Americans with Disabilities Act Sidewalk Evaluation and Transition Plan

Prepared for:

City of Sunset Hills
3939 S. Lindbergh Blvd.
Sunset Hills, MO 63127

Oates Project Number: 18043

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OATES ASSOCIATES

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Executive Summary

The ADA Sidewalk Evaluation and Transition Plan has been prepared pursuant to the Americans with Disabilities Act (ADA), which requires a transition plan to be completed by all public agencies with more than fifty (50) employees. The purpose of this Plan is to document the City of Sunset Hills Public Works Department's evaluation of its pedestrian facilities on public rights-of-way and develop reasonable objectives for making those facilities accessible for all people, including those with disabilities. The City previously assessed its City buildings for compliance and those reports are available for review upon request. This Plan focuses on pedestrian facilities within the public rights-of-way owned and maintained by the City of Sunset Hills. The Deputy City Clerk / Business License – Finance Clerk has been designated as the City's ADA Coordinator, and will serve as the primary clearing house and record keeper for all issues related to ADA accessibility.

Sidewalks, Curb Ramps & Pedestrian Signals

The ADA requires a self-inventory of pedestrian facilities within the public rights-of-way, including all City sidewalks, curb ramps, and pedestrian traffic signals on City rights-of-way. The pedestrian assets were inspected and assessed collecting data to determine the physical condition of the sidewalk and curb ramp based on the collection criteria established in **Appendix A.** The City created a comprehensive GIS database based on the field data collected that will be used by City staff for future planning. If a sidewalk or curb ramp was found to not meet ADA standards, the asset was prioritized based on physical condition and proximity to pedestrian traffic generators. A missing curb ramp represents the highest barrier to ADA compliance based on physical condition. The highest activity areas are those around public facilities, schools and commercial developments along busy streets.

The City of Sunset Hills should develop a programmatic plan to ultimately address all areas of noncompliance throughout the City. However, since it is most likely not feasible for the City of Sunset Hills to improve all pedestrian facilities in one year, a prioritization system was developed to allow the City to prioritize future improvements. Sidewalk segments and curb ramps were then divided into three tiers to help prioritize future improvements. The third-tier sidewalk segments and curb ramps are categorized as Long-Term Priorities – Out Years Improvements. These sidewalk segments and curb ramps have minor ADA concerns and are least likely to have high pedestrian traffic. 1st Tier Improvements represent those sidewalk segments and curb ramps that are in the worst physical condition and most likely to have high pedestrian traffic. See **Chapter 5** and **Appendix A** for additional information regarding the development of the prioritization system.

Three (3) potential projects were developed to address the highest priority sidewalks and curb ramps as identified by the Plan. The three projects focus on connecting City residents to the various pedestrian traffic generators throughout the City. See **Appendix A.8** for additional information. This plan does not identify priority locations where sidewalks are currently not provided. The City has previously developed a Plan to expand the existing pedestrian network throughout the City.

The City currently has no pedestrian traffic signals that are owned and operated by the City of Sunset Hills. Future pedestrian traffic signals installed should be designed and constructed to meet all applicable ADA standards. See **Appendix A.6.3** and **A.7** for applicable ADA standards to ensure that future pedestrian traffic signals meet ADA compliance.

1.0 Regulatory Requirements

The Americans with Disabilities Act Sidewalk Evaluation and Transition Plan, (referred to as "the Plan") documents the City of Sunset Hills Department of Public Works evaluation of existing City owned pedestrian facilities and develop objectives for making those facilities accessible for all people including those with disabilities. This Plan focuses on public pedestrian facilities, including sidewalks and curb ramps located on public rights-of-way or within public parks. The Plan has been prepared pursuant to the Americans with Disabilities Act (ADA), which requires a transition plan to be completed by all public agencies with more than fifty (50) employees.

1.1 Americans with Disabilities Act

The Americans with Disabilities Act (ADA), enacted on July 26, 1990, is a comprehensive civil rights act that prohibits discrimination on the basis of disability. As listed below, the act is divided into five separate titles that cover specific applications: Employment, Public Services (state and local government), Public Accommodations (commercial facilities), Telecommunications and Miscellaneous Provisions. The ADA is meant to complement the minimum guidelines presented in Section 504 of the Rehabilitation Act of 1973. While the City of Sunset Hills is covered by multiple titles of the ADA, **this Plan focuses on Title II of the ADA as the City of Sunset Hills is a public entity and specifically those programs, services or activities administered by the Department of Public Works.**

- Title I – Employment: This title is designed to remove barriers that would deny qualified individuals with disabilities access to the same employment opportunities and benefits available to others without disabilities. Employers must reasonably accommodate the disabilities of qualified applicants or employees.
- **Title II - Public Services: This title prohibits discrimination by public entities on the basis of disability. The public entity is required to provide access to programs, services and activities provided by the state or local government.**
- Title III - Public Accommodations: This title prohibits discrimination on the basis of disability by private entities in places of public accommodation. Examples include hotels, restaurants, golf courses, etc.
- Title IV – Telecommunications: This title requires telephone companies to have developed interstate and intrastate telephone relay services in every state.
- Title V - Miscellaneous Provisions: This title has a variety of provisions relating to the ADA as a whole, including its relationship to other laws and its impact on insurance benefits.

1.2 Definitions

Title II of the ADA addresses discrimination in relation to public services including "public entities". The ADA definition of a "public entity" includes any state or local government. Title II of the ADA requires that no person shall by reason of such disability be excluded from participation in or denied the benefits of services, programs, or activities of a public entity, or be subjected to discrimination by any such entity. Sidewalks and curb ramps are considered a "program" per Title II of the ADA, and therefore must meet the requirements of the Americans with Disabilities Act.

According to Sec. 12102 of the ADA the term "disability" means, with respect to an individual:

(a) A physical or mental impairment that substantially limits one or more major life activities of such individuals;
(b) A record of such an impairment; or
(c) Being regarded as having such impairment.

The ADA does not specifically name all the impairments that are covered but describes in detail the conditions that are included or excluded as disabilities under the ADA. An example of an excluded disability is a transitory impairment; an impairment with an actual or expected duration of 6 months or less.

1.3 ADA Requirements of the City of Sunset Hills

The ADA presents specific items that the City of Sunset Hills or any "public entity" must perform to achieve compliance. The NCHRP 20-7 (232) – *ADA Transition Plans: A Guide to Best Management Practices* was developed to provide guidance in achieving ADA compliance. This document was used to create this Plan. These steps include:

- Perform a self-evaluation
- Develop a grievance procedure (See **Exhibit 2**)
- Provide notice about the ADA requirements (See **Exhibit 1**)
- Designate an individual to oversee Title II compliance (ADA Coordinator) (City Clerk / Business License – Finance Clerk)
- Develop a transition plan if structural changes are necessary for achieving program accessibility
- Retain all grievances reports and ADA compliance checklists for a minimum of three years

The Transition Plan lays out the steps and actions to ensure compliance with the above listed steps and achieving ADA compliance. Achieving ADA compliance will require a long-term plan based on funding availability.

<u>Administrative Requirements</u>
The City of Sunset Hills is responsible for ensuring all-inclusive access for all properties, services, and programs offered by the City. In addition to sidewalks, curb ramps, and City owned buildings and facilities for which additional information is listed below, the City of Sunset Hills also maintains a website, in addition to other programs and services offered by various City departments. The City of Sunset Hills must have a notice to the public stating the public's rights related to City properties, services, and programs offered by the City. Additionally, the City must have a process in which the public can file a complaint on ADA accessibility. While it will take time for the City to bring the entirety of their buildings and facilities into compliance, the City has an obligation to modify existing programs to accommodate all users. **This plan focuses on the programs, services or activities maintained by the City of Sunset Hills Department of Public Works.**

<u>Sidewalk, Curb Ramp & Pedestrian Signals Inventory Requirements</u>
The sidewalks, curb ramps and pedestrian signals inventory must be available for inspection online through the City's website as well as at City Hall and is also available in alternative format (e.g. flash drive, large print, Braille) by request. This inventory identifies physical barriers in public rights-of-way under the jurisdiction of the City of Sunset Hills. This inventory will serve as a guide to help schedule repairs that have a higher priority and greater impact on the public. **See Appendix A** for the sidewalk and curb ramp inventory.

2.0 Steps to a Compliant Transition Plan

The National Cooperative Highway Research Program (NCHRP) Project Number 20-7 (232) – *ADA Transition Plans: A Guide to Best Management Practices* was used as a basis for the development of this Plan. The following steps were taken to meet the requirements identified in Chapter 2:

2.1 Designating an ADA Coordinator

The City has identified the Deputy City Clerk / Business License – Finance Clerk as the ADA Title II Coordinator and he/she will be the primary point of contact on all issues related to ADA accessibility within the City of Sunset Hills. He/She will also oversee the requirements outlined in the ADA notice to the public and in the grievance procedure. The ADA Title II Coordinator is available to answer questions from both the public and city employees about accommodating persons with disabilities and Title II of the ADA. All written requests should be sent to:

Lori Stone, ADA Coordinator
City of Sunset Hills
3939 South Lindbergh Blvd.
Sunset Hills, MO 63127
Phone: 314-272-2463
Email: lstone@sunset-hills.com

2.2 Providing Notice to the Public about ADA Requirements

The public participation process included specific efforts to include persons with disabilities, as well as the outreach groups that represent them. Because of their sensitivity to pedestrian travel, this group has specific concerns that differ from the general population. The public participation process also included City officials and the public. See Chapter 3 for documentation of the City's public outreach effort. A notice to the public about ADA requirements has previously been developed and approved by the City. This notice should be posted at all City buildings and on the City's website. A copy of the notice is included in **Exhibit 1**.

2.3 Establishing a Grievance Procedure

The ADA Coordinator is responsible for ensuring that the grievance procedure is followed and that records are kept for at least three years. A grievance procedure has previously been developed and approved by the City. A copy of the grievance form is provided in **Exhibit 2**.

2.4 Developing Internal Design Standards, Specifications and Details

The City of Sunset Hills references the standard specifications and details of the Department of Transportation of St. Louis County.

2.5 Assigning Personnel for the Development of the Plan and Collecting Data

Oates Associates (OA) was contracted by the City of Sunset Hills to inventory the existing facilities including curb ramps and sidewalks within City rights-of-way, identify ADA deficiencies, and develop procedures for implementing and scheduling work to provide an ADA compliant system.

The inventory for sidewalks and curb ramps was completed by OA by walking the City's sidewalk system and recording the observed deficiencies on the sidewalks and curb ramps on a block by block basis. This information was recorded using a mobile global positioning satellite (GPS) unit. All the information collected was stored within a Geographic Information System (GIS) database. The GIS database developed for this project will be integrated into the GIS system that the City already implements. The database will be periodically updated as improvements are performed throughout the City.

2.6 Approving a Schedule and Budget for the Plan

By adopting this plan, the City has developed an implementation procedure to identify the sidewalk sections or curb ramp locations that are the most critical. While this Plan does include a prioritization for pedestrian facility improvements throughout the City of Sunset Hills, projects will be logically grouped together for construction efficiency and cost savings. Additionally, should projects be identified that are eligible for either federal or state funds these projects should be pursued regardless of the prioritization rank of these given segments or curb ramps. The implementation procedure will help guide the City to identify specific projects that will allow the City to maximize the improvements that can be performed within the available budget.

The City of Sunset Hills currently provides funding for sidewalk improvements through its Capital Improvements Fund program through the Public Works Department section of the budget. Additionally, sidewalk improvements should be incorporated into other transportation improvement projects throughout the City. The final budget for sidewalk and curb ramp improvements within a given year will be determined by the Council during the development of the fiscal budget. Various state and federal funding sources are also available to fund specific projects throughout the City (e.g., Surface Transportation Program).

2.7 Monitoring the Progress on the Implementation of the Transition Plan

The City of Sunset Hills is responsible for monitoring the progress of the Plan. The Plan should be updated as projects are completed and changes to ADA requirements are enacted. The ADA Coordinator / Deputy City Clerk / Business License – Finance Clerk will be responsible for assigning staff to monitor the various components of the Transition Plan, with the expectation that the Department of Public Works will be responsible for ensuring compliance associated with improvements within the public rights-of-way.

3.0 Public Outreach

The ADA states that public entities are required to make available to all applicants, participants, residents, and other interested parties' information regarding the formation of the Plan. A primary goal of the Plan was to actively seek input from all interested parties, including those with disabilities and the groups that represent them. The ADA also requires that a copy of the Plan be made available for public review during a citizen review period.

3.1 Community Feedback Survey

The ADA requires as part of the development of the Plan, public input throughout the entirety of the process. Since the Plan is a multi-year process that is designed to be flexible, it is critical that public involvement and comment continue to be sought through the entire length of the Plan.

To assist in the prioritization of pedestrian assets a public survey has been developed to gather community feedback. The public survey includes questions to determine which barriers to access have the greatest impact on the usability of pedestrian assets. The public survey is available online and in alternative formats upon request. Anyone requiring alternative formats should contact the ADA Coordinator for additional information. A copy of the public survey is included in **Exhibit 3.**

3.2 Public Review and Comment Period

A City Council working session was held on MONTH DAY YEAR to present the draft plan to council members to residents of the City and provide citizens with an opportunity to comment on the plan. Additionally, anyone wishing to comment on the plan can do so in writing or by contacting the City. The Plan was sent out for public comment in MONTH DAY YEAR and the public comment period was established for a period of 30 days. A copy of the public comment form is included in **Exhibit 3**. Should any resident or visitor have a desire to comment on the Plan the public comment form can be completed at any time and returned to the City.

4.0 ADA Design Standards

4.1 Incorporation into City of Sunset Hills Standards

See Appendix A.1 for a list of definitions used through the Plan.

The following statutes, codes, guidelines, and standards were used in the development of this plan. Should other new statutes, codes or standards become applicable after the adoption of the plan, such new codes or standards shall be incorporated into this plan if they are more restrictive and/or exceed the existing standards.

(a) Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG), published by the U.S. Architectural and Transportation Barriers Compliance Board on July 26, 2011. These guidelines are currently published for review and comment and will replace the current ADAAG guidelines within the public rights-of-way upon final approval. The guidelines have not been approved by the U.S. Department of Justice but are currently identified as the best practice for pedestrian accommodations in public right-of-way. Once the PROWAG, in either its present form or a modified version, is adopted by the Department of Justice, the PROWAG will be the federal standards for accessibility compliance on public right-of-way. **Since PROWAG represents the most current guidelines regarding public rights-of-way it was used as the guiding federal standards for the plan.**

(b) 2018 Missouri Standard Plans for Highway Construction published by the Missouri Department of Transportation effective beginning with the July 2018 bid opening. **The standard plans represent the most current state standards.**

(c) Standard Drawings published by the St. Louis County Department of Transportation and last revised on September 1, 2015 and standard specifications for road and bridge construction published by the St. Louis County Department of Transportation on October 1, 2018. **The standard drawings and specifications represent the most current county standards. The standard specifications published by St. Louis County Department of Transportation have also been established as the standard specifications for the City of Sunset Hills.**

The ADA Codes and Standards described in this section are intended to apply to all construction undertaken within City rights-of-way after the final approval and adoption of the Plan. This is meant to include all new construction, both private and public, as well as all construction undertaken as part of the Plan.

Pedestrian Facilities

The ADA Design Standards for sidewalk evaluation for pedestrian facilities on public rights-of-way within the City of Sunset Hills have been developed as a result of a review process to determine the most stringent standards from federal, state, and local guidelines and codes as they relate to various accessibility issues throughout the City. The standards developed to collect inventory data as part of this plan were determined by comparing the St. Louis County standard drawings to the standards detailed in the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (dated July 2011).

4.2 Implementation of ADA Design & Construction Standards

New Construction/New Alignment

All areas of newly designed and constructed facilities located on City property/right-of-way shall comply with all applicable ADA standards.

New Construction/Existing Alignment

Each addition on City property/right-of-way shall comply with all applicable ADA standards except as modified below.

Alterations to Existing Facilities/Existing Alignment

When existing elements located on City property/right-of-way are to be altered, each altered element shall comply with all applicable ADA standards including PROWAG and other standards list in Section 4.1 except as modified below:

(a) Exception: In alterations, where compliance with applicable provisions is technically infeasible, the alterations shall comply with the standards to the maximum extent possible without placing undue burden on the City.

(b) Exception: When new sidewalk is tying into an existing element that does not meet ADA standards at a project terminus, all sidewalk panels except the sidewalk panel directly adjacent to the existing elements shall comply with all applicable ADA standards. The sidewalk panel from existing to new shall not result in reduced accessibility.

(c) Prohibited Reduction in Access: An alteration that decreases accessibility for the general public on a public right-of-way, site arrival points to the buildings or other facilities adjacent to the proposed adjustments on public right-of-way or to a room within a building and which are below the requirements for new construction at the time of the alteration will be prohibited.

Approval Procedures for Exceptions and Technically Infeasible Conditions

The City of Sunset Hills should require a written request to the applicable City department for making all determinations of exceptions and technical feasibility. Upon a determination on the status of an exception and technical infeasibility, such determination of the applicable City department shall be final, except that any member of the public can appeal a determination, per the procedures laid out in the City of Sunset Hills Grievance Procedures under the Americans with Disabilities Act.

