



# **Guidance on Assessment of Liquidated Damages**

Contact your Construction Liaison Engineer when contract time is exceeded

# **Three Types of Liquidated Damages**

1. Contract Administrative Costs (CAC)
2. Road User Costs (RUC)
3. Liquidated Damages Specified (LDS)

# **Contract Administrative Costs (CAC)**

## **Road User Costs (RUC)**

- Limits for contract and job completion
- Listed in CONTRACT LIQUIDATED DAMAGES JSP
- Further defined in Sec 108.7
- Usually administered in Calendar Days, Calendar Date or both
- Work Days – rarely used today

# Contract Administrative Costs (CAC)

- LD amount listed is total for contract, not per project
- Charged in full until all work is complete on all projects, including all corrections
- The amount is established based upon actual staff time and other costs

# Contract Administrative Costs (CAC)

Contract Amount		Damages per Day
From	Up To and Including	
\$0	\$500,000	\$250
\$500,001	\$2,500,000	\$500
\$2,500,001	\$5,000,000	\$1,000
\$5,000,001	\$10,000,000	\$1,500
\$10,000,001	\$20,000,000	\$2,000
\$20,000,001	over	\$2,500

# Road User Costs (RUC)

- Charged per project in contract
- Charged until all work is complete, or “significantly complete” – RE discretion
- Ex. - waiting on pavement marking

**108.8.1.2** The Commission may waive the road user cost as may accrue if the work is deemed to be significantly complete. A project will be considered significantly complete when all necessary signing, pavement markings in accordance with Sec 620, guardrail, signals, all permanent traffic control devices and other safety appurtenances have been installed and are operational. At a minimum, traffic must have complete use of the roadways and shoulders, with no delays due to construction activity. The suspension of the road user cost by the engineer will not constitute a waiver by the Commission of any contractual rights, and its application will be contingent upon the discretion of the engineer in completing the remaining items of work.

# Road User Costs (RUC)

AADT	Damages per Day
Under 3,500	\$1,800
3,500 to 10,000	\$2,300
10,001 to 20,000	\$3,200
20,001 to 30,000	\$5,400
30,001 to 50,000	\$7,600
50,001 to 80,000	\$9,800
Over 80,000	\$11,400

\* Road User Costs based on a slowdown in traffic flow and work zone crash costs.

# Liquidated Damages Specified JSP

- Also known as a “Milestone” JSP
- Ex: “Open to Traffic” requirement
- Sec 108.7 does not apply to these LDs
- JSP governs how to administer
- LDs usually apply 7 days week, 365 days/yr
- Liquidated Savings sometimes included
- May be by day, hour or minutes



# Liquidated Damages for Winter Months JSP

Liquidated Damages for Winter Months JSP-04-17A

Delete Sec 108.8.1.3 (a)

Liquidated damages for failure to complete the work on time shall not be waived from December 15 to March 15, both dates inclusive.

*Drafter's Notes: This JSP should only be inserted into projects where the primary work can be performed during the winter months, such as bridge construction. It should not be used in projects where the primary work has weather limitations that might result in a winter shut-down, such as asphalt work.*

Note: For projects let prior to July of 2019, this JSP also specifies charging liquidated damages on weekends and holidays through the winter months.

# **Liquidated Damages for Winter Months JSP**

- Nullifies waiver of LDs through winter months (Dec. 15 – Mar. 15)
- Both RUC and CAC continue through the winter (except for holidays and weekends)
- These LDs are in addition to any Milestone LDs
- Intended use is for jobs where winter work is expected (Ex. bridge replacement)
- Should not be used on basic overlay jobs

# Scenario 1

## Asphalt Overlay Project

- Nov. 1 Completion Date
- LDs for Winter Months JSP not inserted
- All work completed on time except pavement marking
- Pavement marking is started and completed on Nov. 7

# Scenario 1

- Assess 4 days of CAC
- Assess 1 day of RUC for the traffic impact due to pavement marking

2019 NOVEMBER						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		Asphalt work complete			1 Contract Completion Date	2 Weekend No LDs
3 Weekend No LDs	4 No work	5 No work	6 No work	7 Final pvmt. marking	8	9
	CAC	CAC	CAC	CAC & RUC		
10	11	12	13	14	15	16

# Scenario 2

## Asphalt Overlay Project

- Nov. 1 Completion Date
- LDs for Winter Months JSP not inserted
- Work halted on November 12 due to cold weather and snow
- Long range forecast shows no favorable window to finish
- Significant asphalt work remains

# Scenario 2

- Enforcing completion in 2019 would result in poor quality
- Best interest of both parties to halt work until spring of 2020
- Discuss options with DCE & Construction Liaison
- Negotiate a winter shut-down and issue a change order with agreed terms

# Scenario 2

## 2019 NOVEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 Contract Completion Date	2 Weekend No LDs
3 Weekend No LDs	4 CAC & RUC	5 CAC & RUC	6 CAC & RUC	7 CAC & RUC	8 CAC & RUC	9 Weekend No LDs
10 Weekend No LDs	11 Holiday No LDs	12 Last day of work in '19	13 Too cold to continue	14	15	16 Weekend No LDs
		CAC & RUC CAC charged thru Dec. 14 →				
17 Weekend No LDs	18	19	20	21	22	23 Weekend No LDs
24 Weekend No LDs	25	26	27	28	29	30 Weekend No LDs
				Holiday No LDs		

