

*Addison County*  
REGIONAL PLANNING COMMISSION



# Field Days Circulation Study

Final Report

September 14, 2012



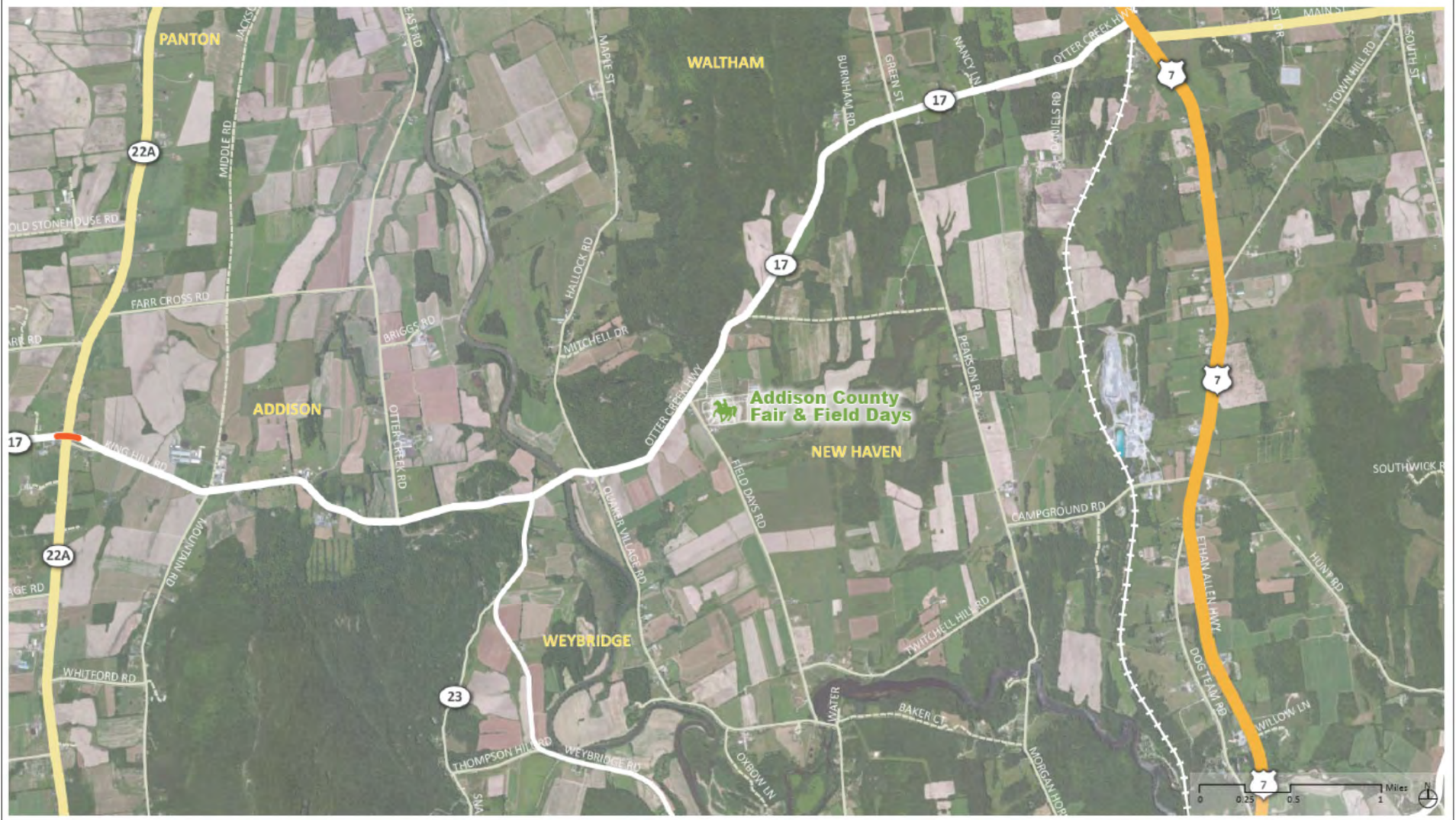
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RESOURCE SYSTEMS GROUP, INC.



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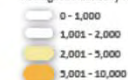
Addison County Fair & Field Days | Access and Movement Planning and Feasibility Study

## LOCAL CONTEXT MAP

1" = 0.5 miles scale

June 2012

Average Annual Daily Traffic (2007)



High Crash Location - Section



# Field Days Vicinity Map



# Introduction

The Addison County Regional Planning Commission (ACRPC), Addison County Fair and Field Days Board of Directors, and the New Haven Selectboard have initiated this project to identify issues and recommend improvements to circulation and access at the New Haven Field Days site.

