

ADMINISTRATIVE COMMITTEE

Monday, December 14, 2015
5:00 p.m.

NOTICE IS HEREBY GIVEN that the Bountiful City Administrative Committee will hold its regular meeting in the Conference Room at City Hall, 790 South 100 East, Bountiful, Utah, at the time and on the date given above. The public is invited. Persons who are disabled as defined by the Americans with Disabilities Act may request an accommodation by contacting the Bountiful City Planning Office at 298-6190. Notification at least 24 hours prior to the meeting would be appreciated.

AGENDA

1. Welcome and Introductions.
2. Consider approval of minutes for December 7, 2015.
3. **PUBLIC HEARING:** Consider approval of a Conditional Use Permit to allow for Solar Panels at 235 South 400 East, Judson Wall (Dental Solutions Inc.), applicant.
4. Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 123 West 1550 North, Nicole Blackham, applicant.
5. Miscellaneous business and scheduling.



Chad Wilkinson, City Planner

Pending minutes have not yet been approved by the Administrative Committee and are subject to change until final approval has been made.

**Bountiful City
Administrative Committee Minutes
December 7, 2015**

Present: Chairman – Chad Wilkinson; Committee Members –John Marc Knight and Dave Badham; Assistant Planner – Andy Hulka; Recording Secretary – Julie Holmgren.

Excused: Lloyd Cheney

1. Welcome and Introductions.

Chairman Wilkinson opened the meeting at 5:02 p.m. and introduced all present.

2. Consider approval of minutes for November 23, 2015.

Mr. Knight made a motion to approve the minutes for November 23, 2015. Mr. Wilkinson seconded the motion.

<u> A</u>	Mr. Wilkinson
<u> A</u>	Mr. Knight
<u> </u>	Mr. Badham (abstained)

Motion passed 2-0.

3. PUBLIC HEARING: Consider approval of a Conditional Use Permit to allow for Solar Panels at 123 West 1550 North, Nicole Blackham, applicant.

Dustin Baker, representing the applicant, was present.

Andy Hulka presented a summary of the staff report (the full staff report follows).

The property where the solar panels are to be installed is located in the R-4 Single Family Zone. Solar power panels are classified in the city ordinance as “private power plants” and require a conditional use permit if they are over 10 watts. The applicant has indicated that the photovoltaic system to be installed will produce 3.85 kilowatts (3,850 watts), requiring a conditional use permit.

The application submitted indicates the proposed installation of 1 photovoltaic array with a total of 14 panels. The arrays will occupy approximately 200 square feet, which is smaller than the 50% maximum roof coverage. The south facing roof will have all 14 panels with 7 panels on the bottom row and 7 panels on the top row. The panels will be connected to the roof by a Snap N Rack mounting system. The roof is of truss construction, has a slope of 10:12, and the shingles are 10 years old and in good condition. A review of information provided in the application indicates that all engineering requirements for the construction of

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solar panels in Bountiful City will be met. A reflection analysis of the roof pitch indicates that photovoltaic panels should not produce a reflection nuisance to surrounding properties.

Based on the findings, staff has determined that the applicant would comply with all requirements for the conditional use permit. Staff recommends approval of the conditional use permit with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This conditional use permit is solely for this site and is non-transferable.

PUBLIC HEARING: Chairman Wilkinson opened and closed the Public Hearing at 5:05 p.m. with no comments from the public.

Mr. Badham inquired regarding the solar mounting system. Mr. Baker reported that he will be using a Snap N Rack system.

Mr. Badham made a motion for approval of a Conditional Use Permit to allow for Solar Panels at 123 West 1550 North, Nicole Blackham, applicant, as outlined by staff. Mr. Knight seconded the motion.

A Mr. Wilkinson
A Mr. Knight
A Mr. Badham

Motion passed 3-0.

4. **Consider approval of a Conditional Use Permit, in written form, to allow for a Home Occupation Contractor Business (gas pipe installation and service) at 699 West 3300 South, Stockton Davis, applicant.**

Mr. Knight made a motion for approval, in written form, to allow for a Home Occupation Contractor Business (gas pipe installation and service) at 699 West 3300 South, Stockton Davis, applicant. Mr. Wilkinson seconded the motion.

A Mr. Wilkinson
A Mr. Knight
A Mr. Badham

Motion passed 3-0.

5. **Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 73 West 900 North, Brady Byington, applicant.**

Mr. Knight made a motion for approval, in written form, to allow for Solar Panels at 73 West 900 North, Brady Byington, applicant. Mr. Wilkinson seconded the motion.

Pending minutes have not yet been approved by the Administrative Committee and are subject to change until final approval has been made.

A Mr. Wilkinson
A Mr. Knight
A Mr. Badham

Motion passed 3-0.

