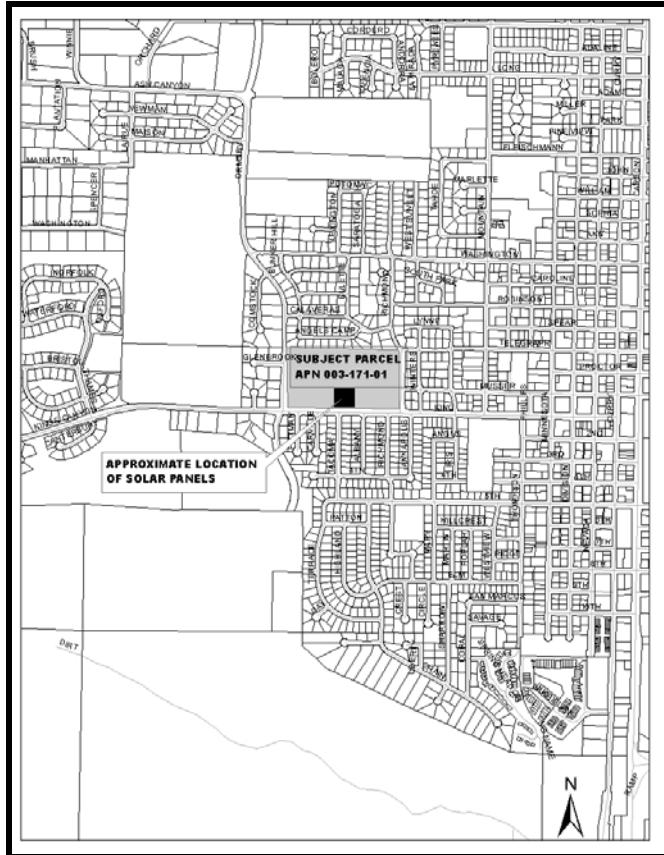
**REQUEST:** Approval of a Special Use Permit to allow the installation of 30,000 square foot photovoltaic (PV) array on supporting carports structures within an existing parking lot of the Carson Middle School campus.

**APPLICANT / OWNER:** Carson City School District

**LOCATION:** 1140 W. King Street

**APN:** 003-171-01

**RECOMMENDED MOTION:** "I move to approve SUP-10-091, a Special Use Permit application from the Carson City School District, to allow solar panels on supporting car port structures, on property zoned Public, located at 1140 W. King Street, Assessor's Parcel Number 003-171-01, based on seven findings and subject to the recommended conditions of approval contained in the staff report."



## **RECOMMENDED CONDITIONS OF APPROVAL:**

### **The following shall be completed prior to commencement of the use:**

1. The applicant must sign and return the Notice of Decision / conditions of approval within 10 days of receipt of notification. If the Notice of Decision is not signed and returned within 10 days, the item will be rescheduled for the next Planning Commission meeting for further consideration.
2. The applicant shall meet all the conditions of approval and commence the use (obtain and maintain a valid building permit) for which this permit is granted within twelve months of the date of final approval. A single, one-year extension of time may be granted if requested in writing to the Planning and Community Development Division thirty days prior to the one-year expiration date. Should this permit not be initiated within one year and no extension granted, the permit shall become null and void.

### **Conditions required to be incorporated into the proposed development plan.**

3. All development shall be substantially in accordance with the development plans approved with this application, except as otherwise modified by the conditions of approval herein.
4. All improvements shall conform to City standards and requirements.

### **The following shall be submitted or included as part of a building permit application:**

5. The applicant shall obtain a building permit from the Carson City Building and Safety Division for the proposed construction.
6. The applicant shall submit a copy of the Notice of Decision / conditions of approval, signed by the applicant and owner.
7. Dust control measures must be employed during the construction period and also incorporated into the manufacturer recommended maintenance program.
8. Should the PV array cease to operate for a period of one year, or falls into a state of disrepair, it shall be considered abandoned and removed at the Carson City School District's expense.
9. Landscaping (trees) proposed for displacement (if any) as a result of the installation of the carport structures shall be replanted on the Carson Middle School campus site.
10. All light fixtures that are required to be shielded shall be installed in such a manner that the shielding is installed as designed. Fixtures which are International Dark Sky Association approved such as Dark Sky Friendly or equivalent with full cutoff lighting for area and wall pack fixtures are recommended. Sag, convex, drop lenses and luminaries with open bulbs are prohibited.

**LEGAL REQUIREMENTS:** CCMC 18.02.050 (Review); 18.02.080 (Special Use Permits) and 18.04.170 (Public)

**MASTER PLAN DESIGNATION:** Public /Quasi Public

**ZONING DISTRICT:** Public (P)

**KEY ISSUES:** Would the proposed Photo Voltaic use cause material damage to surrounding properties? Is this an appropriate location for the proposed use?

#### **SURROUNDING ZONING AND LAND USE INFORMATION**

**NORTH:** Single Family 6,000- Residential

**SOUTH:** Single Family 6,000- /West King Street/Residential

**EAST:** Single Family 6,000- North Richmond Street/Residential

**WEST:** Single Family 6,000- North Ormsby Boulevard/Residential

#### **SITE HISTORY**

- On November 8, 2010 - the applicant conducted a neighborhood meeting with property owners surrounding the proposed site development and solicit comments and suggestions.
- On May 30, 2007- the Planning Commission reviewed and approved a Variance (VAR-07-062) to reduce the number of required parking spaces from 867 to 142, which included the construction of additional parking spaces with proposed site modifications.
- On May 30, 2007- the Planning Commission reviewed and approved Special Use Permit (SUP-07-061) for the modifications to the existing Carson Middle School including but not limited to, new classrooms to replace modular classrooms and bathroom structures, connection of three existing buildings into one enclosed campus, new cafeteria and other site improvements within the Public (P) zoning district.
- On April 03, 2007- City staff review Major Project Reviewed (MPR-07-047) a plan to allow new classrooms to replace modular classrooms and bathroom structures, connection of three existing buildings into one enclosed campus, new cafeteria and other site improvements within the Public (P) zoning district.
- On June 28, 2000- the Planning Commission reviewed and approved Special Use Permit (U-99/00-45) to allow a freestanding reader board sign (96 inches by 72 inches) overall height of 14 feet on the Carson Middle School campus.
- On July 31, 1996-the Planning Commission reviewed and approved Special Use Permit (U-94/95-55) to allow portable two classrooms (24 feet by 40 feet) and (24 feet by 60 feet) to be located at the Carson Middle School campus.

- On June 28, 1994-the Planning Commission reviewed and approved Special Use Permit (U-93/94-05) to allow two portable classrooms (28 feet by 66 feet each) to be located at the Carson Middle School campus.
- On October 29, 1991-the Regional Planning Commission reviewed and approved Special Use Permit (U-91/92-04) to allow a portable classroom (10 feet by 30 feet) to be located at the Carson Middle School campus.
- On July 30, 1991-the Regional Planning Commission reviewed and approved Special Use Permit (U-91/92-04) to allow four portable classrooms (24 feet by 60 feet each) to be located at the Carson Middle School campus.
- On August 16, 1990-the Board of Supervisors reviewed and approved Special Use Permit (U-90/91-02) to allow a portable classroom (28 feet by 60 feet) to be located at the Carson Middle School campus. On July 31, 1990 the regional Planning Commission reviewed and approved this item on.
- On June 16, 1988-the Board of Supervisors reviewed and approved Special Use Permit (U-87/88-28) to allow the addition of a classroom and lunch room to be located at the Carson Middle School campus. The Regional Planning Commission reviewed and approved this item on May 31, 1988.