Dimension and Grades Tolerances

All dimensions and numerical requirements contained in these standards and any applicable local, state, and federal codes or statutes are absolute and requirements have been derived considering construction practices and constraints, and no dimensional or slope tolerances beyond the stated maximum or minimum are allowed. The person responsible for the construction operations will be responsible for ensuring that all equipment is calibrated properly. For contracted work, the City reserves the right to have any construction that is not built to the standards as listed, removed and reconstructed at no cost to the City.

5.0 Sidewalk Transition Plan

5.1 Inventory Methodology

Self-inventory of pedestrian facilities is one of the requirements for any public entity according to the ADA. The City has created a comprehensive GIS database from the inventory information gathered that will be used by the City staff for future planning. All pedestrian facilities located on city-owned public rights-of-way and within parks maintained by the City were inventoried.

Collection procedures for sidewalk segments, obstructions, and curb ramps were done by walking every block of pedestrian accommodations within the City. Data was obtained through visual inspections and measurements and collected using a mobile GIS data collection unit. The unit had customized forms for OA staff to insert data that they collected related to sidewalks, obstructions, and curb ramps. The staff was trained on the current ADA guidelines and field procedures. The information collected was then analyzed using a scoring system. The scoring was modified as necessary to reflect the goals determined by the City in prioritizing repairs.

5.2 Sidewalk Data Collected

The sidewalk inventory was conducted in segments based on City blocks. A sidewalk segment is considered a continuous length of sidewalk between two termini; with termini points set at either intersecting roadways or at approximately 200' intervals. **See Appendix A.2** for the sidewalk data collected.

5.3 Obstruction Data Collected

An obstruction is any permanent or temporary obstacle or condition that affects the ability of a pedestrian to travel along a pedestrian access route. Obstructions were recorded where encountered along the sidewalk section. There could be several obstructions taken within a sidewalk segment and vertical displacements (elevation difference) were grouped together within a sidewalk segment. **See Appendix A.3** for the obstruction data collected.

5.4 Curb Ramp Data Collected

Because there are comprehensive ADA requirements specifically for curb ramps detailed measurements were taken at each curb ramp. **See Appendix A.4** for the curb ramp data collected.

5.5 Pedestrian Signal Data Collected

Because there are comprehensive ADA requirements specifically for pedestrian traffic signals detailed measurements were taken for each pedestrian traffic signals. **See Appendix A.5** for the pedestrian traffic signal data collected. While the City does not currently maintain and operate a pedestrian traffic signals these standards were established to guide future construction of pedestrian traffic signals.

5.6 Scoring and Ranking

A criteria system was developed to prioritize the ADA compliance by both physical condition and proximity to pedestrian traffic generators. Location is a factor because the *Department of Justice Title II Technical Assistance Manual* points to the fact that a public entity's programs

related to sidewalk and curb ramps may be prioritized with respect to the location of a sidewalk or curb ramp.

Impedance Score

To evaluate the physical condition of a given sidewalk segment or curb ramp, a scoring system was developed to assist the staff in prioritizing the severity of sidewalk segments and curb ramps. Each component of the ADA compliance criteria that was gathered during the sidewalk and curb ramp inventory was assigned a score based on overall impedance and the severity of obstructions within the route.

Curb Ramp Impedance Score

The impedance score for curb ramps was established by assigning a value for each component of a curb ramp that has the ability to affect overall compliance. The value of each component was established based on community feedback and communication with City staff. An example of the assigned value is that a 3' wide curb ramp has a higher priority than a curb ramp that lacks detectable warning panels. The total value for each component of curb ramp compliance is summed together to get the curb ramp impedance score.

Sidewalk Impedance Score

The sidewalk segment impedance score is a combination of two different factors that affect the usability of a given sidewalk segment. The first half of the sidewalk segment impedance score is the overall condition of the sidewalk segment. These components include sidewalk width, cross slope and running slope and are each assigned a different value based on the level of priority based on each factor.

Sidewalk Obstruction Score

The second half of the sidewalk segment impedance score is the number of severities of point obstructions located within a sidewalk segment. Obstructions are point obstacles like utility poles or driveway cross slopes that also impact the functionality of sidewalk and curb ramps. Obstructions located within a curb ramp are included in the Curb Ramp Impedance Score. Similarly, to other components a point value was placed on each point obstruction which is then applied to the sidewalk segment that the point obstruction exists within.

The scoring system equations are:

Sidewalk Segments (Between 1 AND 50)
Sidewalk Score = (Sidewalk Impedance Score + Sidewalk Obstruction Score)

Curb Ramps (Between 1 AND 50)
Curb Ramp Score = Curb Ramp Impedance Score

After the scores were calculated, each location was categorized into a grouping of sidewalks with similar physical deficiency levels. The five groups are (1) no curb/sidewalk present, (2) high impedance, (3) medium impedance, (4) low impedance, and (5) significantly compliant.

See **Appendix A** for a detailed description of the scoring of sidewalks and curb ramps within the City.

Activity Factor

The proximity to traffic generators was evaluated as the second part of the two-part scoring system. The Activity Factor assigns a priority to each sidewalk segment or curb ramp based on the likelihood of having a high amount of pedestrian traffic. The activity factor considers

these pedestrian traffic generators and predicts the likelihood of pedestrian usage based on eight different categories. For this plan, elementary and middle schools, walking trails, government buildings, metro bus stops and arterial and collector routes are considered the highest priority locations. The Activity Factor sums the activity scores and divides by the maximum number of available activity scores. That number is then added to 1 to get the Activity Factor (See Equation below). An Activity Factor with a lower number represents a greater potential for pedestrian traffic.

Activity Factor (Between 1 AND 65)
Activity Factor = Sum of Activity

After the activity factors were calculated, each location was categorized three groupings with similar pedestrian activity levels. The three groups are (1) high activity, (2) medium activity, and (3) low activity. A high priority activity factor represents a segment that is within proximity to a multitude of pedestrian traffic generators. While a low priority activity factor represents a segment that is near few if any pedestrian traffic generators.

See **Appendix A** for a detailed description of the scoring of traffic generators within the City.

5.7 Prioritization

Due to the scale associated with bringing all existing pedestrian facilities within the City of Sunset Hills into compliance and the ever-changing nature of the physical condition of sidewalk and curb ramps, the City has developed a matrix using the Impedance Score and Activity Factor to prioritize improvements. This Plan has identified six (6) potential projects to increase accessibility throughout the City. These projects focus on those pedestrian assets that are high priority deficiencies located in areas with high levels of pedestrian traffic. **See Appendix A.8, Summary of Sidewalk and Curb Ramp Findings,** for additional information on these standalone projects. The City will initially focus on high priority deficiencies located in areas with high levels of pedestrian traffic, 1st Tier Improvements, as shown in red. The next tier, 2nd Tier Improvements, represent those pedestrian assets that either have less severe barriers to access or are located in less trafficked areas of the City. The remaining work - as shown in green - will be addressed in the out years of this Plan or in conjunction with other improvements.

While this Plan does include a prioritization for pedestrian facility improvements throughout the City of Sunset Hills, projects will be logically grouped together for construction efficiency and cost savings. Additionally, should projects be identified that are eligible for either federal, state or developer funds these projects should be pursued regardless of the prioritization rank of these given segments or curb ramps.

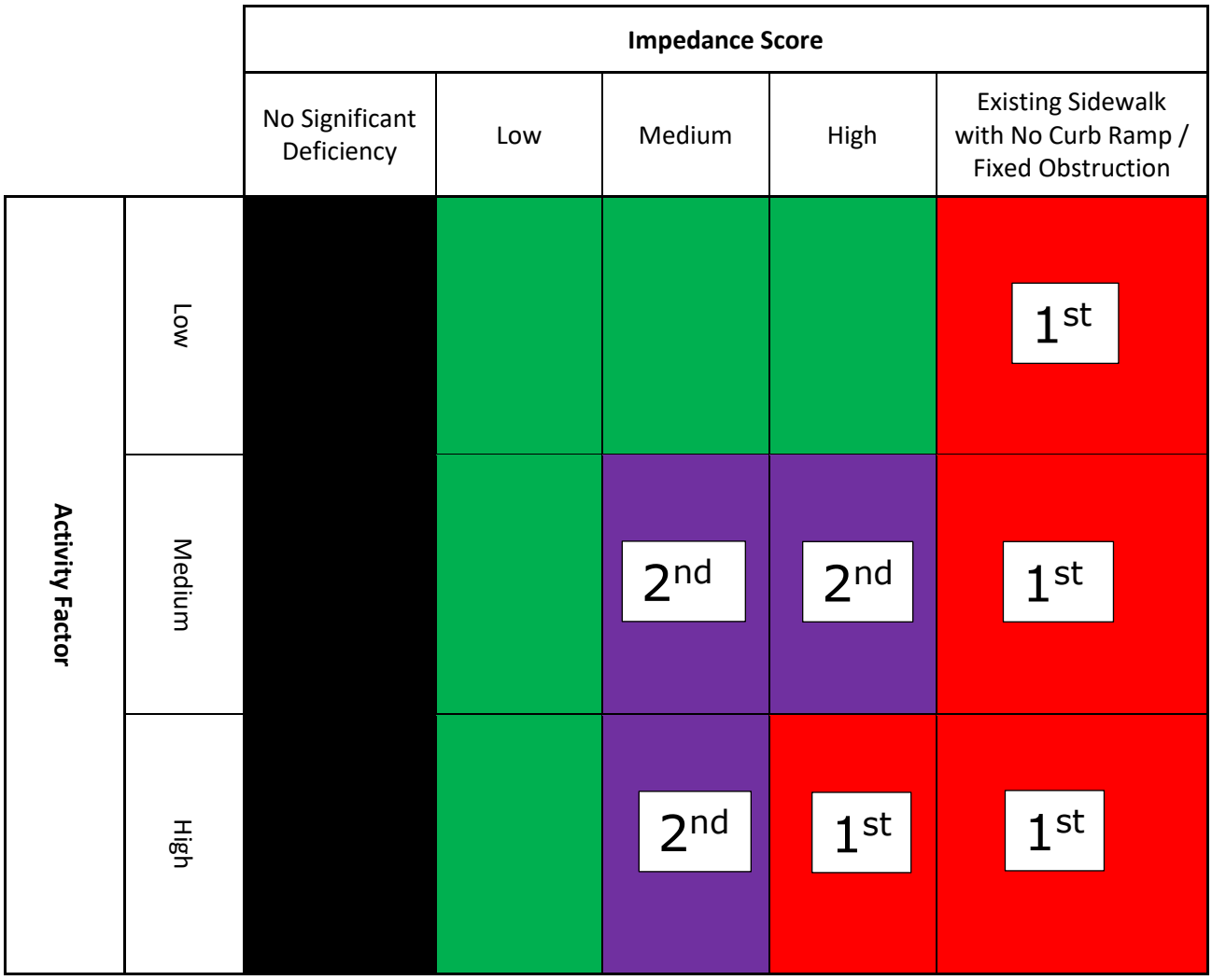


Figure 1: Sidewalk and Curb Ramp Improvement Priorities

5.8 Potential Funding Sources / Programming

City of Sunset Hills Budget

The City of Sunset Hills currently provides funding for sidewalk improvements through its Capital Improvements Fund program through the Public Works Department section of the budget. Additionally, sidewalk improvements should be incorporated into other transportation improvement projects throughout the City. The final budget for sidewalk and curb ramp improvements within a given year will be determined by the Council during the development of the fiscal budget. Various state and federal funding sources are also available to fund specific projects throughout the City (e.g., Surface Transportation Program).

Local / Federal / State Programs

There are several local, state and federal funding sources available to assist municipalities with capital improvement projects. Most of these programs are competitive and have individual restrictions that must be reviewed for compliance with the proposed project. Below are descriptions of a few funding sources that may be applicable to the implementation of the Plan.

This is not an all-encompassing list of the available federal programs. Funding sources should be monitored and sought as situations arise to complete the goals and objectives of the City and the Plan.

(a) Surface Transportation Plan (STP): The STP program provides flexible funding for local agencies to improve public roads and bridges, transit capital projects, and improvements to transit terminals and facilities. "Transportation enhancements" including historic preservation, alternative non-motorized transportation, and landscaping are also funded using STP funds. STP funds can be used for wide variety improvements including road improvements with accompanying pedestrian accommodations as well as new construction and reconstruction of sidewalk and curb ramps. The East West Gateway Council of Governments currently administers STP funds for the St. Louis Metropolitan area.

(b) Congestion Mitigation and Air Quality Improvement Program (CMAQ): The CMAQ program provides funds to help mitigate congestion and improve air quality. CMAQ projects commonly include intersection improvements and reconstruction. Pedestrian accommodations including accessible pedestrian signals can be included with CMAQ projects to improve pedestrian safety at the intersection. The East West Gateway Council of Governments currently administers CMAQ funds for the St. Louis Metropolitan area.

(c) Transportation Alternatives Program (TAP): The Moving Ahead for Progress in the 21st Century (MAP-21) transportation bill combined multiple funding sources that fund pedestrian projects including Safe Routes to Schools (SRTS) and Recreational Trails Program (RTP). Money is still allocated for projects that were previously under these funding sources through the Transportation Alternative Program (TAP). The East West Gateway Council of Governments currently administers TAP funds for the St. Louis Metropolitan area.

Private Developers

Private development can have a direct impact on the adjacent public right-of-way. City ordinances currently require sidewalk construction along public right-of-way with the issuance of building permits. The City Ordinances should be reviewed for ADA compliance to provide guidance to private developers for the construction of pedestrian facilities on public rights-of-way. On larger projects that may include the construction of new intersections with traffic signals, the developer could be required to include pedestrian accommodations including but

not limited to curb ramps, marked crosswalks, pedestrian signals, and accessible pedestrian devices.

5.9 Monitoring of Sidewalk Transition Plan

Most construction projects include pedestrian accommodations in some form or another. All curb ramps and sidewalks constructed on City-owned right-of-way or future right-of-way should be inspected by the City prior to acceptance. New sidewalk should be logged into the GIS system either by City staff during an on-site assessment or based on information provided by the Contractor or Developer. All data collected should be in the same format as the existing inventory to maintain consistent data and the integrating of the scoring system. If the construction replaces an existing sidewalk or curb ramp, the new data should be stored over the existing data to provide an up-to-date look at the status of the Transition Plan. If the project includes an expansion to the existing pedestrian network, the data should be added to the existing GIS system.

5.10 Recommendations

The following recommendations are proposed to increase ADA accessibility within the City and ensure future construction of public right-of-way is constructed to meet ADA standards:

(a) Continue to pursue available external funds for applicable projects
(b) Incorporate pedestrian improvements with applicable City projects
(c) Review the City standards and ordinances for compliance with applicable state and federal standards.
(d) Inspect all sidewalk and curb ramps prior to the City taking over maintenance responsibilities.
(e) Keep the ADA Transition Plan current by inventorying new ramps and sidewalk segments.
(f) Keep assigned City staff educated on current ADA requirements.

Exhibit 1
Notice Under the Americans with Disabilities Act
(Updated Document)

City of Sunset Hills
Notice Under the Americans With Disabilities Act

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 ("ADA"), the City of Sunset Hills will not discriminate against qualified individuals on the basis of disability in its services, programs, or activities.

Employment: The City of Sunset Hills does not discriminate on the basis of disability in its hiring or employment practices and complies with the regulations promulgated by the U.S. Equal Employment Opportunity Commission under Title I of the ADA.

Effective Communication: The City of Sunset Hills will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in the City of Sunset Hills' programs, services, and activities, including qualified sign language interpreters, documents in Braille, and other ways of making information and communications accessible to people who have speech, hearing, or vision impairments.

Modification of Policies and Procedures: The City of Sunset Hills will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all of its programs, services, and activities. For example, individuals with service animals are welcome in the City of Sunset Hills offices, even when pets are generally prohibited.

Anyone who requires auxiliary aid or service for effective communication, or a modification of policies or procedures to participate in a program, service, or activity of the City of Sunset Hills, should contact the office of Lori Stone, Deputy City Clerk / Business License – Finance Clerk, (314) 272-2463, lstone@sunset-hills.com as soon as possible but no later than 96 hours (4 days) before the scheduled event.

The ADA does not require the City of Sunset Hills to take any action that would fundamentally alter the nature of its programs or services, or impose an undue financial or administrative burden to the City.

Complaints that a program, service, or activity of the City of Sunset Hills is not accessible to persons with disabilities should be directed to the office of Lori Stone, Deputy City Clerk / Business License – Finance Clerk, (314) 272-2463, lstone@sunset-hills.com.

The City of Sunset Hills will not place a surcharge on a particular individual with a disability or any group of individuals with disabilities to cover the cost of providing auxiliary aids/services or reasonable modifications of policies, such as retrieving items from locations that are open to the public but are not accessible to persons who use wheelchairs.

Exhibit 2
ADA Grievance Form
(Updated Document)

City of Sunset Hills
Grievance Procedures Under
The Americans with Disabilities Act

This Grievance Procedure is established to meet the requirements of the American with Disabilities Act of 1990 ("ADA"). It may be used by anyone who wishes to file a complaint alleging discrimination on the basis of disability in the provision of services, activities, programs, or benefits by the City of Sunset Hills. The City's Personnel Manual governs employment-related complaints of disability discrimination.

The complaint should be in writing and contain information about the alleged discrimination such as name, address, phone number of complainant and location, date, and description of the problem. Alternative means of filing complaints, such as personal interviews or a tape recording of the complaint, will be made for persons with disabilities upon request.

