



**ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN  
ASTRONOMY  
(AURA)**

**CORPORATE OFFICE AND CENTRAL  
ADMINISTRATIVE SERVICES**

FISCAL AND ACCOUNTING PROCESSES AND PROCEDURES FOR NSF FUNDED CENTERS

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The Association of Universities for Research in Astronomy (AURA) is a consortium of universities and non-profit institutions committed to advancing the frontiers of astronomy. AURA manages world-class astronomical facilities on behalf of the NSF and NASA that operate as public observatories and are open to astronomers on a merit basis.

The AURA Corporate Office is based in Washington, D.C. The Corporate Office provides management oversight and sets policies for the astronomical facilities. The AURA Corporate Office is governed by the AURA Board of Directors.

AURA Central Administrative Services (“CAS”) is a division of Association of Universities for Research in Astronomy (“AURA”). Business services provided by CAS include; Procurement, which includes Contracts, Purchasing, Shipping, Export, Property Management and Sponsored Projects & Grants; Accounting, which includes Financial Reporting, Accounts Payable, Accounts Receivable and Payroll; and, Business Information Technology (“IT”).

CAS Accounting is centralized in Tucson, AZ with a support element located in Chile to provide local accounting and reporting services. Accounting functional activity in Chile is in Chilean Peso’s. Peso transactions occurring in Chile are transferred and converted to the US\$ accounting system in Tucson. The accounting function is managed by the CAS Controller who reports directly to the CAS Finance Deputy.

## **GENERAL INFORMATION**

The processes and procedures presented herein pertain specifically to the AURA Corporate and CAS operations. It is AURA policy that operating units may develop processes and procedures specifically applicable to their unit, but these processes and procedures may not conflict with AURA policy.

### **A. The Basis for AURA Accounting Records**

As a U.S. based non-profit organization, AURA follows the accounting principles generally accepted in the U.S. In addition, as a government contractor and Federally Funded Research and Development Center (FFRDC), AURA is subject to the Uniform Guidance at 2 CFR 200.

### **B. Authority and Responsibility**

The President is responsible for assets and services provided to and generated by the organization at the explicit direction of the AURA Board of Directors. The President is the custodian of all funds and has the authority to administer these funds, based on direction

from the AURA Board of Directors in a manner consistent with AURA policy as well as the terms and conditions of AURA contracts and cooperative agreements with Federal Agencies. At his or her discretion, the AURA President may delegate some or all these responsibilities to members of the corporate office staff.

### **C. Financial and Internal Control Systems**

Internal control is a fundamental component of financial management. Its purpose is to assure that:

- Financial resources are used in accordance with applicable laws, regulations, and policies.
- Financial resources are safeguarded against waste, loss and misuse.
- Reliable data on the use of financial resources is properly obtained, recorded and reported.

Procedures must be established to provide for:

- Proper authorization of transactions and activities.
- Segregation of duties where possible and appropriate, to reduce the opportunity for any one individual to both perpetrate and conceal errors or irregularities in their normal course of duties.
- Limiting authority over access to assets.
- Maintaining adequate documentation of transactions, insuring adequacy is defined and implemented including controls, timing, and access.
- Performing independent routine verification, comparisons and reconciliation of transactions and their valuations.

### **D. Financial Statements**

Preparing financial statements and communicating key financial information is a necessary accounting function. Statements are management tools used in making decisions, in monitoring the success of financial objectives, and as a standard method for providing information to interested parties external to the organization.

It is AURA policy to prepare accurate financial statements and distribute them on a timely basis in the most cost-effective manner to match expenses and income appropriately.

On an annual basis, financial statements shall be audited by an Independent Auditor retained by the Board of Directors.

AURA Corporate Financial statements are presented at each meeting of the Board of Directors. Statements are reviewed by the Treasurer and presented to the Board of Directors for acceptance.

CAS Business IT provides customized computer software which supports both the Procurement functions and the financial reporting function for all its NSF funded centers as well as for AURA Corporate.

**CASNET** is an on-line reporting system that delivers up-to-date financial information to Center and Corporate management. CASNET accesses financial data from the official accounting system software Public Sector's USL Financials, a fund-based accounting system developed for Government and not-for-profit organizations. All types of financial and labor information are available in formatted reports, with many supporting drill-down capability to go from summarized data to the supporting detail. Data can also be exported into spreadsheet, database and word processing applications. CASNET was developed in-house and is used by all AURA NSF funded Centers.

**Reqless** is a web application for processing purchase requisitions, travel requests, and shipping memos. Upon submittal of requests, REQLESS manages the approval process through the account management (signature authority) and supervisory hierarchy. Approved requests are transferred into the USL PO module. REQLESS was developed in-house and is used by all AURA's NSF funded Centers.

**Carina** is a web application that tracks and links basic information, key documents, and user notes for all agreements, Cooperative Support Agreements ("CSA"), grants, contracts, and sub-awards managed by CAS. Carina allows users to quickly look up and share information regarding agreements. Carina also has a module that automates the process of obtaining and documenting the required approvals for invoices submitted to AURA under contracts and sub-awards.

**Webud** is a high-level budgeting application that allows management to input their annual forecast of workforce and spending by account and cost center (work breakdown). The final budget becomes the basis for the Annual Program Plan submitted to NSF. Webud was developed in-house by CAS for NOAO and is also used for the NSO. CAS/HR and the AURA Corporate office all use this for their budgeting processes.

**Budman** is a web-based application that allows managers to track their current fiscal budget and request changes. The system also tracks employee payroll expense, forecasts projected payroll costs, and compares the results to the budget. Budman was developed in-house by CAS and is used by NOAO and NSO as well as CAS\HR and the AURA Corporate office.

## **E. Budgeting**

Budgeting is an integral part of any organization as it represents the translation of organizational goals and objectives into financial and human resource terms. Although accounting and budgeting both relate to sources and uses of funds, accounting is primarily concerned with the current and past fiscal events while budgeting is concerned primarily with the future.

A budget should be designed and prepared to direct the most efficient and prudent use of the organization's financial and human resources.

The AURA Corporate Office budget is developed annually for the upcoming fiscal year. The budget is drafted by the Chief Financial Officer and approved by the President and the Board of Directors prior to the commencement of the fiscal year. Once the budget is approved, the Chief Financial Officer will implement the budget plan. Quarterly reports comparing actual results to the budget shall be prepared by the CAS Controller reviewed by the Chief Financial Officer and submitted to the President for review.

The CAS\HR budget is developed annually for the upcoming fiscal year. The budget is drafted by the CAS Division Chief and approved by the Administrative Oversight Committee.

Each of the NSF funded Centers is responsible for developing annual budgets that then become the basis for their Annual Program Plan submitted to NSF.

## **CASH MANAGEMENT AND CORPORATE INVESTMENT GUIDELINES**

AURA's Financial policy sets the guidelines to be followed for investment of corporate cash reserves. This policy intentionally reflects a conservative strategy which sacrifices some potential earnings for security of the capital invested and which places some premium on liquidity to meet emergencies. There are two general classes of funds to be invested: operating funds and reserves.

### **A. Operating Funds – Corporate Office**

AURA has several bank accounts that hold various types of funds. These accounts are maintained by CAS and reported on via the Treasury Report presented at all AURA Board meetings. Since CAS provides the business services for AURA, all funds flow through the General Operating Funds account and AURA's interfund balance provides any over or under of excess funds. Any excess funds that accumulate are to be transferred into the US Treasury money-market accounts.

### **B. Operating Funds – General**

Operating funds are the funds used for ongoing operations of the NSF funded Centers as well as all AURA related operations to meet payroll, operating expenses, travel expenses, etc. CAS has one operating account from which all transactions flow through.

A 'Cash Projection' spreadsheet is maintained as a tool in planning for cash orders for payroll and orders for cash are, generally, placed twice a week on Tuesday and Friday. The lead-time for the cash order to arrive at the bank is usually two working days.