6. Consider approval of a Conditional Use Permit, in written form, to allow for Solar Panels at 281 West 2400 South, Bernell Loveridge, applicant.

Mr. Knight made a motion for approval, in written form, to allow for Solar Panels at 281 West 2400 South, Bernell Loveridge, applicant. Mr. Wilkinson seconded the motion.

A Mr. Wilkinson
A Mr. Knight
A Mr. Badham

Motion passed 3-0.

7. Miscellaneous business and scheduling.

Mr. Wilkinson ascertained there were no further items of business.

The meeting was adjourned at 5:10 p.m.

Chad Wilkinson, City Planner



BOUNTIFUL

City of Beautiful Homes and Gardens

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CITY COUNCIL
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BETH HOLBROOK
JOHN M. (MARC) KNIGHT
KENDALYN HARRIS
JOHN PITT

CITY MANAGER
GARY R. HILL

Memo

Date: December 2, 2015
To: Administrative Committee
From: Andy Hulka, Assistant Planner
Re: Staff Report for the Administrative Committee Meeting on Monday, December 14, 2015

Overview

- 3. PUBLIC HEARING** - Consider approval of a Conditional Use Permit to allow for Solar Panels at 235 South 400 East, Judson Wall (Dental Solutions Inc.), applicant.

Item #3

Background

The property where the solar panels are to be installed is located in the (H) Hospital Zone. Solar power panels are classified in the city ordinance as "private power plants" and require a conditional use permit if they are over 10 watts. The applicant has indicated that the photovoltaic system to be installed will produce 21.4 kilowatts (21,400 watts), requiring a conditional use permit.

Findings

The application submitted indicates the proposed installation of 1 large photovoltaic array with a total of 75 panels. The arrays will occupy approximately 2,110 square feet, which is less than the 50% maximum roof coverage. All 75 panels will be arranged in a grid covering the roof, with 12 rows ranging between 4 and 9 panels per row. The panels will be connected to the roof by a ballasted racking system. The roof is of joist construction, is flat (1/4" per foot slope), and is 2 years old. A review of information provided in the application indicates that all engineering requirements for the construction of solar panels in Bountiful City will be met. A reflection analysis of the roof pitch indicates that photovoltaic panels should not produce a reflection nuisance to surrounding properties.

Staff Recommendation

Based on the findings, staff has determined that the applicant would comply with all requirements for the conditional use permit. Staff recommends approval of the conditional use permit with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.

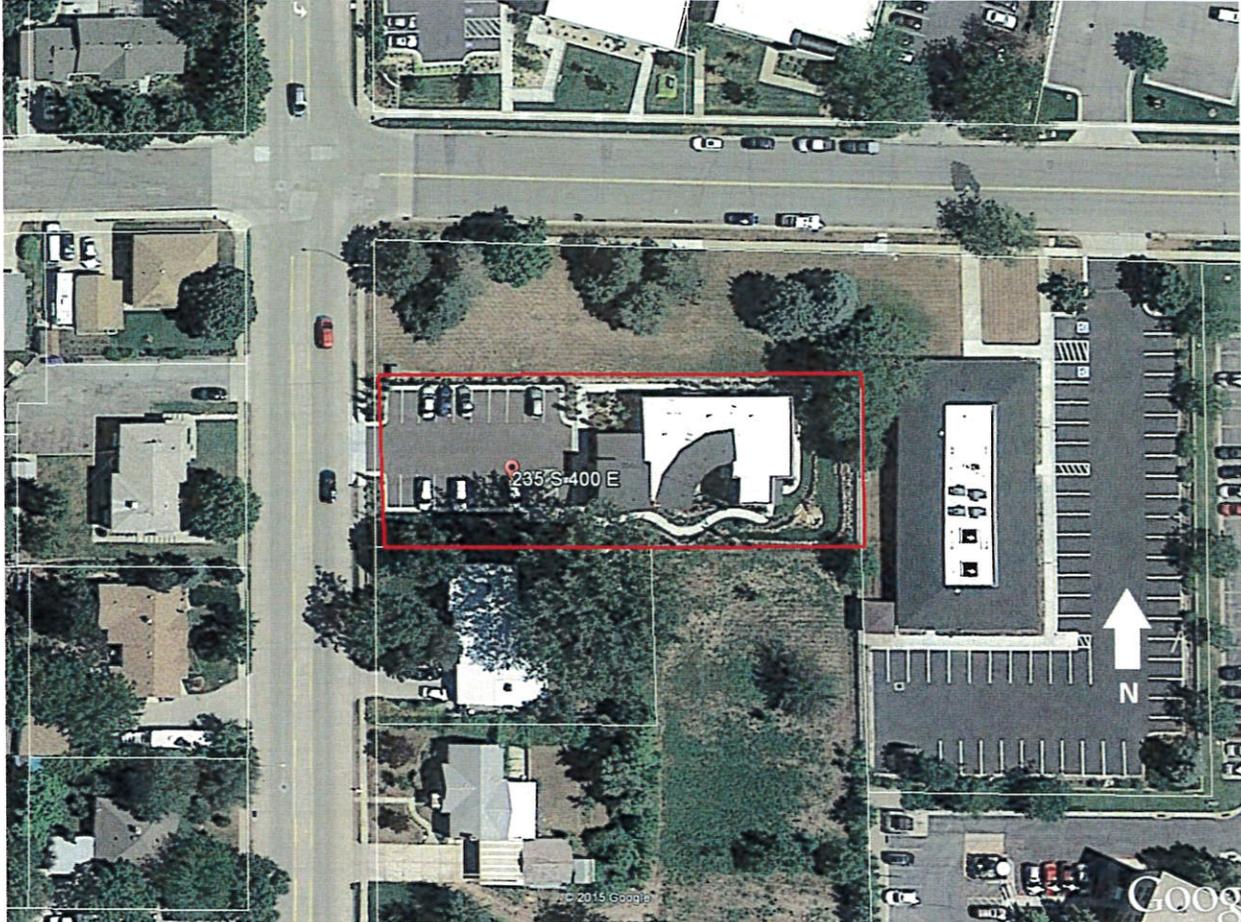
3. System shall be set up in accordance with Bountiful City Power requirements.
4. This conditional use permit is solely for this site and is non-transferable.