The New Haven fairgrounds where the annual Addison County Fair & Field Days takes place each summer is located at the intersection of Field Days Road and VT 17 (Otter Creek Highway). As Vermont's largest agricultural fair, people from the entire region converge on this spot a few days each year. Although Field Days is the largest of the events taking place at the fairgrounds, other sizable events occur nearly every weekend during the summer. Most of the growth at the site at the corner of Field Days Road and Route 17 in the Town of New Haven has been haphazard and designed to meet immediate needs rather than with any particular eye to the future. As the popularity and size of events has grown over time, formal transportation planning is needed to address the new scale of participation and access needs.

As a result of reactive rather than pro-active responses, traffic flow both onto and throughout the grounds can be a nightmare. Traffic issues are present throughout the fair site and surrounding transportation network coming from automobile traffic, delivery traffic, pedestrian traffic, public transportation services, handicap parking/access, and lack of controlled livestock access.

In past years, fair traffic had backed up along Route 17 east for up to 1 mile waiting to get onto the grounds and parking areas. In an effort to relieve some of the congestion, ACTR has made transit resources available during the fair for additional trips between Middlebury and the fair site. This has been met with mixed reviews and surprisingly low ridership.

This report summarizes a planning process that included a review of existing data and conditions, observations of the 2012 Fair and Field Days, and working with the Field Days Board of Directors on preliminary recommendations for improving access and circulation.





# Introduction

A number of systems have already been instituted to successfully address and improve congestion:

- Hang-tags were developed to restrict on-grounds parking.
- The main gate into the grounds is closed to vehicles between 10AM and 10PM.
- Staff directs parking in the main lot.
- Staff directs traffic at the VT 17-Field Days Road intersection.
- Handicapped parking was relocated from inside the main gate on the north side of the drive to outside the fence along the main driveway (between Field Days Road and the main gate).
- A motorcycle parking area was designated at a convenient location within the main lot.
- The VT 17 parking lot driveway is now open for two-way traffic for the duration of the fair (previously it was closed with a gate and opened only to allow exits during peak times).
- Water and electricity have been installed along the fence along the main driveway, allowing for midway camping to take place there.
- Hang-tags are now grouped by type (Horses, Director, Forestry, Dairy, etc.) as opposed to one general tag regardless of parking area/function.
- The road outside the fence along the southern edge of the property was built.
- The gatehouse at the Dairy/South Gate was moved from the fence opening to the center of the driveway.
- The horse area has expanded to include two new barns.
- Additional property was acquired to the north and east, allowing for additional parking.



# Planning Levels

This project is approached from three geographic levels, as shown to the right:

## *Regional*

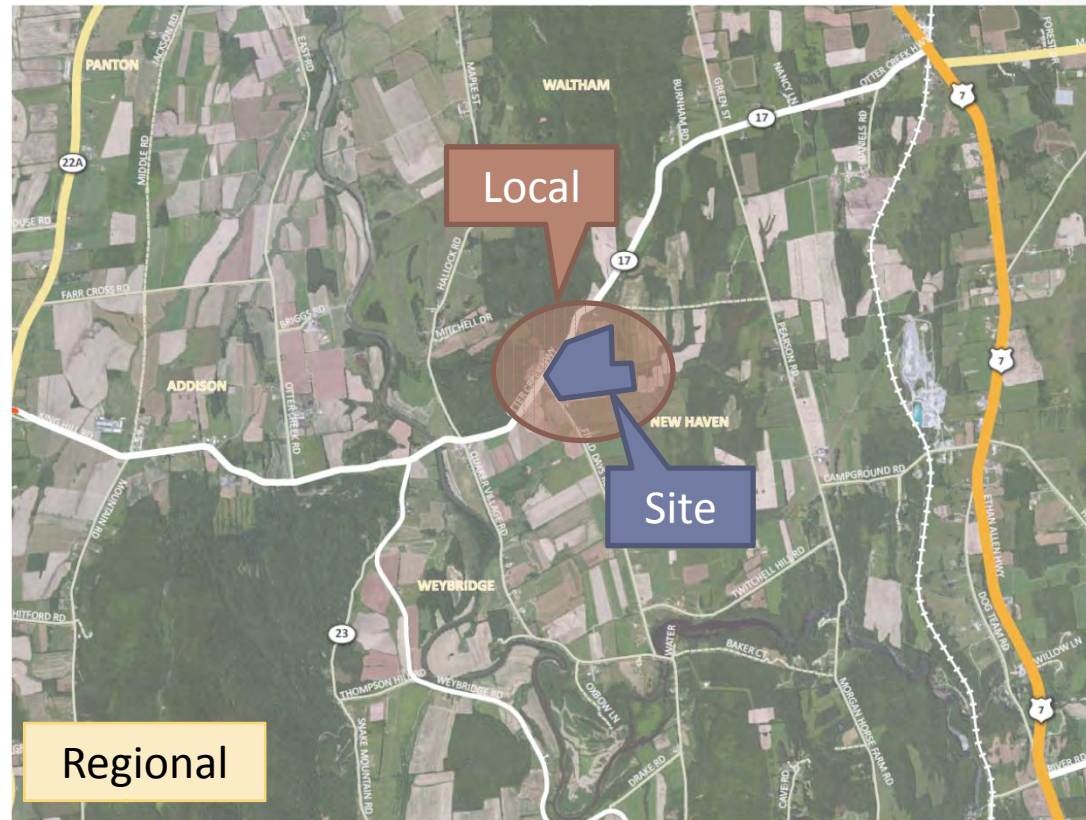
Access to the site from different parts of the region and how transit and bicycle can be used.

