



Kentucky Access Management Program



Overview and Status Briefing

June 2, 2006

Access Management vs. Permitting

◆ Philosophy

- AM – Allowed access based on highway functional purpose.
- P – Allows access for convenience of property owner. Access by Permit negates functional hierarchy of highway system - treats all roads as access roads.

◆ Practice

- AM – Comprehensive statewide approach based on classification system and associated standards; assures consistency.
- P – Case-by-case consideration subject to general guidelines; consistency often lacking.

Why Access Management for Kentucky?

- ◆ AM supports KYTC's Vision
 - Provide a **safe** and **reliable** transportation system supporting Kentucky's future **economic growth**, national competitiveness, and overall quality of life
- ◆ AM supports KYTC's Goals
 - We commit to maintain and operate a safe, efficient and sound transportation system
 - **Preserve** the transportation infrastructure
 - Improve transportation **safety**
 - Improve **traffic flow**
- ◆ AM saves highway improvement dollars
 - Preserves function & capacity; extends useful life of highways

Brief History

- ◆ KYTC sponsored AM study by KTC July02
- ◆ Study completed Feb04
 - Access Management for Kentucky report
- ◆ Executive Briefings Oct03, Mar04, Jan05, Oct05, Mar06
- ◆ Implementation Task Force created May04
 - Multi-disciplinary (12 KYTC + KTC + FHWA)
 - Monthly meeting schedule (14 meetings)

Implementation Process Overview

- ◆ Completed Task Force activities
 - Finalized recommended AM standards
 - Developed and tested classification procedures
 - Outlined variance/appeal process and rules

Implementation Process Overview

- ◆ Current Task Force activities
 - Additional research to quantify benefits of program
 - Complete classification system statewide
 - Develop program documentation

Implementation Process Overview

- ◆ Future steps (timing uncertain)
 - Organizational structure - roles/responsibilities
 - Develop/process Administrative Regulation
 - Public outreach
 - Training



Access Management

Classification System

Classification System - Review

◆ Why

- Mechanism for basing allowable access on highway function
- Access standards vary by classification

◆ What

- New classification system for all state routes
- 4 urban, 4 rural classes for non-freeway facilities
- Based on intended function – traffic flow vs. land access
- Recorded in Cabinet databases and GIS maps

◆ How

- Preliminary based on functional class, ADT, and posted speed
- Refine based on manual review & consideration of other factors

Classification System – Preliminary Results

| | <u>Miles</u> | <u>% R/U</u> | <u>% Total</u> |
|-----------|--------------|--------------|----------------|
| Rural I | 2,210 | 9.2% | 8.5% |
| Rural II | 3,056 | 12.8% | 11.7% |
| Rural III | 13,201 | 55.2% | 50.7% |
| Rural IV | 5,430 | 22.7% | 20.9% |
| Total | 23,897 | 100.0% | - |
| Urban I | 898 | 41.9% | 3.4% |
| Urban II | 686 | 32.0% | 2.6% |
| Urban III | 410 | 19.1% | 1.6% |
| Urban IV | 150 | 7.0% | 0.6% |
| Total | 2,144 | 100.0% | 100.0% |

Classification System – Current Status

- ◆ Manual review/refinement process
 - Data lists, GIS maps for each county
 - Guidelines
 - Training for District planning, permits, traffic, design functions
 - Incorporate final results in HIS
- ◆ Develop process for classification revisions



Access Management

Recommended Standards

Access Management Standards - Process

- ◆ Initial standards proposed by KTC study
- ◆ Extensive discussion of each standard
- ◆ Incorporated practical experiences
- ◆ Incorporated new research findings
- ◆ Innovative approaches tailored to KY needs
- ◆ Cyclical process of refinement

- ◆ Standards selected represent compromise between engineering principles and property access needs

Access Management Standards - Overview

- ◆ Recommended Standards developed for:
 - Interchange spacing
 - Signalized intersection spacing
 - Median type
 - Median opening spacing
 - Unsignalized intersection spacing (includes driveways)
 - Corner clearance
 - Interchange area access

