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ARIZONA CORPORATION COMMISSION  
DOCUMENT CONTROL

December 10, 2004

Arizona Corporation Commission

DOCKETED

DEC 10 2004

Hon. Lyn A. Farmer, Esq.  
Chief Administrative Law Judge  
ARIZONA CORPORATION COMMISSION  
1200 West Washington  
Phoenix, Arizona 85007-2996

DOCKETED BY	<i>CAH</i>
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Re: APS Rate Case: E-01345A-03-0437 (Late-filed Exhibits)

Dear Judge Farmer:

Attached please find the following late-filed exhibits requested by you or members of the Arizona Corporation Commission ("Commission") during the course of proceedings in the above matter on December 3, 2004:

*APS Exhibit No. 28* – This exhibit includes correspondence, e-mails and other written documents exchanged between APS and the City of Phoenix ("City") concerning the potential installation of solar electric facilities at the East Economy Parking Lot of Sky Harbor Airport, which correspondence, e-mails, etc., indicate that, contrary to the unsupported allegations of Arizona Cogeneration Association (Tr. Vol. VIII at 1597–1601), the issue of bifurcating the Parking Lot load into lighting and non-lighting components (to better take advantage of the Phoenix Lighting rate schedule) was unrelated to the installation of solar equipment and that the issue of installing such equipment was actively in the City's plans until at least September 13, 2001 based on engineering diagrams bearing such a date.

*APS Exhibit No. 29* – APS has updated APS Exhibit No. 26 to show the impact of the proposed APS rate increase as well as the impact of rate changes implemented or proposed by other Western electric utilities that were not reflected (i.e., they were after December 31, 2003) or not fully reflected (i.e., not annualized for all of 2003) in APS Exhibit No. 26.

*APS Exhibit No. 30* – Commissioner Mayes had requested any “Marketing Plans” for APS/PWEC generation formulated after the December 8, 2002 “Generation Marketing Plan” referenced in the testimony of RUCO witness David Schlissel (page 5) and before the Load and Resource Plans attached to APS witness Ajit Bhatti’s testimony (APS Exhibit No. 7) as Schedule AB-2. There were no “marketing plans” post-2000 because the window of opportunity for optimum marketing of excess PWEC/APS generation had closed by the summer of 2001. APS/PWEC did prepare Load and Resource Plans for 2001 and 2002 (similar to those in Schedule AB-2), which I have attached as Exhibit No. 30.

*APS Exhibit No. 31* – The exhibit is a discussion of the potential for “automatic” enrollment of low-income consumers in APS programs such as the low-income discount program (E-3 and E-4) and the weatherization/bill assistance program.

*APS Exhibit No. 32* – APS has provided various residential rate design alternatives for E-12 (its single most popular residential rate) that in each instance preserves the existing per kWh rate for the first 400 kWh and impose differing amounts of the proposed increase on the second (400 – 800 kWh) and/or third (over 800 kWh) blocks, along with both the percentage impact at various consumption levels and a bill frequency analysis indicating the percentage of bills that could be affected by such alternative rate designs.

In addition, APS has provided the court reporter with the Summaries of: (1) the Settlement Direct Testimony of Steven M. Wheeler; (2) the Settlement Rebuttal Testimony of Steven M. Wheeler; (3) the Settlement Direct Testimony of Donald G. Robinson; (4) the Settlement Direct Testimony of Steven Fetter; (5) the Settlement Direct Testimony of David J. Rumolo; (6) the Settlement Rebuttal Testimony of David J. Rumolo; and (7) the Settlement Rebuttal Testimony of Steven Bischoff. These Summaries had previously been filed with the Commission and served on parties of record. APS asks that they be marked as APS

Hon. Lyn A. Farmer, Esq.  
December 10, 2004  
Page 3 of 3

Exhibits 33 through 39, respectively, and admitted, along with APS Exhibits 28 through 32, in accordance with the procedure set forth at the conclusion of the hearing on December 3<sup>rd</sup>.

I believe this discharges all of the outstanding requests for information, but please feel free to contact me if I am in error or if you or the Commissioners have any further questions concerning the proposed settlement.

Sincerely,



Thomas L. Mumaw

Thomas L. Mumaw

cc: Chairman Marc Spitzer  
Commissioner William A. Mundell  
Commissioner Jeff Hatch-Miller  
Commissioner Mike Gleason  
Commissioner Kristin K. Mayes  
Parties to the Docket

## **Sky Harbor Airport Parking Garage Solar Project Timeline and Documentation**

In response to the concerns raised by Bill Murphy (ACA) regarding APS' involvement with the City of Phoenix proposed East Economy parking structure at the Sky Harbor International Airport, this document provides information regarding APS' support of the design to provide electrical service to the garage and a solar system for the roof.

Contrary to the assertions made by Mr. Murphy that "the APS representative basically talked them out of it (roof-mounted solar collectors) in one meeting" (transcript page 1598), the draft Letter of Intent (LOI) and other documents show APS fully supported the rooftop solar generating facility by providing technical guidance and review, and offered financial support, to allow "Sky Harbor (to be) recognized as a leader in the promotion and use of this new environmentally friendly technology" (draft LOI excerpt).

Mr. Murphy goes on to relate that he recalls APS "said there's a cheaper way to do it. Why don't you go to the special rate that the City of Phoenix has. Go put in two meters. Don't do solar." (transcript page 1598). APS did inform the designer of the Municipal Lighting Service - City of Phoenix tariff (E-67) and supported the electrical design by ensuring this new facility could take advantage of this lighting-only rate. Therefore, in sum, APS worked to support the City of Phoenix's desire to use the lighting rate, ensured the facility was compliant with APS' requirements for electrical service and supported the City to "do the right thing" (transcript page 1598 - Murphy) by installing a rooftop solar generating facility.

As to Mr. Murphy's statement "Now, I believe, neither thing (lighting-only meter and rooftop solar) was done. It wasn't solar and it wasn't two meters, but I'm not sure" (transcript page 1599), the facts show that APS supported the application and design for both items - the lighting-only meter and roof-top solar. Although the project proceeded through the design phase, the City terminated this project when the priorities for the Airport changed post 9/11.

APS has a record of supporting municipal and civic projects to encourage the installation solar facilities. See attached "APS Solar Energy Municipal and Public Entity Partnerships" for a listing of these past and ongoing projects.

### Project Description

The City of Phoenix ("City") asked APS about how it might include solar at the Sky Harbor International Airport planned parking garages. In meetings held with the Sky Harbor management, planners, and contractors, APS indicated the City could 1) participate more generally in promoting solar energy through the Solar Partners program or 2) work on a hosted installation - similar to the installations APS currently has at the ADEQ building, Scottsdale Water Campus and others - where APS installs and owns the PV (photovoltaic) system, at no cost to the customer, on their facility.

The City's management, planners and designers were open to the second option, and APS was involved in a series of meetings and correspondence on the design and other considerations. For example, see the progress meeting minutes from 7/26/01 where the City mentions it was leaning towards hosting a photovoltaic system. In August of 2001, APS sent a draft Letter of Intent (LOI) to Al Smolko, the Project Manager for this project.

The solar project was scoped to be photovoltaic system of approximately 200 kW, the supporting transformer and service for the electrical power, and the needed design support. The most cost effective solution for the solar system would have Sky Harbor host an APS solar system where APS would be responsible for the costs of engineering and installing the system and the City would provide the site and interconnection of the system to the grid. Sky Harbor would become a Solar Partner and purchase some or all of the energy generated by the installation

The last written contact on the solar project from APS was a follow-up to the Project Manager on November 1, 2001 inquiring on the status of the project and the draft LOI that had been provided. In a phone conversation following this email, the Project Manager indicated that all the airport parking projects were on hold post "9/11." That was the last conversation APS had with Sky Harbor regarding the proposed solar electric project.

#### Timeline

3/1/01 - First contact with the APS solar customer project coordinator was from the APS Customer Account Representative for the Airport, who indicated that there was interest by the City in installing a solar project at the parking structures being built as part of Phase Two at Sky Harbor.

3/15/01 - APS solar customer project coordinator met with the electrical engineering consultants for the project - Clark Engineers.

5/17/01 - APS met with the City's Project Manager and the electrical designer for the project from Clark Engineers at the STAR facility to show them examples of solar technology. The City was interested in ways that APS could help with the project. They favored those systems with the lowest cost to them for the project, which was an installation where the City would host an APS photovoltaic system on the parking garage roof.

5/21/01 through 8/08/01 – APS reviewed structural and electrical design issues with project consultants of the planned garage and determined the level at which APS could participate and began developing a proposal. Initial project size was in the 100-200 kW range. APS began discussions with solar internal designers and consultants for potential system layout and design.

5/24/01 & 7/26/01 – APS solar customer project coordinator attended design coordinating meetings for the project.

7/16/01 – APS submitted to the project manager a rough draft of a letter of interest for comments, outlining the solar project concept at Sky Harbor.

11/01/01 – APS e-mailed the Project Manager inquiring on the status of solar project.

Post - 11/01/01 –The airport project manager informed APS that the project was put on hold due to a change of priorities for the Airport.

**APS Solar Energy Municipal Partnerships**

We have partnered the following municipalities and public organizations to develop and promote solar energy:

Town of Gilbert

Nature Center - 144 kW

Gilbert School District - 2 kW

City of Glendale Airport - 200 kW

State of Arizona Department of Environmental Quality (ADEQ) - 126 kW

Embry Riddle Aeronautical University - 228 kW

Prescott College - 12 kW

Prescott Airport - 2,418 kW

City of Scottsdale

Water Campus - 298 kW

Service Yard - 93 kW

Main Library - 2 kW

Mustang Library - 2 kW

Tempe Recycle Center - 2 kW

NAU - 2 kW

In addition we are currently working with the following organizations to publicly support and promote solar:

Valley Transit Light Rail - 100 kW at their Service Facility

Phoenix Civic Center Plaza expansion - 100-200 kW

NAU New Applied Research and Development Building - 175 KW

ASU - 34 kW

Also, in conjunction with our solar educational website - <http://projectsol.aps.com/>, we donated 2 kW solar systems to the following institutions:

Boyce Thompson Arboretum

Challenger Learning Center

Desert Outdoor Center

Lowell Observatory

Sharlott Hall Museum



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## EAST ECONOMY PARKING STRUCTURE PHASE 2 – CELL C

Sky Harbor International Airport  
City of Phoenix Project No. AV15000016

### DESIGN COORDINATION MEETING MINUTES

Date: May 10, 2001 1:30 pm

Location: Terminal 3 Aviation Conference Room

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#### PART 1 – GARAGE

1. Project Status Overview:

- a. 60% Garage Plans submitted at the meeting. 60% Specifications to be distributed on 5/11/01.
- b. "Bid Set" Foundation and Precast Plans and Specifications scheduled for submittal on May 31<sup>st</sup>.
- c. 95% Garage Plans and Specifications to be submitted 6/21/01.

2. DSD Permit Review:

- a. Jim Burr trying to contact Dwight Havens to discuss fire sprinklers in the Garage. Rick Dole with Development Services is researching the need for sprinklers in the new Garage. Jim will set up a meeting within the next two weeks to discuss with all of the appropriate parties involved.
- b. The Foundation and Precast review periods will be discussed with Mo Glancy of Development Services to determine if review period can be shortened.

3. CM @ Risk Bid Issues:

- a. DL Withers will have their GMP finalized by Friday, May 18<sup>th</sup> or early the week of May 21<sup>st</sup>.
- b. DL Withers to review all prior approval requests from subcontractors, make recommendations and forward to the Design Team for review and approval/rejection prior to giving the subcontractors a response on the request.
- c. DL Withers and the City need to establish a DBE percentage for the project. Abacus will provide trade breakdowns and associated costs. A meeting with EAS will be required to finalize the process. This can be completed after the final GMP.

4. FAA Coordination:
  - a. Dibble preparing the 7460 form to submit to the FAA. It appears that the SROG work in the southwest tie-in will have to be coordinated with the Center Runway shutdowns.
5. Foundations/Geotechnical:
  - a. The 60% Specifications do not specifically address the difficulties in drilling the caissons during the Phase 1 Garage construction. These "lessons learned" will need to be included in the Specifications as applicable for the Phase 2 Garage. Brian Lingnau of Speedie will prepare some sample specifications that address the issues.
6. Electrical/Special Systems Issues:
  - a. Al Smolko to tour the APS "Star Center" to look at solar applications. He also wants to set up a meeting on Thursday, May 17<sup>th</sup> to explore options and make a decision concerning solar power on the Phase 2 Garage.
  - b. APS has provided a written explanation of the different power rates for Aviation. The surface lot lighting will be on a separate meter in order to get the reduced power rate. The bus stops are not eligible for this rate because of varying power demands.
  - c. There is still some question regarding Video Motion Detection. It was noted that Aviation wants to ultimately utilize for entire airport. Employment of such technology on the Phase 2 Garage will increase the cost of the overall CCTV package by approximately 20 percent. A final decision needs to be made on whether or not the technology will be added to the Phase 2 Garage project.
  - d. CCTV Bid Approach: Discussed the options of procuring CCTV equipment as part of an allowance for proprietary equipment and opening up for other bids by an "or equal" company. Vicon supplies the main switch that means that "or equal" equipment would have to work with the existing Vicon equipment. It was noted that the Phase 1 Garage was sole sourced because the network was expanded and had to have compatibility with other existing equipment. Ross & Baruzzini will discuss with Tracey Rivas of Aviation Operations.
  - e. Several of the existing surface lot cameras will need to be re-fed. It appears that this work is not shown in the 60% plans. Ross & Baruzzini will coordinate with Clark Engineers to add new conduit runs to the plans.
  - f. The space count loops will be installed on the ramps to increase the accuracy of the space count system.
7. Design/Coordination Issues:
  - a. The widened level 7 to 8 stairs on the east side of the Phase 2 Garage conflict with the ramp drive area. Transystems and NSB will review this issue.
8. Parking Operations:
  - a. The split East Economy Lot bus routes will begin on Monday May 14<sup>th</sup>.
9. Lessons Learned:
  - a. DL Withers will provide Design Team with a "Lessons Learned" summary to be added to the existing summary. A final "Lessons Learned" summary will be distributed to all of the Design Team for review of the 60% plans to refine the design.

10. Scheduling and Phasing:

- a. Dennis Lee from Abacus submitted a revised project schedule that takes into account the increased review time by the City. It appears that even with the longer review time the ending date is essentially the same.

11. Open Discussion:

- a. Jim Burr noted that with the placement of the shear columns on the Phase 2 Garage, some of the parking spaces would be reduced from 9 feet wide to 8.75 feet wide. This should not be an issue as such a width is acceptable.

**PART 2 – SROG**

1. Project Status Overview:

- a. Bids results have been received from Ameron and CSR Hydro Conduit, Hanson has elected not to participate.
- b. We need to get a notice to proceed to the pipe manufacturers as soon as possible; the estimates given by CMX from Ameron and CSR are based on a NTP of 5/11/01.
- c. Options of pipe to consider include lined, dry-cast which is encased in slurry and wet cast.
- d. Exfiltration – Research is ongoing for dry-cast exfiltration, this type is still not recommended.
- e. Proposed 90" wet-cast is a better value than purchasing the 84" but there are other cost increases due to the increase pipe size, items such as the Odor Control Facility.
- f. Discussions with Aviation concerning not having a holiday shut down in order to meet desired schedule. Withers will look at construction scheduling and staging so we are ready to discuss this with Aviation.
- g. Brown and Caldwell to look at new D-Load due to proposed 90" Pipe Size.
- h. Brown and Caldwell Opinion – Risk of using wet-cast much less than dry-cast, the in-house testing for either type of pipe for this project will be very stringent, we need to make sure we have a manufacturer who can meet the requirements.
- i. 100% SROG Plans will be ready 5/21/01
- j. Continue design of plans with 84" pipe for now.
- k. Increase pipe size (90") increases head in Odor Control Facility, additional 1000cfm or so, may require an increase from electrical as well.
- l. CMX and Brown and Caldwell to write memos of their individual recommendations for pipe type; DL Withers to look at installation options; need to keep Cynthia Park in the loop.
- m. A meeting to be set up 5/14/01 in the afternoon to make final decision, wet-cast vs. dry-cast. CMX, B&C and DL Withers to bring research and recommendations to this meeting, including the impact to the odor control facility. Dibble to schedule this meeting for Monday 3:00 pm. Meeting should also include Gary Griffith - City of Phoenix Water Services.
- n. Water Services Division is finishing the 95% review of SROG plans.
- o. It is estimated that if encasement of the existing 60" water line at the SROG crossing is required, the cost of shoring alone could be up to \$125,000. If the 60" water line pipe is welded, we should be able to do away with the encasement. B&C to discuss with the Maricopa County Health Department, input also required from Water Services.



ELECTRIC RATES

ARIZONA PUBLIC SERVICE COMPANY  
 Phoenix, Arizona  
 Filed by: Alan Propper  
 Title: Director of Pricing and Regulation  
 Original Effective Date: February 1, 1985

A.C.C. No. 5549  
 Cancelling A.C.C. No. 5514  
 Tariff or Schedule No. E-67  
 Revision No. 14  
 Effective: July 1, 2003

MUNICIPAL LIGHTING SERVICE - CITY OF PHOENIXAVAILABILITY

Within the City of Phoenix at all points where facilities of adequate capacity and the required phase and suitable voltage are adjacent to the premises served.

APPLICATION

To all electric service except street lighting service, furnished for the lighting of alleys, buildings, and other public places owned or maintained by the City. Service to traffic signals is limited to those installations being served as of January 31, 1985, under the Agreement of April 4, 1930, as modified, between Central Arizona Light and Power Company and the City of Phoenix, and no new or reconnected traffic signal installations may be served after that time. Service must be supplied at one premise through one point of delivery and measured through one meter.

Not applicable to breakdown, standby, supplementary, or resale service.

TYPE OF SERVICE

Single or three phase, 60 Hertz, at one standard voltage (as may be selected by customer, subject to availability at the customer's premise). Transformation equipment is included in cost of extension.

MONTHLY BILL

The monthly bill shall be the greater of the amount computed under A. or B. below, including the applicable Adjustments.

- |    |                |                               |
|----|----------------|-------------------------------|
| A. | <u>RATE</u>    | \$0.03480 per kWh for all kWh |
| B. | <u>MINIMUM</u> | None                          |

ADJUSTMENTS

Plus the applicable proportionate part of any taxes, or governmental impositions which are or may in the future be assessed on the basis of gross revenues of the Company and/or the price or revenue from the electric energy or service sold and/or the volume of energy generated or purchased for sale and/or sold hereunder.

TERMS AND CONDITIONS

Subject to Company's Terms and Conditions for the Sale of Electric Service.



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PROJECT: East Economy Parking Structure Phase 2 – Cell C AV15000016 Progress Meeting

DATE: May 10, 2001 TIME: 1:30 p.m.

LOCATION: T-3 Aviation Conference Room PAGE: 1 OF:

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
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Mark Lee	Dibble & Associates	602.957.1155	602.957.2838	mlee@dibblecorp.com	ML
Jeff McBride	Dibble & Associates	602.957.1155	602.957.2838	jmcbride@dibblecorp.com	
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Steven Bigg	City of Phoenix/Aviation	602.273.3480	602.273.2183	sbigg@ci.phoenix.az.us	
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Rick Green	City of Phoenix	602.273.8859	602.273.2102	rgreen2@ci.phoenix.az.us	
Cindy Perea-Hernandez	City of Phoenix/Aviation	602.273.4096	602.273.2781	cperea@ci.phoenix.az.us	
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David Bradley	D.L. Withers	602.438.9500	602.438.9600	dbradley@dlwithers.com	DB
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Pat Peters	D.L. Withers	602.438.9500	602.438.9600		
Steve Randall	D.L. Withers	602.438.9500	602.438.9600	srandall@dlwithers.com	
Bob Roble	D.L. Withers	602.438.9500	602.438.9600	broble@dlwithers.com	
Jason Koob	Ross & Baruzzini	314.918.8383	314.918.1766	jkoob@rossbar.com	JK
Theresa Smith	Ross & Baruzzini	314.918.838	602.918.1766	tsmith@rossbar.com	TS
David Wise	Ross & Baruzzini	602.275.2150	602.275.2156	dwise@rossbar.com	DW



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**PROJECT:** East Economy Parking Structure Phase 2 – Cell C AV15000016 Progress Meeting  
**DATE:** April 26, 2001 **TIME:** 1:30 p.m.  
**LOCATION:** T-3 Aviation Conference Room **PAGE:** 2 **OF:** 2

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
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Jim Nichols	Brown & Caldwell	602.222.4444	602.222.4466	jnichols@brwncald.com	JN
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## **EAST ECONOMY PARKING STRUCTURE PHASE 2 – GARAGE C**

Sky Harbor International Airport  
City of Phoenix Project No. AV15000016

### **DESIGN COORDINATION MEETING MINUTES**

Date: May 24, 2001 1:30 pm

Location: Terminal 3 Aviation Conference Room

#### **PART 1 – GARAGE**

GARAGE

##### 1. 5.10.01 Meeting Minutes

- a. Ross & Barruzini offered the following clarification to the May 10<sup>th</sup> Meeting Minutes for Item 6.c: "The cost estimate increased at the 60% submittal due to the garage revisions developed from the Conceptual Planning sessions. Almost every line item of the original cost estimate increased to support the larger facility. A rough order of magnitude cost line item was provided in the original estimate for Video Motion Detection to support both the Phase 1 and 2 garages. That cost also increased proportionally."

##### 2. Project Status Overview

- a. The Foundation Plans and Specifications will be submitted to the City for review on June 1<sup>st</sup> or 4<sup>th</sup>. The Precast Plans and Specifications will be completed 2 to 3 days after.
- b. Speedie & Associates presented a foundation spec for the team's review. Return any comments as soon as possible to be incorporated into the Foundation package.

##### 3. Budget

- a. The CM at Risk GMP will be "fine-tuned" and submitted as soon as completed, anticipated to be the end of May.

##### 4. O.C.I.P.

- a. Dibble will contact Dennis at Aon Risk Services to obtain the latest O.C.I.P. requirements for the project.

5. DSD Permit Review

- a. A meeting occurred between members of the design team and Dwight Havens to discuss the inclusion of sprinklers in the parking garage. It appears that an exemption will be granted for open garages and thus the Phase 2 garage will not require sprinklers.
- b. The Foundation package first review will take 30 to 45 days to complete. The second review will take 20 days. An authorization letter from the Aviation Department will be needed to log in the plans for review. Al Smolko will provide the letter.
- c. The Precast package will not be submitted to Development Services for review but will be used for precast bidding and to start shop drawings. The plans and specifications will be submitted to DL Withers and Aviation on June 6<sup>th</sup>.

6. CM @ Risk Bid Issues

- a. The GMP should be finalized by the end of May.
- b. DL Withers will provide a detailed review of the 60% plans and give comments on the design.

7. Electrical/Special Systems Issues

- a. The Phase 2 garage plans will incorporate necessary infrastructure for a future PV system. It does not appear that the system will be included as part of this project. Instead, Aviation may elect to "host" a solar site at the garage where APS would install and maintain the system. In order to provide all required infrastructure to accommodate such a system, specific structural and electrical requirements are needed from APS. Cassius McChesney of APS will coordinate directly with NSB and Clark to provide the requirements. This information is needed by the end of May to avoid impacting the design schedule.
- b. FAA approval will be required prior to installing solar panels on top of the parking canopies. Cassius noted that a PV system is currently in operation at Glendale Municipal Airport.
- c. Ross & Barruzini will coordinate with Aviation Operation and Maintenance personnel to determine if CCTV equipment from different manufacturers is acceptable. Open bidding equipment should result in better prices.
- d. Video Motion Detection will not be included in this project but may be added in the future.
- e. It was noted that the Revenue Control System should be on the emergency generator for the Phase 2 garage.
- f. The fire alarm panel, some garage signage, pay-on-foot machines and lightning protection will all be retrofitted in the Phase 1 garage as part of this project. It was noted that surplus pay-on-foot machines from the Terminal 4 project might be available for this project.

8. Additional Design/Coordination Issues

- a. The east stairs between levels 7 and 8 will be narrowed to avoid conflict with the ramp roadway. Transystems will revise and send out copies to the design team.
- b. The airlines need to be made aware of future garage locations to determine possible impacts to emergency flight paths. Dibble will be sending out 7460 forms to the FAA

for approval. Prior to doing so, the forms will be sent to Bob Brown (Aviation Airside Operations) and Hans Willemse (FAA) for review.

9. Parking Operations

- a. It has not been determined whether an easement through the Southwest Airlines parking lot will be granted. DL Withers may need to add an allowance for construction of an access to their costs. Currently, plans for constructing the access through the Southwest Airlines parking lot to the East Economy Lot are included in the SROG plans.

10. Scheduling and Phasing

- a. In order to meet the required construction schedule, no 6-week holiday shutdown will occur during construction. Parking spaces will still be turned over to Operations as the foundation work is completed. A 3 to 4 day shutdown may occur for both Thanksgiving and Christmas.
- b. The contractor will need to coordinate construction traffic with parking traffic at the crossing location(s). DL Withers will have a flagman manning the crossing and will minimize traffic conflicts as much as possible.
- c. Abacus discussed the latest schedule impacts. Given the worst-case conditions, their end date is not significantly impacted. However, there are more concurrent construction activities that will need to take place in order to meet the schedule. November 11, 2002 is still a realistic completion date. Al Smolko indicated that the required project completion date is November 1, 2002.

11. 95% Garage Plans Schedule

- a. 95% plan submittal is currently scheduled for June 14<sup>th</sup>. Given the need to incorporate PV design content and to allow DL Withers/Aviation adequate time to review and comment on the 60% submittal, it would be beneficial to submit the plans 2 or 2-1/2 weeks later. It appears that the float is available. A firm submittal date needs to be established.

**PART 2 – SROG**

1. FAA Coordination

- a. Mid July, Center Runway, expect night closures, may need to include crane height restrictions as part of package.
- b. A 7460 form will be prepared, coordinated with Airside Operations and submitted to the FAA.

2. Project Status Overview

- a. Waiting for water services review.
- b. 100% SROG Plans and Specs delivered, expect to issue 5/30/01 for bid.
- c. Submit proposed contractor list to Gary Griffith, Water Services, for review.
- d. Submit draft memo to Aviation & Water Services of bid dates and schedule
- e. Bid package review to be completed by design team, Aviation and Water Services, as a minimum. This should be available 5/29/01.

- f. DL Withers to get Kim Keller (EAS) an estimate for MBE/WBE involvement.
- 3. SROG/Odor Control Facility Budget Issues
  - a. DL Withers to look further at budget issues, Dibble to organize a meeting to discuss.
- 4. Odor Control
  - a. 95% Plans and Specs ready May 30, 2001
  - b. 100% Plans and Specs ready June 14, 2001
  - c. Once shop drawings are received on the 90" pipe, will have to look at an update to the junction structures.
- 5. SRO Construction Phase Odor Control
  - a. Construction phase odor control will be required, possibly as short as one week. Additional odor control may be required during construction of the Odor Control Facility.
- 6. Other
  - a. Odor Control Facility will go to DSD as a separate package and bid as a separate project.
  - b. Leave electrical service to Odor Control Facility as part of the garage package.
  - c. Include in the plans or specifications that the contractor is not to open up full-length SROG trench, must be constructed and backfilled in sections.

