



To: Sean Messner, Director, CivTech Inc.

From: Stephanie Santana, Sr. Lead Transportation Engineer SS

Date: October 13, 2026

RE: STL Master Plan Traffic Impact Analysis sealed September 15, 2026

CC: Jeffrey Bauman, Transportation Director / Traffic Engineer

The City of Flagstaff Transportation Engineering Section has reviewed the STL 405 Master Plan Traffic Impact Analysis, sealed September 15, 2026. The TIA is approved subject to the following conditions:

1. **Development phasing and improvement timing.** The required improvements and their timing are based on the 2028, 2034, and 2045 development horizons evaluated in the TIA.
 - a. The improvements identified below are required to mitigate traffic generated by the combined impact of the STL 405 development, the Juniper Point development, and projected background growth. These improvements were identified through the TIA analyses and Transportation Engineering's supplemental review and analysis. They shall be constructed and operational before issuance of the first building permit for development assigned to the applicable TIA horizon, or before the corresponding land use quantities or trip-generation threshold are reached, whichever occurs first. Exact projects and thresholds will be documented in the upcoming Development Agreement.
 - b. Before approval of each development phase or parcel, the developer shall demonstrate that the proposed development is consistent with the land use quantities, trip generation, and improvements evaluated for the applicable TIA horizon. If it is not, an updated TIA/Trip Generation Statement or TIA addendum shall identify the required improvements and revised improvement timing.
 - c. These conditions identify the required improvements and timing but do not assign full construction or funding responsibility to the STL 405 development. Responsibility may include constructing an improvement or contributing a proportional share, as determined through coordination with the City. Construction responsibility, proportional shares, improvement timing, and supporting engineering cost estimates shall be documented in the development agreement.
2. **Outstanding analysis and TIA addendum.** The following analyses remain outstanding and shall be completed and documented in a City-approved TIA addendum before the Development Agreement is finalized. The addendum shall verify the identified mitigation, determine the required storage lengths, identify any remaining or additional mitigation, and document improvement timing. Any resulting improvements shall be incorporated into the applicable horizon-year requirements.



- a. Lone Tree Rd and Butler Ave, Intersection 4: Revise the Synchro analyses using the constructed intersection configuration and traffic volumes redistributed north to the open overpass. Verify the required mitigation and 95th-percentile queue-storage lengths.
 - b. Juniper Point Blvd and J.W. Powell Blvd, Intersection 12: Using the City-approved Pine Canyon development traffic volumes, identify the mitigation required for the NBL movement to operate at LOS D or better in 2034. Using the updated City-approved traffic volumes, verify that the proposed 2045 intersection control and associated lane configuration will operate at LOS D or better during the peak hours.
3. **J.W. Powell Blvd and Access H, Intersection H:** Before issuance of a building permit for the 75th dwelling unit within the Pine Canyon Expansion (PCE), submit a study of the at-grade Arizona Trail crossing and identify the required crossing treatment.
4. **Ponavera Blvd roadway classification and cross section.** Ponavera Blvd shall be designed as a major collector roadway because it connects two arterial roadways. The roadway shall include one through travel lane in each direction, raised medians, buffered bike lanes, required turn lanes at intersections per the TIA, and a FUTS trail on one side of the roadway in lieu of the sidewalk on that side.
5. **Juniper Point Blvd roadway classification and cross section.** Juniper Point Blvd shall be designated as a minor arterial and initially constructed with one through travel lane in each direction and a wide raised median designed to accommodate future widening to the inside.
6. **2028 Offsite Improvements:**
 - a. Lone Tree Rd and Zuni Dr, Intersection 2: Construct a roundabout. A traffic signal will not comply with the intersection grade requirements in the City Engineering Standards. The roundabout shall be designed to accommodate the additional northbound and southbound lanes required in 2034. Additionally, the MetroPlan Planning and Environmental Linkages (PEL) study identifies a roundabout at this intersection to improve safety, accommodate future traffic volumes, and support multimodal travel.
 - b. Lone Tree Rd and Butler Ave, Intersection 4: Per Condition 2.a, the Synchro analysis does not reflect the constructed intersection configuration, and background volumes were not redistributed north to the open overpass, resulting in inaccurate queue estimates. A corrected Synchro analysis remains outstanding and shall be submitted using the correct lane configuration and redistributed traffic volumes. Construct dedicated NBR and EBR lanes with storage sufficient to accommodate the ultimate 95th-percentile queues established by the corrected analysis.
 - c. Lake Mary Rd and J.W. Powell Blvd, Intersection 5: Monitor crashes to confirm that intersection improvements may be deferred until the 2034 horizon, as MUTCD Warrants 2 and 3 are met under the 2028 No Build scenario.
 - d. Beulah Blvd and University Heights Dr/Lake Mary Rd, Intersection 7: Construct a free-flowing channelized WBR with a raised island and an exclusive