- ◆ Sight distance also considered in determining access location

Recommended Standards: Interchange Spacing

- ◆ Adopted AASHTO Interstate Policy
 - ◆ Rural – 3 miles
 - ◆ Urban – 1 mile

Recommended Standards: Signalized Intersection Spacing

- ◆ Most critical control for traffic flow
- ◆ Large degree of consistency between states
- ◆ Range: 1,200 – 2,400 feet

Recommended Standards: Signalized Intersection Spacing

| Access Class | Typical FC | Spacing |
|---------------------|--------------------|----------------|
| Urban I | Principal Arterial | 2,400 |
| Urban II | Minor Arterial | 2,400 |
| Urban III | Collector | 1,200 |
| Urban IV | Local | 1,200 |
| Rural I | Principal Arterial | 2,400 |
| Rural II | Minor Arterial | 2,400 |
| Rural III | Collector | 1,800 |
| Rural IV | Local | 1,200 |

Recommended Standards: Nontraversable Medians & Median Openings - Conclusions

- ◆ The design and placement of nontraversable medians and median openings should become an integral part of KY's access management practice.
- ◆ Median openings should be thought of as a traffic control device and should receive as much care regarding use and location as other traffic control devices.
- ◆ Access management strategies that increase U-turn volumes at intersections and median openings can be applied safely and effectively.

Recommended Standards: Median Type Guidelines - TWLTL

TWLTL generally appropriate for:

- ◆ Urban/suburban 2-lane roadways with:
 - projected ADT < 17,000
 - access point density > 10 ap/mi and < 85 ap/mi
 - left-turn volume < 150 vph

- ◆ Urban/suburban multi-lane with:
 - projected ADT < 24,000
 - access point density > 10 ap/mi and < 85 ap/mi
 - left-turn volume < 100 vph

Recommended Standards: Median Type Guidelines – Nontraversable Median

Nontraversable median recommended for:

- ◆ All new multilane arterials
- ◆ Existing roadways where ADT, access density, or turning volumes exceed TWLTL thresholds
- ◆ Existing rural multilane arterials
- ◆ Crossroads in the vicinity of interchanges
- ◆ Multilane roadways with high pedestrian activity

Recommended Standards: Median Opening Spacing

| Access Class | Full Median | Directional Median |
|---------------------|------------------------|-------------------------------|
| Urban I | 2,400 | 1,200 |
| Urban II | 2,400/1,200* | 1,200/600* |
| Urban III | 600 | 300 |
| Urban IV | NA | NA |
| Rural I | 2,400 | 1,200 |
| Rural II | 2,400 | 1,200 |
| Rural III | 900 | 450 |
| Rural IV | NA | NA |

* Larger value applies to routes with 85th %-tile speed >45 mph

Recommended Standards: Unsignalized Intersection (Driveway) Spacing

- ◆ Make it work for Kentucky
 - Departed from common practice
 - Incorporated type of access
 - Distinguish between types of land use (level of impact)

Recommended Standards: Unsignalized Intersection (Driveway) Spacing

- ◆ Allows significantly reduced spacing for negligible impact access
- ◆ Type B Access
 - Single-family residences
 - Multiple-family residences, 3 units or less
 - Farm/field entrances
- ◆ Type A Access
 - Commercial access
 - Residential subdivision entrance
 - All other not included in Type B

Recommended Standards: Unsignalized Intersection (Driveway) Spacing

| Access Class | Type A Access | Type B Access |
|---------------------|----------------------|----------------------|
| Urban I | 1,200/600* | 300 |
| Urban II | 600 | 150 |
| Urban III | 300 | 150 |
| Urban IV | 150 | 100 |
| Rural I | 1,200 | 300 |
| Rural II | 600 | 300 |
| Rural III | 450 | 150 |
| Rural IV | 150 | 150 |

* Larger value applies to routes with 85th %-tile speed >45 mph

Restrictions/Notes for Type B Access

- ◆ All other standards will apply according to the roadway classification.
- ◆ Type B access spacing may be utilized only if alternative reasonable access meeting Type A standards is not feasible.
- ◆ Change of land use from that previously permitted under Type B access to that classified as Type A requires a new permit and application of Type A standards.
- ◆ Only one access allowed per parcel or contiguous parcels under one ownership. Additional access points allowed only if they meet Type A standards and are deemed necessary for the convenience or welfare of the traveling public.

