

# Planning, Planning, & Planning.

Presented to: 2012 AAND and SDAMA Airports Conference

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Date: October 10 & 11, 2012

AAND and SDAMA 2012 Airports Fall Seminar  
October 10 & 11, 2012



Federal Aviation  
Administration



# Planning

## Why plan?



# Planning

## Why?

- **\$150,000.00 Non Primary entitlements / year**
- **20 year life span of pavements and structures**

**\$3,000,000.00**

**will be received by the airport over the twenty year period.**



# Planning Why?

<b>Runway Rehabilitation:</b>	<b>\$1,500,000.00</b>
<b>Taxiway Rehabilitation:</b>	<b>\$750,000.00</b>
<b>Apron Rehabilitation:</b>	<b>\$1,500,000.00</b>
<b>Total:</b>	<b>\$3,750,000.00</b>
<b>20 years of NP entitlement:</b>	<b>\$3,000,000.00</b>
<b>Surplus / Deficit:</b>	<b>-\$750,000.00</b>



# Planning

## Why?

- **Due to lots of demand for funding, the FAA usually only gets funding for high priority items such as runways.**
- **Before the FAA provides discretionary funding, an airport must use its entitlements for the highest priority project.**
- **Very few airports get discretionary funding for high priority projects like runways and low priority projects like aprons.**



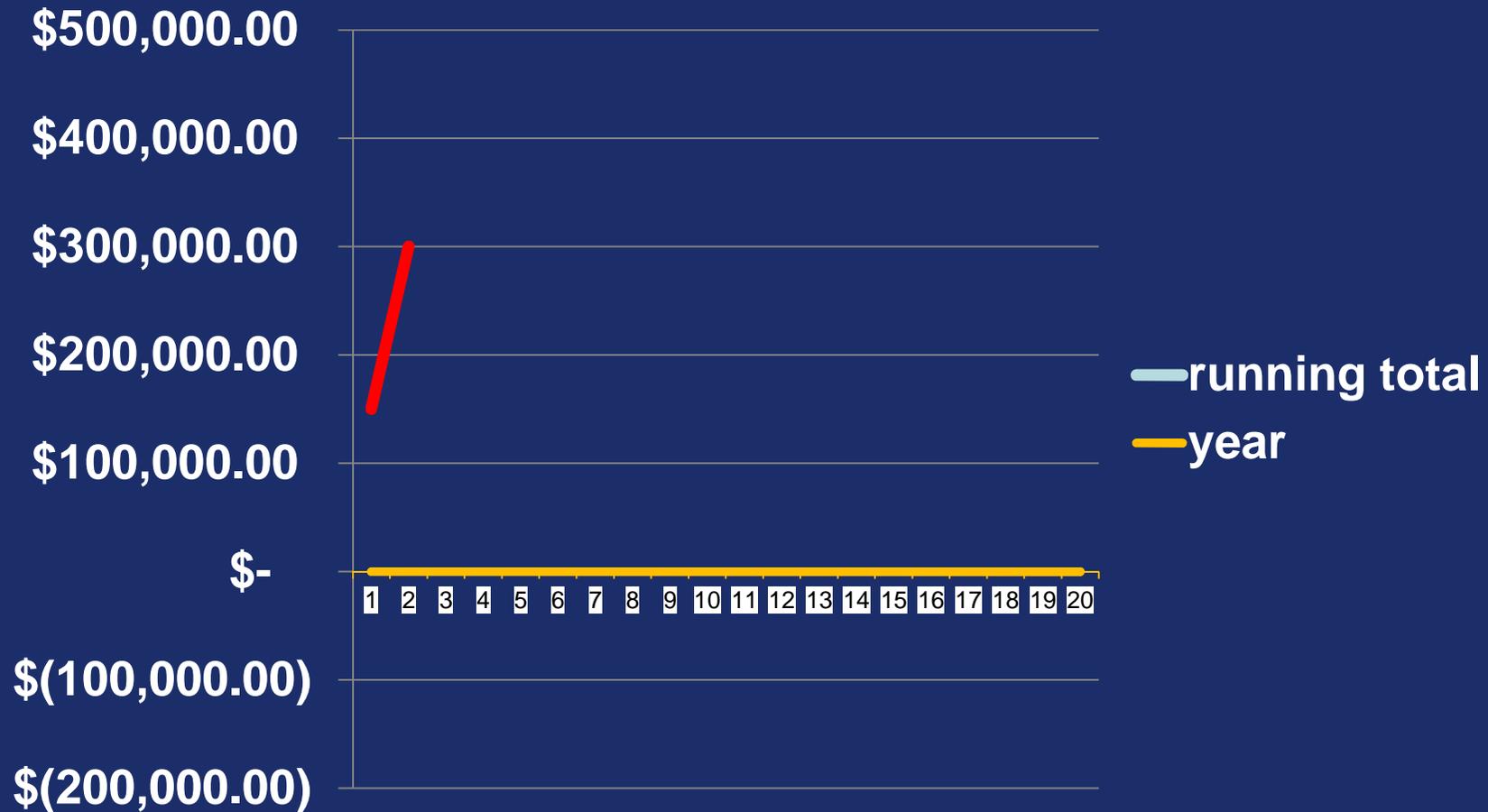
# Planning

## Why?

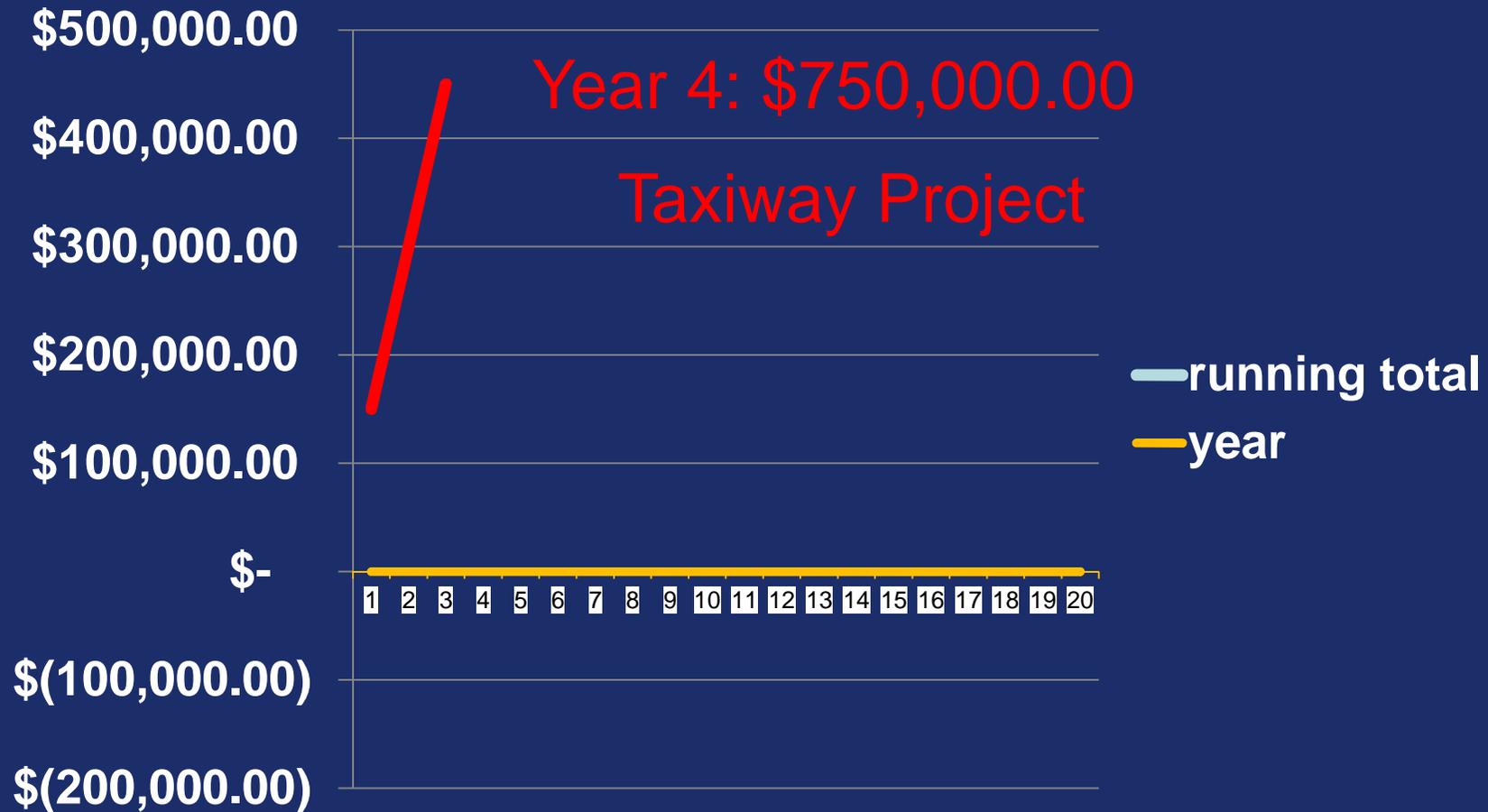
- **State apportionment can be used to fund low priority projects like aprons when entitlements and discretionary are used on high priority projects.**
- **There is not much state apportionment available.**
- **Airports typically will need to stagger projects to provide enough funding.**



# Planning Why?



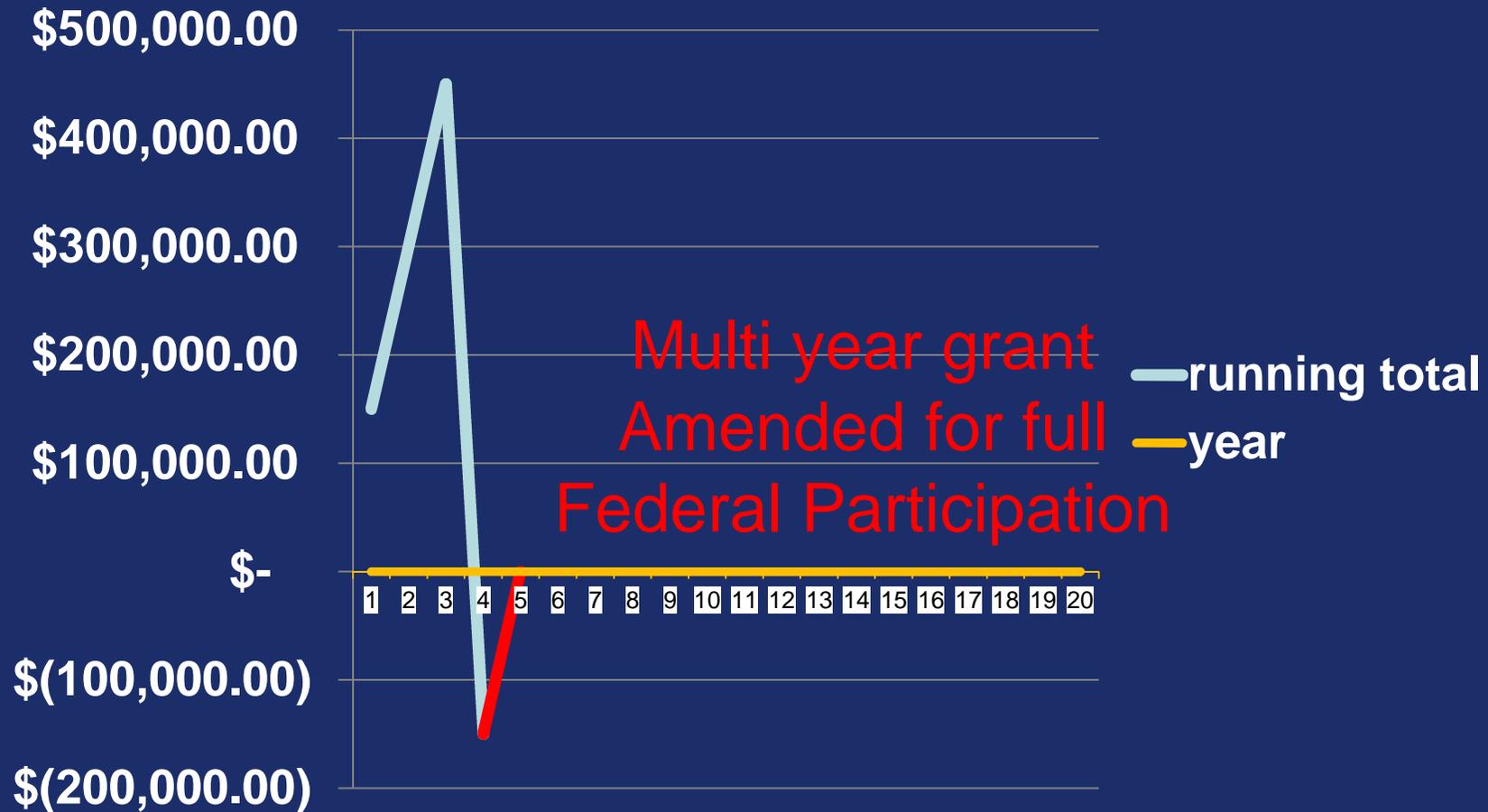
# Planning Why?