The complaint should be submitted by the grievant and/or his/her designee as soon as possible but no later than 60 calendar days after the alleged violation to:

Lori Stone, Deputy City Clerk / Business License – Finance Clerk
Phone: (314) 272-2462,
3939 S. Lindbergh Blvd.
Sunset Hills, MO 63127
Phone: 314-849-3400
Email: esterman@sunset-hills.com

Within 15 calendar days after receipt of the complaint, the City Clerk / City Administrator, or his/her designee will meet with the complainant to discuss the complaint and the possible resolutions. Within 15 calendar days of the meeting, the City Clerk / City Administrator, or his/her designee will respond in writing, and where appropriate, in a format accessible to the complainant, such as large print, Braille, or audio tape. The response will explain the position of the City of Sunset Hills and offer options for substantive resolution of the complaint.

If the response by the City Clerk / City Administrator, or his/her designee does not satisfactorily resolve the issue, the complainant and/or his/her designee may appeal the decision within 15 calendar days after receipt of the response to the Mayor or his/her designee.

Within 15 calendar days after receipt of the appeal, the Mayor or his/her designee will meet with the complainant to discuss the complaint and possible resolutions. Within 15 calendar days after the meeting, the Mayor or his/her designee will respond in writing, and, where appropriate, in a format accessible to the complainant, with a final resolution of the complaint.

All written complaints received by the City Clerk / City Administrator, or his/her designee, appeals to the Mayor or his/her designee, and responses from these two offices will be retained by the City of Sunset Hills for at least three years.

City of Sunset Hills
ADA Grievance Form

Name: _____

Address: _____

City: _____ State: _____

Zip: _____

Phone: (____) _____ Email: _____

Please provide a <u>complete</u> description of your grievance:

_____

_____

_____

Please specify the location of your grievance:

_____

_____

_____

Please state what you think should be done to resolve the grievance:

_____

_____

_____

Please attach additional pages or photo(s) as needed.

Signature: _____ Date: _____

Please return to:

Lori Stone, Deputy City Clerk / Business License – Finance Clerk, (314) 272-2463, 3939 S. Lindbergh Blvd. Sunset Hills, MO 63127 Email: lstone@sunset-hills.com

Upon request, reasonable accommodations will be provided in completing this form. Contact the office of Lori Stone, Deputy City Clerk / Business License – Finance Clerk, (314) 272-2463, lstone@sunset-hills.com.

Exhibit 3
Public Involvement

CITY OF SUNSET HILLS, MISSOURI

ADA EVALUATION AND TRANSITION PLAN

Pedestrian Accessibility Survey

The City of Sunset Hills is in the process of creating a comprehensive ADA Evaluation and Transition Plan. The plan is mandated by Title II of the American with Disabilities Act (ADA) passed into law on July 26, 1990 for every public entity with over fifty (50) employees. The plan will include an inventory of all existing sidewalks and curb ramps on City right-of-way and provide guidance on future construction needs to make the City accessible to all citizens. This survey was created to get public input on the pedestrian routes and travel habits of our citizens and visitors.

Please complete the form and either drop it off at the City Hall information desk or mail it to:

City of Sunset Hills
Department of Public Works
3939 S. Lindbergh Blvd
Sunset Hills, MO 63127

Oates Associates
Laclede Gas Building
720 Olive, Suite 700
St. Louis, MO 63101

1. Which of the following statements best represents you? (Circle all that apply)
    a. I am a City of Sunset Hills Resident
    b. I am a property owner in the City of Sunset Hills
    c. I work in the City of Sunset Hills
    d. I frequently visit City of Sunset Hills businesses for goods or services.

2. What is your age? (Circle One)
    a. Less than 18 years
    b. 18 to 35 years
    c. 36 to 65 years
    d. 66+ years

3. Do you have any of the following disabilities that affect your mobility when traveling on sidewalks? (Circle all that apply)
    a. Visually Impaired
    b. Mobility Impaired
    c. Hearing Impaired
    d. None
    e. Other _____

Pedestrian Accessibility Survey Continued

4. If you answered “mobility impaired”, what kind of mobility device you use?
    a. Motorized Wheelchair
    b. Non-Motorized Wheelchair
    c. Walker
    d. Stroller

5. What is your primary mode of transportation? (Circle One)
    a. Car
    b. Bus / Mass Transit
    c. Bicycle
    d. Walking

6. What is your secondary mode of transportation? (Circle One)
    a. Car
    b. Bus/ Mass Transit
    c. Bicycle
    d. Walking/ Wheeling

7. How often do you use city sidewalks? (Circle One)
    a. Daily
    b. A few days a week
    c. Weekly
    d. Monthly
    e. Never

8. Which of the following best describes the primary reason that you use City sidewalks? (Circle One)
    a. To access Bus/ Mass Transit
    b. For Exercise / Health / Pleasure
    c. To access goods or services (Groceries, Errands, etc.)
    d. Travel to School / Church / Public Facilities (City Hall, Libraries, etc.)
    e. Travel to work
    f. Other _____

Pedestrian Accessibility Survey Continued

9. Does someone in your household use the sidewalk system to travel to and from school.

    ____Yes

    ____ No

    If yes, please list the school that your child attends: _____

10. Prioritize the following types / locations of the City sidewalks that should be improved first? (Rank in order from 1-4 with 1 being the most critical)

    ____ Neighborhood streets

    ____ Sidewalk leading to or from schools

    ____ Sidewalks adjacent to commercial developments

    ____ Sidewalk leading to or from City facilities (Parks, City Hall, etc.)

11. What conditions along City streets / sidewalks affect your walking habits? (Rank in order from 1-4 with 1 being the most critical)

    ____ Afraid of motor vehicles / drivers

    ____ Difficult / unsafe street crossings

    ____ Sidewalks in poor condition

    ____ Inaccessible condition (no curb ramps, obstructions, etc.)

12. What sidewalk characteristics / amenities are most important to you? (Rank in order from 1-7 with one being the most critical)

    ____ Pedestrian Lighting

    ____ Sidewalk surface is in good condition

    ____ Safe roadway crossing provided

    ____ Wide sidewalks

    ____ Grass / Landscaping between roadway and sidewalk

    ____ Street trees to provide shade

    ____ Curb ramps at every corner

Pedestrian Accessibility Survey Continued

13. Please complete the following photographic Sidewalk evaluation survey. Rank the following obstacles / conditions 1 through 5 in order of impact to your daily travel (1 being the highest impact and 5 the least impact.)

_____ Trip Hazards

_____ Poor Surface Quality

_____ Obstructions

_____ Steep Cross Slope

_____ Non-Continuous sidewalks

OATES ASSOCIATES

Pedestrian Accessibility Survey Continued

14. Please complete the following photographic Curb Ramp evaluation survey. Rank the following obstacles / conditions 1 through 7 in order of impact to your daily travel (1 being the highest impact and 7 being the least impact.)

_____Steep Ramp Slope

_____ Lack of Turning Space

_____ Crosswalks-Length or Alignment

_____No Detectable Warning Panels

_____ Obstruction

_____ No Curb Ramp

Pedestrian Accessibility Survey Continued

15. Please identify any specific difficulties or constraints along the routes you normally take:

16. If you have a disability or travel with someone who has a disability, what accessibility problems have you experienced along the City's sidewalk & pedestrian facilities?

Thank you for your participation!

(Optional)

Contact Information:

Name: _____

Address: _____

_____

Phone: _____

APPENDIX A
Sidewalk Transition Plan

APPENDIX A

A.1 Definitions

The following list of definitions is used throughout the entirety of this Appendix:

Accessible Pedestrian Signal (APS, or Audible Pedestrian Signal): A mounted device that communicated information to pedestrian in both visual and non-visual formats (i.e. audible tones and vibrotactile surfaces) related to the pedestrian walk interval.

Clear Width: The effective width of a sidewalk or curb ramp, the actual distance that a pedestrian has to navigate around an obstacle, as opposed to the full paved width of a sidewalk or curb ramp section.

Condition: A subjective analysis of the usability of a sidewalk or curb ramp based on cracking, spalling, or other visual deficiencies.

Cross Slope: The slope that is perpendicular to the direction of pedestrian travel.

Curb: A vertical or rolled transition that serves as a separation between the roadway or gutter and the sidewalk or green space.

Curb Line: A line at the face of the curb that marks the transition from the roadway or gutter to a sidewalk or green space.

Curb Ramp: A short ramp cutting through a curb that provides access between the sidewalk and the adjacent roadway surface.

Curb Type: The transition provided between the roadway or gutter and the sidewalk or green space (e.g. greater than 4", less than 4", etc.)

Detectable Warning Panel: A tactile, raised, surface feature built in or applied to walking surfaces or other elements to warn visually impaired people of hazards on the circulation path.

Diagonal Curb Ramp: A singular ramp that is diagonal to the pedestrian user's path of travel as well as oncoming vehicular traffic.

Driveway: Pavement that provides access for a motorized vehicle to access a single parcel of private property.

Driveway Slope thru Sidewalk: The cross slope of a sidewalk segment at a location where the driveway crosses the sidewalk.

Encroachment: An obstruction that limits the clear width of a sidewalk or curb ramp that can be removed through minimal work (e.g. parked vehicles, tree limbs, or bushes).

Fixed Obstruction: An obstruction that limits the clear width of a sidewalk or curb ramp that is permanent and requires significant effort to adjust (e.g., drainage inlet, manhole, driveway slope, utility pole)

Flare Slope: The sloped sides of a curb ramp where a pedestrian circulation path crosses the curb ramp.

Flush Transition: The transition between a curb ramp and either a landing at the top of a curb ramp or the gutter pan at the bottom of the curb ramp. Flush is defined as a vertical displacement less than ¼".

Grade Break: The intersection of two surfaces at different running slopes.

Green Space: The portion of the public right-of-way, usually grass, located between the sidewalk and the curb line or edge of roadway.

Impedance: A characteristic of a sidewalk or curb ramp that inhibits accessibility for pedestrian access.

Landing: The sidewalk panel located at the top or bottom of a curb ramp.

Landing Slope: The slope of the landing measured in both directions, cross and running slope.

Obstruction: A permanent obstruction (e.g. utility pole or fire hydrant) that limits the clear width of a sidewalk or curb ramp.

Operating Force: The amount of force necessary to activate the pedestrian push button.

Parallel Curb Ramp: A ramp that run parallel to existing curb lines to a lower landing that matches the elevation of the adjacent street.

Pedestrian Circulation Path: The predominant path that a pedestrian can be reasonably expected to utilize to travel from one destination to another (e.g. sidewalk).

Pedestrian Push Button: Electronic buttons that signal that a pedestrian is at a crosswalk and activates the walk interval.

Pedestrian Signal: A traffic signal that alerts pedestrians that the walk interval is active.

Perpendicular Curb Ramp: A ramp with the main slope perpendicular to the curb line that directs traffic perpendicular to vehicular traffic.

Public Rights-of-Way: Land or property that is owned by a public entity and usually is acquired or devoted to transportation and/or pedestrian purposes.

Ramp Type: The design of ramp used to connect the pedestrian circulation path to the adjacent roadway (e.g., perpendicular curb ramp, diagonal curb ramp, or parallel curb ramp.)

Running Slope: The slope that is parallel to the direction of pedestrian travel.

Sidewalk: Any pedestrian accommodation that is located between the curb line or edge of roadway and the adjacent property line.

Surface: The existing material the sidewalk is constructed of (e.g., concrete, asphalt, brick).

Technical Infeasibility: An alteration to an existing element that has little likelihood of being accomplished due to existing constraints that cannot be overcome without placing an undue burden on the City.

Undue Burden: A requirement that can be achieved only at a significant difficulty or expense to the City or other property owner.

Vertical Displacement: A vertical difference of greater than ¼" along the pedestrian circulation path that can result in a trip hazard.

Walk Interval: The phase of a pedestrian traffic signal during which a pedestrian is to begin crossing a roadway.

A.2 Sidewalk Data Collected

At each end of the sidewalk segment the following measurements and data were collected:

(a) Sidewalk Surface: The type of surface present; including an option for no sidewalk present.
(b) Type of Curb: Identify whether a curb is present, and if present the type of curb.
(c) Green Space: Identify whether a green space is present, and if present, note the distance between the curb line and sidewalk.
(d) Condition: An overall assessment of the current condition of the sidewalk.
(e) Width of Sidewalk: The width of the sidewalk measured perpendicular to the direction of pedestrian travel.
(f) Cross Slope: The slope of the sidewalk perpendicular to the direction of pedestrian travel.
(g) Running Slope: The slope of the sidewalk parallel to the direction of pedestrian travel and whether the running slope varies from the running slope of the adjacent roadway.

A.3 Obstruction Data Collected

The following measurements and data were recorded as obstructions where encountered along the sidewalk section:

(a) Fixed Obstruction: Identify the type of permanent obstruction (e.g. utility poles, inlets, sidewalk grating, or manholes).
(b) Encroachments: Identify the type of temporary obstruction (e.g. tree limbs, parked vehicles, or shrubbery).
(c) Vertical Displacement: An abrupt grade change between two adjacent sidewalk panels.
(d) Driveway Slope: Indicates driveway cross slopes greater than 2% are present.
(e) Clear Width: Indicates width at any fixed obstruction or encroachment that is less than 4 feet and limits the ability for a pedestrian to continue along the pedestrian route.
(f) Ramp Slope: Indicates a running slope parallel to the sidewalk at the location when the pedestrian route ramps down at a residential or commercial driveway.
(g) Railway Flangeway Gap: Indicated the distance parallel to the sidewalk at at-grade railway crossings.
(h) Obstruction Number: Number of similar obstructions within a given sidewalk segment.

A.4 Curb Ramp Data Collected

The following measurements and data were recorded at each curb ramp:

(a) Type of Ramp: The type of curb ramp present, including an option for no ramp present.
(b) Surface Material: The type of surface present, including an option for no surface present.
(c) Condition: An overall assessment of the current condition of the curb ramp.
(d) Running Slope: The slope of the curb ramp parallel to the direction of pedestrian travel.
(e) Cross Slope: The slope of the curb ramp perpendicular to the direction of pedestrian travel.
(f) Flare Slope: The slope of the flares when the curb ramp is in the pedestrian circulation path, including an option for flare slopes outside of pedestrian circulation path.
(g) Ramp Width: The width of the ramp at its narrowest location.

(h) Ramp Length: The length of the ramp at the midpoint of the curb ramp.
(i) Gutter Slope: The slope of the gutter pan parallel to the direction of travel.
(j) Detectable Warning Panels: The type of detectable warning panel present, including an option for no detectable warning panel.
(k) Vertical Displacement: Indicates the vertical displacement between the ramp and the landing or the ramp and the curb.
(l) Dimensions of Landing: The dimensions of the sidewalk panel located at the top of the curb ramp.
(m) Landing Slope: The slope of the landing in all directions.
(n) Obstruction Present: The presence of any obstruction either fixed or an encroachment that limits the clear width of a curb ramp less than 4 feet.
(o) Fixed Obstruction: Permanent objects within the curb ramp that limits the curb ramp width to less than 4 feet (e.g., utility poles or manholes).
(p) Encroachment: Temporary objects within the curb ramp that limits the curb ramp width to less than 4 feet (e.g., tree limbs or parking conflicts).
(q) Width of Crosswalk: The distance between the inside edge of the crosswalk pavement markings, including an option for no sidewalk crossed.
(r) Alignment of Crosswalk: Indicates whether the marked crosswalk leads a pedestrian to a curb ramp on the opposite side of the roadway.

A.5 Pedestrian Signal Collected

The following measurements and data were recorded at each curb pedestrian traffic signal:

(a) Distance from curb line: Horizontal distance between pedestrian push button and curb line.
(b) Pedestrian Push Button Height: The height of the pedestrian push button from the adjacent sidewalk pavement to the center of the pedestrian push button.
(c) Pedestrian Detector: Indicates the presence of pedestrian push button or some other method to activate the walk interval.
(d) Non-Visual Aids: Indicates the presence of a non-visual method to alert pedestrians to the presence of a pedestrian push button or some other method to activate the walk interval.
(e) Clear Space Widths: The width of the landing for the pedestrian push button.
(f) Clear Space Slopes: The slope of the landing for the pedestrian push button in all directions.
(g) Distance from the Pedestrian Push Button to the Crosswalk: The proximity of the pedestrian push button to the crosswalk that the pedestrian push button services.
(h) Pedestrian Push Button Proximity: The proximity of the pedestrian push buttons to each other.
(i) Operating Force: The amount of force necessary to activate the pedestrian push button.
(j) Countdown Signals: Does the pedestrian signal include countdown signals during the walk interval.
(k) Alternative Name Format: Indicates the street to be crossed in an alternative format (e.g., braille or verbal)

A.6 Activity Scores

The following activity scores were included in the Activity Factor equation based on a sidewalk segments or curb ramps proximity to the traffic generators. The Activity Factor prioritizes both sidewalk segment and curb ramps that are near locations that are likely to generate heavy amount of pedestrian traffic.

A.6.1 Schools

Accessible sidewalks and curb ramps not only provide safe access to students who currently travel to school but encourage more parents and students to travel to school by foot. Based on discussions with school officials' elementary and middle schools receive the highest volume of non-motorized travelers to and from schools. While all schools were incorporated into the school activity score, a higher priority was placed on elementary and middle schools in the City. The elementary and middle schools include:

- Southview School
- Kennerly Elementary School
- Long Elementary School
- Truman Middle School
- Concord Elementary School
- St. Catherine Laboure Catholic School

Additionally, high schools and higher education are also included in this activity score. These schools are:

- Lindbergh High School
- St. John Vianney High School
- South County Technical School

This activity score is assigned based on a radial distance to these destinations.

