HUD RfR Financial Factors Tool
Version 1.01
4/12/2016

INSTRUCTIONS

This spreadsheet is a template for use by MAP Lenders in preparing a financial plan for funding reserve for replacement needs in accordance with HUD's instructions for such financial plans as described in the 2016 MAP Guide Appendix 5G, Section VII, Subsection C. All lender data entries are made as indicated on the "Input Sheet" and on the project information lines of the "RfR commitment ltr attchmnt." No other entries or changes to the spreadsheet should be made. Instructions for each entry blank or numbered step are as follows:

User inputs on the "Input Sheet" worksheet are to be typed into the cells with white background. Other cells are protected.

Project Name	Enter the name as shown on the HUD 92013.
FHA #	Enter the FHA number assigned to the application.
Item #1	Enter the number of units in the project.
Item #2	Enter proposed mortgage amount.
Item #3	Enter the mortgage interest rate, the term, and the estimated date of endorsement or final endorsement.
Item #4	Enter the total uninflated cost of all repairs/replacements for each relative year in the estimate period.
Item #5	Enter the current rate of inflation, then the relative year in which this rate likely will change and then the historic average of annual inflation rates.
Item #6	Enter the amount of the initial deposit to the RfR (IDRR) if any.
Item #7	Enter the current rate of interest for short term deposits (3-6 months), the relative year in which this rate likely will change and then the historic average of short term rates.
Item #8	Enter the amount of the initial or year 1 Annual Deposit per unit to the RfR (ADRR)
Item #9	Enter the annual rate of change for the ADRR, the relative year when this rate will change and the rate of change for years thereafter.

Inputs on the "RfR Commitment Ltr Attchmnt" worksheet are to be typed into the cells with white background. Others are protected.

Project Name and FHA # are automatically entered from the "Input Sheet"

Enter the following information about the project. Use data that is consistent with the application:

City
State
SOA
Lender Name
Date of Firm Commitment (to be input by HUD staff at the time of commitment)

This spreadsheet differs from the CNA e-tool in that it calculates only 10-year and 20-year schedules for 10-year and 20-year Estimate Periods. The CNA e-tool will allow the user to input other Estimate Periods, when, for example, a project mortgage may have less than twenty years to maturity. Relative Years end on the anniversary of the date you enter as the estimated date when amortization of the mortgage begins.

Note that most calculations are performed in a hidden worksheet called "Engine" in this workbook, so some cell formulas make reference to that worksheet.

Project Name
FHA #

HUD RfR Financial Factors Tool *Version 1.01*
4/12/2016

FHA # in conventional format: 00-000000

Basic Project and Loan data

1. Enter number of units.

2. Enter the mortgage amount.

3. Enter information about the mortgage:

a. Mortgage Interest Rate*
b. Term in years
c. Amortization start date

* The mortgage rate of interest, not the mortgage constant.

Initial Deposit to Reserve for Replacements (IDRR)
(lump sum at closing)

6. Enter IDRR, include any transferred amount. Revise as needed to balance.

Rates of Interest Earned on RfR Balances

7. Enter interest income data on the RfR:

a. Current earnings rate
b. Historic rate begins at year:
c. Historic average earnings rate

Capital Needs

4. Input 20 years of uninflated capital needs below.

5. Enter estimated cost inflation rate(s) to be applied to capital needs:

a. Current inflation rate
b. Historic rate begins at year:
c. Historic average inflation rate

Annual Deposit to Reserve for Replacements (ADRR)

8. Enter initial ADRR per unit. Revise as needed to balance.

9. Enter % annual rate of change in ADRR:

a. Initial rate of change
b. Later years rate begins at year:
c. Later years rate of change

Times the # of units equals the base ADRR below:

Resulting Inflated Needs withdrawals appear below:

Resulting adjusted ADRRs based on rate(s) of change appear below:

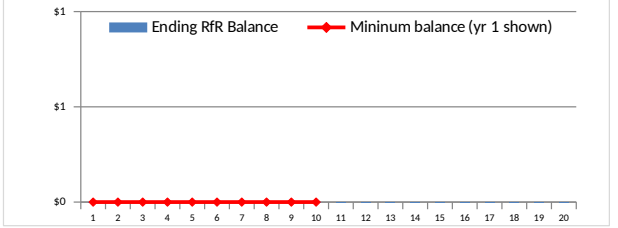
Relative Year				
1		$0	$0	$0
2		$0	$0	$0
3		$0	$0	$0
4		$0	$0	$0
5		$0	$0	$0
6		$0	$0	$0
7		$0	$0	$0
8		$0	$0	$0
9		$0	$0	$0
10		$0	$0	$0
11		$0	$0	$0
12		$0	$0	$0
13		$0	$0	$0
14		$0	$0	$0
15		$0	$0	$0
16		$0	$0	$0
17		$0	$0	$0
18		$0	$0	$0
19		$0	$0	$0
20		$0	$0	$0
TOTALS	$0	$0	$0	$0

Note:
Initial 10-yr min. bal. / unit N/A
Initial 20-yr min. bal. / unit N/A

Structuring Results: REQUIREMENTS MET

Minimum Balance Analysis - Years 1 - 10 met? YES

Reserve for Replacements Ending Balance and Years 1-10 Required Minimum Balance

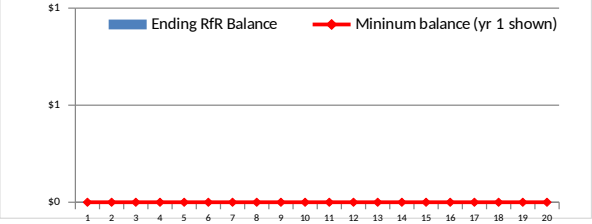


Approximate Initial deposit exceeding minimum**: $0
Approximate Annual deposit exceeding minimum**: #DIV/0!

**Amount needed to offset smallest margin exceeding minimum in any year from 1-10.

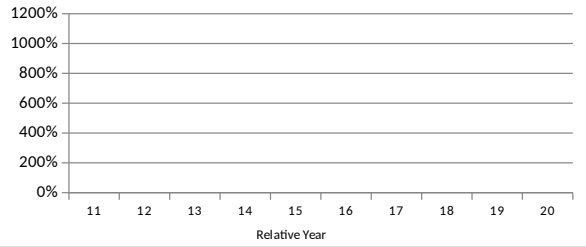
Minimum Balance Analysis - Years 11 - 20 met? YES Mitigated? N/A

Reserve for Replacements Ending Balance and Years 11-20 Required Minimum Balance



Is 50% of Loan Amortization sufficient to offset any year 11-20 RfR required minimum shortfalls? (That is, are all bars below < 50%?) YES

RfR Shortfall vs. required minimum as a % of Cumulative Principal Amortization

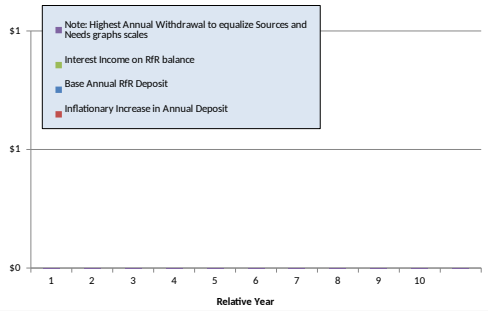


Project Name from Input Sheet	0										
FHA # from Input Sheet	0										
Structuring Results:	REQUIREMENTS MET										
		Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year
Year of Deposit or Withdraw		1	2	3	4	5	6	7	8	9	10
Initial Deposit		$0									
RfR Beginning Balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Interest Income on RfR balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
RfR balance before RfR deposit		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
RfR Deposit (as inflated)		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
RfR balance Available for Needs		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Inflated Needs (Withdrawal)		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Ending RfR Balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Lowest RfR balance years 1-10	$0										
Lowest RfR balance years 11-20	$0										
Net Annual Change in RfR balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minimum Balances Analysis Years 1-10											
Inflated 10-year Estimate Period minimum balan	*Mininum balance (yr 1*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Margin>min. *Lowest margin, years 1-10*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minimum Balance Met-Yrs 1-10 YES	*0 Violations*	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Min. Balance/Mitigation Analysis Years 11-20											
Inflated 20-year Estimate Period minimum balan	*Mininum balance (yr*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Margin>min. *Lowest margin, years 11-20*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minimum Balance Met-Yrs. 11-20? YES	*0 Violations*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
If Min. Balance is not met, does principal amortization calculated below mitigate it? N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Loan Amortization Test for Outyear Deficits-Yrs 11-20											
Margin>min. *Lowest margin, years 11-20*	*Err:502*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Are Shortfalls <50% of Principal Paydown YES	*0 Violations*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Principal Amortization		Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502
If a shortfall, shortfall as a % of Cumulative Principal Amortization		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