### **C. Cash Projection**

The Cash Projection is used as a planning tool designed to estimate cash needs in the following areas (step by step instructions are outlined on the Cash Projection spreadsheet):

1. Cash is ordered for Accounts Payable on a reimbursement basis. Invoices are entered and expensed as they are received and due. Each Tuesday a Voucher Selection list is processed which selects all expenses posted and due. Additional wires or ACH payments in excess of \$25,000 are added. Cash is ordered based on this selection. Cash is received on Thursday and AP processes checks for all expenses posted through that date.
2. Payroll cash disbursements. AURA NSF Centers pays its employees on a bi-weekly basis (on Friday). The net cash disbursements for a normal payroll cycle include wages for all NSF funded centers and the associated taxes and retirement contributions. Funds for payroll disbursements are ordered the Friday preceding a normal payday (generally available in our bank account in two business days) and completely disbursed by the Friday pay date. The bank requires the cash to be in the operating account on the day the Payroll ACH batch is uploaded. The ACH batch is uploaded on Tuesday (no later than Wednesday) prior to the Friday pay date.
3. Chilean cash needs are sent to Tucson each Thursday to be included in the Friday cash draw. An Accountant in the Chile Accounting office submits a Cash Projection based on the AP invoices posted for payment in the following week and the cash required to cover the Chilean Payroll. The funds are wired to Chile as soon as they are received. Chile Purchases Peso's and processes payments on Tuesday or Wednesday.
4. On occasion there are circumstances that require CAS to project cash needs for a longer period other than two to three business days, e.g. at the end of the fiscal year NSF shuts down the ACM\$ system in the last week of September requiring CAS to project and order enough cash to cover this extended period. If there is the potential for a Government shutdown, guidance is requested from NSF as to the method of placing a cash order (via ACMS or through the CSA Program Officers). Guidance from the Corporate Office is provided regarding the length time cash should be projected. The following steps are followed:
  - a. The same cash projection process outlined above for Payroll and Chile cash needs is extended through the period that the ACM\$ system or the government is shut down. In addition to these processes all Contracts Officers (and Center business managers if it is for a Government Shutdown) are asked to forecast any large contract payments that will be due in that shutdown period. All regular accounts payable cash needs are calculated based on the average daily expenditure of expenses less than \$25,000.
  - b. The Chile office projects their cash needs through the projected ACM\$ shut down, period considering the average Accounts Payable per day; any payroll occurring in that period; and any large contract payments that will be coming due.



## D. Ordering Cash

Cash is ordered from NSF using the ACM\$ system located at <https://www.research.gov/research-portal/appmanager/base/> . The Division Chief, Finance Deputy, Controller and Senior Financial Compliance Manage have access and authority to order cash. The Controller routinely orders the cash. The following process is used when ordering cash:

- a. The person ordering cash will log in to Research.gov and enter the ACM\$ Dashboard to download the Excel spreadsheet with the most current amounts.
- b. Once the spreadsheet is saved to a specific location on the CAS Server, the ACM\$ form (shown below) will be completed based on the Cash Projection for Chilean Cash and if cash is needed for PR. Cash required for AP is based on total expenses expensed with a payment due date of the following Wednesday.

This process has been reviewed and approved by the NSF BSR team in February of 2016

What's New?  
**Create ACM\$ Cash Request**

**ACM\$ Cash Request for 2/11/2016**

|                                    |                                |
|------------------------------------|--------------------------------|
| Total Order:                       | <input type="text" value="0"/> |
| <b>Includes Fixed Amounts For:</b> |                                |
| Gemini:                            | <input type="text" value="0"/> |
| LSST:                              | <input type="text" value="0"/> |
| DKIST:                             | <input type="text" value="0"/> |
| NOAO:                              | <input type="text" value="0"/> |
| NSO:                               | <input type="text" value="0"/> |

**Submit**

- c. When the Submit button is hit a macro will use the spreadsheet that was downloaded above and distribute the cash order to the awards based on actual expenses posted first with any cash more than posted expenses needed for Chile or PR being allocated based on a predetermined allocation rate calculated based on historical costs. Chilean cash is allocated between the NOAO and Gemini O&M awards and the LSST construction award. [Appendix H](#) provides a detail explanation on how the Macro allocates the cash ordered to each award.

- d. The person ordering cash will log in to Research.gov and enter the ACM\$ Dashboard to upload the Excel spreadsheet now saved with the Cash order per award. If there are any large adjustments for any reason they are noted in the comments section of the cash order. The person ordering the cash will then forward the ACM\$ cash request to either the Finance Deputy, Division Chief or the Senior Financial Compliance Manager for certification.
- e. A CAS Accountant will post the transaction in the accounting software.

[Appendix A](#) provides a flow chart showing the process of recording amendments to the cooperative agreements to receivable accounts; drawing cash; and, crediting the appropriate receivable account.

#### **E. Tracking incurred costs of successor CSA's**

AURA has experienced transitions from expiring O&M funding CSAs to successor O&M funding CSAs. With each of these transitions, guidance from NSF and the funding mechanism has varied. In one instance, the expiring CSA was extended and new funds from the successor CSA were provided on the expiring CSA for the same scope of work while budgeting matters were resolved with NSF. In this event, AURA followed the outline of tracking expenses to the expiring CSA in the manner outlined above. In a second instance, the expiring O&M CSA had remaining funds that, through agreement with NSF would be used for special projects in future years. The expiring CSA was extended; the residual funds were tracked separately for the special projects and funding on the successor CSA was used for continuing O&M expenses. In a third instance, residual funding remaining on the expiring CSA was to be transferred from that award to the successor CSA. In this instance, AURA tracked and recorded all incurred expenses through the expiration date of the expiring CSA and informed NSF when all known expenses had been recorded so the remaining funds could be transferred.

With the variety of methods by which the guidance for how funding from expiring to successor CSAs is to be handled, AURA's future practice will be to confirm with NSF the expectations of the awarding agency and proceed accordingly to meet those expectations. The historical methodology outlined above may be used in the future should it be suitable to meet NSF expectations, however the procedures used in the future will likely vary based upon the situation.

#### **F. Reserves – Corporate Office**

Reserves are funds accumulated beyond those needed for immediate expenditure:

## 1. First Level Reserves

First level reserve funds are available to augment the operating funds during any operating year. The first-level reserves should meet the full corporate budget for approximately twelve (12) months at the current-year budgeted level. This requirement can be met by a combination of short-term investments and/or a standby Line of Credit, guaranteed by reserve funds. When possible, investments shall be made in increments not exceeding federally insured amounts for certificates of deposit with maturity dates scheduled to provide required liquidity during the fiscal year. Short-term Treasuries should be similarly staggered.

## 2. Second Level Reserves

Second level reserve funds are available for investment periods longer than one year. To maximize interest earnings, these funds should be invested in increments up to federally insured amounts for certificates of deposit with staggered maturity dates.

### **G. Investment Instruments**

Investments of First Level Reserves may be made in U.S. Government instruments; in Certificates of Deposit or other instruments insured by the FDIC; Commercial paper backed by bank letters of credit; high quality bankers' acceptances; or repurchase agreements issued by reputable financial institutions.

Investment decisions should have preservation of capital as the first-priority and portfolio liquidity must come before yield considerations. Even though certificates of deposit are insured, care should be taken in such investments because in case of failure, these funds are temporarily non-liquid; and,

Investments of Second Level Reserves may be made in the same instruments as prescribed for First Level Reserves. In addition, Second Level Reserves may be invested in U. S. Government guaranteed bonds, investment grade corporate bonds or Mutual Funds of over \$500 million in assets that invest in U.S. Government guaranteed bonds, investment grade corporate bonds and equities.

Equities may not exceed 50% of the Second Level Reserves and Corporate bonds may not exceed 25% of the Second Level Reserves.

### **NSF FastLane Permissions**

AURA CAS assigns FastLane permissions based on the individual job descriptions and needs of the employee. Administrative rights are given to the CAS Procurement Manager; the CAS Grants Officer; and, the AURA Corporate Office Business and Administrative Manager. Administrators give permissions to; Prepare & Submit Proposals; Review Proposals; Submit project reports, notifications & requests; and, Manage Financials, which includes ordering cash through ACM\$. Individual authorized to manage financials are the: Controller, Finance Deputy, CAS Division Chief, Senior Financial Analyst and Financial Manager.

## Program Income Report

Program Income is gross income earned that is directly generated by a supported activity or because of the grant during the period of performance. Examples of Program Income earned by AURA managed NSF funded Centers include; Indirect expense reimbursements through the NSF approved recharge rates charged to non-NSF funding sources; Sales from NOAO Kitt Peak or NSO Sacramento Peak Gift Shop; and miscellaneous other sources that vary depending on the Center they are earned in. All program income is netted against NSF related expenditures.

On an annual basis, grantee organizations are required to submit a Program Income Reporting Worksheet to NSF to report program income earned/expended for any of their awards during the previous twelve months or to validate that they did not earn/expend program income for any of their awards during the applicable period. This report is completed by the CAS Controller, reviewed by the CAS Senior Financial Analyst and submitted by the CAS Controller and Finance Deputy.

The process for calculating the program income generated under each CA is completed by the Financial Manager through an Access Query on the AURA CAS USL accounting software. This query pulls all amounts under specific expense\object codes as follows:

- Exclude:
  - Outside Fund Y, V and Z accounts with expense code 999 (these revenues offset A/R expense)
  - Gemini fund G accounts with expense code 07G (Gemini does not use labor recharge for income)
  
- Include:
  - Accounts where three-character expense code starts with: 07? or 9?? (net income from labor recharge activity, indirect rates, and other receipts like meals & lodging, rent, museum sales)
  - Where NOAO fund N expense code in: 505, 755, 780 (net against NOAO South internal income from shuttle and facilities support)

Based on the account number used we can then sort the income applied to each NSF award.