### **ENVIRONMENTAL INFORMATION**

- FLOOD ZONE: Zone XS
- SLOPE/DRAINAGE: The site is improved.
- SOILS: 71- Urban Land

### **SITE DEVELOPMENT INFORMATION**

1.PARCEL AREA:	18.56 Acres
2.PROJECT SITE AREA:	Approximately 30,000 square feet
3.POJECT HEIGHT:	Approximately 15.25 feet in overall height
4.EXISTING LAND USE:	Middle School Educational Facility
5.EXISITNG STRUCTURE – BUILDINGS FOOTPRINT:	144,014 Square feet
6.REQUIRED SETBACKS:	Set according to the approval of a Special Use Permit
7.PROVIDED SETBACKS:	Northern: NA feet Western: NA feet Southern 44 feet Eastern: NA
8.PARKING EXISITNG:	138 parking spaces
9.VARIANCES REQUESTED:	None

## DISCUSSION:

A Special Use Permit is required by CCMC Section 18.04.170, which states that:

*The Conditional Uses in the Public District which require a Special Use Permit are: Buildings and facilities owned, leased or operated by the city of Carson City, Carson City Unified School District or any other district, state of Nevada or the government of the United States.*

*All public district development standards relative to lot area, setbacks, building height, landscaping, off-street parking and signs shall be based on requirements and conditions of the Special Use Permit.*

Carson Middle School was built approximately 50 years ago. Over the past few years, the Carson City School District has embarked on green energy projects. The savings generated by these projects increases the educational operating funds, which have a direct impact on teachers, students and Carson City.

Green energy is a term that describes environmentally friendly sources of power and energy. Unlike conventional energy sources such as oil, gas, coal etc., green energy typically refers to renewable and non-polluting energy sources. Consumers, businesses, and organizations can support the development of clean technologies by choosing to purchase green power instead of conventional electricity. In effect, this will reduce the environmental impact associated with conventional electricity generation and also increase their nation's energy independence.

Since January 2010, the School District has been involved in \$1.2 million dollars of green energy projects. There are a total of 12 projects related to energy efficiency, which include but are not limited to replacing old inefficient boilers, lighting retrofits and heat retrofits and replacements.

The applicant is proposing to locate an approximate 30,000 square foot photovoltaic (PV) array on supporting carports structures within the existing primary parking lot of the Carson Middle School campus. The overall height of the proposed structures range from 11+ feet to 15+ feet, consistent with typical carport structures.

As noted in this staff report, the School District started a major upgrade to the Carson Middle School in 2007. Carson Middle School (CMS) is now equipped with a state of the art Heating Ventilation and Air Conditioning (HVAC) system that regulates the building with outside air. The temperature control system is linked to the lighting system, which together condition each area with the building for less operating costs. To further reduce operating costs at the CMS hallway and classrooms take advantage of natural day lighting due to the installation of skylights equipped with lighting sensors and mechanical blinds to maximize the use of natural light. The CMS has also installed two trash compactors on site, which has already saved the School District approximately \$40,000 in landfill disposal fees.

While the panels are made of tempered glass, it is quite strong. They pass hail tests, and are rated for snow load of 49 to 113 pounds per square foot depending on the manufacturer. The Northern Nevada average snow load requirements are 20 pounds per square foot. As noted by the applicant the PV panels are also equipped with non-glare technology.

In reviewing the information provided by the applicant and the required findings as identified below, the findings to grant approval of this Special Use Permit can be made. Therefore, it is recommended that the Planning Commission approve this Special Use Permit application, SUP-10-091.

**PUBLIC COMMENTS:** Public notices were mailed on November 01, 2010 notices were sent to 70 adjacent property owners within 300 feet of the subject site pursuant to the provisions of NRS and CCMC. Any comments that are received after this report is complete will be submitted prior to or at the Planning Commission meeting, depending on their submittal date to the Planning Division.

**OTHER CITY DEPARTMENT OR OUTSIDE AGENCY COMMENTS:** The following comments were received from various city departments. Recommendations have been incorporated into the recommended conditions of approval, where applicable.

**Building Division comments:**

*These comments do not constitute a complete plan review, but are merely observations based on the information and plan sheets provided. The comments do not reflect all submittal requirements necessary for this project, but are those requirements that have generated concerns with similar projects in the past.*

**GENERAL COMMENTS**

1. The photovoltaic system requires an application for a Building Permit, issued through the Carson City Building Division. This will necessitate a complete review of the project to verify compliance with all adopted construction codes and municipal ordinances applicable to the scope of the project.
2. The plans submitted for review shall comply with the Carson City Building Division handout titled: Photovoltaic (Solar Electric) Systems and New Construction and Additions, Commercial Plan Submittal Requirements. These handouts can be found on our website at [WWW.Carson.org/building](http://WWW.Carson.org/building).

**Engineering Division comments:**

- The Engineering Division has no preference or objection to the special use request.

**Fire Department comments:**

- The applicant must meet all codes and ordinances as they relate to this request.

**Health Department comments:**

- Carson City Health and Human Services has no comments regarding the project as described in the packet received. The applicant must meet all applicable codes and ordinances as they apply to this request.

**FINDINGS:** Staff recommends approval of the Special Use Permit based the findings below, pursuant to CCMC 18.02.080 (Special Use Permits), subject to the recommended conditions of approval, and further substantiated by the applicant's written justification.

As herein described, the proposed project is consistent with the following applicable goals and policies (in *italics*) of the Master Plan in accordance with the seven findings (in **bold**) required for approval of a Special Use Permit:

**1. The use will be consistent with the objectives of the Master Plan elements.**

**Chapter 3: A Balanced Land Use Pattern**

Establishing a balance of land uses within the community promotes vitality and long-term economic stability. A balanced community is able to provide employment opportunities for its residents as well as a diverse choice of housing, recreational opportunities, and retail services. Carson City strives to maintain its strong employment base and extensive network of public lands while increasing housing options and the availability of retail services to serve residents of the City and surrounding growth areas.

1. This project involves the installation of roof-mounted photovoltaic panels that will be installed in the existing parking lot of the CMS campus. No development is associated with this project and this project will not have any adverse impacts to traffic, drainage, school capacity or other identified issues associated with managed growth within Carson City. As such, this project meets the provisions of the Growth Management Ordinance (1.Id, Municipal Code 18.12).
2. The purpose of this project is to utilize alternative energy solutions (solar energy) to assist in the powering of school facilities. This will not only provide a savings to the School District, but will also help reduce the overall demand on the power grid. Materials used in the construction will be sustainable building materials and construction techniques to promote water and energy conservation (1.le, f).
3. The proposed photovoltaic arrays are being installed on an existing Middle School site. The project does not generate any redevelopment or infill. As such, this project complies with the intent of the priority infill development area goals. (1.2a).
4. The existing school site has been an operating school for approximately fifty years. The school is located within an established residential community. As such, there are no direct connections to open space lands. However, this project will also not impede any pathway connections or easements that access public lands (1 .4a).
5. This project is not at the urban interface and will not impact existing site features, to include mature trees and character-defining features. All work associated with this project will occur within the existing school property (1.4c)
6. The proposed photovoltaic arrays are set back a minimum of 44 feet behind the back of sidewalk of W. King Street. Because this school site is zoned "Public," the Special Use Permit specifies the setback requirements. As such, this project meets adopted standards for transitions between non-residential and residential zoning districts (2. id).

8. In accordance with Carson City requirements and the Special Use Permit, this project meets the required setback requirements and does not encroach on any identified sensitive areas. As such, there are no anticipated environmental impacts as a result of this project (3.lb).
9. This project involves the installation of photovoltaic arrays on carport structures. The project is expected to reduce reliance on the power grid. The project is on the existing Middle School site. Existing site conditions allow adequate access to the proposed project, without disrupting school operations or neighboring parcels. Installation of this proposed project will not impact these existing improvements.

#### **Chapter 4: Equitable Distribution of Recreational Opportunities**

Carson City residents are fortunate to have access to an extensive network of open lands both within and surrounding the community, as well as a range of more formal community and neighborhood parks and sports facilities. The City has developed an extensive park system (765 acres) and, with many partners, offers an extensive array of recreational programs. In addition, the City provides many recreation facilities (baseball/softball fields, soccer/football fields, tennis courts, playgrounds, picnic pavilions, etc.), as well as a community theater, aquatic facility with a 50 meter pool, a fairgrounds, and a number of natural parks and recreational pathways. In 1996 Carson City residents approved Ballot Question 18 – The Quality of Life Initiative, creating a supplemental sales tax revenue source (1/4 of a cent) for parks, open space, pathways and associated maintenance. This source has allowed development of many new facilities.

- Carson Middle School site is not only used by the School District, but is also used by the community. This project will not impact the community's use of its facilities. As such, Seeliger Elementary School will continue to provide facilities for community use (4.lb).

