



Design  
2023 CFL Annual A/E Meeting

# EEBACS

Project Information	
(If modifying an existing project name or number, list both existing and modified data)	
Division: <input type="checkbox"/> CFLHD <input type="checkbox"/> EFLHD <input type="checkbox"/> WFLHD	Unit: <input type="checkbox"/> Metric <input type="checkbox"/> USC
FP Version: <input type="checkbox"/> FP14 <input type="checkbox"/> FP03	Density: <input type="checkbox"/> Urban <input type="checkbox"/> Rural
Project Number: <input type="text"/>	Terrain: <input type="checkbox"/> Level <input type="checkbox"/> Rolling <input type="checkbox"/> Mountainous
Project Name: <input type="text"/>	Partner Agencies: <input type="text"/>
Project Description: <input type="text"/>	
State and County: <input type="text"/>	Federal Land: <input type="text"/>
	Funding Sources: <input type="text"/>



Project Description*:	Grading, drainage, aggregate base, asphalt paving, bridge replacement, and new trail construction. <input type="text"/>
-----------------------	---



# EEBACS

Project Info | **Design** | Account | Team | Event Log

Estimate | CPL | **Schedules** | Column Headers | Pay Items | Construction Estimates

Save & Close | Save | Delete | Cancel | Cancel & Close \* indicates a required field

**Schedule**

Schedule Type\*: Base

Schedule Letter\*: A

Construction Type\*: Describes the type of construction for the project (i.e. Mill 2"/Overlay 4")  
40302 Mill + < 2.5-inches Asphalt Concrete Overlay

Schedule Description\*: Describes the type of work being performed on the project (i.e. Grading, Base, Pavement)  
Grading, drainage, aggregate base, asphalt paving, bridge replacement, and trail construction.

Schedule Termini\*: Describes the beginning and ending location of the project (i.e. From Milepost 349.7 to I-40)  
From Entrance Station to Meadow Lark Th

CPM Days: 0

Line Item Starting Number\*: 100

Line Item Increment Number\*: 100

GIS Route(s): Add GIS Route

Schedule Length: 0 miles

Lane Miles: 0

Bridge(s): Add Bridge

Schedule Length: 0 miles

Lane Miles: 0

Bridge(s):

**Bridge**

Bridge Identification

GIS Route

Bridge Construction Type

Bridge Size (area) SQFT

GIS Milepost Start

GIS Milepost End

Bridge Lat Begin

Bridge Long Begin

Bridge Lat End

Bridge Long End

Bridge Length\* FT

Add Bridge

Remove Bridge

# EEBACS

**Quality Unit Price**

save and close close

**Quality Unit Price Analysis**

Pay Item Number: 30101-0000

Pay Item Description: AGGREGATE BASE

Pay Unit (U.S. Units): TON

Pay Item Type\*: QM ▾

Unit Price: **\$110.00** ←

Incentive (%)\*:

Incentive Unit Price: \$

Unit Price Used\*: \$

Remarks:

(maximum characters: 4000) 4000 remaining

save and close close

**Quality Unit Price**

save and close close

**Quality Unit Price Analysis**

Pay Item Number: 40101-0080

Pay Item Description: ASPHALT CONCRETE PAVEMENT, GYRATORY MIX, NO. 4 SIEVE NOMINAL MAXI

Pay Unit (U.S. Units):  ←

Pay Item Type\*:  ←

Unit Price: **\$126.00**

Incentive (%)\*:  ←

Incentive Unit Price: \$

Unit Price Used\*: \$

Remarks:

(maximum characters: 4000) 4000 remaining

save and close close

# EEBACS

Project Info **Design** Account Team Event Log

Estimate CPL Schedules Column Headers **Pay Items** Construction Estimates

Project Pay Items **Add Master Pay Item** Default BHUP Settings Advanced Search






**Search Filters:**

Keywords  Show  selected  all

Pay Item Number

150 200 250 300 400 500 550 600 900 [all]

