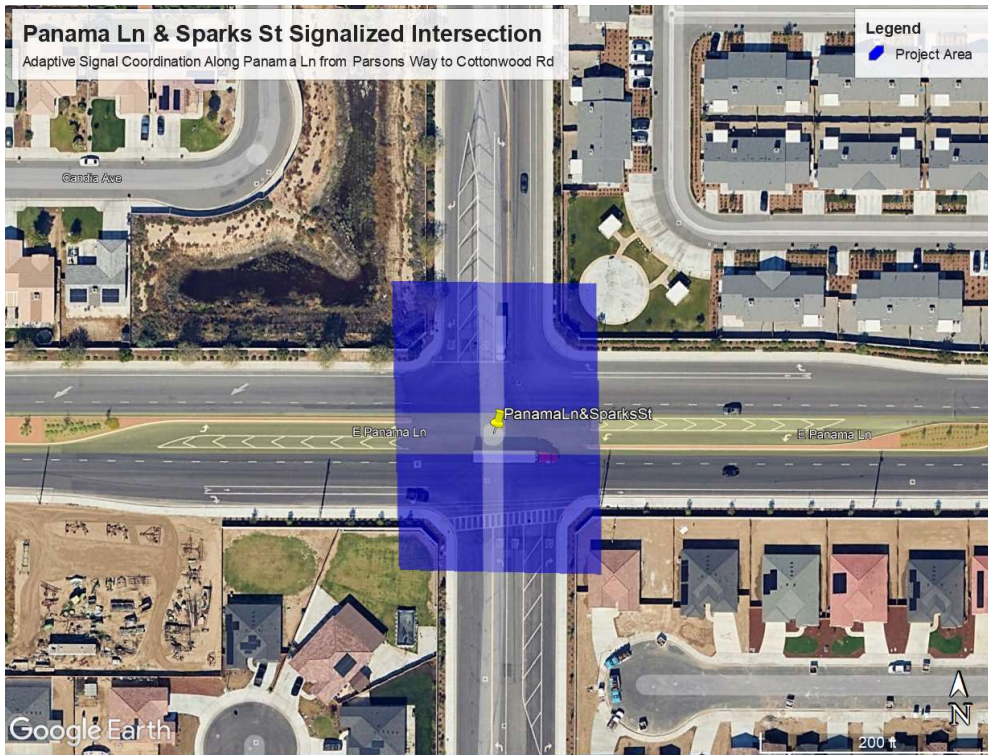


Adaptive Signal Coordination Along Panama Ln from Parsons Wy to Cottonwood Rd



San Joaquin Valley Project Level Conformity Group Presentation

April 23, 2025



Project Overview

- Project Description
- Location and Other Background Information
- Purpose and Need
- Project Listing in the FTIP/CTIPS¹
- Traffic Data and a Summary of Traffic Findings
- Project Schedule
- Project-level Conformity Summary

