

### 3.0 Appendix B – Project Aspire Enhancement Functional Design

<b>ADML ID</b>	<b>136</b>
<b>ADML Description</b>	<b>Voucher Audit</b>
<b>ADML Tech#</b>	<b>132</b>

#### 3.1 Background

##### 3.1.1 Functional Requirement

SWF-007

Provide the ability to re-route transaction / document / business event for Chief Financial Officer's pre-audit approval based upon user defined criteria such as dollar thresholds or random selection for statistical sampling purposes.

##### *New Requirement*

Provide ability to flag an account such that all payments from that account must be pre-audited by CFO staff.

Aspire will mimic the pre-audit functionality currently used in FLAIR. This new functionality will need to satisfy several requirements to ensure applicable vouchers get routed to Accounting and Auditing (A&A) for review and final approval. These requirements include: vendor levy hold, ChartField combination hold, Origin, high dollar threshold, and random sampling. Vouchers can be configured to be exempt from audit for selected Chartfield combinations and origins. This configuration should be made available to A&A.

##### 3.1.2 Delivered Functionality

Aspire, as delivered, does not have any pre-audit sampling capability. Delivered functionality only gives the ability to direct voucher approval participants using route control logic for workflow approvals. Aspire's delivered functionality does not include work flow for vendor holds or for particular ChartField combinations. This delivered workflow will be configured as the agency's internal approval process. The delivered worklist page contains an auditor's items pending approval, but does not contain relevant voucher information.

### 3.1.3 Gap Description

PP-056 - Aspire does not have the functionality to route vouchers based on the Account chartfield.

PP-038 - All vouchers over a specific dollar threshold (i.e. \$1,000) and a sampling of vouchers under the threshold need to be audited. The dollar threshold workflow can be created using standard workflow objects. However, random selection is not standard functionality. A&A requires a page that contains a list that can be sorted, containing relevant workflow and voucher information. A&A is required to respond to a voucher within ten days. Due to high volume of transaction audited, the concern is being able to respond to the high priority vouchers first. This page will also allow auditors to flag vouchers as "In Progress", allowing other auditors to know that a person has already begun approving this voucher.

## 3.2 Description of New Functionality

See process flow PP08 and PP09 in conceptual design.

There are four situations where vouchers will be automatically flagged for review and final approval by A&A. These situations include when a voucher is flagged with any of the following:

- A vendor that has been placed on hold due to an Internal Revenue Service, Department of Revenue, or some other kind of levy,
- The voucher's origin has been selected for auditing,
- When the voucher's total gross amount exceeds the processing business unit's high dollar threshold,
- When the voucher's distribution information has been coded to a ChartField combination placed on hold for the processing business unit,
- When the random sampling engine selects a voucher to be sampled.

Aspire will run through the above checks when the voucher is created, and each time the voucher has been updated, up until the Voucher has been routed to an Auditor. As an example, if the AP Clerk creates a voucher over the high dollar threshold, the voucher will be flagged for Audit. If the AP Clerk then updates the voucher so that it is no longer within the high dollar threshold, the voucher will be un-flagged for audit. If voucher was denied by an Auditor, then changed to a dollar amount below the threshold, the voucher will still be flagged for auditing, so that the Auditor can review the changes made. Once a voucher has

been selected for randomly audit, the voucher will always route to audit regardless of the changes made to the voucher.

The AP Clerk may choose to route their voucher to audit if it has not been selected for any of the above reasons. Both vouchers keyed directly into Aspire via the online pages and those vouchers interfaced into Aspire via batch feeds will need to be reviewed and/or sampled by custom logic in Aspire. This will be accomplished with custom PeopleCode for online vouchers and a custom Application Engine (AE) program for batch vouchers. The online vouchers will be evaluated at save time and the batch vouchers will be evaluated immediately following the voucher build program. The custom AE program should be placed in a PSJOB (a grouping of batch processes that run in sequence) immediately following the voucher build process to ensure that it is run for all batched vouchers.

Several object modifications will be required to accomplish this requirement. A separate Yes/No field for each of these situations will be added to the VOUCHER record's user sub record (VCHRH\_USER\_SBR). These custom fields will track each condition for processing and reporting purposes. The fields will be the following: FL\_VNDR\_FLAG (vendor flag), FL\_VCHR\_HD\_HOLD (high dollar flag), FL\_VCHR\_CF\_HOLD (ChartField combo flag), and FL\_VCHR\_SAMPLE (selected by random sampling).

A page shot follows showing how the VOUCHER record's voucher header user sub-record (VCHRH\_USER\_SBR) should look after the new fields have been added.