#### **Chapter 5: Economic Vitality**

Carson City derives its overall health and economic success from its ability to maintain a strong and diverse base of jobs, to provide a supply of varied housing choices for its employees, to provide a range of services and recreational opportunities for residents and visitors, and to generate tourism through the promotion of its unique characteristics and historic amenities. Furthermore, the City recognizes the revitalization of the Downtown as an important component of the community's long-term health and vitality. The Master Plan promotes the continued enhancement of the Downtown and surrounding residential neighborhoods as the focus of the community.

1. Being an existing middle school, the site serves the children residing in the surrounding community and does not distinguish between housing types or labor force populations (5. ij).
2. The existing school site employs faculty and staff to support the education of its student population. This work force and the community the school serves indirectly encourages the development of regional retail centers. Given the school's long-standing existence in the community, there are no new retail centers expected. There is some potential for this project to generate interest in the community with

respect to solar energy and alternative power supplies, which in turn might lead to retail centers seeing an increase in these types of businesses. (5.2a).

3. Carson Middle School has been a part of Carson City for approximately fifty years, and can arguably be considered a historic resource. This project involves the installation of photovoltaic arrays. The goal is to minimize dependence on the existing power grid that in turn will reduce operating costs for the School District. This type of green technology, while not related to heritage or tourism, allows our Capitol city to boast its interest in alternative and green energy solutions. This could draw visitors interested in these technologies to Carson City. (5.4a).
4. This project will have no direct impact on revitalization of the downtown core. However, alternative energy projects such as this one might spark similar interests within Carson City that in turn could generate some downtown core revitalization through retail and tourism uses that are interested in these energy solutions. (5.6a).

## **Chapter 6: Livable Neighborhoods and Activity Center**

Carson City strives to be a city known for its safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and its vibrant, pedestrian-friendly Downtown. Access to parks, pathways, open space, and recreational facilities will be emphasized and the incorporation of thoughtful design and site planning techniques will be encouraged in all development. New commercial development will be focused in pedestrian-friendly, mixed-use activity centers located along major thoroughfares where they will be readily accessible to surrounding neighborhoods and may ultimately be served by transit. New higher-density housing will be encouraged as part of the overall land use mix along the City's major gateway corridors and within the Downtown area to provide a more diverse selection of housing types and price ranges for residents within walking distance of the City's primary job and activity center.

1. This project involves the installation of photovoltaic arrays on supporting car port structures. As such, this green energy project will use durable, long-lasting building materials. (6.1 a).
2. Photovoltaic arrays are a relatively new addition to the south end of Carson City. This use will generate visual and technical interest due to its function and appearance. The arrays will be angled to the south to maximize exposure to the sun. It is important to the neighbors and the school district that the arrays are effective, without being a visual nuisance to the neighbors. (6.1b).
3. This project is surrounded by well-established residential development, and will comply with Carson City height, density and setback requirements. Because this school has been in existence for approximately fifty years, it is a staple in the community. The proposed green energy additions will be compatible with existing on-site uses and the community by reducing the dependence of the District on the existing power grid that in turn will reduce the demand for the community. (6.2a, 9.3b, 9.4a).

## **Chapter 7: A Connected City**

A connected city allows residents to travel within the community, and to other centers within the region, in a variety of ways using a safe, efficient, multi-modal transportation system. Carson City will promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational amenities, and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks. Additionally, the City will seek opportunities to expand existing transit services as feasible to increase travel choices for the community and to support a more compact pattern of growth.

1. Transit development patterns are not applicable. However, this green energy project may generate interest that may lead to visitors to see this technology. The existing pedestrian access routes along the perimeter of the school are well suited to accommodate this use.(11.2b).
2. Roadways exist throughout this area, and there is no reasonable ability to enhance roadway connections and/or networks. On-site transportation systems are currently in place and meet the needs of the site and the community. This photovoltaic array project will not impact existing on-site traffic patterns. (11 .2c).
3. Single-family residences surround the Carson Middle School project site. Existing pathways consist of sidewalks and on-site walkways, which are intended to remain. The United Pathways Master Plan is not applicable to this project (12.la, c).

2. **The proposed use will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and will cause no noise, vibrations, fumes, odors, dust, glare or physical activity.**

*During construction dust must be controlled and staff has recommended a condition of approval to this effect. Once complete, the proposed use should not create any objectionable noise, vibrations, odors, dust, glare or physical activity any more than the current use of the property does. As noted by the applicant the proposed solar panels are equipped with non-glare technology. Staff has included a condition of approval related to the manufacturers recommended dust control measures.*

*It is not anticipated that the PV array will be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood.*

3. **The project will have little or no detrimental effect on vehicular or pedestrian traffic.**

*The site is served by an adequate existing street network. Pedestrian movement would not be affected.*

**4. The project will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.**

The proposed project will have no impact on the existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.

**5. The project meets the definition and specific standards set forth elsewhere in this Title 18 for such particular use and meets the purpose statement of that district.**

*The purposes of the P District is to achieve the following:*

1. *To accommodate the wide range of public institutional and auxiliary uses which are established in response to the health, safety, cultural and welfare needs of the citizens of the City.*
2. *To organize the assemblage of specific, nonprofit and profit public facilities into efficient functionally compatible, and attractively planned administrative centers in conformance with the master plan;*
3. *To establish site plan approval for many uses thereby ensuring compatibility with adjacent more restrictive districts.*

*Public uses, such as schools, are a primary purpose of the Public district – including split-zoned parcels. A school (and its accessories) is a conditional use in the Public zoning district. Upon approval of the Special Use Permit with the recommended conditions of approval, the proposed PV project will be in conformance with the requirements of the Carson City Municipal Code and related Development Standards.*

**6. The project will not be detrimental to the public health, safety, convenience and welfare.**

*In addition to the issues addressed in this Special Use Permit, the proposed PV project will require a building permit, related reviews and inspections and will therefore not be detrimental to the public health, safety, convenience and welfare.*

**7. The project will not result in material damage or prejudice to other property in the vicinity.**

*At this time there is no change proposed for the use of the subject site. The site will continue to be used as a Secondary Educational facility.*

*Landscaping (trees) proposed for displacement as a result of the installation of the carport structures shall be replanted on the Carson Middle School campus site.*

*Should the PV array cease to operate for a period of one year, or falls into a state of disrepair, it shall be considered abandoned and removed at the Carson City School District's expense.*

Respectfully submitted,

PUBLIC WORKS, PLANNING DIVISION

*Jennifer Pruitt*

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Jennifer Pruitt, AICP, LEED AP  
Principal Planner

Attachments:

Application (SUP-10-091)  
Building Division comments  
Engineering Division comments  
Health Department  
Fire Department

**Engineering Division  
Planning Commission Report  
File Number SUP 10-091**

**TO:** Planning Commission  
**FROM:** Rory Hogen, E. I.  
**DATE:** October 25, 2010      **MEETING DATE:** November 17, 2010

**SUBJECT TITLE:**

Action to consider an application for a Special Use Permit from Carson City School District to allow placement of photovoltaic arrays at Carson Middle School, 1140 W. King St., apn 03-171-01 and zoned public (P).

**RECOMMENDATION:**

The Engineering Division has no preference or objection to the special use request.

**DISCUSSION:**

The Engineering Division has reviewed the conditions of approval within our areas of purview relative to adopted standards and practices and to the provisions of CCMC 18.02.080, Conditional Uses.

**CCMC 18.02.080 (2a) - Adequate Plans**

The information submitted by the applicant is adequate for this analysis.

**CCMC 18.02.080 (5a) - Master Plan**

The request is not in conflict with any Engineering Master Plans for streets or storm drainage. Construction must not block natural and existing drainage.

**CCMC 18.02.080 (5c) - Traffic/Pedestrians**

The proposal will have little effect on traffic or pedestrian facilities.

**CCMC 18.02.080 (5d) - Public Services**

Existing facilities are not impacted.



# CARSON CITY FIRE DEPARTMENT

*"Service with Pride, Commitment, Compassion"*

## MEMORANDUM

TO: Community Development

FROM: Duane Lemons, Fire Inspector

DATE: October 18, 2010

SUBJECT: AGENDA ITEMS FOR NOVEMBER 17, 2010 PLANNING COMMISSION MEETING.

We reviewed the agenda items for the November 17, 2010 Planning Commission Meeting and have the following comments:

- SUP-10-086 We have no comments or concern with this request.
- ZMA-10-087 LLC We have no comments or concern with this request.
- SUP-10-088 Carson City, Granite Construction / CC Airport Authority The applicant must meet all codes and ordinances as they relate to this request.
- SUP-10-89, SUP-10-090, SUP-10-091 Carson City School Dist. The applicant must meet all codes and ordinances as they relate to this request.