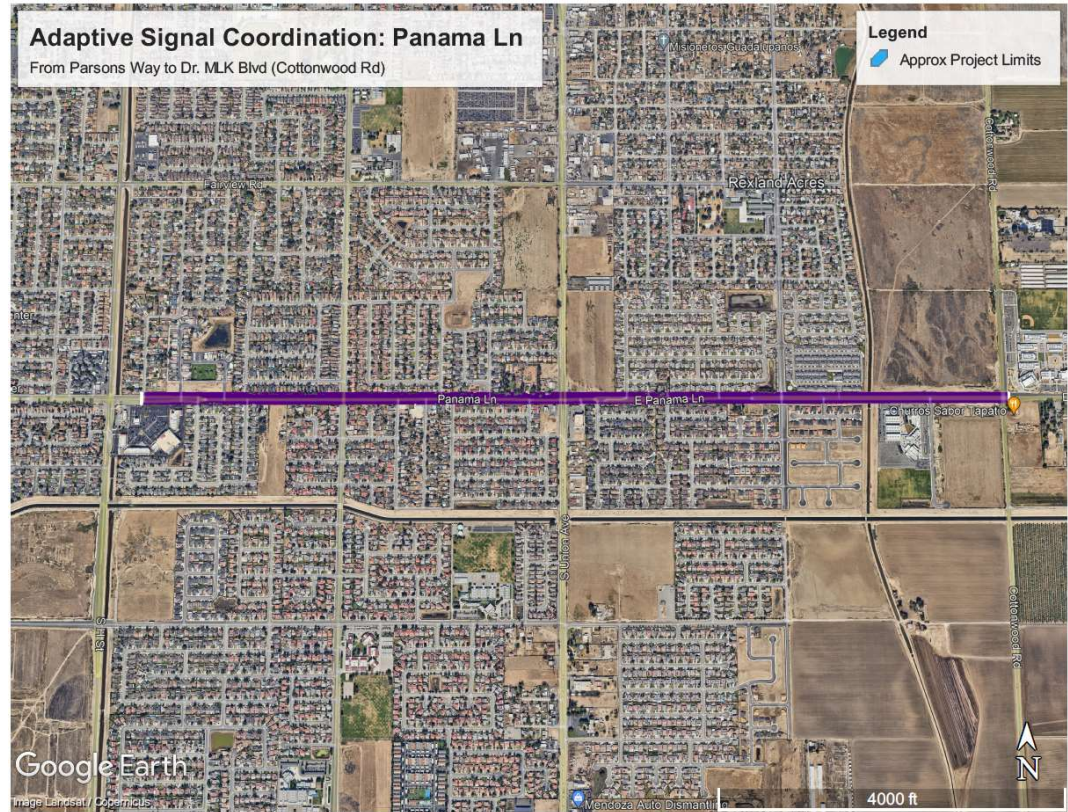
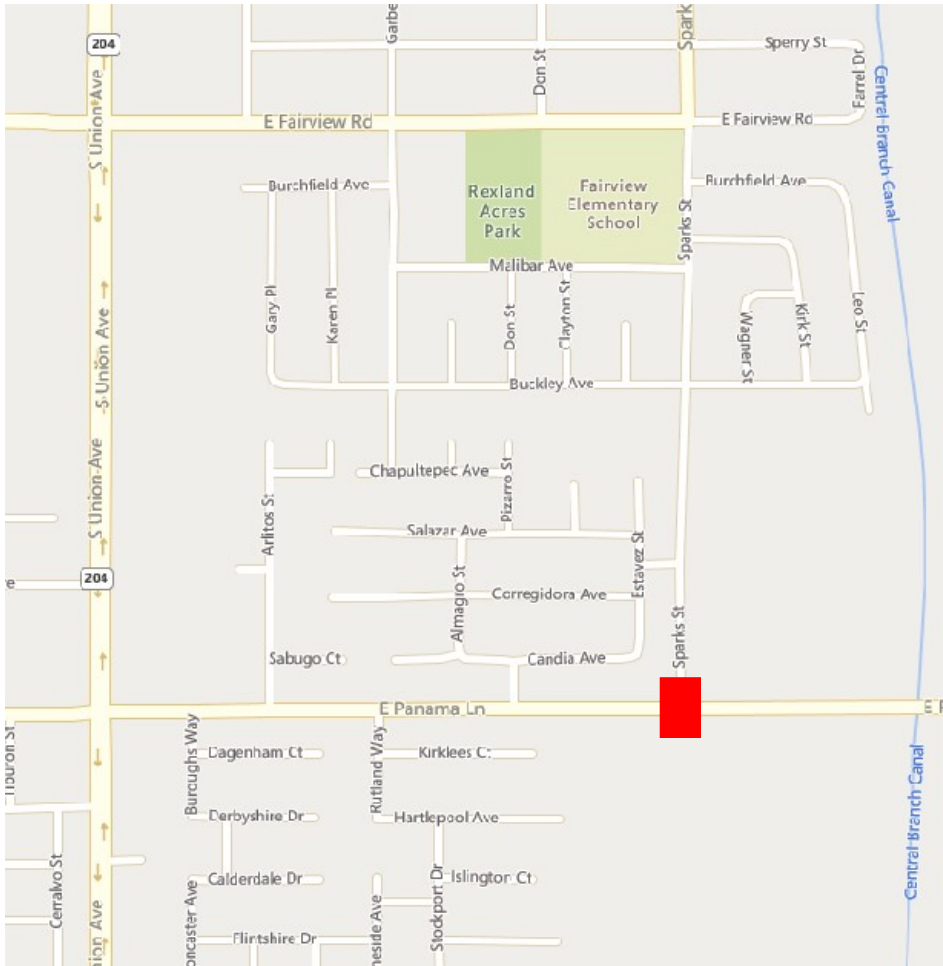
¹FTIP: Federal Transportation Improvement Program; CTIPS: California Transportation Improvement Program System.