Num	Field Name	Type	Len	Format	Short Name	Long Name
1	USER_VCHR_CHAR1	Char	1	Upper	User Char	User Character Field
2	USER_VCHR_CHAR2	Char	1	Upper	User Char	User Character Field 2
3	USER_VCHR_DEC	Sign	23.3		User Amount	User Amount Field
4	USER_VCHR_DATE	Date	10		User Date	User Date
5	USER_VCHR_NUM1	Nbr	3		User Number Fld	User Number field
6	FL_VNDR_FLAG	Char	1	Upper	VNDR FLAG	Vendor FLAG
7	FL_VCHR_CF_HOLD	Char	1	Upper	Vchr CF Combo	Voucher ChartField Com
8	FL_VCHR_HD_HOLD	Char	1	Upper	Vchr HD Hold	Voucher High Dollar Hol
9	FL_VCHR_SAMPLE	Char	1	Upper	Vchr Random	Voucher Random Sampli
10	FL_VCHR_AUD_HOLD	Char	1	Upper	Vchr Audit Hold	Voucher Audit Hold

A fifth custom field, FL\_VCHR\_AUD\_HOLD, will be added to the VCHRH\_USER\_SBR sub record as well. This field will be the indicator that one of the four possible voucher flag situations has occurred and the voucher will be routed to A&A for review after the standard workflow approval streams have completed. Also, a sixth custom field (not pictured above) will need to be added to the same sub-record to track voucher return reasons. This field (FL\_RTRN\_REASON) will be a two character field and should have a custom prompt table

with valid values. A custom page (FL\_RTRN\_REASON) and custom record (FL\_RTRN\_REASON) will need to be created to add, maintain, and delete valid voucher return reasons. The custom table to maintain the return reasons should contain the following fields: SETID, FL\_RTRN\_REASON, and DESCR100. A seventh field FL\_ORIGIN\_HOLD (not pictured above) will be added to track vouchers that are audited because of the Origin. This field will prompt off of PS\_ORIGIN\_AP.

For online vouchers and those batch vouchers requiring any approvals in Aspire, a PeopleCode modification to the delivered voucher approval processing logic and a separate, custom business process to route flagged vouchers to A&A will need to be created. The new PeopleCode routing logic will most likely be triggered immediately after the final approval is given using the standard voucher approval business process.

A&A routing will only be triggered for those vouchers where the FL\_VCHR\_AUD\_HOLD field is set to 'Y'. This field (FL\_VCHR\_AUD\_HOLD) will need to be made available for editing (when value = N) to the agencies on the main voucher page (VCHR\_HDR\_SBP) so that vouchers can be routed to A&A at the agencies discretion. RowInit PeopleCode will also be required to make sure that this field is display only after it has been set to 'Y'. This will ensure integrity in the system controlled sampling logic. For batch loaded, pre-approved vouchers a step will be added in the custom AE process to set the voucher to pending approval and route the vouchers to A&A using the custom business process.

A big part of this enhancement, both for the online and batch functionality, will be a custom component and page to capture processing rules for this voucher flag functionality at the Payables business unit level. The custom page, FL\_VCHR\_AUDIT, will be a maintenance page to update and add audit related configuration and control information for each Payables business unit.

Three custom records will be the underlying records on this custom page and they should be named FL\_VCHR\_AUDIT, FL\_VCHR\_CF\_DATA, and FL\_VCHR\_ORGN\_AUD. The FL\_VCHR\_AUDIT record will be the parent record for the page and will be keyed only by the Payables business unit. It will have several custom fields to capture the business unit's high dollar threshold (FL\_VCHR\_HD\_AMT), random sampling percentage (FL\_VCHR\_SMP\_PCT), and target sample total for the year (FL\_VCHR\_SMP\_TOT). This custom page and its underlying records should include the necessary fields for standard effecting dating logic. This will allow mid-year modifications to the auditing parameters without losing history and tracking capabilities. The second record, FL\_VCHR\_CF\_DATA, will be a child record of FL\_VCHR\_AUDIT and will store all possible ChartField combinations that will trigger a ChartField combo hold. This record should be displayed on the FL\_VCHR\_AUDIT page as a grid underneath the parent record data. It will have the following additional key fields: BUSINESS\_UNIT\_GL, FUND\_CODE, ACCOUNT and BUDGET\_REF. This grid will allow for multiple ChartField combinations for a single Payables business unit. A second level 2 grid will exist to contain the multiple origins that

can be flagged for audit and audit exemption. The primary record on this grid will be FL\_VCHR\_ORGN\_AUD.

FL\_VCHR\_AUDIT

(EFFDT and EFF\_STATUS should be added to the FL\_VCHR\_AUDIT table below)

Record Fields		Record Type								
Num	Field Name	Type	Key	Ordr	Dir	CurC	Srch	List	Sys	
1	BUSINESS_UNIT	Char	Key	1	Asc		Yes	Yes	No	
2	FL_VCHR_HD_AMT	Sign					No	No	No	
3	FL_VCHR_SMP_PCT	Nbr					No	No	No	
4	FL_VCHR_SMP_TOT	Nbr					No	No	No	
5	FL_VCHR_SMP_CNT	Nbr					No	No	No	

FL\_VCHR\_CF\_DATA

Num	Field Name	Type	Len	Format	Short Name	Long Name
1	BUSINESS_UNIT	Char	5	Upper	Unit	Business Unit
2	EFFDT	Date	10		Eff Date	Effective Date
3	BUSINESS_UNIT_GL	Char	5	Upper	GL Unit	GL Business Unit
4	OPERATING_UNIT	Char	8	Upper	Oper Unit	Operating Unit
5	PRODUCT	Char	6	Upper	Bud Detail	Budget Detail
6	PROGRAM_CODE	Char	5	Upper	FSI	FSI
7	FUND_CODE	Char	6	Upper	Fund/CC	Fund/CC
8	ACCOUNT	Char	10	Upper	Account	Account
9	FL_VCHR_CF_FLAG	Char	1	Upper	Vchr CF Flag	Voucher ChartField Flag

FL\_VCHR\_ORGN\_AUD

This table will contain the following fields:

- Business Unit (Key)
- Effective Date (Key)
- Origin (Key)
- FL\_VCHR\_ORG\_FLG –This keeps track if the origin is exempt from audit, or always to be audited

Access to this custom page will be limited to only those people at the enterprise level who will maintain this audit related information. PeopleSoft’s delivered security scheme will be utilized to safeguard this information.