**Next Meeting: 6/7/01 in Terminal 3 Aviation Conference Room**



# DIBBLE & ASSOCIATES

## CONSULTING ENGINEERS

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Tel. (602) 957-1155  
Fax (602) 957-2838

Since 1962  
CIVIL ENGINEERING ■ Transportation ■ Airports ■ Drainage/Flood Control ■ Water Resources ■ Land Development ■ Surveying

**PROJECT:** East Economy Parking Structure Phase 2 – Cell C AV15000016 Progress Meeting

**DATE:** May 24, 2001

**TIME:** 1:30 p.m.

**LOCATION:** T-3 Aviation Conference Room

**PAGE:** 1 **OF:**

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
Susan Detwiler	Dibble & Associates	602.957.1155	602.957.2838	sdetwiler@dibblecorp.com	
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Ken Snyder	Dibble & Associates	602.957.1155	602.957.2838	ksnyder@dibblecorp.com	Ken Snyder
Steven Bigg	City of Phoenix/Aviation	602.273.3480	602.273.2183	sbigg@ci.phoenix.az.us	
Victor Callahan	City of Phoenix/Aviation	602.273.3332	602.273.2410	vcallahan@ci.phoenix.az.us	
Rick Green	City of Phoenix	602.273.8859	602.273.2102	rgreen2@ci.phoenix.az.us	
Cindy Perea-Hernandez	City of Phoenix/Aviation	602.273.2975	602.273.2183	cperea@ci.phoenix.az.us	
Al Smolko	City of Phoenix/Aviation	602.273.4096	602.273.2781	asmolko@ci.phoenix.az.us	AS
Robert Stanley	Nabar Stanley Brown	602.912.9191	602.912.9686	rstanley.nsbaz.com	RS
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Bob Roble	D.L. Withers	602.438.9500	602.438.9600	broble@dlwithers.com	
Jason Koob	Ross & Baruzzini	314.918.8383	314.918.1766	jkoob@rossbar.com	
Theresa Smith	Ross & Baruzzini	314.918.8383	602.918.1766	tsmith@rossbar.com	
David Wise	Ross & Baruzzini	602.275.2150	602.275.2156	dwise@rossbar.com	DW



# DIBBLE & ASSOCIATES

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**PROJECT:** East Economy Parking Structure Phase 2 – Cell C AV15000016 Progress Meeting  
**DATE:** May 24, 2001 **TIME:** 1:30 p.m.  
**LOCATION:** T-3 Aviation Conference Room **PAGE:** 2 **OF:**

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
Jim Burch	Clark Engineers	602.264.3070	602.264.0419	james.burch@clarkeng.com	JAB
Jeff Mostajabi	Clark Engineers	602-264-3070	602.264.0419	jeff.mostajabi@clarkeng.com	MJM
Ed Rossman	Clark Engineers	602-264-3070	602.264.0419	edward.rossman@clarkeng.com	
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Jim Nichols	Brown & Caldwell	602.222.4444	602.222.4466	jnichols@brwncald.com	JN
Phil Berger	CMX	602.279.8436	602.265.1191	pdillon@cmxinc.com	
Don Dillon	CMX	602.279.8436	602.265.1191	pberger@cmxinc.com	
Dennis Lee	Abacus	602.265.6870	602.265.9360	dennistlee@phoenix-abacus.com	D Lee
Harold Schulke	Kimley-Horn	281.597.9300	281.597.8032	hschulke@kimley-horn.com	
Cassius McChesney	APS	602.250.3124	602.250.3255	cassiusmchesney@pinnaclewest.com	CMC
Allan Davis	Hunnicut Davis Assoc.	203.849.0898	203.849.0355	a.davis@allandavis.com	
Dean Baird	Aviation Operations	602.206-8776		dbaird@ci.phoenix.az.us	
GREGG CREAGER	SPEER ASSOC	602-947-0391	443-5508	gcreager@speerassoc.com	GC
Jennifer Dawson	PSM <sup>2</sup>	602-468-0846	602-381-1166	PSMSquared@uswest.net	JD

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Tuesday, May 29, 2001 1:58 PM  
**To:** Hayden, Herbert T(K44372)  
**Subject:** RE: Sky Harbor covered parking pics

Lepley is putting together the plan for STAR. I haven't talked to him about this project other than to ask for some early pricing for comparison purposes.

-----Original Message-----

**From:** Hayden, Herbert T(K44372)  
**Sent:** Friday, May 25, 2001 3:09 PM  
**To:** McChesney, Cassius J(Z07788)  
**Subject:** RE: Sky Harbor covered parking pics

Looks pretty straightforward.

Have you discussed with Lepley this or the STAR testing? These projects will need quite a bit of project management attention.

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Friday, May 25, 2001 12:27 PM  
**To:** Johnston, Peter (Z54407); Hayden, Herbert T(K44372)  
**Cc:** Hanson, Erika (ZB6083)  
**Subject:** Sky Harbor covered parking pics

FYI - Existing Sky Harbor covered parking structure. Pretty hefty. About 300 - 350 spaces. Could slap 200-250 kW up there on the existing structure. The planned garage will be similar unless we suggest something different.

<< File: canopy meet.jpg >> << File: cross beam.jpg >> << File: cross beams.jpg >> << File: elevator building.jpg >> << File: main structure.jpg >> << File: single row.jpg >> << File: support beams.jpg >> << File: support columb.jpg >> << File: under canopy.jpg >>

Cassius McChesney  
Pinnacle West Technology Development  
Mail Station 8378  
PO Box 53999  
Phoenix AZ 85072-3999  
602-250-3124 - phone  
602-250-3255 - fax number  
800-675-9827 - pager  
cassius.mcchesney@pinnaclewest.com

**From:** Jefferson Shingleton [jefferson@shingleton.com]  
**Sent:** Tuesday, May 29, 2001 4:03 PM  
**To:** McChesney, Cassius J(Z07788)  
**Subject:** Re: Sky Harbor East Economy Covered Parking

I received and reviewed the drawings and photos.

One concept would be to attach the PV modules directly to the flat corrugated metal roof. The structure is likely has enough excess structural capacity to support the deadload of PV modules flat on the roof. We would need to develop the attachment detail, which could be relatively simple.

Another concept would be to attach the PV modules with some pitch toward South. It looks like the roof orientation would be favorable. I would think that the pitch would be limited to say 20 degrees. We need to think about whether we want to occupy just the roof metal, or to position panels above that portion of the structure that has no roof (access lanes.)

Or we could eliminate the roof metal entirely, and substitute PV modules. These could occupy more of the roof than the current shade. Might be security issues there.

There are lots of other options. What did you have in mind?

Jeff

Jefferson Shingleton, PE  
 Shingleton Design, LLC  
 7322 Parcell Road  
 Auburn, NY 13021 USA  
[jefferson@shingleton.com](mailto:jefferson@shingleton.com)  
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 Auburn, NY 13021 USA  
[jefferson@shingleton.com](mailto:jefferson@shingleton.com)  
 315-255-3504

----- Original Message -----

**From:** McChesney, Cassius J(Z07788)  
**To:** 'jefferson@shingleton.com'  
**Sent:** Tuesday, May 29, 2001 6:36 PM  
**Subject:** FW: Sky Harbor East Economy Covered Parking

Now if only I could type. Second try.

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Tuesday, May 29, 2001 10:39 AM  
**To:** Hayden, Herbert T(K44372)  
**Cc:** 'jeffereson@shingleton.com'  
**Subject:** FW: Sky Harbor East Economy Covered Parking

Herb -

Here are some drawings for, and pictures of, the covered parking structures

on the top deck of the newest Parking Garage at Sky Harbor from the engineering firm that designed them. They look like they can withstand a hurricane and hold up a building (But what do I know).

If we do a solar installation at the airport, will these structures be sufficient or will we need to recommend some design changes for the new garage that being designed now.

Let me know what you think.

Thanks  
Cassius

-----Original Message-----

From: Robert M. Stanley [mailto:RStanley@nsbaz.com]  
Sent: Friday, May 25, 2001 9:01 AM  
To: 'McChesney, Cassius J(Z07788)'  
Subject: RE: Sky Harbor East Economy Covered Parking

Cassius,

Here are the drawings you requested.

Look forward to hearing from you.

Bob Stanley

-----Original Message-----

From: McChesney, Cassius J(Z07788)  
[mailto:Cassius.MCchesney@pinnaclewest.com]  
Sent: Friday, May 25, 2001 8:53 AM  
To: 'rstanley@nsbaz.com'  
Subject: FW: Sky Harbor East Economy Covered Parking

Thanks for your help.

-----Original Message-----

From: McChesney, Cassius J(Z07788)  
Sent: Thursday, May 24, 2001 4:59 PM  
To: 'rstanely@nsbaz.com'  
Subject: Sky Harbor Covered Parking

Bob - I was thinking that if we could get the design and layout for the first covered parking structures (at the existing east economy parking lot) without PV, we might be able to simply suggest modifications or determine

that your current design is structurally capable of handling a PV installation. Easier to modify the existing design than start from scratch. We can develop a set of parameters that will encompass all possible design considerations regarding weight and physical parameters of the possible PV modules and system design.

If you could email the autocad drawings, we'll take a look at them.

Thanks for your help. Please call me if you have any questions. Talk to you soon.

Cassius

Cassius McChesney  
Pinnacle West Technology Development  
Mail Station 8378  
PO Box 53999  
Phoenix AZ 85072-3999  
602-250-3124 - phone  
602-250-3255 - fax number  
800-675-9827 - pager  
[cassius.mcchesney@pinnaclewest.com](mailto:cassius.mcchesney@pinnaclewest.com)

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Friday, July 06, 2001 6:17 PM  
**To:** 'James Burch'  
**Subject:** RE: EAST ECONOMY PARKING 95% ELECTRICAL PLANS

Thanks Jim.

I have to ask for these to be printed out for me (my computer doesn't have CAD). Which is the key drawing(s) that you suggest I ask to be printed that show the one lines including the solar?

Cassius

-----Original Message-----

**From:** James Burch [mailto:James.Burch@clarkeng.com]  
**Sent:** Thursday, July 05, 2001 6:00 PM  
**To:** CASSIUS.MCCHESNEY@PINNACLEWEST.COM  
**Cc:** Jeff Mostajabi; ksnyder@dibblecorp.com  
**Subject:** EAST ECONOMY PARKING 95% ELECTRICAL PLANS

This is the 95% set as I have it in ACADv14.  
Little should change with the backgrounds.  
If you have questions please call.  
Dave McCasland has full size drawings.

thanx

James A. Burch, E.I.T.  
Clark Engineers, Inc.  
Associate Project Engineer  
Electrical Designer  
[james.burch@clarkeng.com](mailto:james.burch@clarkeng.com)  
(602)264-3070 Phone  
(602)264-0419 Fax

This is the 95%  
set as I have it in  
ACADv14.  
Little should change  
with the backgrounds.  
If you have questions  
please call.  
Dave McCasland has  
full size drawings.

thanx

James A. Burch  
Clark Engineers, Inc.  
Associate Project Engineer

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Thursday, August 09, 2001 7:11 AM  
**To:** McCasland, David L(H64986); kylemarinello@torengineering.com; james.burch@clarkeng.com  
**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

My address is

Cassius McChesney  
Pinnacle West Technology Development  
602-250-3124 - phone  
602-250-3255 - fax  
800-675-9827 - pager  
cassius.mcchesney@pinnaclewest.com

-----Original Message-----

**From:** McCasland, David L(H64986)  
**Sent:** Wednesday, August 08, 2001 5:50 AM  
**To:** McChesney, Cassius J(Z07788); 'kylemarinello@torengineering.com'; 'james.burch@clarkeng.com'  
**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

Kyle.... I'll be on vacation. When you get the drawing complete please mail Cassius a copy so he can see what is being done.

Cassius.. Please e-mail Kyle your mailing address.

Jim... you may want to get with Cassius to go over their requirements.

Here is my understanding of what is planned. APS will set a padmount transformer and run up service in customer provided 2-4" conduits to a 800A, 277/480v Service Entrance Section. From there the customer will do the necessary wiring a set a dry type transformer to convert to whatever voltage they believe is necessary to run their equipment. The dry type transformer will be on the load side of the meter.

If things are any different please let us know. Thanks.

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Tuesday, August 07, 2001 6:38 PM  
**To:** McCasland, David L(H64986); 'kylemarinello@torengineering.com'; 'james.burch@clarkeng.com'  
**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

The plans that I have now are nor cleear on the solar SES, its ratings and its locations expecially in relation to the APS SES. Please share with me the final plans for the layout and conduit runs and sizes so we can review one last time.

Thanks  
Cassius

-----Original Message-----

**From:** McCasland, David L(H64986)  
**Sent:** Monday, August 06, 2001 6:00 AM  
**To:** 'kylemarinello@torengineering.com'; 'james.burch@clarkeng.com'  
**Cc:** McChesney, Cassius J(Z07788)

12/6/2004

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Subject: FW: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

Kyle... please install 2-4" conduits to serve a future 800A SES at 480v. Thanks.

-----Original Message-----

**From:** McCasland, David L(H64986)

**Sent:** Monday, August 06, 2001 5:53 AM

**To:** McChesney, Cassius J(Z07788)

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

Bottom line from what your note says, if I understand it, is that the maximum service size will be 800A at 480v.

If you go with a 208v system you will be dry-typing to that voltage from 480v. Therefore the maximum number of service conduits the customer should run from our APS transformer to the future PV Service Entrance Section is 2-4" conduits.

If you went with a direct 208v service from APS there would be a non-refundable cost of \$733 to be paid by whomever develops the project. The other difference is that the customer would need to run 5-4" conduits from the transformer to the Service Entrance Section.

APS normally discourages the customer from going to 208v with this high of load because of the inefficiencies of supplying power at this voltage.

Based on my understanding of your note our design will reflect serving a 800A SES at 480V.

Please let me know if I misunderstood anything. - Thanks.

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)

**Sent:** Friday, August 03, 2001 4:24 PM

**To:** McCasland, David L(H64986)

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

David - We are looking at the worst case scenerio for getting the energy from the top of the parking garage to the bottom. The intertie with APS will be a maximum 480V @ 800 amps = 384kW (rounded down to 300 kW to be conservative) but probably smaller. This is the maximum for which we are prepared to offer to Sky Harbor for a PV system. It will more than likely be smaller (100-200kW) but we want to be prepared.

The actual PV system design may end up delivering 208V from the inverters on the top level down to the PV service section on the bottom floor where they would be stepped up to 480V (or whatever APS distribution voltage is required) for interconnection via transformer. The system may be designed to use one large inverter or as many as 20 small ones. Since we will endeavor to use the newest technology, we cannot say for sure which way we'll want to go. At 384kW and 208V the maximum current from the top floor to the bottom is 1,846 amps. Round up to 2,000 amps to be conservative.

We always like to add a little extra in sizing these projects.

Call me when you get this and let me know if you're OK with this.

Cassius

-----Original Message-----

**From:** McCasland, David L(H64986)

**Sent:** Thursday, August 02, 2001 2:18 PM

**To:** McChesney, Cassius J(Z07788); 'Kyle Marinello'

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

A 2000A SES is way to big for the loads you are talking about. We want to know the maximum size service you would plan to install to serve the solar. Originally you had said it would be 800A. Are you now saying it will be much larger? Please advise so we are all aware of the needs for this system. The Planning Dept

needs this information for load forecasting. Thanks.

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)

**Sent:** Thursday, August 02, 2001 1:09 PM

**To:** 'Kyle Marinello'

**Cc:** McCasland, David L(H64986)

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

These conduit sizes should be sufficient for future plans up to 300kW of solar. I believe that this is the maximum that we discussed.

Call me if you have any additional questions.

-----Original Message-----

**From:** Kyle Marinello [mailto:KyleMarinello@torengineering.com]

**Sent:** Thursday, July 26, 2001 3:45 PM

**To:** Cassius.McChesney@pinnaclewest.com

**Subject:** East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

Mr. McChesney,

I was given your name by Jim Burch @ Clark Engineering. I am designing the electrical for Dave McCasland @ APS and I wanted to verify the proposed Amps on the future solar panel. The plans dated 7/1 show (5) 4" conduits, which would be for a 2000A ses. I want to make sure I place enough spare conduit for future wire installation. Please verify for me what the actual size will be.

Thanks for help.

Kyle Marinello

Tor Engineering

(602) 437-1677 Ext. 252

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Monday, July 16, 2001 2:41 PM  
**To:** asmolko@ci.phoenix.az.us  
**Subject:** APS Sky Harbor Project

AI - I've attached a draft Letter of Intent for the Sky Harbor Solar Project.

This is only a draft for your review. There may be a couple of typos but this will give you an idea of where I'm headed. Please feel free to make any comments you like or suggest new language.

The purpose of this letter is to express formal approval from both APS and Sky Harbor to move forward into the planning and design phases.

Please call me if there is anything else you need. (I'm about 3-5 days behind on my emails since I got back from vacation).

Thanks  
Cassius

Cassius

<<Letter of Interest.doc>>

<Letter of Interest.doc>

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Cassius McChesney  
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PO Box 53999  
Phoenix AZ 85072-3999

24

Al Smolko  
Project manager  
Sky Harbor International Airport

Dear Al:

This letter of intent serves to express APS' interest in working together with Phoenix Sky Harbor Airport to develop a solar power project in conjunction with the phase two parking garage currently in the planning and design stages.

APS and The City of Phoenix Aviation Department agree that installing solar generating facilities at the airport would be beneficial to all parties. By participating, Sky Harbor will be promoting the use of renewable energy and environmentally friendly solar technology, be assisting in the deployment of a large scale application of this new and emerging technology, will help make solar energy more cost effective in the future and will demonstrate that solar technology is becoming a viable and important part of our energy mix both today and in the future. In addition, Sky Harbor will be recognized as a leader in the promotion and use of this new environmentally friendly technology.

After reviewing several alternatives for solar power at Sky Harbor, the most cost effective solution would be for Sky harbor to host a solar power system. In such an arrangement, APS would own the solar power plant and the energy generated and would bare all the costs of engineering and installing the solar power system at the selected site. Sky Harbor would be responsible for providing a suitable site and areas for interconnection of the solar power system to the grid. In addition, Sky Harbor will purchase some of the energy generated by the solar power plant by becoming and APS Solar Partner.

By signing this letter, City of Phoenix Aviation Sky Harbor Airport and APS agree to work together to develop a formal agreement for the installation of a solar power facility on the phase two parking garage at Sky Harbor Airport.

For APS:  
Peter Johnston

For City of Phoenix Aviation  
Al Smolko

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Wednesday, July 25, 2001 3:24 PM  
**To:** allan.smolko@phoenix.gov  
**Subject:** RE: Ltr of intent

Al - do you have any additional comments from those reviewing the letter on your side? If not, I'll go ahead and make the changes you suggested below and send you a final version for your last review.

Your advice is appreciated on getting this moving. I have a question and a suggestion. Will Mr. Heinecke and Krietor be briefed on and expecting this letter? Perhaps I could see about providing a briefing to them in person? Perhaps we could deliver the letter in a meeting with them? Easier to answer any questions.

Could you also provide their correct name spellings, mailing addresses and titles.

Your advice and help is greatly appreciated.

Thanks  
Cassius

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Thursday, July 19, 2001 2:30 PM  
**To:** 'allan.smolko@phoenix.gov'  
**Subject:** RE: Ltr of intent

allan.smolko@phoenix.gov  
July 19, 2001 2:30 PM  
allan.smolko@phoenix.gov  
Ltr of Intent

Thanks Al.

Once we've finalized a letter, I'll put it on APS letterhead and send it off to Mr. Heinecke and Krietor.

You are correct. The last sentence should say...

In addition, Sky Harbor may also support energy generated by the solar power plant by becoming an APS Solar Partner.

Let me know if you have any additional changes.

Cassius

-----Original Message-----

**From:** allan.smolko@phoenix.gov [mailto:allan.smolko@phoenix.gov]  
**Sent:** Monday, July 16, 2001 3:08 PM  
**To:** cassius.mcchesney@pinnaclewest.com  
**Cc:** david.hensley@phoenix.gov; john.heinecke@phoenix.gov  
**Subject:** Ltr of intent

I received your letter. I will pass it around and get some feedback. You will need to address it to either John Heinecke, Deputy Aviation Director, Planning and Development, or to David Krietor, Aviation Director.

This letter of intent basically outlines that solar power can be developed at Sky Harbor Intern Airport. Aviation is allowing APS to develop at their cost a solar application on top of our curenly under design parking structure, and possibly on the existing one and also the future parking structures.

As far as the Sky Harbor will purchase some of the energy generated..statement, don't you mean that the power will be placed on the grid and in Sky harbor's regular purchase of energy, we probably will be purchasing energy created by this renewable resource? We are under no obligation to purchase the solar power directly or indirectly at a diferent cost from normal.

Dave Hensley and John Heinecke, comments please.

Allan  
(See attached file: apsltr01.doc)

**From:** Kim Robertson [krobertson@dibblecorp.com]

**Sent:** Wednesday, August 22, 2001 4:27 PM

**To:** 'Al Smolko'; 'Allan Davis'; 'Bart Jacobsen'; 'Bob Roble'; 'Brian Lingnau'; 'McChesney, Cassius J(Z07788)'; 'Cindy Perea-Hernandez'; 'Cynthia Parker'; 'Darryl Jaquess'; 'David Bradley'; 'David Casselman'; 'David Hensley'; 'McCasland, David L(H64986)'; 'David Wise'; 'Dean Baird'; 'Dennis Lee'; 'Dibble, Kent"@mail.dibblecorp.com'; 'Don Dillon'; 'Don Tappendorf'; 'Ed Rossman'; 'Hans Willemse & Gordon Green'; 'Harold Schulke'; 'James Burr'; 'Janet Guedry'; 'Jason Koob'; 'Jeff Jarvis'; 'Jeff McBride'; 'Jeff Mostajabi'; 'Jeff Turner'; 'Jim Burch'; 'Jim Nichols'; 'Lee, Mark"@mail.dibblecorp.com'; 'Phil Berger'; 'Rick Green'; 'Robert M. Stanley'; 'Ruben Rivas'; 'Sam Edmondson'; 'Scott Brotherson'; 'Scott Maples'; 'Snyder, Ken"@mail.dibblecorp.com'; 'Stephen Bigg'; 'Steve Davidson'; 'Steve Randall'; 'Tammy J. Doytek'; 'Theresa Smith'; 'Tom Stone'; 'Tracey Rivas'; 'Tracy Moraca'

**Subject:** Progress Meeting Minutes 7/26/01

Please find attached the Progress Meeting Minutes for the 7/26/01 meeting.



# DIBBLE & ASSOCIATES

CONSULTING ENGINEERS

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2633 East Indian School Road, Suite 401  
Phoenix, Arizona 85016-6763  
Tel. (602) 957-1155  
Fax (602) 957-2838

## EAST ECONOMY PARKING STRUCTURE PHASE 2 – GARAGE C

Sky Harbor International Airport  
City of Phoenix Project No. AV15000016

### PROGRESS MEETING MINUTES

Date: July 26, 2001 1:30 pm

Location: Terminal 3 Engineering Conference Room

---

#### GARAGE

##### 1. Project Overview

- a. Final Garage plans to be submitted to DSD on 8/2/01 for first review.
- b. Aviation has 95% comments ready. DLW will have their 95% comments to the Team by the end of the day (7/26/01).
- c. Any 95% comments that are not received in time to make revisions will be included after the initial submittal to DSD and noted as such.

##### 2. DSD Permit Review

- a. Jim Burr is still coordinating with Dwight Havens for a written variance not requiring sprinklers in the garage.
- b. The stair widths are being revised per comments from Janet Reed (DSD). Stairs 1 and 3 have been widened between 8" and 12".
- c. Per the VE proposal, a transfer beam has been added at levels 6 and 7 in order to eliminate 16 caissons and 18 columns.
- d. Caisson drilling is scheduled to begin the week of August 27<sup>th</sup>. The second Foundation plan review should be completed by then and a permit granted.
- e. We are waiting for OCF comments from DSD to be finalized.

##### 3. CM @ Risk

- a. Coreslab has been selected as the precast contractor for the garage project. The Team has also accepted 2 Value Engineering proposals that were offered by Coreslab. The VE savings is approximately \$250,000.
- b. Odor Control bids are due on 7/26/01.

4. Electrical/Special Systems Issues

- a. There has been no Pinnacle West (PV system) proposal yet. They need a letter of intent from Aviation prior to providing. Aviation will most likely host the solar site.
- b. No APS comments have been received regarding the APS duct bank around the Phase 2 garage.
- c. The CCTV cameras will be competitively bid through Vicon with Vicon as the installer.

5. Additional Design/Coordination Issues

- a. It appears that the 7460 will be approved. Ken Snyder has received verbal approval from Kevin Flynn (FAA Regional Office). This will be documented and given to Gary Coffman (Aviation).
- b. DLW will review the temporary construction fence location near the ILS with Aviation and the FAA.
- c. The cost estimates from Schiedt & Bachmann and TCS have been received. TCS is near the projected budget number, and S&B is over the projected budget number by approximately the cost for extra pay-on-foot machines.
- d. The City has approved a new ADA Ordinance. Cindy Perea-Hernandez will provide Jim Burr with a copy. Jim will be attending the Mayor's Council on ADA issues on 8/09/01.
- e. Per DSD, overflow drains will be required on levels 6, 7, and 8. They were not required on the Phase 1 garage, but will be on this one. DSD also wants bubbler boxes to be installed at grade in case the outfall line should ever become plugged. This would require a re-design of the storm drain outfall line. Clark is coordinating with the City regarding these matters.

6. Parking Operations

- a. Cindy Perea-Hernandez noted that the airport pay-on-foot system will be called Pay 'n Go. Signage will be revised accordingly.
- b. Jim Burr will incorporate Allan Davis's suggestion for vehicular routing on level 1 of the garage. This change will be reflected in the upcoming submittal.
- c. Cindy Perea-Hernandez will copy Valley Coach on the suggested bus route sketch that Dibble handed out at a prior meeting.

7. Construction Scheduling and Phasing

- a. DLW is currently on schedule.

8. Miscellaneous

- a. The remainder of the meeting was spent on Aviation review comments.



**DIBBLE & ASSOCIATES**  
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Fax (602) 957-2838

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**PROJECT:** East Economy Parking Structure Phase 2 – Garage C AV15000016 **Progress Meeting**  
**DATE:** July 26, 2001 **TIME:** 1:30 p.m.  
**LOCATION:** T-3 Engineering Conference Room **PAGE:** 1 **OF:**

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
Susan Detwiler	Dibble & Associates	602.957.1155	602.957.2838	sdetwiler@dibblecorp.com	
Kent Dibble	Dibble & Associates	602.957.1155	602.957.2838	kdibble@dibblecorp.com	
Mark Lee	Dibble & Associates	602.957.1155	602.957.2838	mlee@dibblecorp.com	ML
Jeff McBride	Dibble & Associates	602.957.1155	602.957.2838	jmcbride@dibblecorp.com	
Ken Snyder	Dibble & Associates	602.957.1155	602.957.2838	ksnyder@dibblecorp.com	
Steven Bigg	City of Phoenix/Aviation	602.273.3480	602.273.2183	sbigg@ci.phoenix.az.us	
Victor Callahan	City of Phoenix/Aviation	602.273.3332	602.273.2410	vcallahan@ci.phoenix.az.us	
Rick Green	City of Phoenix	602.273-8859	602.273.2102	rgreen2@ci.phoenix.az.us	
Cindy Perea-Hernandez	City of Phoenix/Aviation	602.273.2975	602.273.2183	cperea@ci.phoenix.az.us	CPH
Al Smolko	City of Phoenix/Aviation	602.273.4096	602.273.2781	asmolko@ci.phoenix.az.us	AS
Robert Stanley	Nabar Stanley Brown	602.912.9190	602.912.9686	rstanley.nsbaz.com	RS
Brian Lingnau	Speedie & Associates	602.997.6391	602.943.5508	blingnau@speedie.net	BL
Darryl Jaquess	Lea & Elliott	817.261.1446	817.861.3296	djaquess@leaelliott.com	
David Bradley	D.L. Withers	602.438.9500	602.438.9600	dbradley@dlwithers.com	DB
Scott Brotherson	D.L. Withers	602.438.9500	602.438.9600	sbrotherson@dlwithers.com	
Pat Peters	D.L. Withers	602.438.9500	602.438.9600		
Steve Randall	D.L. Withers	602.438.9500	602.438.9600	srandall@dlwithers.com	
Bob Roble	D.L. Withers	602.438.9500	602.438.9600	broble@dlwithers.com	
Jason Koob	Ross & Baruzzini	314.918.8383	314.918.1766	jkoob@rossbar.com	
Theresa Smith	Ross & Baruzzini	314.918.8383	602.918.1766	tsmith@rossbar.com	TS
David Wise	Ross & Baruzzini	602.275.2150	602.275.2156	dwise@rossbar.com	
Gregg Creaser	Speedie & Associates	602.997.6391	602.963.5508	gcreaser@speedie.net	
Gary Griffith	City of Phoenix Water Services	602.261.8363	602.495.5843	ggriffit@ci.phoenix.az.us	



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PROJECT: East Economy Parking Structure Phase 2 – Garage C AV15000016 Progress Meeting

DATE: July 26, 2001 TIME: 1:30 p.m.