# Scenario 2

## Likely Terms of Change Order:

- Assess 28 days of CAC in 2019 (Nov. 2-Dec. 14)
- Assess 6 days of RUC in 2019 (Nov. 2-Nov. 12)
- Work will resume in 2020 on a mutually agreeable date when weather is favorable
- Both CAC and RUC resume when work starts



# Scenario 3

## Three UBAWs Jobs Let in Combination

- Nov. 1 Contract Completion Date
- LDs for Winter Months JSP not inserted
- CAC - \$500
- RUC: Job A & B - \$1,800
- RUC: Job C - \$2,300
- Nov. 5 – Rainout (this is not relevant since weather is not an excusable delay)

# Scenario 3

- Job A – UBAWS finished - Oct. 29  
Pavement marked - Oct. 29
- Job B – UBAWS finished - Nov. 4  
Pavement marked - Nov. 13
- Job C – UBAWS finished - Nov. 8  
Pavement marked - Nov. 14

# Scenario 3

## 2019 NOVEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>1</b>	<b>2</b>
		Job A Complete & Pvmt. Marked			Contract Completion Date	Weekend No LDs
<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
	Job B UBAWS Complete	No Work due to rain			Job C UBAWS Complete	
Weekend No LDs	CAC/RUC B&C	CAC/RUC C	CAC/RUC C	CAC/RUC C	CAC/RUC C	Weekend No LDs
<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
			Job B Pvmt. Marked	Job C Pvmt. Marked		
Weekend No LDs	Holiday No LDs	CAC	CAC/RUC B	CAC/RUC C		
<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>
		Resume RUC on Job B due to disruption of traffic			Resume RUC on Job C due to disruption of traffic	

## Scenario 3

- Assess 8 days of CAC on contract (\$4,000)
- Assess 2 days\* of RUC on Job B (\$3,600)
- Assess 6 days\* of RUC on Job C (\$13,800)

Total Damages = \$21,400

\*Includes 1 day for pavement marking.

# Scenario 4

## New Interchange Project

- Nov. 16 – Original “Open to Traffic” date
- Liquidated Damages Specified JSP (milestone)
- Nov. 25 - Contract Completion Date
- LDs for Winter Months JSP is inserted
- CAC - \$1,000
- RUC: \$2,300
- LDS: \$10,000



# Scenario 4

- Project delayed 10 days due to utilities halting the major operation (excusable delay)
- Weighted time tables determines the 10-day delay = 15-day extension to both Contract Time and Milestone Date
- Dec. 01 – Revised “Open to Traffic” date
- Dec. 10 – Revised Completion Date
- Dec. 17 – Interchange opened to traffic
- Dec. 30 – Project complete

# Scenario 4

## Liquidated Damages Specified JSP

### Liquidated Damages Specified JSP-93-28

**1.0 Description.** If the I-70/Rte. W interchange is not complete and open to traffic prior to Nov. 16, 2019, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of \$10,000 per day for each full day that the I-70/Rte. W interchange is not complete and open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of excess closure time.

**1.1** The said liquidated damages specified will be assessed regardless of whether it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract.

# Scenario 4

## Liquidated Damages Specified JSP

- Read LDS JSP terms carefully – they differ from Contract LDs JSP
- “...must be opened prior to (insert date)”
- LDs assessed, “...for each full day in excess of the limitation”
- Contract LDs – “on or before” and LDs assessed for “each partial day”



# Scenario 4

## 2019 DECEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>1</b> Rev. "Open to Traffic" Date	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
LDS	LDS	LDS	LDS	LDS	LDS	LDS
<b>8</b>	<b>9</b>	<b>10</b> Revised Completion Date	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b> Weekend- No CAC/RUC LDs
LDS	LDS	LDS	LDS/CAC/RUC	LDS/CAC/RUC	LDS/CAC/RUC	LDS
<b>15</b>	<b>16</b>	<b>17</b> Interchange Opened	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b> Weekend- No CAC/RUC LDs
LDS	LDS/CAC/RUC	CAC/RUC	CAC/RUC	CAC/RUC	CAC/RUC	
<b>22</b> Weekend- No CAC/RUC LDs	<b>23</b>	<b>24</b>	<b>25</b> Holiday No CAC/RUC	<b>26</b>	<b>27</b>	<b>28</b> Weekend- No CAC/RUC LDs
	CAC/RUC	CAC/RUC		CAC/RUC	CAC/RUC	
<b>29</b> Weekend- No CAC/RUC LDs	<b>30</b> Project Complete	<b>31</b>				
	CAC/RUC					

# Scenario 4

- LDS: 16 days x \$10,000/day = \$160,000
- CAC: 13 days x \$1,000/day = \$13,000
- RUC: 13 days x \$2,300/day = \$29,900

Total Damages = \$202,900