Bountiful Land Use Ordinance

14-14-126 PRIVATE POWER PLANTS

- A. A "Private Power Plant" is any device or combination of devices not owned and operated by a regulated utility company, which convert mechanical or chemical energy into electricity. A private power plant with a peak power generation capacity of 10 Watts/12v/500mAmp (or equivalent) is exempt from the provisions of this Section. A private power plant, including a windmill or wind turbine, shall not be permitted within Bountiful City limits, with the following exceptions:
1. A back-up power generator running on unleaded gasoline, diesel, natural gas, propane, or hydrogen fuel cell, rated for a single structure or building lot, located in accordance with the requirements of the zone in which it is located.
 2. A photovoltaic cell array or other passive solar energy system located in accordance with the requirements for occupied structures for the zone in which it is located.
- B. With the exception of a back-up power generator, no private power plant may be installed or used on any property unless a conditional use permit has been issued for the specific power generation device.
- C. A private power plant is not exempt from the height requirements of the Zone in which it is located, and shall be considered an occupied structure for the purposes of calculating height.
- D. Solar energy design standards and requirements
1. Solar energy panels or collectors that are mounted to the roof shall:
 - a. Not extend beyond the roofline.
 - b. Not reflect sunlight onto neighboring windows or rights-of-way.
 - c. Not exceed fifty (50) percent of the total roof area.
 - d. Shall be maintained in good condition.
 2. Prior to installation, use, and connection to the grid, the following shall be done:
 - a. A Conditional Use Permit shall be issued
 - b. A Building Permit shall be issued
 - c. The Power Department shall approve the application for net metering
 - d. The Power Department shall approve the physical installation

235 S 400 E



CONDITIONAL USE PERMIT APPLICATION

~~Dec 7~~
Dec 14

Date of Submittal: 11/23/15

Property Address: 235 South 400 East

Applicant Name: Judson Wall / Dental Solutions Inc TMJ Dental office
LLC

Applicant Address: 235 S. 400 East, Bountiful UT #04 003 0137

Applicant Phone #: 801-298-1812

Applicant Email: mail@utahdentalhealth.com
801 867-4543 Matt Sovic (Marathon Electric)
matt.sovic@marathonelectricllc.com

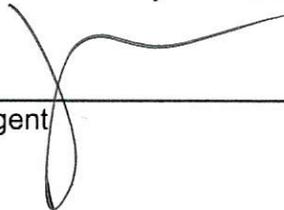
1. Items that shall be included with any Conditional Use Permit application:

- a. A completed Bountiful City Application for Conditional Use Permit cover sheet (this document).
- b. Payment of Filing Fee (\$200 P.C. / \$50 A.C.)
- c. If the conditional use permit is to be approved by the Planning Commission, a mailing list of all property owners within three hundred feet (300') of the subject property boundaries based on the most recent Davis County Tax Assessment records, submitted on self-adhesive mailing labels. Items heard by the Administrative Committee do not require mailing labels.
- d. If the conditional use permit requires site plan review, two (2) full sized, and one (1) 11x17 copy or one (1) .PDF file, of the proposed site plan drawn at 1:10 scale or as required by the City Engineer and City Planner. A site plan shall include:
 - i. A north arrow, the scale of the drawing, and the date of the drawing.
 - ii. Street names and addresses.
 - iii. Property lines with dimensions.
 - iv. All sidewalks, driveways, curbs and gutter, and parking areas.
 - v. All existing easements, rights-of-way, and any other restrictions on the use of the property.
 - vi. Existing buildings, proposed buildings, and other significant features on the site.
 - vii. Existing buildings and significant features located on adjacent properties within 50 feet (50') of the subject property boundaries
 - viii. When required by the City Planner or City Engineer, and for all new construction, a survey including both existing and proposed contours of the land at intervals of two feet (2') or better.