## *Local*

The area immediately surrounding the Field Days site, including the VT 17-Field Days Road intersection and the access points to the site from these roads.

## *Site*

The grounds themselves, both within the fence and the adjacent parking & camping areas.



# Purpose and Need Statement

To guide the development of this plan, a purpose and need statement was drafted and reviewed by the project Steering Committee.

*The purpose of this project is to effectively and efficiently address circulation and access issues at New Haven Field Days.*

*Improvements are needed to:*

- *Address the increasing number of fair-goers and other event attendees.*
- *Address access- both regional and on-site- for all modes.*
- *Increase the efficiency of parking operations.*
- *Increase safety.*



# Review of Existing & Previous Plans

The first step in this project was to review relevant plans to establish the context of the project and ensure consistency and coordination with other local and regional planning efforts. As shown below, Field Days plays an important role in supporting these plans and their visions for the region. Improving and strengthening operations at the site will ensure continued success and enhance the core values of the site and its events.

## **Addison County Regional Plan (2011)**

The Economy Chapter notes that: “Agriculture and forestry have played a central role in defining the character of the Addison Region and have historically been, and continue to be, significant parts of the region’s economy. Current trends in agriculture are leading to fewer, larger dairy farms in the region. There is also a trend towards small operations focused on non-dairy or specialty-food products.”

One of the goals for the region is: “For the historic and cultural resources of the Addison Region to continue to be preserved and strengthened while remaining vital components of the region’s economy, its communities and residents’ way of life.”





# Review of Existing & Previous Plans (continued)

## **New Haven Town Plan (2006)**

The goals of this plan include: “To support a rural, agricultural and economically diverse town....To preserve and promote the economic viability of agriculture....To protect the natural, historic and aesthetic resources of the Town’s environment...”

## **VTrans High Crash Location Report 2006-2010**

The nearest HCL to the Field Days site is the intersection of VT 22A and VT 17.

## **VT 17 Paving Project (2012)**

VT 17 will be paved between VT 22A and US 7 during Summer 2012, including during the Fair & Field Days. The project will widen VT 17 to improve and widen the shoulders, making it more bike-friendly.

## **Addison County Emergency Plan (in progress)**

The ACRPC is currently developing an Emergency Plan to identify responses to emergencies in the region, including at the Field Days site.



# Identified Issues & Observations

REGIONAL, LOCAL & SITE





Addison County Fair & Field Days | Access and Movement Planning and Feasibility Study