### ***Vendor Hold Flag***

The enterprise will have the ability to flag an Aspire vendor with a hold on the vendor master tables due to IRS, DOR or other levies (see FDSE\_132 for more detail on the Vendor Flag customization). If a vendor has been placed on hold due to this Vendor Flag, a new page will be displayed to record the reason for the hold. This information will be displayed to the Payables clerk in Aspire when a voucher is saved that includes a flagged vendor. A Vendor Flag will place all of the vendor's locations on payment hold. This payment hold status will ultimately prevent the vouchers from being selected by the Pay Cycle process.

During the save of an online voucher, SaveEdit PeopleCode will use the VENDOR\_ID on the VOUCHER record to validate against the custom Vendor Flag field on the VENDOR record. If the vendor is marked with a Vendor Flag, PeopleCode should retrieve the Vendor Flag reason code and return it in a message box to the user saving the voucher. The PeopleCode logic should also update both the FL\_VNDR\_FLAG and FL\_VCHR\_AUD\_HOLD fields to 'Y' on the VOUCHER record (VCHRH\_USER\_SBR). When the FL\_VCHR\_AUD\_HOLD field equals 'Y' this will indicate that the voucher will be routed to A&A for review and final approval before a disbursement will be created. The AE's processing logic should continue onto the high dollar threshold section even if FL\_VCHR\_AUD\_HOLD flag was previously set to 'Y'.

If the vendor is not flagged on the vendor master with a vendor levy hold then both the FL\_VNDR\_FLAG and FL\_VCHR\_AUD\_HOLD fields should remain set to their default ('N') and the processing logic should continue to the high-dollar threshold check.

For batch vouchers, the custom application engine process will mimic the PeopleCode logic outlined above for the vendor flag. A separate paragraph at the end of this section will outline the processing logic of the custom Application Engine program.

### ***High Dollar Threshold flag***

The enterprise will have the ability to establish a high dollar threshold for automatic voucher routing to A&A for each Payables business unit. Vouchers with a gross amount greater than the agency's voucher limit will automatically be flagged for auditing by A&A. Each Payables business unit's high dollar threshold amount (FL\_VCHR\_HD\_AMT) will also be captured on the custom voucher maintenance record (FL\_VCHR\_AUDIT). The correct effective dating logic should be used when accessing the FL\_VCHR\_AUDIT record to ensure accurate auditing control information is used.

For online vouchers, custom PeopleCode will need to be created during the voucher's save processing. This new PeopleCode should be executed after the vendor flag logic completes and it should compare the voucher's gross amount to that business unit's high-dollar threshold to determine if it is over the limit. If the voucher's gross amount exceeds the business unit's threshold then the voucher will require A&A approval before a disbursement is created. To do this, the PeopleCode logic should update both the FL\_VCHR\_HD\_HOLD

and FL\_VCHR\_AUD\_HOLD fields to 'Y'. These fields will be custom fields added to the VOUCHER record (VCHRH\_USER\_SBR). When the FL\_VCHR\_AUD\_HOLD field is set to 'Y' this will indicate that the voucher will be routed to A&A for final approval. The AE's processing logic should continue onto the ChartField combination hold section even if FL\_VCHR\_AUD\_HOLD flag was previously set to 'Y'.

If the gross amount is under the high-dollar threshold then the FL\_VCHR\_HD\_HOLD field should remain equal to 'N' and the ChartField combination hold logic should be performed. The FL\_VCHR\_AUD\_HOLD should not be changed from its current value if the gross amount is under the threshold. It is possible that the vendor flag could have already set this field to 'Y'.

For batch vouchers, the custom application engine process will mimic the PeopleCode logic outlined above for the high dollar threshold flag. A separate paragraph at the end of this section will outline the processing logic of the custom Application Engine program.

### *ChartField combination flag*

The enterprise users will have the ability to select chartfield combinations that are excluded from audit. They can set any of the below combinations:

- Business Unit GL
- Business Unit GL , Fund Code
- Business Unit GL , Fund Code, Budget Entity, Category, Appropriation Year
- Business Unit GL , Fund Code, Budget Entity, Category, Appropriation Year, Account
- Account

If the voucher contains any distribution lines that match a configured chartfield combination that is set for exclusion, the voucher will not go through the audit process. This will not route to audit even if the AP Clerk has selected the voucher to be audited.

If a voucher contains distribution lines that contain chartfield combinations that have been marked for audit and exclusion, the voucher will not route to the Auditors.