Project Description

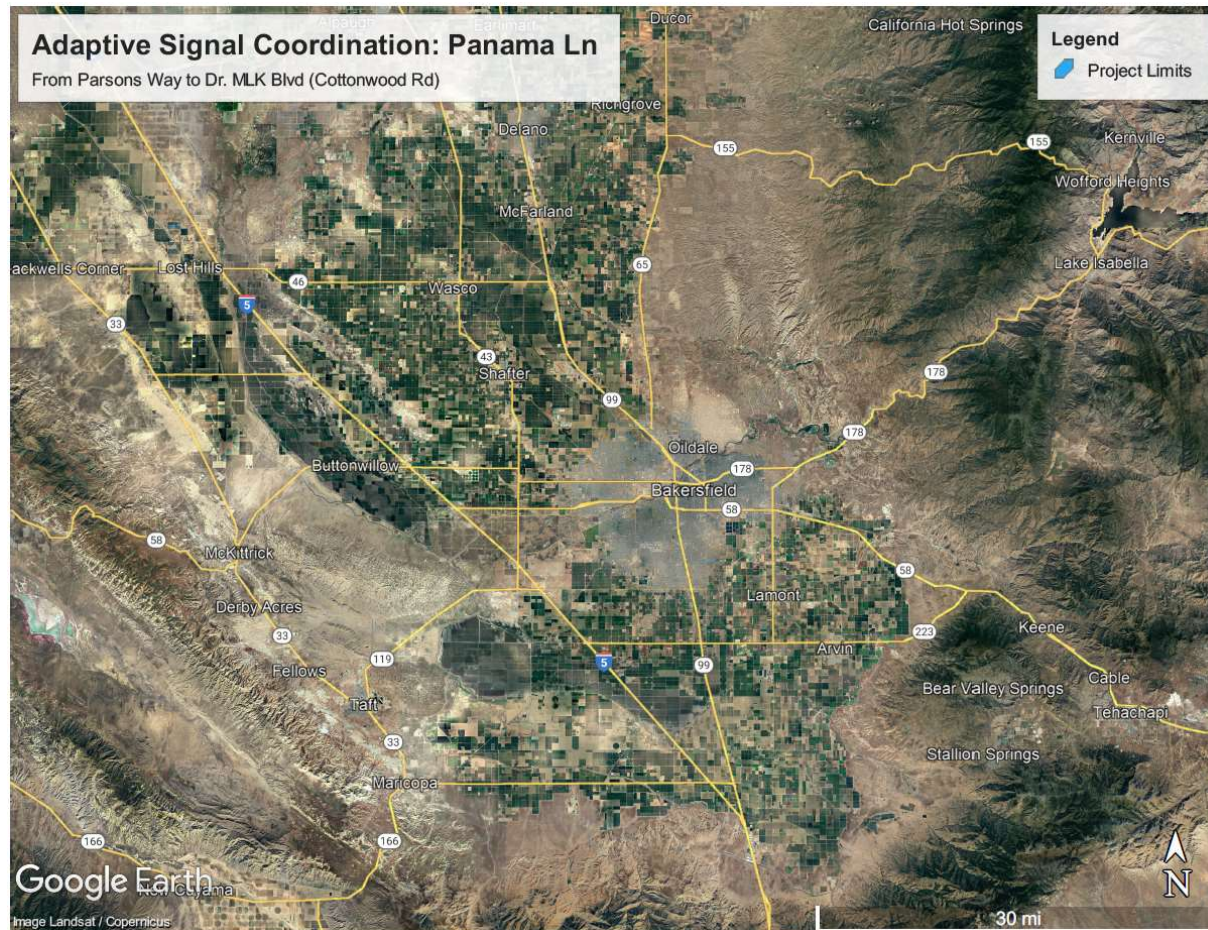
The City of Bakersfield proposes the installation of a new Traffic Signal at the intersection of Panama Lane and Sparks Street. The proposed Traffic Signal and Lighting installation is part of the City of Bakersfield's Adaptive Signal Coordination project along the segment of Panama Lane between Parsons Way to Dr. Martin Luther King Jr Boulevard/ Cottonwood Road. With the addition of a traffic signal at the proposed intersection, the City can more effectively implement synchronization of traffic signals along the corridor. Adaptive Signal Coordination allows for optimal signal timing across the arterial network by adjusting cycle lengths based on prevailing traffic. This coordination will decrease idle vehicles (thereby decreasing carbon emissions), improve traffic flow, and improve driver/pedestrian confidence and safety.