Proximity to Schools	Point Value
Within the walk zone and < 1/10 mile	10
Within the walk zone and between 1/10 mile and ¼ mile	7
Within the walk zone and between ¼ mile and ½ mile	4
Outside the walk zone or > ½ mile	0

Table A1: Elementary and Middle School Activity Score

Proximity to Schools	Point Value
Within the walk zone and < 1/10 mile	5
Within the walk zone and between 1/10 mile and ¼ mile	3
Within the walk zone and between ¼ mile and ½ mile	1
Outside the walk zone or > ½ mile	0

Table A2: High School Activity Score

A.6.2 Parks

There are seven parks located within the municipal boundary of Sunset Hills. Parks provide opportunities for residents to reconnect with nature in addition to leisure activities, sports fields and playgrounds. The following parks were included in the activity score:

City Parks:

- Watson Trail Park
- Minnie Ha Ha Park
- Kitun Park (Dog Park)
- Claire Gempp Davidson Memorial Conservation Area
- Sunset Hills Athletic Fields
- Laumeier Sculpture Park (St. Louis County Park)
- Lynstone Park
- Aquatic Facility (Within Watson Trail Park)

In addition to these parks, one park from the outside City limits is in close proximity to Sunset Hills neighborhoods and was included in the Activity Factor to account for Sunset Hills residents traveling to the parks:

- Crestwood Park

This activity score is assigned based on the radial distance to these properties.

Proximity to Parks	Point Value
< ¼ mile	5
¼ mile – ½ mile	3
> ½ mile	0

Table A3: Parks Activity Score

A.6.3 Government Buildings

Government buildings provide critical services to city residents and businesses. Government buildings includes those operated by the City of Sunset Hills as well as state and federal government facilities that offer services to citizens of Sunset Hills. The ADA emphasizes the importance of "walkways serving local government offices and facilities" as government buildings are a critical element of the civic experience. This activity score is assigned based on the radial distance to these buildings. The following government buildings were included in the activity score:

- Sunset Hills City Hall
- Sunset Hills Police Station
- Post Office
- Mehlville Fire Protection District

Proximity to Government Buildings	Point Value
< ¼ mile	10
¼ mile – ½ mile	5
> ½ mile	0

Table A4: Government Building Activity Score

A.6.4 Metro Bus Stops

MetroBus provides dependable, accessible transportation to locations throughout St. Louis County. This transportation is especially important to the elderly and people with disabilities that rely on the bus system to get to work and be active members of the community. This activity score is based on its proximity to Metro bus stops.

Proximity to Metro Bus Stops Trails	Point Value
< ¼ mile	10
¼ mile – ½ mile	5
> ½ mile	0

Table A5: MetroBus Stop Activity Score

A.6.5 Traffic Generators

Traffic generators include areas in which employment centers and retail centers reside within the City. The traffic generators include individual developments that draw traffic (e.g., Plaza at Sunset Hills) and streets that include a large density of commercial or businesses that attract pedestrians (e.g., S. Lindbergh Blvd). Removing the physical barriers to these traffic generators allows all residents to fully participate in all aspects of civic life. The Traffic Generators in Sunset Hills are:

- Watson Rd.
- S Lindbergh Blvd.

This activity score is assigned based on the radial distance to the traffic generators.

Proximity to Traffic Generators	Point Value
< 1/10 mile	10
1/10 mile – ¼ mile	5
> ¼ mile	0

Table A6: Traffic Generators Activity Score

A.6.6 Street Classification

Arterial and collector routes serve as the major thoroughfares through the City of Sunset Hills providing access to many destinations within the City such as shopping centers, employment centers, and government offices. Arterial and collector routes typically have higher and faster vehicular traffic than residential streets due to the connectivity they provide. Residential streets typically have a higher pedestrian traffic but are safer for pedestrians because they only provide access within a specific neighborhood and therefore have slower motor vehicle traffic. Street classification is based on data provided by East West Gateway except for Principal Residential which was developed for the Plan to provide higher priority for the principal streets within subdivisions that connect to arterial and collector routes.

The Interstates / Expressways are:

- I-270
- I-44
- MO 30 HWY (I-270 to Meramec River)

The Principal Arterials are:

- US 67 (Lindbergh Boulevard)
- MO 366 HWY (Watson Road)

- MO 30 HWY (Gravois Road) (I-270 to Sappington Rd)

The Minor Arterials are:

- Sappington Rd.

The Major Collectors are:

- Geyer Rd.
- Kennerly Rd.
- Gravois Rd.
- Robyn Rd. (Rott to W Watson)
- Rott Rd. (W Watson to Geyer)
- West Watson Rd.
- Eddie and Park Rd.

The Minor Collectors are:

- Denny Rd.
- E Watson Rd.
- Rott Rd. (Geyer to Lindbergh Rd.)

This activity score is given to sidewalk located along the stated routes based on street classification.

Street Classification	Point Value
Principal Arterial	10
Minor Arterial	10
Major Collector	7
Minor Collector	4
Commercial	0
Local/Residential	0

Table A7: Street Classification Activity Score

A.6.7 High Density Housing

High density housing includes large apartment complexes and senior living facilities. High density housing includes large populations living in closer proximity than single families housing complexes. Although aging is not legally listed as a disability, disabilities rise with increased age. Seniors who travel by foot are more susceptible to tripping hazards and other impedances. The high-density housing activity factors in Sunset Hills includes:

- The Sheridan at Laumeier Park
- Friendship Village at Sunset Hills

This activity score is assigned based on the radial distance to the traffic generators.

Proximity to Traffic Generators	Point Value
< 1/10 mile	5
1/10 mile – ¼ mile	3
> ¼ mile	0

Table A8: High Density Housing Activity Score

A.7 Impedance Scores

A.7.1 Sidewalk Impedance Score

The following three criteria were collected at each sidewalk segment. The point values for each unique deficiency is listed below and used in the equation list in **Section 5.6**. The lower the point value the greater the impact on pedestrian traffic.

A.7.1.1 Surface

Surface is the existing wearing material of the sidewalk. When sidewalk is not present, pedestrians are forced to either travel in the travel lanes of the adjacent roadway or walk in the grass. This can lead to hazardous pedestrian motor vehicle interactions as well as uneven walking surfaces. When no surface is present it is almost impossible for someone with a mobility disability to safely travel. Not every street is required to have sidewalks; however, where sidewalk is present, it must terminate at a curb ramp.

Surface	Point Value
None Present	1
Concrete	For Information Only
Brick	For Information Only
Wood	For Information Only
Other	For Information Only

Table A9: Sidewalk Surface Activity Score

A.7.1.2 Sidewalk Width

Narrow sidewalks limit the mobility of pedestrian on the pedestrian circulation path. This can lead to a dangerous passing especially when wheelchairs or walkers are involved. Sidewalk width requirements vary based on the presence of a green space between the roadway and the sidewalk so point values were assigned based on the distance between the sidewalk and the adjacent roadway.

Sidewalk Width (w Green space)	Point Value
< 4'	1
48"	8
4' – 5'	10
5' - 6'	10
>6'	10

Sidewalk Width (w/o Green space)	Point Value
< 4'	1
48"	1
4' – 5'	1
5' - 6'	10
>6'	10

Table A10: Sidewalk Width Activity Score

A.7.1.3 Cross Slope

Cross slope is the slope measured perpendicular to the direction of travel. A cross slope of greater than 2% can make it difficult for wheelchairs to maintain lateral balance especially in downhill conditions.

Cross Slope	Point Value
> 5%	1
3% - 5%	3
2% - 3%	6
<2%	8

Table A11: Sidewalk Cross Slope Activity Score

A.7.1.4 Running Slope

The running slope of a sidewalk is the slope parallel to the direction of travel. According to PROWAG standards the running slope can match the running slope of the adjacent roadway, however if the sidewalk running slope does not match the adjacent roadway running slope the slope can be a maximum of 5%. A steep running slope can cause wheelchairs to become unstable and difficult to control.

Running Slope	Point Value
>5%	1
<5%	2
Running slope matches road grade	2

Table A12: Sidewalk Running Slope Activity Score

A.7.2 Sidewalk Obstruction Score

The following 4 criteria were assigned to each obstruction observed in the field to describe the limiting factor of the various obstructions. The point values for each unique deficiency is listed below and used in the equation list in **Section 5.6**. The higher the point value the greater the impact on pedestrian traffic.

A.7.2.1 Vertical Displacement

Vertical displacements are the abrupt grade changes between two adjacent sidewalk panels. These changes are often caused by sidewalk settling and tree roots. Vertical Displacements are tripping hazards and especially dangerous to those in wheelchairs, walkers, and the elderly.

Vertical Displacement	Point Value
>1”	10
½” – 1”	6
¼” – ½”	2

Table A13: Vertical Displacement Obstruction Score

A.7.2.2 Driveway Slope thru Sidewalk

While the cross slope of a sidewalk segment may meet the standards of ADA compliance at the endpoints, often where a driveway crosses the sidewalk the cross slope of the sidewalk follows the driveway slope. A cross slope of greater than 2% can make it difficult for wheelchairs to maintain lateral balance and sudden changes in cross slope may be difficult for the elderly and the visual disabled.

Driveway Cross Slope	Point Value
>8%	10
5% - 8%	7
3% - 5%	4
2% - 3%	1

Table A14: Driveway Slope thru Sidewalk Obstruction Score

A.7.2.3 Clear Width

The clear width is the width of sidewalk surface available for a pedestrian to navigate around an obstacle. The obstacle could be anything from a utility pole and traffic sign to overgrown shrubbery. Although a sidewalk width can meet the minimum ADA standards, if a section of the segment does not meet the minimum width requirement the whole segment is effectively not accessible to a pedestrian specifically those in wheelchairs.

Clear Width	Point Value
<4'	10
>/= 4'	0

Table A15: Clear Width Obstruction Score

A.7.2.4 Driveway Ramp Slope

Where the sidewalk has to slope down for a driveway the running slope of the sidewalk varies from the running slope of the roadway. A running slope on a driveway ramp of greater than 8% can make it difficult for wheelchair users to safely stop if a motor vehicle is in the driveway, while a driveway ramp of greater than 1:12 can make it difficult for a wheelchair user to navigate the uphill grade with significant exertion.

Driveway Ramp Slope	Point Value
>15%	10
12% - 15%	7
10% - 12%	5
8% - 10%	2

Table A16: Driveway Ramp Slope Obstruction Score

A.7.3 Curb Ramp Impedance Score

The following 11 criteria were collected at each curb ramp. The point values for each unique deficiency is listed below and used in the equation list in **Section 5.6**. The lower the point value the greater the impact on pedestrian traffic.

A.7.3.1 Curb Ramp Type

When a sidewalk intersects with a curb, a curb cut should be provided per ADA regulations. When a curb cut is not provided, pedestrians especially those in wheelchairs can have difficulty navigating the drop-off which limits their mobility. **No curb ramps are considered the highest priority. The Curb Ramp Score will be set at 1 if no curb ramp is present. None of the subsequent deficiencies will be taken into account with the scoring.**

Curb Ramp Type	Point Value
No Ramp Present	1
All Other Ramp Types	For Information Only

Table A17: Curb Ramp Type Score

A.7.3.2 Fixed Obstructions

Fixed obstructions range from utility poles and fire hydrants to wide street signs and low-hanging branches. Fixed Obstructions can limit the clear width of a curb ramp as well as being hazardous to visually impaired pedestrians. A clear width of less than 4' is considered hazardous. **The Curb Ramp Score will be set at 2 if a fixed obstruction is present. None of the subsequent deficiencies will be taken into account with the scoring.**

Fixed Obstructions	Point Value
Present – Fixed Obstruction	2
Present – Encroachment	For Information Only

Table A18: Curb Ramp Fixed Obstructions Score

A.7.3.3 Running Slope

The running slope is the slope parallel to the direction of travel. A steep running slope can cause a wheelchair to lose control or cause the wheels to get stuck at the bottom of the ramp due to the gradient change.

Running Slope	Point Value
>15%	1
12% - 15%	4
8% - 12%	7
<8%	10

Table A19: Curb Ramp Running Slope Score

A.7.3.4 Cross Slope

The cross slope is the slope perpendicular to the direction of travel. A steep cross slope can cause the user to lose balance.

Cross Slope	Point Value
>5%	1
3% - 5%	2
2% - 3%	5
<2%	8

Table A20: Curb Ramp Cross Slope Score

A.7.3.5 Flared Slope

The flare slope is the slope between the curb ramp and the sidewalk panel or green space besides the curb ramp. If this slope is in the pedestrian circulation path the slope must be less than 10%. Slopes greater than 10% can be a challenge to navigate and can lead to loss of balance. If the flared slopes of a curb ramp are outside the pedestrian circulation path, the slopes are of no consequence.

Flared Slopes	Point Value
> 10%	1
</= 10%	3
Outside of Pedestrian Circulation Path	3

Table A21: Curb Ramp Flared Slope Score

A.7.3.6 Curb Ramp Width

Narrow curb ramps limit the mobility of pedestrians and can lead to a dangerous passing especially when wheelchairs or walkers are involved.

Curb Ramp Width	Point Value
<4'	1
4' - 6'	5
6' – 8'	5
>8'	5

Table A22: Curb Ramp Width Score

A.7.3.7 Gutter Slope

A steep gutter slope leads to a sharp transition from the curb ramp to the pavement. This can lead to wheelchair and walker wheels catching as well as a generally uncomfortable walking situation.

Gutter Slope	Point Value
>8%	1
5% - 8%	3
<5%	4

Table A23: Curb Ramp Gutter Slope Score

A.7.3.8 Detectable Warning Panels

Detectable warning panels inform the visually impaired that they are approaching a dangerous condition and hazard is warranted. On perpendicular and parallel curb ramps, they also guide the visually impaired as to the direction of the opposing curb ramp across the roadway.

Detectable Warning Panels	Point Value
Not Present	1
Concrete Mesh	1
Not Compliant	3
Truncated Pavers	3
Truncated Mesh	5
Truncated Domes	5

Table A24: Curb Ramp Detectable Warning Panels Score

A.7.3.9 Vertical Displacements

The transition between the curb ramp and gutter pan and the curb ramp and the landing needs to be flush due to the potential for tripping hazards. Due to the steep slopes common on curb ramps it is more likely that the pedestrian can lose his/her balance and fall.

Vertical Displacements	Point Value
>1"	1
½" – 1"	5
¼" – ½"	9
<¼" or <Null>	10

Table A25: Curb Ramp Vertical Displacements Score

A.7.3.10 Landing Dimensions

The landing at the top of a curb ramp provides a safe location for a pedestrian to change direction. The landing at the bottom of the curb ramp provides protection for the pedestrian from motorists.

Landing (Top or Bottom)	Point Value
<4' in each direction	1
>/= 4' in each direction	3

Table A26: Curb Ramp Landing Dimensions Score

A.7.3.11 Landing Slopes

Top Landing Slope	Point Value
>2% in either direction	1
</= 2% in either direction	2

Table A27: Curb Ramp Landing Slope Score

A.7.4 Pedestrian Signal Impedance Score

The following 11 criteria were collected at each pedestrian signal. The pedestrian signals are classified as either compliant or not since the pedestrian signals will most likely only be updated during future signal improvements and an individual project to update the existing pedestrian signals is unlikely.

A.7.4.1 Distance from Curb Line

The horizontal distance between the pedestrian push button and the curb line. When the pedestrian push button is closer than 1.5 feet from the curb line there is a potential conflict between motorist and pedestrians.

Distance from curb line	Compliance Level
Less than 1.5 feet from curb line	Non-compliant
1.5 feet to 6 feet from curb line	Compliant
Greater than 6 feet from curb line	Compliant

Table A28: Pedestrian Signal – Distance from the Curb Line

A.7.4.2 Pedestrian Push Button Height

The height of the pedestrian push button from the adjacent sidewalk pavement to the center of the pedestrian push button. When a pedestrian push button is mounted either too high or too low it can be difficult to access for certain users including users in a wheelchair.

Pedestrian push button height	Compliance Level
Less than 3.5 feet from adjacent pavement	Non-compliant
3.5 feet to 4 feet from adjacent pavement	Compliant
Greater than 4 feet from adjacent pavement	Non-compliant

Table A29: Pedestrian Signal – Pedestrian Push Button Height

A.7.4.3 Pedestrian Detector

Indicates the presence of pedestrian push button or some other method to activate the walk interval.

Pedestrian detector	Compliance Level
Pushbuttons	Compliant
Passive detection	Compliant
No detection present	Non-compliant

Table A30: Pedestrian Signal – Pedestrian Detector

A.7.4.4 Non-Visual Aids

Indicates the presence of a non-visual method to alert pedestrians to the presence of a pedestrian push button or some other method to activate the walk interval. A non-visual aid provides guidance to pedestrians who are either low vision or blind.

Non-visual aids	Compliance Level
Audible tones	Compliant
Vibrating surfaces	Compliant
None present	Non-compliant

Table A31: Pedestrian Signal – Non-Visual Aids

A.7.4.5 Clear Space Widths

The width of the landing for the pedestrian push button. A landing of less than 4 feet by 4 feet does not provide adequate space for someone in a wheelchair to activate the pedestrian push button.