LOCATION: T-3 Engineering Conference Room PAGE: 2 OF:

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
Jim Burch	Clark Engineers	602.264.3070	602.264.0419	james.burch@clarkeng.com	
Jeff Mostajabi	Clark Engineers	602-264-3070	602.264.0419	jeff.mostajabi@clarkeng.com	
Ed Rossman	Clark Engineers	602-264-3070	602.264.0419	edward.rossman@clarkeng.com	ER
Tom Stone	Clark Engineers	602-264-3070	602.264.0419	thomas.stone@clarkeng.com	
Jim Burr	TranSystems	602.277.7800	602.277.6150	jgburr@transystems.com	J
Jeff Jarvis	TransSystems	602.277-7800	602.277.6150	jjjarvis@transystems.com	
Ruben Rivas	TranSystems	602.277-7800	602.277.6150	rrivas@transystems.com	
Steve Davidson	Brown & Caldwell	602.222.4444	602.222.4466	sdavidson@brwncald.com	
Sam Edmondson	Brown & Caldwell	602.222.4444	602.222.4466	sedmondson@brwncald.com	
Jim Nichols	Brown & Caldwell	602.222.4444	602.222.4466	jnichols@brwncald.com	
Phil Berger	CMX	602.279.8436	602.265.1191	pdillon@cmxinc.com	P Berger
Don Dillon	CMX	602.279.8436	602.265.1191	pberger@cmxinc.com	D Dillon
Dennis Lee	Abacus	602.265.6870	602.265.9360	dennistee@phoenix-abacus.com	D Lee
Harold Schulke	Kimley-Horn	281.597.9300	281.597.8032	hschulke@kimley-horn.com	H Schulke
Cassius McChesney	Pinnaclewest	602.250.3124	602.250.3255	cassiusmcchesney@pinnaclewest.com	C McChesney
Allan Davis	Hunnicut Davis Assoc.	203.849.0898	203.849.0355	a.davis@alldavis.com	A Davis
Dean Baird	Aviation Operations	602.206-8776		dbaird@ci.phoenix.az.us	D Baird
Jennifer Dawson	PSM2	602.468.0046	602.381.1166	psmsquared@uswest.net	J Dawson
Stephanie Sperry	Dibble	602-957-1155	602-957-2838	sgarry@dibblecorp.com	S Sperry
Dennis MONTAGE	D.L. WITHERS				D MONTAGE
BOB HUNTER	D.L. W.	526-1353			B Hunter
DAVE OSTLUND	C.O.P. (P+D)	602-418-1088			D Ostlund
PAUL HEERING	COP SYSTEMS MAINT	602-273-4051			P Heering
MIKE DRAPER	Avia. PFD/ENG	320.0154			M Draper
Chet Freese	C.O.P. Mechanical	275-4325			C Freese

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Monday, August 06, 2001 9:59 AM  
**To:** allan.smolko@phoenix.gov  
**Subject:** RE: Ltr of intent

Allan - Any additional comments before I send to you a final version?

Cassius

-----Original Message-----

**From:** allan.smolko@phoenix.gov [mailto:[allan.smolko@phoenix.gov](mailto:allan.smolko@phoenix.gov)]  
**Sent:** Monday, July 16, 2001 3:08 PM  
**To:** cassius.mcchesney@pinnaclewest.com  
**Cc:** david.hensley@phoenix.gov; john.heinecke@phoenix.gov  
**Subject:** Ltr of intent

I received your letter. I will pass it around and get some feedback. You will need to address it to either John Heinecke, Deputy Aviation Director, Planning and Development, or to David Krietor, Aviation Director.

This letter of intent basically outlines that solar power can be developed at Sky Harbor Intern Airport. Aviation is allowing APS to develop at their cost a solar application on top of our curenly under design parking structure, and possibly on the existing one and also the future parking structures.

As far as the Sky Harbor will purchase some of the energy generated..statement, don't you mean that the power will be placed on the grid and in Sky harbor's regular purchase of energy, we probably will be purchasing energy created by this renewable resource? We are under no obligation to purchase the solar power directly or indirectly at a diferent cost from normal.

Dave Hensley and John Heinecke, comments please.

Allan  
(See attached file: apsltr01.doc)

ms

---

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Thursday, August 09, 2001 5:27 AM  
**To:** allan.smolko@phoenix.gov; 'James Burch'  
**Cc:** Jeff Mostajabi; ksnyder@dibblecorp.com  
**Subject:** RE: East Economy parking Solar. Review of plans by City?

Thanks for the heads up Jim. Have there any questions from code review people?

AI - Do you think we need some form of review before the final design stage? I assume there will be appropriate review for these plans once we get to the final design phase.

Once we get our letter of interest signed, we can establish a time frame for the project which will include getting a formalized agreement giving APS access to the space on the garage and some preliminary design concepts. Once this is complete, we can begin the final design which will be presented to the appropriate people for review.

Cassius

-----Original Message-----

**From:** James Burch [mailto:James.Burch@clarkeng.com]  
**Sent:** Tuesday, August 07, 2001 10:15 AM  
**To:** McChesney, Cassius J(Z07788)  
**Cc:** Jeff Mostajabi; ksnyder@dibblecorp.com  
**Subject:** East Economy parking Solar. Review of plans by City?

You may want to check with the City to see if they want to do a code review of any plans for the Solar.

thanx

James A. Burch, E.I.T.  
Clark Engineers, Inc.  
Associate Project Engineer  
Electrical Designer  
[james.burch@clarkeng.com](mailto:james.burch@clarkeng.com)  
(602)264-3070 Phone  
(602)264-0419 Fax

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Thursday, November 01, 2001 2:53 PM  
**To:** asmolko@ci.phoenix.az.us  
**Subject:** Sky Harbor Solar

Hi Al. Hope all is well at Sky Harbor.

Just wanted to touch bases and see how things were progressing on the parking structures at the airport. Has there been any progress on the LOI sent in late August. I'm sure that you guys have much larger issues on your plate right now.

If you would respond and let me know when might be a good time to follow up with you on this project and I'll put it in my tickler file.

Talk to you soon,

Cassius

Cassius McChesney  
Pinnacle West Technology Development  
Mail Station 8378  
PO Box 53999  
Phoenix AZ 85072-3999  
602-250-3124 - phone  
602-250-3255 - fax number  
800-675-9827 - pager  
cassius.mcchesney@pinnaclewest.com

**Subject:** FW: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

Kyle... please install 2-4" conduits to serve a future 800A SES at 480v. Thanks.

-----Original Message-----

**From:** McCasland, David L(H64986)

**Sent:** Monday, August 06, 2001 5:53 AM

**To:** McChesney, Cassius J(Z07788)

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

Bottom line from what your note says, if I understand it, is that the maximum service size will be 800A at 480v.

If you go with a 208v system you will be dry-typing to that voltage from 480v. Therefore the maximum number of service conduits the customer should run from our APS transformer to the future PV Service Entrance Section is 2-4" conduits.

If you went with a direct 208v service from APS there would be a non-refundable cost of \$733 to be paid by whomever develops the project. The other difference is that the customer would need to run 5-4" conduits from the transformer to the Service Entrance Section.

APS normally discourages the customer from going to 208v with this high of load because of the inefficiencies of supplying power at this voltage.

Based on my understanding of your note our design will reflect serving a 800A SES at 480V.

Please let me know if I misunderstood anything. Thanks.

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)

**Sent:** Friday, August 03, 2001 4:24 PM

**To:** McCasland, David L(H64986)

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

David - We are looking at the worst case scenerio for getting the energy from the top of the parking garage to the bottom. The intertie with APS will be a maximum 480V @ 800 amps = 384kW (rounded down to 300 kW to be conservative) but probably smaller. This is the maximum for which we are prepared to offer to Sky Harbor for a PV system. It will more than likely be smaller (100-200kW) but we want to be prepared.

The actual PV system design may end up delivering 208V from the inverters on the top level down to the PV service section on the bottom floor where they would be stepped up to 480V (or whatever APS distribution voltage is required) for interconnection via transformer. The system may be designed to use one large inverter or as many as 20 small ones. Since we will endeavor to use the newest technology, we cannot say for sure which way we'll want to go. At 384kW and 208V the maximum current from the top floor to the bottom is 1,846 amps. Round up to 2,000 amps to be conservative.

We always like to add a little extra in sizing these projects.

Call me when you get this and let me know if you're OK with this.

Cassius

-----Original Message-----

**From:** McCasland, David L(H64986)

**Sent:** Thursday, August 02, 2001 2:18 PM

**To:** McChesney, Cassius J(Z07788); 'Kyle Marinello'

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

A 2000A SES is way to big for the loads you are talking about. We want to know the maximum size service you would plan to install to serve the solar. Originally you had said it would be 800A. Are you now saying it will be much larger? Please advise so we are all aware of the needs for this system. The Planning Dept

needs this information for load forecasting. Thanks.

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)

**Sent:** Thursday, August 02, 2001 1:09 PM

**To:** 'Kyle Marinello'

**Cc:** McCasland, David L(H64986)

**Subject:** RE: East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

These conduit sizes should be sufficient for future plans up to 300kW of solar. I believe that this is the maximum that we discussed.

Call me if you have any additional questions.

-----Original Message-----

**From:** Kyle Marinello [mailto:KyleMarinello@torengineering.com]

**Sent:** Thursday, July 26, 2001 3:45 PM

**To:** Cassius.McChesney@pinnaclewest.com

**Subject:** East Economy Parking Structure - Phase 2 - Garage "C" SkyHarbor Airport

Mr. McChesney,

I was given your name by Jim Burch @ Clark Engineering. I am designing the electrical for Dave McCasland @ APS and I wanted to verify the proposed Amps on the future solar panel. The plans dated 7/1 show (5) 4" conduits, which would be for a 2000A ses. I want to make sure I place enough spare conduit for future wire installation. Please verify for me what the actual size will be.

Thanks for help.

Kyle Marinello

Tor Engineering

(602) 437-1677 Ext. 252

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Monday, July 16, 2001 2:41 PM  
**To:** asmolko@ci.phoenix.az.us  
**Subject:** APS Sky Harbor Project

AI - I've attached a draft Letter of Intent for the Sky Harbor Solar Project.

This is only a draft for your review. There may be a couple of typos but this will give you an idea of where I'm headed. Please feel free to make any comments you like or suggest new language.

The purpose of this letter is to express formal approval from both APS and Sky Harbor to move forward into the planning and design phases.

Please call me if there is anything else you need. (I'm about 3-5 days behind on my emails since I got back from vacation).

Thanks  
Cassius

Cassius

<<Letter of Interest.doc>>

<<Letter of Interest.doc>>

Cassius McChesney  
Pinnacle West Technology Development  
Mail Station 8378  
PO Box 53999  
Phoenix AZ 85072-3999  
602-250-3124 - phone  
602-250-3255 - fax number  
800-675-9827 - pager  
cassius.mcchesney@pinnaclewest.com

Cassius McChesney  
Pinnacle West Technology Development  
Mail Station 8378  
PO Box 53999  
Phoenix AZ 85072-3999

Al Smolko  
Project manager  
Sky Harbor International Airport

Dear Al:

This letter of intent serves to express APS' interest in working together with Phoenix Sky Harbor Airport to develop a solar power project in conjunction with the phase two parking garage currently in the planning and design stages.

APS and The City of Phoenix Aviation Department agree that installing solar generating facilities at the airport would be beneficial to all parties. By participating, Sky Harbor will be promoting the use of renewable energy and environmentally friendly solar technology, be assisting in the deployment of a large scale application of this new and emerging technology, will help make solar energy more cost effective in the future and will demonstrate that solar technology is becoming a viable and important part of our energy mix both today and in the future. In addition, Sky Harbor will be recognized as a leader in the promotion and use of this new environmentally friendly technology.

After reviewing several alternatives for solar power at Sky Harbor, the most cost effective solution would be for Sky harbor to host a solar power system. In such an arrangement, APS would own the solar power plant and the energy generated and would bare all the costs of engineering and installing the solar power system at the selected site. Sky Harbor would be responsible for providing a suitable site and areas for interconnection of the solar power system to the grid. In addition, Sky Harbor will purchase some of the energy generated by the solar power plant by becoming and APS Solar Partner.

By signing this letter, City of Phoenix Aviation Sky Harbor Airport and APS agree to work together to develop a formal agreement for the installation of a solar power facility on the phase two parking garage at Sky Harbor Airport.

For APS:  
Peter Johnston

For City of Phoenix Aviation  
Al Smolko

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Wednesday, July 25, 2001 3:24 PM  
**To:** allan.smolko@phoenix.gov  
**Subject:** RE: Ltr of intent

Al - do you have any additional comments from those reviewing the letter on your side? If not, I'll go ahead and make the changes you suggested below and send you a final version for your last review.

Your advice is appreciated on getting this moving. I have a question and a suggestion. Will Mr. Heinecke and Krietor be briefed on and expecting this letter? Perhaps I could see about providing a briefing to them in person? Perhaps we could deliver the letter in a meeting with them? Easier to answer any questions.

Could you also provide their correct name spellings, mailing addresses and titles.

Your advice and help is greatly appreciated.

Thanks  
Cassius

-----Original Message-----

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Thursday, July 19, 2001 2:30 PM  
**To:** 'allan.smolko@phoenix.gov'  
**Subject:** RE: Ltr of intent

Change:  
Cassius J. McChesney  
July 19, 2001  
allan.smolko@phoenix.gov  
Ltr of intent

Thanks Al.

Once we've finalized a letter, I'll put it on APS letterhead and send it off to Mr. Heinecke and Krietor.

You are correct. The last sentence should say...

In addition, Sky Harbor may also support energy generated by the solar power plant by becoming an APS Solar Partner.

Let me know if you have any additional changes.

Cassius

-----Original Message-----

**From:** allan.smolko@phoenix.gov [mailto:[allan.smolko@phoenix.gov](mailto:allan.smolko@phoenix.gov)]  
**Sent:** Monday, July 16, 2001 3:08 PM  
**To:** cassius.mcchesney@pinnaclewest.com  
**Cc:** david.hensley@phoenix.gov; john.heinecke@phoenix.gov  
**Subject:** Ltr of intent

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Dave Hensley and John Heinecke, comments please.

Allan

(See attached file: apsltr01.doc)

**From:** Kim Robertson [krobertson@dibblecorp.com]

**Sent:** Wednesday, August 22, 2001 4:27 PM

**To:** 'Al Smolko'; 'Allan Davis'; 'Bart Jacobsen'; 'Bob Roble'; 'Brian Lingnau'; 'McChesney, Cassius J(Z07788)'; 'Cindy Perea-Hernandez'; 'Cynthia Parker'; 'Darryl Jaquess'; 'David Bradley'; 'David Casselman'; 'David Hensley'; 'McCasland, David L(H64986)'; 'David Wise'; 'Dean Baird'; 'Dennis Lee'; "Dibble, Kent"@mail.dibblecorp.com; 'Don Dillon'; 'Don Tappendorf'; 'Ed Rossman'; 'Hans Willemse & Gordon Green'; 'Harold Schulke'; 'James Burr'; 'Janet Guedry'; 'Jason Koob'; 'Jeff Jarvis'; 'Jeff McBride'; 'Jeff Mostajabi'; 'Jeff Turner'; 'Jim Burch'; 'Jim Nichols'; "Lee, Mark"@mail.dibblecorp.com; 'Phil Berger'; 'Rick Green'; 'Robert M. Stanley'; 'Ruben Rivas'; 'Sam Edmondson'; 'Scott Brotherson'; 'Scott Maples'; "Snyder, Ken"@mail.dibblecorp.com; 'Stephen Bigg'; 'Steve Davidson'; 'Steve Randall'; 'Tammy J. Doytek'; 'Theresa Smith'; 'Tom Stone'; 'Tracey Rivas'; 'Tracy Moraca'

**Subject:** Progress Meeting Minutes 7/26/01

Please find attached the Progress Meeting Minutes for the 7/26/01 meeting.



# DIBBLE & ASSOCIATES

CONSULTING ENGINEERS

Since 1962

2633 East Indian School Road, Suite 401  
Phoenix, Arizona 85016-6763  
Tel. (602) 957-1155  
Fax (602) 957-2838

CIVIL ENGINEERING ■ Transportation ■ Airports ■ Drainage/Flood Control ■ Water Resources ■ Land Development ■ Surveying

## EAST ECONOMY PARKING STRUCTURE PHASE 2 – GARAGE C

Sky Harbor International Airport  
City of Phoenix Project No. AV15000016

### PROGRESS MEETING MINUTES

Date: July 26, 2001 1:30 pm

Location: Terminal 3 Engineering Conference Room

#### GARAGE

1. Project Overview
  - a. Final Garage plans to be submitted to DSD on 8/2/01 for first review.
  - b. Aviation has 95% comments ready. DLW will have their 95% comments to the Team by the end of the day (7/26/01).
  - c. Any 95% comments that are not received in time to make revisions will be included after the initial submittal to DSD and noted as such.
  
2. DSD Permit Review
  - a. Jim Burr is still coordinating with Dwight Havens for a written variance not requiring sprinklers in the garage.
  - b. The stair widths are being revised per comments from Janet Reed (DSD). Stairs 1 and 3 have been widened between 8" and 12".
  - c. Per the VE proposal, a transfer beam has been added at levels 6 and 7 in order to eliminate 16 caissons and 18 columns.
  - d. Caisson drilling is scheduled to begin the week of August 27<sup>th</sup>. The second Foundation plan review should be completed by then and a permit granted.
  - e. We are waiting for OCF comments from DSD to be finalized.
  
3. CM @ Risk
  - a. Coreslab has been selected as the precast contractor for the garage project. The Team has also accepted 2 Value Engineering proposals that were offered by Coreslab. The VE savings is approximately \$250,000.
  - b. Odor Control bids are due on 7/26/01.

45

4. Electrical/Special Systems Issues

- a. There has been no Pinnacle West (PV system) proposal yet. They need a letter of intent from Aviation prior to providing. Aviation will most likely host the solar site.
- b. No APS comments have been received regarding the APS duct bank around the Phase 2 garage.
- c. The CCTV cameras will be competitively bid through Vicon with Vicon as the installer.

5. Additional Design/Coordination Issues

- a. It appears that the 7460 will be approved. Ken Snyder has received verbal approval from Kevin Flynn (FAA Regional Office). This will be documented and given to Gary Coffman (Aviation).
- b. DLW will review the temporary construction fence location near the ILS with Aviation and the FAA.
- c. The cost estimates from Schiedt & Bachmann and TCS have been received. TCS is near the projected budget number, and S&B is over the projected budget number by approximately the cost for extra pay-on-foot machines.
- d. The City has approved a new ADA Ordinance. Cindy Perea-Hernandez will provide Jim Burr with a copy. Jim will be attending the Mayor's Council on ADA issues on 8/09/01.
- e. Per DSD, overflow drains will be required on levels 6, 7, and 8. They were not required on the Phase 1 garage, but will be on this one. DSD also wants bubbler boxes to be installed at grade in case the outfall line should ever become plugged. This would require a re-design of the storm drain outfall line. Clark is coordinating with the City regarding these matters.

6. Parking Operations

- a. Cindy Perea-Hernandez noted that the airport pay-on-foot system will be called Pay 'n Go. Signage will be revised accordingly.
- b. Jim Burr will incorporate Allan Davis's suggestion for vehicular routing on level 1 of the garage. This change will be reflected in the upcoming submittal.
- c. Cindy Perea-Hernandez will copy Valley Coach on the suggested bus route sketch that Dibble handed out at a prior meeting.

7. Construction Scheduling and Phasing

- a. DLW is currently on schedule.

8. Miscellaneous

- a. The remainder of the meeting was spent on Aviation review comments.



# DIBBLE & ASSOCIATES

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**PROJECT:** East Economy Parking Structure Phase 2 – Garage C. AV15000016 **Progress Meeting**  
**DATE:** July 26, 2001 **TIME:** 1:30 p.m.  
**LOCATION:** T-3 Engineering Conference Room **PAGE:** 1 **OF:**

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
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Ken Snyder	Dibble & Associates	602.957.1155	602.957.2838	ksnyder@dibblecorp.com	
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Victor Callahan	City of Phoenix/Aviation	602.273.3332	602.273.2410	vcallahan@ci.phoenix.az.us	
Rick Green	City of Phoenix	602.273-8859	602.273.2102	rgreen2@ci.phoenix.az.us	
Cindy Perea-Hernandez	City of Phoenix/Aviation	602.273.2975	602.273.2183	cperea@ci.phoenix.az.us	CPH
Al Smolko	City of Phoenix/Aviation	602.273.4096	602.273.2781	asmolko@ci.phoenix.az.us	AS
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Theresa Smith	Ross & Baruzzini	314.918.8383	602.918.1766	tsmith@rossbar.com	TS
David Wise	Ross & Baruzzini	602.275.2150	602.275.2156	dwise@rossbar.com	
Gregg Creaser	Speedie & Associates	602.997.6391	602.963.5508	gcreaser@speedie.net	
Gary Griffith	City of Phoenix Water Services	602.261.8363	602.495.5843	ggriffit@ci.phoenix.az.us	



# DIBBLE & ASSOCIATES

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**PROJECT:** East Economy Parking Structure Phase 2 – Garage C AV15000016 **Progress Meeting**  
**DATE:** July 26, 2001 **TIME:** 1:30 p.m.  
**LOCATION:** T-3 Engineering Conference Room **PAGE:** 2 **OF:**

NAME	REPRESENTING	PHONE	FAX	E-MAIL	INITIALS
Jim Burch	Clark Engineers	602.264.3070	602.264.0419	james.burch@clarkeng.com	
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Don Dillon	CMX	602.279.8436	602.265.1191	pberger@cmxinc.com	Don Dillon
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Dennis Montague	D.L. WITHERS				
BOB HUNTER	D.L. W.	526-1353			BOB
DAVE OSTLUND	C. O. P. (P+D)	602-418-1088			
PAUL HEERING	COP SYSTEMS MAINT	602-273-4051			PH
MIKZ DRAPER	Avia. PFD/ENG	320.0154			MD
Chet Friesgard	C.O.P. Mechanical	273-4325			CF

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Monday, August 06, 2001 9:59 AM  
**To:** allan.smolko@phoenix.gov  
**Subject:** RE: Ltr of intent

Allan - Any additional comments before I send to you a final version?

Cassius

-----Original Message-----

**From:** allan.smolko@phoenix.gov [mailto:[allan.smolko@phoenix.gov](mailto:allan.smolko@phoenix.gov)]  
**Sent:** Monday, July 16, 2001 3:08 PM  
**To:** cassius.mcchesney@pinnaclewest.com  
**Cc:** david.hensley@phoenix.gov; john.heinecke@phoenix.gov  
**Subject:** Ltr of intent

I received your letter. I will pass it around and get some feedback. You will need to address it to either John Heinecke, Deputy Aviation Director, Planning and Development, or to David Krietor, Aviation Director.

This letter of intent basically outlines that solar power can be developed at Sky Harbor Intern Airport. Aviation is allowing APS to develop at their cost a solar application on top of our curenly under design parking structure, and possibly on the existing one and also the future parking structures.

As far as the Sky Harbor will purchase some of the energy generated..statement, don't you mean that the power will be placed on the grid and in Sky harbor's regular purchase of energy, we probably will be purchasing energy created by this renewable resource? We are under no obligation to purchase the solar power directly or indirectly at a diferent cost from normal.

Dave Hensley and John Heinecke, comments please.

Allan  
(See attached file: apsltr01.doc)

---

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Thursday, August 09, 2001 5:27 AM  
**To:** allan.smolko@phoenix.gov; 'James Burch'  
**Cc:** Jeff Mostajabi; ksnyder@dibblecorp.com  
**Subject:** RE: East Economy parking Solar. Review of plans by City?

Thanks for the heads up Jim. Have there any questions from code review people?

AI - Do you think we need some form of review before the final design stage? I assume there will be appropriate review for these plans once we get to the final design phase.

Once we get our letter of interest signed, we can establish a time frame for the project which will include getting a formalized agreement giving APS access to the space on the garage and some preliminary design concepts. Once this is complete, we can begin the final design which will be presented to the appropriate people for review.

Cassius

-----Original Message-----

**From:** James Burch [mailto:James.Burch@clarkeng.com]  
**Sent:** Tuesday, August 07, 2001 10:15 AM  
**To:** McChesney, Cassius J(Z07788)  
**Cc:** Jeff Mostajabi; ksnyder@dibblecorp.com  
**Subject:** East Economy parking Solar. Review of plans by City?