## PROJECT SITE AREA AND CIRCULATION

1" = 300 feet scale

June 2012



# Field Days Site



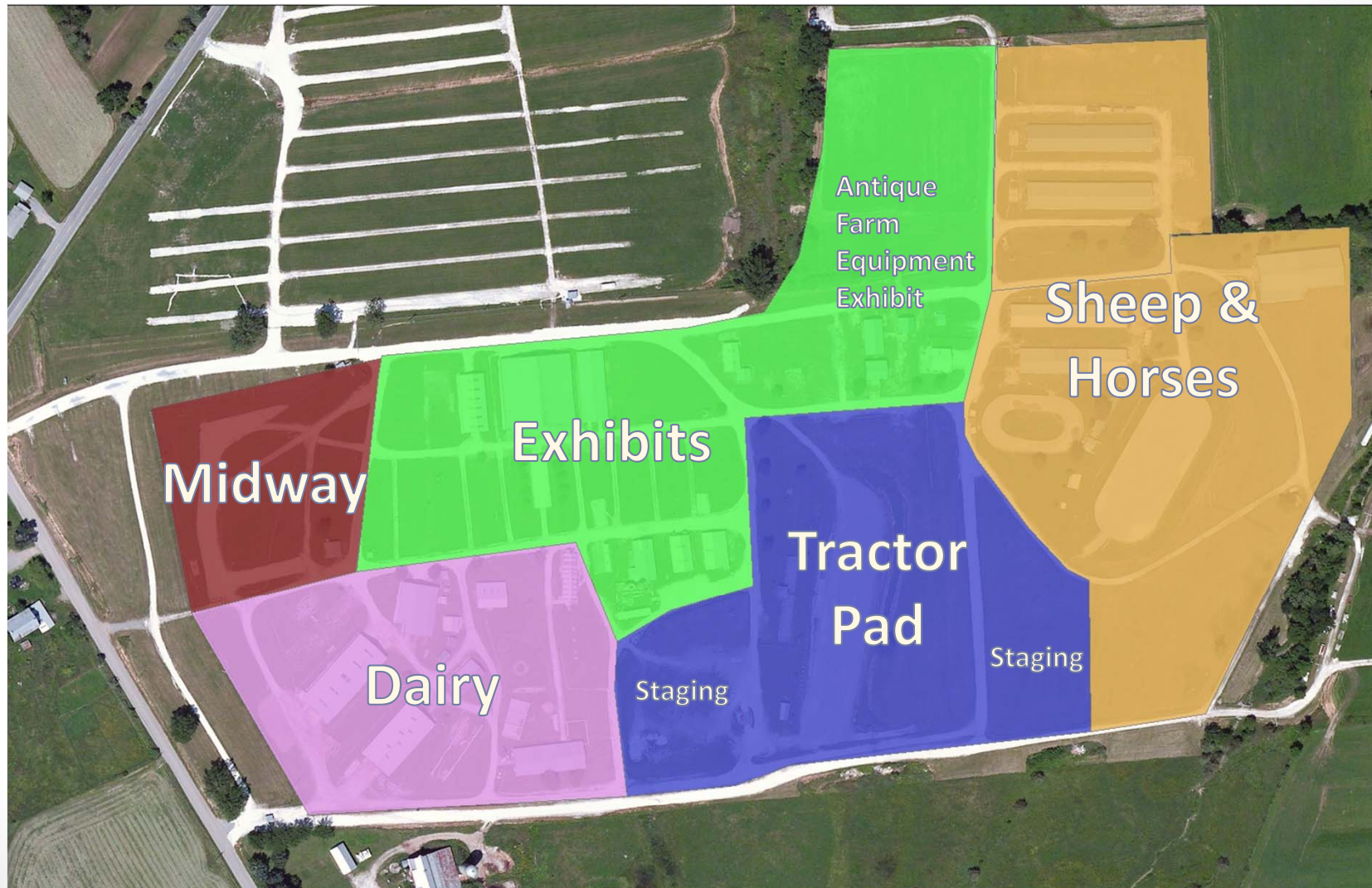
# Fair Operations: Key Points

- Peak times are
  - 4:00PM-7:00PM, which is almost entirely entering traffic; and
  - when the events end (around 10:00-11:00PM), particularly after the fireworks on Saturday/the last night.
- Events (Demolition Derby, etc.) start at 7PM.
- Staff directs traffic at VT 17/Field Days Rd intersection during peak times.
- Livestock turnover on Thursday and Saturday.
- To park within the fence/on-grounds, a vehicle must have a hang-tag displayed in the windshield which identifies which sector (Dairy, Forestry, Horses, etc.) they are affiliated with. The hang-tags are picked up ahead of time (before arriving at the fair), and are decorated differently each year so that they cannot be reused.





# Functional Areas





# What are the issues?

## Local Level

- Congestion and queuing: traffic backs up on VT 17 during peak times.
- South/Dairy Gate is very congested and chaotic, especially during the livestock turnover: there is confusion among the mix of traffic: general admission, livestock trailers, competition vehicle (e.g. tractors, demolition derby vehicles) deliveries, equipment delivery (front loaders, etc.)
- Safety: vehicle and pedestrian conflicts, particularly at the South/Dairy Gate (gate keepers and vehicles) and in parking lots.
- Main entrance is too close to intersection, generating conflicting turning movements.

## Site Level

- Mix of traffic- general admission, livestock trailers, emergency vehicles, event deliveries- is disorganized and confusing.
- Main entrance/driveway is very congested.