- receiving/acceleration lane, including the required downstream merge taper. Locate the WBR improvement to preserve sufficient space for the dual WBL lanes required in 2045. Provide signal-timing adjustments. The applicant's Synchro analysis did not include any pedestrian volumes; however, the City-required improvements are expected to provide adequate mitigation with pedestrian conflicts included.
- e. Fourth St and Butler Ave, Intersection 8: Construct the multi-lane roundabout identified in the TIA improvement plan. The proposed development shall contribute proportional shares toward the improvement because the current roundabout design accounts for traffic generated by the development.
 - f. Ponavera Blvd and J.W. Powell Blvd, Intersection 9: Construct a single-lane roundabout.
 - g. Ponavera Blvd and Access 10, Intersection 10: Construct a single-lane roundabout.
 - h. Juniper Point Blvd and J.W. Powell Blvd, Intersection 12: Restripe the north leg to provide dedicated SBR, SBT, and SBL lanes. Restripe the south leg to provide a dedicated NBL lane and a shared NBT/NBR lane.
- 7. 2028 Project Access and Internal Intersection Configurations:**
- a. Intersection D, Ponavera Blvd and Access D: dedicated EBL with shared EBT/EBR; dedicated WBL with shared WBT/WBR; dedicated NBL, NBT, and NBR; and dedicated SBL with shared SBT/SBR. The north, east, and south legs shall be designed as collector roadways.
 - b. Intersection E, Ponavera Blvd and Access E: shared WBL/WBR; dedicated NBT and NBR; and dedicated SBL and SBT. The north and south legs shall be designed as collector roadways.
 - c. Intersection F, Ponavera Blvd and Access F: dedicated WBL and WBR; dedicated NBT and NBR; and dedicated SBL and SBT. The north, east, and south legs shall be designed as collector roadways.
 - d. Intersection G, J.W. Powell Blvd and Access G: dedicated EBL and EBT; dedicated WBT and WBR; and dedicated SBL and SBR. The north leg shall be designed as a collector roadway and the east and west legs arterial roadways.
 - e. Intersection H, J.W. Powell Blvd and Access H: dedicated EBL, EBT, and EBR; dedicated WBL, WBT, and WBR; shared NBL/NBT/NBR; and dedicated SBL with shared SBT/SBR. The north leg shall be designed as a collector roadway and the east and west legs as arterial roadways. Refer to Condition 3 for the study requirements and timing for construction of the required Arizona Trail crossing treatment.
 - f. Intersection I, J.W. Powell Blvd and Access I: dedicated EBT and EBR; dedicated WBL and WBT; and dedicated NBL and NBR. The east and west legs shall be designed as arterial roadways. The south leg shall be designed as a Residential Local Wide roadway and striped with three 11-foot travel lanes.
 - g. Intersection J, J.W. Powell Blvd and Access J: dedicated EBT and EBR; dedicated WBL and WBT; and dedicated NBL and NBR. The south leg shall be designed as a collector roadway and the east and west legs arterial roadways.



- h. Intersection K, J.W. Powell Blvd and Access K: dedicated EBL and EBT; dedicated WBT and WBR; and dedicated SBL and SBR. The east and west legs shall be designed as arterial roadways. The north leg shall be designed as a Residential Local Wide roadway and striped with three 11-foot travel lanes.
- i. J.W. Powell Blvd connection: Complete the connection to Fourth St before issuance of the first building permit for development beyond Pine Canyon Expansion (PCE) Parcels 14, 15, and 16, consistent with the secondary-access requirements.

8. 2034 Offsite Improvements:

- a. Lone Tree Rd and J.W. Powell Blvd, Intersection 1: Construct a roundabout. The roundabout shall be designed to accommodate the required five-lane arterial widening of Lone Tree Rd, including the additional northbound and southbound lanes. A traffic signal will not comply with the intersection grade requirements in the City Engineering Standards. Additionally, the MetroPlan Planning and Environmental Linkages (PEL) study identifies a roundabout at this intersection to improve safety, accommodate future traffic volumes, and support multimodal travel.
- b. Lone Tree Rd and Zuni Dr, Intersection 2: Construct an additional NBT approach and receiving lane and an additional SBT approach and receiving lane.
- c. Lone Tree Rd and Pine Knoll Dr, Intersection 3: Construct additional NBT and SBT approach and receiving lanes. Extend the NBR storage lane to 120 feet, NBL storage lane to 300 feet, SBR storage lane to 215 feet, and SBL storage lane to 165 feet. The applicant's Synchro analysis did not include conflicting pedestrian volumes and modeled the left turns as permissive despite the dual opposing through lanes. In lieu of another round of TIA comments, the City performed a supplemental analysis that included conflicting pedestrian volumes and protected-only left-turn phasing. The analysis indicates that the City-required improvements provide adequate mitigation.
- d. Lake Mary Rd and J.W. Powell Blvd, Intersection 5: Construct a single-lane roundabout due to the intersection's location within a runway protection zone (RPZ), where a traffic signal is not acceptable.
- e. Ponavera Blvd and Juniper Point Blvd, Intersection 11: Construct a single-lane roundabout.
- f. Juniper Point Blvd and J.W. Powell Blvd, Intersection 12: Per Condition 2.b, provide mitigation sufficient for the NBL movement to operate at LOS D or better during the peak hours using the City-approved Pine Canyon development traffic volumes.
- g. Intersection C, Ponavera Blvd and Access C: shared EBL/EBT/EBR; dedicated WBL and shared WBT/WBR; dedicated NBL, NBT, and NBR; and dedicated SBL with shared SBT/SBR. The north, east, and south legs shall be designed as collector roadways.
- h. Lone Tree Rd Segment: Widen Lone Tree Rd from J.W. Powell Blvd to Sawmill Rd to a five-lane arterial cross section and coordinate the widening with all roundabouts along the corridor.

9. 2045 Offsite Improvements:



- a. Lone Tree Rd and Pine Knoll Dr, Intersection 3: Construct dual EBL lanes with a minimum of 100 feet of storage per lane, extend the EBR storage lane to 165 feet, construct a dedicated WBR lane with 115 feet of storage. The applicant's Synchro analysis did not include conflicting pedestrian volumes and modeled the left turns as permissive despite the dual opposing through lanes. In lieu of another round of TIA comments, the City performed a supplemental analysis that included conflicting pedestrian volumes and protected-only left-turn phasing. The analysis indicates that the City-required improvements, together with the required 2034 improvements, provide adequate mitigation.
 - b. Lone Tree Rd and Butler Ave, Intersection 4: Per Condition 2.a, the Synchro analysis does not reflect the constructed intersection configuration, and background volumes were not redistributed north to the open overpass, resulting in inaccurate queue estimates. A corrected Synchro analysis remains outstanding and shall be submitted using the correct lane configuration and redistributed traffic volumes. Construct an additional NBL lane and provide sufficient storage in each NBL lane to accommodate the ultimate 95th-percentile queues established by the corrected analysis.
 - c. Lake Mary Rd and High Country Trl, Intersection 6: Construct an additional NBT approach and receiving lane, extend the EBL storage lane to 260 feet, and extend the EBR storage lane to 145 feet. The City's supplemental analysis indicates that these improvements provide adequate mitigation.
 - d. Beulah Blvd and University Heights Dr/Lake Mary Rd, Intersection 7: Construct dual WBL lanes with storage as long as possible, with a target of 260 feet per lane, due to the existing freeway ramp support column. Restripe the south leg to provide an additional SBT receiving lane for the dual WBL movement and transition to the downstream cross section using the applicable taper length. Extend the NBR storage lane to 360 feet and the dual SBL storage lanes to 615 feet per lane. The applicant's Synchro analysis did not include conflicting pedestrian volumes; however, the City-required improvements are expected to provide adequate mitigation with pedestrian conflicts included.
 - e. Juniper Point Blvd and J.W. Powell Blvd, Intersection 12: Construct the City-approved roundabout or traffic signal verified through the analysis required under Condition 2.b. A roundabout is preferred for consistency with the corridor.
- 10. 2045 Project Access and Internal Intersection Configurations:**
- a. Intersection A: shared EBT/EBR, shared WBT/WBR, and shared NBL/NBR. The west leg shall be designed as a collector roadway.
 - b. Intersection B: shared EBT/EBR; dedicated WBL and WBT; and dedicated NBL and NBR. The east, south, and west legs shall be designed as collector roadways.
 - c. Intersection D1: dedicated EBL and EBR; dedicated NBL and NBT; and shared SBT/SBR. The north and south legs shall be designed as collector roadways. The west



- leg shall be designed as a Residential Local Wide roadway and striped with three 11-foot travel lanes.
- d. Intersection B1: dedicated EBL and EBT; shared WBT/WBR; and shared SBL/SBR. The east and west legs shall be designed as collector roadways.
11. Storage lengths listed in this approval are minimum lengths unless otherwise stated. Final civil plans shall include the necessary tapers and deceleration lengths and shall confirm that the proposed storage accommodates the City-approved 95th-percentile queue for the applicable horizon year.
 12. Signal timing shall be reviewed and adjusted at all signalized study intersections for each applicable development horizon.