You may want to check with the City to see if they want to do a code review of any plans for the Solar.

thanx

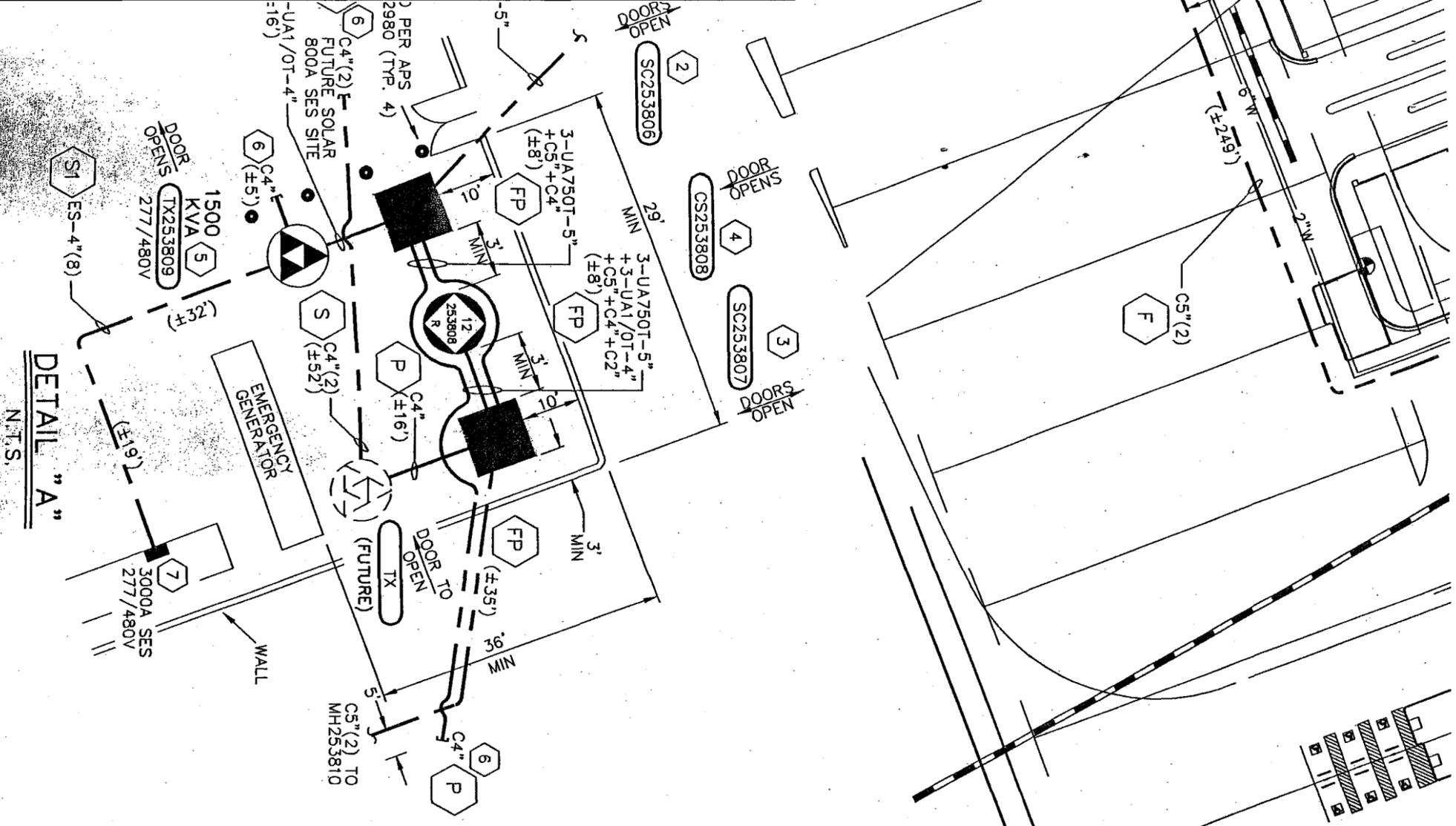
James A. Burch, E.I.T.  
Clark Engineers, Inc.  
Associate Project Engineer  
Electrical Designer  
[james.burch@clarkeng.com](mailto:james.burch@clarkeng.com)  
(602)264-3070 Phone  
(602)264-0419 Fax



### CONSTRUCTION NOTES

- A. PRIMARY WIRE TO BE 3-1/0A (3-UA1/0T) IN CUSTOMER PROVIDED/INSTALLED 4" CONDUITS. UNLESS OTHERWISE NOTED.
- B. SERVICE WIRE TO BE 6-750A PER Ø +6-500A NEUTRAL FOR A TOTAL OF 18-750A+6-500A (6-UA750DDV) IN 6 OF 8 CUSTOMER PROVIDED/INSTALLED 4" CONDUITS.
- C. LOCATIONS OF ELECTRIC FACILITIES SHOWN ARE APPROXIMATE. INSTALL PER DIMENSIONS AND DETAILS AS PROVIDED ON SKETCH, UNLESS OTHERWISE NOTED.
- D. ALL SERVICE WIRE TERMINATIONS TO BE 2704.UA750DDV & 2708.UA750DDV.
- E. MAXIMUM CABLE PULL TENSION EXPECTED ON THIS JOB TO BE... LBS FOR 3-1/0A IN 4" CONDUIT. 67 LBS FOR 3-750 IN 5" CONDUIT. 4122 LBS FOR 3-750 IN 5" CONDUIT.
- F. REFER TO DIBBLE & ASSOCIATES PLANS (WATER, SEWER, GRADING, PAVING, ETC) FOR EXACT LOCATIONS OF PROPOSED AND EXISTING FACILITIES.
- G. CONCRETE ENCASE ALL 5" BENDS AND SWEEPS.
- H. FEEDER WIRE TO BE 3-750A (UA750T) IN CUSTOMER PROVIDED/INSTALLED 5" CONDUIT, UNLESS OTHERWISE NOTED.

SC220543	1	2895.B (3) 8881.JQ	2895.UA750T (3)
SC253806	2	8475.A09 8542.B 2893.UA750T (6) 2894.FA (3) 2894.C (3) 2660.CD80 (3) 8881.GQ 8881.JQ (2)	
SC253807	3	8475.A09 8542.B 2895.UA750T (3) 2894.FA (3) 2660.CD80 (3) 2894.C (3) 2895.C (3) 8881.DQ 8881.JQ (3)	
CS253808	4	1386.R 8540	
TX253809	5	7666.B319 (1500KVA, 277/480V, END-OF-LINE) 2708.UA750DDV (4)	
LOCATIONS	6	8760	
	7	9045.A 9047.D 9047.E	
	8	2704.UA750DDV (4) 8690 8881.JQ (4)	



DETAIL "A"  
N.T.S.



BASEMAP: 1"=60'  
(ELECTRIC FACILITIES N.T.S.)



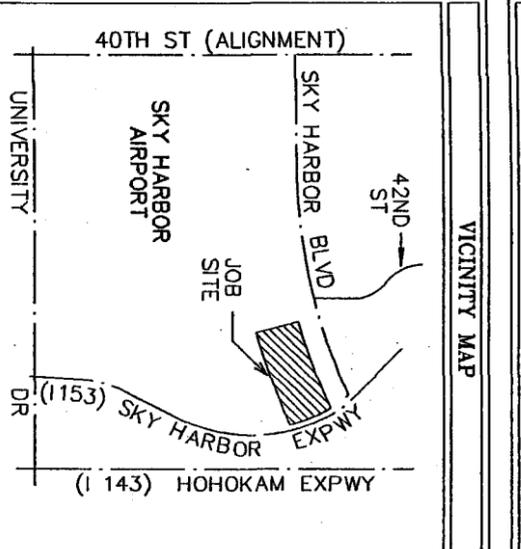
GRADES)  
2. ALL APPROVED TRENCH & CONDUITS MATERIAL IN COMPLIANCE WITH THE A.P.S. TRENCH AGREEMENT & THE TRANSMISSION & DISTRIBUTION CONSTRUCTION STANDARDS, UNLESS OTHERWISE NOTED.

APS TO PROVIDE, CUSTOMER TO INSTALL

1. EQUIPMENT PADS (EXCEPT 3 PHASE TRANSFORMER PADS) J-BOXES, PULLBOXES, MANHOLES, AND GROUND RODS/WIRE UNLESS NOTED OTHERWISE

CUSTOMER TO CONTACT FACILITIES INSPECTOR 2 WORKING DAYS PRIOR TO TRENCHING: (602) \_\_\_\_\_ OR MOBILE (602) \_\_\_\_\_

COORDINATE WITH WAMS: \_\_\_\_\_



ARIZONA PUBLIC SERVICE  
EAST ECONOMY PARKING STRUCTURE GARAGE "C"

NO.	DATE	CHANGE ORDER/DESCRIPTION

PROJECT: D. MCCASLAND  
LEADER: (602)371-6006 PAGER MOBILE: \_\_\_\_\_  
DESIGNER: K. MARINELLO (TOR)  
PHONE: (602)437-1677-ext.252

WAMS: W126822

SCALE: 1" = 60'

TOTAL TRENCH FTG: 1547'

TOTAL PRIMARY CONDUIT FTG: \_\_\_\_\_

TOTAL FTG IN R/W: 0

FILE NAME: 015553 SHEET 1 OF 1

### APS E-3, E-4 and Low Income Programs

APS appreciates the suggestion from the AARP spokesperson, Mr. Poston, concerning "streamlining" the process of qualifying eligible low-income customers for rate discount, weatherization, and bill assistance programs and, as noted below, has again contacted the Arizona Department of Economic Security ("DES") and the relevant non-profit agencies concerning this potential process change. APS would also like to provide some background on these programs and the current efforts to encourage and facilitate participation.

DES is APS' administrative agent for the E-3 and E-4 programs. DES' primary duties are to screen applicants for income eligibility and to notify customers when it's time to renew their application, which is required every 12 months.

The Community Action Agencies ("CAA") identify and implement weatherization projects. The CAA are non-profit private and public organizations established under the Economic Opportunity Act of 1964 to fight America's War on Poverty. There are eight member CAA agencies in Arizona that serve APS customers. They serve geographic areas as designated by the state government.

The agencies serving APS customers are:

- City of Phoenix Neighborhood Services
- Coconino County Community Services
- Community Action Human Resources Agency
- Gila County Community Action Agency
- Maricopa County Human Service Department
- Northern Arizona Council of Governments
- Southeastern AZ Community Action Program
- Western Arizona Council of Governments

The Arizona Community Action Association ("ACAA") is an administrative agency that supports these agencies and others. The ACAA administers the APS low income weatherization program.

APS customers may apply for the E-3 and E-4 programs in several ways. All involve completing an application and mailing or delivering it to the Department of Economic Security, where it is screened for income eligibility. Applications are available from:

- DES community outreach events
- APS offices
- APS call center

- APS website

Customers may apply for low income weatherization assistance and for assistance in paying their electric bill at the various CAA offices. These offices are located throughout the APS service area. CAA may have multiple offices to provide easy access for clients. APS and DES refer customers to these offices.

APS E-3 and E-4 programs are promoted annually by APS with bill inserts to all APS residential customers. Thus, even APS customers that do not qualify for or need the programs are aware of their existence and may be able to contact potentially eligible customers in their community. Applications are also available on the APS website as well as through the APS Call Center and Business Offices. APS Call Center and Business Office representatives are trained to provide E-3 and E-4 information to customers when they sense or are told there is a need. APS also provides materials to community groups and agencies through presentations. Finally, DES also promotes the programs in various community outreach events. Attached are copies of the application, brochure and annual bill insert as well as information available through the APS website.

Low income weatherization and bill assistance programs are similarly advertised through the CAA offices, through the APS website and through bill inserts to APS customers.

There are between 23,000 and 25,000 customers on APS E-3 and E-4 programs at any given time. In 2003, there were 553 households served by the weatherization program and 253 received bill assistance.

APS has renewed its conversations with DES and ACAA requesting feedback on increasing participation through automated or "one stop" signup provisions for the E-3 and E-4 programs. Both agencies have expressed interest and plan on exploring this further after the first of the year. APS will continue to work with both agencies to determine the efficiency and practicality of such a streamlined approach.

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# Energy Support Program (E-3) Application



Low Income Discounts



THE POWER TO MAKE IT HAPPEN

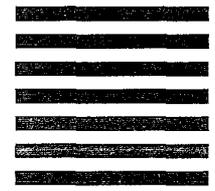
RETURN ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



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UNITED STATES

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POSTAGE WILL BE PAID BY ADDRESSEE



ARIZONA DEPARTMENT OF ECONOMIC SECURITY  
APS ENERGY SUPPORT PROGRAM (E-3) - 086Z  
PO BOX 18165  
PHOENIX AZ 85005-9946



## Energy Discounts

<u>If you used this amount</u>	<u>You are entitled to this discount</u>
400 or less	30 percent
401 - 800	20 percent
801 - 1,200	10 percent
More than 1,200	\$10

## How to Apply

It's easy. Simply complete the attached form and drop it in the mailbox.

If you qualify, you'll begin receiving discounts on your bill. Once you're on the program, the discounts will appear automatically!

For more information, call APS at 602-371-7171 in Phoenix, or 800-253-9405 statewide.

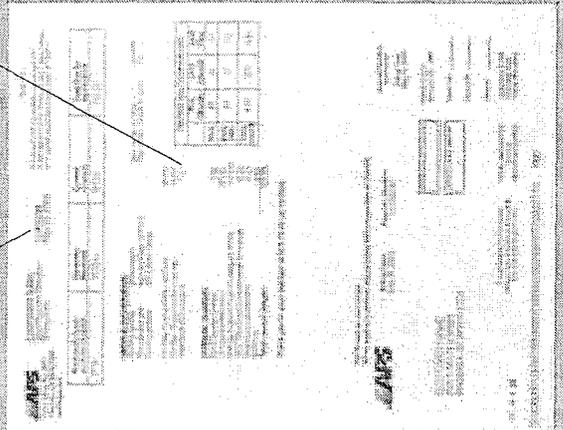
# Lower Your Electric Bill By as Much as 30 Percent.

If you qualify under the income guidelines listed at the right, you may be eligible to receive a discount of as much as 30 percent off your cost of electricity. The amount of the discount depends on how much electricity you use each month.

How much can you save? See the chart on the back of this form.

Your APS account number

Amount of electricity (kilowatt-hours) used for the month



# APS Energy Support Program

To qualify for discounts under the APS Energy Support Program (E-3), all of the following statements must apply to you.

- I am an APS customer and the APS bill is in my name.
- My household income is at or below the income level in the listing below. (Be sure to complete your household's total gross monthly income in the box below.)

Household Size	Monthly Income Level	Household Size	Monthly Income Level
1 Person	\$1,164	6 People	\$3,152
2 People	\$1,562	7 People	\$3,549
3 People	\$1,959	8 People	\$3,947
4 People	\$2,357	9 People	\$4,344
5 People	\$2,752	10 People	\$4,742

For more than 10 people, add \$398 per person (example: 11 = \$5,140).

Please print the following information. **INCOMPLETE INFORMATION WILL DELAY YOUR DISCOUNT.** The name used here to apply for the discount **MUST** be the same as the name on the APS bill.

NAME AS SHOWN ON APS BILL (LAST, FIRST, M.I.)		SOCIAL SECURITY NO.	
MAILING ADDRESS (NUMBER AND STREET)		DATE OF BIRTH	
CITY	STATE	HOME TELEPHONE NUMBER	
RESIDENTIAL ADDRESS (NUMBER AND STREET)		TOTAL NO. OF PERSONS LIVING IN HOUSEHOLD	
CITY	STATE	HOUSEHOLD'S TOTAL GROSS MONTHLY INCOME	
APS ACCOUNT NO. (AS SHOWN ON APS BILL)		\$	

ACCOUNT NUMBER MUST BE FILLED IN

Permission is hereby granted to the Department of Economic Security to contact any sources necessary to establish the accuracy of information given by me or other information which pertains to the verification of my eligibility to receive services under the APS Energy Support Program (E-3). Permission is also granted to the Department of Economic Security and APS to exchange information regarding my electric utility account for the purpose of receiving a discount on my electric bill. I further understand that the disclosure of my Social Security number is voluntary and not mandatory, and will only be used for the purpose stated herein.

X

Signature

Today's Date

**NOTE: Application must be signed by THE PERSON WHOSE NAME APPEARS ON THE APS BILL.**

Please allow 30 - 45 days for processing.

DETACH ALONG PERFORATED LINE. FOLD FORM IN HALF, MAKING SURE THAT THE MAILING INFORMATION IS VISIBLE. MOISTEN GLUE; PRESS BOTH PARTS FIRMLY TOGETHER AND MAIL.

**THIS FORM EXPIRES ON JUNE 30, 2005**

Solicitud para el  
Programa de  
Asistencia para  
Energía Eléctrica (E-3)



Descuentos para clientes  
de escasos recursos



El Poder de Nuestra Energía™

RETURN ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



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NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**BUSINESS REPLY MAIL**  
FIRST-CLASS MAIL      PERMIT NO. 12988      PHOENIX, AZ  
POSTAGE WILL BE PAID BY ADDRESSEE



ARIZONA DEPARTMENT OF ECONOMIC SECURITY  
APS ENERGY SUPPORT PROGRAM (E-3) - 086Z  
PO BOX 18165  
PHOENIX AZ 85005-9946



### Descuentos de Energía

Si usted usó esta cantidad	Tiene derecho a este descuento
400 - menos	30 por ciento
401 - 800	20 por ciento
801 - 1,200	10 por ciento
Más de 1,200	\$10

### Cómo Solicitarlo

¡Es muy fácil! Sólo llene el formulario adjunto y deposítelo en el correo.

Si usted es elegible, empezará a recibir descuentos en su cuenta. Ya que se encuentre en el programa, ¡los descuentos aparecerán automáticamente!

Para más información llame a APS al 602-371-6861 en Phoenix, o al 800-253-9410 desde el resto del estado.

# Ahorre Hasta el 30% en su Cuenta de Energía Eléctrica

Si usted se encuentra dentro del nivel federal de pobreza, es posible que tenga derecho a recibir un descuento que puede ser hasta el 30 por ciento en lo que usted gasta de electricidad. Vea los requisitos para calificar más abajo. La cantidad del descuento depende de cuánta electricidad usted usa cada mes.

¿Cuánto puede usted ahorrar? Lea por favor la tabla al reverso.

Número de cuenta de cliente

Cantidad de electricidad (kilovatio-horas) usada durante te el mes

## APS Energy Support Program (Programa de Asistencia de APS para Energía Eléctrica)

Para recibir descuentos bajo el Programa de Asistencia de APS para Energía Eléctrica (E-3), todas las declaraciones que se encuentran a continuación deben de ser aplicables a usted.

- Yo soy cliente de APS, y los cobros de APS están a mi nombre
- Los ingresos de mi hogar son igual o menos que las cantidades indicadas más abajo. (Por favor asegúrese de responder a la pregunta sobre la cantidad total de ingreso mensual en su hogar en la cajita: "TOTAL DE INGRESOS MENSUALES DE SU HOGAR")

Número de personas que viven en el hogar	Nivel de ingresos mensuales	Número de personas que viven en el hogar	Nivel de ingresos mensuales
1 persona	\$1,164	6 personas	\$3,152
2 personas	\$1,562	7 personas	\$3,549
3 personas	\$1,959	8 personas	\$3,947
4 personas	\$2,357	9 personas	\$4,344
5 personas	\$2,754	10 personas	\$4,742

En un hogar de 11 o más personas, agregue \$398 por persona a la cantidad base de \$4,742 (por ejemplo, 11 = \$5,140)

Por favor escriba con letra de molde la siguiente información. **INFORMACION INCOMPLETA RETRASARA SU DESCUENTO.** Es muy importante que el nombre que use aquí para pedir el descuento sea el mismo nombre que aparece en sus cobros de APS.

NOMBRE COMO SE MUESTRA EN EL COBRO DE APS (apellido, nombre, inicial)		NUMERO DE SEGURO SOCIAL	
DIRECCION PARA LA CORRESPONDENCIA: (numero y calle)			
CUIDAD	ESTADO	CODIGO POSTAL	FECHA DE NACIMIENTO
DIRECCION DE SU RESIDENCIA (numero y calle)		ESTADO	NUMERO TELEFONICO DE SU HOGAR
CUIDAD	ESTADO	CODIGO POSTAL	TOTAL DE PERSONAS VIVIENDO EN SU HOGAR
NUMERO DE CUENTA DE APS		TOTAL DE INGRESOS MENSUALES DE SU HOGAR	
(COMO SE MUESTRA EN EL COBRA DE APS)		\$	

➔ DEBE DE PROPORCIONAR EL NUMERO DE CUENTA.

Por medio de ésta, otorgo permiso al Departamento de Seguridad Económica (Department of Economic Security) para que se ponga en contacto con cualquier fuente necesaria para establecer la validez de la información que he proporcionado, o cualquier otra información correspondiente a la verificación de elegibilidad para recibir servicios bajo el Programa de Asistencia de APS para Energía Eléctrica (E-3). También concedo permiso al Departamento de Seguridad Económica y a la compañía APS para que intercambien información correspondiente a mi cuenta de servicio eléctrico con el propósito de recibir un descuento en mi cobro de electricidad. Más aún, entiendo que el proporcionar mi número de Seguro Social es voluntario, no es mandatorio, y será usado únicamente con el propósito declarado aquí.

X

Firma

Fecha de hoy

NOTA: La solicitud debe firmarla la persona cuyo nombre aparece en el cobro de APS.

SEPARÉ EN LA LINEA PERFORADA, DOBLE LA FORMA A LA MITAD, ASEGURÁNDOSE QUE LA INFORMACION SOBRE EL DESTINATARIO ESTE VISIBLE. MOJE LA PEGA, PRESIONE AMBAS PARTES FIRMEMENTE Y ENMIE POR CORREO.

Por favor permita 30 a 45 días para procesar.

**ESTE FORMULARIO VENDE EL 30 DE JUNIO DE 2005**

## Call Us!

If you would like to learn how to use your energy more efficiently, give us a call. Our customer service associates want you to receive maximum value for your energy dollars and are happy to talk with you.

*As part of the APS Service Commitment,  
we're available 7 days a week,  
24 hours a day.*

**Metro Phoenix area call:**

**371-7171**

**Other areas call:**

**1-800-253-9405**

Si le gustaría información sobre maneras de reducir su uso de electricidad, por favor llámenos al

**371-6861**

**ó**

**1-800-252-9410**



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11/99 13300018

## Energy Support Program (E-3)

## Programa de APS para la Asistencia de la Energia (E-3)



Low-income discount/Descuentos  
para clientes de escasos recursos



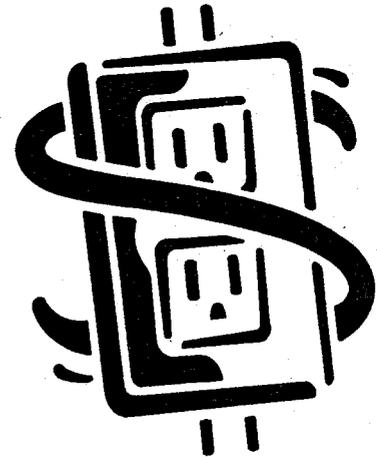
**Para información  
en Español sobre  
E-3, por favor vea  
página 8.**

## **The APS Energy Support Program**

In cooperation with the Arizona Department of Economic Security, APS offers a discount to its low-income customers.

If you qualify under the federal poverty guidelines as determined by the Department of Economic Security, you may be eligible to receive a discount of up to 30 percent off your cost of electricity. The amount of the discount depends on how much electricity you use each month.

The APS Energy Support Program, or E-3 Rate, is designed to provide assistance to the company's low-income customers as well as promote conservation and the wise use of electric energy.





## Questions and Answers

Here are answers to some questions you may have about the APS Energy Support Program:

**Q.** How do I qualify for the discount available through the APS Energy Support Program?

**A.** You can qualify for the discount if:

- You have an APS account in your name. (If the account is not in your name, call APS for information about putting it in your name. In the Phoenix metro area call 371-7171. From elsewhere in Arizona, the number to call is 1-800-253-9405.)

and

- Your household income is within 150% of the federal poverty guidelines. Income is defined as total income for all household members before taxes.

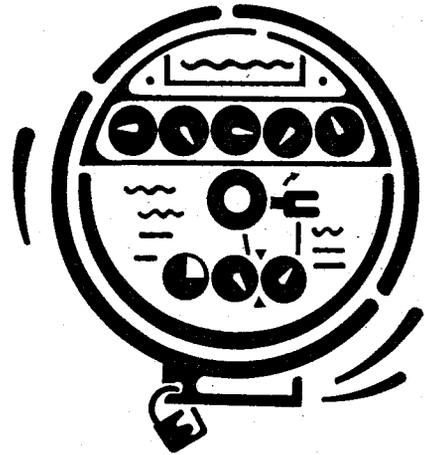
**Q.** How much is the discount?

**A.** The amount of the discount depends on how much electricity you use each month. If you use 400 kilowatt-hours (kwh) of electricity or less in any given month, your discount will be 30 percent of your kilowatt-hour cost for that month.

In months that you use between 401 kwh and 800 kwh, your discount will be 20 percent. The discount will be 10 percent for months that you use between 801 kwh and 1200 kwh. If you use more than 1200 kwh in any month, your discount will be \$10 for that month.

**Q.** How will the discount be applied to my bill?

**A.** A credit will appear on your monthly electric bill based on the amount of electricity you use that month.





Q. How do I sign up for this discount on my electric bill?

A. All you need to do is complete an application for the APS Energy Support Program and send it to the Arizona Department of Economic Security (DES). The address is on the application form. DES is responsible for making sure customers who apply for the discount are eligible to receive it based on the program income guidelines.

To maintain your eligibility, you must recertify for the program each year.

Q. Where can I find application forms for the Energy Support Program?

A. Application forms can be found at the following locations:

- All APS business offices
- Community Action Program offices
- Senior centers
- Food banks

Q. Does participating in other energy assistance programs disqualify me from the APS Energy Support Program?

A. No.

Q. What happens if I move?

A. If you move while you are participating in the Energy Support Program, you may ask to have your eligibility transferred to your new APS address.

Q. Where do I go for additional information about the APS Energy Support Program?

A. To find out which service plan you are on, how much electricity you typically use or other information about your APS account, you can call APS at 371-7171 in the Phoenix metro area. From outside the metro Phoenix area, please call 1-800-253-9405 or your nearest APS business office.

If you need information about applying for the discount, obtaining application forms, or determining whether you are eligible for the program, you can call the Arizona Department of Economic Security at 542-6600 in the Phoenix metro area. From elsewhere in Arizona, call toll-free 1-800-582-5706.

**APS**  
 Post Office Box 2907  
 Phoenix, AZ 85062-2907

**BILL SAMPLE**  
 1234 N SUNSHINE LN  
 AP 456

Your Account Number  
 9546560071

Your Meter Number  
 654321

You are on the  
 Classic Rate

Billing Date  
 June 18, 1999

Your service began Sep 14, 1976

**Important Information is Available**

For more information about deregulation of Arizona's Electric Industry, checkout our website at [www.apsc.com](http://www.apsc.com) or call 602-371-6816 or 1-877-327-9456.

We appreciate your business. Thank you!

**THIS MONTH'S ELECTRIC BILLING INFORMATION**

On Jun 17 your meter read was **3374**  
 On May 15 your meter read was 2724  
**Your total kWh usage is 650**

Basic service charge	7.50
Charge for kWh used	57.01
Energy Support Program discount (20%)	-12.90
<b>Sub Total</b>	<b>\$51.61</b>
Regulatory assessment	0.11
Sales tax	2.84
<b>Total Amount Due</b>	<b>\$54.56</b>

Please see back for additional information

Your average kWh purchase per day/month		
Month	kWh/Day	kWh/Mo
Jun 98	19.7	650
Jun 97	21.8	588
May 98	33.6	941
33 days in this billing month		
Avg daily cost \$1.65		

**THANK YOU FOR YOUR PAYMENT of \$45.11 on 05-28-99**

If we can help please call 371-7171 or toll-free in Arizona 1-800-253-9405.

YOUR LOCAL OFFICE  
 960 West University  
 Tempe, Arizona

**TOTAL AMOUNT DUE**  
**\$54.56**

TOTAL CURRENT BILLING PAST DUE AFTER 6-27-99

Customer account number

Número de cuenta de cliente

Amount of electricity (kilowatt-hours) used in the month

Cantidad de electricidad (kilovatio-horas) usada durante el mes



**BILL SAMPLE**  
 AP 456  
 1234 N SUNSHINE LN  
 TEMPE, AZ 85282-0320

CA CK GC MO TC  
 ENTER AMOUNT ENCLOSED

MAKE CHECK PAYABLE TO  
 APS

ENTER S.H.A.R.E. AMOUNT

Check No. \_\_\_\_\_

TOTAL CURRENT BILLING PAST DUE AFTER 6-27-99

Date Paid \_\_\_\_\_

Amount \_\_\_\_\_

01010070014800011100090051700000000000001720053



## Programa de APS para la Asistencia de la Energía (E-3)

APS, en cooperación con el Departamento de Seguridad Económica de Arizona (Arizona Department of Economic Security), ofrece descuentos a sus clientes de escasos recursos.

De acuerdo con el Departamento de Seguridad Económica, si usted se encuentra dentro del nivel federal de pobreza, es posible que tenga derecho a recibir un descuento del 10, 20 ó 30 por ciento en su costo de electricidad. La cantidad del descuento depende de cuanta electricidad usted usa cada mes.

El programa de descuento Energy Support Program de APS, ó Tarifa E-3, ha sido diseñado para proporcionar descuentos en la cuenta eléctrica a los clientes de APS con escasos recursos y para promover la conservación y el uso prudente de la energía eléctrica.

## Preguntas y Respuestas

He aquí algunas respuestas a preguntas que usted pueda tener con respecto al programa Energy Support Program de APS:

P. ¿Cómo puedo llenar los requisitos para recibir los descuentos disponibles por medio del programa Energy Support Program de APS?

R. Usted puede llenar los requisitos para recibir los descuentos si:

- Los recibos mensuales llegan a nombre de usted. Si la cuenta no está a su nombre, llame a APS para que le informen cómo puede poner la cuenta a su nombre.

y

- Sus ingresos familiares no exceden al 150% de las directrices federales del nivel de pobreza. Los ingresos se definen como el total de ingresos de todos los miembros del hogar antes de pagar impuestos.





P. ¿De cuánto es el descuento?

R. La cantidad del descuento, depende de cuánta electricidad use usted cada mes. Si usted usa 400 kilovatio-horas (kwh) de electricidad ó menos, durante cualquier mes, su descuento será del 30 por ciento de su costo de horas kilovatio ese mes (sin incluir impuestos).