- ❖ The proposed enhancements at the intersection of Panama Ln and Sparks St include:
 - ❖ Installation of a Traffic Signal and Lighting System
 - ❖ Minor Modification of Pavement Striping, Roadside Signs, and Markings

Project Location



Project Location



Project Purpose and Need

Purpose and Needs:

- To Reduce Carbon Emissions and Facilitate Efficient Traffic Flow
- Synchronize Traffic Signal System along the Corridor to Mitigate Potential Traffic Congestion
- Provide for Orderly and Safe Movement of Conflicting Traffic Flows, Crossing Pedestrians, and Bicyclist

Project Listing in the TIP

Continued

Project Title: Grouped Projects for Safety Improvements - Safer roads - Inclusive of federal aid and non-federal aid roads

PIN	Agency	Fed ID	Project Description	Program Year (FFY)	CMAQ	CRP	State/ Local Funds	Total Project Cost
KER180507 (continued)	Bakersfield		Bakersfield: Panama Ln and Sparks St; installation of new signal; Panama Ln from Parsons Wy to Dr. Martin Luther King Blvd; installation of adaptive signal coordination	24/25	\$0	\$1,072,806	\$138,994	\$1,211,800
			Bakersfield: Ming Ave from Hwy 99 Ramp to P St; installation of adaptive signal coordination	24/25	\$0	\$513,118	\$66,480	\$579,598
			Bakersfield: Ashe Rd from Panama Ln to Club View Dr; installation of traffic signal coordination system	25/26	\$458,142	\$0	\$59,358	\$517,500
	California City		California City: California City Blvd from Baron Blvd to Maverick St; shoulder paving	24/25	\$289,493	\$0	\$37,507	\$3,096,400
				25/26	\$2,451,749	\$0	\$317,651	
	CML-5950(510)	Kern County (Metro Bakersfield): Intersection of Allen Rd and Jomani Dr; Construct a traffic signal and ancillary facilities	Prior Year	\$536,725	\$0	\$69,538	\$606,263	
	CML-5950(505)	Kern County (Metro Bakersfield): Intersection of Cottonwood Rd and Cheatham Ave; Construct a traffic signal and ancillary facilities	Prior Year	\$567,807	\$0	\$73,565	\$641,372	
	Kern County (Bakersfield): Various areas in Metro Bakersfield: Traffic Signal Coordination (Interconnect): Kern							

* <https://www.kerncog.org/category/docs/ftip/>

Project: CRPL - 5109(297)	District: 06	Agency: (5109) Bakersfield
Adv Project Id:	County: 5950	Location: Panama Ln and Sparks St; installation of new signal; Panama Ln from Parsons Wy to Dr. Martin Luther King Blvd; installation of adaptive signal coordination
Draft Adv Id: 0625000005	Status: ACTIVE	

** California Dept of Transportation

- The proposed project is listed in the KCOG 2023 Federal Transportation Improvement Program (added in Amendment 12) and was adopted on February 20, 2024
- Funding includes Carbon Reduction Program (CRP) funding alongside local dollars
- The design, concept, and scope of the project are consistent with the description found in the 2023 FTIP