Clear space widths	Compliance Level
Less than 4 feet by 4 feet	Non-compliant
4 feet by 4 feet to 5 feet by 5 feet	Compliant
Greater than 5 feet by 5 feet	Compliant

Table A32: Pedestrian Signal – Clear Space Widths

A.7.4.6 Clear Space Slopes

The slope of the landing for the pedestrian push button in all directions. Steep slopes in either direction could cause a wheelchair to lose balance and affect the stability of all pedestrian especially the elderly.

Clear space slopes	Compliance Level
Less than or equal to 2 percent	Compliant
Greater than 2 percent	Non-compliant

Table A33: Pedestrian Signal – Clear Space Slopes

A.7.4.7 Distance from the Pedestrian Push Button to the Crosswalk

The proximity of the pedestrian push button to the crosswalk that the pedestrian push button services. When a pedestrian push button is too far away from the crosswalk it can be a challenge for a pedestrian with limited mobility to travel from the pedestrian push button to the crosswalk in time to safely travel across the street.

Distance from the pedestrian push button to the crosswalk	Compliance Level
Less than 5 feet	Compliant
Greater than 5 feet	Non-compliant

Table A34: Pedestrian Signal – Distance from the Pedestrian Push Button to the Crosswalk

A.7.4.8 Pedestrian Push Button Proximity

The proximity of the pedestrian push button to each other. When pedestrian push buttons are near each other audible tones or other non-visual aids are required to different pedestrian push buttons from other push buttons that may be activated and near.

Pedestrian push button proximity	Compliance Level
Less than 10 feet	Compliant
Greater than 10 feet	Compliant

Table A35: Pedestrian Signal – Pedestrian Push Button Proximity

A.7.4.9 Operating Force

The amount of force necessary to activate the pedestrian push button. When the operating force is too heavy it can be difficult for some pedestrians to activate the pedestrian signal.

Operating force	Compliance Level
Less than 5 pounds	Compliant
Greater than 5 pounds	Non-compliant

Table A36: Pedestrian Signal – Operating Force

A.7.4.10 Countdown Signals

The pedestrian signal includes countdown signals during the walk interval. When countdown signals are not provided a pedestrian cannot accurately judge the amount of time to cross a street.

Countdown signals	Compliance Level
Present	Compliant
Not present	Non-compliant

Table A37: Pedestrian Signal – Countdown Signals

A.7.4.11 Alternative Name Format

Indicated the street to be crossed in an alternative format (e.g., braille or verbal). Alternative formats assist in wayfinding for all pedestrians.

Alternative name format	Compliance Level
Present	Compliant
Not present	Non-compliant

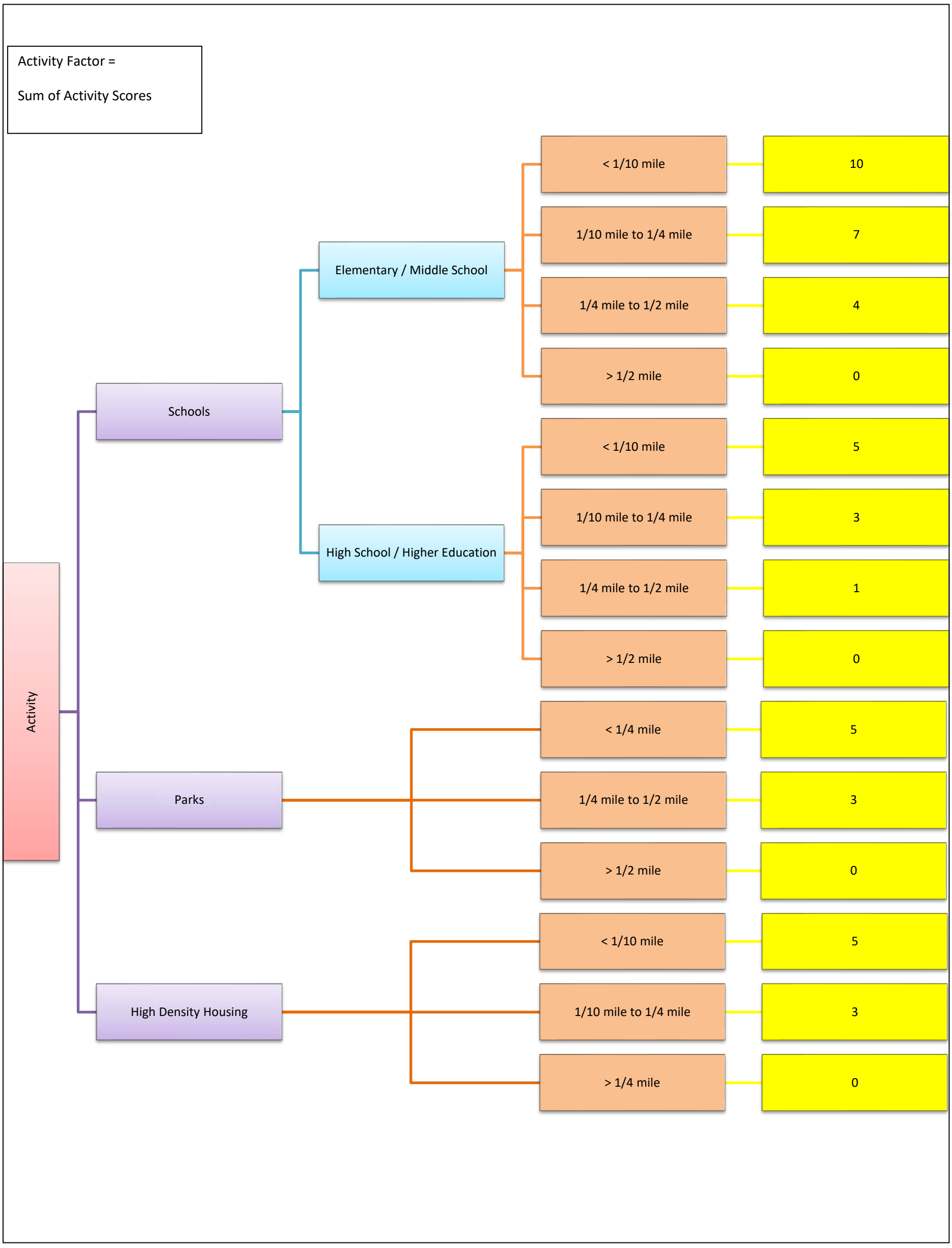
Table A38: Pedestrian Signal – Alternative Name Format

Appendix A.7
Data Collection Matrixes

ACTIVITY SCORE FLOW CHART (SHEET 1)

Max Score 65 Points

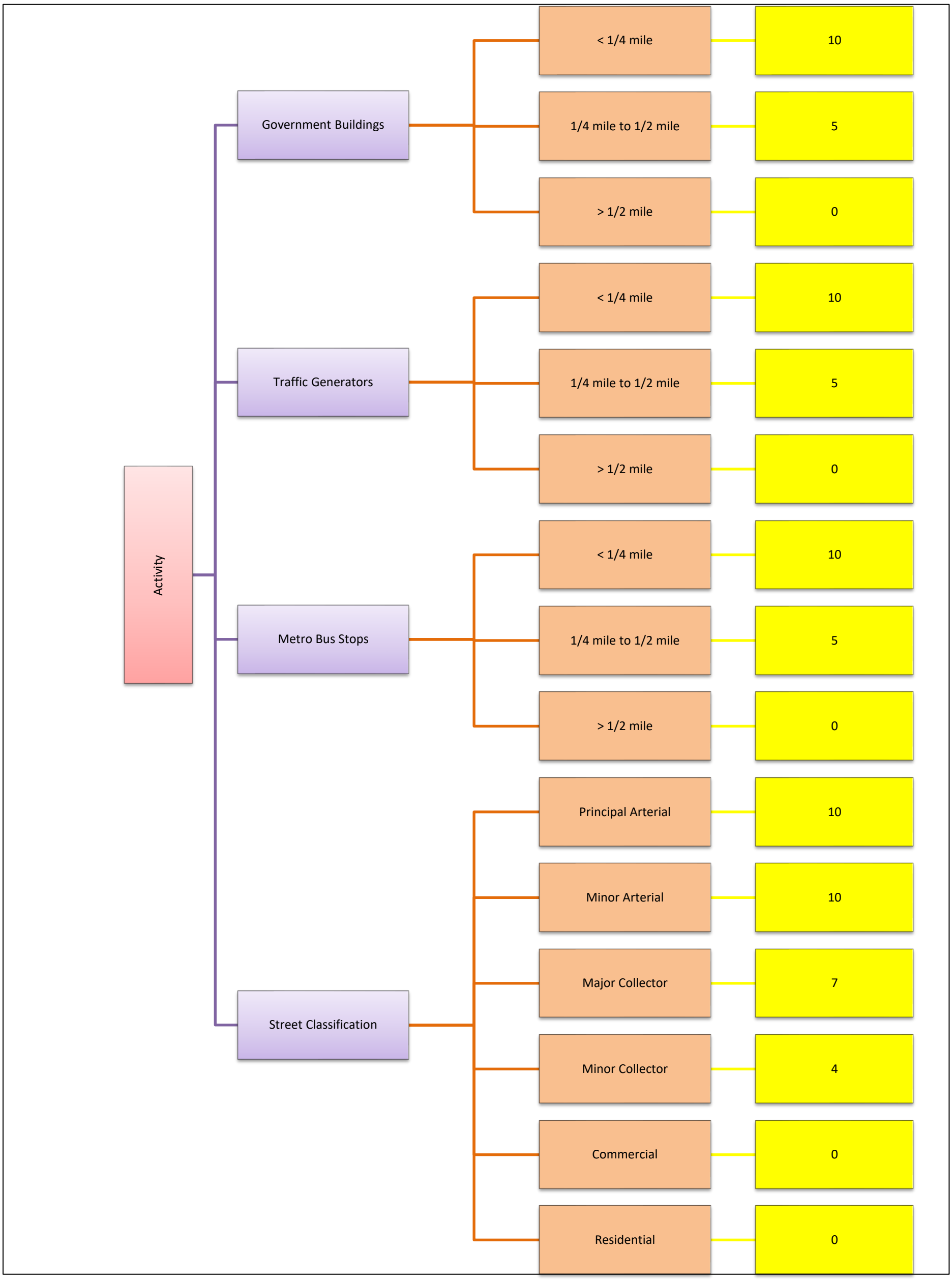
The following is a graphical representation of the activity score to be applied as a multiplication factor to the impedance score as part of the transition plan. The nodes directly right of "Activity" (i.e. Schools, Parks, seniors, etc.) represents the various pedestrian generating activities. The data to the right of the various pedestrian generating activities (i.e. < ¼ mile, ¼ mile to ½ mile, etc.) represents the distance between the various sidewalk segments or curb ramps from the activity. The data to the right of the buffer distances represents the point value that will be assigned based on the segment or ramps distance from the various activities. These points add up to a maximum of sixty-five points. The higher the Activity Factor the closer the proximity to pedestrian generators.



ACTIVITY SCORE FLOW CHART (SHEET 2)

Max Score 65 Points

The following is a graphical representation of the activity score to be applied as a multiplication factor to the impedance score as part of the transition plan. The nodes directly right of "Activity" (i.e. Schools, Parks, seniors, etc.) represents the various pedestrian generating activities. The data to the right of the various pedestrian generating activities (i.e. < ¼ mile, ¼ mile to ½ mile, etc.) represents the distance between the various sidewalk segments or curb ramps from the activity. The data to the right of the buffer distances represents the point value that will be assigned based on the segment or ramps distance from the various activities. These points add up to a maximum of sixty-five points. The higher the Activity Factor the closer the proximity to pedestrian generators.



SIDEWALK DATA COLLECTION FLOW CHART

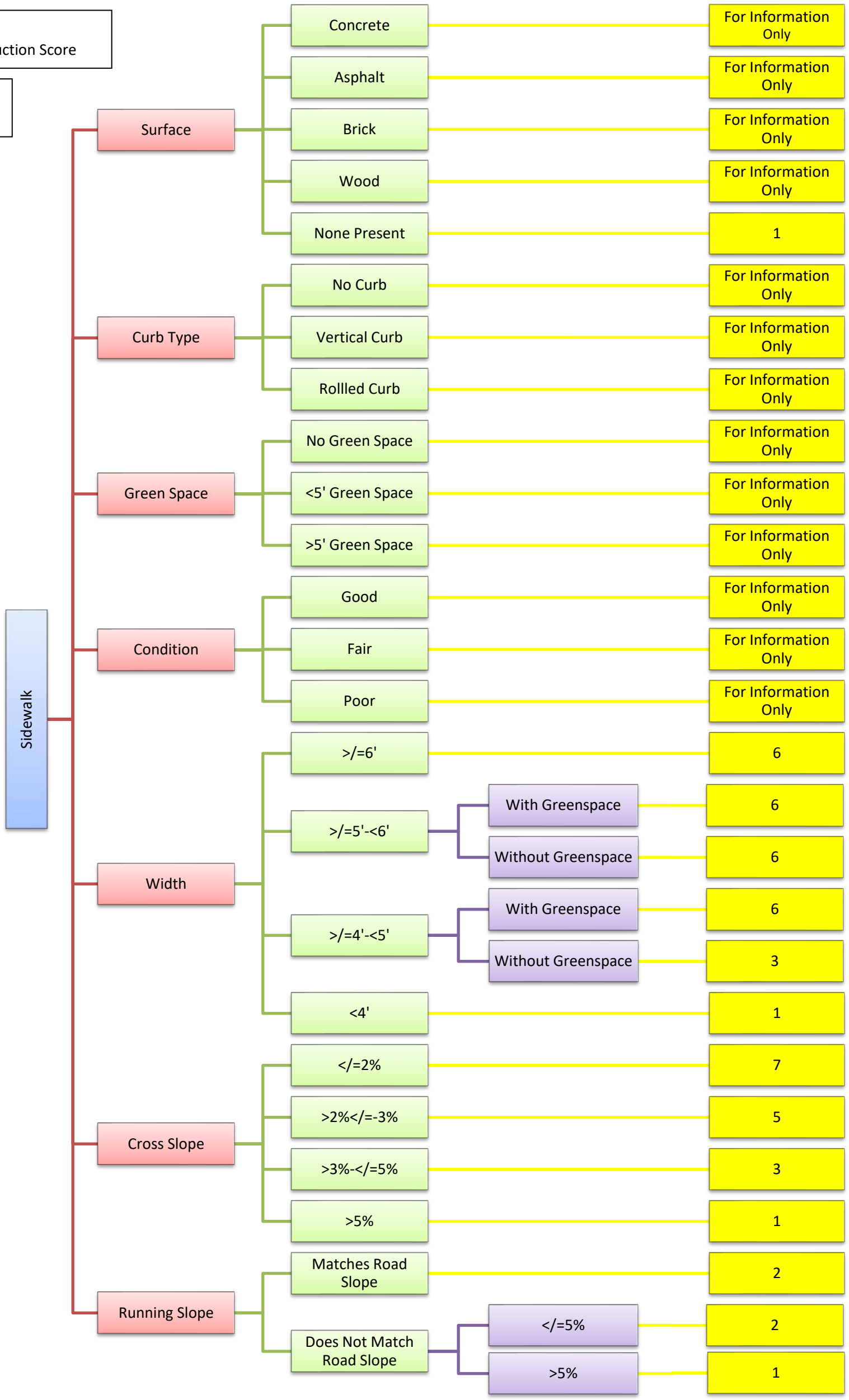
Max Score 15 points (Sidewalk Present)

Score 1 point (No Sidewalk Present)

The following is a graphical representation of the sidewalk data to be collected as part of the transition plan. The main node at the left side of the chart "Sidewalks" represents the feature class for which the data is being collected. The nodes directly right of "Sidewalks" (i.e. Surface, Curb Type, etc.) represents the attributes that will be collected. The data right of the attribute nodes (i.e. Concrete, Asphalt, etc.) represents the options that will be presented to the field crew via a drop-down menu. All data to be collected will be based on existing field conditions as of the time of surveying except for the condition assessment which will be based on the physical appearance of the overall sidewalk segment.