Durante los meses que usted use entre 401 kwh y 800 kwh, su descuento será del 20 por ciento. Su descuento será del 10 por ciento durante los meses que usted use entre 801 kwh y 1200 kwh. Si usted usa más de 1200 kwh cualquier mes, usted recibirá \$10 de descuento ese mes.

P. ¿Cómo se aplicará el descuento a mi cuenta?

R. Su descuento aparecerá en su cuenta, basado en la cantidad de electricidad que usted usó ese mes.

**Un ejemplo de las facturas de APS se encuentra en página 6.**

P. ¿Cómo me registro para recibir el descuento?

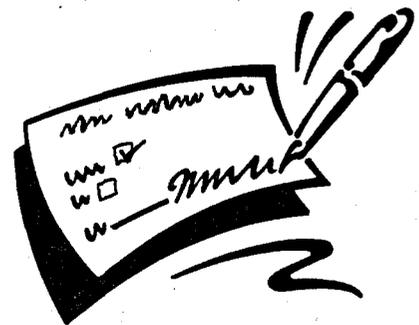
R. Todo lo que tiene usted que hacer, es llenar una solicitud del Programa de Asistencia de APS para Energía Eléctrica y enviarla al Departamento de Seguridad Económica (DES). Su dirección está impresa en la solicitud. El DES es responsable de asegurarse que todos los clientes que soliciten el descuento, tengan derecho a recibirlo, bajo las reglas de ingresos del programa.

Para mantener su elegibilidad, debe certificar para este programa cada año.

P. ¿Dónde puedo encontrar las solicitudes?

R. Puede usted encontrar las solicitudes en los siguientes lugares:

- Todas las oficinas de APS
- Oficinas de Programas de acción de la comunidad (Community Action Program Offices)
- Centros para personas jubiladas (Senior Centers)
- Bancos de alimentos (Food Banks)



P. ¿Si recibo ayuda de otros programas de energía, pierdo el derecho de participar en el programa de asistencia de APS para energía?

R. No.

P. ¿Qué pasa si me cambio de domicilio?

R. Si usted se muda a una nueva dirección durante el tiempo que este participando en el Programa de Asistencia para Energía Eléctrica, puede pedir transferencia de su elegibilidad a la nueva dirección de APS.

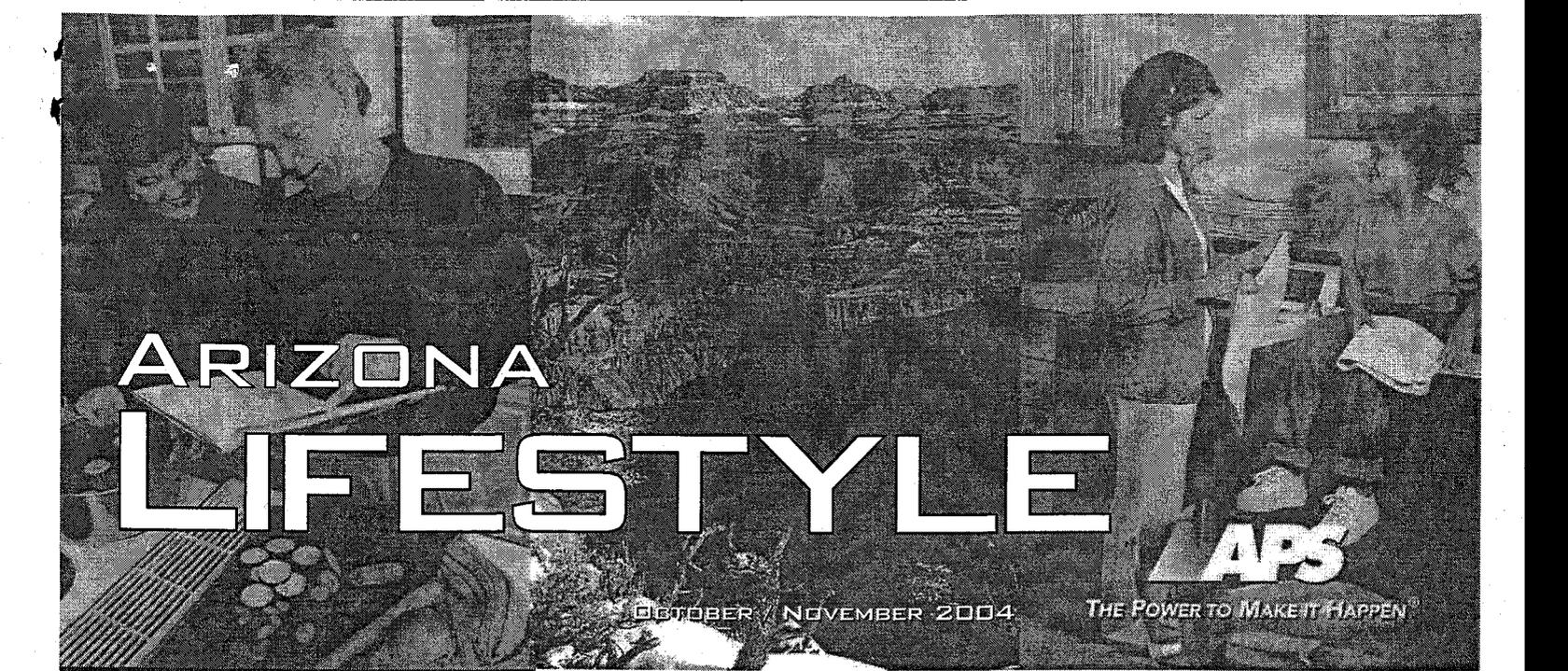
P. ¿Adónde puedo ir para recibir más información sobre el Energy Support Program de APS?

R. Para averiguar en qué tipo de planes de servicio sus cobros, cuánta electricidad gasta usualmente, o cualquier otra información sobre su



cuenta con APS, puede usted llamar a APS al 371-6861 en el área metropolitana de Phoenix. También puede usted llamar al teléfono de larga distancia gratis al 1-800-252-9410. En cualquier otro lugar en el estado, puede usted llamar por teléfono a su oficina de APS más cercana.

Si usted necesita información sobre cómo solicitar el descuento, cómo obtener las solicitudes o determinar si es usted elegible o no para el programa, puede usted llamar al Departamento de Seguridad Económica al 542-6600 en el área metropolitana de Phoenix, o en cualquier otro lugar en Arizona, llame al teléfono de larga distancia gratis al 1-800-582-5706.



# ARIZONA LIFESTYLE

OCTOBER / NOVEMBER 2004

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APS

## Energy Tip

Each summer your home's air conditioning unit works overtime to keep you cool and comfortable. With summer behind us, now is a good time to have your heating and cooling system checked out by a professional.

When you are deciding on a heating, ventilation and air conditioning contractor, make sure the company is licensed, bonded and insured. An easy way to do this is to call an APS Qualified Contractor. To learn more, call the APS Energy Answer Line at 602-371-3636 in the Phoenix area, or 888-890-9730 outside Phoenix.

## NEWS ABOUT FUTURE ELECTRIC RATES

APS is committed to effectively communicating changes regarding your electric service. On August 18, 2004, APS and 21 other parties announced that an agreement had been reached in the company's general rate case pending before the Arizona Corporation Commission (ACC).

Included among the other parties reaching agreement were the Utilities Division staff of the Commission, the Residential Utility Consumer Office, other customer representatives, conservation and renewable energy groups and market competitors.

The agreement must still be approved by the ACC, which will hold a hearing on this matter beginning at 10 a.m. Nov. 8, 2004 at the Commission's offices, 1200 W. Washington, Phoenix. Public comments will be taken on the first day of the hearing.

If approved, APS rates would increase by 4.21 percent. Even after the rate increase, APS retail rates still will be lower than they were in 1990.

APS has made this request to help ensure continued quality electric service and fair prices for our customers today and in the future. APS has not raised its rates in 13 years. During that time, the costs for most goods and services have risen by nearly a third. And, like other companies, APS has experienced significant increases in operating costs over the past decade.

For more information and updates as they become available, log on to [aps.com](http://aps.com). Also, please feel free to contact us with any questions that you may have about this rate agreement at 602-371-3633 or 888-227-5277 or e-mail us at [apsratecase@aps.com](mailto:apsratecase@aps.com).

We're available 7-days-a-week, 24-hours-a-day, [aps.com](http://aps.com)  
Metro Phoenix area: 602-371-7171 — Other areas: 800-253-9405

## ENERGY SAVINGS CAN GROW ON TREES

Planting trees and hedges near your home can be a cost-effective and eye-pleasing way to lower your energy bills. Planting trees near east-, west- and south-facing windows can provide shade from the sun which helps reduce air conditioning costs and protects your home and furnishings from potentially damaging heat and sunlight.

Here are a few other benefits to consider:

- Trees and bushes can block much of the sun's heat before it strikes your windows and walls.
- Trees, shrubs and ground cover can reduce the heat reflected from the ground to your walls and windows.
- Deciduous trees lose their leaves in winter, making them ideal to block the sun in summer while allowing the sun to warm your home in the winter.
- Shrubs, bushes and vines provide year-round insulation by creating a dead-air space next to your home.

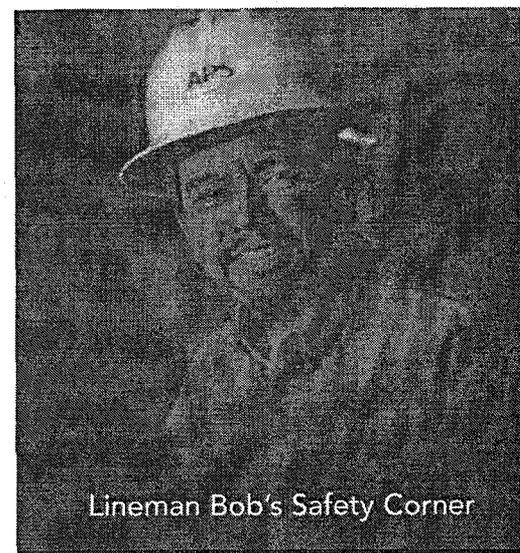
For more great ways to use energy wisely, visit us online at [aps.com](http://aps.com).

## ENERGY HELP FOR LOW-INCOME HOUSEHOLDS

If you are the head of a low-income household, the Energy-Wise Assistance program, administered through local Community Action Agency offices and APS, may be able to help you reduce your energy expenses. The program is available to customers with incomes that meet criteria based on federal poverty guidelines.

The Energy-Wise Assistance program helps low-income customers reduce their electric bills by evaluating homes and suggesting simple ways to cut down on energy use. The APS funded program may also make cost effective weatherization improvements or repairs. In some cases, low-income customers enrolled in the Energy-Wise program may be eligible to receive as much as 30 percent off the cost of electricity. The program may even help with payment of a past-due electric bill.

To locate your nearest Community Action Agency, contact the Community Information and Referral Agency at 602-263-8856 in metro Phoenix or 800-352-3792 outside Phoenix.



Lineman Bob's Safety Corner

### Tree Trimming Safety

APS highly recommends using a certified professional when trees become overgrown and need to be trimmed. However, if you choose to trim your trees and shrubs, the following tips can make this chore a much safer one:

- Before work begins, look overhead to see if there are electric lines in the immediate area. If there are, be sure to stay a minimum of 10 feet away from the lines at all times.
- Never attempt to trim trees in bad weather. Wet or windy conditions can create potentially hazardous situations.
- Have sufficient help available. Never try to do a job yourself. If in doubt, hire a certified professional.
- APS will trim trees that are growing into APS high-voltage electrical distribution lines along streets, alleys or easements for free. For tree branches tangled in the service wire — the power line that connects to the house — APS will disconnect the power while a professional you have hired trims the tree.

Visit us at [aps.com](http://aps.com) for more tips you can use around your home.

We're available 7-days-a-week, 24-hours-a-day, [aps.com](http://aps.com)  
Metro Phoenix area: 602-371-7171 — Other areas: 800-253-9405

### New E-3 Income Levels

An increase in the federal poverty income guidelines, effective July 1, 2004, enables APS to expand its Energy Support (E-3) program to all customers whose total monthly income is at or below:

- \$1,164 for one person
- \$1,562 for two people
- \$1,959 for three people
- \$2,357 for four people
- \$2,754 for five people
- \$3,152 for six people
- \$3,549 for seven people
- \$3,947 for eight people
- \$4,344 for nine people
- \$4,742 for ten people

For each additional household member add \$398. Income is defined as total income (before taxes) for all household members.



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5/04

# You May Be Eligible for a Discount



APS Energy Support Program  
E-3



THE POWER TO MAKE IT HAPPEN®

If you are a low-income customer, you may be eligible to receive a discount on your electric bill through the APS Energy Support Program (E-3).

Beginning July 1, 2004, the monthly household income guidelines increase to the amounts shown in the chart on the back of this insert.

If you qualify under the federal poverty guidelines as determined by the Department of Economic Security, you may be eligible to receive a discount of up to 30 percent off your cost of electricity. The discount amount depends on how much electricity you use each month. Your discount will vary from month to month, if your energy use varies.

The APS Energy Support Program is designed to provide assistance to the company's low-income customers, as well as promote conservation and the wise use of electricity.

#### Monthly discount amounts

<u>Monthly energy use</u>	<u>Discount</u>
400 kwh or less	30 percent
401 kwh to 800 kwh	20 percent
801 kwh to 1,200 kwh	10 percent
Over 1,200 kwh	\$10

#### You qualify for the discount if:

- You have an APS account in your name. (If your account is not in your name, call APS for information on how to change the account to your name.) And ...
- Your household income is within 150 percent of the federal poverty guidelines.

(Please see the reverse side of this insert for income qualifications.)

#### To sign up for the program

Complete an application for the APS Energy Support Program and send it to the Arizona Department of Economic Security (DES). The address is on the application form. DES is responsible for making sure all customers who apply for the discount are eligible under the program's income guidelines.

*To maintain your eligibility, you must recertify for the program each year.* When recertification is needed, DES will automatically send you the necessary paperwork. If you move, you will continue to receive the E-3 discount, as long as you are still eligible and remain an APS customer.

Application forms are available at:

- All APS customer offices
- Community Action Program offices
- Senior centers
- Food banks

#### For more information

To find out which electric service plan you are on, how much electricity you typically use or additional information about your APS account, call APS at 602-371-7171 (metro Phoenix area) or toll-free 1-800-253-9405 (other areas).

If you need information about applying for the discount, obtaining application forms or determining whether you are eligible for the program, call the Arizona Department of Economic Security at 602-542-6600 (metro Phoenix area), or 1-800-582-5706 (other areas).



**RESIDENTIAL SERVICE**

Low Income Plans

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[MY COMMUNITY](#)

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- ..... [ABOUT APS](#)
- ..... [EMPLOYMENT](#)
- ..... [NEWS RELEASES](#)
- ..... [CONTACT US](#)
- ..... [WEB SURVEY](#)
- ..... [SITE MAP](#)
- ..... [MAKE ONLINE PAYMENT](#)
- ..... [LOGIN](#)

**THE POWER TO MAKE IT HAPPEN™**

**Low Income Programs**

The APS Energy Support Program (E-3), administered through the Arizona Department of Economic Security (DES), assists customers living on a limited income.

If you qualify under the [low-income guidelines](#) established by the federal government, you may be eligible to receive a discount of as much as 30 percent off your cost of electricity.

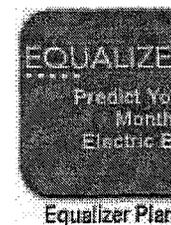
The [amount of the discount](#) depends upon how much electricity you use each month.

You may open and print a copy of the [application form\\*](#) for the APS Energy Support Program or they can be picked up at all [APS business offices](#), as well as several community action agencies, senior centers and food banks.

\*This link requires Adobe Acrobat® Reader™ for viewing and printing. If necessary, you may [download](#) this free software now.

[More Low Income Programs](#)

quick link



SEARCH

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**RESIDENTIAL SERVICE**

Low Income Plans

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THE POWER TO MAKE IT HAPPEN™

SEARCH

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**Guidelines:**

- One person household with a total monthly income of less than \$1,164.
- Two person household with a total monthly income of less than \$1,562.
- Three person household with a total monthly income of less than \$1,959.
- Four person household with a total monthly income of less than \$2,357.
- Five person household with a total monthly income of less than \$2,754.
- Six person household with a total monthly income of less than \$3,152.
- Seven person household with a total monthly income of less than \$3,549.
- Eight person household with a total monthly income of less than \$3,947.
- Nine person household with a total monthly income of less than \$4,344.
- Ten person household with a total monthly income of less than \$4,742.

For each additional household member, add \$398.00 per person. Income is defined as total income (before taxes) for all household members.

Effective July 1, 2004

[More Low Income Programs](#)

quick link

**REGISTER WITH APS**  
manage your accounts online

Register With AP

pay your bill... the **CONVENIENT** way

more  
Surepay



**RESIDENTIAL SERVICE**

Low Income Plans

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- [WEB SURVEY](#)
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- [MAKE ONLINE PAYMENT](#)
- [LOGIN](#)

**THE POWER TO MAKE IT HAPPEN™**

**Energy-Wise Assistance From APS**

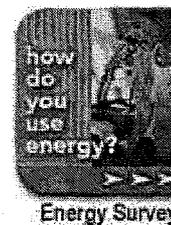
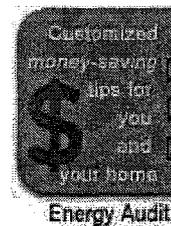
If you are having trouble paying your electric bills and qualify for Energy-Wise Assistance through your local Community Action Agency (CAA), this program may be able to help you reduce your energy expenses.

Our assistance includes determining ways in which your electric bill can be lowered. We may also make weatherization improvements or repairs to your home and teach you simple ways to cut down on energy use. In some cases the program may even help with payment of a past-due electric bill.

To be eligible for this program, your household income must be at or below 125% of the low-income level established by the federal government, 150% for seniors and disabled. To find out if you or someone you care about is eligible for this program, contact your local CAA office.

[More Low Income Programs](#)

**quick link**



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**THE POWER TO MAKE IT HAPPEN™**

SEARCH

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**Community Action Agency Offices**

- |  |                                     |
|--|-------------------------------------|
| <b>Avondale</b><br>(623) 932-9440        | <b>Mesa</b><br>(480) 833-9200       |
| <b>Buckeye</b><br>(520) 386-2588         | <b>Peoria</b><br>(623) 979-39117    |
| <b>Chandler</b><br>(480) 963-4321        | <b>Phoenix</b>                      |
| <b>El Mirage</b><br>(623) 937-0500       | <b>Scottsdale</b><br>(480) 994-2323 |
| <b>Gila Bend</b><br>(520) 252-3186       | <b>Sun City</b><br>(623) 937-0500   |
| <b>Gilbert</b><br>(480) 892-5331         | <b>Surprise</b><br>(623) 937-0500   |
| <b>Glendale</b><br>(623) 930-2854        | <b>Tempe</b><br>(480) 350-5880      |
| <b>Guadalupe</b><br>(480) 730-3093       | <b>Tolleson</b><br>(623) 936-1407   |
| <b>Litchfield Park</b><br>(623) 937-0500 | <b>Wickenburg</b><br>(520) 684-7894 |

**Phoenix Community Action Agency Offices**

Central Phoenix Family Services Center  
 1250 S. 7th Avenue  
 (602) 534-1250

Sky Harbor Family Services Center  
 1818 S. 16th Street  
 (602) 495-5193

South Mountain Family Services Center  
 4732 S. Central Avenue  
 (602) 534-4732

Sunnyslope Family Services Center  
 914 W. Hatcher  
 (602) 495-5229

West Phoenix Human Services Center  
 3454 N. 51st Avenue  
 (602) 262-6510

quick link

**REGISTER WITH APS**  
 manage your accounts online

Customized money-saving tips for you and your home

# APS Energy Support Program

To qualify for discounts under the APS Energy Support Program (E-3), all of the following statements must apply to you.

- I am an APS customer and the APS bill is in my name.
- My household income is at or below the income level in the listing below. (Be sure to complete your household's total gross monthly income in the box below.)

Household Size	Monthly Income Level	Household Size	Monthly Income Level
1 Person	\$1,164	6 People	\$3,152
2 People	\$1,562	7 People	\$3,549
3 People	\$1,959	8 People	\$3,947
4 People	\$2,357	9 People	\$4,344
5 People	\$2,754	10 People	\$4,742

For more than 10 people, add \$398 per person (example: 11=\$5,140).

Please print the following information. INCOMPLETE INFORMATION WILL DELAY YOUR DISCOUNT. The name used here to apply for the discount MUST be the same as the name on the APS bill.

NAME AS SHOWN ON APS BILL (LAST, FIRST, M.I.)			SOCIAL SECURITY NO.									
MAILING ADDRESS (NUMBER AND STREET)			DATE OF BIRTH									
CITY	STATE	ZIP CODE	HOME TELEPHONE NUMBER									
RESIDENTIAL ADDRESS (NUMBER AND STREET)			TOTAL NO. OF PERSONS LIVING IN HOUSEHOLD									
CITY	STATE AZ	ZIP CODE	HOUSEHOLD'S TOTAL GROSS MONTHLY INCOME \$									
APS ACCOUNT NO. (AS SHOWN ON APS BILL)			← ACCOUNT NUMBER MUST BE FILLED IN									
<table border="1"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>												

Permission is hereby granted to the Department of Economic Security to contact any sources necessary to establish the accuracy of information given by me or other information which pertains to the verification of my eligibility to receive services under the APS Energy Support Program (E-3). Permission is also granted to the Department of Economic Security and APS to exchange information regarding my electric utility account for the purpose of receiving a discount on my electric bill. I further understand that the disclosure of my Social Security number is voluntary and not mandatory, and will only be used for the purpose stated herein.

X

Signature

Today's Date

**NOTE: Application must be signed by THE PERSON WHOSE NAME APPEARS ON THE APS BILL. Please allow 30 - 45 days for processing.**

MAIL COMPLETED FORM TO: Arizona Department of Economic Security  
APS Energy Support Program (E-3) - 086Z  
PO Box 18165  
Phoenix, AZ 85005-9946

**THIS FORM EXPIRES ON JUNE 30, 2005**



# TOR ENGINEERING

3731 E. Grove Street  
 Phoenix, Arizona 85040  
 (602) 437-1676 • Fax (602) 437-1564

## LETTER OF TRANSMITTAL

TO D. McCasland  
APS- Metro

DATE	9/19/01	JOB NO.	W126822
ATTENTION			
RE:			

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop drawings     Prints     Plans     Samples     Specifications  
 Copy of letter     Change order     \_\_\_\_\_

COPIES	DATE	NO	DESCRIPTION
1	9/19/01	W126822	EAST Economy PARKING STRUCTURE - FINAL

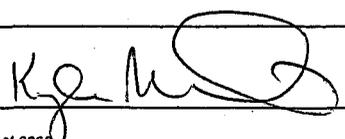
THESE ARE TRANSMITTED as checked below:

- For approval     Approved as submitted     Resubmit \_\_\_\_\_ copies for approval  
 For your use     Approved as noted     Submit \_\_\_\_\_ copies for distribution  
 As requested     Returned for corrections     Return \_\_\_\_\_ corrected prints  
 For review and comment     \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_ 19 \_\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

FINAL  
 015553

COPY TO FINAL

SIGNED: 

If enclosures are not as noted, kindly notify us at once.

**T&D**  
**CUSTOMER SERVICE WORK AUTHORIZATION**

**CAPACITOR #CS253809**

WORK TYPE  
**REV.**

DESCRIPTION/PURPOSE/NECESSITY. IF REVISION W.A. EXPLAIN CHANGES

PROVIDE THREE PHASE FACILITIES FOR NEW  
 COMMERCIAL CUSTOMER.

SYSTEM PLANNING ALLOWANCE:  
 C5"(2) ( CONDUIT ONLY ): 1156' @ \$1.43/FT = \$1,653.08  
 C-5"(2) ( CONDUIT/W/WIRE ): 230' @ \$9.59/FT = \$2205.70

MANHOLE REIMBURSEMENT: 1 @ \$230.00/EA = \$230.00

WORK ORDER <b>W126822</b>	GENERAL LEDGER ACCT NO.	CLAIM NO.
------------------------------	-------------------------	-----------

WORK ORDER DESCRIPTION (50 CHARACTERS MAXIMUM)  
**EAST ECONOMY PARKING STRUCTURE GARAGE C**

PROJECT LEADER <b>D. McCASLAND</b>	CITY <b>PHOENIX</b>
---------------------------------------	------------------------

MAP NO. <b>8-38</b>	EST. START DATE
------------------------	-----------------

<input type="checkbox"/> STREET LIGHTS	<input checked="" type="checkbox"/> CUST. TRENCH	DATE REQUIRED
<input type="checkbox"/> DUSK-TO-DAWN	<input type="checkbox"/> APS TRENCH	

PROJECT I.D. NO.	SUB PROJECT I.D. NO.	CHANGE LOG
------------------	----------------------	------------

**ESTIMATED COST SUMMARY**

CC	CONST. CLASS	CURRENT AMOUNT	REVISED AMOUNT
00	EST. \$ FOR ADDITIONS		
01	EST. \$ FOR REMOVALS		
03	SALVAGE		
TOTAL SPECIFIC COST			
FIXED COST			
W.A. AUTHORIZATION >			
NON-REFUNDABLE CASH RECEIPTS			
CONST. OVERHEAD			
GROSS COST			

RETIREMENT FORM NO.
---------------------

ESTIMATED LABOR HOURS	DIVISION CODE <b>METRO-CENTRAL</b>
-----------------------	---------------------------------------

RESPONSIBLE UNIT NO. <b>0531</b>	ENVIRONMENTAL PERCENT (%) <b>0</b>
-------------------------------------	---------------------------------------

CONSTRUCTION COORDINATOR	
CUSTOMER NAME <b>CITY OF PHOENIX AVIATION DEPT.</b>	PHONE
SERVICE ADDRESS <b>SKY HARBOR INTERNATIONAL AIRPORT</b>	
CONTACT ADDRESS <b>200 W. Washington, 7<sup>th</sup> Floor Phoenix, Az 85003-1611</b>	
CONTACT	PHONE

<input type="checkbox"/> DUAL ENERGY
<input type="checkbox"/> SEASONAL
<input type="checkbox"/> RESIDENTIAL
<input checked="" type="checkbox"/> COMMERCIAL/INDUST.
SQUARE FOOTAGE
RATES
LARGEST SES. SIZE
LARGEST ITEM/EQUIP. ADDED

CUSTOMER PAYMENT DATA	ANNUAL REVENUE	EXTENSION BASIS
RECEIVED BY	CURRENT	<input type="checkbox"/> FOOTAGE BASIS
SALES INVOICE NO.	GUARANTEED ADDED	ALLOWED FOOTAGE 1000
NON-REFUNDABLE ADV.	ESTIMATED ADDITION	EXT. FOOTAGE
REFUNDABLE ADVANCE		EXCESS FOOTAGE
		EXCESS X \$ / FT
		<input type="checkbox"/> REVENUE BASIS
		GROSS COST
		CUSTOMER ADV.

STATE TAX CODES							
TWN.	RNG.	SEC	1/4	STATE	AREA%	COUNTY TAX UNIT	
1N	4E	18	NE	AZ	100	07-	

<input type="checkbox"/> J.U. MEMO	<input checked="" type="checkbox"/> WORK W/TELCO	CONDUIT REQUIREMENTS
STAKING <input checked="" type="checkbox"/> REQUIRED	<input type="checkbox"/> CITY PERMIT	
<input checked="" type="checkbox"/> EASEMENT	<input type="checkbox"/> OTHER PERMIT	
R/W RELEASE BY	STAKING BY	
		CONDUIT REIMBURSEMENTS

DESIGN/ENGINEERING APPROVAL	DATE	EMP. I.D. NO.
USER APPROVAL	DATE	EMP. I.D. NO.
BUDGET AUTHORIZATION	DATE	EMP. I.D. NO.