The enterprise will also have the ability to establish ChartField combination hold rule(s) for a Payables business unit by navigating to a custom page (FL\_VCHR\_AUDIT) and selecting unique combinations of the following ChartFields: BUSINESS\_UNIT\_GL, FUND\_CODE,

BUDGET\_REF, and ACCOUNT. They can select different values from the below combinations:

- Business Unit GL –If the user only selects a GL Business Unit, any Voucher with distribution lines containing this value will be flagged for Audit regardless of the Fund Codes, Budget Entity, Category, Appropriation Year, or Accounts
- Business Unit GL , Fund Code –If the user selects a GL Business Unit and Fund Code for Audit, any Voucher with distribution lines containing these values will be flagged for Audit regardless of the Budget Entity, Category, Appropriation Year and Account. If the user configures a Fund Code for Audit, they must also provide a GL Business Unit.
- Business Unit GL , Fund Code, Budget Entity, Category, Appropriation Year–If the user selects a GL Business Unit, Fund Code, Budget Entity, Category and Appropriation Year for Audit, any Voucher with distribution lines containing these values will be flagged for Audit regardless of the Account. Budget Entity, Category and Appropriation Year must all be filled in together. If any one of the three fields is populated, the other two will become required. If the user configures a Budget Entity, Category, and Appropriation Year combination for Audit, they must also provide a GL Business Unit and Fund Code.
- Business Unit GL , Fund Code, Budget Entity, Category, Appropriation Year, Account –If the user selects a distinct GL Business Unit, Fund Code, Budget Entity, Category, Appropriation Year and Account combination for Auditing, the Voucher must contain a distribution line with this specific combination to be flagged for audit.
- Account – The user may configure an Account for Audit. If only an Account is specified for Audit, any Voucher containing a distribution line containing this Account will be flagged for audit regardless of the Business Unit GL, Fund Code or the Budget Entity, Category and Appropriation Year combination.

A voucher containing these combinations will establish a unique rule to flag a voucher as being eligible for “ChartField combination hold”.

All ChartFields (BUSINESS\_UNIT\_GL, FUND\_CODE, OPERATING\_UNIT (Budget Entity), PRODUCT (Category), PROGRAM\_CODE (Appropriation Year) and ACCOUNT) will be required based upon the combinations available (as described above) on the page (FL\_VCHR\_AUDIT).

For online vouchers, the PeopleCode logic for the ChartField combination flag will need to analyze each voucher distribution combination of BUSINESS\_UNIT\_GL, FUND\_CODE, OPERATING UNIT, PRODUCT, PROGRAM\_CODE, and ACCOUNT at save time and determine if a matching row is present on the FL\_VCHR\_CF\_DATA table. The correct

effective dating logic should be used to ensure that accurate auditing control information is used.

OPERATING\_UNIT (Budget Entity), PRODUCT (Category), and PROGRAM\_CODE (Appropriation Year) are handled like one field. If any one of these fields is populated, all three fields must be populated. PeopleCode validation will be required to verify this, and notify user with the appropriate error.

If a match is detected by the PeopleCode logic then the FL\_VCHR\_CF\_HOLD and FL\_VCHR\_AUD\_HOLD fields on the VOUCHER record (VCHRH\_USER\_SBR) will be updated to 'Y'. When the FL\_VCHR\_AUD\_HOLD field is set to 'Y' this will indicate that the voucher will be routed to A&A for final approval. The processing logic should only continue to the random sampling logic if the FL\_VCHR\_AUD\_HOLD flag remains set to 'N' after the three prior audit checks. If any of the prior three audit checks triggers a positive result (FL\_VCHR\_AUD\_HOLD = 'Y') then the sampling logic should be skipped.

If none of the ChartField combinations on the FL\_VCHR\_CF\_DATA record match the voucher's distribution information then the FL\_VCHR\_CF\_HOLD field should remain equal to 'N' and the program should check the FL\_VCHR\_HD\_HOLD and FL\_VNDR\_FLAG values for 'Y' values. If all of the three audit checks were negative then the random sampling logic should be performed.

For batch vouchers, the custom application engine process will mimic the PeopleCode logic outlined above for the ChartField combination flag. A separate paragraph at the end of this section will outline the processing logic of the custom Application Engine program.

### ***Voucher Origin flag***

Voucher origin criteria should be added as a configurable attribute on the voucher audit page FL\_VCHR\_AUDIT. The voucher origin should have the option to always be included for Audit or always exclude for audit. This applies to both online and batch vouchers.

### ***Audit Selection Criteria***

The hierarchy of the audit selection criteria should be as follows (highest priority being 1):

- (1) Vendor –if the vendor was flagged for audit, all vouchers created for this vendor will be audited regardless of the below configuration
- (2) Origin – If the origin was flagged for audit or exemption, it will/will not be audited regardless of the below configuration.
- (3) Chartfield –If the chartfield combination on the voucher was flagged for audit/exemption it will/will not be audited regardless of the amount.

(4) Amount – If the voucher is over the specified amount, the voucher will be flagged for audit.

(5) Random –The voucher may only be randomly selected for audit, after the above criteria has not been met.

### ***Random Sampling flag***

Aspire will mimic the random selection currently used in FLAIR. The Aspire procedure will contain several differences in approach, but should provide the same degree of random selection and more importantly the same level of assurance that an unbiased, automated solution is in place.