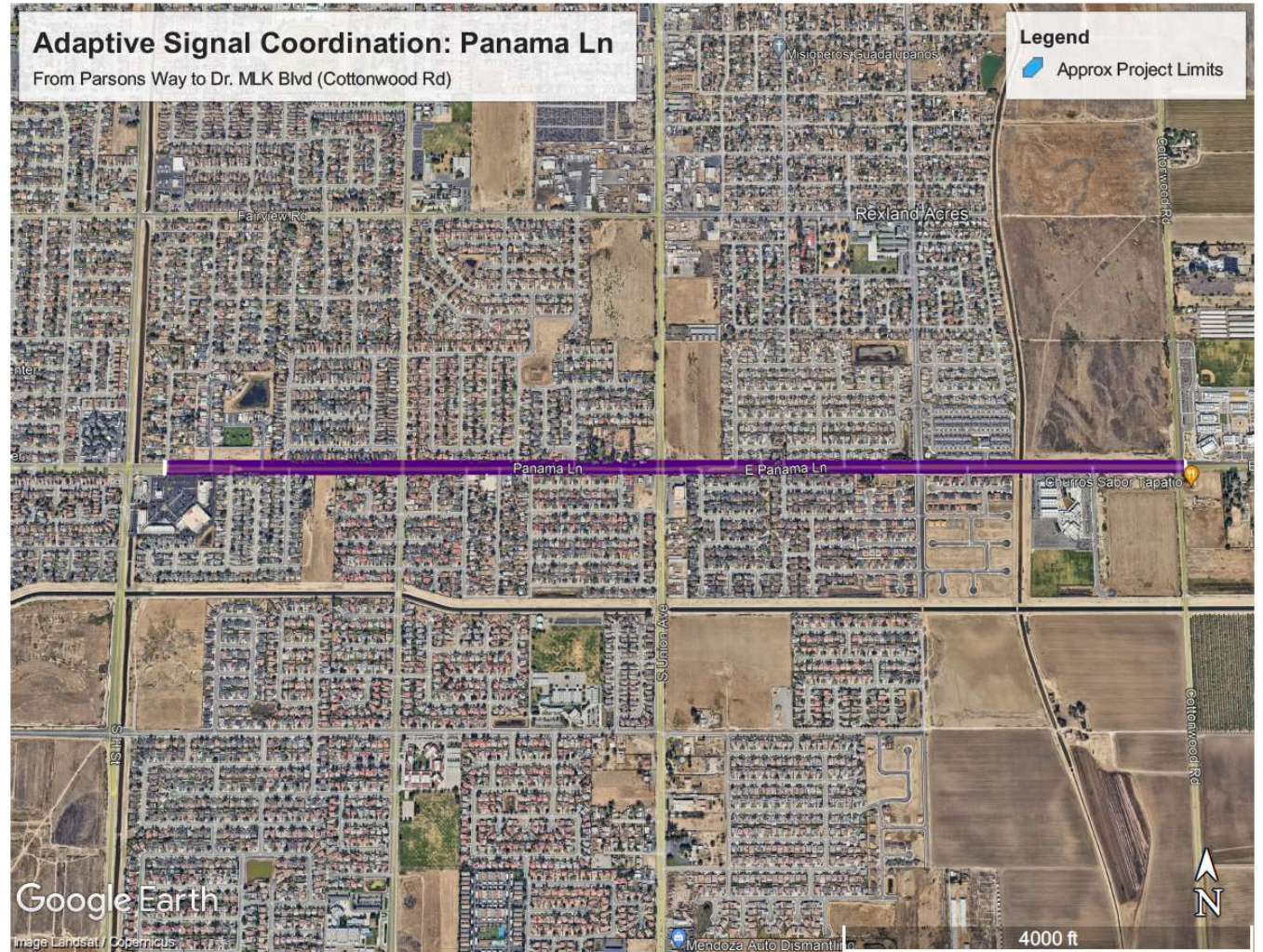
Project Features or Alternatives

**Only one build-
case scenario was
considered for
this project**



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Traffic Data

Years Considered: Three years are considered for assessment of traffic data. 2020 data is utilized as our existing data, which was obtained from the KernCOG’s 2020 Base Network. 2026 is utilized as our opening data and 2046 is our analysis year. The analysis year was selected through consideration of Bakersfield’s continuing population growth and is included in KernCOG’s Future Network.