# Planning Why?



# Planning Why?



# Planning Why?



# Planning Why?



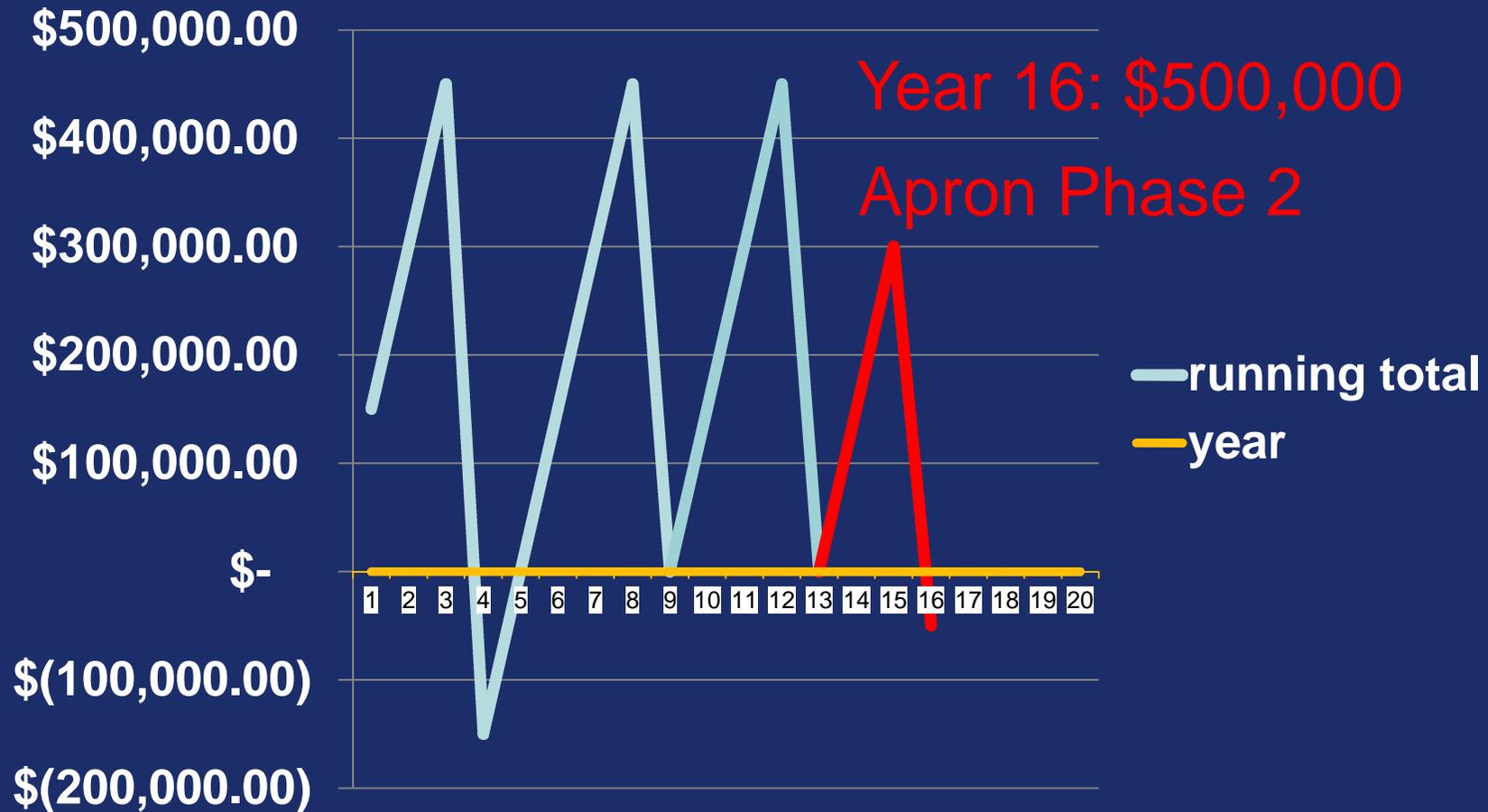
# Planning Why?



# Planning Why?



# Planning Why?



# Planning Why?



# Planning

## CIP

- **So now you have a plan, what do you do?**
- **Submit your plan to SDDOT / NDAC.**
- **The SDDOT / NDAC incorporates your plan in to the state plan.**
- **The state plan is submitted to the FAA in the Capital Improvement Plan (CIP).**



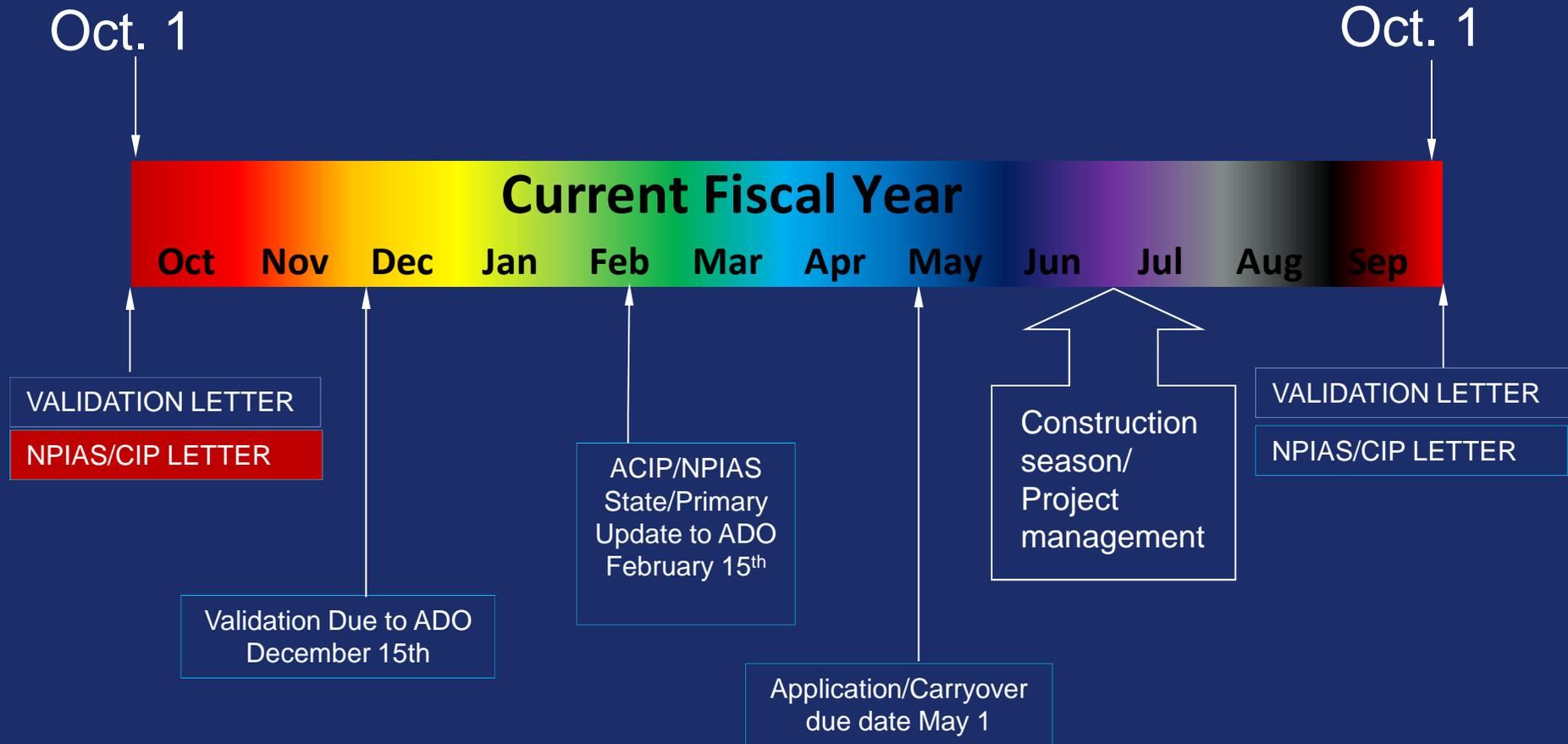
# 2013 Grant Program

- **The CIP for 2013 has already been submitted.**
- **Validation letters have been sent out requesting validations to be sent in to our office.**