## ACCOUNTING PROCEDURES

The U.S. Government has established standards for non-profit organizations which are in receipt of government funds. These standards pertain to administration of grants and agreements, cost accounting and audits, and are set forth in the Uniform Guidance at 2 CFR 200.

AURA must strictly adhere to these standards. Of particular concern are the fiscal responsibilities with respect to the following accounting procedures:

- Accurate, current and complete disclosure of the financial results of each federally-sponsored project or program.
- Records that adequately identify the source and application of funds.
- Effective control over and accountability for all funds, property and other assets.
- Comparison of outlays with budgeted amounts for each award.
- Written procedures for determining the reasonableness, allocability and allowability of costs.
- Accounting records supported by source documentation.

AURA CAS has an Accounting Procedures book that documents the step by step procedures followed for every task assigned to each Accounts Payable, Payroll and Accounting staff member.

### 1. Signatory Authority

Signatory Authority is set up and managed through the Reqless software and the CAS Procurement Policy. Each Center Director delegates authority to specific managers that oversee specific accounts and the budgeted funds within those accounts. The managers can then delegate authority downward to supervisors or employees that oversee specific projects or area of operations. Through Reqless a Delegation Proposal can be submitted for a specific dollar amount and a specific account or series of accounts. This Proposal must be approved by the manager who has signature authority over the account(s) as well as the dollar amount being proposed. Once approval has been received the Procurement Manager or IT Programmer enter the employee name, account number(s) and dollar limits into the Signature Authority table in Reqless.

### 2. Cash Disbursements

The primary objective for accounts payable and cash disbursements is to ensure that disbursements are properly authorized; invoices are processed in a timely manner; and vendor credit terms and operating cash are managed for maximum benefit.

Internal control over disbursements is achieved through various methods; 1) the use of Reqless for authorization of purchases; 2) Buyers who create Purchase Orders ("PO") and enter vendors; 3) Logistics, who receive any physical purchases; 4) Accounts Payable staff who process invoices and match them to receivers and PO's as they are received; 5) Payroll staff, who print the checks; and, 6) Accountants who do the reconciliations to general ledger accounts. It is CAS's goal to segregate duties to the greatest possible extent.

- a) CAS processes invoices for payment once a week. Information is entered into the financial accounting system from approved invoices with all appropriate documentation attached. Disbursements are reviewed for accuracy by the Accounts Payable Supervisor ("APS").

[Appendix B](#) provides a flow chart which outlines the Accounts Payable procedures.

- b) Travel Expense Reimbursements (“TER”) are processed by the Travel (“TR”) Accounting Specialists who are trained to review using the AURA Corp. Travel Expense Reimbursement Policy. TER’s are reviewed not only by the authorized signer but also by; the department administrative assistants; TR Accounting Specialist; and, Accounting Specialist for any unallowable expenses that may be included in the report.

[Appendix C](#) outlines procedures for processing TER’s

Occasionally an invoice is received at various Center locations for which the procurement was not processed through the Reqless system. A requisition must be created, and the invoice attached in Reqless to ensure proper authorization prior to payment. For small employee out of pocket costs a “Employee Reimbursement” request can be entered in Reqless for which proper authorization can then be received. The employee may not self-approve a reimbursement to themselves. These should not exceed \$100 and should be very rarely used.

### 3. Accounts Receivable

AURA CAS has one Accountant that oversees all outside funding sources to ensure these expenses are recorded accurately and billed out timely. All grants and awards can be viewed and audited through Carina. Non-NSF funding sources are tracked through the chart of accounts using letters; Z, for NOAO; V, for Gemini; X, for LSST; and, Y for NSO. These accounts are reviewed regularly to ensure reimbursements are received as quickly as possible.

[Appendix D](#) outlines the process for tracking and invoicing non-NSF funding sources.

### 4. Non-NSF Cash Receipts

Cash is the most liquid asset an organization has and therefore, internal controls must be in place. However, it remains critical to ensure that all cash receipts are immediately deposited and identified and recorded properly.

[Appendix E](#) presents a flow chart illustrating the cash receipts process.

### 5. Recording of Voided Checks

A void check should be processed as follows:

- Write “VOID” clearly across the face of the check. This should also be done on the remittance advice of the check that is attached to the filed voucher package.
- The organization’s remittance advice of the replacement check, if required, is attached to the existing voucher package, the old check information is crossed out and initialed by the accountant, and the new check information is inserted.

## 6. Bank Reconciliations

All bank accounts should be reconciled monthly and reviewed and approved by the Controller or Senior Financial Compliance Manager.

The procedure for stale checks - checks outstanding for more than six months – is as follows:

The Accountant will write a letter giving check recipient thirty (30) days to respond and/or cash check. If no response is received within thirty (30) days, the check will be voided. If the check was written to a vendor residing within the state of Arizona, the Balance Sheet account for Unclaimed Properties will be charged.

An Unclaimed Property report is filed annually with the state of Arizona. Any property that has been unclaimed for the specified number of years will be submitted to the State of Arizona.

The reconciliations will be completed by the 20<sup>th</sup> day of the following month. The Controller, Senior Financial Compliance Manager, or Finance Deputy reviews all reconciliations after completed and compares them to the GL balances.

## 7. Petty Cash

There are several Petty Cash accounts at various Center locations each with an assigned petty cash custodian. Funds are maintained for authorized minor expenditures, typically equal to or less than \$50.00. A record of receipts must be maintained and submitted for reimbursement to the Petty Cash fund periodically depending on the level of usage.

## 8. Payroll

The processing of payroll involves a series of tasks necessary to ensure that employees are properly compensated and that the applicable federal and state withholdings are deducted from gross wages. Additionally, detailed records must be maintained to support tax deposits required for the aforementioned withholding.

Payroll and labor reporting for NOAO, NSO, Gemini, LSST and CASHR is done through a Web based timesheet program (WTS) and Ultipro Payroll and HR Software. Each employee has a “Home” account in which all payroll and benefit costs associated with them are budgeted for and charged to each pay period. A “Fringe Benefit Rate” which includes all employees’ benefits related costs, (i.e. healthcare premiums, FICA, workers compensation, employer contributions to retirement, etc.) are applied to each employees’ gross pay. The combined cost of each employees’ wage and benefits are charged to their home account on a bi-weekly basis after each payday.

[Appendix F](#) is a flow chart outlines the processes for Time and Effort Reporting through Web Time Sheets (“WTS”).

In the week following each payday each employee must submit their completed timesheet for approval, (this is all done electronically via the WTS program). Once all timesheets have been submitted and approved the Job Costing process is done for

NOAO, NSO, and LSST employees, which “charges” out any hours the employee charged on their time sheet to accounts other than their Home account and credits their home account for these hours. The re-charge process calculates the cost of the hours charged out by utilizing a “Labor Recharge Rate” which includes the Fringe Benefit Rate as well as the costs associated with holidays, vacation and sick leave, and any other leave time as allowed by AURA policy.

[Appendix G](#) outlines the Job Costing procedures.

9. Chilean data processing

- a) CAS Accounting in Chile processes all Chilean Peso accounting transactions through the Peso version of USL. Cash flow and accounting procedures for the Chilean Peso are outlined below.
  - Each Thursday CAS South will send a Cash Projection for the following week.
  - CAS North will add this amount into the NSF draw each Friday.
  - Funds will be wired to the CAS South Dollar account on the following Monday or Tuesday.
  - CAS South will purchase Pesos as needed to pay AP and Payroll transactions. Documentation on Peso purchases will be emailed to CAS North.
  - Each Monday CAS South will send a data feed for the previous weeks transactions. The data feed will include all GL (BS and IS accounts) entries that were processed in the specified time-period. The data should be formatted and ready to be imported into the USL\$ accounting system in the North. The peso rate used will be from the previous weeks purchase. No transactions processed in US\$ will be included in these batches.
  - Accounting in Tucson will import the transactions with US\$ values.
- b) US\$ transactions are processed through a separate USL accounting system that is set up for Chilean transactions processed in US\$. These transactions are sent to Tucson at the end of each month in a separate data feed to be imported at actual value.
- c) Travel Requisitions (“TR”) submitted in Chilean Pesos are imported and managed by an Accountant on the Chilean Accounting staff. Procedures for processing Chilean TER’s are the same as those processed in US\$ in Tucson. If a TR for a Chilean based employee is submitted in US\$ the following procedures will be followed:
  - Travel Requisitions (“TR”) submitted in US\$ will be imported (by the Accounting Specialist handling travel) into the USL US\$ accounting system in the North.
  - Any TR’s advances will be emailed to [AccountingCH@aura-astronomy.org](mailto:AccountingCH@aura-astronomy.org) for processing.



