Draft 2035 Baseline (No Build) Transportation Analysis Fact Sheet

The 2035 Baseline conditions transportation analysis summarizes future land use, traffic volumes, traffic operations, queuing, and safety in the interchange study area.

2035 Baseline Transportation Network

The Baseline is based on a financially constrained transportation system. The financially constrained system will include projects from Metro's adopted 2035 Regional Transportation System Plan (RTP) and both city and county adopted Transportation System Plans (TSP). Projects in local community plans were not included in the travel demand model. The Baseline assumes that the JTA Project is not constructed.

2035 Land Use

On October 20, 2011, the Metro Council decided to expand the region's urban growth boundary in four areas. One of the four is a 330-acre (358.89 acres including roads and right-of-way) area north of Hillsboro, in the vicinity of Northwest Meek Road and south of U.S. Highway 26, for the purposes of attracting future large-site industrial employers. The additions to the urban growth boundary took effect on January 18, 2012.

The City amended its comprehensive plan to include the new North Hillsboro Industrial Area Community Plan. The new community plan replaces the Shute Road Site, Evergreen Area Industrial Plan, and Helvetia Area Industrial Plan. The City likewise amended its zoning ordinance to replace the four special industrial districts (Shute Road, Evergreen, Helvetia, and Special) with the Industrial Sanctuary Zone (IS) that implements the North Hillsboro Industrial Area Community Plan.

The new community plan and implementing zoning retains and strengthens the requirements for large lots and restrictions on commercial development. However, it does broaden allowable industrial uses and still allows commercial, retail, office and service support uses. Permitted uses are: Industrial services, manufacturing and production, public safety facilities, warehousing and distribution, wholesale sales, and utility facilities. Conditional uses are: automobile service stations; telecommunications facilities; schools, parks and open space; and company headquarters. Limited uses are: aviation (public-use airport); community colleges or trade schools; and eating and drinking establishments, general office, and retail to serve businesses and employees in the area. Commercial nodes are limited to less than 20,000 square feet in three areas that support industrial uses. It also establishes a planning foundation for possible future UGB expansions.

Traffic Volumes

Future Baseline traffic volumes for the project area were forecasts based on adopted local and regional transportation system plans for the City of Hillsboro, Washington County, and Metro Region. Planned

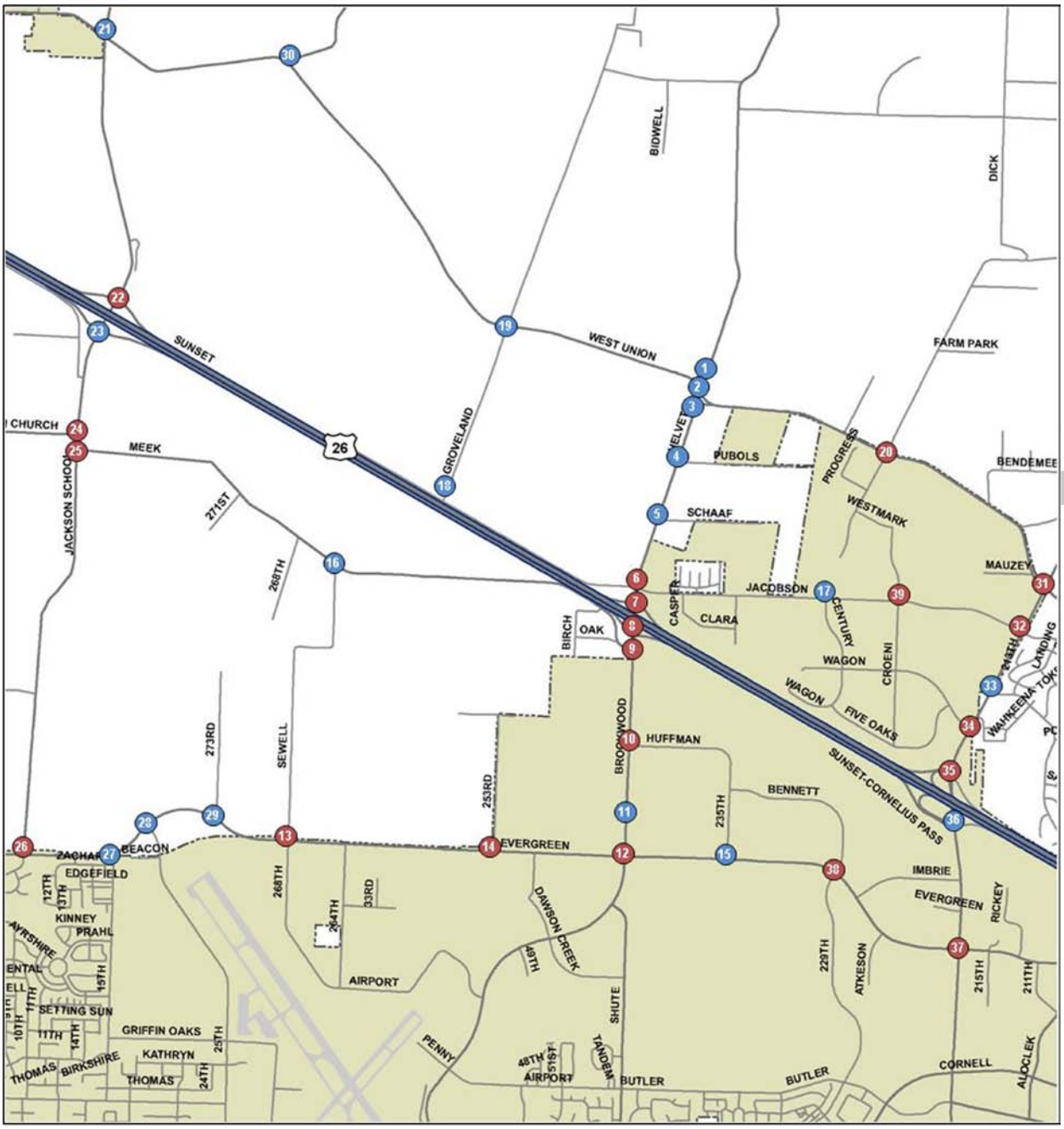
population growth and expected land uses resulted in an average vehicular growth rate from 2011 to 2035 of approximately 50% for the AM peak hour and approximately 45% for the PM peak hour. Traffic volume growth varies throughout the study area with some intersections experiencing a minimal growth of approximately 2%. Intersection near areas of intense lane use changes result in forecasted traffic volumes that more than double existing traffic volumes.