Restrictions/Notes for Type B Access

- ◆ Type B access should not be allowed within the functional area of another intersection. No entrance should be permitted within the limits of a turning lane.
- ◆ Type B access shall not be permitted on routes designated as having “Partial Control” access.
- ◆ When a median is present, Type B access will be limited to right turns only.
- ◆ Unified access using cross access, combined entrances, backage roads and frontage roads is strongly encouraged.

Recommended Standards: Corner Clearance

Same spacing distances as unsignalized intersections with additional requirements to protect functional area of intersection.

- Driveways not permitted within limits of turn lanes
- Driveways not permitted within limits of regularly forming queues

Recommended Standards: Interchange Area Spacing

| Access Class | Full Access Intersection | Limited Access Connection | Right-In/Out Only Access |
|---------------------|---------------------------------|----------------------------------|---------------------------------|
| Urban I | 2,400 | 1,200 | 600 |
| Urban II | 1,800 | 900 | 450 |
| Urban III | 1,200 | 600 | 300 |
| Urban IV | 1,200 | 600 | 300 |
| Rural I | 2,400 | 1,200 | 600 |
| Rural II | 1,800 | 900 | 450 |
| Rural III | 1,200 | 600 | 450 |
| Rural IV | 1,200 | 600 | 300 |

Non-Conforming Access

- ◆ Access that currently exists will frequently not comply with spacing standards
- ◆ AM standards not applied retroactively
 - Applied to requests for new access
 - Applied to changes in existing access
 - “Goal” for highway improvement projects
- ◆ Pre-existing access impacted only if redevelopment occurs or usage changes



Access Management

Variance/Appeal Process

Variance Process: Why/How ?

- ◆ Flexibility required in administration of Access Management regulations
 - Unconditional application of minimum standards not appropriate for all cases
 - Topography, roadway features, existing access points and property frontage create constraints
 - Impossible to anticipate and cover all conditions to be encountered
 - Complexities may require alternative treatments
- ◆ Build flexibility into program via formal Variance Process rather than weaken standards

Variance Process: Basic Structure – Two Levels

- ◆ Minor Variance

- Requests with minor deviation from standard and negligible impact on highway operations
- Basic information and documentation of decision

- ◆ Major Variance

- Significant deviation from standard and potential for significant impact
- Requires more extensive review and justification
 - Traffic Impact Study - study area determined by size of development and type of access modification

Variance Process: Minor Variance

◆ Criteria

- All Variances involving Type B Access
- Classes I & II: Deviation from standard $\leq 15\%$
- Classes III & IV: Deviation from standard $\leq 25\%$
- Trips generated < 100 vph for peak hour
- No alteration of traffic signal control on adjacent roadway

◆ Burden of Proof

- Adequate sight distance
- There are no reasonable engineering or construction alternatives to provide access to the site which meet or are in closer compliance to the standard.

Variance Process: Major Variance

◆ Criteria

- Requests for deviation from standards that do not meet criteria for minor variance

◆ Burden of Proof

- Adequate sight distance
- No reasonable engineering/construction alternatives
- Traffic Impact Study
 - Traffic operations and safety will not be degraded to unacceptable level by proposed development & access plan
 - Level of safety/operational performance comparable to that provided with full adherence to AM standards
 - Mitigation improvements