DL/lb

**From:** Teresa Hayes  
**To:** MPR Committee  
**Date:** 11/5/2010 9:14 AM  
**Subject:** Planning commission comments 11/17/10

10-088

Carson City Health and Human Services has no comments regarding the project as described in the packet received. The applicant must meet all applicable codes and ordinances as they apply to this request. Et. Seq.

10-089

10-090

10-091

Carson City Health and Human Services has no comments regarding the project as described in the packet received. The applicant must meet all applicable codes and ordinances as they apply to this request. Et. Seq.

Teresa Hayes, R.E.H.S.

Environmental Health Specialist II

Carson City Health and Human Services

900 E. Long St

Carson City, NV 89706

Phone: (775) 887-2190 ext 7227

Fax: (775) 883-4701

e-mail: [thayes@carson.org](mailto:thayes@carson.org)

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<b>File # (Ex: MPR #07-111)</b>	SUP – 10- 091
<b>Brief Description</b>	<i>Carson Middle School, Photovoltaic</i>
<b>Project Address or APN</b>	APN #003-171-01
<b>Bldg Div Plans Examiner</b>	<i>Kevin Gattis</i>
<b>Review Date</b>	<i>November 17, 2010</i>
<b>Total Spent on Review</b>	

### **BUILDING DIVISION COMMENTS:**

*These comments do not constitute a complete plan review, but are merely observations based on the information and plan sheets provided. The comments do not reflect all submittal requirements necessary for this project, but are those requirements that have generated concerns with similar projects in the past.*

### **GENERAL COMMENTS**

1. The photovoltaic system requires an application for a Building Permit, issued through the Carson City Building Division. This will necessitate a complete review of the project to verify compliance with all adopted construction codes and municipal ordinances applicable to the scope of the project.
2. The plans submitted for review shall comply with the Carson City Building Division handout titled: Photovoltaic (Solar Electric) Systems and New Construction and Additions, Commercial Plan Submittal Requirements. These handouts can be found on our website at [WWW.Carson.org/building](http://WWW.Carson.org/building).



# Carson City Building Division

*Kevin Gattis, Chief Building Official*

## Photovoltaic (Solar Electrical) Systems Plan Submittal Requirements

### Scope:

This information is applicable to photovoltaic panels or arrays installed as a supplemental power source to the available power feed from your local utility. Photovoltaic panels installed as part of a stand-alone alternative power system for a dwelling, in lieu of power from your local utility. These requirements are applicable to both residential and commercial installations.

For submittal purposes, it is assumed the system design may include battery storage with an inverter to convert the Direct Current (DC) to Alternating Current (AC), or a system with Direct Current (DC) converted to Alternating Current (AC), which is then utilized onsite or sold back to the utility. For systems designed to strictly use DC power with DC utilization equipment, please contact the Carson City Building Division staff for further information and requirements.

### General Information:

- These permits are issued to a Nevada licensed **Electrical Contractor** possessing Carson City Business License. The Electrical Contractor shall possess a Nevada State Contractors Board (NSCB) licensing type C-2 or C-2g. **OR** residential installations being issued to an **owner/builder** in compliance with the requirements of Nevada Revised Statute (NRS) 624.031. **OR** issued to a contractor or party approved at the discretion of the Chief Building Official.
- Due to Carson City's snow and wind loads, roof mounted systems shall include design by a Nevada licensed Engineer. The design shall take into consideration the dead load from the system components, as well as the potential for accumulated drifting snow and any wind loading placed on the attachments.

NOTE: This requirement is not applicable to ground mounted systems; however, a mounting detail, furnished from the manufacturer will be required as a part of the plan submittal, or a mounting detail from the Electrical contractor installing the system will be accepted as an alternative.

- All ground mounted systems, and all commercial roof mounted systems shall comply with the requirements of the Carson City Planning Division. For additional information, please contact the Carson City Planning Division at (775) 887-2180.
- Plans shall be on **11" x 17" or larger** paper sizes, and all design sheets within the plan set should be the same size. The plans shall be designed to comply with applicable minimum approved scale. In addition, the plan cover sheet shall allow enough space on the cover sheet to allow staff to insert the necessary approvals, which translate to a blank area roughly **4" x 8 1/2"**.
- Plans shall be **photocopies, or original blue or black ink drawings**. The use of colored ink, other than blue or black, or the use of colored ink beyond that which is used for licensing seals and/or original signatures on plan sets, would constitute grounds for an automatic rejection of the application. Plans with original pencil drawings or notes will be rejected.
- Plans shall be fully dimensioned, and drawn to an **approved architectural scale 1/4"=1'-0"** **minimum**, with plan **details and elevations prepared using a 1/2"=1'-0" or greater scale**. The scale shall be indicated on each page, and separate detail or elevation. **Site plans** shall be fully dimensioned and drawn to one of the following **approved engineering scales: 1"=10', 1"=20' & 1"=30'**

- **When plans are prepared by an Owner/Builder**, in compliance with Nevada Revised Statute (NRS), the plan set must have the owner's name and address printed under the heading of "Designer" the cover sheet. Below this information shall be an original signature with date of signing. To avoid confusing this signature with a copy or facsimile, Carson City Building Division staff recommends that this signature be in colored ink. (Some color other than black)
- **Plans prepared by a Nevada licensed Electrical Contractor** shall have the following information on the printed in a on the Cover Sheet of the plan set:
  - Business Name
  - Business Address
  - Bid Limit
  - License Classification Type
  - License Number
  - License Expiration Date
  - Name of Qualified Employee, with an original signature
- **Plans prepared by a Nevada licensed Registered Design Professional** (Architect, Residential Designer, or Engineer) shall comply with the applicable Nevada Administrative Code (NAC) for their licensure

## Submittal

- A minimum submittal shall include the following items. Incomplete plan submittals will not be accepted:
  - **Two (02) complete sets of plans for Residential Systems or Three (03) complete sets for Commercial Systems** - which shall include the following, as applicable:
    - **Cover Sheet** – Indicate the project address, contractor(s) contact information, code(s) & adopted amendments used, Seismic Zone, Wind Load, Snow Load, and allowing an area for Carson City Building Division approval stamps and redline comments.
    - **Site Plan (Ground mounted systems only)** – The Site Plan shall indicate the location of the photovoltaic panels or arrays, with all underground electrical conduit(s) including material type and sizes (Ex.: 3" PVC, 2 ½" RMC, etc.). Show the location of the electrical main service panel with amperage (100 Amp, 200 Amp, etc.), voltage and phasing identified. Also, indicate the transfer switch type (automatic versus manual) at the service.

NOTE: For residential properties on well and/or septic one (01) additional site plan shall be submitted for review by the Carson City Health & Human Services Dept. (HHS)

For Site Plan design requirements, please refer to the following Carson City Building Division handouts, as applicable: COMMERCIAL SUBMITTAL REQUIREMENTS: New Construction & Additions or RESIDENTIAL PLAN SUBMITTAL REQUIREMENTS: One & Two Family Dwellings and Accessory Structures

- **Foundation Plan (Ground mounted systems only)** – This is a dimensioned plan view of the footing locations, with details showing the footing designs.

- **Roof Plan** – This is a plan view of the panels and system installation. Typically, this plan sheet include the mounting details, unless prepared separately by a Registered Design Professional (Architect, Residential Designer, or Engineer)
- **Building Elevation / Screening Detail (Commercial only)** – A building elevation is used to establish that the roof mounted panels on commercial buildings are not seen from street level. This typically includes a screening detail, if necessary, to shield the collectors from street level. Please contact the Planning Division for clarification.
- **Floor Plan** – This is a scaled **Electrical Floor Plan** of the photovoltaic equipment room or building used to house the batteries, inverter and any applicable equipment. The Floor Plan must include the type, location and size of all vents used to vent the gases from the battery banks, if applicable.
- **Electrical One-Line Diagram** – This is a line drawing, which shows the components of the system, and their relationship to each other in the installation. This is not a scaled drawing, but is merely a conceptual representation of the system design used to verify compliance. The one-line diagram shall show the photovoltaic panels or arrays, the Over Current Protection Device (OCPD) type rating and size (circuit breaker, fuse, etc.), the conductor sizes/types and the wiring method used, with panel voltage, phasing, and size in amperes. Show the inverter type and rating along with the type and size of all system batteries.