WIRE FOOTAGE DATA			METERING DATA										
OVERHEAD	U.G. PRIMARY	U.G. SEC.	ELBC	NO. OF METER	VOLTS	WIRE	CONN LOAD KW	EST DEM KW					
0	360'	0											
INITIATED BY <b>D. McCASLAND</b>	DATE												
PREPARED BY <b>K. MARINELLO (TOR)</b>	DATE <b>9/17/01</b>												
ENGINEERING CONCURRENCE	DATE		TOTAL										
			3	277/480	4	1218	852						
			3			1218	852						

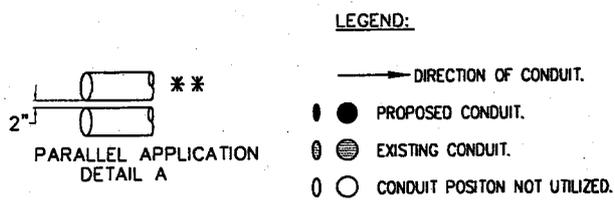
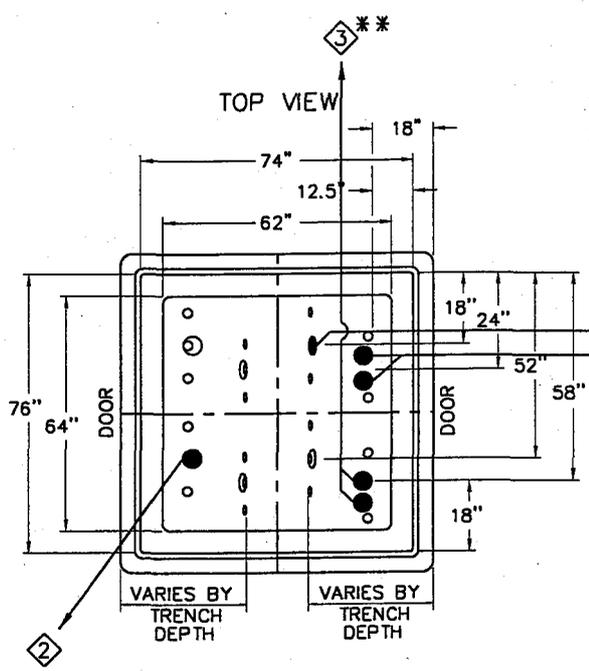
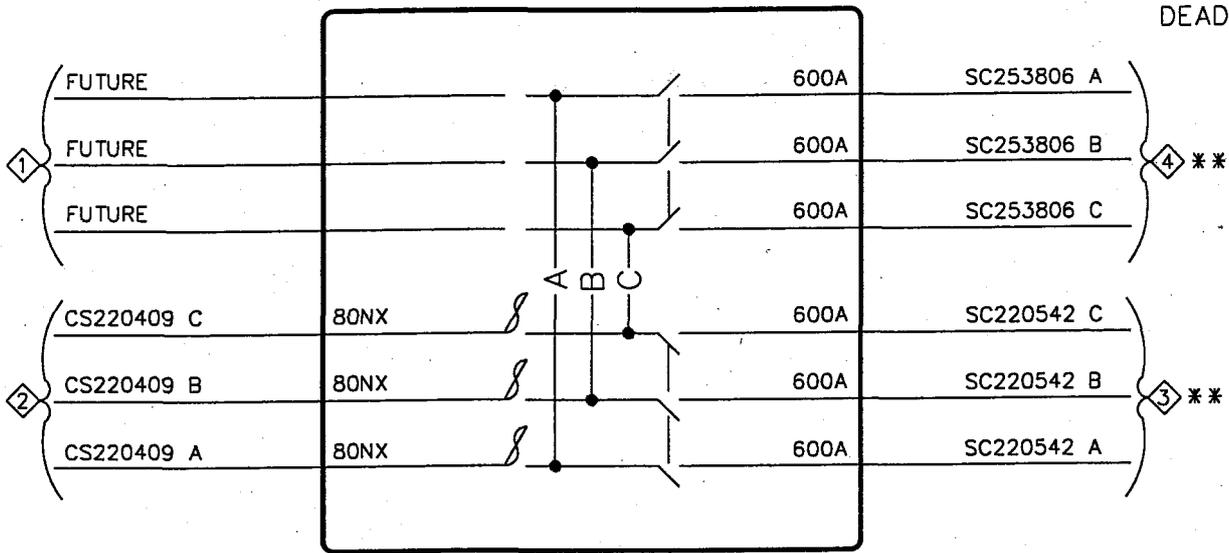
COMPLETION REPORT	
RESPONSIBLE FIELD PERSON	
RESPONSIBLE ENGINEER	
IN-SERVICE DATE	CONTROL DESK COMPLETION DATE



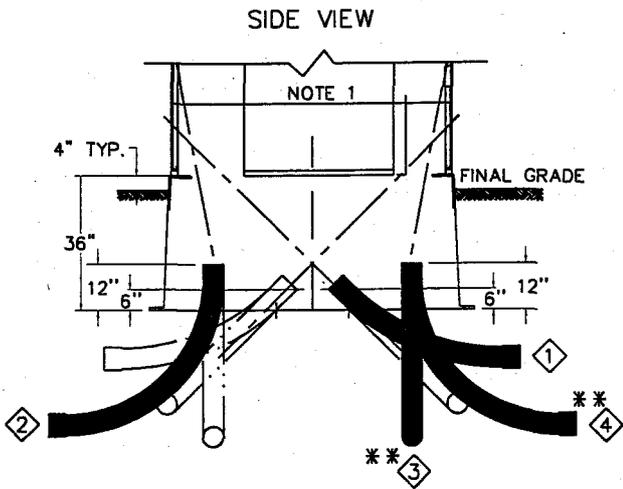


SC220543

8475.B09  
DEADFRONT

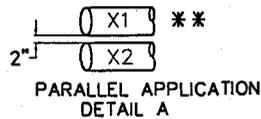
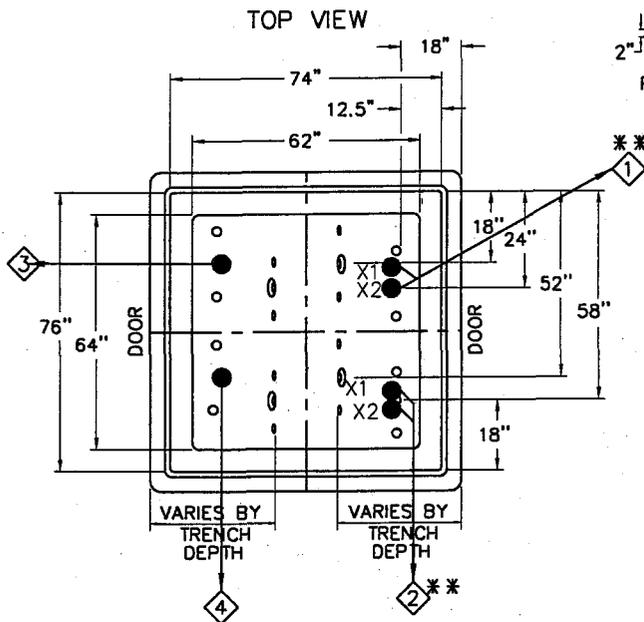
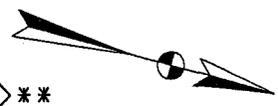
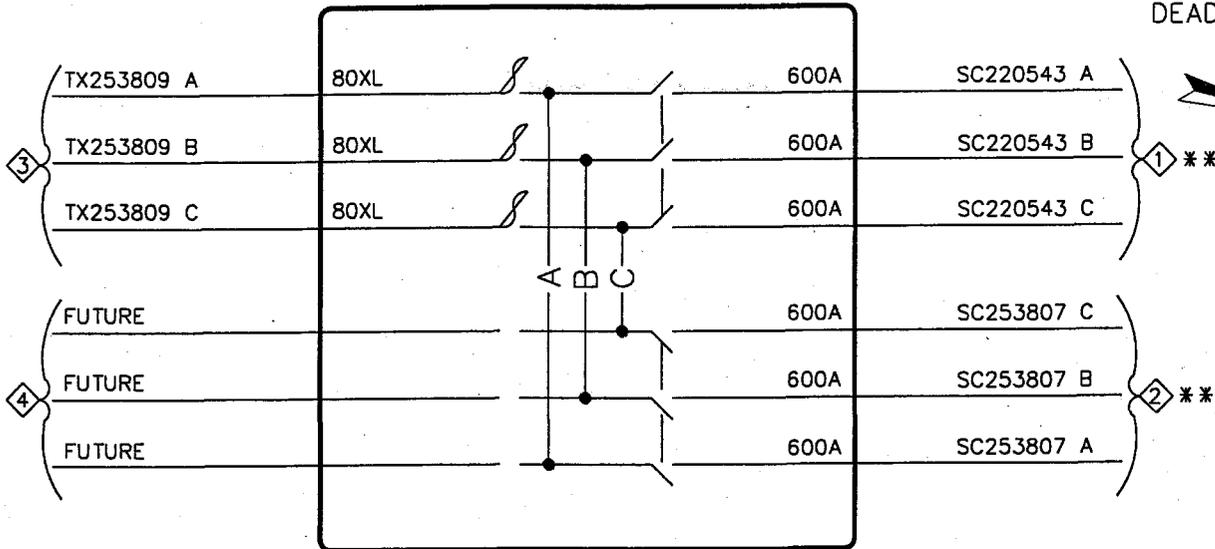


- NOTES:**
1. THIS DIMENSION VARIES BY BUS CONFIGURATION TYPE 9 & 12 = 81-1/4" TYPE 10 & 11 = 88-1/4"
  2. CENTER PARALLEL CONDUITS OVER DIMENSION FOR SINGLE CONDUIT AS SHOWN IN DETAIL A.
  3. CABLE SHOULD BE PULLED INTO THE WINDOW IT WILL BE TERMINATED IN.
  4. ALL CONDUIT AND SWEEPS ENTERING THE BOX PAD FROM THE OPPOSITE SIDE OF THE BOX, EXCLUDING 90 DEGREE BENDS BELOW SAME WINDOW, SHALL HAVE A SLEEVE EXTENSION WHICH ALLOWS IT TO REST ON THE INSIDE LIP UNTIL SLURRY HAS SET.
  5. ALL BACKFILL UNDER BOXPAD AND AROUND CONDUIT SWEEPS ENTERING THE BOXPAD SHALL BE 1-SACK SLURRY.
  6. DIMENSIONS ARE SHOWN FROM TOP OUTSIDE EDGE OF BOX.
  7. A 2-INCH MINIMUM DIAMETER DRAIN IS REQUIRED IN ALL BOX PADS AT LOWEST POINT TO A MINIMUM DEPTH OF 1-INCH BELOW SLURRY.



- CABLE & CONDUIT NOTES:**
- ① 1-4", 36"R, 45' SWEEP TO STUBBED OUT 10' E/O CABINET
  - ② 1-4", 36"R, 90' SWEEP TO CS220409. 3-1/OA IN SWEEP TO CS220409.
  - \*\* ③ 2-5", 60"R, 90' SWEEPS TO SC220542. 3-750A IN SWEEP TO SC220542.
  - \*\* ④ 2-5", 60"R, 90' SWEEP EAST & SOUTH TO SC253806. 3-750A TO SC253806.

WA: 91359	REVISED	DATE: 07/01/00	DATE: 09/17/01
BY: TOR (TOR)	BY: K. MARINELLO (TOR)	JEMS: W126822	
DOORS OPEN: EAST & WEST			
LOCATION: ±509' S/O SKY HARBOR BY WEST BOUND ±1320' E/O 44TH ST			
NE 1/4Sec 18 T1N R4E		MAP #8-38	
TOWN: PHOENIX		FILENAME: 015553	



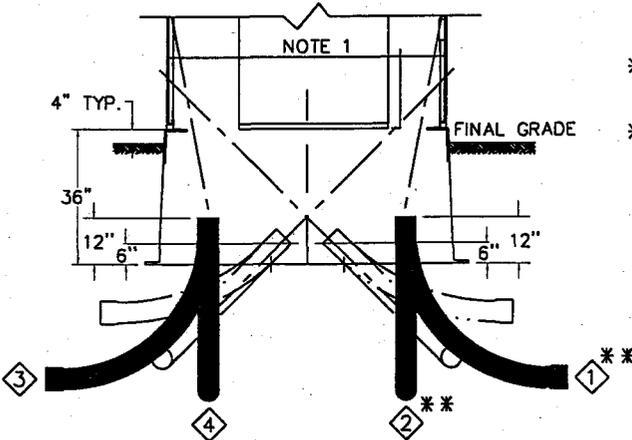
LEGEND:

- DIRECTION OF CONDUIT.
- PROPOSED CONDUIT.
- ⊙ EXISTING CONDUIT.
- CONDUIT POSITION NOT UTILIZED.

NOTES:

1. THIS DIMENSION VARIES BY BUS CONFIGURATION  
TYPE 9 & 12 = 81-1/4" TYPE 10 & 11 = 88-1/4"
2. CENTER PARALLEL CONDUITS OVER DIMENSION FOR SINGLE CONDUIT AS SHOWN IN DETAIL A.
3. CABLE SHOULD BE PULLED INTO THE WINDOW IT WILL BE TERMINATED IN.
4. ALL CONDUIT AND SWEEPS ENTERING THE BOX PAD FROM THE OPPOSITE SIDE OF THE BOX, EXCLUDING 90 DEGREE BENDS BELOW SAME WINDOW, SHALL HAVE A SLEEVE EXTENSION WHICH ALLOWS IT TO REST ON THE INSIDE LIP UNTIL SLURRY HAS SET.
5. ALL BACKFILL UNDER BOXPAD AND AROUND CONDUIT SWEEPS ENTERING THE BOXPAD SHALL BE 1-SACK SLURRY.
6. DIMENSIONS ARE SHOWN FROM TOP OUTSIDE EDGE OF BOX.
7. A 2-INCH MINIMUM DIAMETER DRAIN IS REQUIRED IN ALL BOX PADS AT LOWEST POINT TO A MINIMUM DEPTH OF 1-INCH BELOW SLURRY.

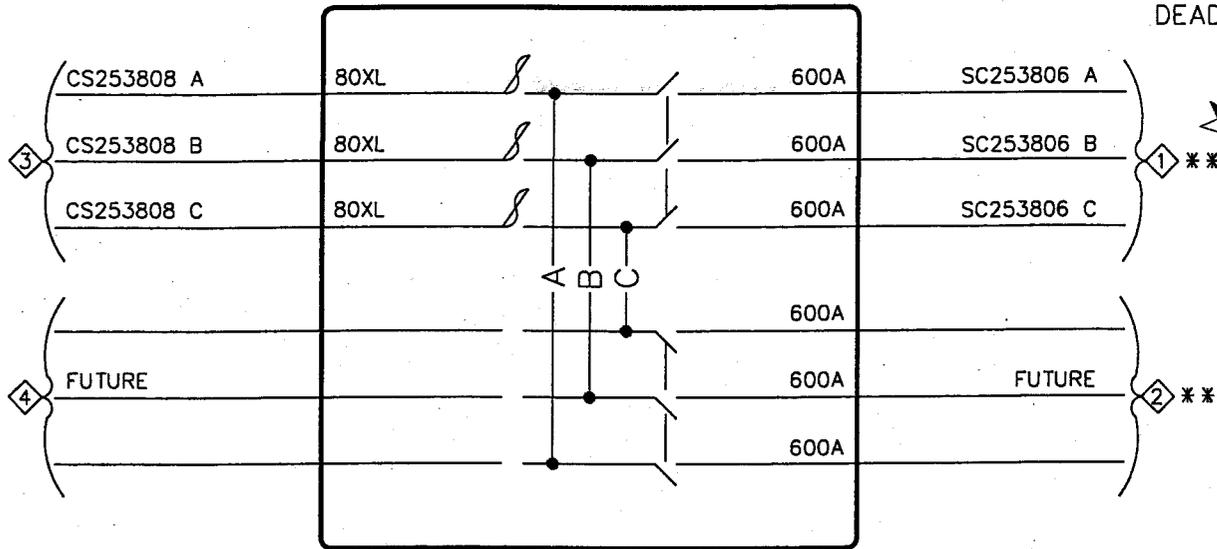
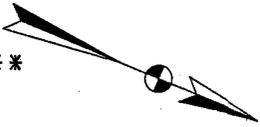
SIDE VIEW



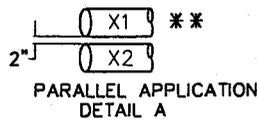
CABLE & CONDUIT NOTES:

- \*\*① 2-5", 60°R, 90° SWEEPS (X1-X2) N/W TO SC220543. 3-750A IN X1 TO SC220543.
- \*\*② 2-5", 60°R, 90° SWEEPS (X1-X2) EAST TO SC253807. 3-750A IN X1 TO SC253807.
- ③ 1-4", 36°R, 90° SWEEP SOUTH TO TX253809. 3-1/OA TO TX253809.
- ④ 1-4", 36°R, 90° SWEEP EAST STUBBED TO 35' S/E OF SC253807.

REVISED	DATE:
BY:	
WAMS:	
WAMS: W126822	DATE: 09/17/01
BY: K. MARINELLO (TOR)	& SOUTH
DOORS OPEN: NORTH	LOCATION: ±730' S/O SKY HARBOR BY WEST BOUND
	±1235' W/O 44TH ST
	NE 1/4Sec 18 T1N R4E
	MAP #B-38
	TOWN: PHOENIX
	FILENAME: 015553



**LEGEND:**



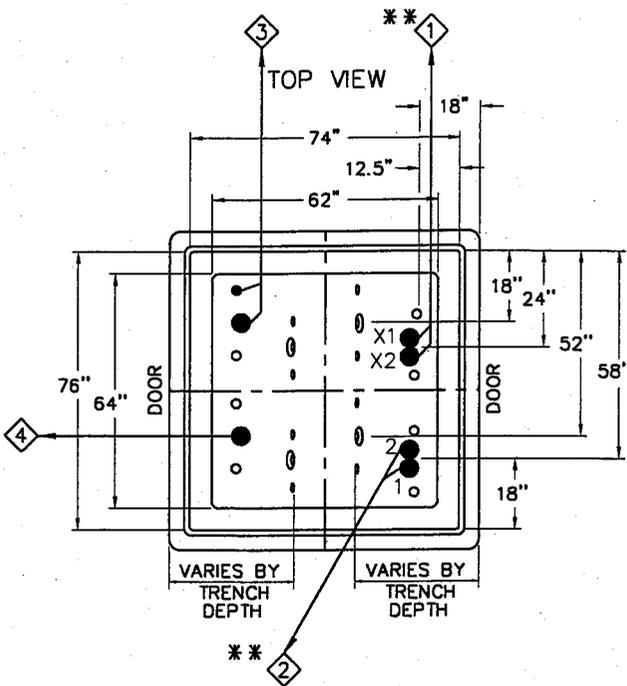
- DIRECTION OF CONDUIT.
- PROPOSED CONDUIT.
- ⊙ EXISTING CONDUIT.
- CONDUIT POSITION NOT UTILIZED.

**NOTES:**

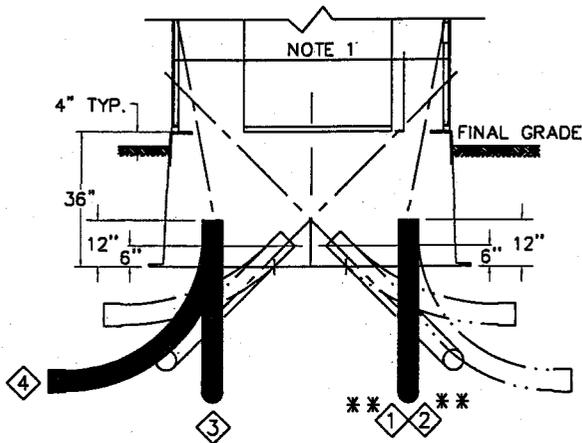
1. THIS DIMENSION VARIES BY BUS CONFIGURATION  
TYPE 9 & 12 = 81-1/4" TYPE 10 & 11 = 88-1/4"
2. CENTER PARALLEL CONDUITS OVER DIMENSION FOR  
SINGLE CONDUIT AS SHOWN IN DETAIL A.
3. CABLE SHOULD BE PULLED INTO THE WINDOW IT  
WILL BE TERMINATED IN.
4. ALL CONDUIT AND SWEEPS ENTERING THE BOX PAD  
FROM THE OPPOSITE SIDE OF THE BOX, EXCLUDING  
90 DEGREE BENDS BELOW SAME WINDOW, SHALL HAVE  
A SLEEVE EXTENSION WHICH ALLOWS IT TO REST  
ON THE INSIDE LIP UNTIL SLURRY HAS SET.
5. ALL BACKFILL UNDER BOXPAD AND AROUND CONDUIT  
SWEEPS ENTERING THE BOXPAD SHALL BE 1-SACK  
SLURRY.
6. DIMENSIONS ARE SHOWN FROM TOP OUTSIDE EDGE  
OF BOX.
7. A 2-INCH MINIMUM DIAMETER DRAIN IS REQUIRED IN  
ALL BOX PADS AT LOWEST POINT TO A MINIMUM  
DEPTH OF 1-INCH BELOW SLURRY.

**CABLE & CONDUIT NOTES:**

- 1-2-5", 60"R, 90° SWEEP (X1-X2) WEST TO  
SC253806. 3-750A IN X1 TO SC253806.
- 2-5", 60"R, 90° SWEEPS (1-2) S/E TO  
MH253810.
- 1-4"+1-2", 36"R 90° SWEEPS WEST TO CS253808  
3-1/0A IN 1-4" TO CS253808.
- 1-4", 36"R, 90° SWEEP SOUTH 16' TO  
FUTURE TRANSFORMER SITE.



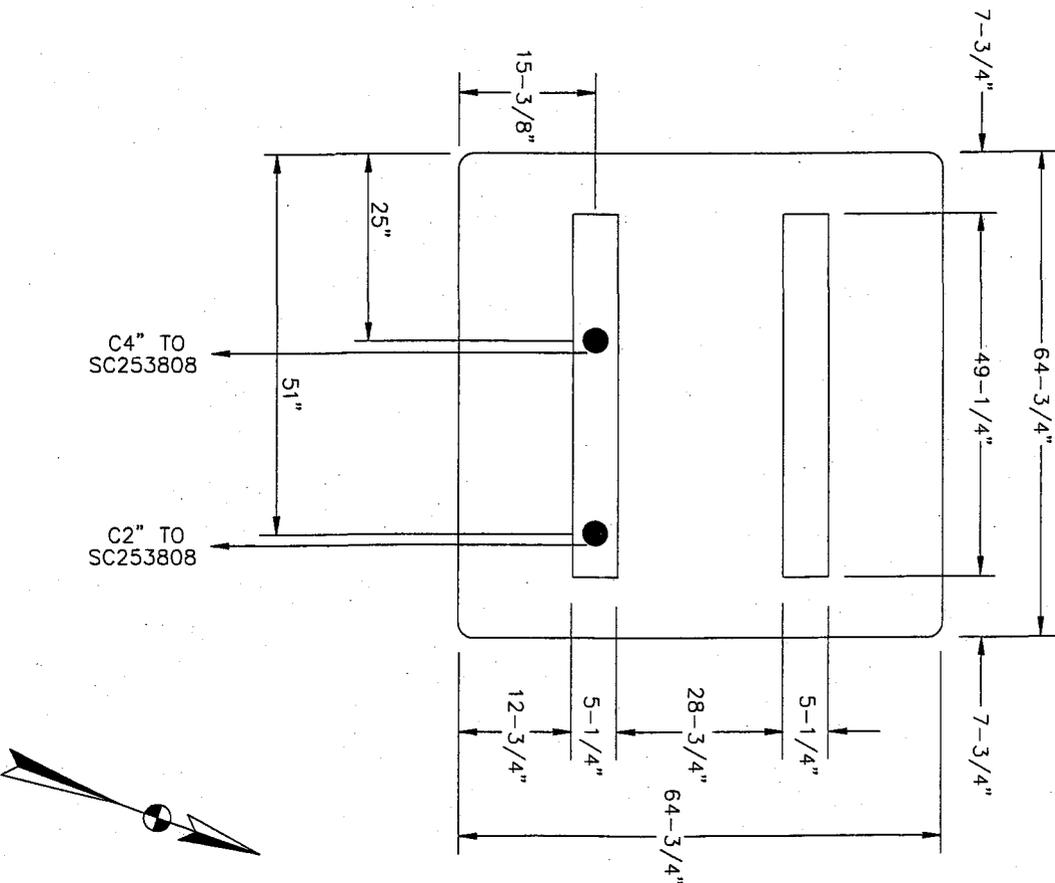
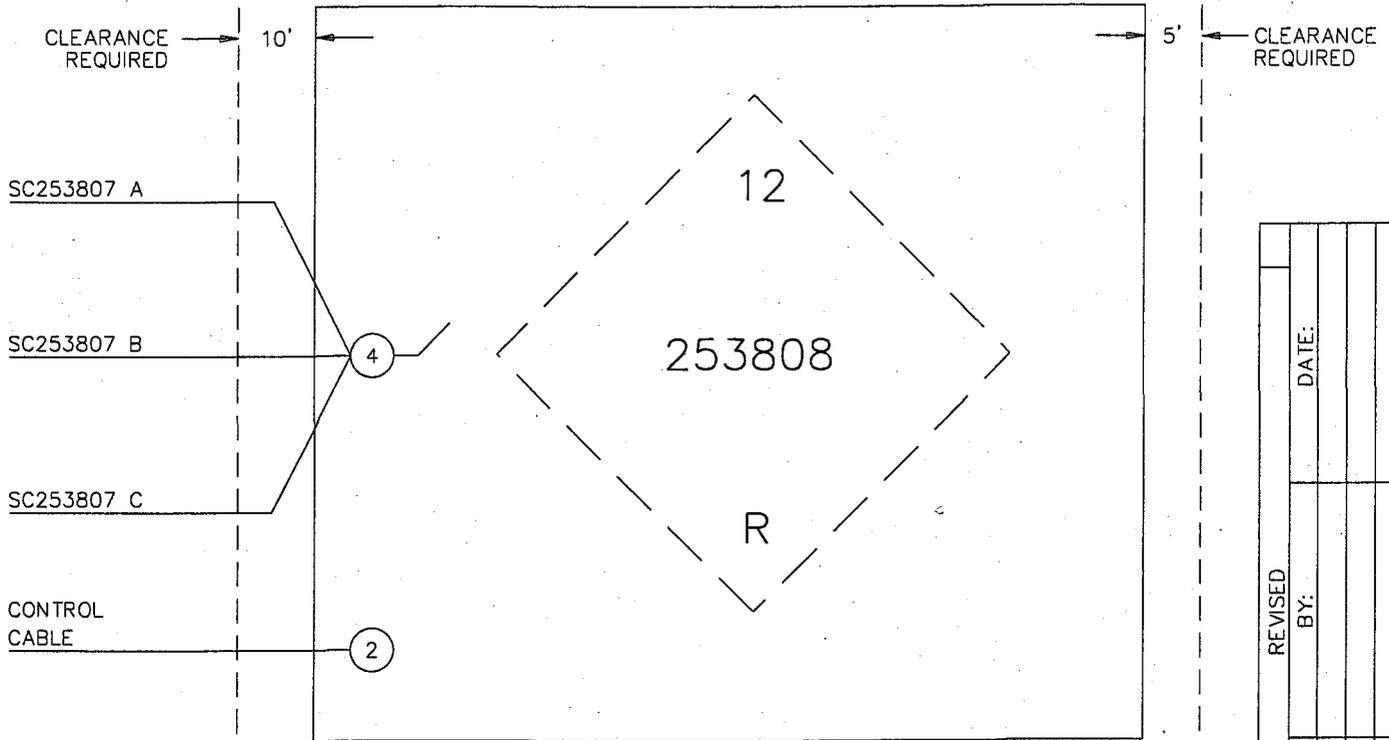
**SIDE VIEW**