Items 1-3 of 3

Options	Pay Item # ▼	Pay Item Description (US Customary) ▼	Pay Item Type ▼	U.S. Pay Units ▼
  	40199-0002	INCENTIVE, ROUGHNESS	DI	LPSM
	40299-0002	INCENTIVE, ROUGHNESS	DI	LPSM
	40399-0002	INCENTIVE, ROUGHNESS	DI	LPSM

Items 1-3 of 3

# e-Delivery Update

---

- Off-the-Shelf System: Masterworks by Aurigo
  - Replacing: EEBACS and One-Note (used by Construction)
  - Adding: eBidding & some mobile app capability for Construction
  - Currently being configured/modified to meet FLH needs
- Design specifics:
  - Similar Functionality to EEBACS – but different approach & look
  - Folder structure for Schedules & Options
  - Calculates Pay Item Allowance based on % entered
  - Approach to Funding a bit different, but easier to change entire Schedule

# e-Delivery Update

---

- Login via Internet Browsers
- "Live" MSTeams-type Training will be provided
- Short, Topic Specific Training Video's will be provided
- Online Help

# e-Delivery Update

---

- Implementation process – most likely:
  - After Go-Live: Next milestone EE put into Masterworks
  - May enter some 100% EE's, not yet started in Construction
  - Still working out processes for new users and new projects
  - Would have new "eDelivery" SCRs to be added



# New Special Contract Requirements (SCR's)

---

- REMINDER: At each milestone, check for SCR updates; use designer notes
- 107 – updated permit numbers and website links and combined all states into one SCR
- 157 – singular SCR for Ipsm EC approach (pref.)
- 404/503 – added warranty for NPS/BLM projects funded by the GAOA
- 635 – Added descr. of progress payments for Ipsm TTC
- 637 – added text for contractor-provided govt. office
- 108/109/152/153/156/302/625/634/710/713 – minor updates

# PE Memo

---

- New PE Memo template available on FLH site
- PE Memo vs Project Tech Memo
- Notes for PE – design decisions, notable or unique design
  - Seek input from all disciplines

# Highway Design Standards (HDS) Form

## ■ Exceptions vs. Variances

**FEDERAL LANDS HIGHWAY  
HIGHWAY DESIGN STANDARDS** Print Form

Project Number \_\_\_\_\_ Project Name \_\_\_\_\_  
 Location \_\_\_\_\_ Route \_\_\_\_\_  
 Type of Project \_\_\_\_\_ Terrain \_\_\_\_\_

Description  
 National Highway System (NHS) \_\_\_\_\_  
 Owner/Maintaining Agency \_\_\_\_\_

Functional System \_\_\_\_\_

Traffic	Year	Annual ADT	Seasonal ADT	DHV	PERCENTAGE TRUCKS DHV I ADT	D
Current						
Future						

Design Standards:  AASHTO Green Book  AASHTO Low Volume  Park Road Standards  
 State  Other (Describe)

CRITERIA: Design Speed		EXCEPTION	
Minimum from Standard	<input type="checkbox"/> _____	<input type="checkbox"/>	
Chosen for Segment	<input type="checkbox"/> _____	<input type="checkbox"/>	
CRITERIA	STANDARD (for Chosen Speed)	AS DESIGNED	EXCEPTION
Lane Width			<input type="checkbox"/>
Shoulder Width			<input type="checkbox"/>
Horizontal Curve Radius			<input type="checkbox"/>
Superelevation Rate	e(max) =		<input type="checkbox"/>
Stopping Sight Distance			<input type="checkbox"/>
Maximum Grade			<input type="checkbox"/>
Cross Slope			<input type="checkbox"/>
Vertical Clearance			<input type="checkbox"/>
Design Loading Structural Capacity			<input type="checkbox"/>

For each exception provide description (including context), reasons, alternatives considered, analysis of risk, and proposed mitigation.