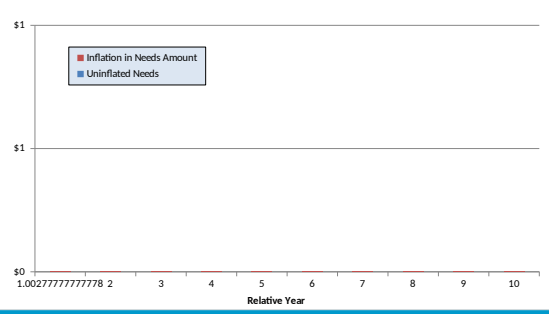
Project Name from Input Sheet	0												
FHA # from Input Sheet	0												
Structuring Results:	REQUIREMENTS MET												
		Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year	Relative Year		
Year of Deposit or Withdraw		11	12	13	14	15	16	17	18	19	20	Totals	
Initial Deposit													
RfR Beginning Balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
Interest Income on RfR balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
RfR balance before RfR deposit		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
RfR Deposit (as inflated)		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
RfR balance Available for Needs		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
Inflated Needs (Withdrawal)		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Ending RfR Balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
Lowest RfR balance years 1-10	$0												
Lowest RfR balance years 11-20	$0												
Net Annual Change in RfR balance		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Minimum Balances Analysis Years 1-10													
Inflated 10-year Estimate Period minimum balan	Mininum balance (yr 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
Margin>min. *Lowest margin, years 1-10*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
Minimum Balance Met-Yrs 1-10	YES	0 Violations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Min. Balance/Mitigation Analysis Years 11-20													
Inflated 20-year Estimate Period minimum balan	Mininum balance (yr	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
Margin>min. *Lowest margin, years 11-20*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
Minimum Balance Met-Yrs. 11-20?	YES	0 Violations	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
If Min. Balance is not met, does principal amortization calculated below mitigate it?	N/A		Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	
Loan Amortization Test for Outyear Deficits-Yrs 11-20													
Margin>min. *Lowest margin, years 11-20*	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	
Are Shortfalls <50% of Principal Paydown	YES	0 Violations	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	
Cumulative Principal Amortization			Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	
If a shortfall, shortfall as a % of Cumulative Principal Amortization			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Project Name from Input Sheet	0
FHA # from Input Sheet	0

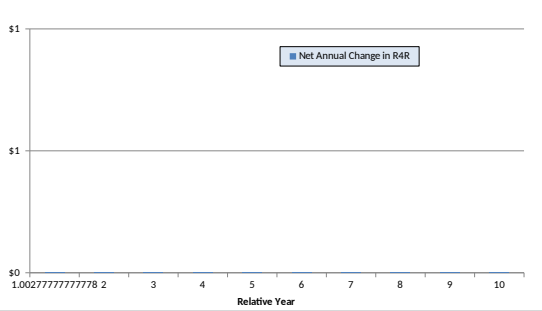
Annual Inflows into the Reserve for Replacements



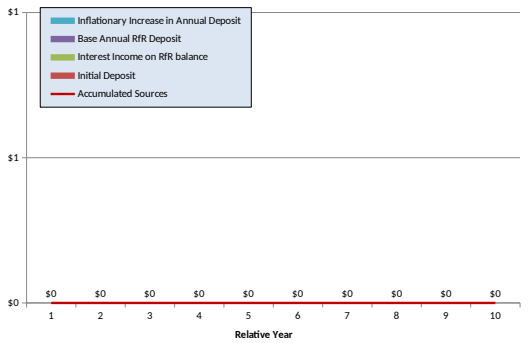
Annual Needs Showing Inflationary Adjustments