- e. Typed responses to the following questions:
 - i. How does your proposed project fit in with surrounding properties and uses?
 - ii. What will you do to mitigate the potential conflicts with surrounding properties and uses?

2. Property Owner Authorization and Affidavit

The undersigned, being duly sworn, depose that I am (we are) the owner(s) or authorized agent(s) of the owner(s) of the property involved in this application and that the statements contained herein or by attachment, are to the best of my (our) knowledge true and correct.



Owner/Agent

Owner/Agent



BOUNTIFUL

City of Beautiful Homes and Gardens

MAYOR
Randy Lewis
CITY COUNCIL
Richard Higginson
Beth Holbrook
John M. Knight
R. Fred Moss
Thomas B. Tolman
CITY MANAGER
Gary Hill

SOLAR PANEL QUESTIONS

Please answer all questions completely (do not simply refer to an attachment)

Total Number of Panels	78 75
Array Dimensions	39.4" x 65.95"
Total rating of photovoltaic system:	22 KW 21.4
Mounting Location	
Roof/Wall/Other	Roof
Roof Pitch (Rise/Run e.g. "5/12")	Flat (1/4" per foot)
Roofing Material Asphalt Shingle/Tile/Steel/Other Age & Condition of Shingles	Roof Membrane System 2 years
Roof Construction Rafter/Truss/Joist	Joist
Engineering Analysis	
Connection to Roof	Ballast (Lay on Top)
Analysis of Existing Roof Structure with added Solar Equipment	Total extra weight on roof is 10,600 lbs max bay load = 171 lbs max bay load (Dead + snow) = 464 lbs
Adequate Uplift Resistance (120 mph Exp B)	yes 120 mph

Kim Bushnell

From: Kim Bushnell
Sent: Thursday, March 26, 2015 3:44 PM
To: 'Judson Wall'
Cc: Jerrell Jensen; Brent Thomas; Alan Farnes; Jay Christensen
Subject: RE: solar
Attachments: Customer Net Metering Documents-2014-10-02.pdf

Mr. Wall,

I read the documents to make sure I had given you the correct information and found that I had not. For a single phase commercial service like yours we allow a 10 KW or 75% of peak metered energy demand whichever is greater. With the measured peak we have on record (31.2 KW) your system could be sized up to 23.3 KW.

The rules I had looked at before were for three phase services. We would be interested in meeting with you to go over what you are proposing for your net metered system. If you would like we can set up a meeting with you to go through it. If after talking with us you are not satisfied with the results you could contact other Bountiful City Departments.

Thanks,

Kim Bushnell
Metering Foreman
Bountiful City Light and Power

-----Original Message-----
From: Judson wall [mailto:mail@utahdentalhealth.com]
Sent: Thursday, March 26, 2015 3:05 PM
To: Kim Bushnell
Subject: solar

thank you for your help today

regards,

judson

Judson Wall, DDS, FAGD, FAACP, AIAOMT
Dental Solutions, Inc.
235 S. 400 E.
Bountiful, UT 84010



November 30, 2015

Matt Sovic
Marathon Electric
4322 South Main Street
Murray, UT 84107

Re: Dental Solutions Solar Panels

Dear Matt,

We have reviewed the calculations for the building design and the information provided to us by you on November 25, 2015 for your intention of installing solar panels on the roof of the Dental Solutions Building. I have found that the additional weight of 4.8 psf which will be imposed on the roof, does not cause an unsafe or overloaded condition for the roof framing. There are two instances where the demand of this system causes a 102% - 104% stress level, but it is our professional opinion that this will not be detrimental to the roof system due to the safety factors applied, as well as the actual loading being less than the design load. We have included with this letter, the original calculations for these roof joists with the added weight of the Solar Panel System.

Therefore, you may safely proceed to install the solar panels as requested. Please let us know if you have any further questions or concerns.