Implementation Strategy - Next Steps

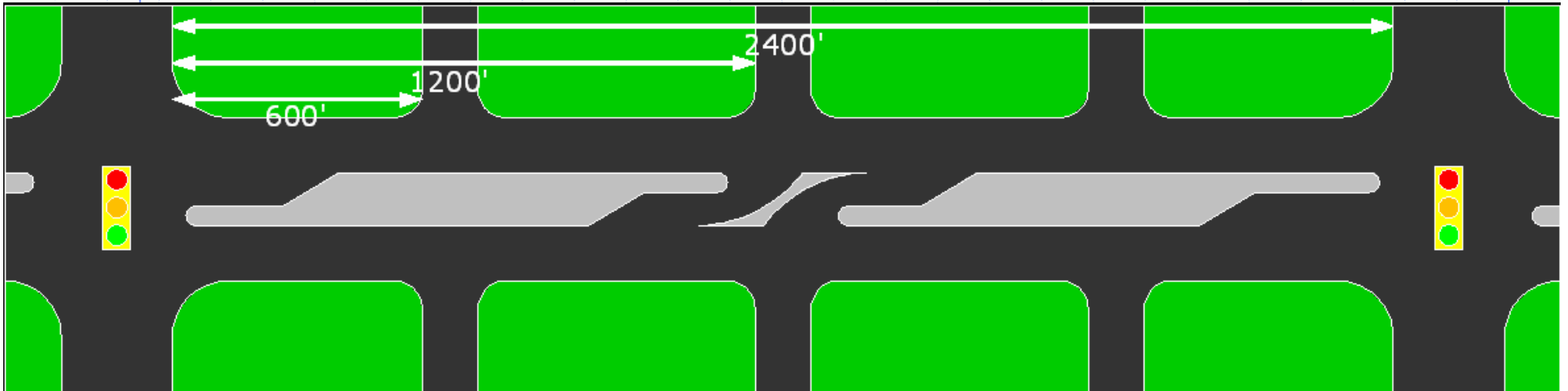
- ◆ Implement incrementally
 - Implement elements of proposed program
 - Completion of Access Management Classification System
 - Median Policy
 - Identify aspects of program that can be implemented by Cabinet policy rather than Admin Regulation
 - Design policy incorporating AM standards as alternative
 - Permitting policy prescribing coordination with local P&Z
- ◆ Pursue access management retrofit projects
 - Several studies underway
- ◆ Encourage local initiatives



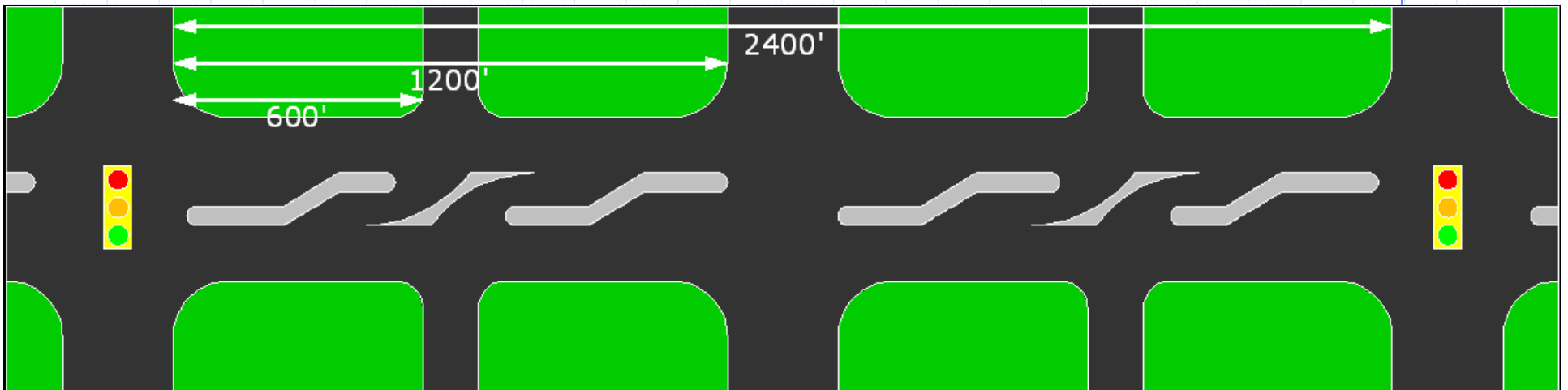
Questions ?

Discussion ?