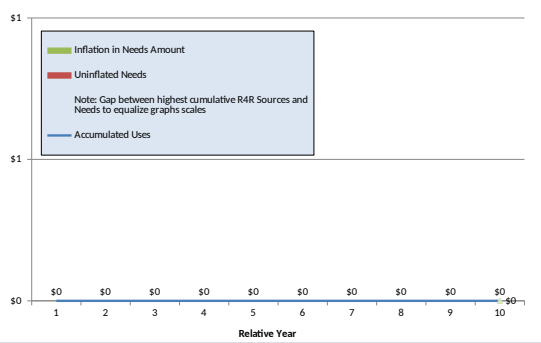
Net Annual Change in R4R



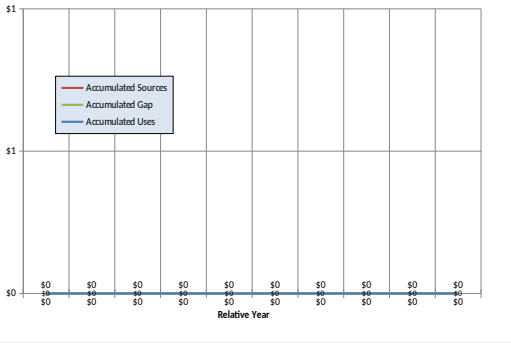
Cumulative Sources for funding the Reserve for Replacements



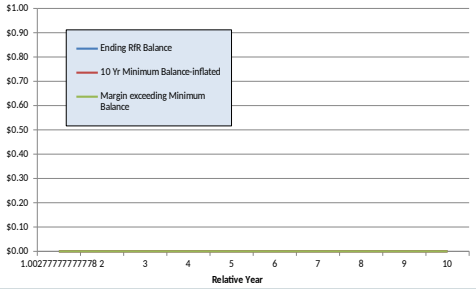
Cumulative Needs withdrawn from the Reserve for Replacements



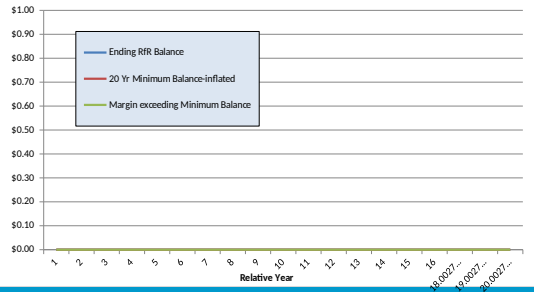
Cumulative Sources Funding the Reserve for Replacements and Cumulative Needs withdrawn from the Reserve for Replacements



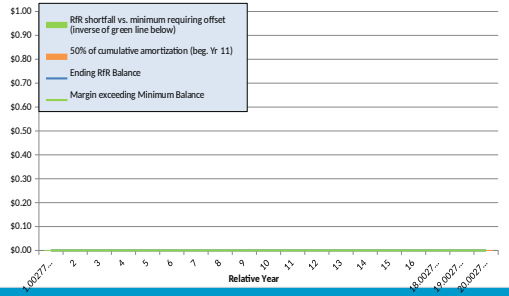
Reserve Balances and the 10-year average inflated minimum requirement



Reserve Balances and the 20-year average inflated minimum requirement



Reserve Balances and the 11th-20th-year 50%-of-paid-down-mortgage-principal offset for projected shortfall vs. required minimum RfR balances



This schedule is to be attached to the Firm Commitment letter

The following amounts and assumptions are incorporated by reference into the terms of the Commitment Letter for the referenced project

Version 1.01

Project Name	0
FHA #	00-000000
Project City	
Project State	
SOA	
Lender	
Commitment letter date	

Initial Deposit to Reserve for Replacements (IDRR)

Initial deposit, including any transferred reserves: $0

Annual Deposit to Reserve for Replacements (ADRR)