Impedance Score =
Sidewalk Score + Obstruction Score

Sidewalk Score =
Sum of Sidewalk Values



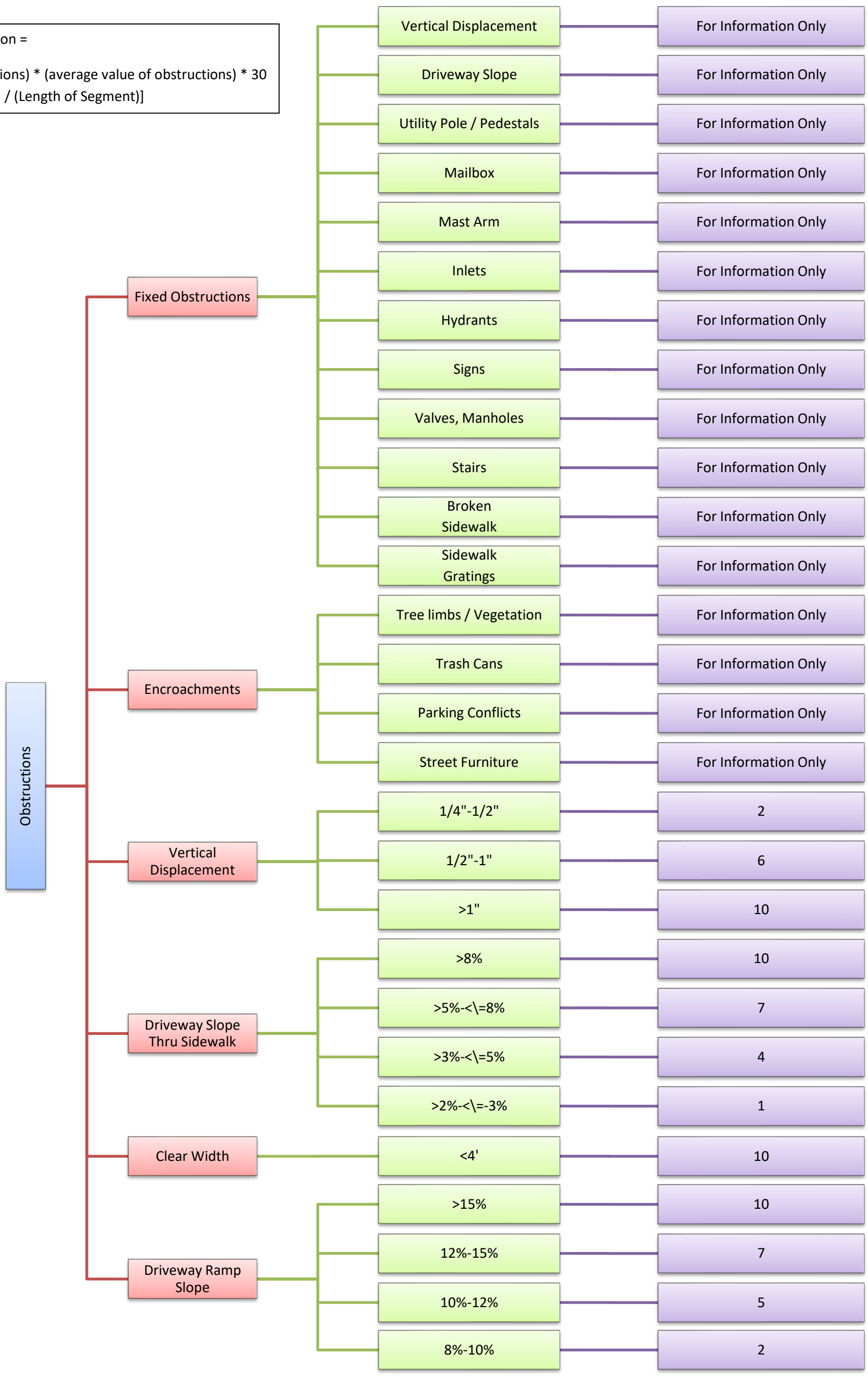
OBSTRUCTIONS DATA COLLECTION FLOW CHART (SIDEWALK SEGMENTS)

Max Score 35 Points

The following is a graphical representation of the obstruction data to be collected as part of the transition plan. The main node at the left side of the chart "Obstructions" represents feature for which the data is being collected. The nodes directly right of "Obstructions" (i.e. Fixed Obstructions, Driveway Slope, etc.) represents the attributes that will be collected. The data right of the attribute nodes (i.e. Inlets, Mast Arm, etc.) represents the options that will be presented to the field crew via a drop-down menu.

Obstruction Equation =

35 - [{# of obstructions) * (average value of obstructions) * 30 / (Length of Segment)]



CURB RAMP DATA COLLECTION FLOW CHART (SHEET 1)

Max Score 50 points

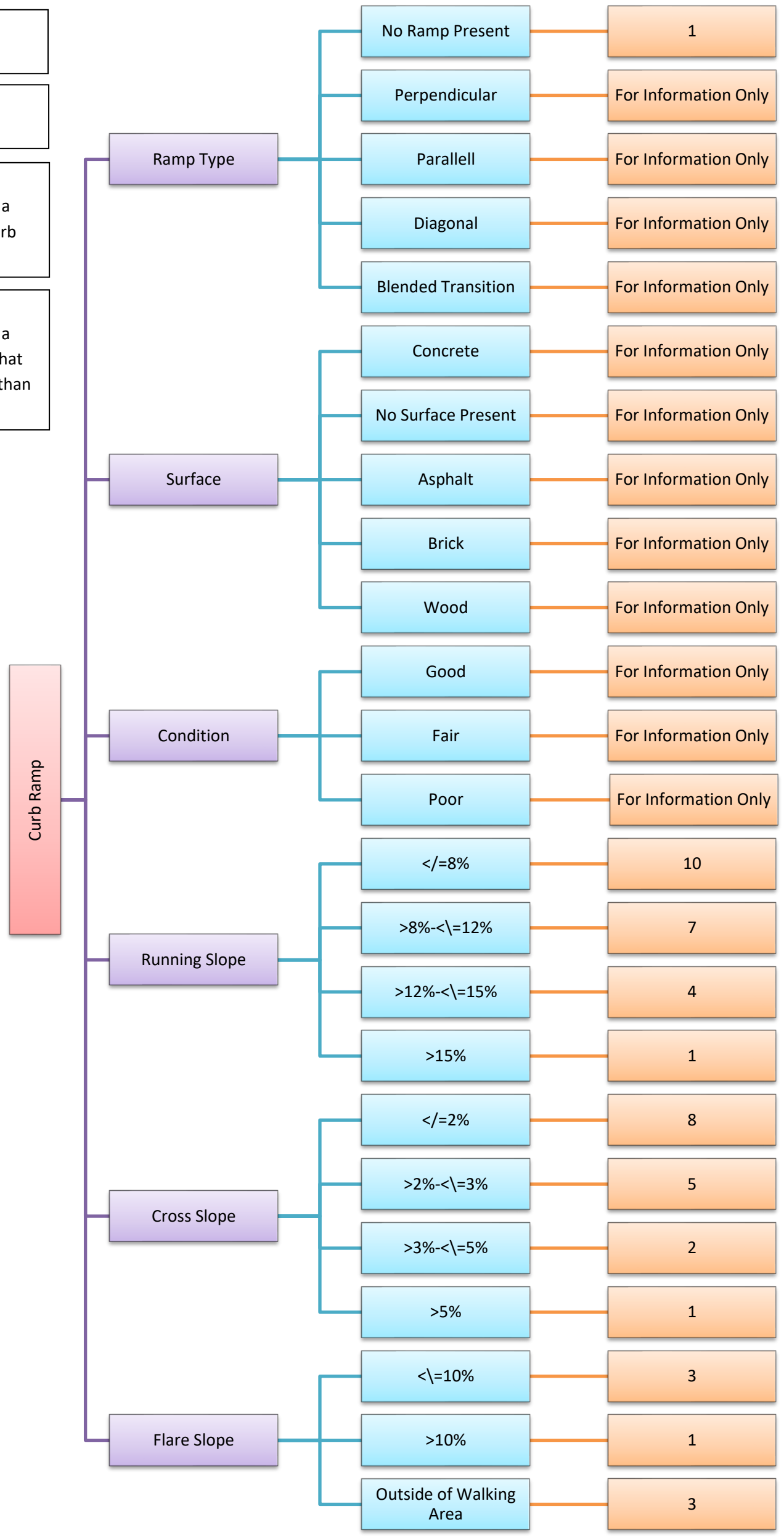
This is the first sheet of curb ramp data. Curb ramps were divided into 2 sheets to provide clarity. The following is a graphical representation of the curb ramp data to be collected as part of the transition plan. The main node at the left side of the chart "Curb Ramps" represents the feature for which the data is being collected. The nodes directly right of "Curb Ramps" (i.e. Surface, Condition, etc.) represents the attributes that will be collected. The data right of the attribute nodes (i.e. Concrete, Asphalt, etc.) represents the various options that will be presented to the field crew via drop-down menu. The data at the far right represent the point value that will be assigned to the various deficiencies; if the curb ramp does not have a curb ramp present than a score of 1 will be assigned. If an obstruction is present a score value of 2 points will be assigned. A surface of "no surface present" represents that no sidewalk is present at the curb ramp and forty-nine points will be deducted from the score. The max score of fifty points represents a curb ramp that has no deficiencies.

Curb Ramp Score =
(Sum of Curb Ramp Values)

Impedance Score =
Curb Ramp Score

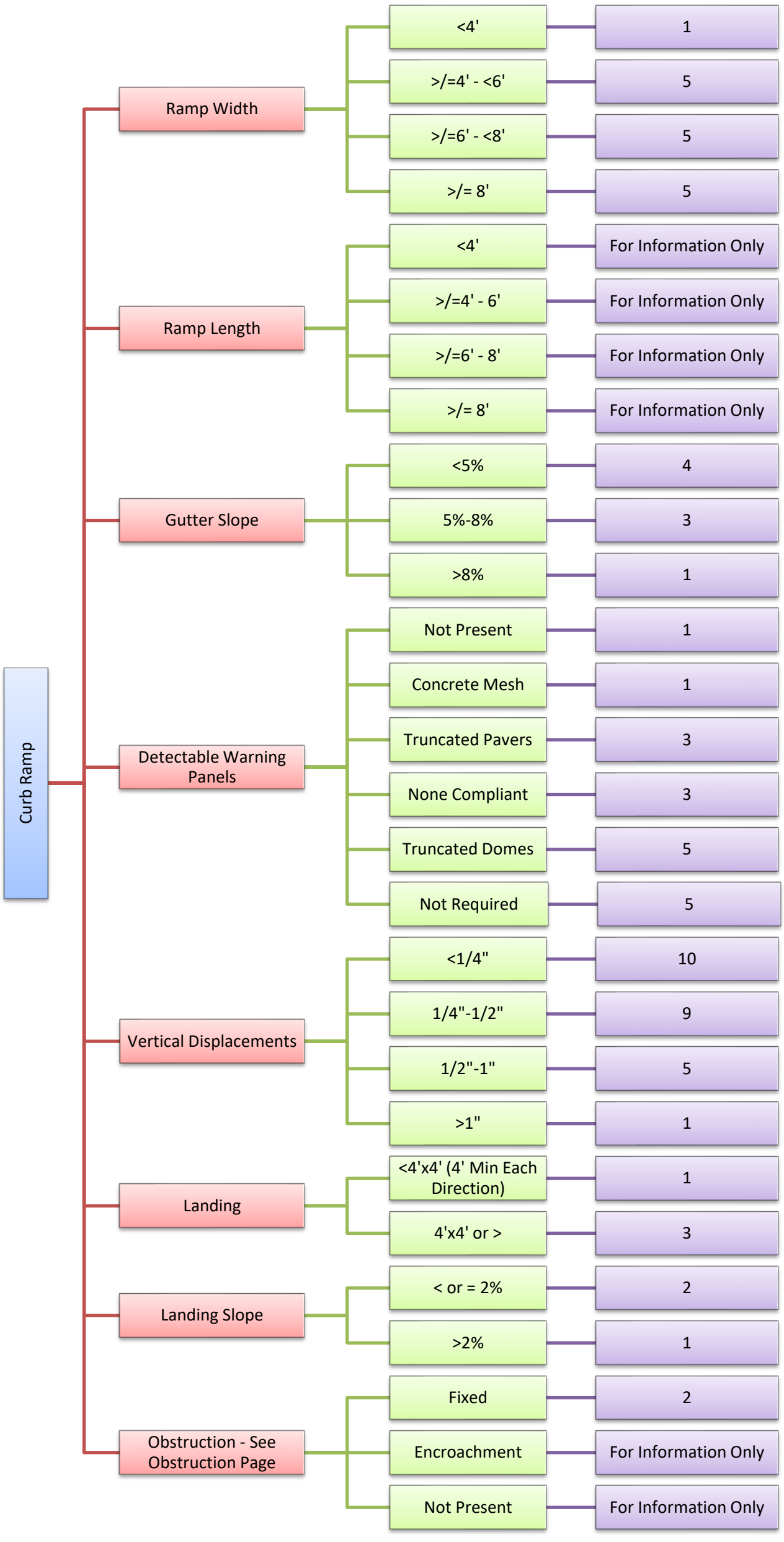
Curb Ramp Score = 1
Indicates a curb ramp where a sidewalk is present but no curb ramp is provided

Curb Ramp Score = 2
Indicates a curb ramp where a fixed obstruction is present that limits the clear width to less than 4'



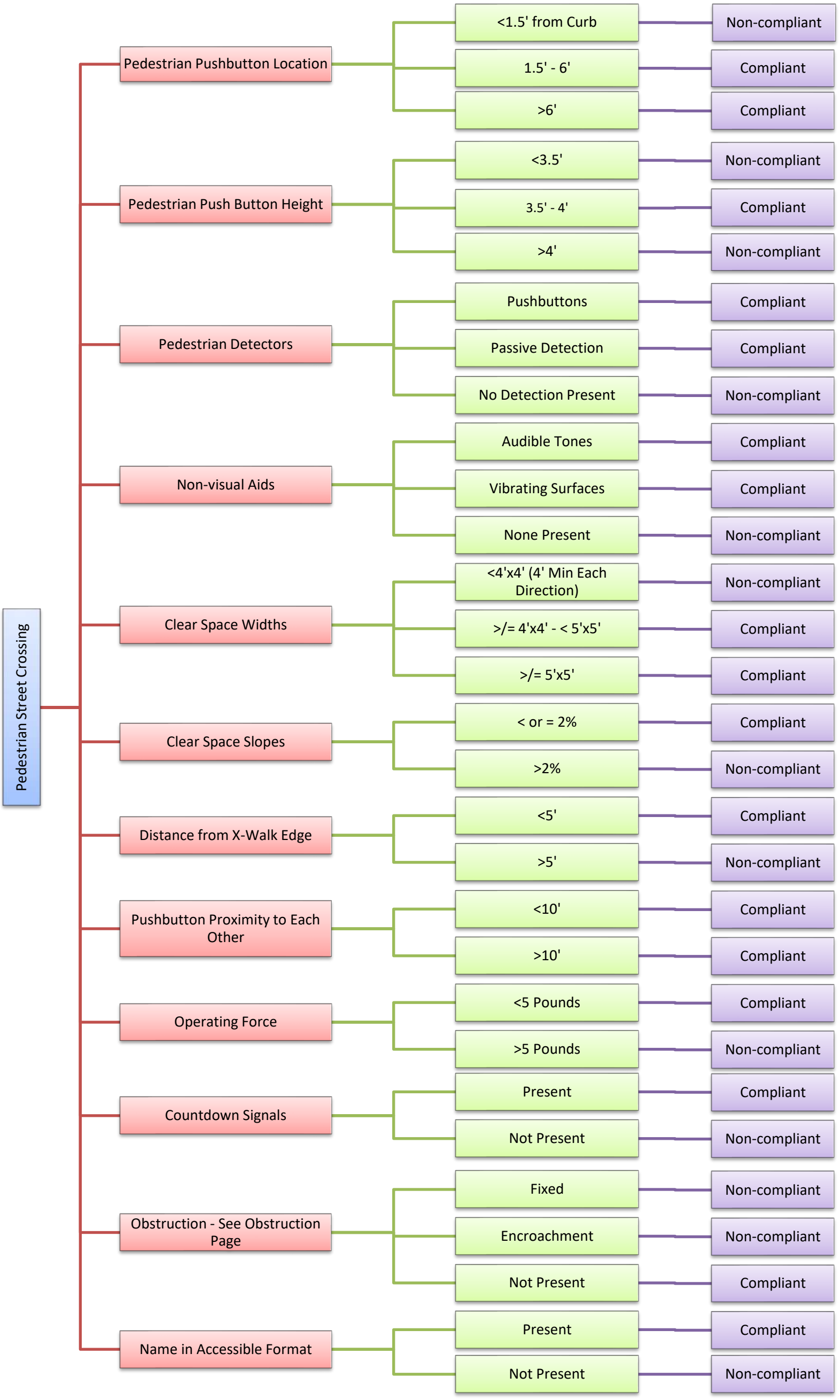
CURB RAMP DATA COLLECTION FLOW CHART (SHEET 2)

This is the first sheet of curb ramp data. Curb ramps were divided into 2 sheets to provide clarity. The following is a graphical representation of the curb ramp data to be collected as part of the transition plan. The main node at the left side of the chart "Curb Ramps" represents the feature for which the data is being collected. The nodes directly right of "Curb Ramps" (i.e. Surface, Condition, etc.) represents the attributes that will be collected. The data right of the attribute nodes (i.e. Concrete, Asphalt, etc.) represents the various options that will be presented to the field crew via drop-down menu. The data at the far right represent the point value that will be assigned to the various deficiencies; if the curb ramp does not have a curb ramp present than a score of 1 will be assigned. If an obstruction is present a score value of 3 points will be assigned. A surface of "no surface present" represents that no sidewalk is present at the curb ramp and forty-nine points will be deducted from the score. The max score of fifty points represents a curb ramp that has no deficiencies.



SIGNALIZED INTERSECTION PEDESTRIAN STREET CROSSING DATA COLLECTION FLOW CHART

The following is a graphical representation of the signalized intersection pedestrian street crossing data to be collected as part of the transition plan. The main node at the left side of the chart "Pedestrian Street Crossing" represents the feature for which the data is being collected. The nodes directly right of "Pedestrian Street Crossing" (i.e. Clear Space Widths, Clear Space Slopes, etc.) represents the attributes that will be collected. The data right of the attribute nodes (i.e. Concrete, Asphalt, etc.) represents the various options that will be presented to the field crew via drop-down menu.