# Regional Observations

## Addison County Transit Resources



- Has provided fare-free bus service to Fair & Field Days since 2005
- Expands Tri-Town route for additional ~10.5 hours of service
- Field Days has sponsored ACTR since 2008
- Ridership has increased, but there are not enough trips to be useful:
  - During Field Days, one roundtrip each day, and 4 roundtrips on Saturday.
- Potential to be a valuable resource for reducing circulation issues while increasing ticket sales/attendance.



# Regional Observations (cont.)

- Currently ACTR service is marketed via
  - *Addison County Independent* insert
  - Signage at the fair
  - Field Days is listed as sponsor in ACTR schedule and on website
- Additional marketing opportunities
  - Underwrite space in the Merchant's Row Bus Shelter in Downtown Middlebury
  - Bus magnets
  - Banner on ACTR's website
  - Promote riding the bus in all ads produced by Field Days
  - Early promotion of the bus could increase ridership

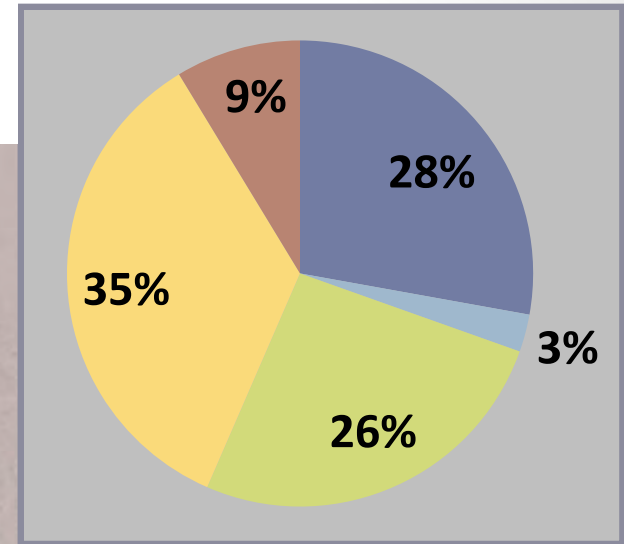
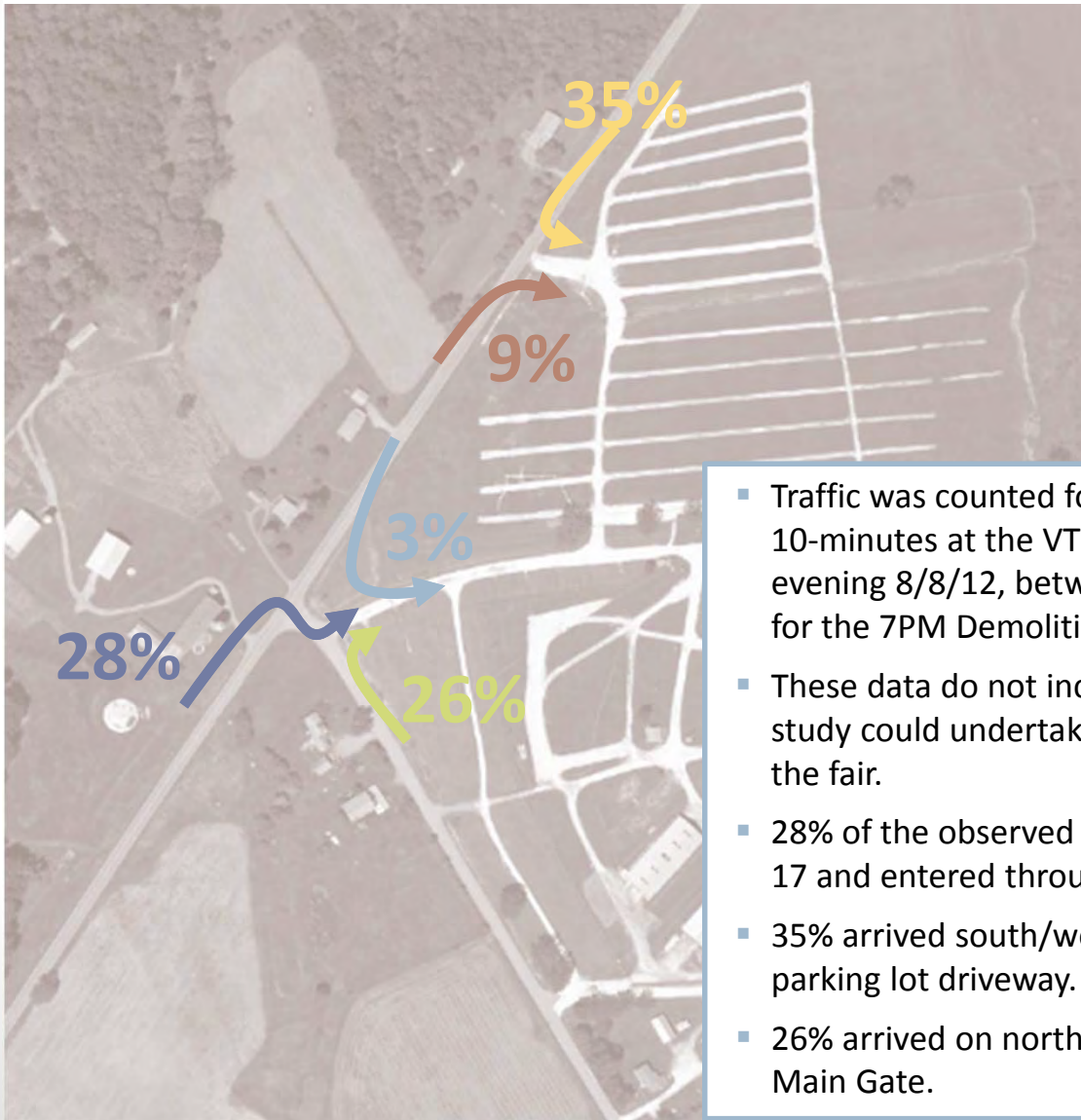