The enterprise will continue to compute and assign a random sampling percentage and a not to exceed voucher sampling count to each Payables business unit definition. These fields will be saved using the custom page, FL\_VCHR\_AUDIT. The correct effective dating logic should be used to ensure that accurate auditing control information is used. The random sampling percentage (z) will be established for each Payables business unit at the beginning of each year by dividing the desired number of invoices to be sampled (x) by the estimated number of eligible vouchers (y) for that year ( $z = x / y$  or stated with numbers  $.0693 = 800$  vouchers to be sampled / 11,539 total estimated vouchers for year). This percentage will be multiplied by 10,000 to ensure the result is an integer, this assumes the percentage to sample is rounded to four digits of precision ( $10,000 * .0693 = 693$ ). This product will then be used by the PeopleCode random number generator function to determine if the voucher will be routed for auditing. The PeopleCode logic should look similar to this this:

$$\&RANDOM\_NBR = \text{Int}(\text{Rand}(\ ) * 10000)$$

The random number (&RANDOM\_NBR) generated by the function above will be an integer that is greater than or equal to zero and less than 10000.

Using the example from above, if the &RANDOM\_NBR value generated between zero and ten thousand is less than 693 then that voucher is flagged to be sent to Accounting and Auditing (A&A) for auditing. If the integer generated is 693 to 9,999 then the voucher will not be flagged for A&A review. The 693 represents the target calculated percentage to sample in terms of 10,000 for a given Payables business unit.

A new counter will be updated to keep track of the number of vouchers selected for sampling. When the counter reaches the desired number of invoices to be sampled for that year (i.e. 800 vouchers) no more vouchers will be selected for that Payables business unit. This counter will be a field (FL\_VCHR\_SMP\_CNT) on the newly created custom record to capture all pre-audit voucher sampling configuration information (FL\_VCHR\_AUDIT). This same custom record would also capture the random sampling percentage

(FL\_VCHR\_SMP\_PCT) and the desired number of invoices to be sampled (FL\_VCHR\_SMP\_TOT) for each Payables business unit. If the desired number of invoices has already been achieved for the year then the PeopleCode logic should not update the FL\_VCHR\_AUD\_HOLD to be equal to 'Y'.

For online vouchers, the random number logic will be performed on all applicable vouchers every time they are saved. Applicable vouchers include those where the FL\_VNDR\_FLAG, FL\_VCHR\_HD\_HOLD, and FL\_VCHR\_CF\_HOLD fields all equal 'N'. Therefore, if changes are made to a voucher after it has been saved, the voucher could potentially be selected for auditing on the subsequent save. The opposite will not be true; a payables clerk will not simply be able to resave a voucher to prevent a prior audit selection from occurring. Once the eligible voucher is flagged by the random number generator (FL\_VCHR\_SAMPLE = 'Y') then it will be reviewed by A&A and nothing can prevent the voucher from being routed to A&A. This will ensure integrity in the sampling process and provide routing control for all vouchers. If a voucher contains a chartfield combination that is flagged for exemption, the Voucher will not be eligible for Random selection. A custom user defined field (FL\_VCHR\_SAMPLE) on the VOUCHER record will be used to hold the yes/no (Y/N) indicator on whether auditing is required for the voucher. This field should be initialized to 'N' in add mode to ensure the correct initial status is provided.

For batch vouchers, the custom application engine process will mimic the PeopleCode logic outlined above for the random sampling flag. The next section will outline the processing logic of the custom Application Engine program.

### *Custom Workflow routing*

During A&A's review process, each voucher in Aspire may be given a return reason within the main voucher pages by an A&A representative. A reason code may be assigned to all vouchers before the vouchers are approved and is always required if denied by A&A. This reason code field (FL\_RTRN\_REASON) will have a prompt table edit to ensure only valid values (see table in Miscellaneous section) are selected and will be within the main voucher pages. After the final approval on the standard workflow voucher business process, custom PeopleCode should update voucher's APPR\_STATUS on the VCHR\_APPRVL record from 'A' (Approved) to 'P' (Pending) and change the BUSPROCNAME and APPR\_RULE\_SET to the newly created custom business process for forwarding voucher to A&A for review.

For vouchers entered using the online pages with no standard workflow requirements, PeopleCode should populate the custom business process and workflow ruleset to forward the voucher to A&A at save time. The Auditor will be selected based upon the voucher's Business Unit, Org and Account combination. Auditors will be configured with Route Control Profiles, which contain information relating to the Business Unit, Org, and Account combinations that they are responsible for approving. The custom workflow business process to A&A will have two event paths on the activity, an approval event and a denial event. The approval event will be the vouchers final approval and the denial event will route the voucher

back to the user who entered the voucher and send an email indicating the voucher was denied. A comment can be added to the approval/denial event if desired that will be available for review.

### *Application Engine Overview*

The following overview will provide a blue print for the functionality required to check the vendor hold flag, origin, ChartField combo flag, high-dollar flag and the random sampling applicability for batch interfaced vouchers using a custom application engine program. The high level description of this program is the following: get run control and other processing information, vendor flag section, origin selection criteria, high dollar threshold section, ChartField combination section, random sampling section, update vouchers, and finally the program clean-up.

