MEETING DATE		AGENDA
May 11, 2026	MAITLAND FLORIDA	Section: Decisions
Department/Office : Public Works	AGENDA REPORT	Item #: 3.

Subject:
Chippewa Sidewalk.

Requested Action or Motion:
Provide direction on the design location of the Chippewa Trail sidewalk between Thistle Lane and Tomahawk Trail.

Summary Explanation & Background:
On April 10, 2023, City Council approved execution of a contract for Dommerich Hills Sanitary Sewer Extension, Phases 2-4 and Alternate 2, with R. P. Utility & Excavation Corp. (RPU), which included sidewalk and traffic-calming measures funded through the General Fund. The sidewalks were included in the project based on the Bicycle/Pedestrian Master Plan, which states the priority for sidewalk construction is to construct new sidewalks so that residents can be within one block of a new or existing sidewalk.

At the July 22, 2024 meeting, City Council approved postponing the portions of sidewalks planned to be constructed with the project on Chinook Trail, Huron Trail, Tomahawk Trail, Chickapee Trail, and the east side of Kewannee Trail as part of a budgetary package intended to reduce project costs following property tax reductions largely attributed to the Live Local Act. At the direction of the City Council, the sidewalk segment on Chippewa Trail from Thistle Lane to Ponca Trail remained included in the project.

During construction, the sidewalk was completed on the north side of Chippewa Trail between Clydesdale Drive and Ponca Trail. Concerns were expressed regarding the remaining section of Chippewa Trail between Thistle Lane and Tomahawk Trail, primarily due to the large live oak tree located at 2007 Chippewa Trail. To provide additional time to evaluate alternatives and address concerns, this section was removed from the RPU contract with the intent of revisiting the issue following completion of the contract.

The tree at 2007 Chippewa Trail is a 52-inch DBH (diameter at breast height, measured at 4'-6" above grade) live oak. While the root system has not been formally measured, standard growth habits for live oak roots indicate an extensive, shallow system that typically extends 1.5 to 2 times the canopy spread. Mature root systems generally consist of widespread lateral roots within the top three feet of soil, with feeder roots often extending 50–90 feet from the trunk. The canopy of this tree extends across Chippewa Trail nearly to the right-of-way line on the opposite side of the roadway.

The root system includes a few main horizontal roots that provide structural stability and typically remain close to the soil surface. Standard arboriculture practices recommend avoiding the cutting of these roots whenever possible. The roots on the street side of the tree were air-spaded to expose the root structure and provide a better understanding of the potential impacts associated with sidewalk installation. Based on consultation with a licensed arborist, the property owners expressed concern that the level of root pruning required could irreparably damage the tree, reducing both its stability

and lifespan.

The City's arborist conducted a site inspection on April 6, 2026, and found the tree to be in good health, with no visible disease, insects, injuries, or stressors. The arborist did note that some prior pruning had not followed industry best practices, limiting opportunities for future canopy reduction. Consistent with arboricultural best management practices, minimizing disturbance to the root system is preferred.

Staff evaluated several alternatives to provide a sidewalk connection between Clydesdale Drive and Thistle Lane.

Option 1: Continue Sidewalk Construction as Originally Designed Along the North Side of Chippewa Trail.
This option would continue the sidewalk along the originally planned route between Clydesdale Drive and Thistle Lane. A conflicting tree at 2025 Chippewa Trail was removed prior to reevaluation of the route; however, the live oak at 2007 Chippewa Trail remains a significant constraint. The current design places the sidewalk approximately two feet behind the back of curb, which would require construction directly through the tree's root zone near the root flare.

A field adjustment could shift the sidewalk adjacent to the curb. This would require widening the sidewalk from five feet to six feet, providing approximately one additional foot of separation from the root flare. However, the arborist's review indicates that this adjustment would not significantly reduce root impacts, as root cutting would still be required.

The primary advantage of this option is that it follows the previously approved alignment, requiring no additional design effort and utilizing a route already anticipated by nearby property owners. It also provides a direct and consistent sidewalk alignment along Chippewa Trail. However, this option carries the highest likelihood of damaging the tree through root pruning. Additionally, the longer sidewalk run and multiple driveway crossings (11) contribute to relatively higher construction costs compared to some alternative routes.

Option 2: Install a Traffic-Calming Curb Extension (Chicane or Bump Out) to Shift the Sidewalk Away from the Tree.

This option would modify the roadway geometry by incorporating a traffic-calming curb extension, or chicane, to create additional separation between the sidewalk and the tree's root flare. By shifting the sidewalk farther from the tree, an additional two to four feet of clearance could potentially be achieved, decreasing disturbance to the root zone.

Because the sidewalk would likely be installed at or above the elevation of the existing asphalt, a portion of the disturbance would occur in already compacted roadway areas, potentially reducing impacts compared to direct excavation within undisturbed soil.

The primary benefit of this option is that it may reduce root disturbance and improve the probability of long-term tree viability. However, implementation would require significant engineering design to determine the proper length and geometry of the curb extension while maintaining safe traffic flow and ADA-compliant sidewalk grades.