Respectfully,
MJ Structural Engineers

Jon Ward, S.E.
Senior Structural Engineer





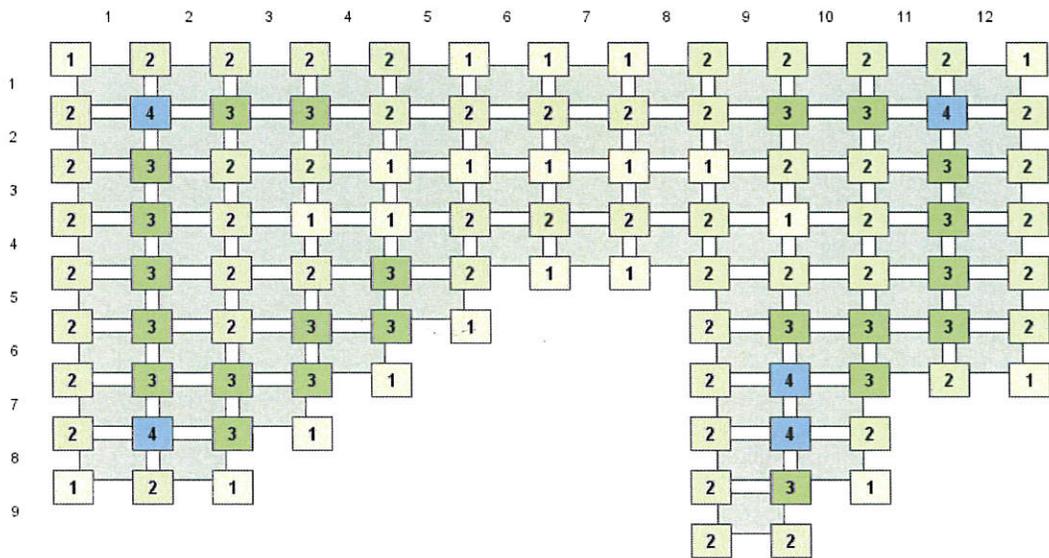
PROJECT TITLE: DENTAL SOLUTIONS
PROJECT ID: 3DB32B7D

NOVEMBER 11, 2015, 10:58 PM

Name:	TMJ Dental	Designed by solar
Address:	235 South 400 East Bountiful, UT 84010	RM-BALLASTED FLAT ROOF
City, State:	Bountiful, UT, 84010	75 - 285 Watt Panels
Module:	SolarWorld SW 285 mono (33mm)	2110 Sq Ft.
	285 Watts	21.4 kW

INSTALLATION AND DESIGN PLAN

LAYOUT WORKSPACE 1



Note: Blocks above with values greater than 4 require extra ballast bays. The proper number of bays are provided in the Bill of Materials. The installer must install these extra bays as near to the indicated location as possible.

Layout Dimensions				
NS Dimension:				~45.4 ft
EW Dimension:				~66.2 ft
Row	Modules	Buckets	Ballast Blocks	Ballast Weight
1	12	13	21	672
2	12	13	34	1088
3	12	13	23	736
4	12	13	25	800
5	9	13	27	864

6	8	11	27	864
7	5	10	24	768
8	4	7	18	576
9	1	6	10	320
10	0	2	4	128



U-BUILDER PROJECT REPORT

PROJECT TITLE: DENTAL SOLUTIONS
PROJECT ID: 3DB32B7D

NOVEMBER 11, 2015, 10:58 PM

Name:	TMJ Dental	Designed by solar
Address:	235 South 400 East Bountiful, UT 84010	RM-BALLASTED FLAT ROOF
City, State:	Bountiful, UT, 84010	75 - 285 Watt Panels
Module:	SolarWorld SW 285 mono (33mm)	2110 Sq Ft.
	285 Watts	21.4 kW

ENGINEERING REPORT

Plan review

Average PSF:	4.81 lbs/ft ²
Total Number of Modules:	75
Total KW:	21 KW
Total Area:	2110 ft ²
Total weight on roof:	10147 lbs
- Racking weight:	354 lbs
- Module weight:	2978 lbs
- Ballast weight:	6816 lbs
- Max Bay Load (Dead):	171 lbs
- Max Bay Load (Dead + Snow):	464 lbs
Loads Used for Design	
- Building Code:	ASCE 7-10
- Wind Speed:	120 mph
- Ground Snow Load:	20 psf
- Roof Snow Load:	15.12 psf
- Seismic (Ss):	1.29
- Wind Exposure:	B
Loads Determined by Zip	
- City, State:	Bountiful, UT
- Wind Speed:	115 mph
- Ground Snow Load:	0 psf

Inspection

Product:	RM-BALLASTED FLAT ROOF
Module Manufacturer:	SolarWorld
Model:	SW 285 mono (33mm)
Module Watts:	285 watts
Module Length:	65.94 "
Module Width:	39.41 "
Module Thickness:	1.30 "
Module Weight:	39.70 lbs
Ballast Block Weight:	32 lbs
Max Blocks per Bucket:	4
Building Height:	15 ft
Roof Type:	Mineral Cap
Parapet Height:	None