- When the Travel Expense Reports (“TER”) are submitted for these TR’s they can be processed in the South using the US\$ accounting system or be reimbursed through Payroll. **For all US\$ Advances and TER’s processed in the South a “Special Schedule” will need to be submitted to [AccountingUS@aura-astronomy.org](mailto:AccountingUS@aura-astronomy.org) so that these US\$ Transactions can be entered into the USL US\$ accounting system in the North and the TR’s can be closed.**

#### 10. Journal Entries and Adjustments

- a. A limited number of people have the authority to process adjusting or general journal entries. All entries must have proper supporting documentation and backup attached. All entries must be proposed by one individual and reviewed by another to ensure proper segregation of duties.

#### 11. Revenue Recognition

- a. Management Fees and F&A receipts - The preponderance of AURA revenue comes from F&A and Management fee income received from AURA centers. These funds shall be recognized as revenue when they are earned.
- b. Membership Dues are recognized in the year in which they are received and/or designated by the prospective member. If dues are received in advance, they are treated as a liability and reflected in the financial records as deferred dues income.
- c. Grant and contract revenues are earned when expenses are incurred and recorded against specific cost objectives of funded tasks, thus fulfilling the restriction(s) on such funds.
- d. Other Income received from gain on sale of assets and rental of corporate owned assets is recognized as revenue in the period payment is earned. Investment and interest income is recognized when earned. As investments are held on the corporate records at their fair market value, unrealized gain or loss on these investments are recorded as net investment income (loss).

#### 12. Expenses

- a. Allowable Costs

AURA accounting and procurement staff is required to maintain expertise in the cost principles set forth in Uniform Guidance at 2 CFR 200 including its revisions or superseding documents. Each expenditure must be analyzed with respect to the principles of allowability, reasonableness and allocability. To the extent that all or any part of an expenditure fails to meet these

standards, it must be separately identified as unallowable and recorded as such.

As a recipient of government funds, AURA is subject to audit by federal agencies in addition to its outside independent auditors. It is the responsibility of the AURA CAS to ensure that full disclosure and cooperation is demonstrated during the conduct of these audits.

AURA CAS strives to maintain efficient business practices and good cost control. A well-managed accounts payable function can assist in accomplishing this goal from the purchasing decision through payment and check reconciliation.

Careful Attention should be given to how expenses are coded and recorded in the accounting system. Each expense item should be analyzed with respect to Uniform Guidance at 2 CFR 200 for allowability, reasonableness, and allocability. Expenses which fall outside these criteria should be separately identified as unallowable costs.

b. Indirect Rates and Fringe Benefit Rates

On an annual basis, AURA submits an indirect cost rate proposal to NSF for approval. Please refer to the AURA Cost Policy Statement for Indirect Rate calculation processes and procedures.

### 13. Travel in General

Travel at AURA expense must be approved in advance by the AURA President or a designee for Corporate Office personnel, and by the Center Director or a designee as appropriate for Center personnel. AURA employees must submit a Travel Request prior to travel. Official, company-reimbursed travel cannot take place without a properly executed travel request. Please refer to the AURA Travel Policy and the CAS Travel Manual for additional information on travel in general.

### 14. Director's Discretionary Research Fund (DDRF)

The Director's Discretionary Research Fund is a fee-based fund given to AURA by NASA based on the Space Telescope Science Institute's performance. The fund is restrictively used for STScI's scientific research under the discretion of the STScI director. Both the Institute and AURA maintain financial record associated with the DDRF. At the Institute, records are maintained for the DCAA to audit the fund for allocability and allowability. However, DDRF financial activities are disclosed under AURA's heading in AURA's financial statements. Conversely, DDRF is not part of the prime contract activity at STScI and is therefore not reflected under STScI's heading in the AURA financial statements.

The DDRF is designed as a pool of money used to pay for research time for science staff at STScI. At the beginning of each month, NASA is billed for the previous month's DDRF fee (as determined in our contract with NASA. The fee is then wired to AURA's bank account. Towards the end of the month, an invoice is received from

STScl, for the previous months' billable DDRF activities. This invoice is reviewed and approved by the Vice President for Administration.

#### 15. AURA Management Fee

AURA receives an NSF award for Management Fee (MF) under each of the Cooperative Agreements for NOAO, NSO, Gemini and LSST. The composition of these awards is in two parts; 1) AURA Corporate MF funds; and 2) MF funds dedicated exclusively to each Center. The preponderance of the funding is for AURA Corporate MF projects.

AURA will carefully audit all use of both the Center and its own MF expenditures to ensure that they comply with NSF Policy. Specific accounting codes have been set up to track and reconcile MF activity.

#### 16. Valuation of Investments

All investments held in bonds, mutual funds and other long-term investment vehicles shall be held at current market value. Market value shall be determined by monthly statements received from the bank or other external investment managers. Changes in the fair market value of investments shall be recorded monthly.

Treasury and Certificates of Deposit shall be presumed to be held until maturity. They will be valued in the accounting system at purchase cost. Interest income shall be recorded when the Treasury of Certificate of Deposit matures.

#### 17. Signature Authority on Bank Accounts

In the Corporate Office, Signatory Authority resides exclusively with the Chief Financial Officer and the President. Signatory Authority over the AURA CAS accounts in Tucson reside with the President, Chief Financial Officer and/or the CAS Division Chief. There are two zero balance accounts which have signature authority delegated to local staff on Kitt Peak and Sacramento Peak. The Controller has the authority to wire funds from both the Suntrust and PNC accounts for up to \$500,000, to AURA accounts at different banks.

#### 18. Purchasing

Please refer to the Procurement Manual for all Purchasing guidelines.

#### 19. Capital Equipment and Work (Construction) in Process

Capital equipment purchases are tracked through account numbers. All capital items purchased are logged into the PIMA system. At the end of each year and periodically during the year a reconciliation is done from the PIMA system to the accounting system to ensure that all items are properly recorded.

Work and/or Construction in Process is tracked through account numbers. At the end of each year an email is sent to the manager in charge to verify the work in process activity and determine whether it will continue as WIP; be charged out and expensed; or converted to a capital asset. Construction in process accounts are carried over until the completion of construction and operations begin.

## 20. Vacation and Finiquito Liability

AURA Corporate, CAS\HR, NOAO, NSO, and LSST vacation accrual is done at the end of each year. An export from the payroll software is done on the last day of the fiscal year which details the accrued vacation hours for each employee. Current wages are applied to accrued hours to calculate the total current liability per employee and for each Center. Adjustments are made to each Center's Accrued Vacation liability account to record any change from the previous year. NOAO and NSO the adjustment is made through the equity account as they do not expense accrued vacation until it is taken by the employee. AURA Corporate, CAS\HR, and LSST adjustments are done in accordance with US GAAP by recoding the expense when earned at the end of the year.

Gemini adjusts accrued vacation on each payroll cycle throughout the year. At the end of the year an export from the payroll software is done on the last day of the fiscal year which details the accrued vacation hours for each employee. Current wages are applied to accrued hours to calculate the total current liability employee. An adjustment is made to the Gemini accrued vacation liability account to record any change from the current balance. The adjustment is credited/debited to each individual employee's home account.