Initial ADRR per unit	Number of units
$0	0

Approved annual % rate(s) of change in ADRR:

a. Initial rate of change	0.00%
b. Later years rate begins at year:	0
c. Later years rate of change	0.00%

Relative Year	Initial ADRR per unit x the # of units is the base ADRR below:	Adjusted ADRR based on rate(s) of change:	Adjusted ADRR per month
1	$0	$0	$0.00
2	$0	$0	$0.00
3	$0	$0	$0.00
4	$0	$0	$0.00
5	$0	$0	$0.00
6	$0	$0	$0.00
7	$0	$0	$0.00
8	$0	$0	$0.00
9	$0	$0	$0.00
10	$0	$0	$0.00
Total	$0	$0	

The ADRR may be amended in future years based on HUD review of actual repair and replacement needs and in any event ADRR will be adjusted based on a new capital needs assessment (CNA) which must be completed not later than 10 years after the date of Endorsement/Final Endorsement.

<<< When sheet is unprotected, Click on this row 55 margin + or - sign to show or hide rows 1-54 which include the input cells and structuring results and then click the hyperlink below to

See input, summary and violation status

	Relative Year 1	Relative Year 2	Relative Year 3	Relative Year 4	Relative Year 5	Relative Year 6	Relative Year 7	Relative Year 8	Relative Year 9	Relative Year 10
Year of Deposit or Withdraw	1	2	3	4	5	6	7	8	9	10
Year ending	*12/31/1900*	*12/31/1901*	*12/31/1902*	*12/31/1903*	*12/31/1904*	*12/31/1905*	*12/31/1906*	*12/31/1907*	*12/31/1908*	*12/31/1909*
Initial Deposit	*$0.00*									
RfR Beginning Balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Times Assumed Earnings rate of	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Interest Income on RfR balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
RfR balance before RfR deposit	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Base Annual RfR Deposit	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Times Increase rate on Deposit	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Calculated cumulative inflation	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Inflationary Increase in Annual Deposit	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
RfR Deposit (as inflated)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
RfR balance Available for Needs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal: Increase in RfR balance (Interest + inflated RfR deposit)	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Uninflated Needs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Needs Inflation rate	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Calculated cumulative inflation	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Inflation in Needs Amount	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Inflated Needs (Withdrawal)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ending RfR Balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Lowest RfR balance years 1-10 $0

Lowest RfR balance years 11-20 $0

Note: Highest Annual Withdrawal to equalize Sources and Needs graphs scales

Net Annual Change in RfR balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Minimum Balances Analysis Years 1-10										
Minimum HUD standard (Total needs uninflated/Estimate Period x needs inflation rate)										
10-year period total needs - ten year average	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Needs Inflation rate	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Calculated cumulative inflation (Approx. offsets needed)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Inflation in Needs Amount (Initial dep. $0 / Ann dep. #DIV/0!)	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
10 Yr Minimum Balance-inflated	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Margin exceeding Minimum Balance	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Lowest margin, years 1-10 $0										
Minimum Balance Met-Yrs 1-10 YES (*0 Violations*)	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*
Min. Balance/Mitigation Analysis Years 11-20										
20-year period total needs - 20 year average	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Needs Inflation rate	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Calculated cumulative inflation (Approx. offsets needed)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Inflation in Needs Amount (Initial dep. $0 / Ann dep. #DIV/0!)	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
20 Yr Minimum Balance-inflated	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Margin exceeding Minimum Balance	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Lowest margin, years 11-20 $0										
Minimum Balance Met-Yrs. 11-2 YES (*0 Violations*)	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
If Min. Balance is not met, does principal amortization calculated below mitigate it? N/A	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Loan Amortization Test for Outyear Deficits-Yrs 11-20										
Original Mortgage Amount	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Cumulative Mortgage Payments	*12*	*24*	*36*	*48*	*60*	*72*	*84*	*96*	*108*	*120*
Mortgage Balance End of Period (Apx. offsets needed)	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*
Amount Paid (Initial dep. Err:502 / Ann dep. Err:502)										
Cumulative Paid (formula check)	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*
Mitigant available = 50% of cumulative mortgage principal paid	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*
Margin Exceeding 50% of Amortization Test										
Lowest margin, years 11-20 *Err:502*										
Are Shortfalls <50% of Principal YES (*0 Violations*)	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
App 5.G.C.3.d.(4) *$0*										