WORKSPACE 1

Roof Point Load Up:	0 lbs
Roof Point Load Down:	0 lbs

Total Number of Modules:	75
Total KW:	21.4 KW
Rows/ Columns:	9 / 12 (with gaps)
NS Dimension:	~45.4 ft
EW Dimension:	~66.2 ft

Maximum Rail Span (Zone 1):	0"
Selected Rail Span:	0"
Maximum Rail Cantilever:	0.00 "
Roof Pitch:	None

RM PRODUCT ASSUMPTIONS

RM – Ballasted Flat Roof Systems

1. Importance Factor = 1
2. Building Height \leq 60 ft.
3. Roof Slope \geq 1.2° and 4. Topographic Factor (Kzt) = 1
5. ASCE 7-05: Basic Wind Speed: 85-150 mph (IBC 2006/ASCE 7-05). Wind Exposure: B or C.
6. ASCE 7-10: Basic Wind Speed: 110-180 mph (IBC 2012/ASCE 7-10). Wind Exposure: B or C.
7. Ballast Calculations are based on ASCE 7-05 ASCE 7-10 load combinations and product specific wind tunnel testing per ASCE 7-05 and ASCE 7-10
8. Ground Snow Load: 0-60 psf. (Reduction can be input if this is acceptable with your local building authority). Results are based on uniform snow loading and do not consider unbalanced, drifting, and sliding conditions.
9. Roof Snow Load: Reduction calculated per Section 7.3 of ASCE 7-05 with the following assumptions: Exposure factor = 0.9, Thermal factor = 1.2, Importance factor = 1. Please verify these are appropriate for your site before using the max bay loads reported above.
10. Dead Load Due to Racking: 3.5 lbs. per ballast tray
11. Module Gaps (E/W): 0.25 in.
12. Seismic: Installations must be in seismic site class A, B, C, or D as defined in IBC 2006/ASCE 7-05.

SEAOC PV1-2012 describes Structural Seismic Requirements for Rooftop Photovoltaic Arrays

Minimum Separation Distance: SEAOC PV1-2012 prescribes a minimum separation distance for unattached PV arrays on rooftops.

Array Size Limits for Seismic: SEAOC PV1-2012 limits the size of an unattached array by the design strength of the system connections.

Assumptions:

1. For Unattached Rooftop Photovoltaic Arrays
2. Array Importance Factor, $I_p = 1.0$
3. Building Importance Factor, $I_e = 1.0$
4. Site Class = D
5. Separation (S) is to a qualified parapet or rooftop obstruction
6. Array to Array Minimum Distance = $0.5 * S$
7. Array to Unqualified Parapet Minimum Distance = $1.5 * S$
8. S_s : Spectral response acceleration parameter at short periods per ASCE 7-05
9. S_d : Design, 5 percent damped spectral acceleration parameter at short periods per ASCE 7-05
10. A minimum module return flange of 0.9in (when using 1-3/4 in. clip bolts) is required for all RM installations
11. A minimum module return flange of 0.65in (when using 2 in. clip bolts) is required for all RM installations
12. Coefficient of friction used for calculations = 0.4