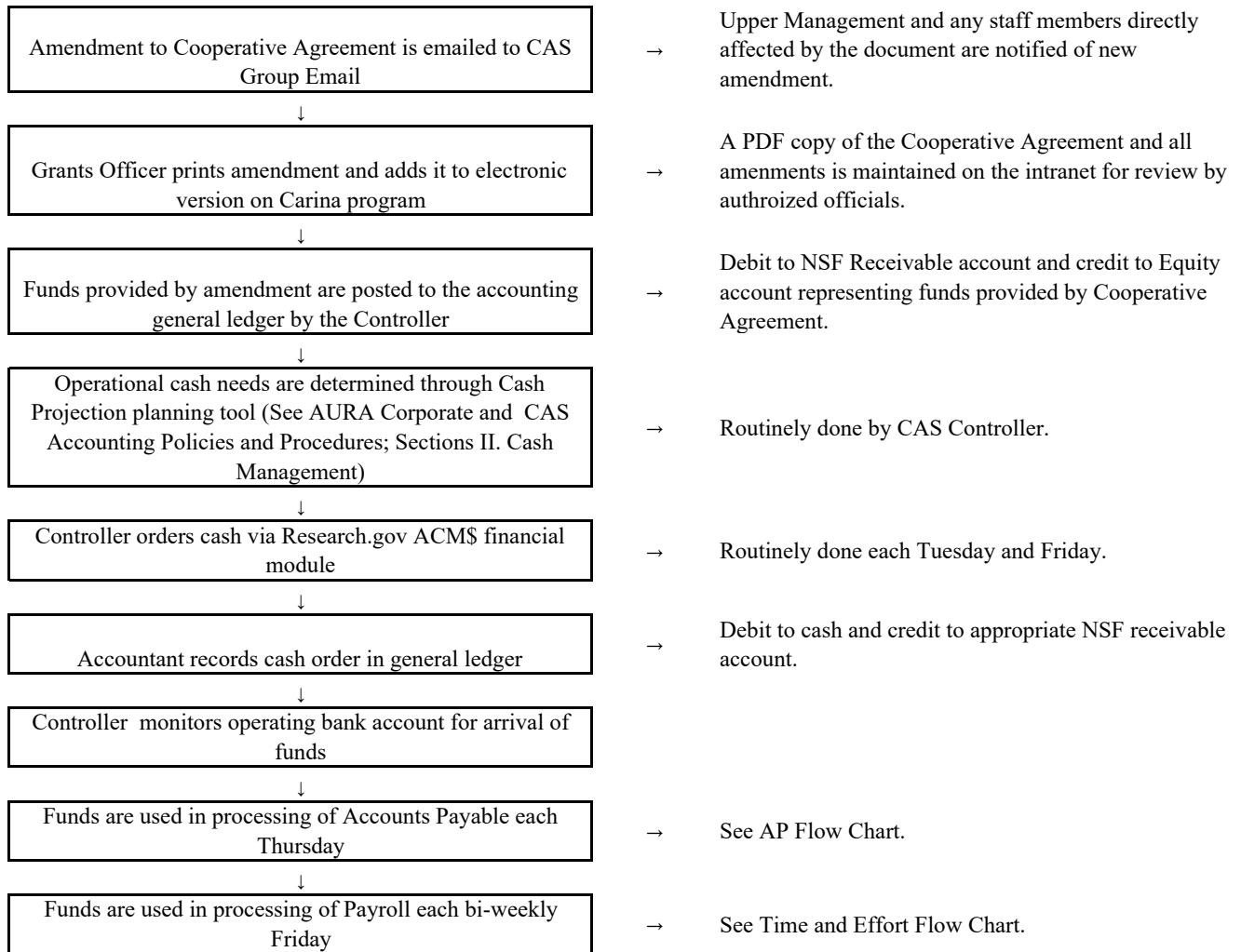
Finiquito's are a type of non-retirement post-employment benefit like severance pay for AURA's Chilean hires in La Serena. This is a benefit outlined in the Collective Bargaining Agreement. Finiquito's are calculated based on the number of years an employee has been employed by AURA. Each employee accrues equivalent to one-month salary for every twelve months of employment up to one full year of salary. After 12 years of accrual, the Finiquito (one-month salary) is paid out annually to the employee. Upon termination of an employee AURA is obligated to pay out the accrued Finiquito.

At the end of each year a Finiquito balance is calculated for each Chile employee based on their current monthly salary and length of employment. CAS\HR, Gemini, and LSST record any change in the Finiquito liability to the Accrued Finiquito liability account on each of their ledgers. NOAO does not record or maintain a Finiquito liability account on their ledgers. The total Finiquito liability for each Center that operates in Chile is provided to the Auditors to record in the footnotes of the financial statement.

## Revisions Log

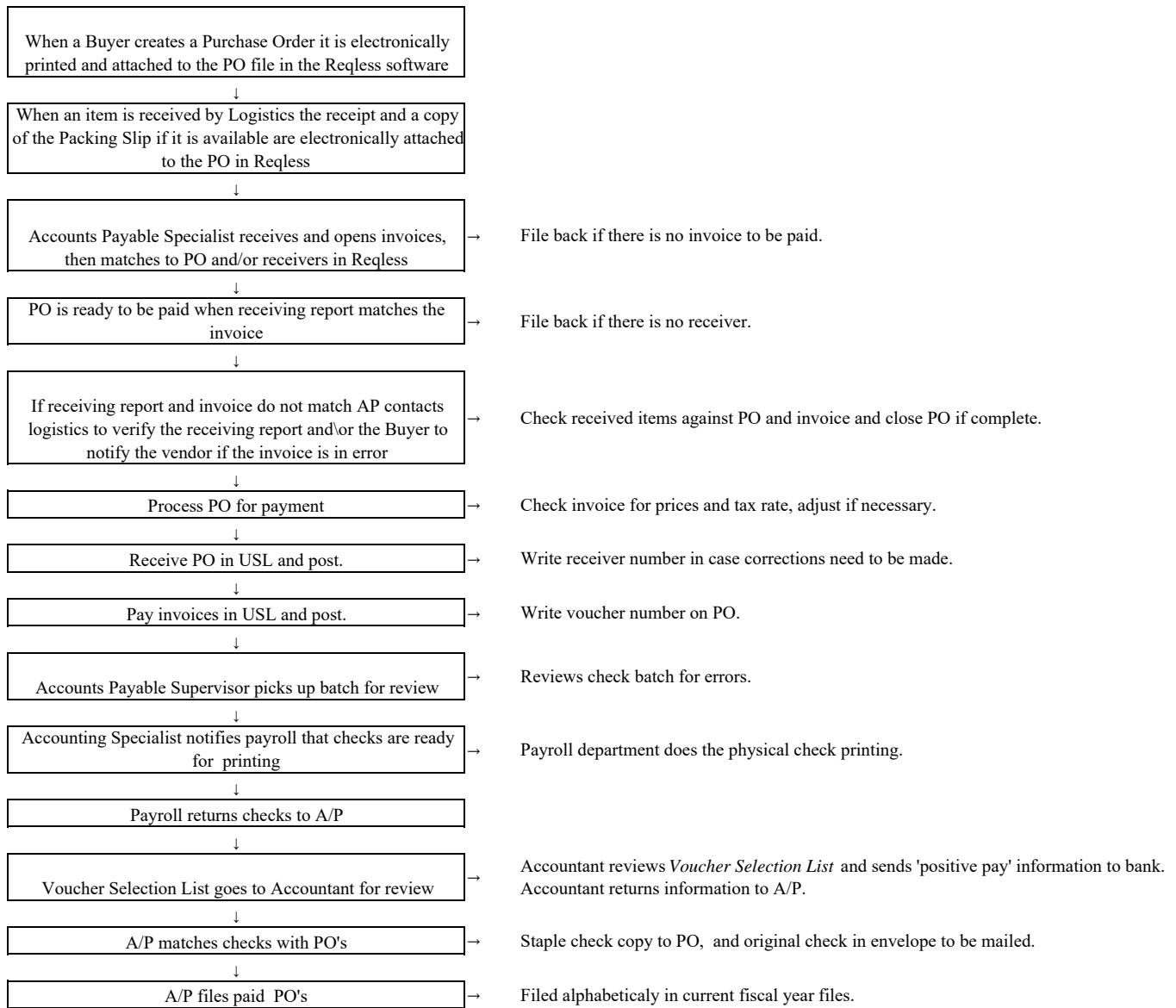
- February 10, 2016 – remove Finance Manager from section II, B; Ordering Cash
- February 10, 2016 – Add bullet on posting cash order in section II, B
- February 10, 2016 – Change wording on Travel Expense policy regarding Center policies; section III, number 13
- February 11, 2016 – Add Cash order calculation explanation to section II.
- February 11, 2016 – reference step by step cash projection instructions in section II.
- May 10, 2016 – Add Senior Financial Analyst to Cash Management and Certification Process section II, B.
- June 16, 2016 – Change name from Policies to Processes. Several minor edits and corrections.
- June 16, 2016 – Incorporate the FastLane permission process and associated monitoring assignments.
- June 16, 2016 – Incorporate NSF Program Income reporting process
- August 2, 2016 – Add processes for calculating Program Income for NSF reporting; add Certification step in Ordering Cash process.
- March 27, 2017 – Add process for tracking incurred costs of successor CSAs.
- August 29, 2017 – Corporate Office Travel Policy (14, Pg21)
- September 25, 2017 – Change to Scanned receipts policy (Pgs. 17 & 18)
- May 18, 2018 – Review and Revision
- September 20, 2018 – Update Cash projections for longer periods (ACM\$ shutdown) (Pgs. 6 & 7)
- September 20, 2018 – Journal Entries and Adjustment (Page 14)

