2021 Thoroughfare Plan Update

Council Public Hearing



September 20, 2022



Citywide Intersection Analysis

Takeaways & Observations

- Global Recommendations
- Intersection-Specific Recommendations

Updates to the MTP

Outline

- Thoroughfare Plan Updates
- Cross Section Updates







Citywide Intersection Analysis

Citywide Traffic Model

KELLER, TEXAS CITYWIDE TRAFFIC MODEL

INSTRUCTIONS

- 1. Identify the zone(s) with the undeveloped parcel(s) that will be tested. A layout of all zones can be found on the North Keller Zones and South Keller Zones tabs.
- 2. In the Land Use Worksheet tab, select the appropriate land use(s) for the respective zone(s), as well as the estimated number of units for each land use type. The worksheet should display the total number of daily and AM/PM peak hour trips that would be generated as a result of the additional proposed land uses.
- 3. To observe the anticipated distribution of traffic based on the proposed land use inputs, select the appropriate numbered Exhibit tab to see a breakdown of the traffic percentages going to and from a zone.
- 4. An estimate of overall volumes is presented in the **Final Volumes** tabs. These volumes incorporate both existing traffic and the anticipated trips that were added to the network via the additional proposed land uses.
- 5. To see a breakdown of existing volumes only, select the Existing Volumes tabs. These volumes will not change based on changes made in the Land Use Worksheet tab.
- 6. In the Synchro tab, select the AM Peak Hour and PM Peak Hour buttons to export Final Volume traffic data as two separate .CSV files (AM and PM) that can be imported into Synchro 10 TM software.

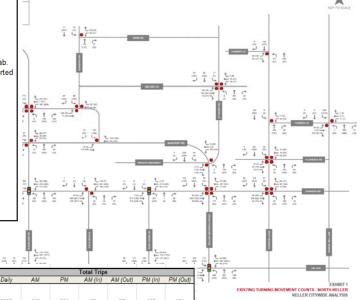
CITYWIDE TRAFFIC MODEL KEY TABS

LAND USE WORKSHEET
NORTH KELLER ZONES
SOUTH KELLER ZONES
EXISTING VOLUMES - NORTH
EXISTING VOLUMES - SOUTH
FINAL VOLUMES - SOUTH
SYNCHRO
INDIVIDUAL ZONE EXHIBITS (1-26)





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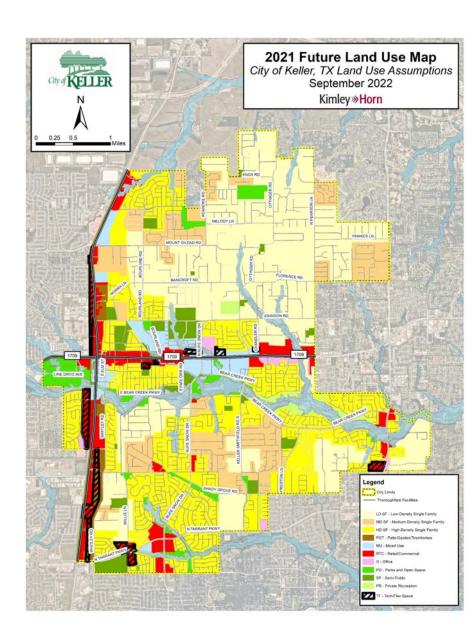