Appendix A.8
Summary of Sidewalk and Curb Ramp Findings

1. MAP ORGANIZATION

A grid system was laid out over the extent of the city. Twelve grids detail all the pedestrian facilities in the City. If a section of the City is not covered by a grid, then there are no pedestrian facilities present in that area. A map showing the layout of these grids can be found under the title "Reference Map" in **Appendix A.9**.

In general, the grids were laid out in relative rows and columns over the city. To better display the information, this pattern was broken in places, and some grids may overlap.

2. MAP SYMBOLOGY

Each grid map is accompanied by a legend as shown below. A priority was assigned to each segment of sidewalk and to each curb ramp in the City. The prioritization system is based on the two-part prioritization system as detailed in Appendix A of the ADA Transition Plan. Existing curb ramps that either have a fixed obstruction that limits the usability of the curb ramp or there is no curb ramp present are automatically categorized as the highest priority regardless of the other physical characteristics of the curb ramp or the proximity of the curb ramp to pedestrian traffic generators. The prioritization system is meant to prioritize those pedestrian assets that are in the worst physical condition, lowest Impedance Score, that are near the highest number of pedestrian traffic generators, highest Activity Factor. These priorities will be prioritized as First Tier Priorities. The lowest priorities, Long-Term Improvements, will represent those pedestrian assets that are either low priorities based on the Impedance Score or Activity Factors. The legend shows the categories of scoring and the colors associated with each category (**See Figure 1**).

Priority Legend	
	1st Tier Improvements - Initial Focus
	2nd Tier Improvements
	Long Term Priorities - Out Years
	No Significant Defiency

Figure 1: Sidewalk and Curb Ramp Improvement Priorities

3. COST ESTIMATING

A cost estimate of upgrading each curb ramp and sidewalk segment to meet ADA standards was developed for each component. The cost estimate was calculated using an algorithm in ArcGIS that considered all the defects within a given segment or curb ramp. The cost estimates are based on the removal and replacement of the existing pedestrian asset and does not include costs for engineering, right-of-way acquisition or any other ancillary costs.

3.1 Curb Ramps

The curb ramp impedance score is detailed in Appendix A.7.3 of the ADA Transition plan. This score accounts for all the obstructions that may impede a disabled pedestrian. It was found that, though these obstructions may be repaired individually, the best practice is to completely remove and reconstruct the curb ramp except in special circumstances in which a minor obstruction can be removed without doing damage to the remainder of the curb ramp. Additionally, curb ramps that included fixed obstructions that will require relocation of an existing utility (such as mast arms) were deemed to require full removal and replacement of the existing curb ramp in addition to the cost required to repair or relocate the fixed obstruction.

For perpendicular ramps, a cost of $2,500 was assumed. For parallel ramps, a cost of $3,000 was assumed. For diagonal ramps, a cost of $4,000 was assumed to account for constructing two perpendicular ramps to replace the existing diagonal ramp. If no curb ramp was present a cost of $3,000 was assumed. If the curb ramp was impeded by a utility pedestal, water valve, manhole, or other utility box, the cost of repair was assumed to be the cost to relocate or adjust the existing utility as identified in **Table A39** in addition to the cost to remove and replace the existing curb ramp as identified above. Although some ramps may be able to be modified to fix minor problems, such as a vertical displacement of between ¼" and ½" that may be ground down, for this plan a cost was assigned to remove and replace the curb ramp to assist in long-term project planning.

3.2 Sidewalk Segments

For the sidewalk segments, the cost was determined by a combination of the physical condition of the sidewalk segment as well as establishing a cost to remove obstructions within a given segment that limit accessibility. In cases where sidewalk is already present it was assumed that the reconstructed sidewalk will be concrete sidewalk of a minimum width of 5 feet. In locations where the sidewalk is located directly behind the back of existing curb the cost does not include the removal and replacement of the adjacent concrete curb. The following cost were assigned for removing the various obstructions.

Cost of Repairing Various Obstructions

Obstruction Type	Cost
Utility Pole Relocation	$10,000
Adjusting Utility Pedestal, Manholes, Inlets, Valve or Hydrants	$1,500
Mast Arm Relocation	$10,000
Vertical Displacement between ¼ inch and ½ inch	$750
Vertical Displacement between ½ inch and 1 inch	$750
Vertical Displacement greater than 1 inch	$750
Vertical Displacement at Inlets	$750
Driveway Cross Slope greater than 8%	$7,500
Driveway Cross Slope greater than 5% to 8%	$5,000
Driveway Cross Slope greater than 3% to 5%	$4,000
Driveway Cross Slope greater than 2% to 3%	$3,000
Broken Sidewalk Limiting Accessibility	$65 per LF
Sidewalk Running Slope to Driveway exceeds 8%	$750
Clear Width less than 4 foot	$65 per LF

Table A39: Cost of Repairing Various Obstructions

Once each obstruction had a cost assigned to it, the cost was divided into two subgroups. The first subgroup, fixed costs, represents the cost to remove and replace driveways or relocating existing utilities that will be incurred regardless of overall sidewalk replacement. The second subgroup, sidewalk replacement costs, represents the cost to remove and replace vertical displacements or broken sidewalks. These costs were summed per sidewalk segment and if this cost exceeded the cost of replacing the sidewalk (at $65 per linear foot), then the final cost assigned was that of replacing the entirety of the sidewalk segment plus the fixed costs for obstructions. If the cost was less than the replacement of the sidewalk, the final cost was given as the cost of repairing each obstruction individually plus the fixed costs. The sidewalk was deemed necessary for replacement if the segment's cross slope was more than 2% or the consistent width of the sidewalk was less than 4-foot wide.

Cost estimates are based on correcting ADA deficiencies. Additional improvements may be desired, but the cost of this work is not included in these estimates. The cost of the improvements is based on 2020 construction dollars and inflation is not included in the development of the cost estimates.

3.3 Development of Potential Projects

Two (2) potential standalone projects were developed based on the prioritization system developed as part of this Plan. The standalone projects were developed based around a potential project size of around $150,000. The projects focus on providing connections between pedestrian traffic generators and the residences and commercial properties throughout the City.

The projects are:

Project #1 (Grid 5) – Reconstruct approximately 1,000 feet of existing sidewalk on the north side of Eddie and Park Drive from Robyn Drive to approximately the horizontal curve

east of Lowill Lane. This sidewalk provides access from the residences along Eddie and Park Road to Truman Middle School and the sidewalk further east of Eddie and Park Road continues to Sappington Road providing further connections. The planning level cost estimate for these improvements is $150,000.

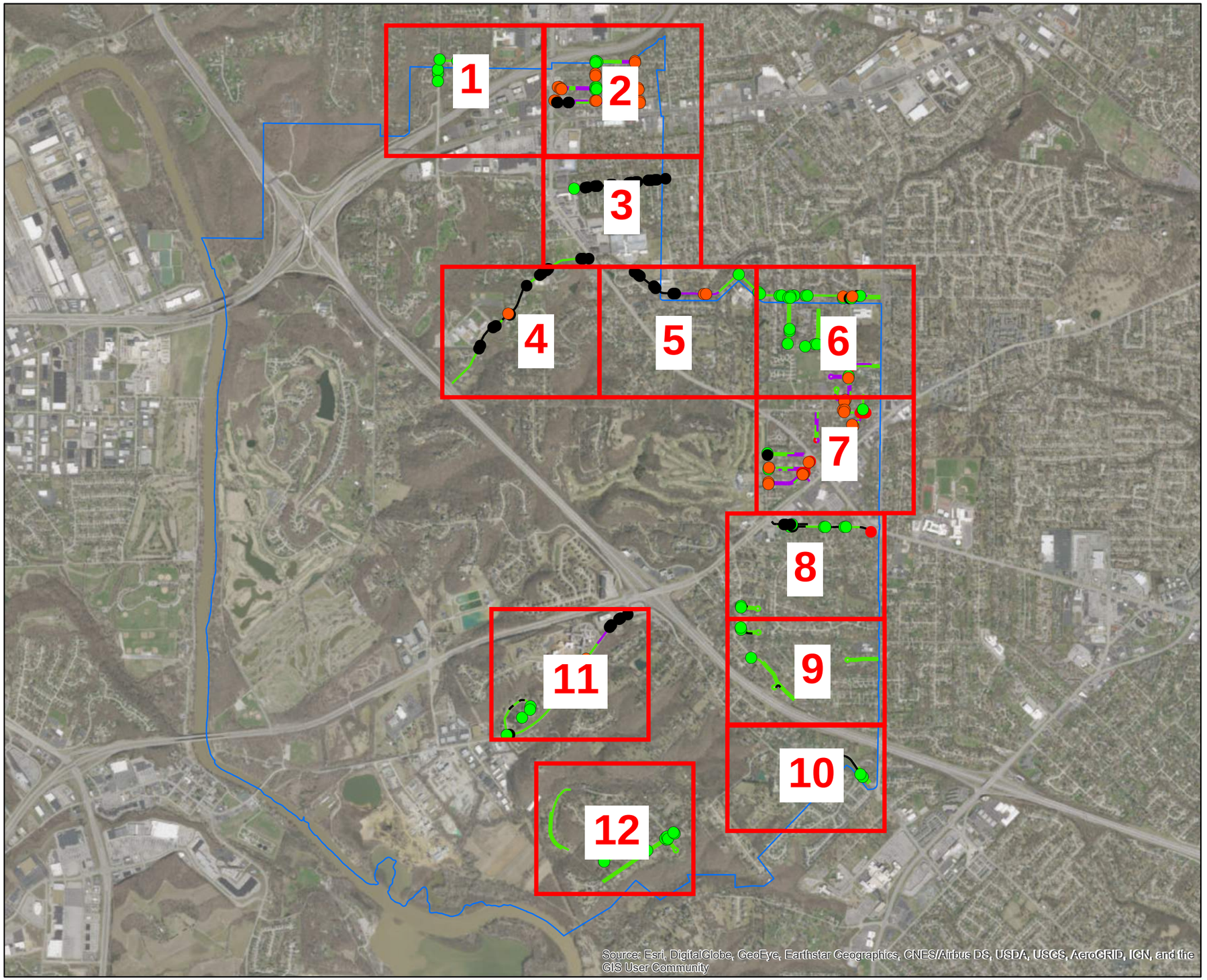
Project #2(Grid 7) – Reconstruct the sidewalk and curb ramps on both sides of Parklind Drive from Lindbergh Boulevard to Sunlind Drive including the removal and replacement of the existing curb ramps at the intersection of Parklind Drive and Sunlind Drive. This sidewalk rated as a high priority for physical condition and provides access from the subdivision to Lindbergh Boulevard including the MetroBus stops along Lindbergh Boulevard. The planning level cost estimate for these improvements is $100,000.

Appendix A.9
Aerial Exhibits for Sidewalk Segments and Curb Ramps

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

REFERENCE GRID



N
W E
S

City of Sunset Hills

OATES ASSOCIATES

0 1,500 3,000 6,000
Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 1

N

W E

S

0 200 400 800

Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

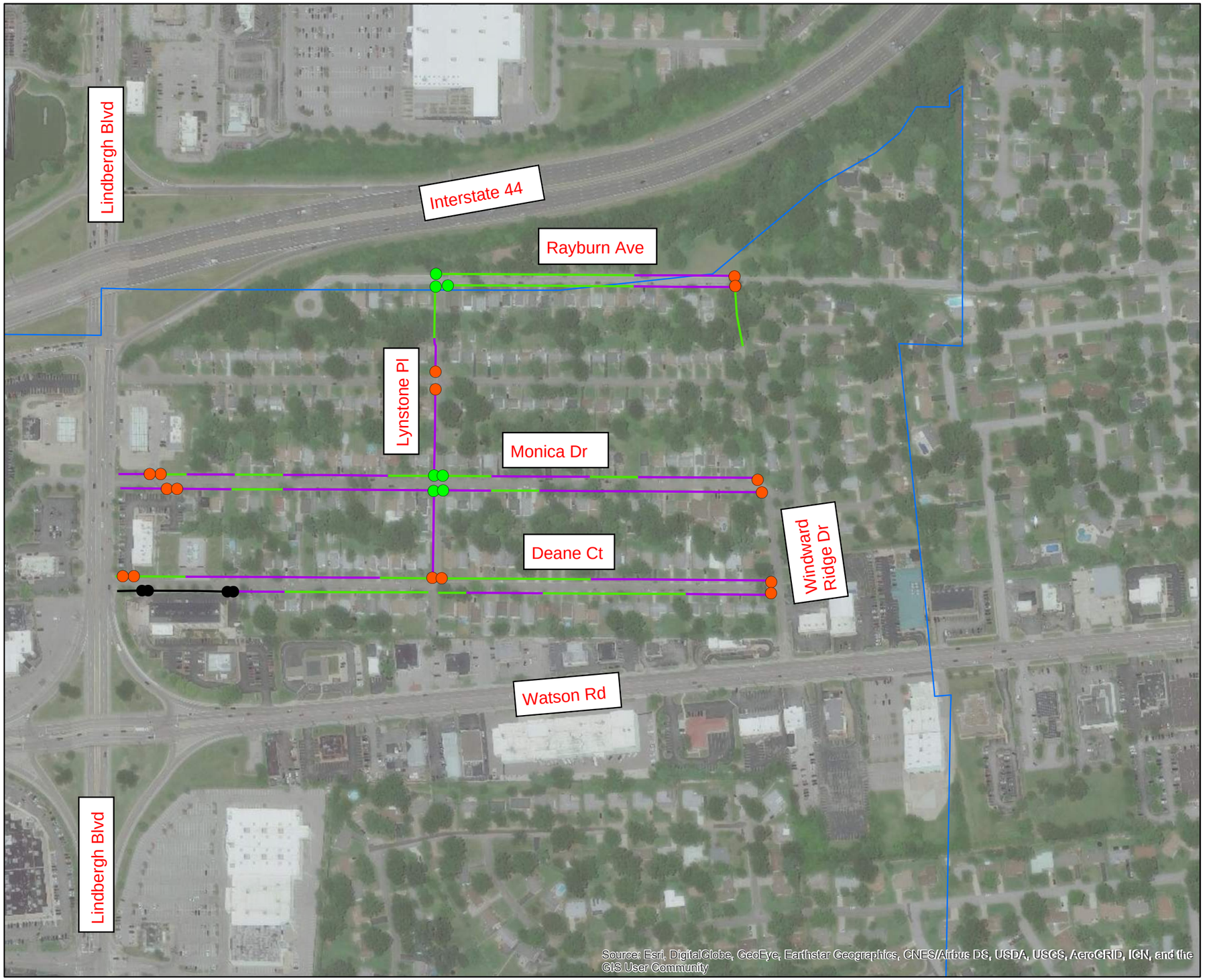
- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 2



N
W E
S

0 200 400 800 Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

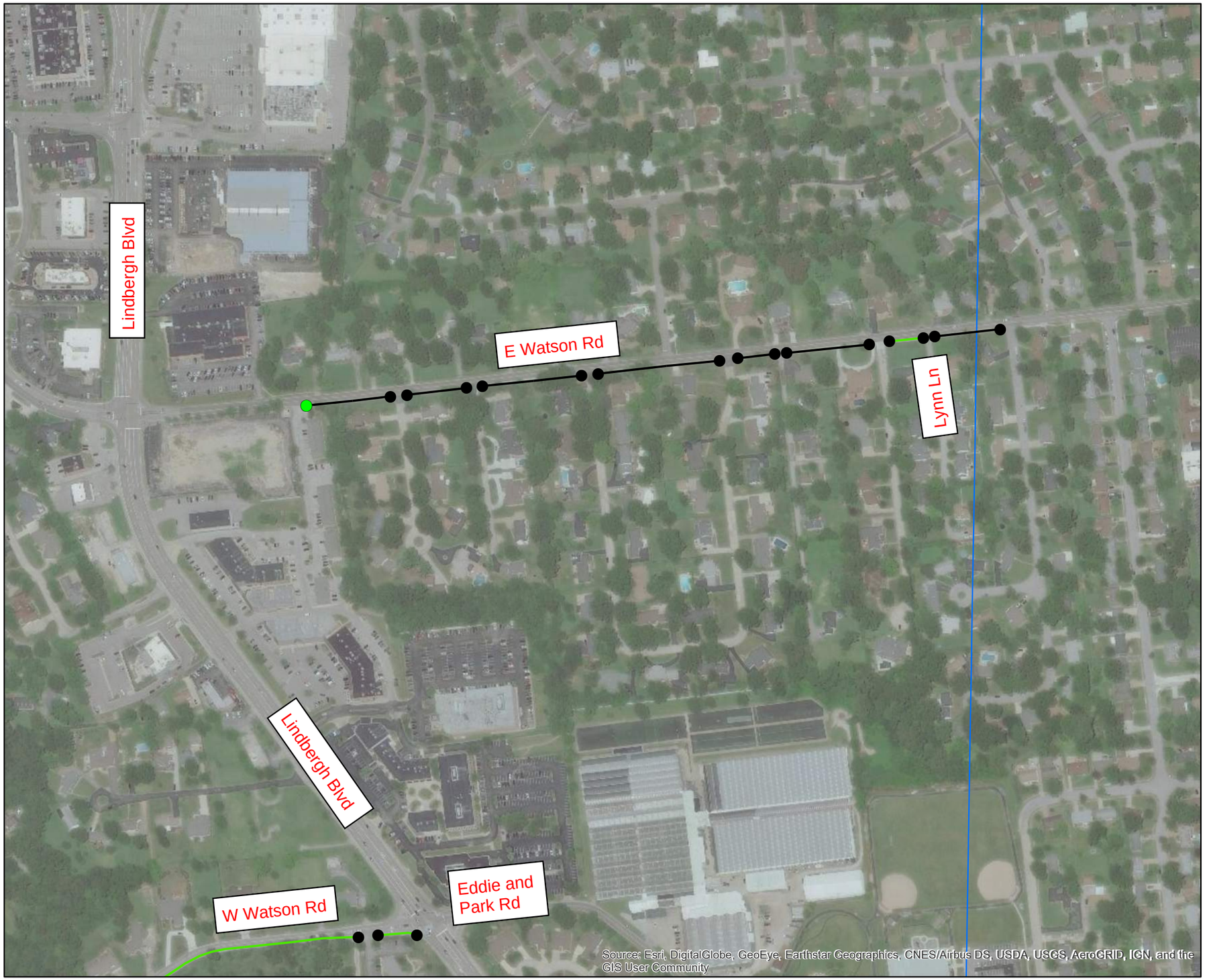
- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 3