NOTE: Indicate if the photovoltaic panels will be wired in series (voltage multiplied – individual module times voltage) or parallel (current multiplied – individual module times ampere). If this information is not provided, staff will assume that the modules are wired in parallel.

- Provide a **Load Calculation** of the total ampere and voltage generated by the photovoltaic array.

Note: A 125% short circuit increase is required on the photovoltaic array, and a further 125% increase is required on the conductor size. ('05 NEC 690.8(A)(1) & 690.8(B)(1))

- Two (02) copies of the **manufacturer's specifications** for the panels, inverter, DC voltage panels, with Over Current Protection Device (OCPD), etc

NOTE: This information may be 8 ½" x 11" copies, submitted as supplemental supporting documents to the plans, which are 11" x 17" minimum.

**RECEIVED**

**Carson City Planning Division**  
**108 E. Proctor Street • Carson City NV 89701**  
**Phone: (775) 887-2180 • E-mail: planning@carson.org**

**FILE # SUP - 10 - SUP - 10 - 091****CARSON CITY SCHOOL DISTRICT****PROPERTY OWNER****P.O. BOX 603, CARSON CITY, NEVADA 89702****MAILING ADDRESS, CITY, STATE, ZIP**

(775) 283-2000 (775) 283-2090

**PHONE #** **FAX #****Name of Person to Whom All Correspondence Should Be Sent**

MARK KORINEK

**APPLICANT/AGENT****P.O. BOX 603, CARSON CITY, NEVADA 89702****MAILING ADDRESS, CITY, STATE ZIP**

(775) 283-2181 (775) 283-2191

**PHONE #** **FAX #**

mkorinek@carson.k12.nv.us

**E-MAIL ADDRESS****FOR OFFICE USE ONLY:**

CCMC 18.02

**OCT 15 2010****SPECIAL USE PERMIT****CARSON CITY  
PLANNING DIVISION****FEE: \$2,450.00 MAJOR****\$2,200.00 MINOR (Residential zoning  
districts)****+ noticing fee and CD containing application digital data (all to be  
submitted once the application is deemed complete by staff)****SUBMITTAL PACKET**

- 6 Completed Application Packets  
(1 Original + 5 Copies) including:
  - Application Form
  - Site Plan
  - Building Elevation Drawings and Floor Plans
  - Proposal Questionnaire With Both Questions and Answers Given
  - Applicant's Acknowledgment Statement
  - Documentation of Taxes Paid-to-Date (1 copy)
  - Project Impact Reports (Engineering) (4 copies)

**Application Reviewed and Received By:****Submittal Deadline: See attached PC application submittal schedule.****Note: Submittals must be of sufficient clarity and detail such  
that all departments are able to determine if they can support  
the request. Additional information may be required.**

<b>Project's Assessor Parcel Number(s):</b> 003-171-01	<b>Street Address</b> CARSON MIDDLE SCHOOL - 1140 W. KING ST., CARSON CITY, NV 89703	<b>ZIP Code</b>
<b>Project's Master Plan Designation</b> PUBLIC	<b>Project's Current Zoning</b> PUBLIC	<b>Nearest Major Cross Street(s)</b> KING & ORMSBY STREETS

Briefly describe your proposed project: (Use additional sheets or attachments if necessary). In addition to the brief description of your project and proposed use, provide additional page(s) to show a more detailed summary of your project and proposal. In accordance with Carson City Municipal Code (CCMC) Section: \_\_\_\_\_, or Development Standards, Division \_\_\_\_\_, Section \_\_\_\_\_, a request to allow as a conditional use is as follows:

THIS PROJECT INVOLVES THE INSTALLATION OF SOLAR PANELS (PHOTO-VOLTAIC ARRAYS) TO BE ROOF-MOUNTED ON  
PROPOSED CARPORTS TO BE LOCATED WITHIN THE SCHOOL'S EAST PARKING LOT.

**PROPERTY OWNER'S AFFIDAVIT**

I, Richard Stokes, being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have knowledge of, and I agree to, the filing of this application.

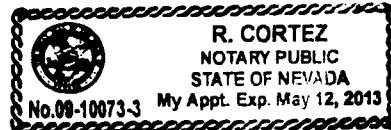
Richard W. Stokes 1402 W. KING ST. CARSON CITY, NV 89701  
 Signature Address Date

Use additional page(s) if necessary for other names.

STATE OF NEVADA  
 COUNTY Carson

On October 6, 2010, Richard Stokes,  
 personally appeared before me, a notary public, personally known (or proved) to me to be the  
 person whose name is subscribed to the foregoing document and who acknowledged to me that  
 he/she executed the foregoing document.

R. Cortez  
 Notary Public



NOTE: If your project is located within the historic district, airport area, or downtown area, it may need to be scheduled before the Historic Resources Commission, the Airport Authority, and/or the Redevelopment Authority Citizens Committee prior to being scheduled for review by the Planning Commission. Planning personnel can help you make the above determination.

**SPECIAL USE PERMIT APPLICATION QUESTIONNAIRE**  
**CARSON CITY SCHOOL DISTRICT**  
**CARSON MIDDLE SCHOOL – PHOTOVOLTAIC ARRAYS**

***Question 1. How will the proposed development further and be in keeping with, and not contrary to, the goals of the Master Plan Elements?***

The following addresses the five themes of the Master Plan policies, contained within the Master Plan Policy Checklist supplied by Carson City as a part of the Special Use Permit application packet.

**Chapter 3: A Balanced Land Use Pattern**

1. This project involves the installation of roof-mounted photovoltaic panels on proposed carport structures that will be built within the existing parking lot. No development is associated with this project and this project will not have any adverse impacts to traffic, drainage, school capacity or other identified issues associated with managed growth within Carson City. As such, this project meets the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12).
2. The purpose of this project is to utilize alternative energy solutions (solar energy) to assist in the powering of school facilities. This will not only provide a savings to the School District, but will also help reduce the overall demand on the power grid. While construction materials for the carport structure has not yet been determined, materials used in the construction will be sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f).
3. The proposed photovoltaic arrays and supporting carport structures are being installed on an existing middle school site. The project does not generate any redevelopment or infill.

As such, this project complies with the intent of the priority infill development area goals. (1.2a).

4. The existing school site has been an operating school for over fifty years. The school is located within an established residential community. As such, there are no direct connections to open space lands. However, this project will also not impede any pathway connections or easements that access public lands (1.4a).
5. This project is not at the urban interface and will not impact existing site features, to include mature trees and character-defining features. All work associated with this project will occur within the existing Carson Middle School west parking lot (1.4c).
6. This project is on an existing school site, within the boundaries of the City of Carson, and is not adjacent to other city or county boundaries, or public lands. As such, coordination with regard to compatibility, access and amenities is not applicable to this project (1.5a,b).
7. The project site is within an existing school site, which is located in a single-family residential zoning district. As such, mixed-use criteria are not applicable to this project (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C).
8. The proposed photovoltaic arrays and supporting carport structures are set back a minimum of approximately forty-four feet behind the back of sidewalk of W. King Street. Because this school site is zoned "Public," the Special Use Permit specifies the setback requirements. As such, this project meets adopted standards for transitions between non-residential and residential zoning districts (2.1d).
9. In accordance with Carson City requirements and the Special Use Permit, this project meets the required setback requirements and does not encroach on any identified

sensitive areas. As such, there are no anticipated environmental impacts as a result of this project (3.1b).

10. The existing Carson Middle School site is not within a primary floodplain or geological hazard area (3.3d, e).
11. This project involves the installation of photovoltaic arrays on supporting carport structures. The project is expected to reduce reliance on the power grid. The project is on the existing Carson Middle School site that recently underwent substantial site improvements as part of the 2006 Carson School District Bond project. That project included water and sanitary sewer improvements; parking lot grading, paving and drainage; sidewalks; and, other modifications. Existing site conditions allow adequate access to the proposed project. Installation of this proposed project will not impact these existing improvements.
12. The project site is an existing middle school site. No off-site development is associated with this project and this project is not within an identified Specific Plan Area.