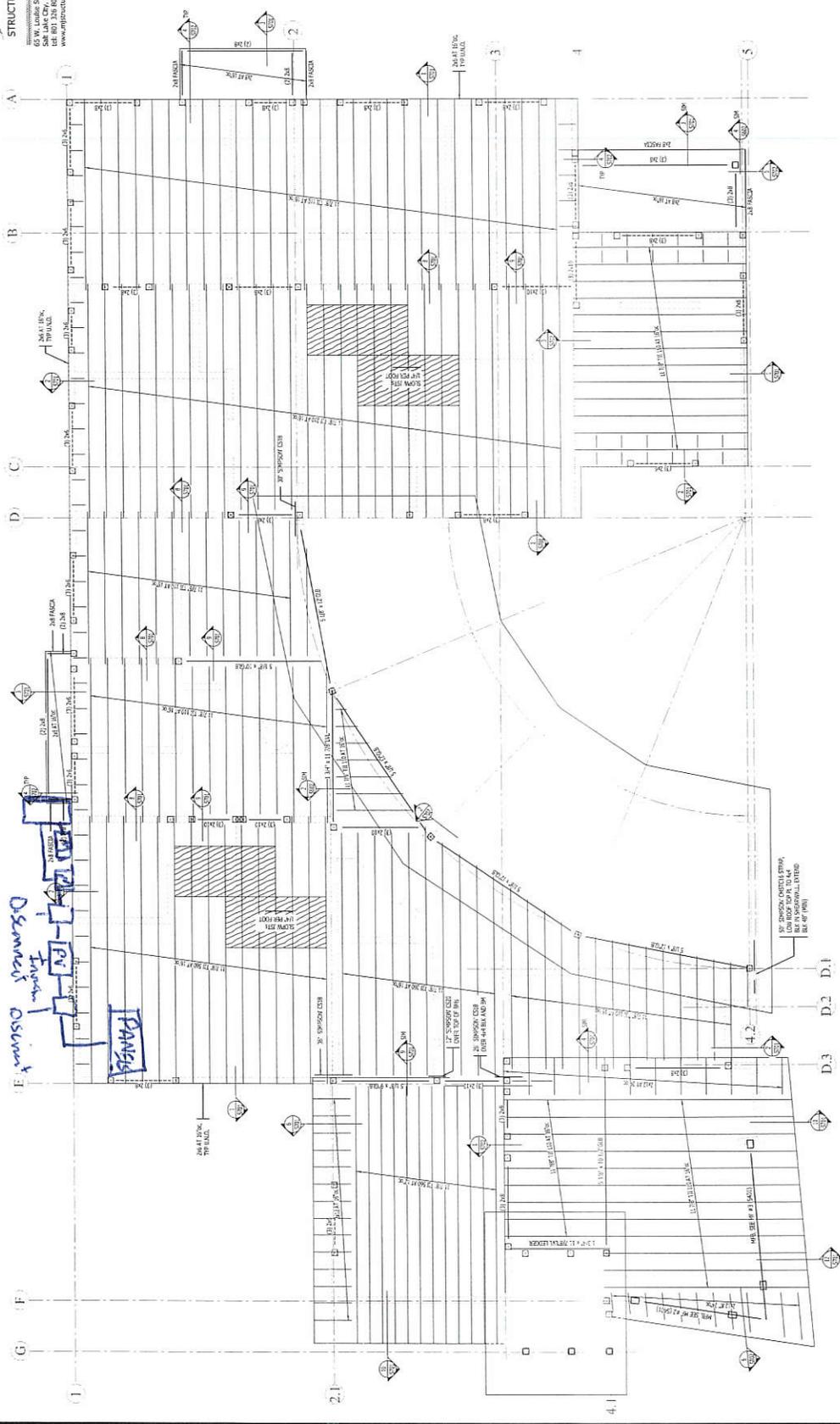
DR. JUDSON WALL, DDS
BOUNTIFUL, UT 84010

HORN PARTNERS
ARCHITECTURE
P.O. BOX 386 BOUNTIFUL, UT 84011-0386
P.H.N. 801.933.4876 or 801.299.4676
FAX 801.299.1111 www.hornpartners.com