REVISED	DATE:
BY:	
WAMS:	
WAMS: W126822	DATE: 09/17/01
BY: K. MARINELLO (TOR)	SOUTH
DOORS OPEN: NORTH &	
LOCATION: ±730' S/O SKY HARBOR BV WEST BOUND	
±1220' W/O 44TH ST	
NE 1/4Sec 18 T1N R4E	MAP #8-38
TOWN: PHOENIX	FILENAME: 015553

CS253808

SOURCE:  
SC253807



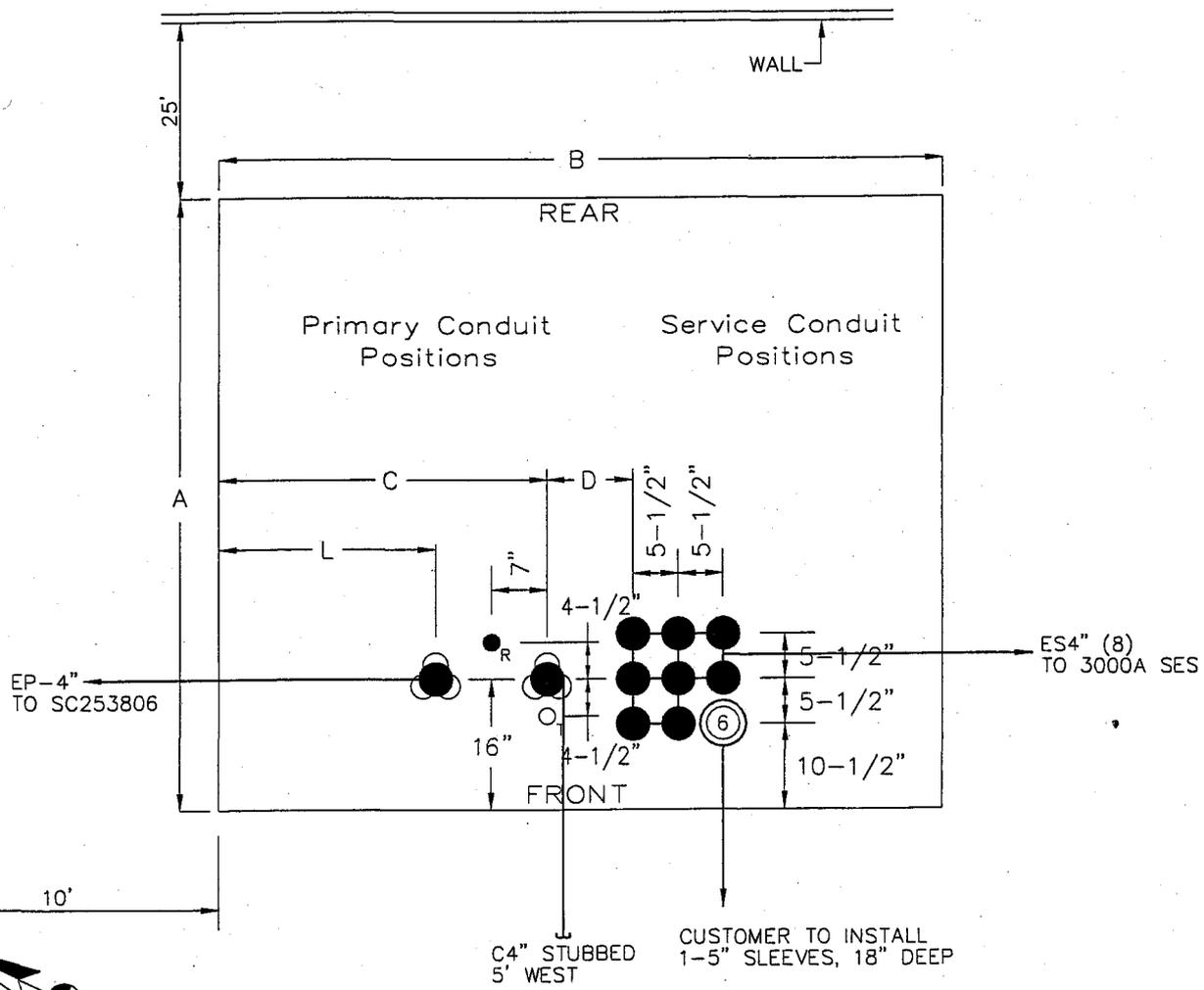
WAMS: W126822	REVISED BY:	DATE:
BY: K. MARINELLO (TOR)	WAMS:	
DOOR OPENS: SOUTH		
LOCATION: ±730' S/O S/W/O 44TH ST ±1228' W/O 44TH ST		
NE 1/4 Sec 18 T1N R4E		
TOWN: PHOENIX		
MAP #8-38		
FILENAME: 015553		
DATE: 09/17/00		



1500KVA  
TX253809  
277/480V

THREE PHASE PAD AND CONDUIT DETAIL

THIS SERV	SERVICE SECTION SIZE (AMPS)	SERVICE VOLTAGE	QUANTITY and SIZE OF CONDUITS			PAD SIZE and CONDUIT LOCATION (inches)				
			PRIMARY	SECONDARY		A	B	C	D	L
	200	120/208 277/480	2-4"	6-2"	1-3"	75	88	40	16	26-1/2
	400	120/208 277/480	2-4"	6-2"	1-4"	75	88	40	16	26-1/2
	600 - 1000	120/208 277/480	2-4"	6-2"	2-4"	75	88	40	16	26-1/2
	1200	120/208 277/480	2-4" 1-4"	6-2" 3-2"	3-4"	75	88	40	16	26-1/2
	1600	120/208 277/480	2-4" 1-4"	6-2" 3-2"	4-4"	75 100	88 102	40 47	16	26-1/2 33-1/2
	2000	120/208 277/480	2-4" 1-4"	6-2" 3-2"	5-4"	75 100	88 102	40 47	16	26-1/2 33-1/2
	2500	120/208 277/480	2-4" 1-4"	6-2" 3-2"	7-4"	75 100	88 102	40 47	16	26-1/2 33-1/2
	3000	277/480	1-4"	3-2"	8-4"	100	102	47	16	33-1/2



SC253806  
 P7660\_7667.dwg 3-13-98

R = GROUND ROD SLEEVE, NOTE 7.  
 T = COMMUNICATION GROUND SLEEVE, NOTE 8.

MAXIMO: W126822	
BY: K. MARINELLO (TOR)	DATE: 9/17/01
DOORS FACE: WEST	
LOCATION: ±746' S/O SKY HARBOR BV WEST BOUND ±1235' W/O 44TH ST	
NE 1/4Sec 18	T 1N R 4E
TOWN: PHOENIX	MAP#8-38
Sh 1 of 2 FILENAME: 015553	

u

1500KVA  
**TX253809**  
 277/480V

**PAD SPECIFICATIONS:**

1. The following minimum unobstructed clearances from the edge of the pad are required:

Horizontal Clearances: 2' to the rear and sides  
 10' to the front  
 Vertical Clearances: 28' above the pad and  
 Horizontal clearance areas

2. All backfill beneath the pad shall be compacted to a minimum of 90 percent of maximum density, and shall not contain rocks larger than 1-1/2 inches in their greatest dimension. Backfill material shall contain enough fines to fill all voids.

3. Pad to be made in one continuous pour of concrete, 3000 PSI at 28 days, \* inch aggregate, 3 to 5-inch slump. Top of pad to be troweled smooth and level. Surface is to have a light broomed finish and all exposed edges are to be rounded to a \* inch radius.

Refer to the Material Specifications 7990 for complete pad specifications.

4. Reinforcing steel required  Yes  No

Reinforcement is not required if pad is poured-in-place in a location unlikely to be undermined by drainage, etc..

5. Minimum required pad thickness is 6 inches.

6. Top of pad to be a minimum of 4 inches above surrounding finished grade.

7. R - Provision for ground rod - install sleeve through pad, 1 inch minimum I.D., with no obstruction beneath. Alternate sleeve locations are along an imaginary center line between the primary ducts. Location to be based on avoiding conduit sweeps when driving ground rod.

8. T - Provision for communications ground - install sleeve through pad, 1 inch minimum I.D., with no obstruction beneath. Location to be based on avoiding conduit sweeps.

**CONDUIT SPECIFICATIONS:**

1. All service conductors shall be installed in rigid metallic or non-metallic conduits from transformer to service entrance section.

2. All primary conductors shall be installed in rigid non-metallic conduits.

3. Rigid non-metallic conduit is defined as PVC and shall be marked as follows:

- SWEEPS - PVC SCH 40 NEMA TC-2
- STRAIGHT SECTIONS - PVC DB 100 MODULUS 400,000 PSI ASTM F-512\*
- PVC DB 120 MODULUS 400,000 PSI ASTM F-512
- PVC SCH 40 NEMA TC-2
- PVC SCH 80 NEMA TC-2

\* Only good for conduit 4" or larger.

4. Apply Purple Primer/Cleaner ASTM F656 to all PVC joints prior to applying a coating of gray PVC to PVC cement ASTM D2564.

5. If steel sweeps, bends and conduit are used, they shall be galvanized per ANSI C80.1 and half-lapped with suitable 20-mil tape, to a total thickness of 40 mils. Polyken #900 2" black tape (or equivalent) shall be half-lapped over Polyken #927 black primer (or equivalent).

6. All non-metallic conduit sweeps and elbows shall have internally chamfered ends.

7. Unless otherwise specified, sweeps, bends and conduits shall be 4-inch IPS with minimum radius sweeps of 36 inches for primary and 24 inches for service.

8. All sweeps into transformer pad shall extend minimum of 1 inch and a maximum of 2 inches above the top of the pad upon cable installation. Conduit ends shall be capped or plugged, not glued. Non-exposed conduits stubbed out for future extensions shall be plugged.

9. Primary conduits shall be installed with a minimum cover of 36 inches, service conduits shall be installed with a minimum cover of 24 inches, unless otherwise specified. Dimensions given are from final grade to the top of the duct bank.

10. Where service conduits must be installed directly under a building foundation, the conduits shall be concrete encased and the top of the encasement shall have a minimum of 24 inches clear separation below the structure foundation. Encasement shall consist of a 3-inch concrete envelope.

11. The Customer shall mandrill all conduits and is responsible for the usability of the conduit system at the time APS installs conductors.

12. Pull lines shall be provided by APS and installed by the Customer.

13. Arrows, shown on pad detail (left), indicate the direction sweeps and conduits are to be positioned.

**GENERAL NOTES:**

1. All transformer locations shall comply with all codes, ordinances, and regulations within the State of Arizona or otherwise specified by APS.

2. Customer to provide all work involved with the pad and conduits.

3. All conduits must be inspected and approved prior to backfilling.

4. All concrete forms and conduit and rebar (if required) must be in place and approved prior to pouring pad.

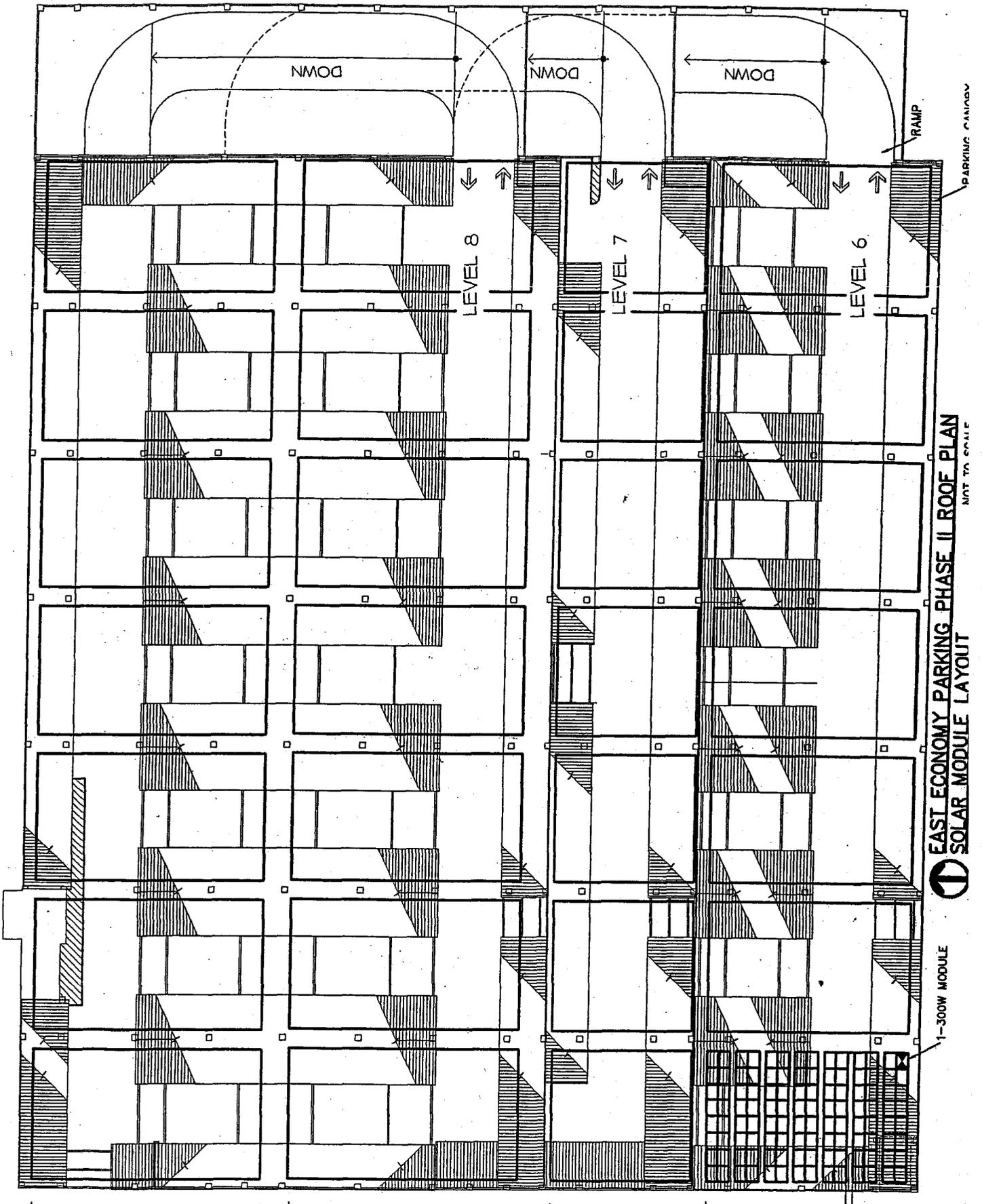
5. Any variations from the above requirements must be given in writing and signed by an APS representative.

6. A minimum 24-hour notice is required for inspections.

P7660\_7667.dwg 3-13-98

FOR INSPECTION CONTACT:	MAXIMO: W126822
PHONE:	BY: K. MARINELLO (TOR)   DATE: 9/17/01
AFTER CONDUITS ARE INSTALLED, AND BEFORE PAD IS POURED:	DOORS FACE: WEST
INSPECTED BY: _____ DATE: _____	LOCATION: ±746' S/O SKY HARBOR BV WEST BOUND ±1235' W/O 44TH ST
FINAL INSPECTION BY: _____ DATE: _____	NE 1/4Sec 18 T1N R   MAP#8-38
	TOWN: PHOENIX   Sh 2 of 2 FILENAME:015553

9



**1 EAST ECONOMY PARKING PHASE II ROOF PLAN**  
**SOLAR MODULE LAYOUT**  
 NOT TO SCALE

896 MODULES

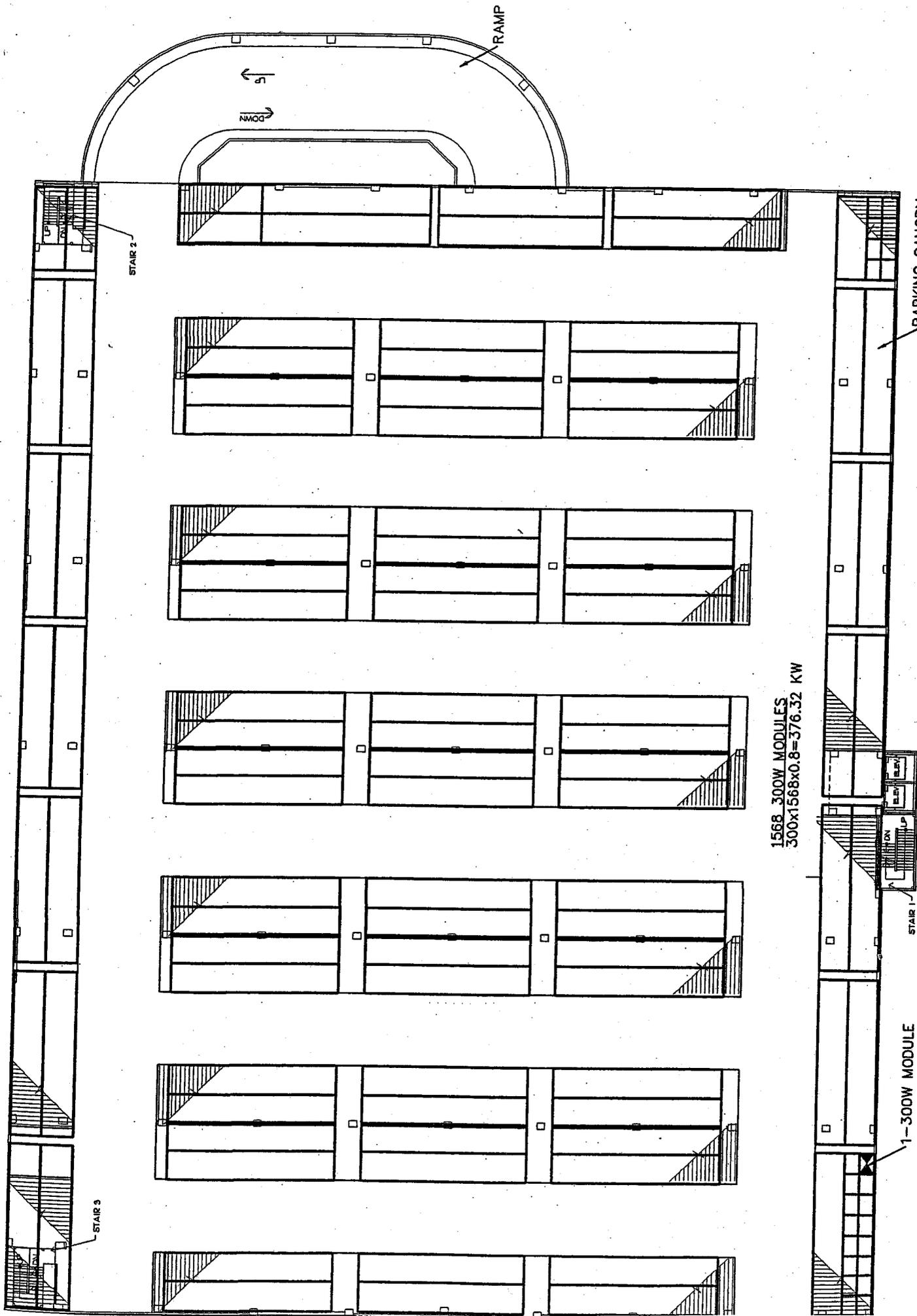
896 MODULES

6 300W MODULES  
 x3136x0.8=752.64 KW  
 2,000 SQFT =  
 5W/SQFT

560 MODULES

784 MODULES

1-300W MODULE



1568 300W MODULES  
 300x1568x0.8=376.32 KW

PARKING CANOPY

**EAST ECONOMY PARKING PHASE I ROOF PLAN**  
**SOLAR MODULE LAYOUT**  
 NOT TO SCALE



1-300W MODULE

**From:** McChesney, Cassius J(Z07788)  
**Sent:** Thursday, November 01, 2001 2:53 PM  
**To:** asmolko@ci.phoenix.az.us  
**Subject:** Sky Harbor Solar

Hi Al. Hope all is well at Sky Harbor.

Just wanted to touch bases and see how things were progressing on the parking structures at the airport. Has there been any progress on the LOI sent in late August. I'm sure that you guys have much larger issues on your plate right now.

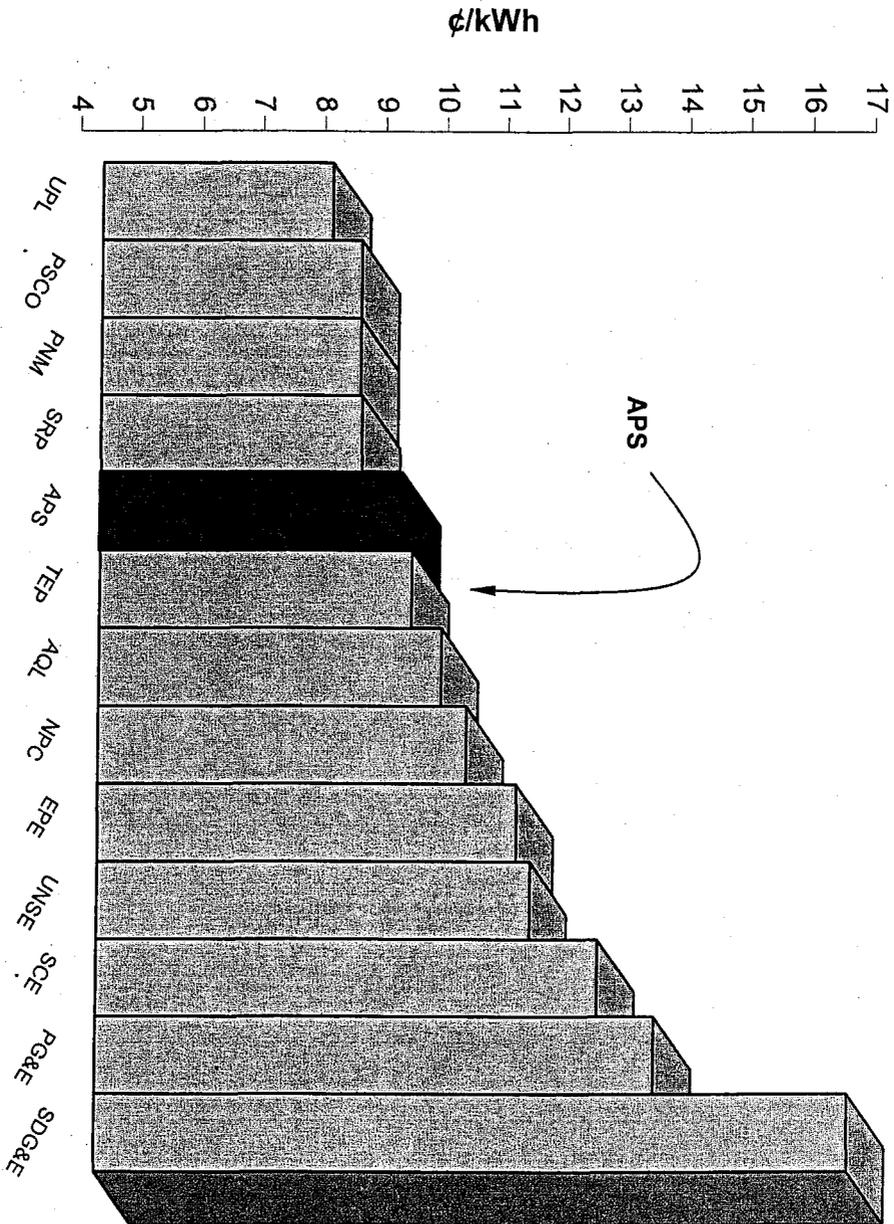
If you would respond and let me know when might be a good time to follow up with you on this project and I'll put it in my tickler file.

Talk to you soon,

Cassius

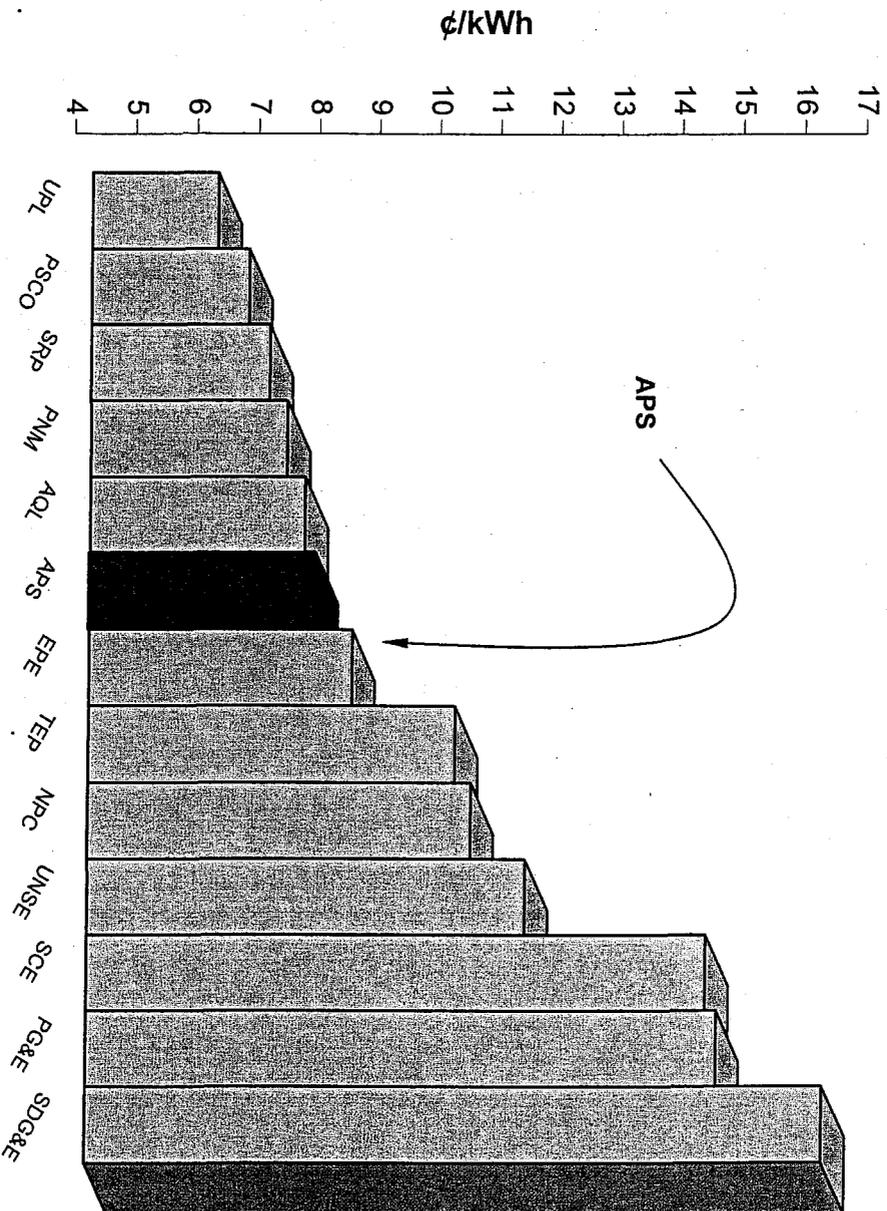
Cassius McChesney  
Pinnacle West Technology Development  
Mail Station 8378  
PO Box 53999  
Phoenix AZ 85072-3999  
602-250-3124 - phone  
602-250-3255 - fax number  
800-675-9827 - pager  
cassius.mcchesney@pinnaclewest.com

Western Utilities  
 Average Residential Price  
 12/31/2003 Data Adjusted for Rate Changes <sup>1/</sup>



<sup>1/</sup> Cents per kWh shown were derived based on percentage increases by utility as reported by Regulatory Research Associates and applied to year ended 2003 actual ¢/kWh reported by each utility in formal filings (gathered on a bundled price basis by Energy Velocity). All percentage changes were applied on an across-the-board basis with the exception of changes to APS, SRP, and PG&E prices, which were based on class-specific percentages. Currently pending rate case changes are included where applicable. Proforma adjustments are computed to reflect rate impacts as if rate changes were in effect for a full year.