#### Chapter 4: Equitable Distribution of Recreational Opportunities

1. The Carson Middle School site is not only used by the School District, but is also used by the community. This project will not impact the community's use of its facilities. As such, Carson Middle School will continue to provide facilities for community use (4.1b).
2. Carson Middle School is not located in a designated open space area or within the area of the Carson River. As such, this policy is not applicable (4.3a).

## Chapter 5: Economic Vitality

1. Being an existing Middle School, the site serves the children residing in the surrounding community and does not distinguish between housing types or labor force populations (5.1j).
2. The existing school site employs faculty and staff to support the education of its student population. This work force and the community the school serves indirectly encourages the development of regional retail centers. Given the school's long-standing existence in the community, there are no new retail centers expected. There is some potential for this project to generate interest in the community with respect to solar energy and alternative power supplies, which in turn might lead to retail centers seeing an increase in these types of businesses. (5.2a).
3. This project involves the installation of photovoltaic arrays on supporting carport structures, and does not involve retail space. As such, encouraging reuse or redevelopment of underused retail spaces is not applicable (5.2b).
4. The Carson Middle School has been a part of Carson City for over fifty years, and can arguably be considered a historic resource. This project involves the installation of photovoltaic arrays on supporting carport structures. The goal is to minimize dependence on the existing power grid that in turn will reduce operating costs for the School District. This type of green technology, while not related to heritage or tourism, allows our Capitol city to boast its interest in alternative and green energy solutions. This could draw visitors interested in these technologies to Carson City. (5.4a).
5. This project will have no direct impact on revitalization of the downtown core. However, alternative energy projects such as this one might spark similar interests within Carson City that in turn could generate some downtown core revitalization through retail and tourism uses that are interested in these energy solutions. (5.6a).

6. This project does not incorporate additional housing in or around the downtown area (5.6c).

#### Chapter 6: Livable Neighborhoods and Activity Center

1. This project involves the installation of photovoltaic arrays on supporting carport structures. As such, this green energy project will use durable, long-lasting building materials. (6.1a).
2. Photovoltaic arrays are a new addition to the west side of Carson City. This use will generate visual and technical interest due to its function and appearance. The arrays will be angled to the south to maximize exposure to the sun. It is important to the neighbors and the school district that the arrays are effective, without being a visual nuisance to the neighbors. (6.1b).
3. This project involves the installation of photovoltaic arrays on supporting carport structures. Architectural features are limited to the support structures and arrays, which will by their nature provide some variety and visual interest. This project will not impact existing landscaping or site access and is consistent with Carson City development standards (6.1c).
4. This project is surrounded by well-established residential development, and will comply with Carson City height, density and setback requirements. Because this school has been in existence for over fifty years, it is a staple in the community. The proposed green energy additions will be compatible with existing on-site uses and the community by reducing the dependence of the District on the existing energy grid that in turn will reduce the demand for the community. (6.2a, 9.3b, 9.4a).
5. This project is not located in an identified Mixed-Use Activity Center area (7.1a, b).

6. The project is not located downtown (8.1a, b, e).
7. This project involves the installation of photovoltaic arrays on supporting carport structures. This project will not have a development component and as such, will not impact housing mixtures or densities. (9.1a).

#### Chapter 7: Livable Neighborhoods and Activity Center

1. Transit development patterns are not applicable. However, this green energy project may generate interest that may lead to visitors to see this technology. The pedestrian access improvements along King Street as a result of the past two School District Bond projects are well suited to accommodate this use. (11.2b).
2. Roadways exist throughout this area, and there is no reasonable ability to enhance roadway connections and/or networks. On-site improvements to facility transportation systems were constructed as a part of the 2006 School District Bond project. The carports associated with this photovoltaic array project will be oriented to accommodate existing on-site traffic patterns. (11.2c).
3. Single-family residences surround the Carson Middle School project site. Existing pathways consist of sidewalks and on-site walkways, which are intended to remain. The United Pathways Master Plan is not applicable to this project (12.1a, c).

***Question 2. Will the effect of the proposed development be detrimental to the immediate vicinity? To the general neighborhood?***

**A. Describe the general types of land uses and zoning designations adjoining your property.**

North: Single-family residences, (SFR 6,000) zoning

West: Single-family residences, (SFR 6,000) zoning

South: Single-family residences, (SFR 6,000) zoning

West: Single-family residences, (SFR 6,000) zoning

**B. Explain why your project is similar to existing development in the neighborhood, and why it will not hurt property values and cause problems, such as noise, dust, odors, vibration, fumes, glare, or physical activity, etc., with neighboring property owners. Will the project involve any uses that are not contained within a building? If yes, please describe. Explain how construction-generated dust (if any) will be controlled. Have other properties in your area obtained approval of a similar request? How will your project differ in appearance from your neighbors?**

Carson Middle School was built in the 1950's. It was first used as a high school, before its current use as a middle school. The school has been in existence longer than most of the current residences that surround it. This project will not hurt property values or cause problems such as noise, dust, odors, vibration, fumes, glare or physical activity because the current use of the site will not change. Given that this project involves the installation of photovoltaic arrays on supporting carport structures, neighbors might be concerned about glare. Glare will not be an issue. The panels come equipped with non-glare technology. Similar panels are being used at airports, to include the San Francisco International Airport and the Yuma Arizona airport, with another installation proposed at the Fresno, California airport. The non-glare panels, combined with the supporting carports being set back a minimum of approximately forty-four feet behind the back of the sidewalk along King Street, is anticipated to create an adequate buffer from adjacent residences. This combined with no anticipated increase in the school's population will

help ensure there is no adverse impact to property values. This project will not impact existing school operations or activities.

The project will have minimal potential for dust generation, as the arrays and supporting carports are being installed within the existing paved west parking lot. As such, no grading or earthmoving is anticipated. The only earthwork is that necessary to construct the footings necessary to support the structure. However, any construction-generated dust will be kept to a minimum with the use of air and water dust palliatives.

C. Provide a statement explaining how your project will not be detrimental to the use, peaceful enjoyment or development of surrounding properties and the general neighborhood.

The subject property has been used as a school for over fifty years. There will be no change to the use of the property. The new photovoltaic arrays and supporting carport structures will be placed within the west parking lot. This project will make the site more energy efficient by using green technology, and will have no negative impact on the use, peaceful enjoyment or development of the surrounding properties within the neighborhood.

The School District does recognize that the neighbors directly across King Street from the existing west parking lot might have initial concerns regarding their northerly view and the potential for glare. The arrays are equipped with anti-glare technology, so glare is not expected to be an issue. Regarding views. The highest point on the photovoltaic arrays will be sixteen feet above ground surface. The closest arrays to King Street will be approximately forty-four feet behind the back of sidewalk, and approximately one hundred feet to the north of the closest residence.

D. Consider the pedestrian and vehicular traffic that currently exists on the road serving your project. What impact will your development have when it is successfully operating? Will vehicles be making left turns? Will additional walkways and traffic lights be needed? Will you be causing traffic to substantially increase in the area? What will be the emergency vehicle response time? State how you have arrived at your conclusions. What City departments have you contacted in researching your proposal? Explain the effect of your project with the existing traffic in the area.

Carson Middle School has been in operation at this site as a school for over fifty years. Because this project involves the installation of photovoltaic arrays on supporting carport structures, there is no increase to the student body and as such, will not have any negative impact to pedestrian or vehicular traffic. Traffic patterns and turning maneuvers will not change as a result of this project. Emergency vehicle response time will not be adversely impacted.

During installation, construction and delivery equipment will be minimal. Staging, if needed, will occur on Carson Middle School property and will not impact neighborhood traffic.

E. Explain any short-range and long-range benefit to the people of Carson City that will occur if your project is approved.

The site has been used as a school since the 1950's, and the Carson City School District plans to continue to utilize this middle school for years to come. Reducing operating costs and the demand on our local utilities has been an ongoing pursuit of the School District. This project is projected to generate a net savings to the District of approximately \$70,000 per year. This will allow the School District to use that savings for other operating needs. As with the rest of our community, this economy has caused many people to maintain their properties with less available money. The School District is no different. This is both a short and long term benefit to the District and the community. The community indirectly benefits by the District being able

to maintain their facilities with more available funds. In addition, the reduced power demand by the District reduces the strain on the community's power grid.

***Question 3. Has sufficient consideration been exercised by the applicant in adapting the project to existing improvements in the vicinity?***

A. How will your project affect the school district? Will your project add to the student population or will it provide a service to the student population? How will your project affect the Sheriff's Office?