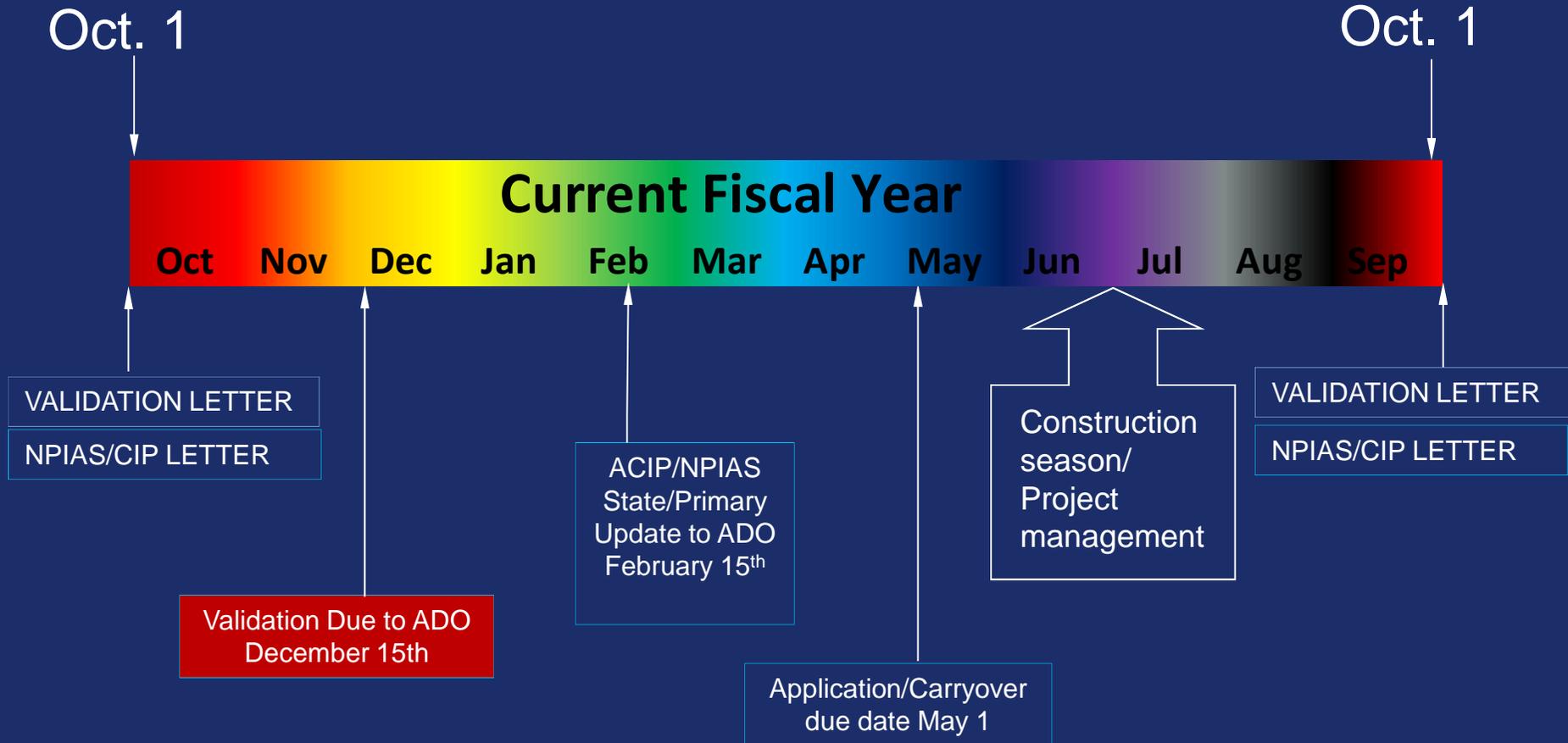




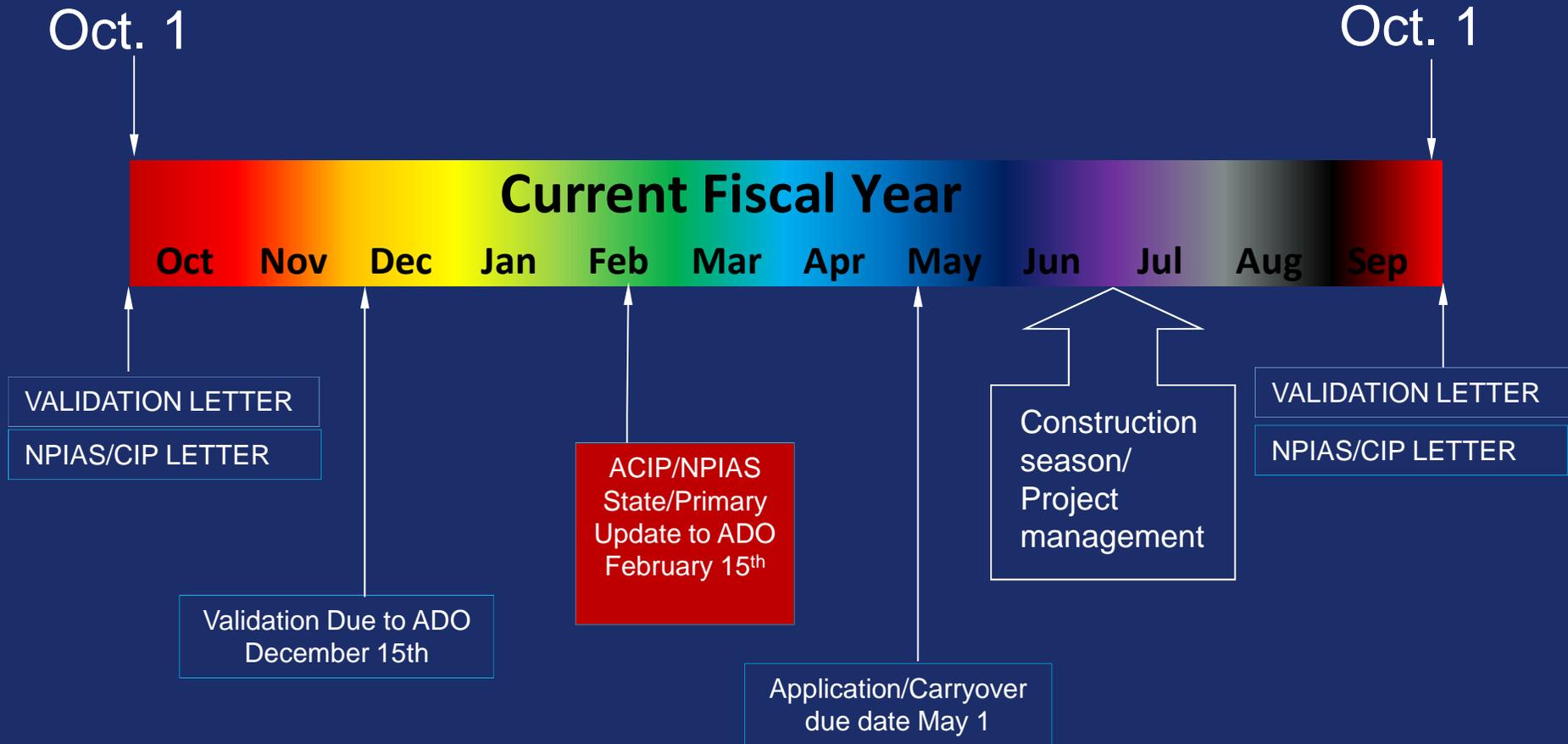
# Project Timeline



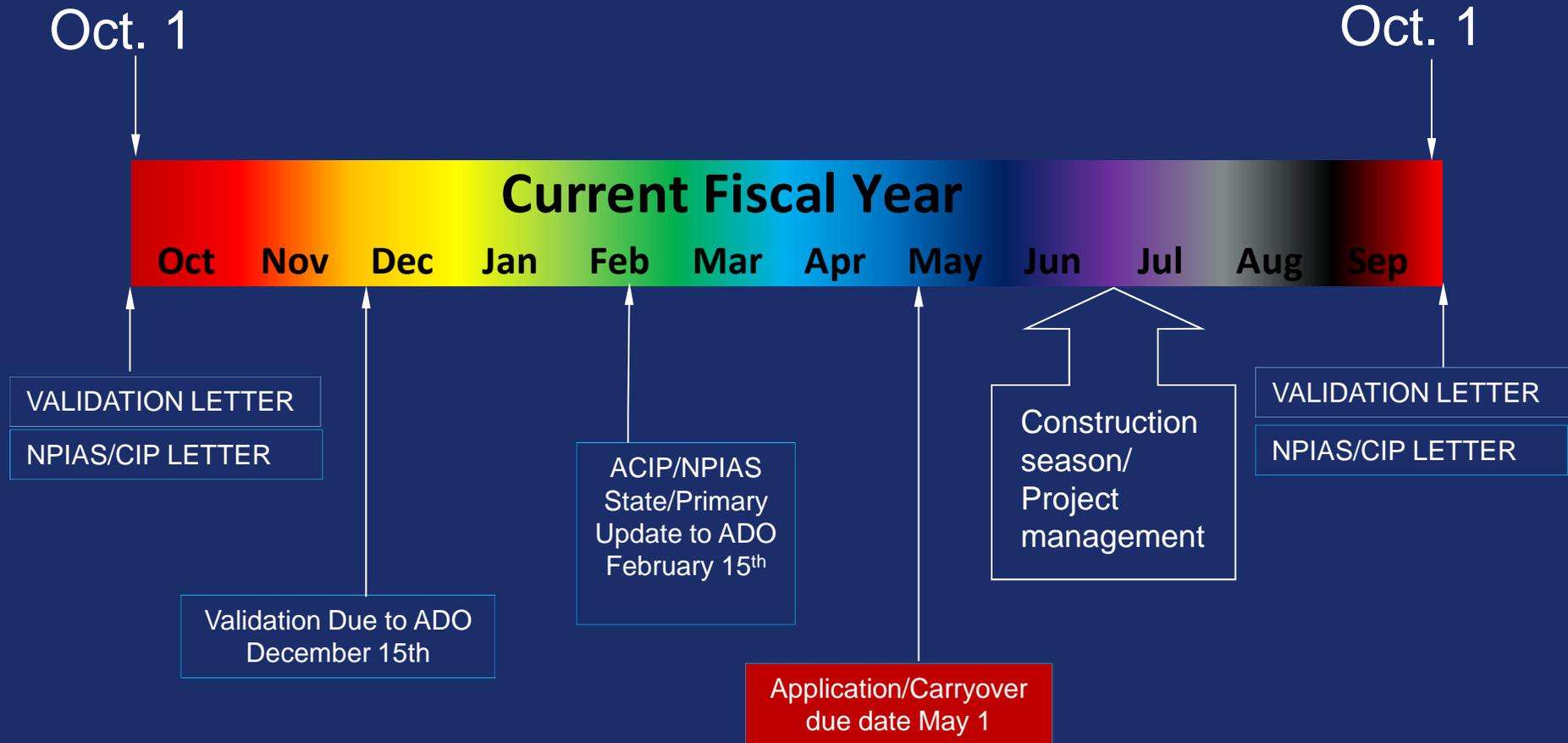
# Project Timeline



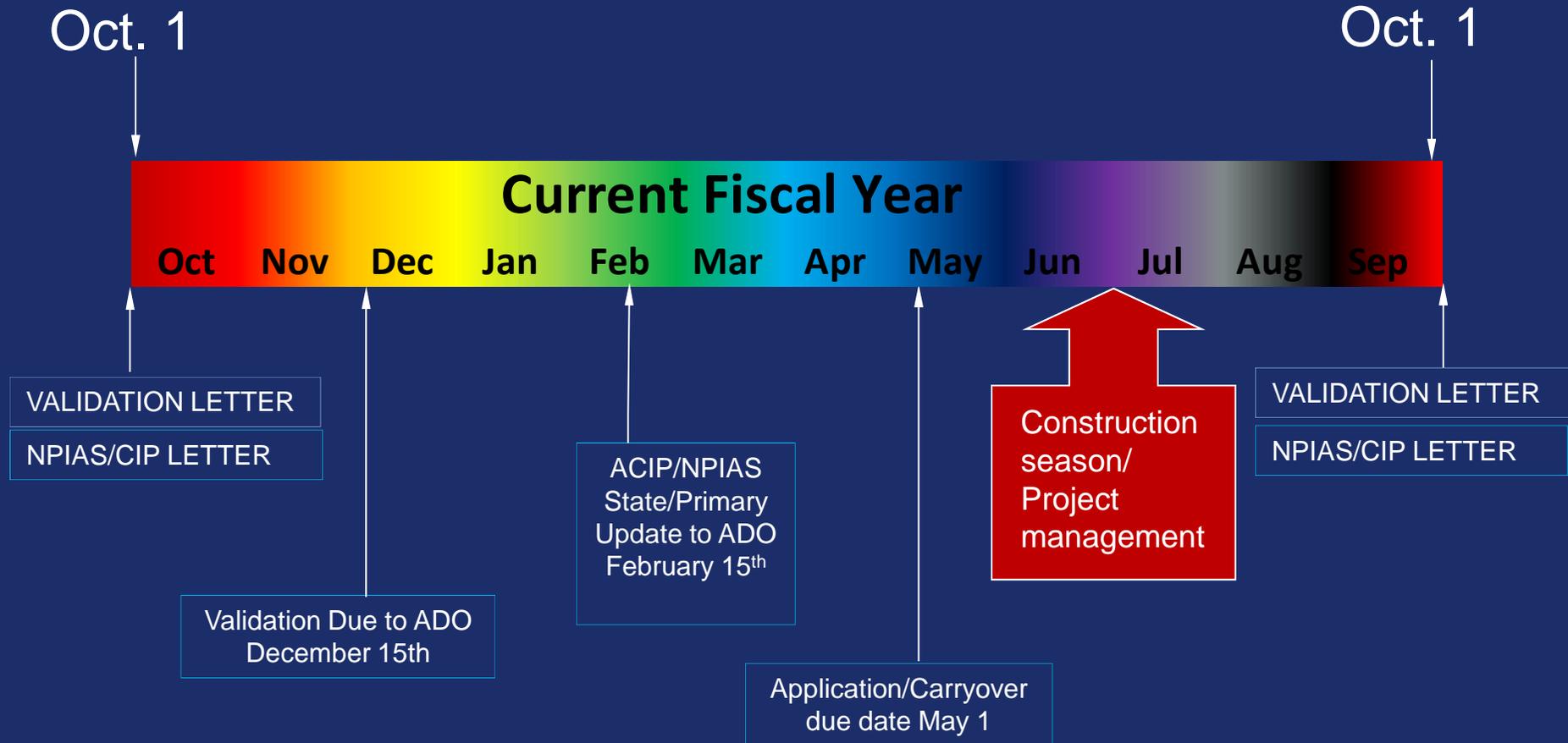
# Project Timeline



# Project Timeline



# Project Timeline





# Project Timeline

- **This timeline is for simple projects. Additional time is necessary if a project:**
  - Is requesting discretionary
  - Is impacting an approach
  - Does not have an approved ALP / master plan
  - Is impacting FAA owned navigational equipment
  - Requires an Environmental Assessment or Environmental Impact Statement
  - Are required to have DBE goals
  - Requires a cost benefit analysis