This process should be added to a new PSJOB with the delivered voucher build program (AP\_VCHRBLD). This will ensure it is run immediately following the build of all interfaced vouchers into Aspire.

Run Control parameters: None

The program should begin processing by storing all run control parameters from the run control record into variables on the state record. The batch scheduled process will not need any of the run control parameters, it will simply subtract one from its current process instance and use this number to select all vouchers from the voucher build job. The batch run control should be saved without any parameters.

The program should then select applicable vouchers using either the run control parameters, for ad hoc processing, or the previous process instance for scheduled batch processing. Vouchers should be selected from the VOUCHER table and inserted into a temporary table (TMP1). A mechanism within this section of the program should exclude voucher sources defined as not requiring voucher audit. All vouchers to be processed will now be in TMP1.

A do-select command will then distinctly select each Payables business unit for processing. This must be performed because each Payables business unit will have its own processing rules for handling the various hold flags and random sampling. Each business unit will be processed entirely and then the program will move onto the next distinct business unit for processing until no business units are left.

The program will then use the current business unit to retrieve control information for the business unit from the FL\_VCHR\_AUDIT, FL\_VCHR\_CF\_DATA, and FL\_VCHR\_ORGN\_AUD, table. The correct effective dating logic should be used to ensure accurate results. This information includes the business unit's high-dollar threshold, its sampling percentage, the target sampling total and the current sampling counter. These fields should be saved into the program's state record for later use by the program.

Next, the program will update both the FL\_VNDR\_FLAG and FL\_VCHR\_AUD\_HOLD fields to 'Y' on the TMP1 record for all rows where the VENDOR\_ID's vendor flag is set to 'Y' on the VENDOR record and the business unit on TMP1 is equal to the processing business unit (see FDSE\_137 for more detail on the vendor flag customization).

If the voucher has not been flagged for audit because of the vendor, then the origin on the voucher is checked. The voucher origin audit configuration is stored in the FL\_VCHR\_ORGN\_AUD record. If the voucher's origin has been flagged for audit, then it stops processing any further and routes to the appropriate people. If the voucher's origin has been flagged for exemption, then program moves onto the next voucher for processing.

The program will then process the ChartField Combination section. In this section, the program will insert all rows into a second temporary table (TMP2) where the vouchers from TMP1 meet the following criteria: TMP1 vouchers are joined to the DISTRIB\_LINE table using BUSINESS\_UNIT and VOUCHER\_ID; the resulting rows are then checked to see if they exist on FL\_VCHR\_CF\_DATA table. This is done by joining the DISTRIB\_LINE and FL\_VCHR\_CF\_DATA tables using BUSINESS\_UNIT, BUSINESS\_UNIT\_GL, FUND\_CODE, and BUDGET\_REF. The rows inserted into TMP2 should represent all TMP1 lines that have corresponding DISTRIB\_LINE rows that are marked with a ChartField Combination hold. Applicable rows on TMP1 will then be updated so that both the FL\_VCHR\_CF\_HOLD and FL\_VCHR\_AUD\_HOLD fields are set to 'Y'. Again, the only rows being processed are those where the business unit on TMP1 is equal to the active processing business unit in the do-select statement at the beginning of the program.

If the voucher's chartfields have been selected for audit exemption, the voucher is skipped and the program begins processing the next voucher.

After the chartfield flag section, the program will move onto the high-dollar section. Here the program will update both the FL\_VCHR\_HD\_HOLD and FL\_VCHR\_AUD\_HOLD fields to 'Y' on the TMP1 record for all rows where the voucher's GROSS\_AMT is greater than the high-dollar threshold for the business unit and the business unit of TMP1 is equal to the processing business unit.

The random sampling section will be processed next. This section is processed differently than the other prior sections; it will primarily be done using PeopleCode. If the random sampling counter (FL\_VCHR\_SMP\_CNT) is less than the total sampled (FL\_VCHR\_SMP\_TOT) to date then the program should continue. The difference between these two fields (FL\_VCHR\_SMP\_TOT - FL\_VCHR\_SMP\_CNT) represents the remaining number of vouchers to sample for the rest of the year. This number should be stored in a state record variable for future use by the AE. A stand alone rowset should be populated with all rows from TMP1 with a matching business unit equal to the active processing business unit and the FL\_VCHR\_AUD\_HOLD field equal to 'N'. Next, the program will do the random sample check on each voucher in the stand alone rowset using the logic outlined previously in this document. If the number generated using the random number generator

PeopleCode is within the target range then both FL\_VCHR\_SAMPLE and FL\_VCHR\_AUD\_HOLD fields on TMP1 should be updated equal to 'Y'.

If a voucher is flagged for sampling, a separate sampling counter variable should be incremented by one before proceeding to the next voucher. This sampling counter will need to be compared against the state record variable holding the remaining number of vouchers to see if processing needs to continue. This sampling counter variable should be initialized to zero at the top of the PeopleCode processing. After all rows in the rowset have been processed, the running total of new sampled vouchers should be added to FL\_VCHR\_SMP\_CNT in an update statement.