Inflation Rate on Deposit

Inflation Rate on Capital Needs

RFRR Deposit / Unit / Year

Inflated Needs / Unit / Year

<<< When sheet is unprotected, Click on this row 55 margin + or - sign to show or hide rows 1-54 which include the input cells and structuring results and then click the hyperlink below to

See input, summary and violation status

Year of Deposit or Withdraw	Relative Year 11	Relative Year 12	Relative Year 13	Relative Year 14	Relative Year 15	Relative Year 16	Relative Year 17	Relative Year 18	Relative Year 19	Relative Year 20	Totals
Year ending	*12/31/1910*	*12/31/1911*	*12/31/1912*	*12/31/1913*	*12/31/1914*	*12/31/1915*	*12/31/1916*	*12/31/1917*	*12/31/1918*	*12/31/1919*	
Initial Deposit											
RfR Beginning Balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
Times Assumed Earnings rate of	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Interest Income on RfR balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
RfR balance before RfR deposit	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
Base Annual RfR Deposit	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00
Times Increase rate on Deposit	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Calculated cumulative inflation	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Inflationary Increase in Annual Deposit	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00
RfR Deposit (as inflated)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
RfR balance Available for Needs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
Subtotal: Increase in RfR balance (Interest + inflated RfR deposit)	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00
Uninflated Needs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0.00
Needs Inflation rate	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Calculated cumulative inflation	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Inflation in Needs Amount	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00
Inflated Needs (Withdrawal)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ending RfR Balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
Lowest RfR balance years 1-10 $0											
Lowest RfR balance years 11-20 $0											
Note: Highest Annual Withdrawal to equalize Sources and Needs graphs sc	*$0.00*										
Net Annual Change in RfR balance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Minimum Balances Analysis Years 1-10

Minimum HUD standard (Total needs uninflated/Estimate Period x needs inflation rate)											
10-year period total needs - ten year average	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	*Not applicable*	
Needs Inflation rate											
Calculated cumulative inflation Approx. offsets needed											
Inflation in Needs Amount Initial dep. $0 / Ann dep. #DIV/0!											
10 Yr Minimum Balance-inflated											
Margin exceeding Minimum Balance											
Lowest margin, years 1-10 $0											
Minimum Balance Met-Yrs 1-10 YES *0 Violations*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	
Min. Balance/Mitigation Analysis Years 11-20										0.00%	
20-year period total needs - 20 year average	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	
Needs Inflation rate	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Calculated cumulative inflation Approx. offsets needed	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	
Inflation in Needs Amount Initial dep. $0 / Ann dep. #DIV/0!	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	
20 Yr Minimum Balance-inflated	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Margin exceeding Minimum Balance	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	
Lowest margin, years 11-20 $0											
Minimum Balance Met-Yrs. 11-2 YES *0 Violations*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	*OK*	
If Min. Balance is not met, does principal amortization calculated below mitigate it? N/A	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	Err:502	
Loan Amortization Test for Outyear Deficits-Yrs 11-20											
Original Mortgage Amount	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	
Cumulative Mortgage Payments	*132*	*144*	*156*	*168*	*180*	*192*	*204*	*216*	*228*	*240*	*$2,520.67*
Mortgage Balance End of Period Apx. offsets needed	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	
Amount Paid Initial dep. Err:502 / Ann dep. Err:502											
Cumulative Paid (formula check)	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	
Mitigant available = 50% of cumulative mortgage principal paid	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	
Margin Exceeding 50% of Amortization Test	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	
Lowest margin, years 11-20 *Err:502*											
Are Shortfalls <50% of Principal YES *0 Violations*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	*Err:502*	
App 5.G.C.3.d.(4) *$0*											

Inflation Rate on Deposit
Inflation Rate on Capital Needs
RFRR Deposit / Unit / Year
Inflated Needs / Unit / Year