**Appendix A**  
**NSF Funds Flow Chart**



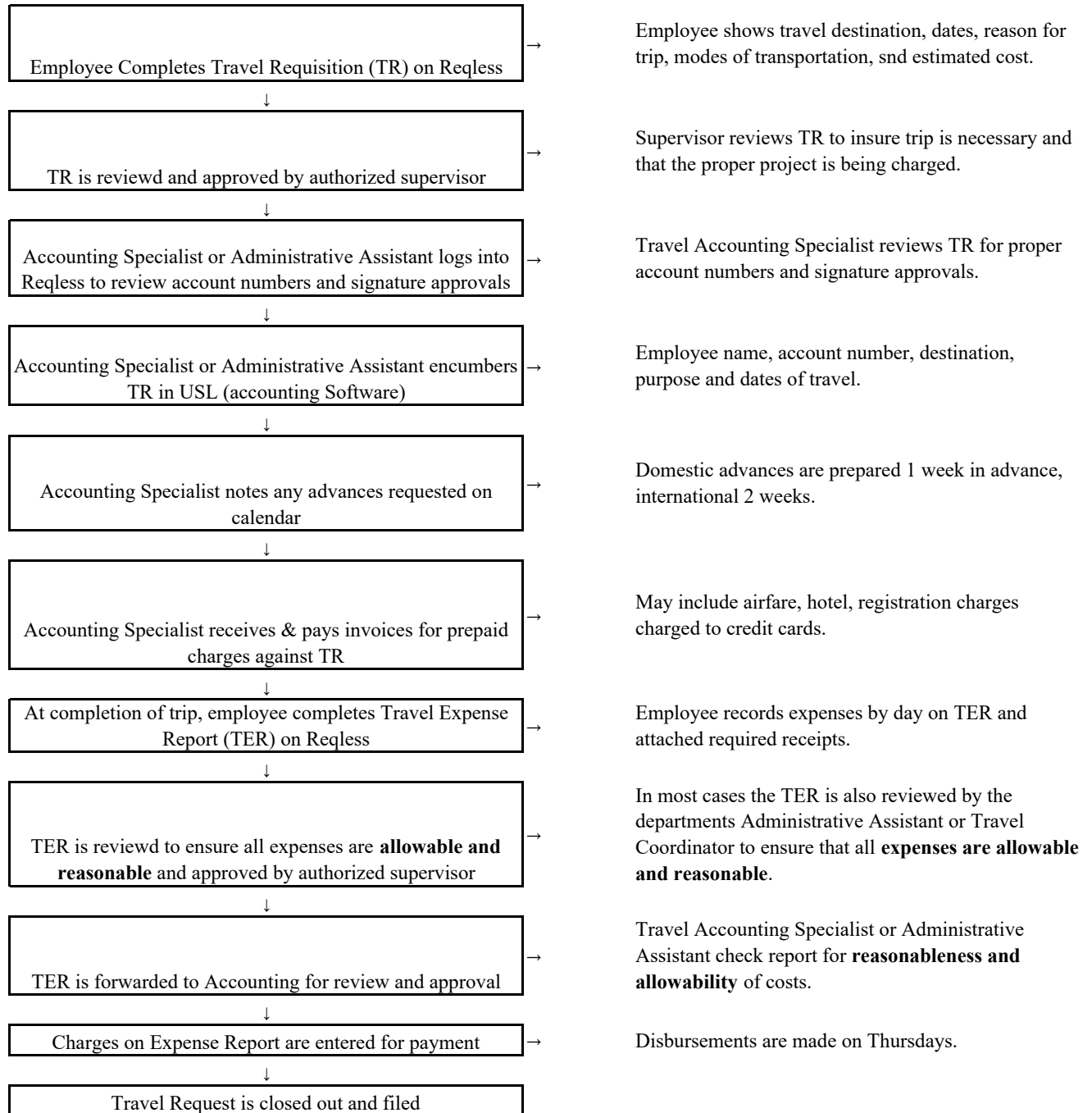
## Appendix B

### Accounts Payable Flow Chart



## Appendix C

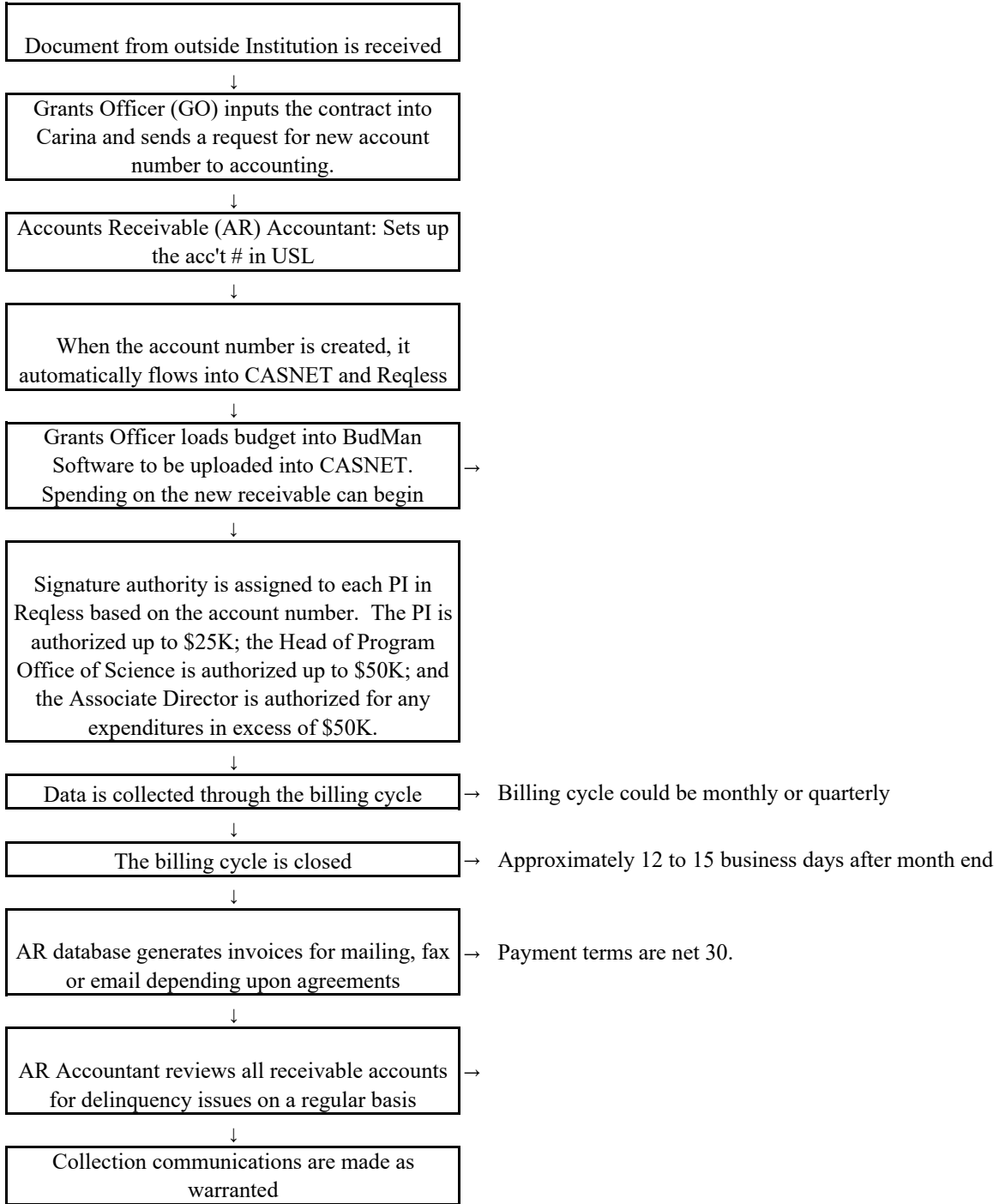
### Travel Expense Flow Chart





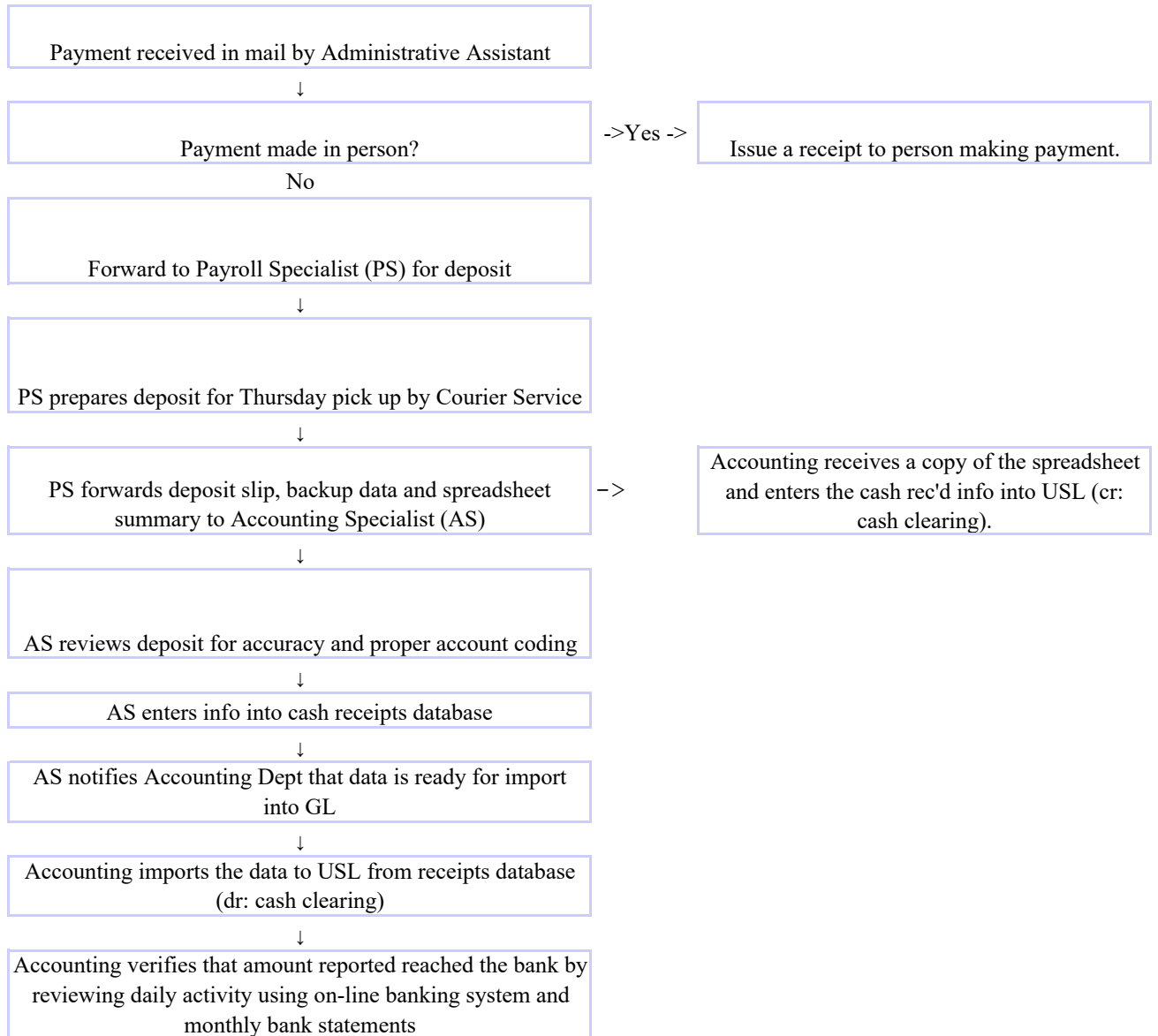
**Appendix D**

**Accounts Receivable (non-NSF) Flow Chart**



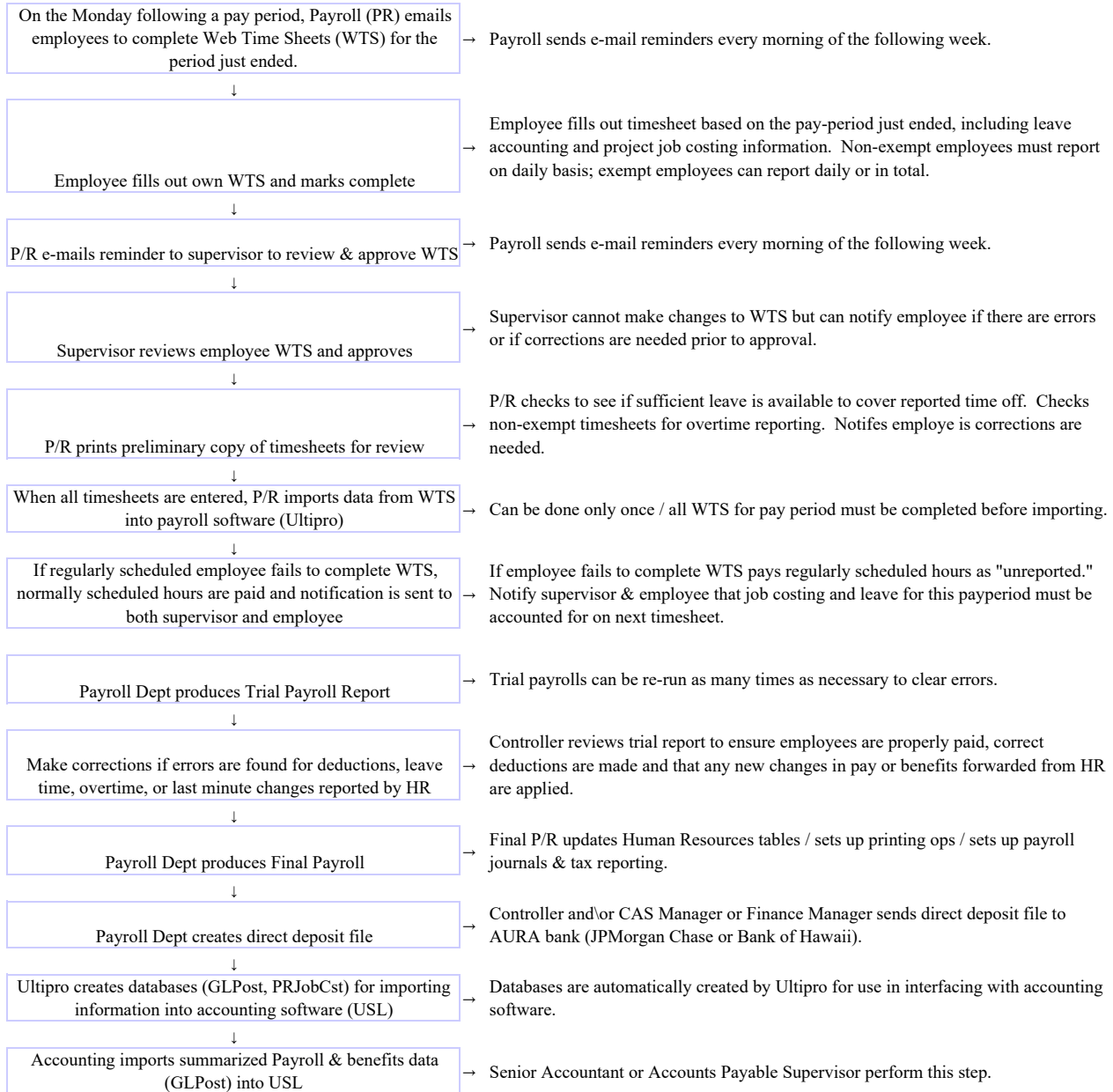
## Appendix E

### Non-NSF Revenues and Cash Receipts Flow Chart



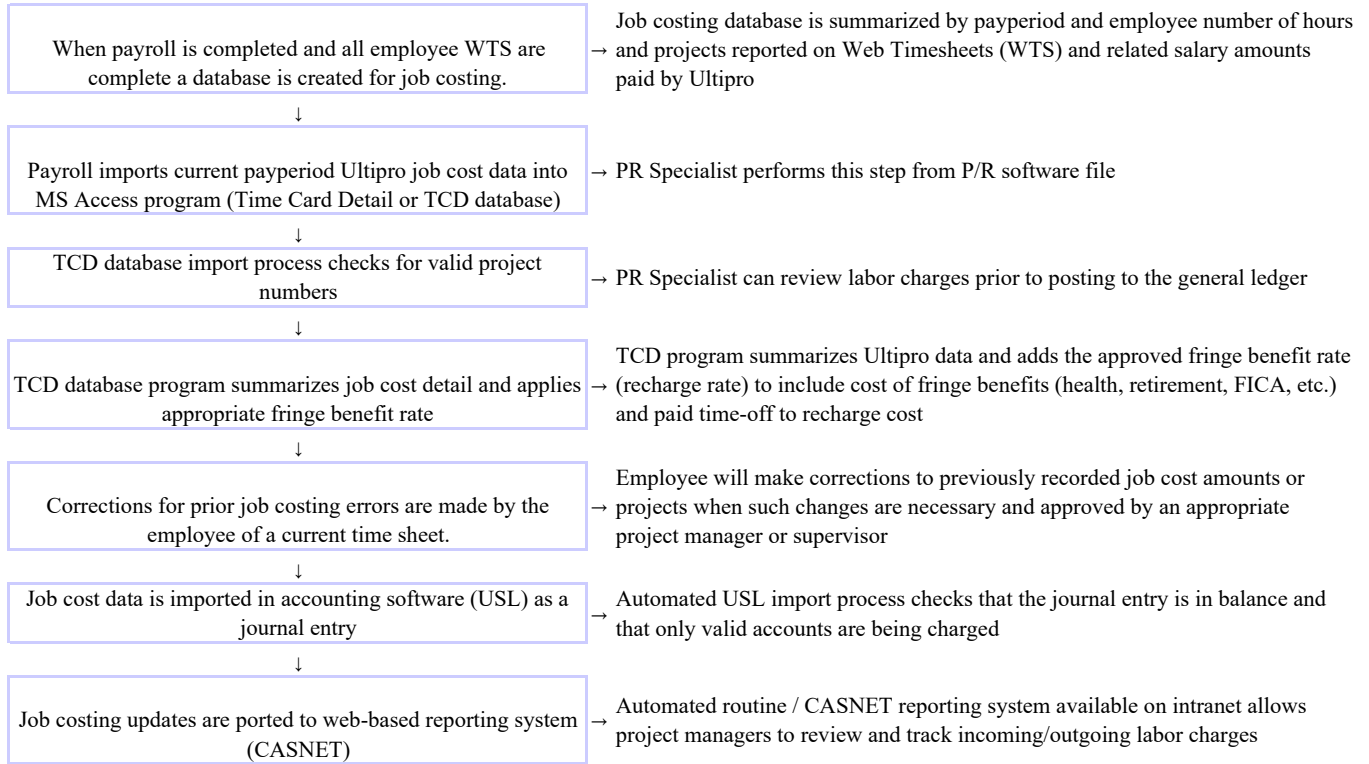
## Appendix F

### Payroll Time And Effort Reporting



## Appendix G

### Job Costing



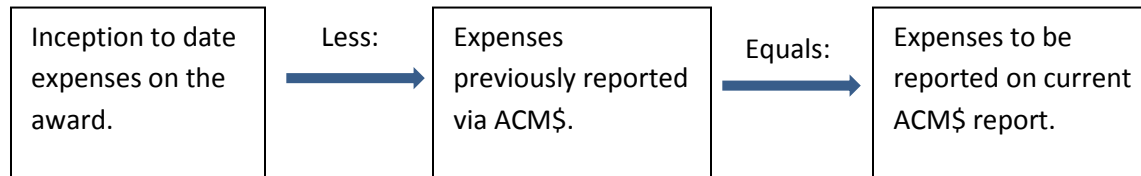
## Appendix H

### ACM\$ calculation for cash orders – How it works

Each Award received from NSF receives a distinct series of account numbers within the chart of accounts that tracks expense activity. See sample below:

| ACM\$ Requests  |              |                        |           |                    |                     |                     |      |      |                   |         |              |            |            |            |                      |
|-----------------|--------------|------------------------|-----------|--------------------|---------------------|---------------------|------|------|-------------------|---------|--------------|------------|------------|------------|----------------------|
| Requests        |              |                        |           |                    |                     |                     |      |      |                   |         |              |            |            |            |                      |
| Add New Record  |              |                        |           |                    |                     |                     |      |      |                   |         |              |            |            |            |                      |
| Show 10 entries |              |                        |           |                    |                     |                     |      |      |                   |         |              |            |            |            |                      |
| Search:         |              |                        |           |                    |                     |                     |      |      |                   |         |              |            |            |            |                      |
| GrntNbr         | Desc1        | Desc2                  | Def1      | Def2               | Def3                | Def4                | Def5 | Def6 | Beginning Balance | Closed? | GL Number    | Allocation | Start Date | End Date   |                      |
| 1202910         | LSST CSA-2   | LSST CSA-2             | KLM       |                    |                     |                     |      |      | 0.00              | No      | K11000022000 | 18.00      | 7/1/2014   | 9/30/2022  | <a href="#">Edit</a> |