Existing Data Year: Average Daily Traffic (ADT), trucks ADT, and proportion of truck traffic is seen below

Existing Year, Currently Available (2020) ADT at Panama Ln and Sparks St

PANAMA LN 2020			
PANAMA LN & SPARKS ST	<u>Existing Conditions</u>		
	<i>TOTAL ADT</i>	<i>TRUCKS ADT</i>	<i>TRUCKS %</i>
	6342	406	1.03%

Traffic Data

Opening Year: Data consisting of ADT, truck ADT and proportion of truck traffic for the analysis year 2026 is shown below

Opening Year (2026) ADT at Panama Ln and Sparks St

PANAMA LN 2026			
PANAMA LN & SPARKS ST	<u>Projected Conditions</u>		
	<i>TOTAL ADT</i>	<u>No-Build / Build</u> <i>TRUCKS ADT</i>	<u>No-Build / Build</u> <i>TRUCKS %</i>
	6745	431	1.03%

Traffic Data

Analysis Year: Data consisting of ADT, truck ADT and proportion of truck traffic for the analysis year 2046 is shown below

Analysis Year (2046) ADT at Panama Ln and Sparks St

PANAMA LN 2046			
PANAMA LN & SPARKS ST	<u>Projected Conditions</u>		
	<i>TOTAL ADT</i>	<u>No-Build / Build</u> <i>TRUCKS ADT</i>	<u>No-Build / Build</u> <i>TRUCKS %</i>
	8038	529	1.03%

Summary of Traffic Findings

- No changes in Truck Trips between no-build and build conditions
 - This project does not develop a new or expanded highway
 - Project is located near the City urban core, not a major trade/logistics route
 - Build conditions do not have an impact on truck percentage of total ADT
 - Truck (%) remains at 1.03%
- Installation of a traffic signal system is warranted per the City of Bakersfield’s Traffic study dated April 19, 2023

PANAMA LN AT SPARKS ST					
<u>OPENING YEAR 2026 SIGNALIZED INTERSECTION</u>					
	LOCATION	LOS (CURRENT)		LOS (With Modification)	
	Panama Ln & Sparks St	AM Peak	PM Peak	AM Peak	PM Peak
DIRECTION	NB	F	F	A	A
	SB	F	F	A	A
	EB	B	B	B	B
	WB	B	B	B	B

Summary of Traffic Findings Continued

- In the Analysis year (2046), an isolated intersection LOS study was made comparing the No-Build and Build scenarios. No-Build has LOS F compared to Build LOS D. Adaptive Traffic Signal will improve the LOS D as it adjusts the optimal timing based on prevailing traffic.

PANAMA LN AT SPARKS ST			
<u>2046 Analysis Year LOS Comparison</u>			
	LOCATION	* LOS (NO BUILD)	** LOS (BUILD)
	Panama Ln & Sparks St		
DIRECTION	NB	F	D
	SB	F	D
	EB		B
	WB		B
* Only NB and SB Approaches have Stop bars			
** LOS is Based on Non-Adaptive Traffic Signal			

Project Schedule

Project Study Report Approved	TBD
Target Environmental Documents Approval	04/21/2025
Target Project Design Completion	04/28/2025
Award Contract	Summer 2025
Approve Contract	Summer 2025
Construction Begins	Fall 2025
Construction Ends	Spring 2026

Project-level Conformity Conclusion

Under 40 CFR 93.123(b)(1)(i) and (ii), and as outlined in Appendix B of “Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas” this project does not meet the criteria for a POAQC per the following:

- Intersection channelization projects, traffic circles or roundabouts, intersection signalization projects at individual intersections, and interchange reconfiguration projects that are designed to improve traffic flow and vehicle speeds, and do not involve any increases in idling. Thus, they would be expected to have a neutral or positive influence on PM emissions.

Additional reasons:

- Under the build conditions, there will be no significant increase in daily truck activities
- There is no expansion or addition of any bus or rail terminals with this project
- The project will improve traffic flow to mitigate congestion along the selected corridor

Questions?

Contact Information

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