NEW DENTAL SOLUTIONS OFFICE
235 S. ORCHARD DR.
BOUNTIFUL, UT 84010

LOW ROOF FRAMING
S203

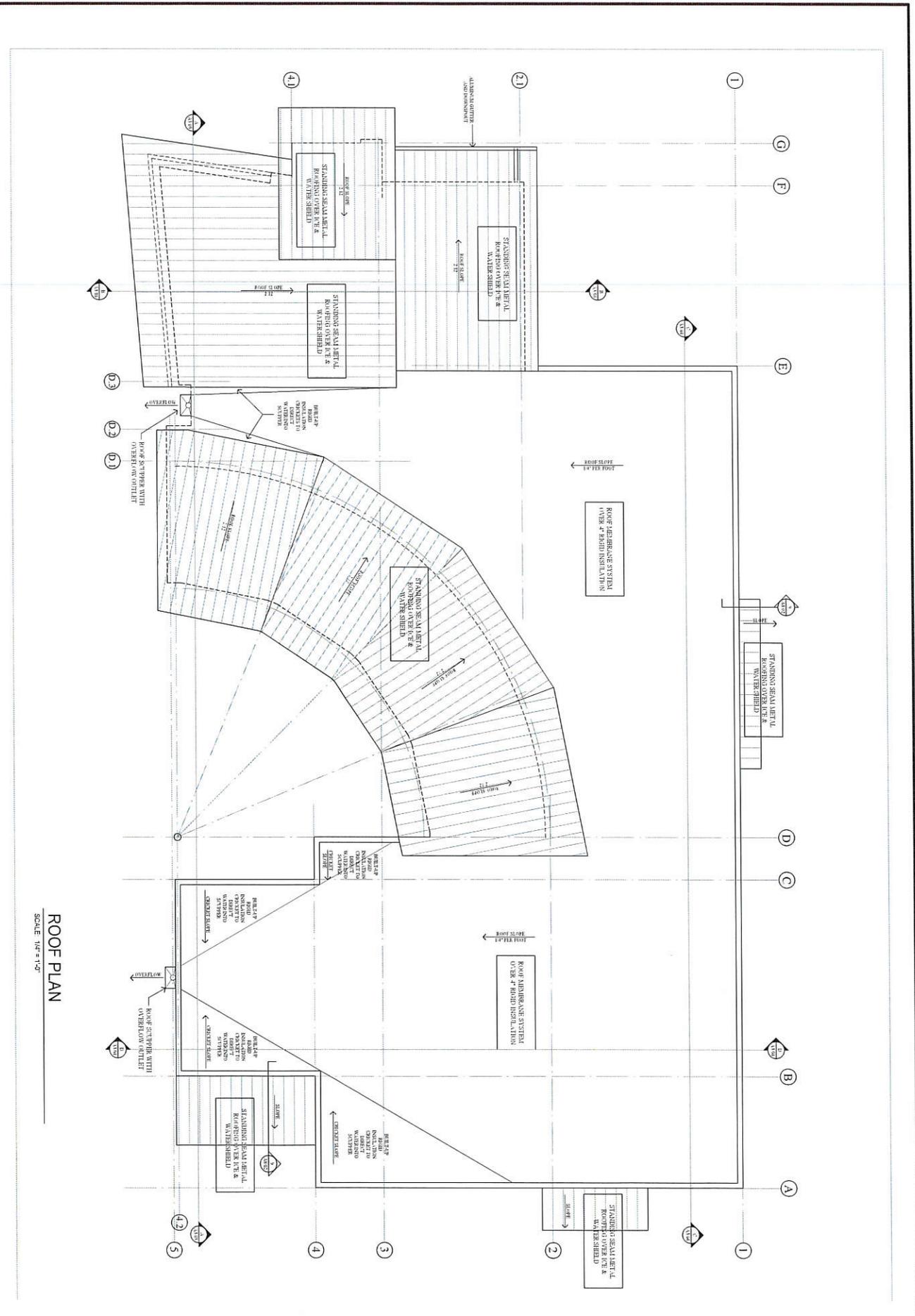
STRUCTURAL ENGINEERS
65 W. Linder Street
Boonville, MO 64615
Tel: 816.336.6038
www.structuralengineers.com



SEE SHEET (S103) FOR PLAN NOTES AND LEGEND

1 LOW ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"



ROOF PLAN
SCALE 1/4" = 1'-0"

A2.02	ROOF PLAN	NEW DENTAL SOLUTIONS OFFICE 235 S. ORCHARD DR. BOUNTIFUL, UT 84010	
		DRAWING DATE: 10/20/2012	JOB NO.:
		DRAWN BY: JBD	FILE NO.:
		CHECKED BY: KN	

HORN PARTNERS
ARCHITECTURE

P.O. BOX 386 BOUNTIFUL, UT 84011-386
PHN 801.933.4676 or 801.295.4676
FAX 801.299.1111 www.hornandpartners.com

DR. JUDSON WALL, DDS
460 E 400 S
BOUNTIFUL, UTAH 84010

02-2-14-R

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BETH HOLBROOK
JOHN M. (MARC) KNIGHT
KENDALYN HARRIS
JOHN PITT

CITY MANAGER
GARY R. HILL

Bountiful City, Utah Conditional Use Permit

A public hearing was held on December 7, 2015, at Bountiful City Hall to consider the request of Nicole Blackham for a Conditional Use Permit allowing for a Private Power Plant (Solar Panels) at the following location:

123 West 1550 North, Bountiful City, Davis County, Utah

ALL OF LOT 61, BOUNTIFUL SHADOWS NO 2. CONTAINS 0.21 ACRES

Parcel: 03-158-0061

The Bountiful City Administrative Committee heard the matter and considered the statements of the applicant, the City staff, and the public. As a result, the Administrative Committee makes the following findings:

1. This matter is properly heard before the Administrative Committee.
2. Appropriate public notice has been provided and a public hearing held.
3. The proposed request to operate a Private Power Plant (Solar Panels) meets the letter and the intent of the specific requirements in §14-2 and 14-14 et seq (Conditional Use Permit provisions) of the Bountiful City Land Use Ordinance.

The Bountiful City Administrative Committee hereby grants this Conditional Use Permit for a Private Power Plant (Solar Panels) to be located at 123 West 1550 North, in Bountiful, Davis County, Utah, with the following conditions:

1. The applicant shall obtain a building permit.
2. The panels must be installed only as proposed in the application.
3. This Conditional Use Permit is solely for this site and is non-transferable.

The Conditional Use Permit was approved on December 7, 2015, and this written form was approved this 14th day of December, 2015.

Chad Wilkinson
Planning Director

ATTEST: Julie Holmgren
Recording Secretary