N
W E
S

0 200 400 800 Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 4

N
W E
S

City of Sunset Hills

OATES ASSOCIATES

0 200 400 800 Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

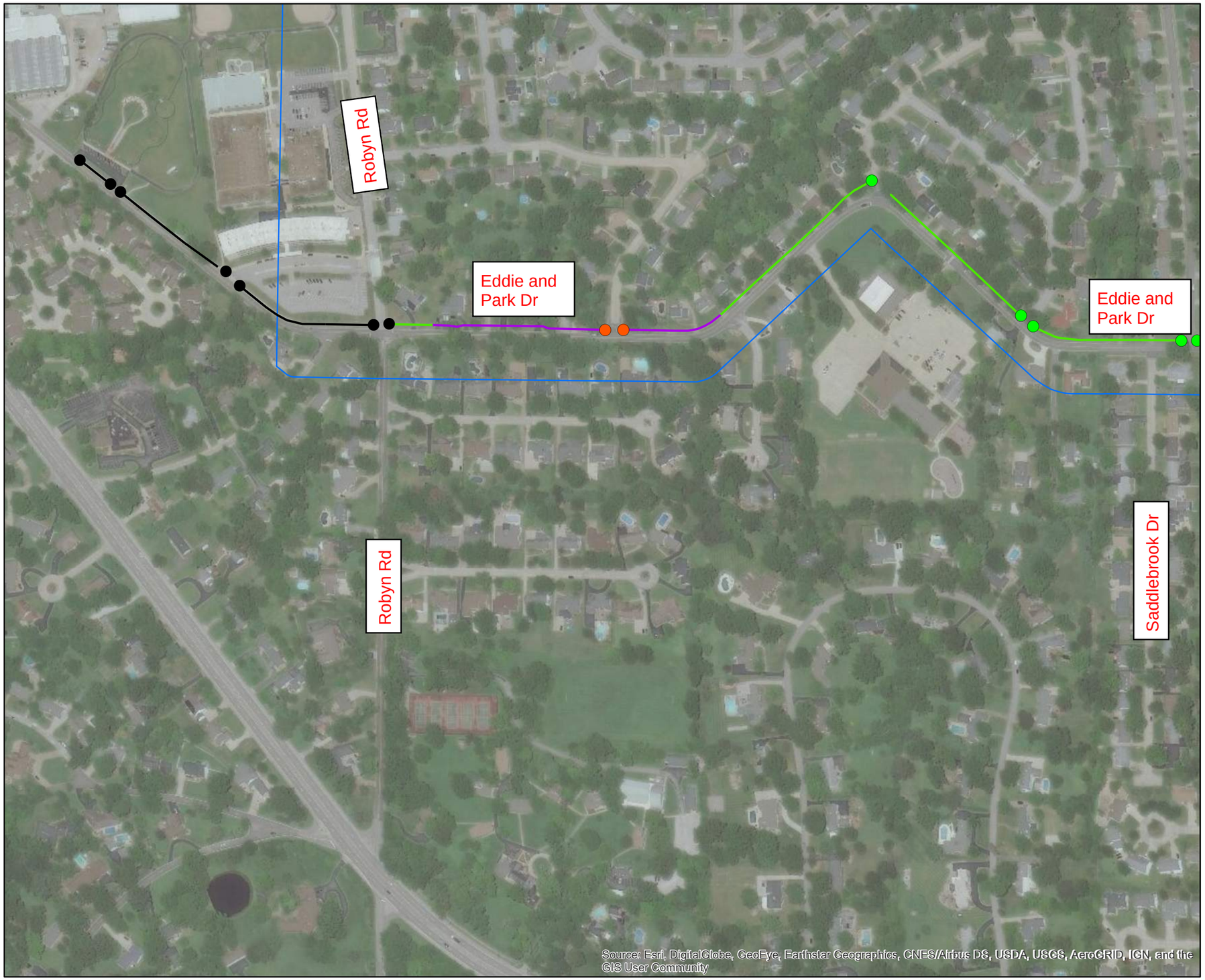
- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 5



N
W E
S

0 200 400 800
Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

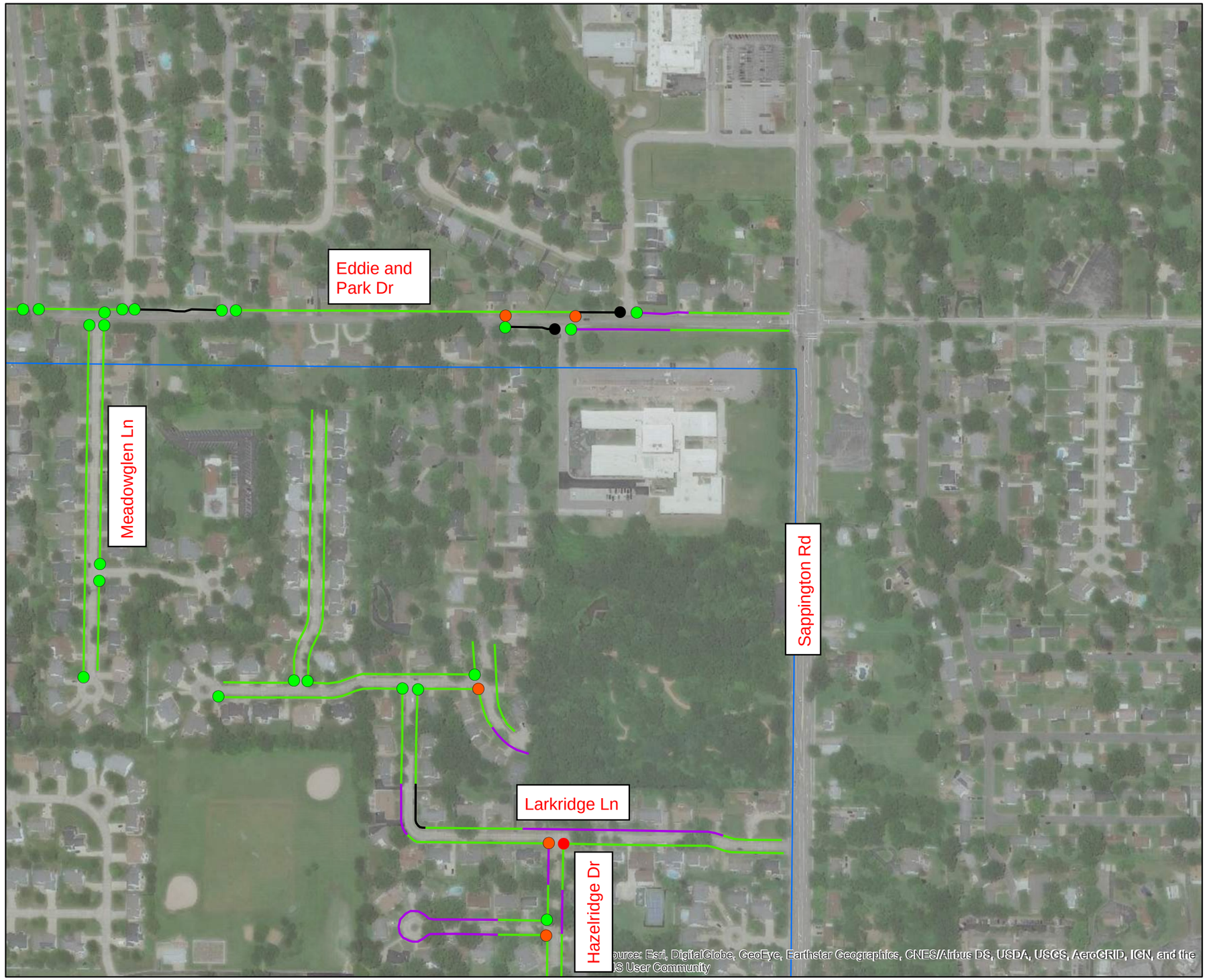
- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 6



N

W E

S

City of Sunset Hills

OATES ASSOCIATES

0 200 400 800

Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

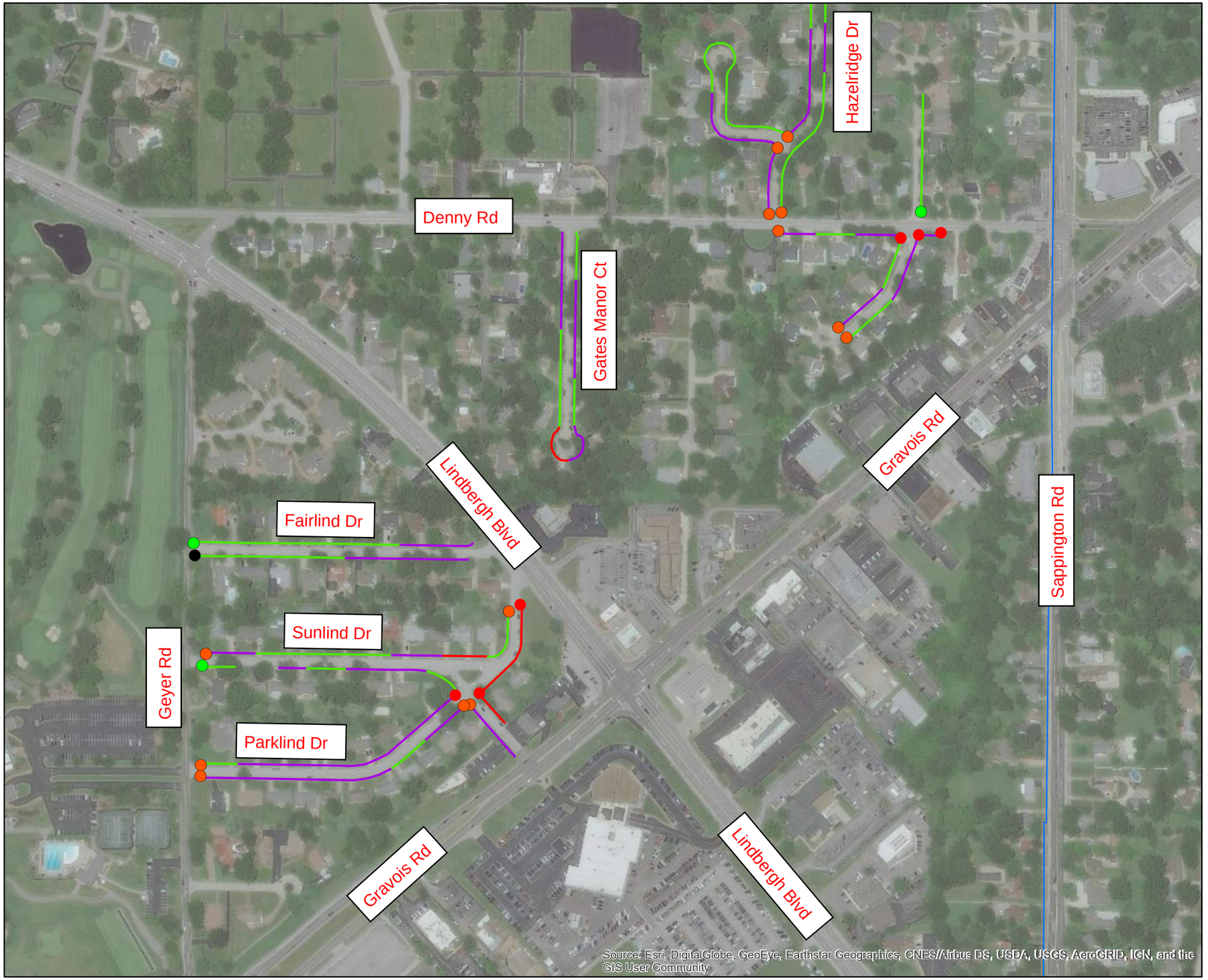
- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 7



N

W E

S

City of Sunset Hills

OATES ASSOCIATES

0 200 400 800 Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 8

N

W E

S

City of Sunset Hills

OATES ASSOCIATES

0 200 400 800

Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

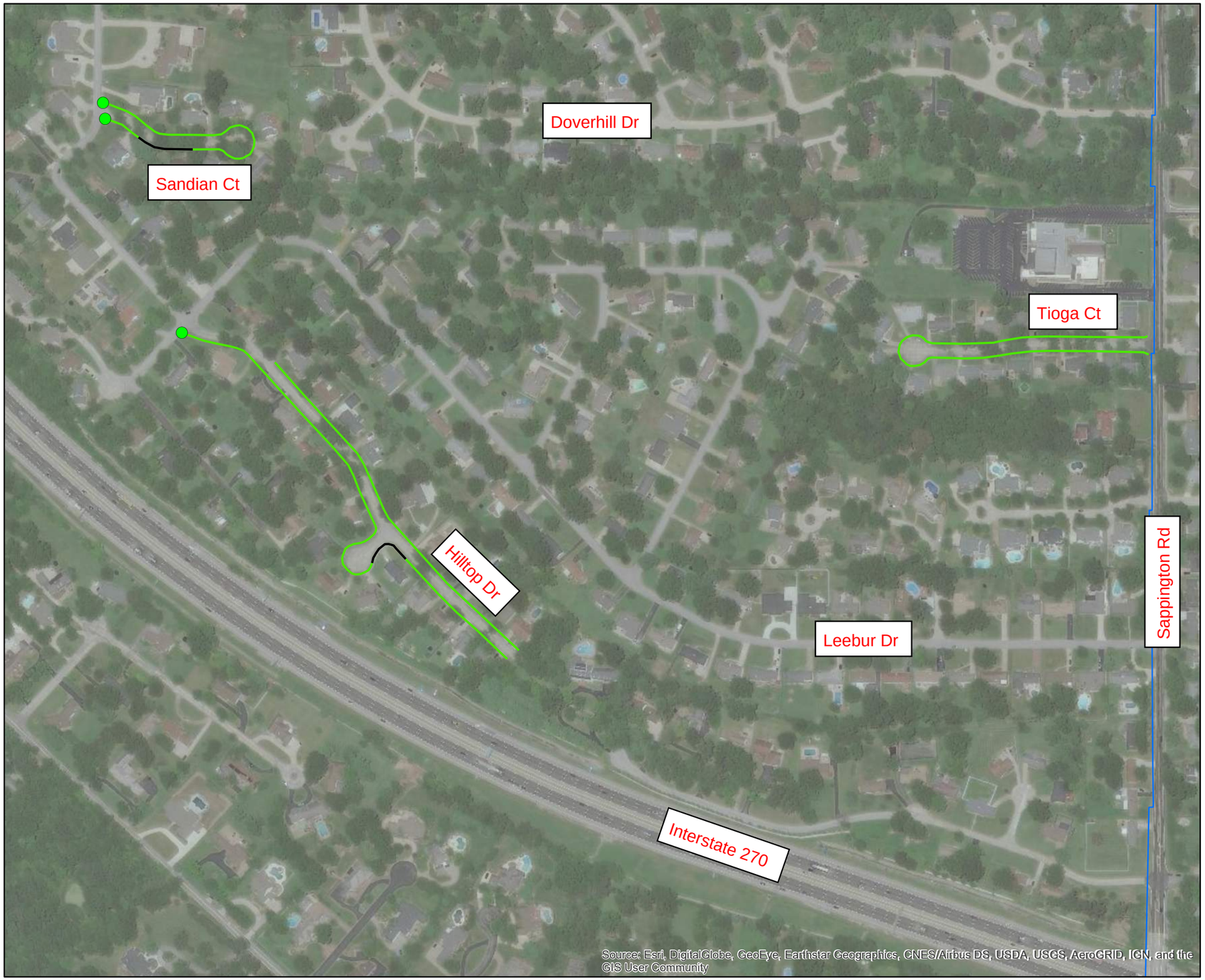
- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 9



N
W E
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0 200 400 800
Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 10

N
W E
S

City of Sunset Hills

OATES ASSOCIATES

0 200 400 800
Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 11

N
W E
S

0 200 400 800
Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits

CITY OF SUNSET HILLS

SIDEWALK EVALUATION AND ADA TRANSITION PLAN

PRIORITY MAPS

GRID 12

N
W E
S

City of Sunset Hills

OATES ASSOCIATES

0 200 400 800
Feet

Legend

Curb Ramp Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency

Sidewalk Segment Priorities

Priority

- 1st Tier
- 2nd Tier
- Long Term Priorities
- No Significant Deficiency
- Sunset Hills City Limits