Traffic Operations

The two methods used to measure traffic operations of roadways and intersections are volume-to-capacity (v/c) ratio and level of service (LOS). When the v/c ratio is closer to zero, traffic conditions are generally good, with little congestion and low delays for most intersection movements. As the v/c ratio approaches 1.00, traffic becomes more congested and unstable, with longer delays. Six LOS standards have been established, ranging from LOS A, where there is little or no delays, to LOS F, where there is delay of more than 50 seconds at unsignalized intersections, or more than 80 seconds at signalized intersections.

Intersection Operations

Traffic operations were evaluated at all 39 study area intersections during the PM peak hour and at 17 key AM peak hour intersections. The Figure on the following page illustrates the study area intersections. Intersections highlighted in red show intersections failing to meet operational standards in the AM and/or PM peak hour.



The Table summarizes the intersections that exceed operational standards for ODOT, City of Hillsboro, or Washington County for the 2035 Baseline scenario. The 2035 Baseline conditions are expectedly worse than Existing conditions, with 20 intersections exceeding operational standards during the AM and/or PM peak hour. The westbound ramp termini for each of the three study area interchanges would be over capacity and fail to meet operational standards, with the exception of the AM peak hour at the Brookwood/Helvetia Interchange. The eastbound ramp terminal at the Brookwood/Helvetia interchange is also expected to be over capacity and exceeding operational standards in the Baseline scenario.

2035 Baseline Intersections Where Operational Standards Are Exceeded [1]

	Intersection	Critical Movement[2] AM (PM)	AM		PM		Jurisdiction Where Operational Standard Not Met[3]
			V/C Ratio	LOS	V/C Ratio	LOS	
22	Jackson Sch Rd @ US26 WB Ramps	Overall	>1.0	F	>1.0	F	All
24	Jackson Sch Rd @ Scotch Church Rd	(EB L/R)	Not analyzed in AM Peak Hour		>1.0	F	Wash Co, Hillsboro
25	Jackson Sch Rd @ Meek Rd	(WB L/R)	Not analyzed in AM Peak Hour		>1.0	F	Wash Co, Hillsboro
26	Jackson Sch Rd @ Evergreen Pkwy	Overall	>1.0	E	>1.0	F	Wash Co, Hillsboro
13	Sewell Rd @ Evergreen Pkwy	(SB L/T)	Not analyzed in AM Peak Hour		>1.0	F	Wash Co, Hillsboro
14	Meier-Jurgen Rd @ Evergreen Pkwy	(SB L)	Not analyzed in AM Peak Hour		>1.0	F	Wash Co, Hillsboro
6	Helvetia Rd @ Jacobson Rd	WB L/T/R (WB L/T/R)	0.13	C	>1.0	F	All
7	Brookwood Pkwy @ US26 WB Ramps	Overall	0.93	D	>1.0	D	ODOT, Wash Co
8	Brookwood Pkwy @ US26 EB Ramps	Overall	>1.0	D	>1.0	D	ODOT, Wash Co
9	Brookwood Pkwy @ Meek Rd	NB L (EB L/T/R)	>1.0	F	>1.0	F	All
10	Brookwood Pkwy @ Huffman Street	Overall	>1.0	F	>1.0	F	Hillsboro
12	Brookwood Pkwy @ Evergreen Pkwy	Overall	0.77	C	0.99	E	Hillsboro
20	Century Blvd @ West Union Rd	(SB L/T/R)	Not analyzed in AM Peak Hour		>1.0	F	Wash Co, Hillsboro
39	Croeni Rd @ Jacobson Rd	(SB L)	Not analyzed in AM Peak Hour		>1.0	F	Wash Co, Hillsboro
38	229th Avenue @ Evergreen Pkwy	Overall	1.06	F	>1.0	F	Wash Co, Hillsboro
31	Cornelius Pass Rd @ West Union Rd	Overall	0.99	E	>1.0	F	Wash Co, Hillsboro
32	Cornelius Pass Rd @ Jacobson Rd	Overall	Not analyzed in AM Peak Hour		>1.0	D	ODOT, Wash Co
35	Cornelius Pass Rd @ US26 WB Ramps	Overall	>1.0	F	>1.0	F	All
37	Cornelius Pass Rd @ Evergreen Pkwy	Overall	0.94	E	>1.0	F	Wash Co, Hillsboro
34	Cornelius Pass Rd @ Wagon Way	Overall	Not analyzed in AM Peak Hour		>1.0	E	Wash Co, Hillsboro