# Discretionary Timeline



ADO DISCRETIONARY DECISIONS FOR THE NEXT FISCAL YEAR. PROJECT MUST BE JUSTIFIED AND ENVIRONMENTAL NEEDS TO BE COMPLETE

DISCRETIONARY UPDATE



VALIDATION LETTER  
NPIAS/CIP LETTER

Validation Due to ADO

ACIP/NPIAS State/Primary Update to ADO

Construction season/Project management

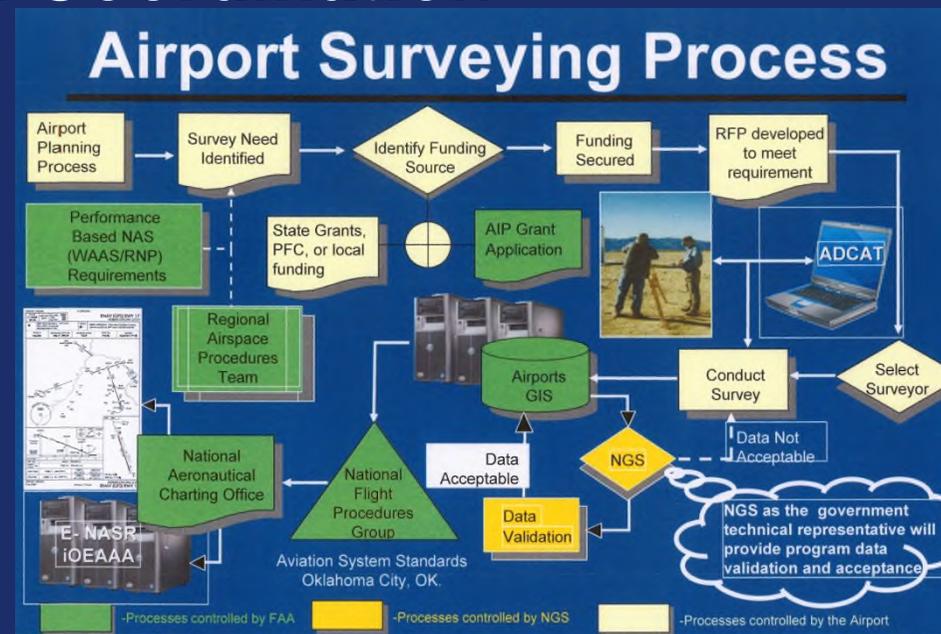
VALIDATION LETTER  
NPIAS/CIP LETTER

Application/Carryover due date



# Items needing to be initiated 2 ½ years prior to the grant.

- Airport Layout Plan
- Reimbursable Agreements
- Approach Coordination



# Items needing to be submitted 6 months prior to the grant.

- **Cost Benefit Analysis**
  - Capacity
  - NAVAIDs
    - AWOS



# Items needing to be submitted 90 days prior to the grant.

- **Modifications to Standards**
- **Passenger Terminal Plan**
- **Proration Documentation**



# Items needing to be submitted 30 days prior to the grant.

- **Life cycle costs**
  - Concrete versus asphalt
  - LED lights
- **Force Account**



# Items needing to be submitted with the validation (usually mid December)

- **Project Validation Worksheet**
- **Application Sketch**
- **Justification**
- **Cost Estimate**
- **Construction Safety/Phasing Plan**
- **FAA Form 7460-1**
- **PAPI / REIL Forms**
- **Environmental Documentation**
- **Business Plan**



# Grant Checklist

**Federal Funding Checklist**  
**Bismarck Airports District Office**  
(COMPLETE ONE CHECKLIST PER GRANT)

AIRPORT NAME: \_\_\_\_\_ DATE PREPARED: \_\_\_\_\_

TAX ID NUMBER \_\_\_\_\_ DUNS NUMBER \_\_\_\_\_

GRANT DESCRIPTION:  
 \_\_\_\_\_

PREPARED BY: \_\_\_\_\_ (Name) \_\_\_\_\_ (Title)

SIGNED: \_\_\_\_\_

Ref.	Yes	No	N/A	Comments Attached
<b>Items initiated 2 1/2 years prior to grant:</b>				
A.				Reimbursable Agreement
B.				Approach Coordination
<b>For discretionary requests, items to be complete by May 1<sup>st</sup> of previous Federal fiscal year:</b>				
C.				Environmental Documentation
D.				Airport Layout Plan
<b>Items to have been submitted to AGL Civil Rights prior to August 1<sup>st</sup> of the previous fiscal year:</b>				
E.				DRP Application
<b>Items to have been submitted 6 months prior to grant application:</b>				
F.				Cost Benefit
<b>Items to have been submitted 90 days prior to grant application</b>				
G.				Modification to Standards
H.				Passenger Terminal Plan
I.				Proration Documentation
<b>Items to have been submitted 30 days prior to grant application</b>				
J.				Life-Cycle Costs
K.				Force Account
<b>Items submitted with the project validation (usually mid December):</b>				
L.				Project Validation Worksheet
3.				Application Sketch
4.				Justification
M.				Cost Estimate
N.				Construction Safety/Phasing Plan
O.				FAA Form 7460-1
P.				PAP/REIL Forms
Q.				Environmental Documentation
R.				Business Plan
<b>ITEMS REQUIRED WITH APPLICATION:</b>				
1.				Standard Form 424
2.				Cost Summary
3.				Application Sketch
4.				Justification
5.				Photos
6.				Bid Tabs/Solicitations/Engineering Contracts
7.				Construction Management Plan
8.				Buy American Waiver
9.				Economic Necessity Letter
10.				Central Contractor Registration (CCR)

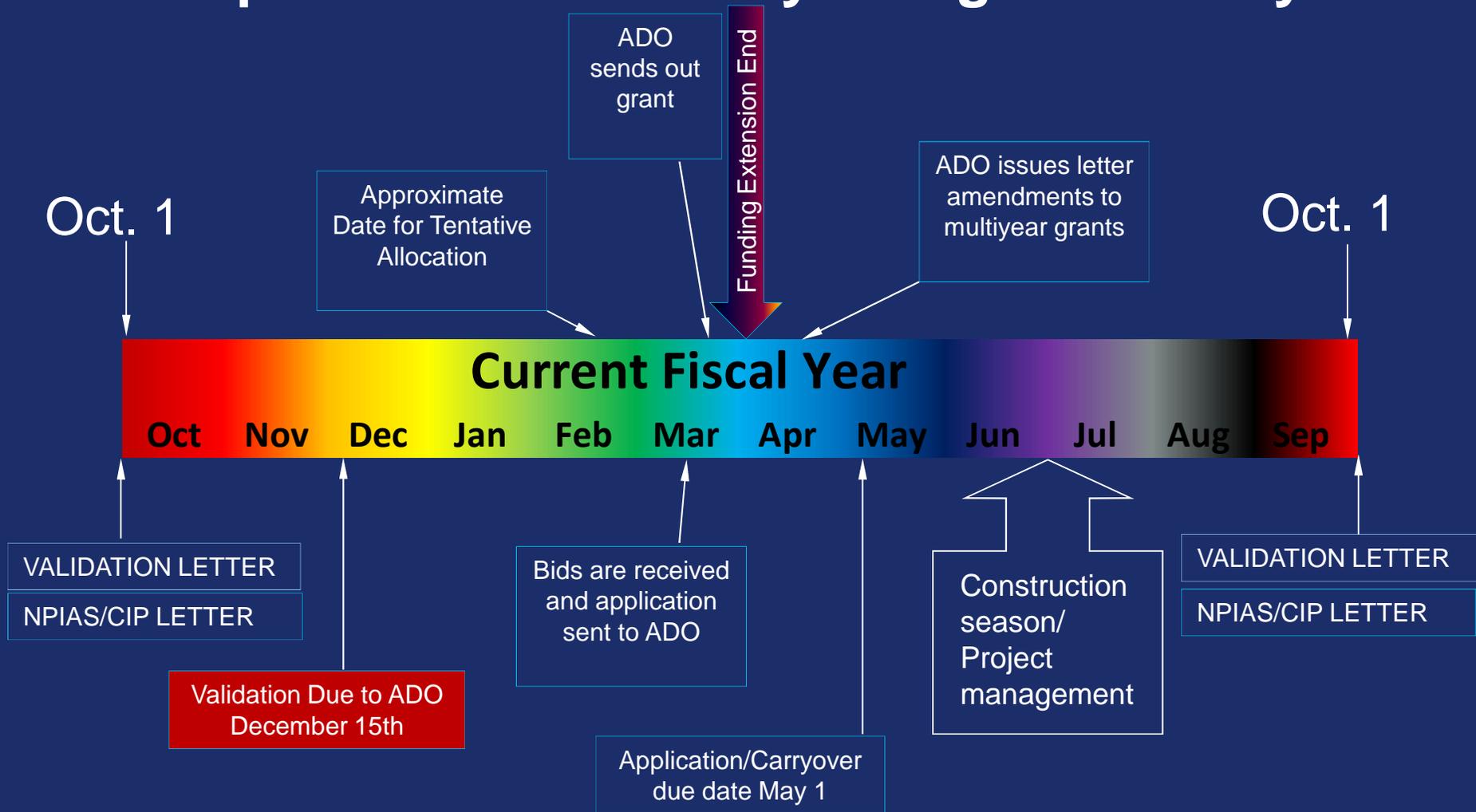
The purpose of this checklist is to identify some of the requirements and considerations associated with requesting Airport Improvement Program (AIP) funds. Airport Sponsors should read and consider each of the items carefully. Some of the items can be answered by simply checking the "Yes" and "No" boxes while others require providing additional information as part of the airport's request for AIP funds.