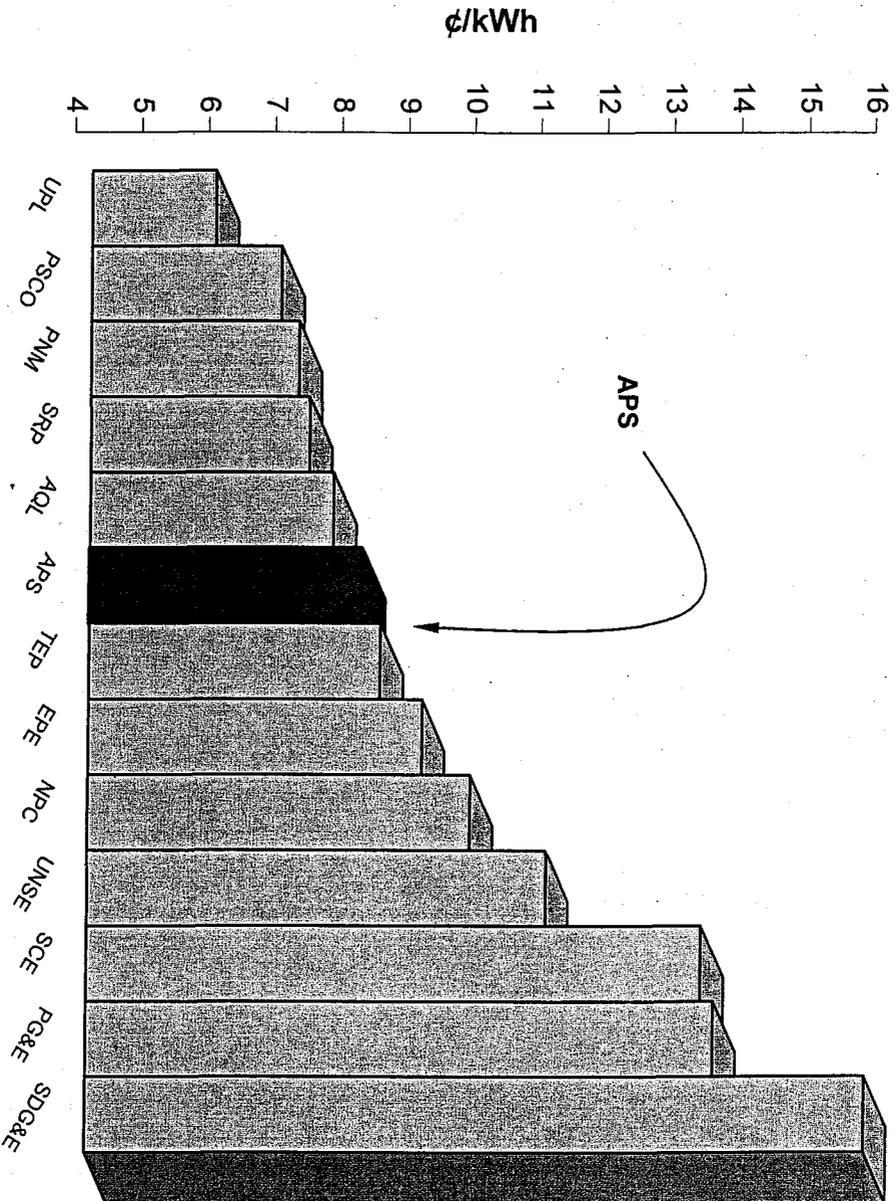
Western Utilities  
 Average Commercial Price  
 12/31/2003 Data Adjusted for Rate Changes <sup>1/</sup>



Utilities are: Utah Power and Light, Public Service of Colorado, Salt River Project, Public Service of New Mexico, Aquila Networks - WPE (Colorado), Arizona Public Service, El Paso Electric - New Mexico, Tucson Electric Power, Nevada Power Company, Unisource Electric, Southern California Edison, Pacific Gas and Electric, and San Diego Gas and Electric.

<sup>1/</sup> Cents per kWh shown were derived based on percentage increases by utility as reported by Regulatory Research Associates and applied to year ended 2003 actual \$/kWh reported by each utility in formal filings (gathered on a bundled price basis by Energy Velocity). All percentage changes were applied on an across-the-board basis with the exception of changes to APS, SRP, and PG&E prices, which were based on class-specific percentages. Currently pending rate case changes are included where applicable. Proforma adjustments are computed to reflect rate impacts as if rate changes were in effect for a full year.

Western Utilities  
 Average Total Retail Price  
 12/31/2003 Data Adjusted for Rate Changes <sup>1/</sup>



Utilities are: Utah Power and Light, Public Service of Colorado, Public Service of New Mexico, Salt River Project, Aquila Networks - WPE (Colorado), Arizona Public Service, Tucson Electric Power, El Paso Electric - New Mexico, Nevada Power Company, Unisource Electric, Southern California Edison, Pacific Gas and Electric, and San Diego Gas and Electric.

<sup>1/</sup> Cents per kWh shown were derived based on percentage increases by utility as reported by Regulatory Research Associates and applied to year ended 2003 actual \$/kWh reported by each utility in formal filings (gathered on a bundled price basis by Energy Velocity). All percentage changes were applied on an across-the-board basis with the exception of changes to APS, SRP, and PG&E prices, which were based on class-specific percentages. Currently pending rate case changes are included where applicable. Proforma adjustments are computed to reflect rate impacts as if rate changes were in effect for a full year.

List of Rate Changes Used in Proforma Derivations

Aquila Networks - WPE (Colorado)

1. 15.6% increase effective 6/03
2. 7.0% increase effective 9/04

El Paso Electric - No Changes

Nevada Power Company

1. 3.0% increase effective 4/04 (base rates)
2. 5.0% increase effective 4/04 (fuel/purchased power)
3. 5.6% increase to become effective 4/05 (fuel/purchased power)

Pacific Gas and Electric

1. (8.0)% decrease effective 1/04  
Residential - (4.1)%  
Small/medium commercial - (10.1)%
2. 9.6% increase effective 6/04

Utah Power and Light

1. 7.0% increase effective 12/03
2. 9.6% requested increase pending

Tucson Electric Power - No Changes

Public Service of Colorado

1. (1.5)% decrease effective 6/03

Public Service of New Mexico

1. (4.0)% decrease effective 9/03

San Diego Gas and Electric

1. (0.1)% decrease effective 1/04

Southern California Edison

1. 0.9% increase effective 5/03

Unisource Electric

1. 22.0% increase effective 7/03 (fuel/purchased power)

Salt River Project

1. 3.6% increase effective 11/03 (fuel/purchased power)  
Residential - 3.1%  
Commercial - 3.6%
2. 1.5% increase effective 11/04 (base rates)  
Residential - 2.3%  
Commercial - 0.8%
3. 3.7% increase effective 11/04 (fuel/purchased power)

Arizona Public Service Company

1. (1.5)% decrease effective 6/03
2. 4.2% requested increase pending  
Residential - 4.4%  
Commercial - 4.0%

Source: Regulatory Research Associates



# PWEC / APS SUPPLY & DEMAND BALANCE

SUMMER (AUGUST) - MW

## 2002 LONG RANGE FORECAST

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2015	2020
<b>A. GENERATION</b>												
1 TOTAL GENERATION [5+12]	5,199	5,624	6,075	6,381	6,717	6,717	6,743	6,783	6,783	6,783	6,783	6,783
<b>EXISTING GENERATION</b>												
2 PWEC EXISTING GENERATION	3,927	3,927	3,953	3,948	3,975	3,975	4,001	4,001	4,001	4,001	4,001	4,001
3 CUC GENERATION (NOGALES)	0	0	0	0	0	0	0	40	40	40	40	40
4 WEST PHX ST 4&6	96											
5 TOTAL	4,023	3,927	3,953	3,948	3,975	3,975	4,001	4,041	4,041	4,041	4,041	4,041
<b>PINNACLE WEST ENERGY ANNOUNCED NEW GENERATION</b>												
6 WEST PHOENIX CC 4	110	110	110	110	110	110	110	110	110	110	110	110
7 WEST PHOENIX CC 5	0	521	521	521	521	521	521	521	521	521	521	521
8 REDHAWK 1-2	991	991	991	991	991	991	991	991	991	991	991	991
9 REDHAWK 3-4 (NOT AT PV)	0	0	0	310	620	620	620	620	620	620	620	620
10 SAGUARO SC	75	75	75	75	75	75	75	75	75	75	75	75
11 SILVERHAWK CC	0	0	425	425	425	425	425	425	425	425	425	425
12 TOTAL	1,176	1,697	2,122	2,432	2,742	2,742	2,742	2,742	2,742	2,742	2,742	2,742
<b>B. LOAD</b>												
13 TOTAL PEAK LOAD	5,935	6,276	6,632	6,959	7,239	7,545	7,877	8,221	8,585	8,885	9,913	11,210
14 CONSER/INTERLOAD MGT	25	40	55	70	90	110	140	170	200	230	230	230
15 APS MANAGED PEAK DEMAND	5,618	5,935	6,267	6,570	6,811	7,088	7,377	7,682	8,006	8,264	9,242	10,526
16 APS LOAD GROWTH%		5.7	5.6	4.8	3.7	4.1	4.1	4.1	4.2	3.2	2.8	2.6
17 CUC LOAD	293	301	310	319	338	347	360	369	379	391	441	454
18 MANAGED PEAK DEMAND [13-14]	5,910	6,236	6,577	6,889	7,149	7,435	7,737	8,051	8,385	8,655	9,683	10,980
<b>EXISTING PURCHASE CONTRACT</b>												
19 SRP - FIRM	281	288	295	302	310	318	326	334	342	351	0	0
20 SRP - CONTINGENT	62	62	62	62	62	62	62	62	62	62	0	0
21 RENEWABLE/DISTRIBUTED GENERATION	8	12	17	21	26	32	37	42	46	46	46	46
22 PACIFICORP DIV EXCH	480	480	480	480	480	480	480	480	480	480	480	480
23 CUC FIRM PURCHASE	293	301	310	319	338	347	360	369	379	391	441	454
24 TOTAL PURCHASES	1,124	1,144	1,163	1,184	1,216	1,239	1,264	1,299	1,330	1,360	1,441	1,480
25 LOAD LESS PURCHASES [18-24]	4,786	5,093	5,414	5,705	5,933	6,196	6,473	7,134	7,455	7,715	9,156	10,453
<b>C. RELIABILITY PLANNING</b>												
26 RESERVE REQUIREMENTS	777	827	879	926	963	1,006	1,051	1,158	1,210	1,252	1,472	1,680
27 %	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
28 APS RESERVE MARGINS (MW)	412	531	236	(59)	(261)	(525)	(775)	(1,396)	(1,717)	(1,977)	(3,418)	(4,715)
29 %	8%	10%	4%	-1%	-4%	-8%	-12%	-19%	-23%	-25%	-37%	-45%
<b>D. MARKET RELIANCE</b>												
30 APS SHORT-TERM PURCH [25+28-32-1]	365	296	643	985	1,224	1,531	1,826	2,554	2,927	3,229	4,891	6,395
31 APS MRKT Exposure % of Peak Load [(30)/18]	6%	5%	10%	14%	17%	21%	24%	32%	35%	37%	51%	58%
32 PWEC GEN SALE TO NEVADA / OTHER MRKTS	0	0	(425)	(735)	(1,045)	(1,045)	(1,045)	(1,045)	(1,045)	(1,045)	(1,045)	(1,045)

Note: Aps' potential use of Silverhawk capacity is not reflected in reserve margin or in Aps short-term purchase calculations

Arizona Public Service Company  
Docket No. E-01345A-03-0437  
Typical Residential Bill Analysis  
E-12 Summer (May - October)

Customer Bills at Varying Consumption Levels  
at Present, Settlement and Alternate Design Rate Levels

(A) Monthly kWh	(B) Monthly Bill under Present Rates	(C) Monthly Bill under Settlement Rates	(D) % Chg from Present		(E) Monthly Bill under All 1 Rates		(F) % Chg from Present		(G) Monthly Bill under All 2 Rates		(H) % Chg from Present		(I) Monthly Bill under All 3 Rates		(J) % Chg from Present	
			Present	Settlement	All 1 Rates	All 2 Rates	All 1 Rates	All 2 Rates	All 1 Rates	All 2 Rates	All 1 Rates	All 2 Rates	All 1 Rates	All 2 Rates	All 1 Rates	All 2 Rates
200	22.25	23.13	4.0%	23.13	22.73	2.2%	22.73	2.2%	22.73	22.73	2.2%	22.73	22.73	22.73	2.2%	2.2%
250	25.94	26.88	4.0%	26.88	26.49	2.1%	26.49	2.1%	26.49	26.49	2.1%	26.49	26.49	26.49	2.1%	2.1%
300	29.63	30.84	4.1%	30.84	30.25	2.1%	30.25	2.1%	30.25	30.25	2.1%	30.25	30.25	30.25	2.1%	2.1%
350	33.32	34.70	4.1%	34.70	34.01	2.1%	34.01	2.1%	34.01	34.01	2.1%	34.01	34.01	34.01	2.1%	2.1%
400	37.00	38.56	4.2%	38.56	37.77	2.1%	37.77	2.1%	37.77	37.77	2.1%	37.77	37.77	37.77	2.1%	2.1%
450	42.14	43.92	4.2%	43.92	43.13	2.3%	43.13	2.3%	43.13	43.13	2.3%	43.13	43.13	43.13	2.3%	2.3%
500	47.29	49.30	4.3%	49.30	48.51	2.6%	48.51	2.6%	48.51	48.51	2.6%	48.51	48.51	48.51	2.6%	2.6%
550	52.43	54.67	4.3%	54.67	53.86	2.8%	53.86	2.8%	53.86	53.86	2.8%	53.86	53.86	53.86	2.8%	2.8%
600	57.57	60.03	4.3%	60.03	59.25	2.9%	59.25	2.9%	59.25	59.25	2.9%	59.25	59.25	59.25	2.9%	2.9%
650	62.71	65.41	4.3%	65.41	64.62	3.0%	64.62	3.0%	64.62	64.62	3.0%	64.62	64.62	64.62	3.0%	3.0%
700	67.85	70.78	4.3%	70.78	69.99	3.2%	69.99	3.2%	69.99	69.99	3.2%	69.99	69.99	69.99	3.2%	3.2%
750	72.99	76.15	4.3%	76.15	75.36	3.2%	75.36	3.2%	75.36	75.36	3.2%	75.36	75.36	75.36	3.2%	3.2%
800	78.13	81.52	4.3%	81.52	80.74	3.3%	80.74	3.3%	80.74	80.74	3.3%	80.74	80.74	80.74	3.3%	3.3%
850	84.12	87.79	4.4%	87.79	87.15	3.6%	87.15	3.6%	87.15	87.15	3.6%	87.15	87.15	87.15	3.6%	3.6%
900	90.12	94.05	4.4%	94.05	93.54	3.8%	93.54	3.8%	93.54	93.54	3.8%	93.54	93.54	93.54	3.8%	3.8%
950	96.11	100.31	4.4%	100.31	99.95	4.0%	99.95	4.0%	99.95	99.95	4.0%	99.95	99.95	99.95	4.0%	4.0%
1,000	102.11	106.57	4.4%	106.57	106.36	4.2%	106.36	4.2%	106.36	106.36	4.2%	106.36	106.36	106.36	4.2%	4.2%
1,100	114.10	119.10	4.4%	119.10	119.16	4.4%	119.16	4.4%	119.16	119.16	4.4%	119.16	119.16	119.16	4.4%	4.4%
1,200	126.09	131.63	4.4%	131.63	131.98	4.7%	131.98	4.7%	131.98	131.98	4.7%	131.98	131.98	131.98	4.7%	4.7%
1,300	138.08	144.15	4.4%	144.15	144.79	4.9%	144.79	4.9%	144.79	144.79	4.9%	144.79	144.79	144.79	4.9%	4.9%
1,400	150.07	156.67	4.4%	156.67	157.60	5.0%	157.60	5.0%	157.60	157.60	5.0%	157.60	157.60	157.60	5.0%	5.0%
1,500	162.07	169.20	4.4%	169.20	170.41	5.1%	170.41	5.1%	170.41	170.41	5.1%	170.41	170.41	170.41	5.1%	5.1%
1,600	174.06	181.73	4.4%	181.73	183.22	5.3%	183.22	5.3%	183.22	183.22	5.3%	183.22	183.22	183.22	5.3%	5.3%
1,700	186.05	194.25	4.4%	194.25	196.02	5.4%	196.02	5.4%	196.02	196.02	5.4%	196.02	196.02	196.02	5.4%	5.4%
1,800	198.04	206.78	4.4%	206.78	208.84	5.5%	208.84	5.5%	208.84	208.84	5.5%	208.84	208.84	208.84	5.5%	5.5%
1,900	210.03	219.30	4.4%	219.30	221.65	5.5%	221.65	5.5%	221.65	221.65	5.5%	221.65	221.65	221.65	5.5%	5.5%
2,000	222.02	231.83	4.4%	231.83	234.47	5.6%	234.47	5.6%	234.47	234.47	5.6%	234.47	234.47	234.47	5.6%	5.6%
2,200	246.00	256.88	4.4%	256.88	260.08	5.7%	260.08	5.7%	260.08	260.08	5.7%	260.08	260.08	260.08	5.7%	5.7%
2,400	269.98	281.93	4.4%	281.93	285.71	5.8%	285.71	5.8%	285.71	285.71	5.8%	285.71	285.71	285.71	5.8%	5.8%
2,600	293.97	306.99	4.4%	306.99	311.33	5.9%	311.33	5.9%	311.33	311.33	5.9%	311.33	311.33	311.33	5.9%	5.9%
2,800	317.95	332.03	4.4%	332.03	336.95	6.0%	336.95	6.0%	336.95	336.95	6.0%	336.95	336.95	336.95	6.0%	6.0%
3,000	341.93	357.08	4.4%	357.08	362.57	6.0%	362.57	6.0%	362.57	362.57	6.0%	362.57	362.57	362.57	6.0%	6.0%

Note: Monthly bills under Settlement and Alternate rate designs include \$0.000338/kWh for CRCC and average franchise taxes of 1.44%.

Alternative 1: No change in 1st 400 from Present (07/01/03), next 400 @ Settlement level, over 800 absorbs increase. (3 blocks) (Summer rates).  
Alternative 2: "2 Blocks" No change in 1st 400 from Present (07/01/03), next 400 and over 800 priced the same, over 400 absorbs increase. (Summer rates).  
Alternative 3: No change in 1st 400 or next 400 from Present (07/01/03), over 800 absorbs increase. (3 blocks) (Summer rates).

	Present	Settlement		Alternative 1		Alternative 2		Alternative 3	
Summer									
BSC (see note)	\$ 7.50	\$ 0.253 per day							
First 400 kWh	\$ 0.07376	\$ 0.07570 per kWh	\$ 0.07570 per kWh	\$ 0.07376 per kWh					
Next 400 kWh	\$ 0.10281	\$ 0.10556 per kWh	\$ 0.10281 per kWh	\$ 0.10281 per kWh					
All additional kWh	\$ 0.11981	\$ 0.12314 per kWh	\$ 0.12314 per kWh	\$ 0.12595 per kWh	\$ 0.12844 per kWh	\$ 0.12844 per kWh			
Winter									
BSC (see note)	\$ 7.50	\$ 0.253 per day							
All kWh	\$ 0.07394	\$ 0.07361 per kWh							

Note: BSC in Present rates is a monthly charge; other BSCs are daily.

Arizona Public Service Company  
Docket No. E-01345A-03-0437  
Typical Residential Bill Analysis  
E-12 Winter (November-April)

Customer Bills at Varying Consumption Levels  
at Present, Settlement and Alternate Design Rate Levels

(A) Monthly kWh	(B) Monthly Bill under Present Rates		(C) Monthly Bill under Settlement Rates		(D) % Chg from Present		(E) Monthly Bill under Alt 1 Rates		(F) % Chg from Present		(G) Monthly Bill under Alt 2 Rates		(H) % Chg from Present		(I) Monthly Bill under Alt 3 Rates		(J) % Chg from Present	
	Present	Rates	Present	Rates	Present	Rates	Present	Rates	Present	Rates	Present	Rates	Present	Rates	Present	Rates	Present	Rates
200	22.29	22.70	22.70	22.70	1.8%	1.8%	22.70	22.70	1.8%	1.8%	22.70	22.70	1.8%	1.8%	22.70	22.70	1.8%	1.8%
250	25.99	26.45	26.45	26.45	1.8%	1.8%	26.45	26.45	1.8%	1.8%	26.45	26.45	1.8%	1.8%	26.45	26.45	1.8%	1.8%
300	29.68	30.20	30.20	30.20	1.8%	1.8%	30.20	30.20	1.8%	1.8%	30.20	30.20	1.8%	1.8%	30.20	30.20	1.8%	1.8%
350	33.38	33.95	33.95	33.95	1.7%	1.7%	33.95	33.95	1.7%	1.7%	33.95	33.95	1.7%	1.7%	33.95	33.95	1.7%	1.7%
400	37.08	37.71	37.71	37.71	1.7%	1.7%	37.71	37.71	1.7%	1.7%	37.71	37.71	1.7%	1.7%	37.71	37.71	1.7%	1.7%
450	40.77	41.45	41.45	41.45	1.7%	1.7%	41.45	41.45	1.7%	1.7%	41.45	41.45	1.7%	1.7%	41.45	41.45	1.7%	1.7%
500	44.47	45.21	45.21	45.21	1.7%	1.7%	45.21	45.21	1.7%	1.7%	45.21	45.21	1.7%	1.7%	45.21	45.21	1.7%	1.7%
550	48.17	48.97	48.97	48.97	1.7%	1.7%	48.97	48.97	1.7%	1.7%	48.97	48.97	1.7%	1.7%	48.97	48.97	1.7%	1.7%
600	51.86	52.71	52.71	52.71	1.6%	1.6%	52.71	52.71	1.6%	1.6%	52.71	52.71	1.6%	1.6%	52.71	52.71	1.6%	1.6%
650	55.56	56.46	56.46	56.46	1.6%	1.6%	56.46	56.46	1.6%	1.6%	56.46	56.46	1.6%	1.6%	56.46	56.46	1.6%	1.6%
700	59.26	60.21	60.21	60.21	1.6%	1.6%	60.21	60.21	1.6%	1.6%	60.21	60.21	1.6%	1.6%	60.21	60.21	1.6%	1.6%
750	62.96	63.96	63.96	63.96	1.6%	1.6%	63.96	63.96	1.6%	1.6%	63.96	63.96	1.6%	1.6%	63.96	63.96	1.6%	1.6%
800	66.65	67.71	67.71	67.71	1.6%	1.6%	67.71	67.71	1.6%	1.6%	67.71	67.71	1.6%	1.6%	67.71	67.71	1.6%	1.6%
850	70.35	71.46	71.46	71.46	1.6%	1.6%	71.46	71.46	1.6%	1.6%	71.46	71.46	1.6%	1.6%	71.46	71.46	1.6%	1.6%
900	74.05	75.21	75.21	75.21	1.6%	1.6%	75.21	75.21	1.6%	1.6%	75.21	75.21	1.6%	1.6%	75.21	75.21	1.6%	1.6%
950	77.74	78.96	78.96	78.96	1.6%	1.6%	78.96	78.96	1.6%	1.6%	78.96	78.96	1.6%	1.6%	78.96	78.96	1.6%	1.6%
1,000	81.44	82.71	82.71	82.71	1.6%	1.6%	82.71	82.71	1.6%	1.6%	82.71	82.71	1.6%	1.6%	82.71	82.71	1.6%	1.6%
1,100	88.83	90.21	90.21	90.21	1.6%	1.6%	90.21	90.21	1.6%	1.6%	90.21	90.21	1.6%	1.6%	90.21	90.21	1.6%	1.6%
1,200	96.23	97.72	97.72	97.72	1.5%	1.5%	97.72	97.72	1.5%	1.5%	97.72	97.72	1.5%	1.5%	97.72	97.72	1.5%	1.5%
1,300	103.62	105.21	105.21	105.21	1.5%	1.5%	105.21	105.21	1.5%	1.5%	105.21	105.21	1.5%	1.5%	105.21	105.21	1.5%	1.5%
1,400	111.02	112.71	112.71	112.71	1.5%	1.5%	112.71	112.71	1.5%	1.5%	112.71	112.71	1.5%	1.5%	112.71	112.71	1.5%	1.5%
1,500	118.41	120.23	120.23	120.23	1.5%	1.5%	120.23	120.23	1.5%	1.5%	120.23	120.23	1.5%	1.5%	120.23	120.23	1.5%	1.5%
1,600	125.80	127.72	127.72	127.72	1.5%	1.5%	127.72	127.72	1.5%	1.5%	127.72	127.72	1.5%	1.5%	127.72	127.72	1.5%	1.5%
1,700	133.20	135.22	135.22	135.22	1.5%	1.5%	135.22	135.22	1.5%	1.5%	135.22	135.22	1.5%	1.5%	135.22	135.22	1.5%	1.5%
1,800	140.59	142.73	142.73	142.73	1.5%	1.5%	142.73	142.73	1.5%	1.5%	142.73	142.73	1.5%	1.5%	142.73	142.73	1.5%	1.5%
1,900	147.99	150.22	150.22	150.22	1.5%	1.5%	150.22	150.22	1.5%	1.5%	150.22	150.22	1.5%	1.5%	150.22	150.22	1.5%	1.5%
2,000	155.38	157.73	157.73	157.73	1.5%	1.5%	157.73	157.73	1.5%	1.5%	157.73	157.73	1.5%	1.5%	157.73	157.73	1.5%	1.5%
2,200	170.17	172.72	172.72	172.72	1.5%	1.5%	172.72	172.72	1.5%	1.5%	172.72	172.72	1.5%	1.5%	172.72	172.72	1.5%	1.5%
2,400	184.96	187.72	187.72	187.72	1.5%	1.5%	187.72	187.72	1.5%	1.5%	187.72	187.72	1.5%	1.5%	187.72	187.72	1.5%	1.5%
2,600	199.74	202.74	202.74	202.74	1.5%	1.5%	202.74	202.74	1.5%	1.5%	202.74	202.74	1.5%	1.5%	202.74	202.74	1.5%	1.5%
2,800	214.53	217.74	217.74	217.74	1.5%	1.5%	217.74	217.74	1.5%	1.5%	217.74	217.74	1.5%	1.5%	217.74	217.74	1.5%	1.5%
3,000	229.32	232.73	232.73	232.73	1.5%	1.5%	232.73	232.73	1.5%	1.5%	232.73	232.73	1.5%	1.5%	232.73	232.73	1.5%	1.5%

Note: Monthly bills under Settlement and Alternative rate designs include \$0.000338/kWh for CRCC and average franchise taxes of 1.44%.

Alternative 1: No change in 1st 400 from Present (07/01/03), next 400 @ Settlement level, over 800 absorbs increase. (3 blocks) (Summer rates).  
Alternative 2: "2 Blocks" No change in 1st 400 from Present (07/01/03), next 400 and over 800 priced the same, over 400 absorbs increase. (Summer rates).  
Alternative 3: No change in 1st 400 or next 400 from Present (07/01/03), over 800 absorbs increase. (3 blocks) (Summer rates).

Summer	Present		Settlement		Alternative 1		Alternative 2		Alternative 3	
	Present	Rates	Present	Rates	Present	Rates	Present	Rates	Present	Rates
BSC (see note)	\$ 7.50	\$ 0.253 per day								
First 400 kWh	\$ 0.07376	\$ 0.07570 per kWh	\$ 0.07570 per kWh	\$ 0.07376 per kWh						
Next 400 kWh	\$ 0.10281	\$ 0.10556 per kWh	\$ 0.10556 per kWh	\$ 0.10281 per kWh						
All additional kWh	\$ 0.11991	\$ 0.12314 per kWh	\$ 0.12314 per kWh	\$ 0.11991 per kWh						
Winter										
BSC (see note)	\$ 7.50	\$ 0.253 per day								
All kWh	\$ 0.07394	\$ 0.07361 per kWh	\$ 0.07361 per kWh	\$ 0.07394 per kWh						

Note: BSC in Present rates is a monthly charge; other BSCs are daily.