For intersection approaches NB = northbound, SB = southbound, EB = eastbound, and WB = westbound. At the intersection approach L = left-turn movement, T = through movement, and R=right-turn movement. Some approaches have shared lanes where two or more travel movements may be permitted as indicated with a slash.

Notes:
1. **Shaded** results indicate an intersection that fails to meet operational standards
2. The critical movement at a signalized intersection is the overall operation of the intersection. The critical movement at an unsignalized intersection is the stopped (or yield) movement with the worst v/c ratio.
3. "All" indicates the following jurisdictions: ODOT, City of Hillsboro, Washington County.

Freeway Operations

US 26 within the Study Area (between the Jackson School Road interchanges and the Cornelius Pass Road interchange) would operate within ODOT standards except for the westbound diverge to Brookwood Parkway/Helvetia Road during the AM peak hour. This segment is forecast to operate at a v/c ratio of 1.09 resulting in slowing on the mainline affecting all travel lanes.

Queuing

Queuing was evaluated at the Jackson School Road interchange, the Cornelius Pass Road Interchange, and along Brookwood Parkway/Helvetia Road from Jacobson Road to Evergreen Parkway. For the 2035 Baseline scenario, queue spillback would occur from the ramp terminals at Jackson School Road and Brookwood Parkway onto US 26. In addition, southbound queuing along Brookwood Parkway during the AM peak hour would spillback into upstream intersections. During the PM peak hour, queuing primarily occurs in the northbound direction and the minor street approaches of unsignalized intersections.

During the PM peak hour, the eastbound ramp meters at Jackson School Road and southbound Cornelius Pass Road spill back into upstream intersections. The Brookwood Parkway/Helvetia Road

eastbound on-ramp does not spillback onto Brookwood Parkway. Vehicles are unable to reach the interchange from Meek Road, Huffman Street, and Evergreen Parkway. The table below illustrates the approach and time period when queuing would be expected to extend into the upstream intersections.

Intersection with Queue Spillback		Direction & Movement	Peak Period	
			AM	PM
22	Jackson Sch Rd @ US26 WB Ramps	WBLT	■	■
23	Jackson Sch Rd @ US26 EB Ramps	NBT		■
7	Brookwood Pkwy @ US26 WB Ramps	WBLT	■	■
		NBT		■
8	Brookwood Pkwy @ US26 EB Ramps	EBLT	■	■
		NBT		■
		SBT	■	
9	Brookwood Pkwy @ Meek Rd	EBLTR	■	■
		NBTR	■	
		SBTR	■	■
10	Brookwood Pkwy @ Huffman Street	EBTR	■	
		WBTR	■	
		NBL	■	■
		NBTR	■	
		SBT	■	■
11	Brookwood Pkwy @ Genentech Access	NBTR	■	
12	Brookwood Pkwy @ Evergreen Pkwy	EBTR	■	
		NBT	■	
35	Cornelius Pass Rd @ US26 WB Ramps	NBT		■
		SBT		■
36	Cornelius Pass Rd @ US26 EB Ramps	NBT		■
		NBR		■

■ = Queue spillback during peak period

NB = northbound, SB = southbound, EB = eastbound, and WB = westbound. At the intersection approach L = left-turn movement, T = through movement, and R=right-turn movement.

Safety

The Baseline operations analysis reveals several long-term traffic safety issues that need consideration. Long delays and extensive queues may cause drivers to engage in riskier actions, such as running lights or traveling longer distances in the TWLTL to go around queues, which could result in more turning, angle, and sideswipe collisions. Congestion at the Brookwood/Helvetia westbound ramp terminal with US 26 will impact overall freeway operations, which could result in more rear-end and sideswipe collisions. On unsignalized side streets, longer delays may increase the likelihood that drivers would accept shorter gaps in the mainline traffic putting them at risk for turning or angle collisions. Where congestion is expected to worsen, current safety concerns as well as new safety concerns (especially queuing backing onto US 26) would be exacerbated.