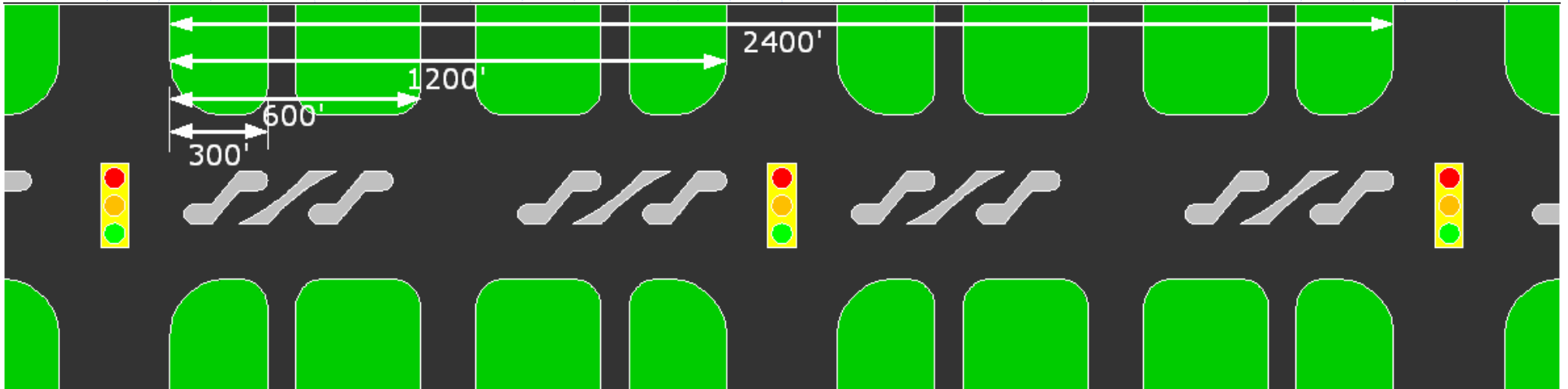
Urban Access Classification I



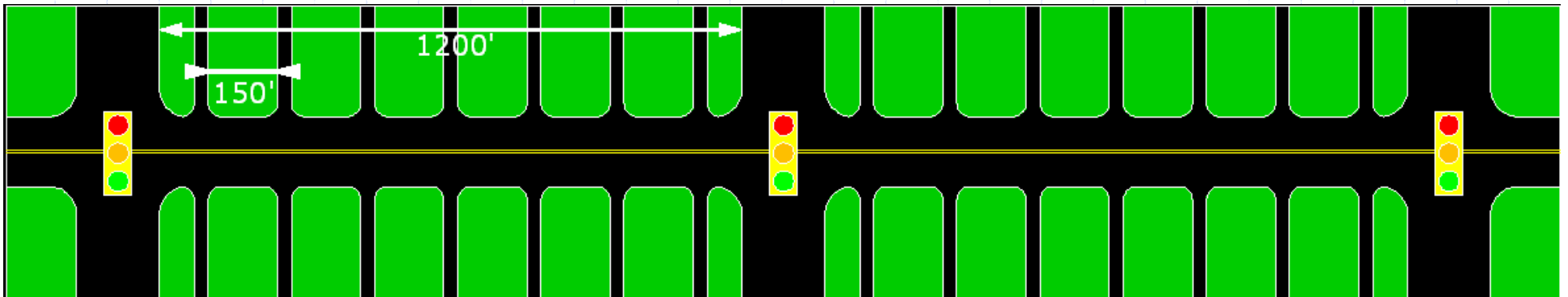
Urban Access Classification II



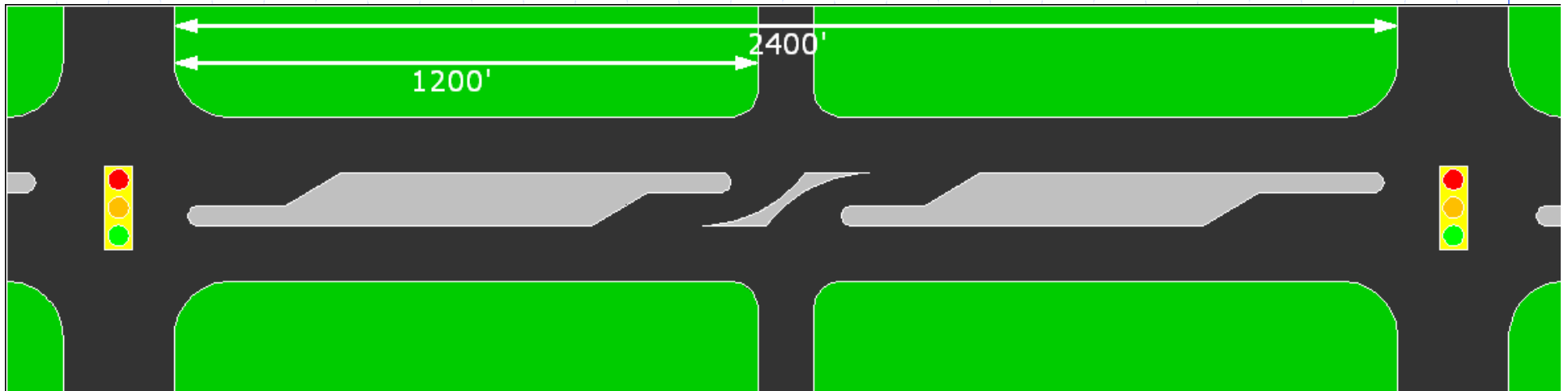
Urban Access Classification III



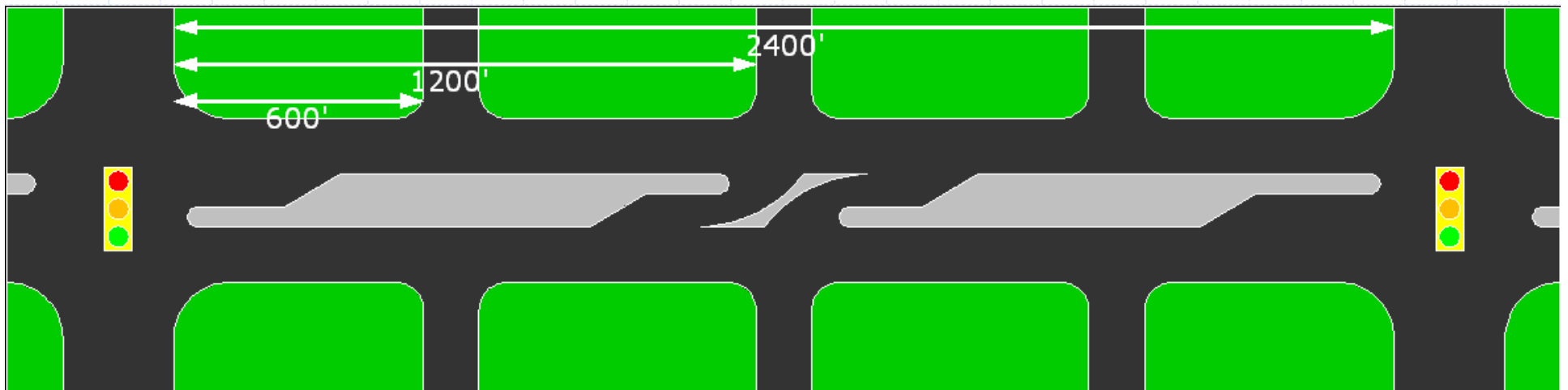
Urban Access Classification IV



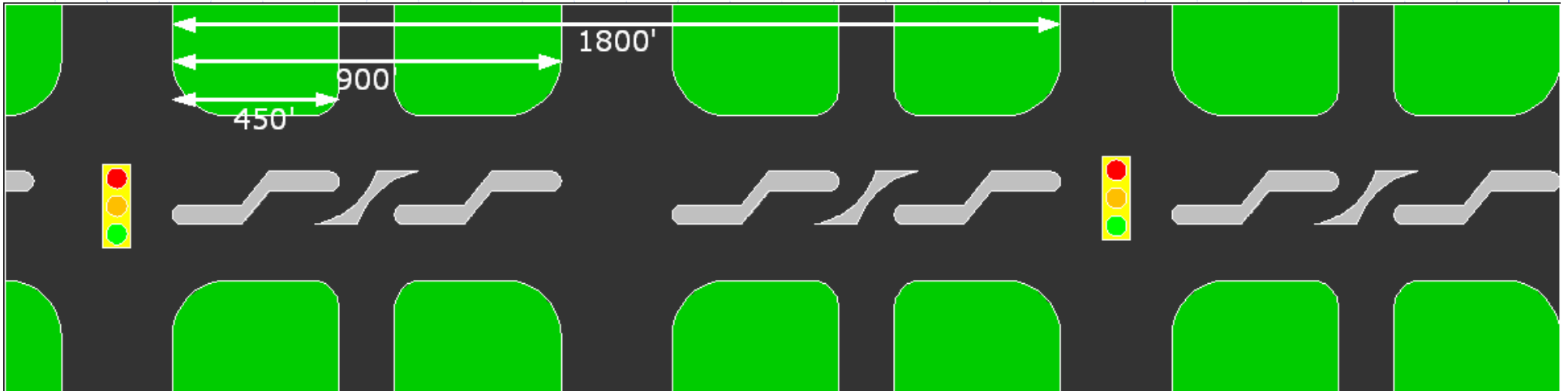
Rural Access Classification I



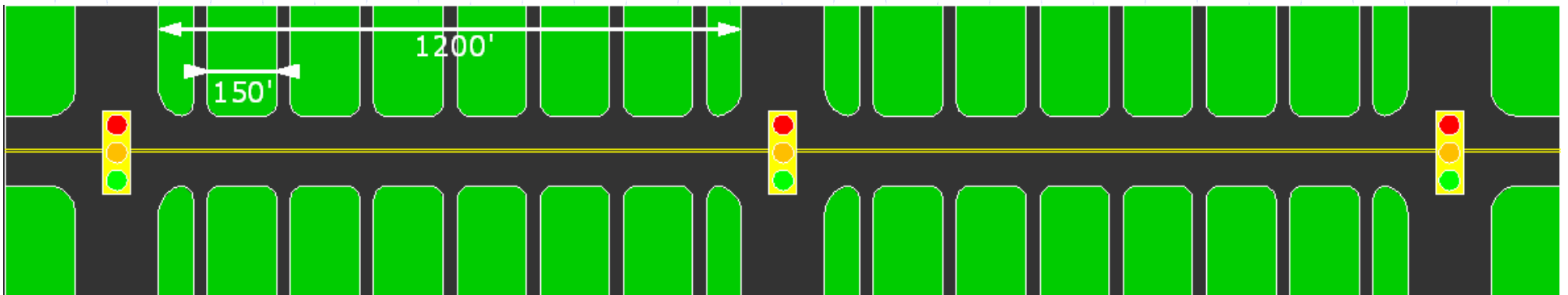
Rural Access Classification II



Rural Access Classification III



Rural Access Classification IV



Class Characteristics – Class I

- ◆ Defining Attribute
 - High priority for traffic flow over property access
- ◆ Typical Characteristics
 - High traffic volume (current or future)
 - High to moderate speed desired
 - Relatively long trip lengths

Class Characteristics – Class II

- ◆ Defining Attribute
 - Moderate priority for traffic flow
- ◆ Typical Characteristics
 - Average to high traffic volume
 - Moderate to high speed
 - Intermediate trip lengths

Class Characteristics– Class III

- ◆ Defining Attribute
 - Equal priority for traffic flow and access
- ◆ Typical Characteristics
 - Moderate - low traffic volume
 - Moderate speed
 - Relatively short distance travel

Class Characteristics – Class IV

- ◆ Defining Attribute
 - High priority for property access over traffic flow
- ◆ Typical Characteristics
 - Low traffic volume
 - Low to moderate speed
 - Short travel distance to access higher class routes