**FEDERAL LANDS HIGHWAY  
HIGHWAY DESIGN STANDARDS** Print Form

Project Number \_\_\_\_\_ Project Name \_\_\_\_\_  
 Location \_\_\_\_\_ Route \_\_\_\_\_  
 Type of Project \_\_\_\_\_ Terrain \_\_\_\_\_

Description  
 National Highway System (NHS) \_\_\_\_\_  
 Owner/Maintaining Agency \_\_\_\_\_

Functional System \_\_\_\_\_

Traffic	Year	Annual ADT	Seasonal ADT	DHV	PERCENTAGE TRUCKS DHV I ADT	D
Current						
Future						

Design Standards:  AASHTO Green Book  AASHTO Low Volume  Park Road Standards  
 State  Other (Describe)

CRITERIA: Design Speed		EXCEPTION	
Minimum from Standard	<input type="checkbox"/> 30 MPH	<input type="checkbox"/>	
Chosen for Segment	<input type="checkbox"/> _____	<input type="checkbox"/>	
CRITERIA	STANDARD (for Chosen Speed)	AS DESIGNED	EXCEPTION
Design Loading Structural Capacity			<input type="checkbox"/>
CRITERIA	STANDARD (for Chosen Speed)	AS DESIGNED	VARIANCE
Lane Width			<input type="checkbox"/>
Shoulder Width			<input type="checkbox"/>
Horizontal Curve Radius			<input type="checkbox"/>
Superelevation Rate	e(max) =		<input type="checkbox"/>
Stopping Sight Distance			<input type="checkbox"/>
Maximum Grade			<input type="checkbox"/>
Cross Slope			<input type="checkbox"/>
Vertical Clearance			<input type="checkbox"/>

For each exception provide description (including context), reasons, alternatives considered, analysis of risk, and proposed mitigation. For any variance, provide brief description, reasons, and proposed mitigation.

# Communication

---

- Upcoming deadlines/schedules
- Major design changes that affect the estimate or schedule
- Scope changes

# Open Roads Designer (ORD)

---

- Workspaces
  - 2 Approved Workspaces
    - All new projects after January 2023 – **International Foot and Workspace 10.10**
    - All others – **Workspace 10.9** (or discuss with your PM)
  - Both are posted on the web. Must download and combine both files
  - Other Updates
- Sample Plans

# Grading Summary

GRADING SUMMARY													
Station to Station	Roadway Excavation		Pay Item 20401-0000	Additional Excavation For info only		For info only		Embankment For info only		For info only			For Info Only
	Prismoidal Volume	Approach Roads	ROADWAY EXCAVATION	(+) Available Material (see note 3)	(-) Unavailable Material (see note 4)	Shrink/Swell Factor	Total Excavation Available For Fills	Prismoidal Volume	Approach Roads	(+) Various Additional Backfill Material Needed Onsite (see note 5)	Total Embankment	Excavation- Embankment	UNCLASSIFIED BORROW (see note 6)
	BCY	BCY	CUYD	BCY	BCY		CCY	CCY	CCY	CCY	CCY	CCY	CUYD

**NOTE:**

- Quantities based on prismoidal (surface to surface) volumes.
- Conserve <<XXX>> inches of topsoil in cut and fill slope areas.
- Available material includes <<INSERT PROJECT SPECIFIC INFORMATION\*\*\*\*\*>>.
- Unavailable material includes <<INSERT PROJECT SPECIFIC INFORMATION\*\*\*\*\*>>.
- Various additional backfill material needed onsite includes <<INSERT PROJECT SPECIFIC INFORMATION\*\*\*\*\*>>.
- Waste quantity calculated using volumes adjusted for shrink/swell. The average shrink/swell factor shown is computed by taking an average of recommended values over the specified range. Refer to the Geotech Report for recommended shrink/swell factors.  
Or  
Unclassified borrow quantity calculated using volumes adjusted for shrink/swell. An assumed value of 0.9 was used for calculations. The contractor is responsible for determining the shrink/swell on the borrow material.
- The quantities shown herein are approximations. Payment will be made for the actual quantities of work performed.
- BCY = Bank cubic yard - one cubic yard of material as it lies in the natural state.  
CCY = Compacted cubic yard - one cubic yard of material after it has been compacted to specification density.

**Notes to Designers**

- \*\*\*\* Material is anything in the grading tab in columns G, H and I
- \*\*\*\* Material is anything in the grading tab in columns J, K and L
- \*\*\*\* Material is anything in the grading tab in columns S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG and AH









Questions???