April 2011



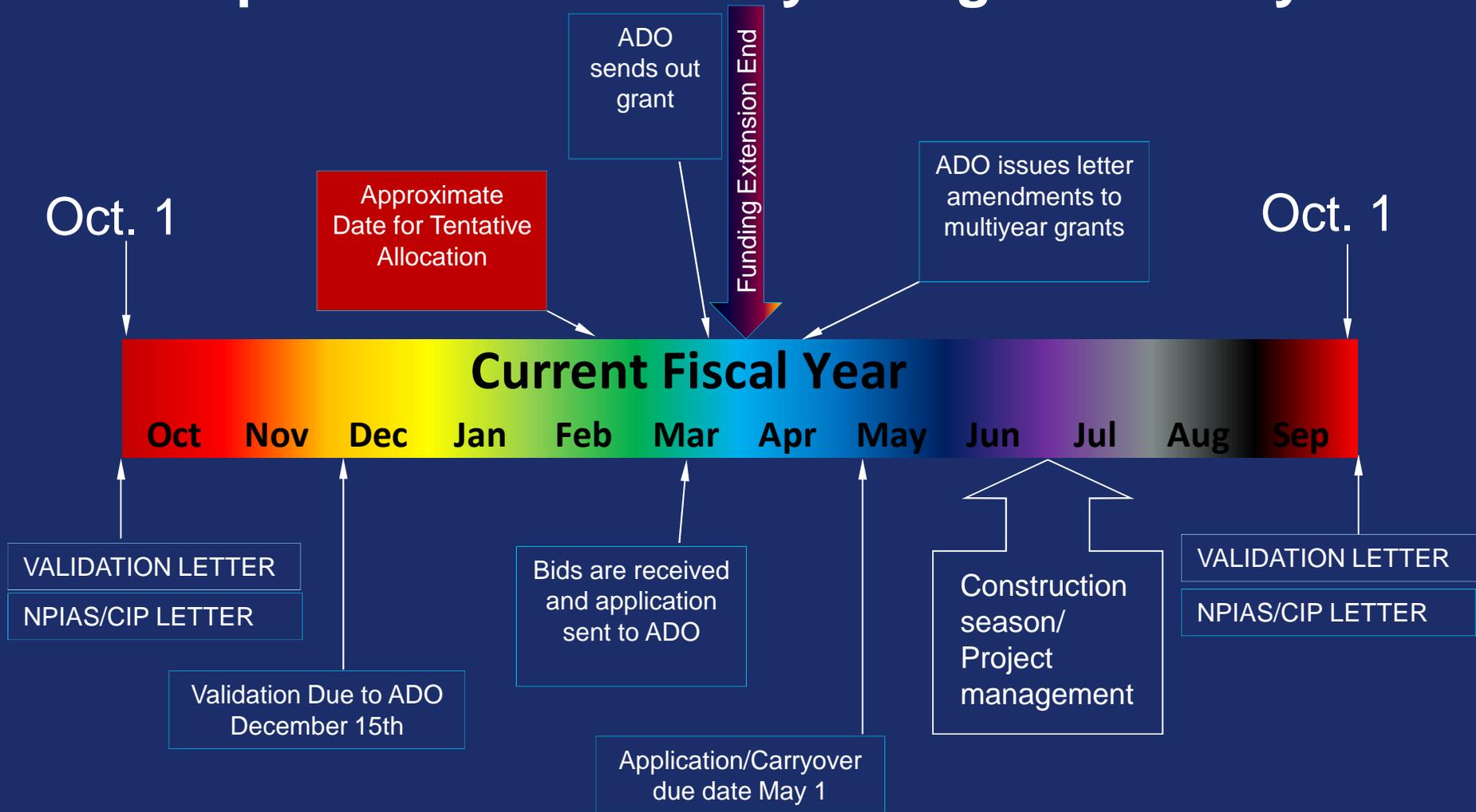
# Project Timeline 2013

## Split Year with Multi-yearing Possibility



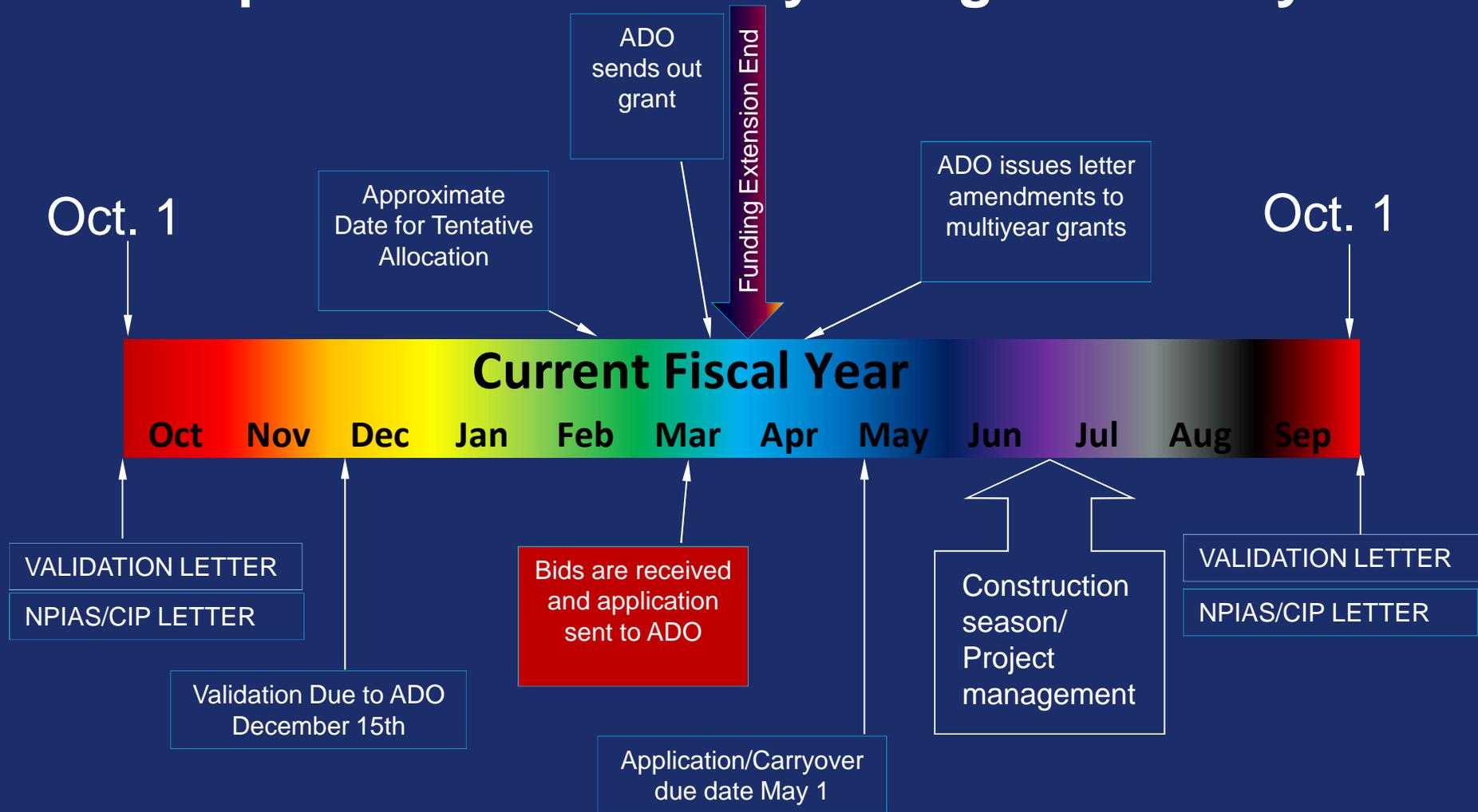
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## Split Year with Multi-yearing Possibility



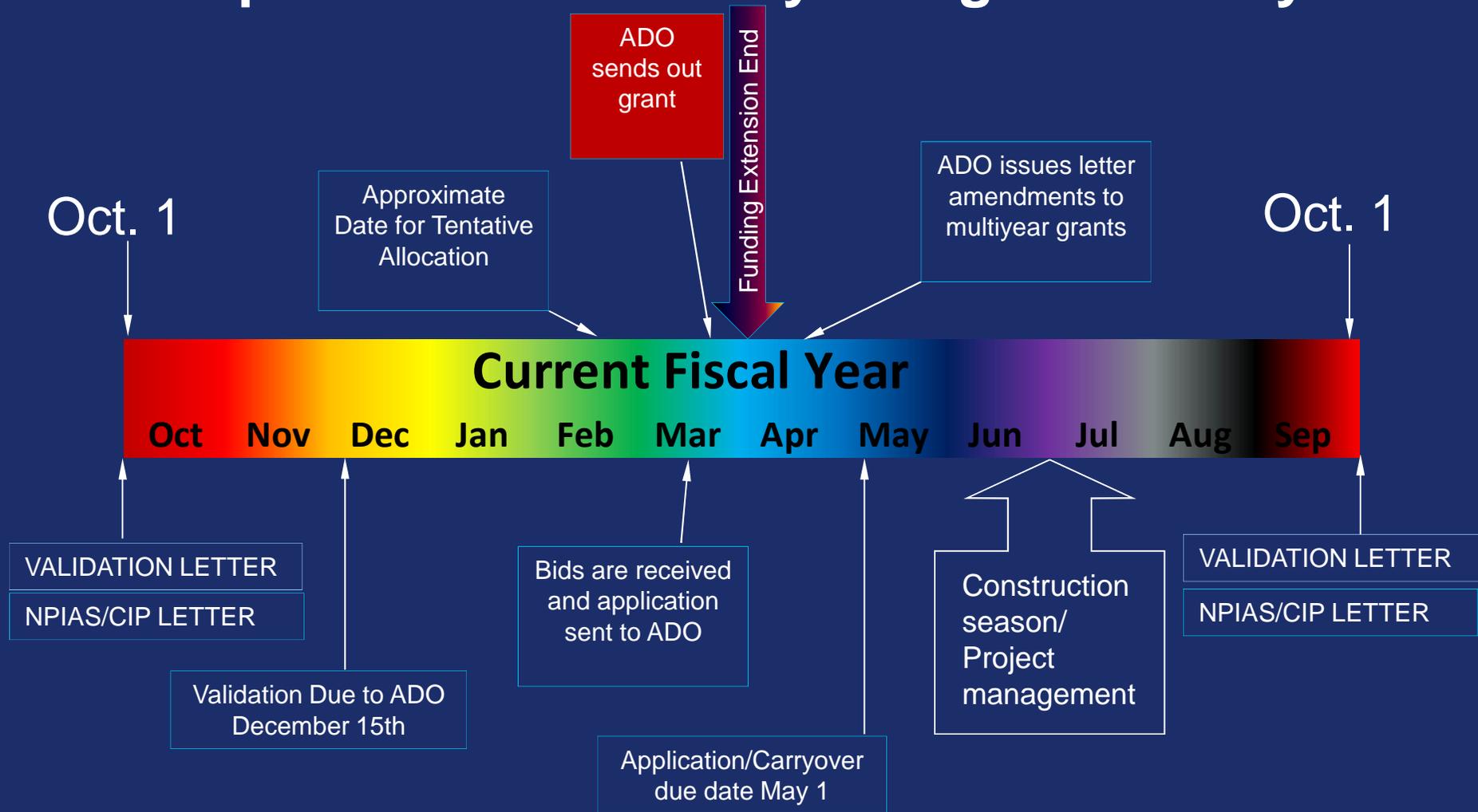
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## Split Year with Multi-yearing Possibility