TMP2 can be deleted at this time and the program should proceed to the next distinct business unit and repeat all the prior steps. After all business units have been processed, the program should update the VOUCHER table using the flags in TMP1. This can be done with four SQL statements. These statements should be constructed, to update FL\_VNDR\_FLAG, FL\_VCHR\_HD\_HOLD, FL\_VCHR\_CF\_HOLD, FL\_VCHR\_SAMPLE, and FL\_VCHR\_AUD\_HOLD using the flags on TMP1 where the BUSINESS\_UNIT and VOUCHER\_ID are equal between TMP1 and VOUCHER.

For batched vouchers, that have no standard workflow path for approvals, the program should populate the business process information and approval ruleset to route the voucher to A&A for review. Finally, all rows on TMP1 can be deleted as the program wraps up.

### ***Audit Listing Page Overview***

A custom page will exist for auditors listing all vouchers that have been routed to them. The page will contain relevant information to determine the priority of the approvals. The page will contain a link for each transaction that will forward them to the voucher's approval page. A "Transfer" button will also exist on this page allowing the Auditor to transfer the voucher to anybody else's worklist.

The primary view on this page will return information from the voucher, and worklist records. When the voucher is approved or denied, it will be removed from their worklist, thus no longer showing on this page.

A checkbox field will be added, referencing the PS\_FL\_VCHR\_HOLD record (defined below). This will allow an auditor to flag a voucher on their worklist as "In Progress". This will allow other auditors with the same voucher available on their worklist to know that somebody has already begun to process this voucher. This checkbox is for informational purposes only, and does not prevent anybody from approving or denying a voucher. The checkbox will automatically be unchecked, and update the PS\_FL\_VCHR\_HOLD record once somebody has approved or denied the voucher.

FL\_VOUCHER\_HOLD

This table will contain the following fields:

- Business Unit (Key)
- Voucher ID (Key)
- In Process Flag

The record on the grid will be a view joining VOUCHER, PYMNT\_VCHR\_XREF, PSWORKLIST, VENDOR and VCHR\_WL1. The view will also outer-join FL\_VOUCHER\_HOLD, which will return a row only if the voucher is currently, or has ever been flagged “In Progress”. The following fields will exist on the page (in grid):

1. Business Unit (PS\_VOUCHER.BUSINESS\_UNIT)
2. Voucher ID (PS\_VOUCHER.VOUCHER\_ID)
3. Scheduled Pay Date (Sort by this date)  
(PYMNT\_VCHR\_XREF.SCHEDULED\_PAY\_DT)
4. Date routed to Auditor (PSWORKLIST.INSTAVAILABLEDTM)
5. Vendor ID (VOUCHER.VENDOR\_ID)
6. Vendor Name (VENDOR.NAME1)
7. Amount (VOUCHER.GROSS\_AMT)
8. Origin (VOUCHER.ORIGIN)
9. Voucher Style (VOUCHER.
10. In Progress (FL\_VOUCHER\_HOLD.IN\_PROCESS\_FLG)
11. Link to approval page (work record on page)
12. Transfer button -to other user’s worklist (work record on page)

### 3.3 Navigation path

Navigation to enter vouchers on-line.

Main Menu > Accounts Payable > Vouchers > Add/Update > Regular Entry.

Navigation path to run the Voucher Build process.

Main Menu > Accounts Payable > Batch Processes > Vouchers > Voucher Build.

Navigation path to configure Audit information

Setup Financials/Supply Chain > Business Unit Related > Payables > Voucher Audit Setup

Navigation to view the user’s pending Audit transactions

Main Menu > Accounts Payable > Vouchers > Approve > Audit Approval

### **3.4 Set Up/Control Data**

The FL\_VCHR\_AUDIT and FL\_VCHR\_CF\_DATA tables should be configured for all valid Payables business units.

Two new Origins will be created:

- EXP “Audit Exempt” – All AP Business Units will be configured to exempt these vouchers from audit. The only way these vouchers can be audited is if the Vendor is flagged for audit.
- AUD “Audit” – Every AP Business Unit will have this Origin configured to always Audit any voucher containing this Origin.

The purpose of these two vouchers are to provide generic Origins for voucher interfaces to use when the voucher always require audit or audit exemption.

### **3.5 Application Changes (e.g., Pages, Components, Menus, Records, App Engines, SQRs, etc.)**

New Objects

Pages -	FL_VCHR_AUDIT
	FL_RTRN_REASON
Components -	FL_VCHR_AUDIT
Records -	FL_VCHR_AUDIT
	FL_RTRN_REASON

Fields -

- FL\_VCHR\_CF\_DATA
- FL\_VCHR\_ORGN\_AUD
- FL\_VCHR\_AUD\_VW
- FL\_VNDR\_FLAG
- FL\_VCHR\_HD\_HOLD
- FL\_VCHR\_CF\_HOLD
- FL\_VCHR\_SAMPLE
- FL\_VCHR\_AUD\_HOLD
- FL\_RTRN\_REASON
- FL\_VCHR\_HD\_AMT
- FL\_VCHR\_SMP\_PCT
- FL\_VCHR\_SMP\_CNT
- FL\_VCHR\_SMP\_TOT

Modified Objects

Sub Records - VCHRH\_USER\_SBR

### 3.6 Unit Test Considerations

- Test the new FL\_VCHR\_AUDIT page. Enter new business unit information with corresponding control information. Update an existing business unit's control information.
- Validate the following:
  - The sampling counter correctly updates after a voucher has been selected for sampling.
  - The batch program runs for more than one Payables business unit.
  - Random sampling stops processing once the annual total counter is greater than the total target sample population.