# Local Observations

ADJACENT TO THE SITE



# What directions do people enter from?



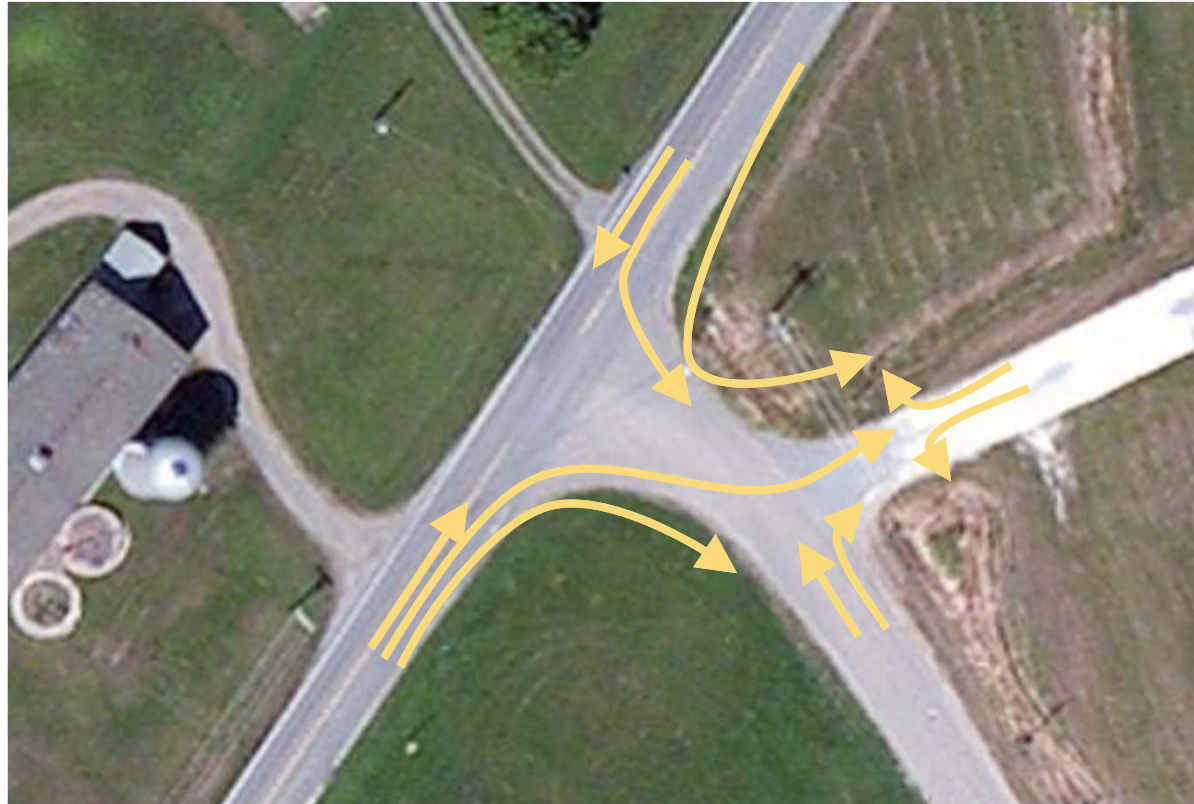
- Traffic was counted for 10-minutes at the Main entrance and 10-minutes at the VT 17 parking lot driveway on Wednesday evening 8/8/12, between 6:00 and 6:30PM, as traffic arrived for the 7PM Demolition Derby.
- These data do not include the South/Dairy Gate. Additional study could undertake a more rigorous traffic count during the fair.
- 28% of the observed traffic arrived on north/eastbound VT 17 and entered through the Main Gate.
- 35% arrived south/westbound VT 17 and entered at the parking lot driveway.
- 26% arrived on northbound Field Days Road and used the Main Gate.