Zone	Location	Land Uses	Development Unit	Development Unit Numb			Rates		Trips					Total Trips							
				Development onit	Development onit	of Units	Daily	AM	PM	Daily	AM	PM	AM (In)	AM (Out)	PM (In)	PM (Out)	Daily	AM	PM	AM (In)	AM (Out)
	North	Single-Family Detached Housing	Dwelling Unit	150	9.44	0.74	0.99	1416	111	149	28	83	94	55	5						
		Shopping Center	1,000 SF GLA	40	37.75	0.94	3.81	1510	38	152	24	14	73	79							
Zone 1 Keller		w		0	0	0	0	0	0	0	0	0	0	2926 1	149	301	52	97	167	134	
	Kellel	DINING Drinking Place Fast Food Restaurant with Drive-Thru Window	^		0	0	0	0	0	0	0	0	0	0							
					0	0	0	0	0	0	0	0	0	0							
		Fast Food Restaurant without Drive-Thru Window High 1 unrover Sit-Down Restaurant Quality Restaurant Coffee/Donut Shop with Drive-Thru Window OTHER RETAIL			0	0	0	0	0	0	0	0	0	0	0 0		0	0	0	0	0
					0	0	0	0	0	0	0	0	0	0							
					0	0	0	0	0	0	0	0	0	0		0					
			V		0	0	0	0	0	0	0	0	0	0							
					0	0	0	0	0	0	0	0	0	0							
Zone 3 North Keller					0	0	0	0	0	0	0	0	0	0	0 0 0		0			0	0
	North				0	0	0	0	0	0	0	0	0	0							
					0	0	0	0	0	0	0	0	0	0		0		0	0		
					0	0	0	0	0	0	0	0	0	0							
					0	0	0	0	0	0	0	0	0	0							



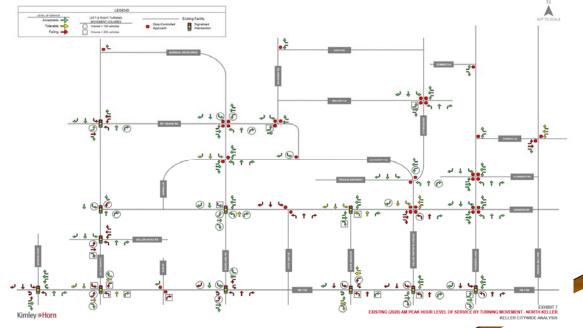
Citywide Traffic Model

- Sub-area traffic model developed to analyze the City's roadway network based on:
 - Traffic model volumes
 - Future land use assumptions
 - Field observations
 - Historical crash data



Citywide Intersection Analysis

- Forty-five (45) major intersections were analyzed with critical movements identified.
- Recommendations and observations were provided for seventeen (17) intersections based on factors such as level of service (LOS), queues, and peak hour volumes.





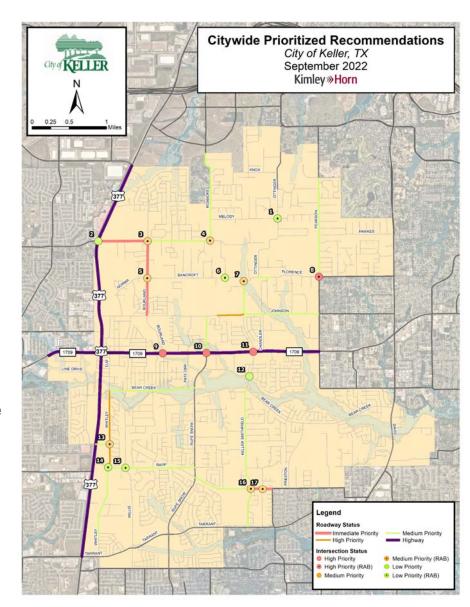




Takeaways & Observations

Global Citywide Recommendations

- Establish consistent signal timing and phasing along signalized corridors
- Eliminate split phasing wherever possible
- Incorporate flashing yellow arrows (FYA) at signalized intersections with Protected/Permitted left turn phasing
- Explore dual lefts as a potential enhancement at certain locations
- Evaluate curb ramp compliance to serve all possible pedestrian crossing movements.
- Recommendations and observations were provided for seventeen (17) intersections