- 
- Ensure vouchers with exempt origins are not routed to auditors and remain in an approved status.
  - Ensure vouchers with origins flagged for audit are changed to a pending status and route to the appropriate auditor.
  - Vouchers for vendors marked with the vendor flag on the vendor master tables are marked for pre-audit review.
  - Create a voucher with a flagged vendor. Create the voucher using a chartfield combination and origin that have been excluded from audit. Ensure that the voucher is still routed to the auditors (because vendor takes priority), and is changed to a pending status.
  - If any one appropriation field is populated, ensure users are required to populate all three appropriation fields (OPERATING UNIT, PRODUCT, PROGRAM\_CODE). Ensure the appropriate error is displayed if only one or two are populated.
  - Vouchers with a gross amount greater than the business unit's high dollar threshold are marked for pre-audit review.
  - Vouchers coded to a ChartField Combination are flagged for pre-audit review.
  - Vouchers that were flagged with the Vendor Flag, ChartField Combo, or High Dollar flag will not be eligible for the random sampling engine.
  - Vouchers with no standard workflow are routed to A&A for review.
  - Vouchers with standard workflow rules are routed to A&A after the final approval.
  - The current effective dated row is used in all applicable transactions.
  - Approve transaction listed on custom page, and ensure the transaction is removed from the user's worklist.
  - Transferring item removes from current user's worklist, and places it into the recipient's worklist.

### 3.7 Miscellaneous

- Values for FL\_RTRN\_REASON and DESCR100 on custom FL\_RTRN\_REASON table.

FL_RTRN_REASON	DESCR100
1A	Voucher returned/deleted per agency request
1B	Insufficient Cash/Insufficient Budget Release
1C	Incorrect Payee/Payee not scheduled
1D	Incorrect voucher schedule amount
1E	Scheduled contractual srv/installment pur/moving exp on sep voucher
1F	Payment should be scheduled as pay and charge
1G	Payment should be made by Journal Transfer
1H	Duplicate payment, see SWDN
1J	Voucher schedule not signed
1K	Other error on voucher schedule
1L	Incorrect category
2A	Original invoice not submitted
2B	Unit and/or unit price not shown
2C	Incorrect invoice amount
2D	Date invoice/services received/approved for payment not shown
2F	Unauthorized/Prohibited expenditure
2G	Error in extension
2H	Sales tax included
3A	Travel not in accordance with s112.061, FS
3B	Benefits to State not shown
3D	Error in extension on travel voucher
3E	Explain why State contract airfare/car/Class B car not used
3F	Reference to related Statewide Document not shown
3G	Receipts not submitted with travel voucher
4A	Payment not in accordance with contract
4B	Contract/PO/Summary Form not submitted
4C	Contract doesn't meet requirements of s287.058/287.0582, FS
4D	Attorney General's approval not submitted
4E	Contract number not provided/valid
4F	Services rendered prior to effective date of contract
5A	Proof of bid/sole source/State contract/certific of emer/RFP eval/CCNA not submitted
5B	More detailed description and/or copy of PO needed
5C	Statutory authority/necessity not documented

FL_RTRN_REASON	DESCR100
5D	Leg budget authority/adv pay authority not cited/submitted
5E	Open records statement for membership dues not submitted
5F	Approval for employees moving expenses/perquisite not submitted
5H	DFS approval/number not shown/submitted
5J	Evidence of DMS purchase of insurance not submitted
5K	DMS lease #/motor pool/comm/cont excep apr not submitted
5M	Postage meter number not submitted
5N	Additional documentation/justification/info needed
6A	DOR claim against payee
6B	IRS levy against payee

- Reporting Requirements
  - A custom report(s) will need to be created to track reason codes usage for analysis.
  - A custom report will also be created to track sampling statistics for analysis.

### 3.8 Assumptions

- The State of Florida will continue to do their current statistical analysis to determine the target sampling number for each Payables business unit (FL\_VCHR\_SMP\_TOT) along with the appropriate sampling percentage (FL\_VCHR\_SMP\_PCT) based on estimated annual voucher volume for a business unit. Both of these will be computed outside of Aspire, but they will be maintained in Aspire.
- The voucher sampling counter (FL\_VCHR\_SMP\_CNT) will be reset to zero at the beginning of each year for all Payables business units.
- The initial population of the two custom control information records (FL\_VCHR\_AUDIT and FL\_VCHR\_CF\_DATA) will be a manual effort. All ongoing maintenance of the information on these records will be manually done by the appropriate A&A users.
- A new PSJOB will be created containing the new custom AE job outlined in this specification. The new AE program will be placed immediately following the voucher build program (AP\_VCHRBLD) in the PSJOB and this PSJOB should be called instead of simply running the voucher build program by itself.

- The random sampling percentage will be rounded to four digits of precision for processing.
- A ChartField Combo hold combination will contain all of the following fields: BUSINESS\_UNIT\_GL, FUND\_CODE, and BUDGET\_REF.