# VT 17-Field Days Rd-Main Gate

The yellow arrows on the figure to the right indicate the variety of turns that occur at the Main Entrance due to its proximity to the VT 17-Field Days Road intersection. Not only are several of these vehicle paths conflicting (that is, they cross over each other if the vehicles fail to stop), but they create significant confusion as to who has the right of way.

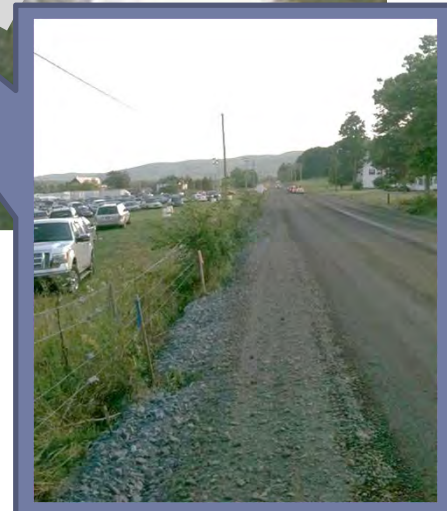
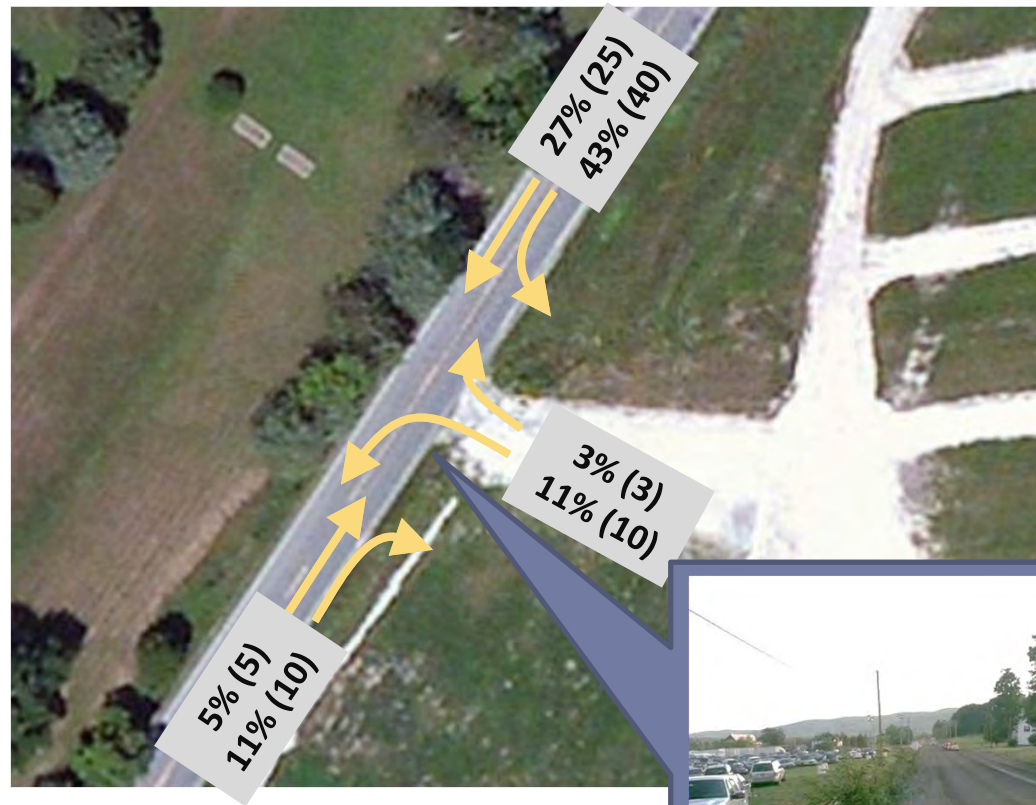
During peak times traffic is directed by staff, but at other times it is unattended.