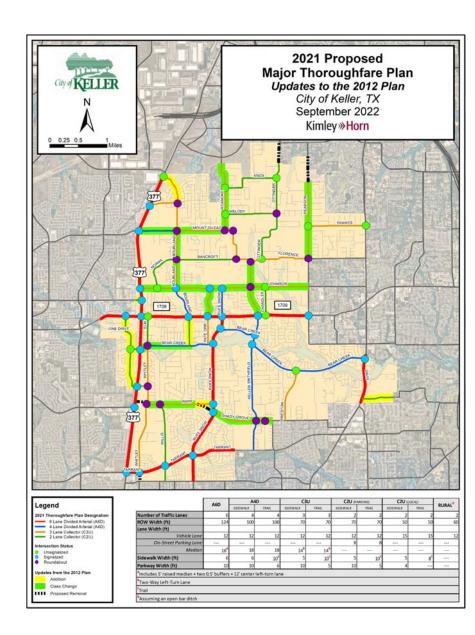


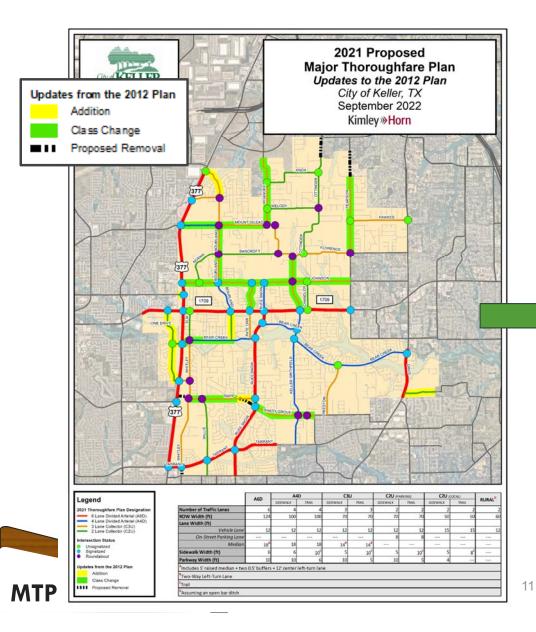


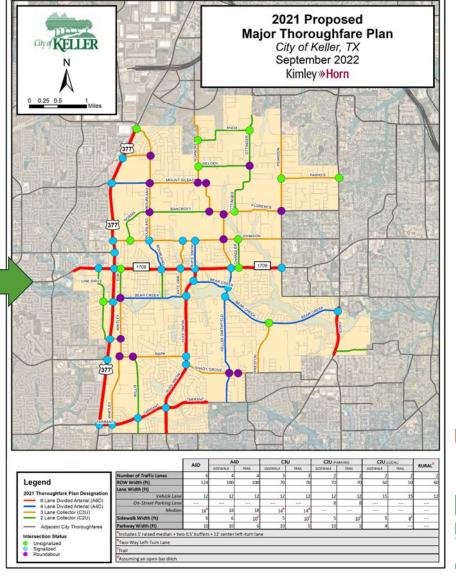
Updates to the MTP

Major Updates to the MTP

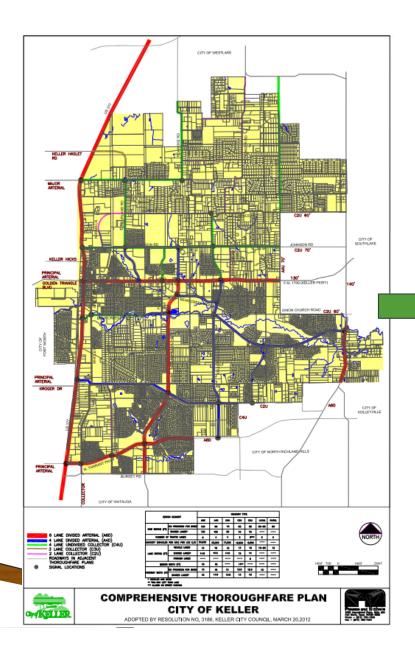
- Based on observations from the traffic model analysis and input from City staff:
 - Renamed from Comprehensive Thoroughfare Plan
 to Major Thoroughfare Plan
 - Revised/removed all four-lane undivided roadways
 - Intersection control is now denoted, including categories for signalized intersections, unsignalized intersections, and roundabouts
 - Eight additional roadways have been added to the MTP.
 - Select roadways proposed on the 2012 MTP have since been removed from the proposed update, including two segments along Rapp Road.
- Note that the MTP does not provide for any bike paths or shared lanes in the proposed update.