Carson Middle School is part of the Carson City School District, which is the applicant. This project involves the installation of photovoltaic arrays on supporting carport structures. This green energy project will have a positive impact to the District and the school by reducing their reliance on the community's power grid and thereby generating a net savings to the District's power bill of approximately \$70,000 per year. This will allow the School District to use that savings for other operating needs

This project will not increase the student population, nor will it impact the Sheriff's Office.

B. If your project will result in the covering of land area with paving or a compacted surface, how will drainage be accommodated?

The project site is currently a paved parking lot with adequate drainage provisions. This project will not create any additional impervious surfaces. Run-off from this array structure will discharge onto the existing pavement and sheet flow to the existing on-site curb and gutter system before being collected in existing drop inlets.

C. Are the water supplies serving your project adequate to meet your needs without degrading supply and quality to others in the area? Is there adequate water pressure? Are the lines in need of replacement? Is your project served by a well?

This project involves the installation of photovoltaic arrays on supporting carport structures. It will have no impact on the water supply system.

D. Is there adequate capacity in the sewage disposal trunk line that you will connect to in order to serve your project, or is your site on a septic system?

This project involves the installation of photovoltaic arrays on supporting carport structures. It will have no impact on the sanitary sewer system.

E. What kind of road improvements are proposed or needed to accommodate your project? Have you spoken to Development Engineering or Regional Transportation regarding road improvements?

Road improvements are not required to serve this project. The existing road system to the school and surrounding neighborhood will not be impacted by this project. However, City planning and engineering departments have been made aware of this project.

F. Indicate the source of the information that you are providing to support your conclusions and statements made in this packet.

The conclusions to support the information contained herein is from input from School personnel, the consulting engineer, the photovoltaic array consultant, and City Engineering, Planning & Building Department staff.

G. If outdoor lighting is to be a part of the project, please indicate how it will be shielded from adjoining property and the type of lighting provided.

No outdoor lighting is associated with this project.

H. Describe the proposed landscaping, including screening and arterial landscape areas.

No new landscaping is proposed for this project and existing landscape planters will not be impacted by this project. In the event existing landscape planters are impacted, it is expected to only be limited to support posts. The location and size of the planters will not change.

I. Provide a parking plan for your project. If you are requesting approval for off-site parking within 300 feet, provide plans showing (1) parking on your site, (2) parking on the off-site parking lot; and (3) how much of the off-site parking area is required for any business other than your own.

This project does not require parking. The existing parking lot and the number of existing parking spaces within the lot will not be impacted. Posts to support the photovoltaic arrays will be aligned with existing striping to the extent possible. There is no request for additional or off-site parking.

**ACKNOWLEDGMENT OF APPLICANT**

I certify that the foregoing statements are true and correct to the best of my knowledge and belief. I agree to fully comply with all conditions as established by the Planning Commission/Board of Supervisors. I am aware that this permit becomes null and void if the use is not initiated within one-year of the date of the Planning Commission/Board of Supervisors approval; and I understand that this permit may be revoked for violation of any of the conditions of approval. I further understand that approval of this application does not exempt me from all City Code requirements.



Mark Korinek, CCSD Director of Operations  
Applicant

10/7/10

Date

**SPECIAL USE PERMIT APPLICATION**  
**PROJECT IMPACT REPORT STATEMENT**  
**CARSON CITY SCHOOL DISTRICT**  
**CARSON MIDDLE SCHOOL – PHOTOVOLTAIC ARRAYS**

This green energy project is proposed to help reduce School District operating costs, reduce the District's reliance on the existing power grid and continue to improve their energy efficiency. The project involves installation of a photovoltaic array (solar energy) system on supporting carport structures within the west parking lot of the property. The amount of space anticipated for these panels is approximately 30,000 square feet.

It is important to note that this work does not increase the student body or staff populations. This project will reduce School District operating costs, reduce the District's reliance on the existing power grid and continue to improve their energy efficiency. As such, demands on traffic, drainage, water and sewer are not anticipated to increase as a result of this project.

The following information discusses the impacts related to traffic, drainage, water and sewer:

**TRAFFIC:** Currently, there are approximately 1,250 students and 100 staff at Carson Middle School. These numbers will not change as a result of this project. This project will have no impact to on-site or neighboring traffic. Because there is no population or traffic increase as a result of this project, no calculations or studies have been prepared.

**DRAINAGE:** This proposed green energy project will not generate any additional impervious surface. The proposed photovoltaic array system will be installed within the existing paved west parking lot of Carson Middle School. Drainage generated from on-site and upstream sources will continue to be routed through the existing on-site curb and gutter system, and drop inlets. Drainage details specific to this project will be submitted as part of the anticipated building permit submittal.

**WATER:** Currently, there are approximately 1,248 students and 100 staff at Carson Middle School. These numbers will not change as a result of this project. This project will have no impact on the existing water demand.

Landscape areas and irrigation will not be impacted as a result of this project.

Since this project does not involve domestic or irrigation water, no water calculations will be provided to the City.

**SEWER:** Currently, there are approximately 1,248 students and 100 staff at Carson Middle School. These numbers will not change as a result of this project. This project will have no impact on the existing sanitary sewer demand.

**SPECIAL USE PERMIT APPLICATION**  
**GREEN ENERGY PROJECTS – SUPPLEMENTAL INFORMATION**  
**CARSON CITY SCHOOL DISTRICT**  
**CARSON MIDDLE SCHOOL – PHOTOVOLTAIC ARRAYS**

In addition to the three Special Use Permit applications for the photovoltaic array projects, which will each generate 300 kilowatts of power, the Carson City School District has been actively pursuing conservation, renewable and green energy projects for several years. The past and present goal of the District is to use capital funds to reduce operating costs. The savings generated by this improved energy efficiency increases the educational operating funds, which have a direct impact on teachers and students. It also provides renewable educational opportunities to the students.

Two other photovoltaic projects are planned at District sites. These two projects will generate an additional one-megawatt of power. These alternative energy projects will save the District approximately \$200,000 in annual utility charges, and reduce the District's reliance on the City's power grid. Other alternative energy projects being considered involve the use of wind generation energy.

Since January 2010, the School District has been involved in approximately \$1.2M of green energy projects. There are twelve of these energy efficient projects, which include replacing old inefficient boilers, lighting retrofits, and heat pump retrofits and replacements.

Carson Middle School is now equipped with a state of the art HVAC temperature control system that regulates the building with outside air. This air constitutes over fifty percent of the required cooling load. The temperature control system is linked to the lighting system, which together condition each area within the building for less operating cost. To further reduce operating costs, hallways and classrooms take advantage of natural lighting due to the installation of skylights equipped with lighting sensors and mechanical blinds to maximize the use of natural sunlight.

The middle school also incorporated two trash compactors, which have already saved the District approximately \$40,000 in landfill disposal fees, not to mention a reduction in vehicle emissions.

These combined energy efficient and green energy projects have already generated a savings to the Carson City School District of approximately \$500,000. With substantially reduced operating budgets, these savings have been instrumental in helping to meet operating needs and directly supporting the needs of our students by making funds available to their classrooms.

# RESOURCE CONCEPTS, INC.

ENGINEERING · PLANNING · RESOURCE MANAGEMENT

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## EXISTING SITE PLAN

CARSON CITY MIDDLE SCHOOL DISTRICT  
Carson City, Nevada

10/12/10

DATE

REVISION

RCI PLAN REVISIONS

10/12/10

DATE

REVISION

RCI

REVISION



Senate Bill No. 114—Senator Schneider

CHAPTER.....

AN ACT relating to energy; requiring the Director of the Office of Energy to make certain determinations relating to systems for obtaining solar energy; prohibiting certain restrictions on the use of systems for obtaining solar energy or wind energy; and providing other matters properly relating thereto.

**Legislative Counsel's Digest:**

Existing law sets forth a prohibition against covenants, restrictions or conditions contained in deeds, contracts or other legal documents which prohibit or unreasonably restrict an owner of property from using a system for obtaining solar energy on his property. (NRS 111.239, 278.0208) **Sections 2 and 3** of this bill include within the prohibition any such covenant, restriction or condition which has the effect of prohibiting or unreasonably restricting the property owner from using a solar energy system. **Sections 2 and 3** also describe an unreasonable restriction on the use of a system for obtaining solar energy as including: (1) the placing of a restriction or requirement that decreases the efficiency or performance of a system for obtaining solar energy by more than 10 percent of the amount that was originally specified for the system, as determined by the Director of the Office of Energy; and (2) the prohibition of a system for obtaining solar energy that uses components painted with black solar glazing.