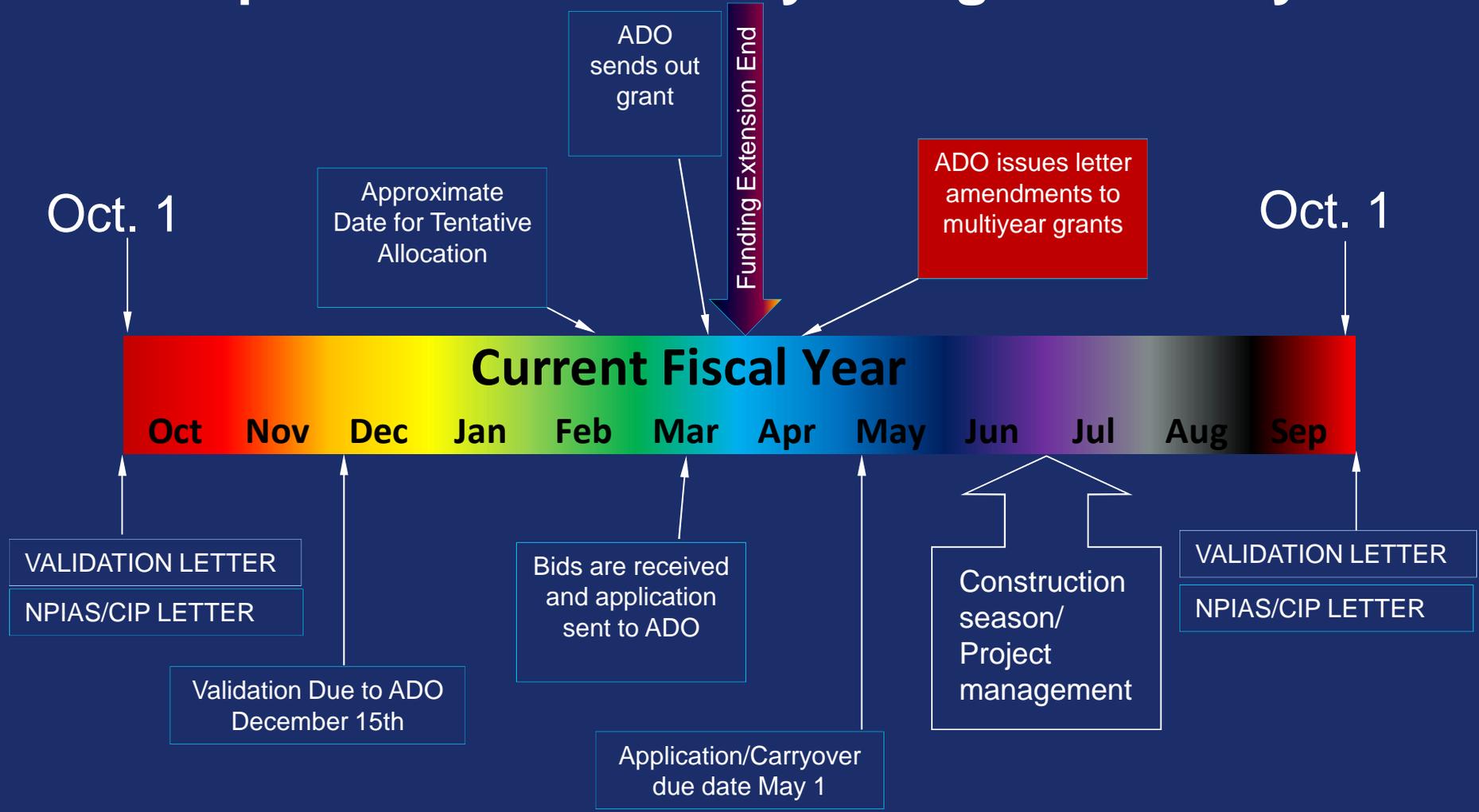
# Project Timeline 2013

## Split Year with Multi-yearing Possibility



# Project Timeline 2013

## Split Year with Multi-yearing Possibility



# Project Timeline 2013

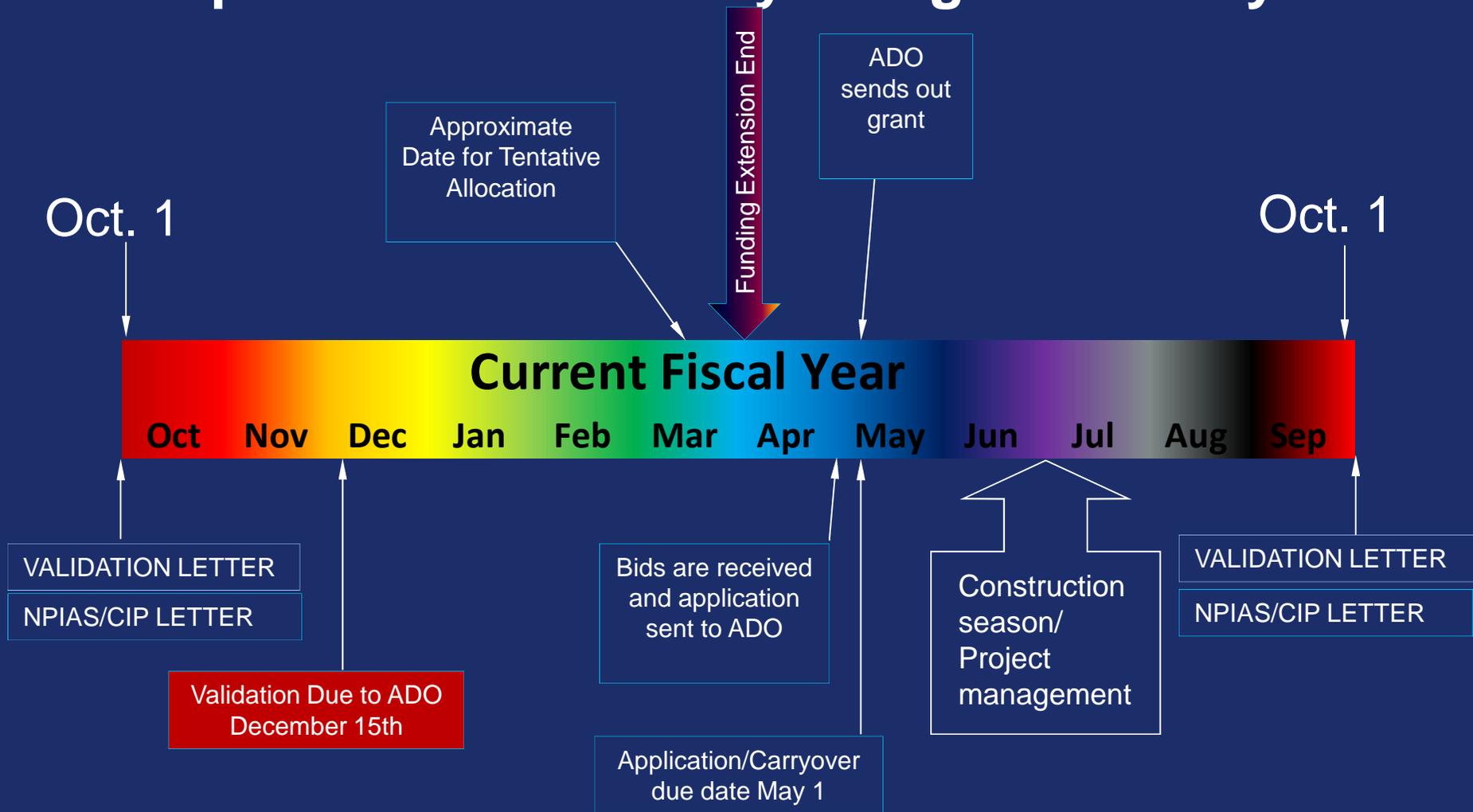
## Split Year with Multi yearing Possibility

- **It is unknown when the ADO will get approval to send out Tentative Allocation Letters.**
- **If approval of Tentative Allocation is late, there may not be enough time to bid the project and get a grant application submitted and grant written and approved before the end of March Deadline**