| 1011851         | NSO CSA-3    | NSO CSA-3 ATST (MREFC) | SWM       |                    |                     |                     |      |      | 9559357.76        | No      | S11000023000 | 24.00      | 10/1/2010  | 12/31/2019 | <a href="#">Edit</a> |
| 0950945         | NOAO O&M CSA | NOAO CSA-1 O&M         | NY15      | NYD                |                     |                     |      |      | 155424656.51      | No      | N11000021000 | 0.00       | 10/1/2009  | 9/30/2018  | <a href="#">Edit</a> |
| 1460743         | Y-TP020-002  | NSO REU Program        | YTP020002 |                    |                     |                     |      |      | 0.00              | No      | YTP020002999 | 0.00       | 6/1/2015   | 5/31/2017  | <a href="#">Edit</a> |
| 1262829         | NOAO REU     | NOAO REU Grant         | ZKP009005 |                    |                     |                     |      |      | 0.00              | No      | ZKP009005999 | 0.00       | 5/1/2013   | 4/30/2017  | <a href="#">Edit</a> |
| 1062976         | NOAO CSA-5   | NOAO CSA-5 REU South   | NY3000002 |                    |                     |                     |      |      | 77689.40          | No      | N11000025000 | 0.00       | 10/1/2011  | 9/30/2016  | <a href="#">Edit</a> |
| 0647970         | Gem CSA      | GEMINI CAS O&M         | G         |                    |                     |                     |      |      | 208617808.79      | No      | G11000021000 | 0.00       | 1/1/2006   | 3/31/2016  | <a href="#">Edit</a> |
| 1421197         | NOAO O&M     | NOAO O&M CSA-6         | NA-NW     | NX0000000-NY14ZZZZ | NY1600000-NY3000001 | NY3000003-NY9999999 |      |      | 0.00              | No      | N11000026000 | 41.00      | 10/1/2015  | 12/31/2015 | <a href="#">Edit</a> |

Each time the ACM\$ cash order calculation is run, the formula is as follows:



Expenses to be reported on the current ACM\$ are totaled, and then compared to the current total cash request. As AURA works on an advance basis for its cash requests, the cash request is usually greater than the expenses reported, any delta is allocated as a reported expense among the 'core' AURA awards using a predetermined allocation rate calculated based on historical payroll costs, see AURA Cash Management Policy, Section II.

Core awards are defined as:

1202910 – LSST CSA-2 - MREFC Construction funds

1421197 – NOAO CSA-6 – O&M funds

1011851 – NSO CSA-3 – DKIST MREFC Construction funds

0415302 – NSO CSA – O&M funds

The predetermined rates are set by analyzing typical cash required for payroll cycles. The rates are evaluated and adjusted on a regular basis.

While this calculation typically yields positive expense amounts for expenses being reported on each award, the advance cash request remains an estimate and circumstances exist that can result in a negative expense report.

These circumstances include:

Timing – Because federal regulations limit the amount of cash AURA may have on hand to 2-3 business days, requests for estimated cash required for operations are placed at least twice per week. In some cases, expenses associated with the first cash request of the week have not been posted before the second cash order is placed.

Examples:

- 1) Payroll - AURA payroll expenses occur on a bi-weekly basis every other Friday. In order to assure that cash is on hand when direct deposit ACH files, retirement contributions and taxes due are transmitted to our banks in advance of these payments, cash is ordered the Friday before the payday. The process to record the expenses associated with the pay cycle are processed on the payday, five business days after the cash is requested and three days after the cash is received in the bank. While this process is occurring, AURA typically must place a second cash request for non-payroll expenses, typically the Tuesday during this above described cycle.
- 2) Chile expenses – Cash for operations in Chile is ordered and transferred to accounts in Chile on a weekly basis. As AURA can have only one bank account assigned to received cash via ACM\$ (in Tucson), the timeframe from when cash for Chile operation is requested via ACM\$ and received in the Chile bank accounts is one to two days longer than cash received for US operations. Expense activity in Chile is recorded in \$CLP and transmitted to the US office on a weekly basis. The process of translating the data from \$CLP to \$US and imported to the official accounting ledger in \$US typically is achieved the next day.

While every attempt is made to post expense data in a timely manner and to take these circumstances into consideration when subsequent cash requests are processed, some of the circumstances that create negative expense reports are difficult to avoid. However, over time the inception to date expense calculation resolves the negative expense activity caused by the timing events.

Adjustments – From time to time, AURA has recorded adjustments to expense activity which transferred costs from one award to another.

Example:

During FY15, the DKIST project used construction funds from two distinct awards, 1011851 –DKIST MREFC funds and 0415302 – ARRA funds. The ARRA award had a 'hard' expiration date during FY15, so it was critical to expend all of the funds during the fiscal year. Tracking normal expense activity to meet a balance of zero at a specific date, was deemed to be an effort that would result in a success without requiring adjustments to be made. With the consent of NSF through an approved change order request, costs recorded on the MREFC award were transferred to like efforts on the ARRA award to achieve a zero-fund balance upon the expiration of the ARRA funds. This effort resulted in a large negative expense report for the MREFC award.