**Section 1** of this bill requires the Director, if requested to make a determination concerning the efficiency or performance of a system for obtaining solar energy pursuant to **section 2 or 3**, to make the determination within 30 days after receiving the request. If the Director needs additional information to make the determination, **section 1** authorizes the Director to request that information from the person requesting the determination and requires the Director to make the determination within 15 days after receiving the additional information.

**Sections 1.5 and 2.5** of this bill set forth a prohibition against covenants, restrictions or conditions contained in deeds, contracts or other legal documents, and against local ordinances, regulations or plans, which prohibit or unreasonably restrict an owner of property from using a system for obtaining wind energy on his property. **Sections 1.5 and 2.5** describe an unreasonable restriction on the use of a system for obtaining wind energy as the placing of a restriction or requirement on the use of a system for obtaining wind energy which significantly decreases the efficiency or performance of the system and which does not allow for the use of an alternative system at a substantially comparable cost and with substantially comparable efficiency and performance. **Sections 1.5 and 2.5** do not prohibit reasonable restrictions: (1) imposed pursuant to a determination by the Federal Aviation Administration that the installation of the system for obtaining wind energy would create a hazard to air navigation; or (2) relating to the height, noise or safety of a system for obtaining wind energy.

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THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN  
SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

**Section 1.** NRS 701.180 is hereby amended to read as follows:  
701.180 The Director shall:



1. Acquire and analyze information relating to energy and to the supply, demand and conservation of its sources.
2. Utilize all available public and private means to provide information to the public about problems relating to energy and to explain how conservation of energy and its sources may be accomplished.
3. Review and evaluate information which identifies trends and permits forecasting of the energy available to the State. Such forecasts must include estimates on:
  - (a) The level of demand for energy in the State for 5-, 10- and 20-year periods;
  - (b) The amount of energy available to meet each level of demand;
  - (c) The probable implications of the forecast on the demand and supply of energy; and
  - (d) The sources of renewable energy and other alternative sources of energy which are available and their possible effects.
4. Study means of reducing wasteful, inefficient, unnecessary or uneconomical uses of energy and encourage the maximum utilization of existing sources of energy in the State.
5. Encourage the development of:
  - (a) Any sources of renewable energy and any other energy projects which will benefit the State; and
  - (b) Any measures which conserve or reduce the demand for energy or which result in more efficient use of energy.
6. In conjunction with the Desert Research Institute, review policies relating to the research and development of the State's geothermal resources and make recommendations to the appropriate state and federal agencies for establishing methods of developing the geothermal resources within the State.
7. Solicit and serve as the point of contact for grants and other money from the Federal Government and other sources to promote:
  - (a) Energy projects that enhance the economic development of the State;
  - (b) The use of renewable energy; and
  - (c) The use of measures which conserve or reduce the demand for energy or which result in more efficient use of energy.
8. Coordinate the activities and programs of the Office of Energy with the activities and programs of the Task Force, the Consumer's Advocate and the Public Utilities Commission of Nevada and other federal, state and local officers and agencies that promote, fund, administer or operate activities and programs related to the use of renewable energy and the use of measures which



conserve or reduce the demand for energy or which result in more efficient use of energy.

9. *If requested to make a determination pursuant to NRS 111.239 or 278.0208, make the determination within 30 days after receiving the request. If the Director needs additional information to make the determination, he may request the information from the person making the request for a determination. Within 15 days after receiving the additional information, the Director shall make a determination on the request.*

10. Carry out all other directives concerning energy that are prescribed by the Governor.

Sec. 1.5. Chapter 111 of NRS is hereby amended by adding thereto a new section to read as follows:

1. *Except as otherwise provided in subsection 2, any covenant, restriction or condition contained in a deed, contract or other legal instrument which affects the transfer or sale of, or any other interest in, real property and which prohibits or unreasonably restricts the owner of the property from using a system for obtaining wind energy on his property is void and unenforceable.*

2. *The provisions of subsection 1 do not prohibit a reasonable restriction or requirement:*

*(a) Imposed pursuant to a determination by the Federal Aviation Administration that the installation of the system for obtaining wind energy would create a hazard to air navigation; or*

*(b) Relating to the height, noise or safety of a system for obtaining wind energy.*

3. *For the purposes of this section, "unreasonably restricts the owner of the property from using a system for obtaining wind energy" includes the placing of a restriction or requirement on the use of a system for obtaining wind energy which significantly decreases the efficiency or performance of the system and which does not allow for the use of an alternative system at a substantially comparable cost and with substantially comparable efficiency and performance.*

Sec. 2. NRS 111.239 is hereby amended to read as follows:

111.239 1. Any covenant, restriction or condition contained in a deed, contract or other legal instrument which affects the transfer ~~or~~ or sale of, or any other interest in, real property ~~that~~ and which prohibits or unreasonably restricts *or has the effect of prohibiting or unreasonably restricting* the owner of the property from using a system for obtaining solar ~~or wind~~ energy on his property is void and unenforceable.



2. For the purposes of this section, ~~“unreasonably restricts the use of a system for obtaining solar or wind energy” means the following shall be deemed to be unreasonable restrictions:~~

(a) *The placing of a restriction or requirement on the use of [such] a system for obtaining solar energy which [significantly] decreases the efficiency or performance of the system by more than 10 percent of the amount that was originally specified for the system, as determined by the Director of the Office of Energy, and which does not allow for the use of an alternative system at a substantially comparable cost and with substantially comparable efficiency and performance.*

(b) *The prohibition of a system for obtaining solar energy that uses components painted with black solar glazing.*

Sec. 2.5. Chapter 278 of NRS is hereby amended by adding thereto a new section to read as follows:

1. *Except as otherwise provided in subsection 2:*

(a) *A governing body shall not adopt an ordinance, regulation or plan or take any other action that prohibits or unreasonably restricts the owner of real property from using a system for obtaining wind energy on his property.*

(b) *Any covenant, restriction or condition contained in a deed, contract or other legal instrument which affects the transfer or sale of, or any other interest in, real property and which prohibits or unreasonably restricts the owner of the property from using a system for obtaining wind energy on his property is void and unenforceable.*

2. *The provisions of subsection 1 do not prohibit a reasonable restriction or requirement:*

(a) *Imposed pursuant to a determination by the Federal Aviation Administration that the installation of the system for obtaining wind energy would create a hazard to air navigation; or*

(b) *Relating to the height, noise or safety of a system for obtaining wind energy.*

3. *For the purposes of this section, “unreasonably restricts the owner of the property from using a system for obtaining wind energy” includes the placing of a restriction or requirement on the use of a system for obtaining wind energy which significantly decreases the efficiency or performance of the system and which does not allow for the use of an alternative system at a substantially comparable cost and with substantially comparable efficiency and performance.*



**Sec. 3.** NRS 278.0208 is hereby amended to read as follows:

278.0208 1. A governing body shall not adopt an ordinance, regulation or plan or take any other action that prohibits or unreasonably restricts *or has the effect of prohibiting or unreasonably restricting* the owner of real property from using a system for obtaining solar ~~or wind~~ energy on his property.

2. Any covenant, restriction or condition contained in a deed, contract or other legal instrument which affects the transfer ~~or~~ or sale *of*, or any other interest in, real property ~~that~~ *and which* prohibits or unreasonably restricts *or has the effect of prohibiting or unreasonably restricting* the owner of the property from using a system for obtaining solar ~~or wind~~ energy on his property is void and unenforceable.

3. For the purposes of this section, ~~“unreasonably restricting the use of a system for obtaining solar or wind energy” means~~ *the following shall be deemed to be unreasonable restrictions:*

(a) *The placing of a restriction or requirement on the use of such a system for obtaining solar energy which significantly decreases the efficiency or performance of the system by more than 10 percent of the amount that was originally specified for the system, as determined by the Director of the Office of Energy, and which does not allow for the use of an alternative system at a substantially comparable cost and with substantially comparable efficiency and performance.*

(b) *The prohibition of a system for obtaining solar energy that uses components painted with black solar glazing.*

**Sec. 4.** This act becomes effective upon passage and approval.