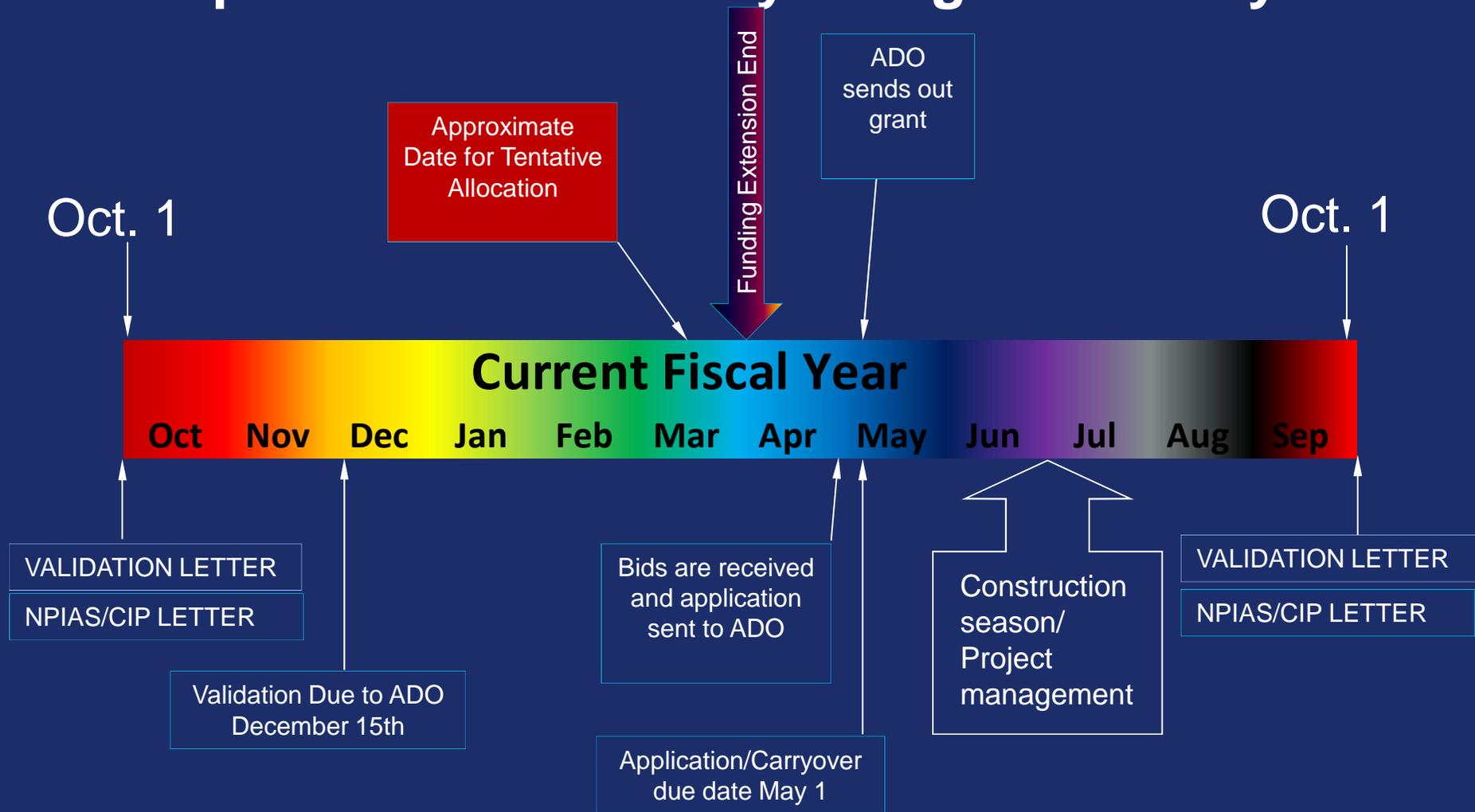
# Project Timeline 2013

## Split Year with Multi-yearing Possibility 2



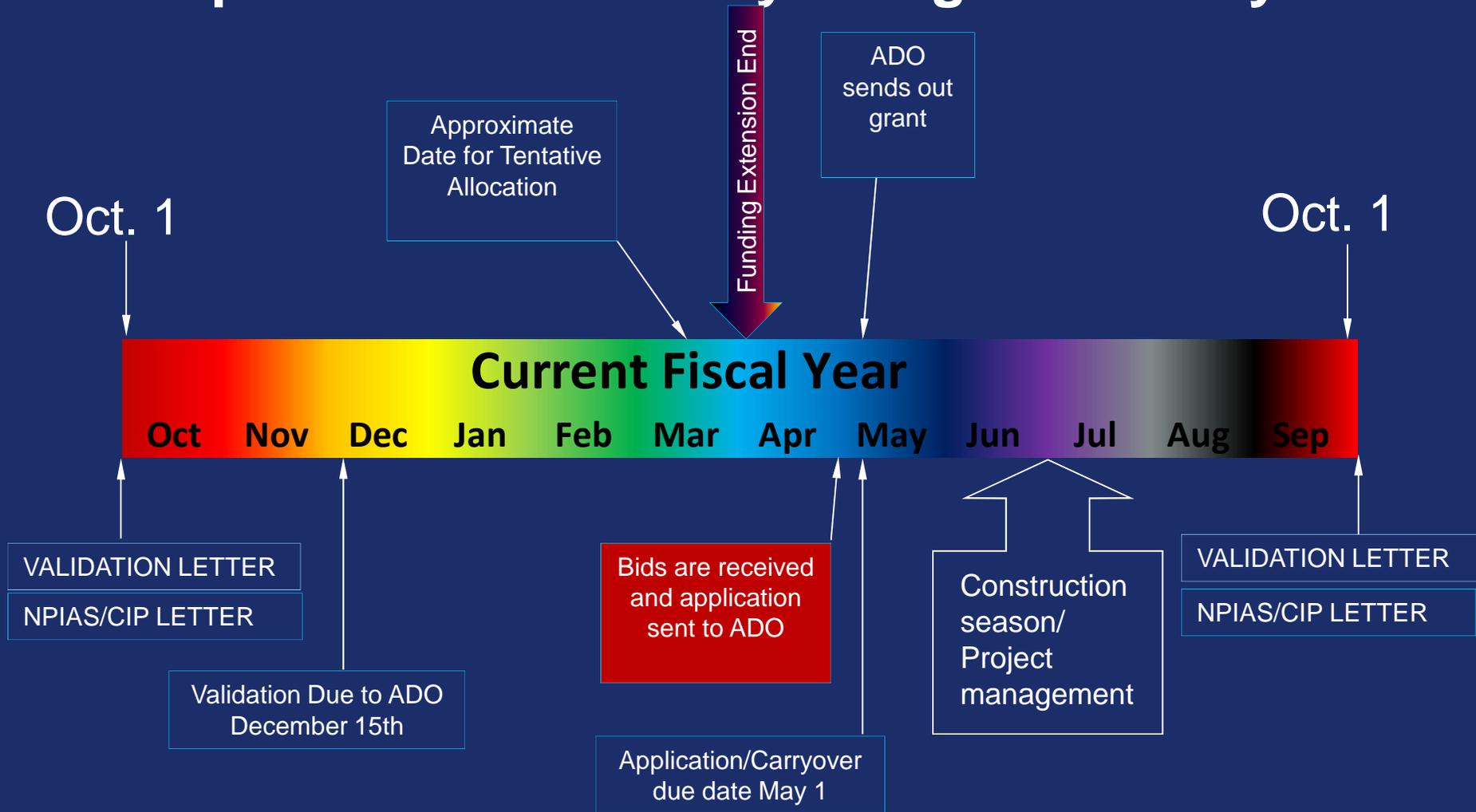
# Project Timeline 2013

## Split Year with Multi-yearing Possibility 2



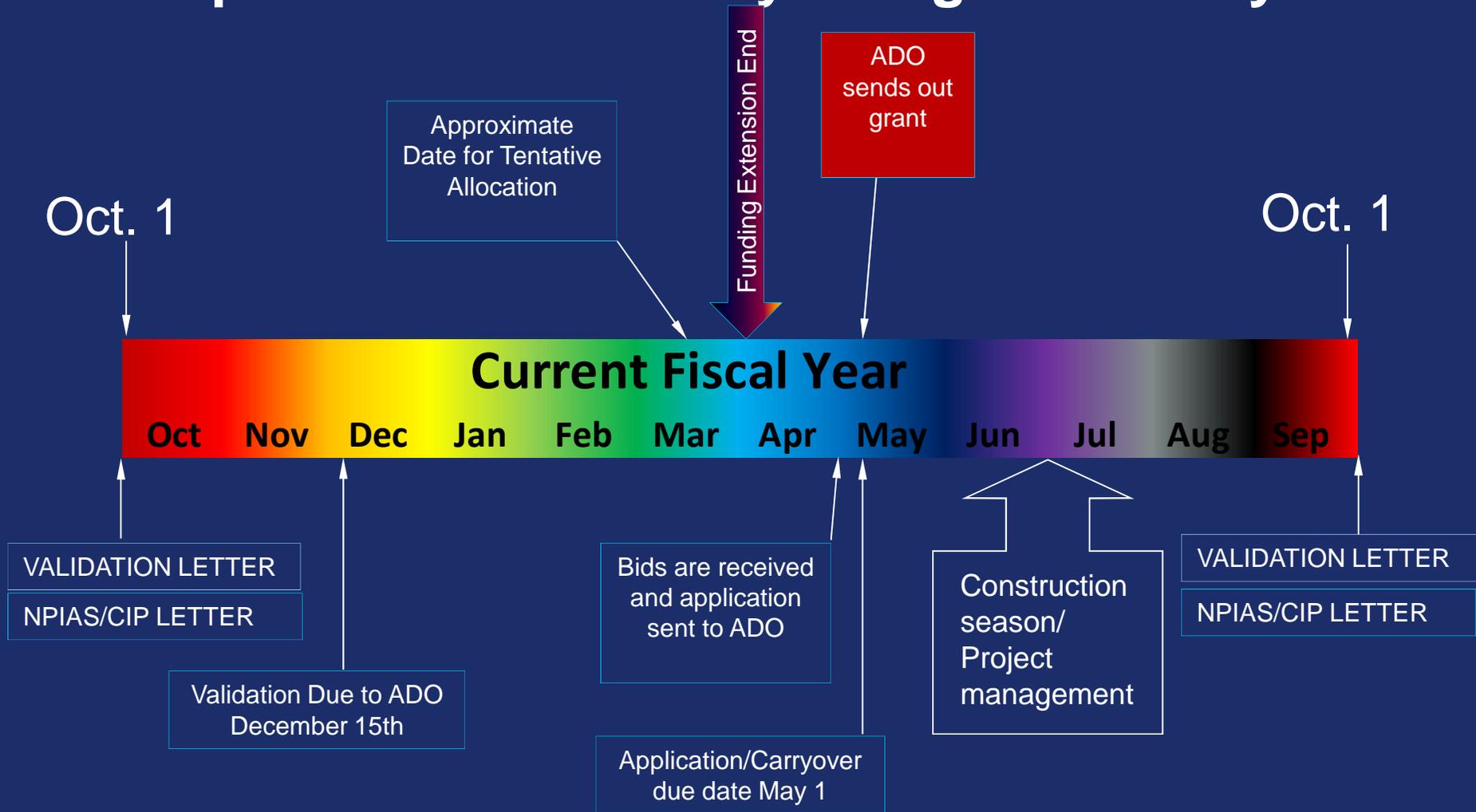
# Project Timeline 2013

## Split Year with Multi-yearing Possibility 2



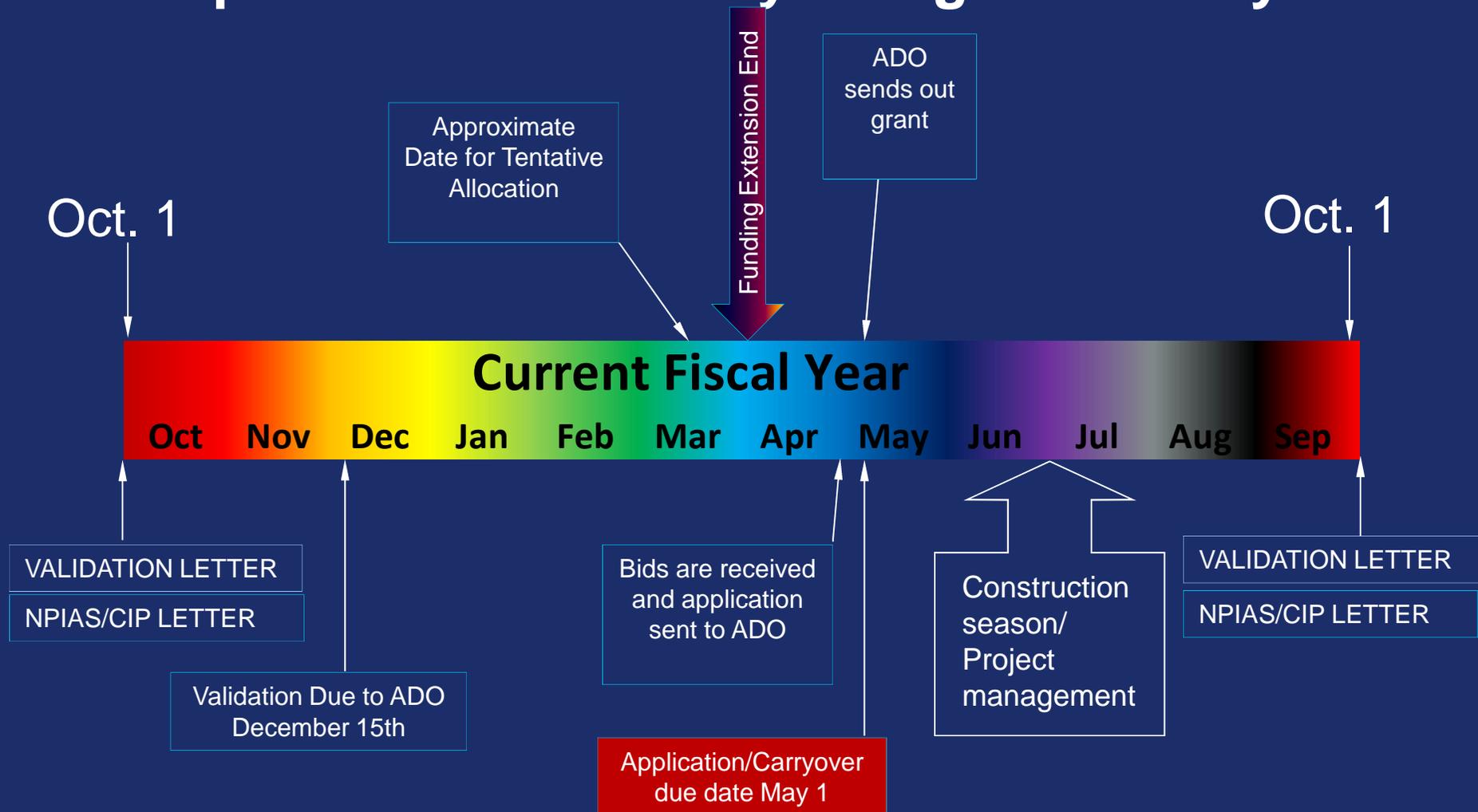
# Project Timeline 2013

## Split Year with Multi-yearing Possibility 2



# Project Timeline 2013

## Split Year with Multi-yearing Possibility 2



# Planning

## Airport Design Standards

- **A completely revised and updated Advisory Circular 150/5300-13A Airport Design was signed on September 28, 2012.**
- **All new projects will need to comply with the new standards.**



# Planning

## Airport Design Standards

### Principle changes to Airport Design:

#### 1. New definitions:

- a) Runway Design Code (RDC)
- b) Runway Reference Code (RRC)
- c) Taxiway Design Group (TDG)

#### 2. More discussion on Declared Distances

#### 3. Updated Runway Protection Zone (RPZ) standards



# Planning

## Airport Design Standards

### Principle changes to Airport Design:

4. **Guidance for intersecting and non-intersecting runways.**
5. **Discussion on runway incursion prevention.**
6. **Design tables have been consolidated into one interactive table.**
7. **A number of appendices are incorporated into the main document.**
8. **The aircraft characteristics database was updated.**



# Planning

## Airport Design Standards

The interactive Runway Design Form allows you to select the design aircraft and it will select the design standards for that aircraft.

AC 150/5300-13A 9/28/2012

**Table 3-8. Runway design standards matrix**

**Runway Design Code (RDC):**  
(select RDC from pull-down menu at right)

**ITEM**

**Runway Design**

- Runway Length
- Runway Width
- Shoulder Width
- Blast Pad Width
- Blast Pad Length
- Crosswind Component

**Runway Protection**

**Runway Safety Area (RSA)**

- Length beyond departure end <sup>10</sup>
- Length prior to threshold
- Width

**Runway Object Free Area (ROFA)**

- Length beyond runway end
- Length prior to threshold
- Width

**Runway Obstacle Free Zone (ROFZ)**

- Length
- Width

**Precision Obstacle Free Zone (POFZ)**

- Length
- Width

**Approach Runway Protection Zone (RPZ)**

- Length
- Inner Width
- Outer Width
- Acres

**Departure Runway Protection Zone (RPZ)**

- Length
- Inner Width
- Outer Width
- Acres

**Runway Separation**

*Runway centerline to:*

- Parallel runway centerline
- Holding position <sup>13</sup>
- Parallel Taxiway/Taxilane centerline <sup>2,4</sup>
- Aircraft parking area
- Helicopter touchdown pad

A - I Small Aircraft

A - I Small Aircraft

A - I

A - II

A - III

A - IV

B - I Small Aircraft

B - I

	10.0 knots	10.0 knots	10.0 knots	10.0 knots
--	------------	------------	------------	------------

	10.0 knots	10.0 knots	10.0 knots	10.0 knots
R	240 ft	240 ft	240 ft	600 ft
P	240 ft	240 ft	240 ft	600 ft
C	120 ft	120 ft	120 ft	300 ft
R	240 ft	240 ft	240 ft	600 ft
P	240 ft	240 ft	240 ft	600 ft
Q	250 ft	250 ft	250 ft	800 ft
Refer to paragraph 308				
Refer to paragraph 308				
	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
L	1000 ft	1000 ft	1700 ft	2500 ft
U	250 ft	250 ft	1000 ft	1000 ft
V	450 ft	450 ft	1510 ft	1750 ft
	8.035	8.035	48.978	79.000
L	1000 ft	1000 ft	1000 ft	1000 ft
U	250 ft	250 ft	250 ft	250 ft
V	450 ft	450 ft	450 ft	450 ft
	8.035	8.035	8.035	8.035
Refer to paragraph 316				
H	125 ft	125 ft	125 ft	175 ft
D	150 ft	150 ft	150 ft	200 ft
G	125 ft	125 ft	125 ft	400 ft
	N/A	N/A	N/A	N/A

Notes:

1. Appendix 7 contains non-interactive tables for all RDCs.
2. Values in the table are rounded to the nearest foot. 1 foot = 0.305 meters.

94

Interactive Form



# Planning

## Airport Design Standards

- **Turf runways are to be increased in length by 20 percent compared to paved runways for the same type of aircraft.**
- **Taxiway fillet design has changed.**



# Planning

## Airport Design Standards

Turnarounds have changed:

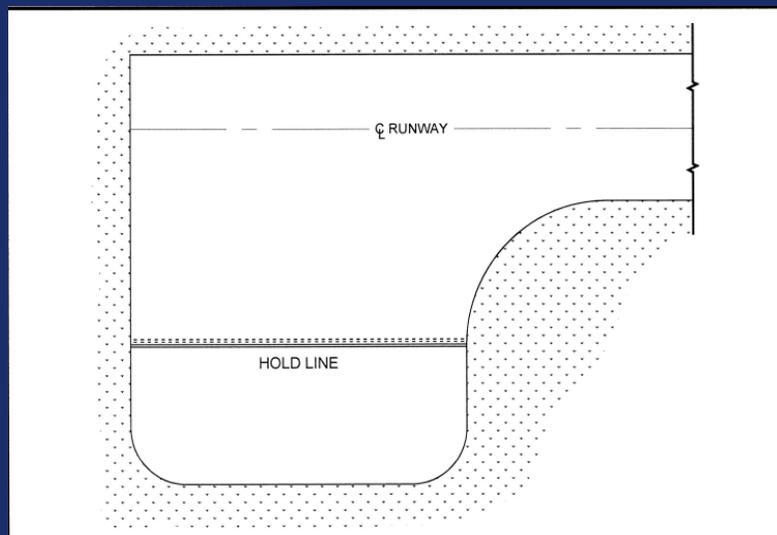


Figure 4-30. Poor holding bay design

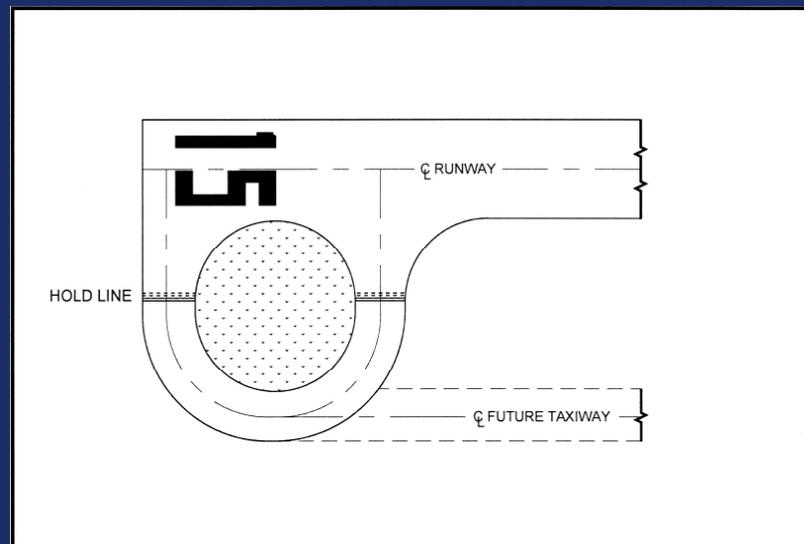


Figure 4-31. Taxiway turnaround

# Planning

## Airport Growth

- **Does your airport have a plan to address growth?**
- **Most of the Dakota airports are now experiencing growth.**
- **Airports should have a plan to address any future growth that may occur.**



# Planning

## Airport Growth

- **Does your airport:**
  1. Have a need for an runway extension?
  2. Need a crosswind runway?
  3. Approaches?
  4. Terminal building?
  5. Fueling Facility?
  6. Tie downs?
  7. Does your airport need FBO locations?
  8. Agricultural Operations?