The design would need to transition back to the existing curb alignment prior to the nearby intersection and driveway at 2001 Chippewa Trail. The driveway at 2007 Chippewa Trail would likely need to be extended into the curb extension area to maintain access and allow the sidewalk to cross

safely. Due to roadway narrowing, the sidewalk would not be recommended directly adjacent to the curb. Existing vehicle stacking associated with school pickup operations may also create traffic circulation challenges, making the roadway more difficult to navigate. These constraints could result in a design that is difficult or infeasible to implement.

Additionally, the design engineer for the project has expressed concerns regarding construction of a sidewalk on a curb extension. This puts pedestrians within what was formerly a driving lane, moving them into a typical driving pathway. Based upon their assessment, this would be an atypical design that would potentially put pedestrians at increased danger, increasing liability if someone were to be injured on this section of sidewalk. Based upon their assessment, this option would not be recommended.

Option 3: Construct a Boardwalk or Elevated Structure Over the Root System.

This option would utilize a boardwalk or elevated walkway to span above the tree's root system and avoid traditional excavation. While this approach could reduce direct disturbance to roots, it presents significant design and long-term maintenance challenges.

To elevate the structure over the root zone, the walkway would require ramped approaches on both sides to meet ADA standards. Due to the limited horizontal distance available between the tree, adjacent driveway, and existing grades, providing ADA-compliant slopes would be difficult or potentially infeasible and would likely require handrails.

A boardwalk system would also require support elements such as pilings or footers. Pilings would need to be driven into the root zone, resulting in direct root impacts, while surface footers placed above roots would create long-term compression impacts. As the tree continues to grow, root movement will likely shift the structure over time, increasing maintenance needs and potentially creating future instability.

The primary benefit of this option is that it could reduce, though not eliminate, disturbance to the root zone. However, it introduces additional design complexity, higher construction and maintenance costs, potential ADA compliance challenges, and aesthetic concerns related to installing a handrailed elevated structure within a residential neighborhood setting.

Option 4: Relocate the Sidewalk to the South Side of Chippewa Trail.

This option would shift the sidewalk to the south side of Chippewa Trail by crossing near Tomahawk Trail and continuing west to Thistle Lane. Relocating the sidewalk would avoid impacts to the live oak at 2007 Chippewa Trail and maintain a reasonably continuous pedestrian route along Chippewa Trail.

However, constructing the sidewalk on the south side would likely impact up to three existing trees, potentially requiring removal. The route would also cross seven residential driveways and one pedestrian walkway connection, each requiring engineered transitions to ensure ADA compliance.

The primary benefit of this option is complete avoidance of impacts to the specimen live oak. It also preserves a sidewalk connection along Chippewa Trail. The disadvantages include the need for additional design, increased driveway crossing complexity, introduction of an additional roadway crossing, potential removal of several trees, and the fact that south-side residents were not previously informed of a sidewalk project adjacent to their properties because this alignment was not included in the original scope.

Option 5: Reroute the Sidewalk to Tomahawk Trail and Connect to Mohawk Trail.

This option would construct the sidewalk west along Chippewa Trail to Tomahawk Trail, cross to the south side at the intersection, and continue along the east side of Tomahawk Trail connecting to the sidewalk system on Mohawk Trail.

This alternative avoids impacts to the live oak at 2007 Chippewa Trail and provides a shorter route requiring only one driveway crossing rather than the eleven crossings associated with continuing along Chippewa Trail. Because the route generally follows previously planned sidewalk segments, minimal additional design effort is anticipated. However, due to the slope of the yards along Tomahawk, low retaining walls or curbs will need to be designed and constructed along most of Tomahawk Trail.

A magnolia tree located at the northeast corner of Tomahawk Trail and Mohawk Trail may experience root impacts from construction. The extent of impact would be evaluated during final layout, and adjustments may be possible to reduce disturbance. This tree has been evaluated by the City's arborist and is currently showing signs of decline and may need removal in the near future regardless of any impact.

This option offers several advantages, including avoiding multiple tree conflicts, minimizing driveway crossings, and requiring little additional design work. However, future drainage improvements currently being evaluated at the Tomahawk and Mohawk Trail intersection could require modifications to the sidewalk crossing area if stormwater improvements are implemented.

Summary:
The alternatives generally fall into two categories: continuing the sidewalk connection along Chippewa Trail or rerouting the sidewalk to connect via Tomahawk Trail. Each option presents trade-offs between preserving mature trees, minimizing design complexity, maintaining pedestrian connectivity, and controlling construction costs.

Staff is requesting City Council direction on which route to construct to provide the connection from Chippewa Trail at Clydesdale Drive to Thistle Lane.

Fiscal Impact:
Approximately $103,000 for Option 1or 2 Other options would require additional designand/or pricing.

Exhibits:
1. Tomahawk Option
2. Pre-construction existing condition 01
3. Pre-construction existing condition 02
4. Pre-construction existing condition 03 - impacted roots
5. Air spaded existing condition 01
6. Air spaded existing condition 02
7. 2007 Chippewa GIS Tree Aerial
8. GIS Tree Photos

Commission/Board: City Council

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Reviewed by City Attorney
N/A