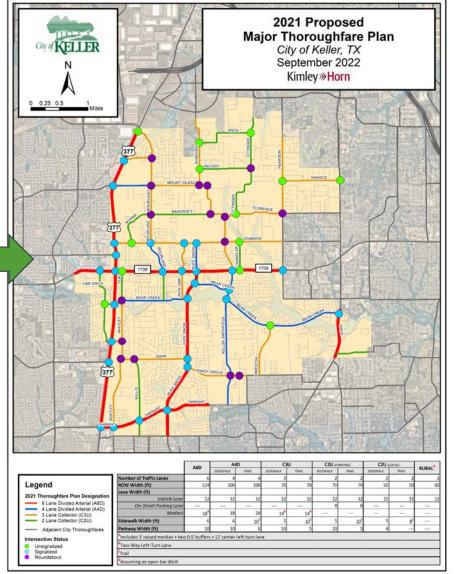








MTP





Proposed Cross Sections

	ACD	A4	ID.	C3	U	C2U (PA	ARKING)	C2U (RURAL		
	A6D		TRAIL	SIDEWALK	TRAIL	SIDEWALK	TRAIL	SIDEWALK			TRAIL
Number of Traffic Lanes	6	4	4	3	3	2	2	2	2	2	
ROW Width (ft)	124	100	100	70	70	70	70	50	50	60	
Lane Width (ft)											
Vehicle Lane	12	12	12	12	12	12	12	15	15	12	
On-Street Parking Lane						8	8				
Median	18 ^A	18	18	14 ^B	14 ^B						
Sidewalk Width (ft)	6	6	10 ^c	5	10 ^c	5	10 ^c	5	8 ^c		
Parkway Width (ft)	10	10	6	10	5	10	5	4			
Alncludes 5' raised median + two 0.5' buffers + 12' center left-turn lane											
BTwo-Way Left-Turn Lane											





Trail

Assuming an open bar ditch

^{*}Incorporates the **removal of all four-lane undivided roadways** from the plan

Proposed Cross Sections

Six-Lane Divided Arterial Option

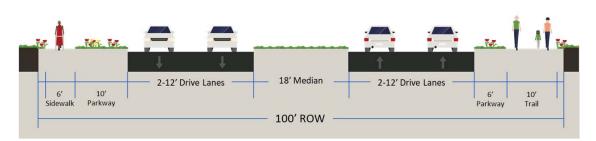
3-12' Drive Lanes

12' Turn
Lane
10' 6'
Sidewalk Parkway

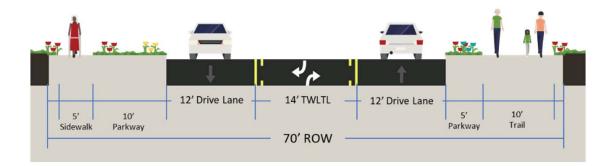
18' Median

124' ROW

Four-Lane Divided Collector Option Sidewalk (L) vs. Trail (R)



Three-Lane Undivided Collector Option Sidewalk (L) vs. Trail (R)



Proposed Cross Sections

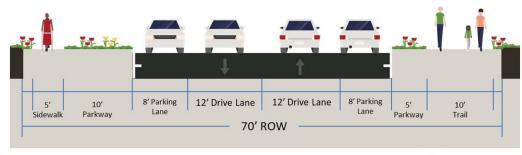
Two-Lane Undivided Collector Option

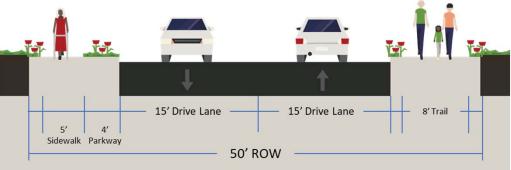
(w/ On-Street Parking)
Sidewalk (L) vs. Trail (R)

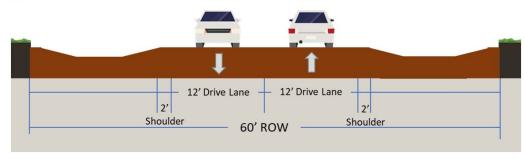
Two-Lane Undivided Collector Option (Local/Residential)

Sidewalk (L) vs. Trail (R)

Two-Lane Rural Option









Questions

Jeff.Whitacre@Kimley-Horn.com

John.Atkins@Kimley-Horn.com

April.Escamilla@Kimley-Horn.com

John.Green@Kimley-Horn.com