# Planning

## Airport Growth

- **Does your airport:**
  9. Need FBO locations?
  10. Agricultural Operations?
  11. Hangar area?
  12. SRE building?
  13. ARFF equipment?
  14. NAVAIDs?



# Planning

## Airport Growth

- With all these needs, and a 20 year deficit of **\$750,000.00** for just the pavement portion of the airport, creating a good plan and using it could save the airport a lot of money and headache.
- The apron / hangar area is very costly and a long range plan could greatly reduce the long term costs and make a more efficient airport.



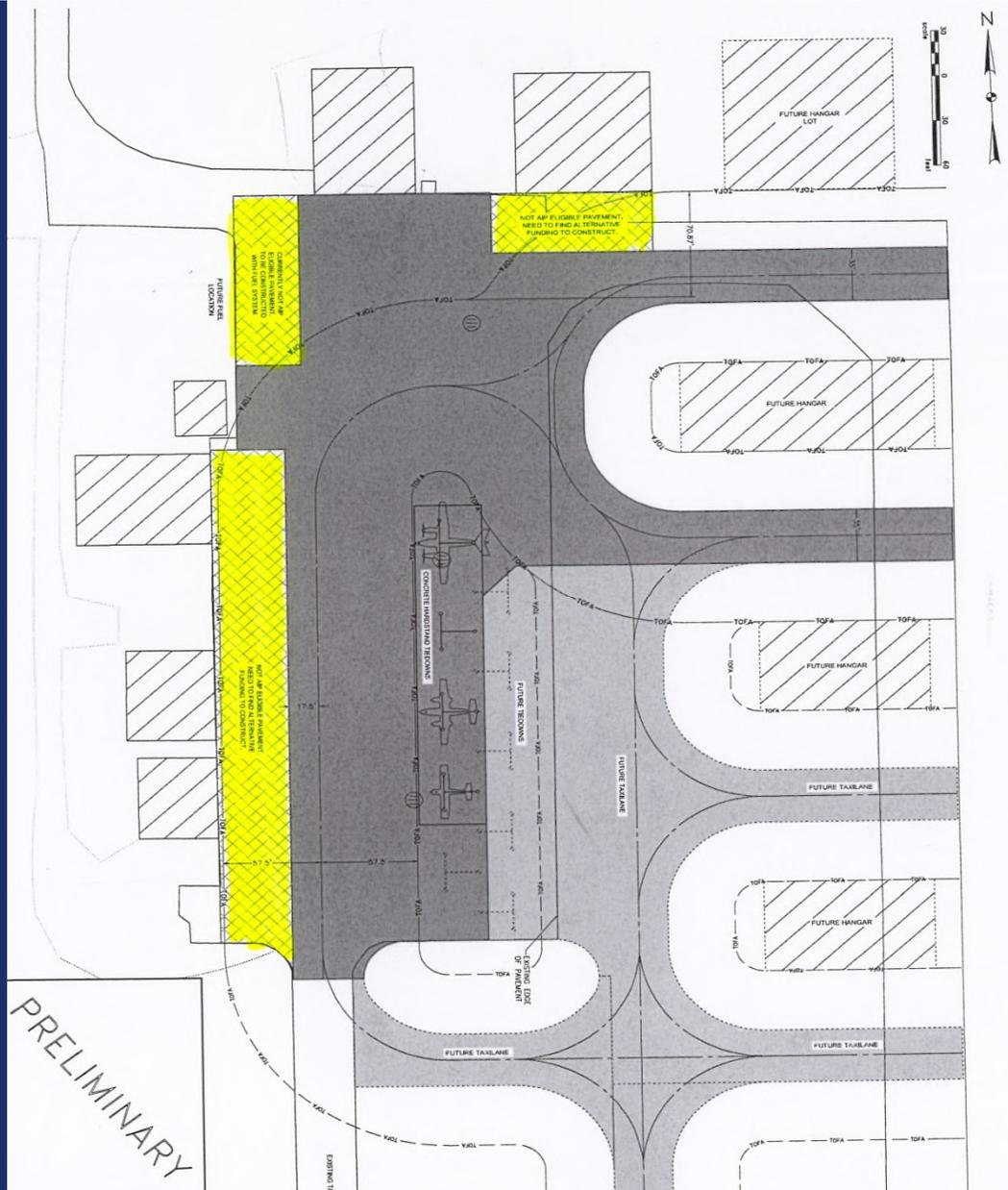
# Planning

## Airport Growth

- **Aprons:**
  - Do you need more?
  - Do you need less?
- **Aprons and taxiways for exclusive or near exclusive use are not eligible.**
- **The apron and related taxiway areas for use of a tenant not furnishing service to the general public are ineligible**

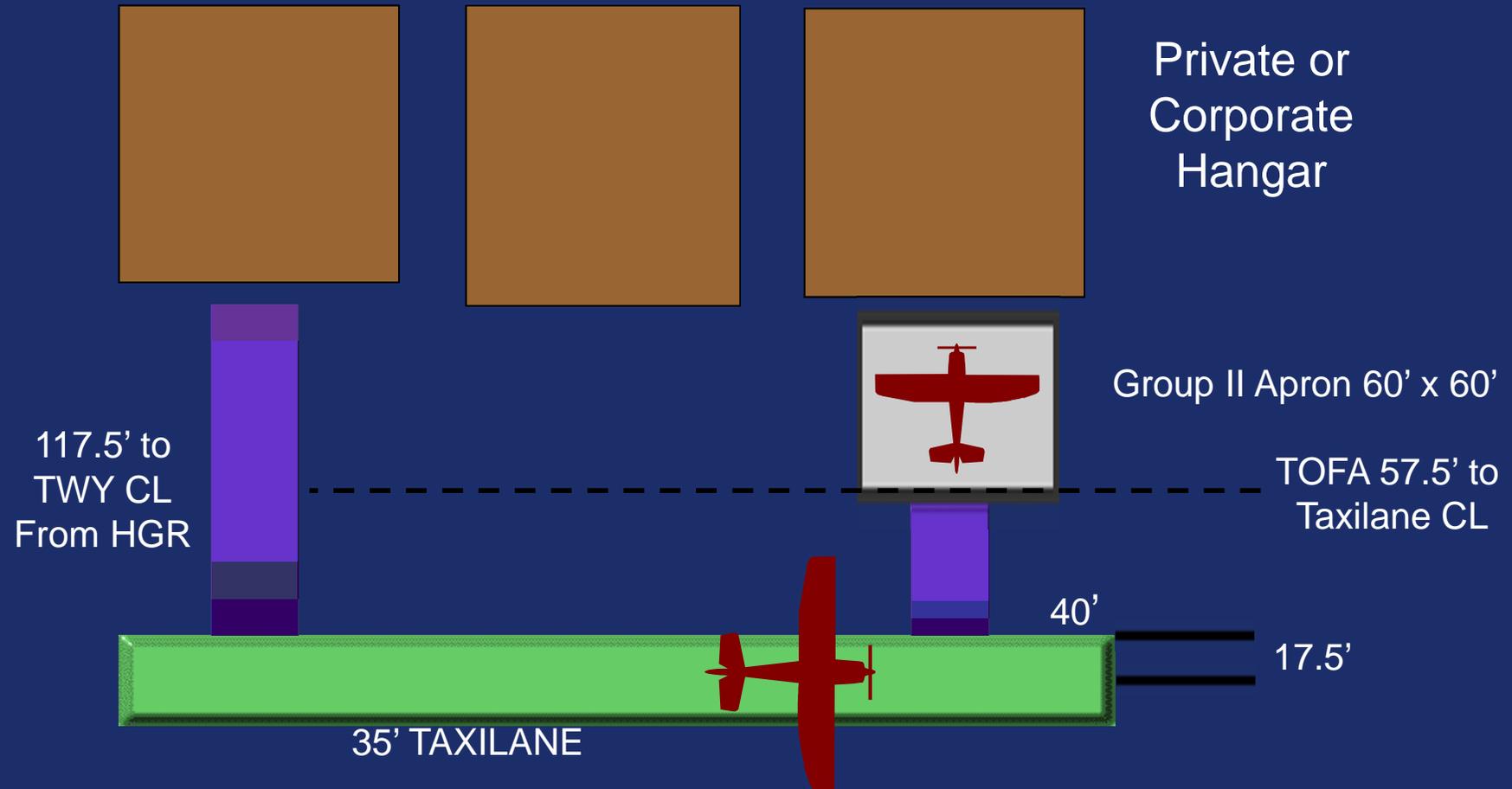




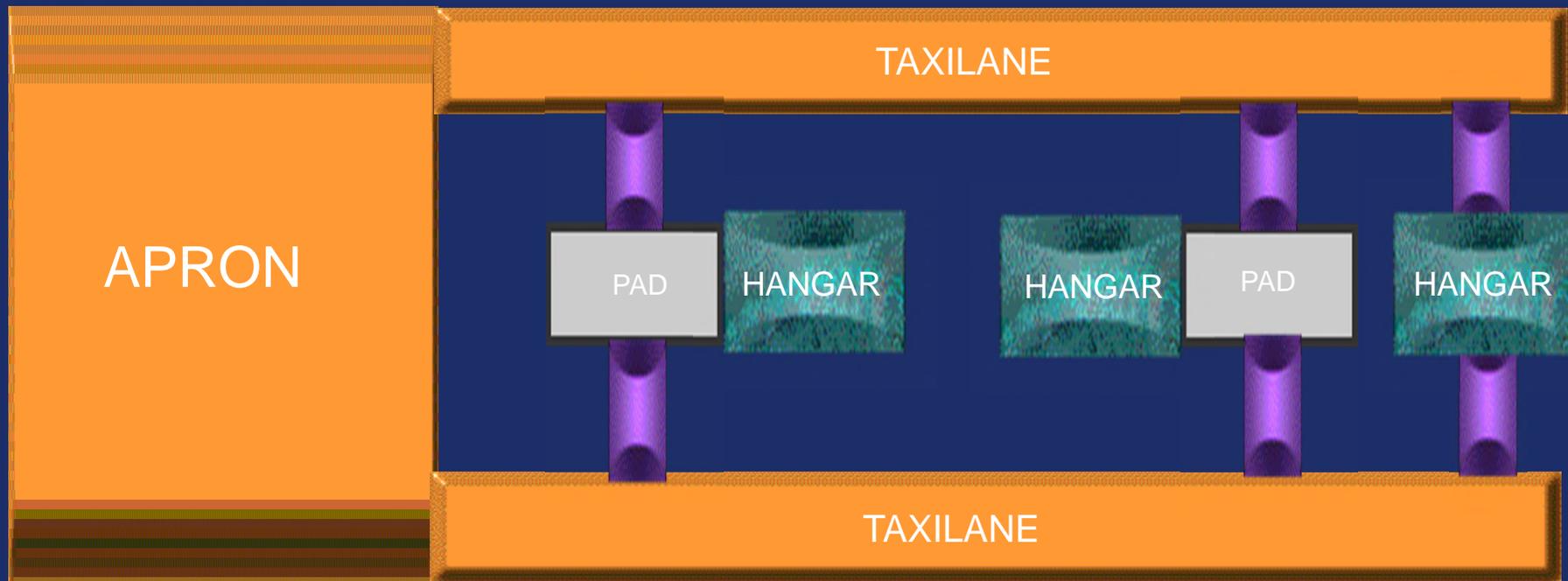


- Apron redesign of current ALP
- Exclusive use non-public areas shown in yellow nearly 10% of total apron cost
- Added series of taxiways for hangars
- Build in phases due to budget constraints

# Sample Apron Design for Private/ Corporate Hangars



# Aerial Application Sample Layout



# Planning Airport Growth



- **Does your airport have adequate growth for:**
  - Fixed Based Operators?
  - Agricultural Operations area?
  - Corporate areas?
  - Private hangars?

# Planning

## Questions?