# VT 17-Main Lot

The figure to the right shows turns at the driveway to the main lot on VT 17, based on the 10-minute spot count on Wednesday night. Almost half of the observed traffic turns left into the parking lot, creating long back-ups on VT 17. Reducing the number of left-turns could help to reduce the amount of the back-ups on VT 17.

Cars exiting the parking lot and turning left onto south/westbound VT 17 were observed to hesitate, assumingly struggling to see around the fenceposts and vegetation that appear to block the sight distance (as shown in the inset).



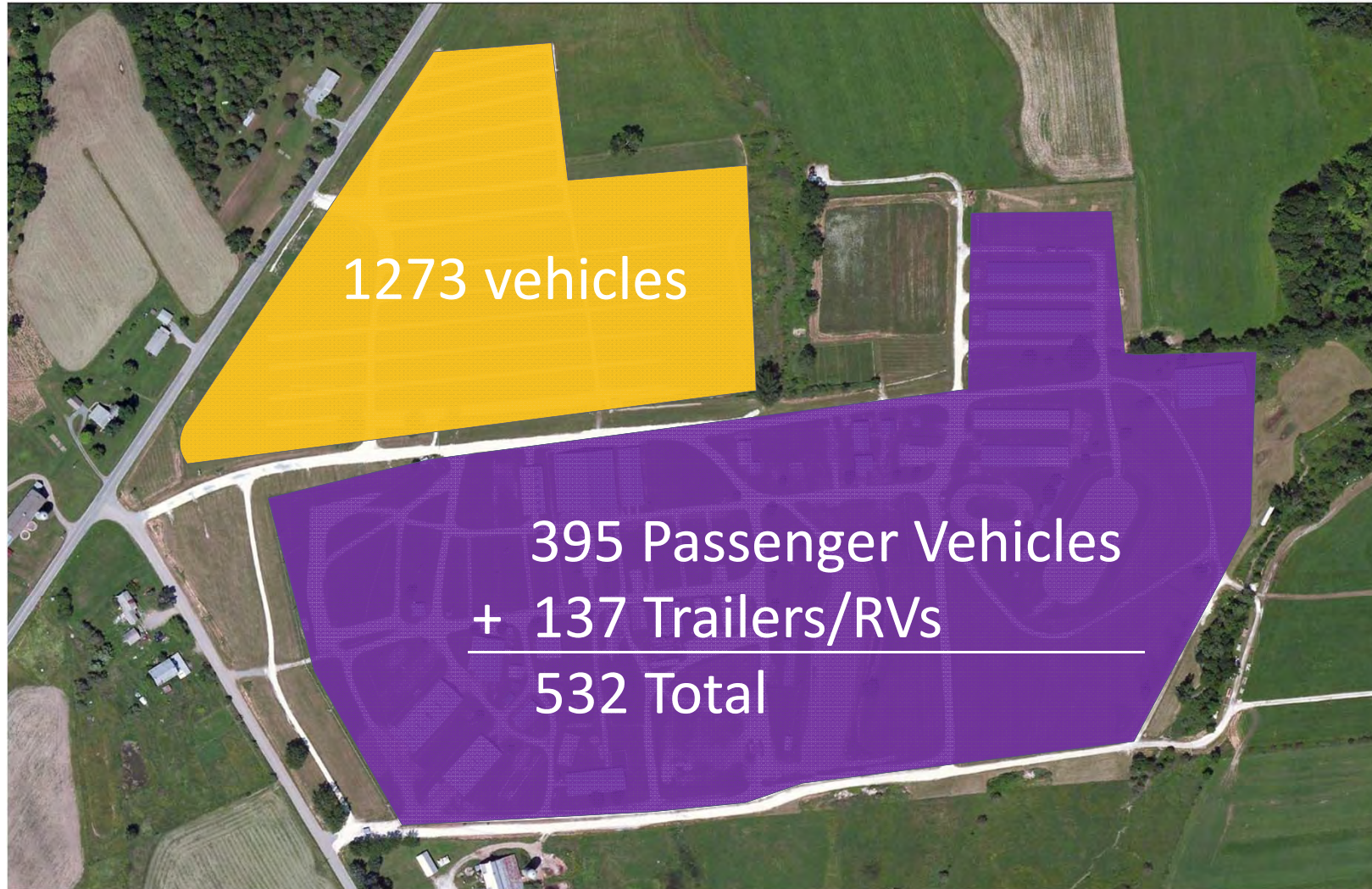
# Site Observations

PARKING LOTS + ON-GROUNDS





# # of cars parked on Saturday afternoon



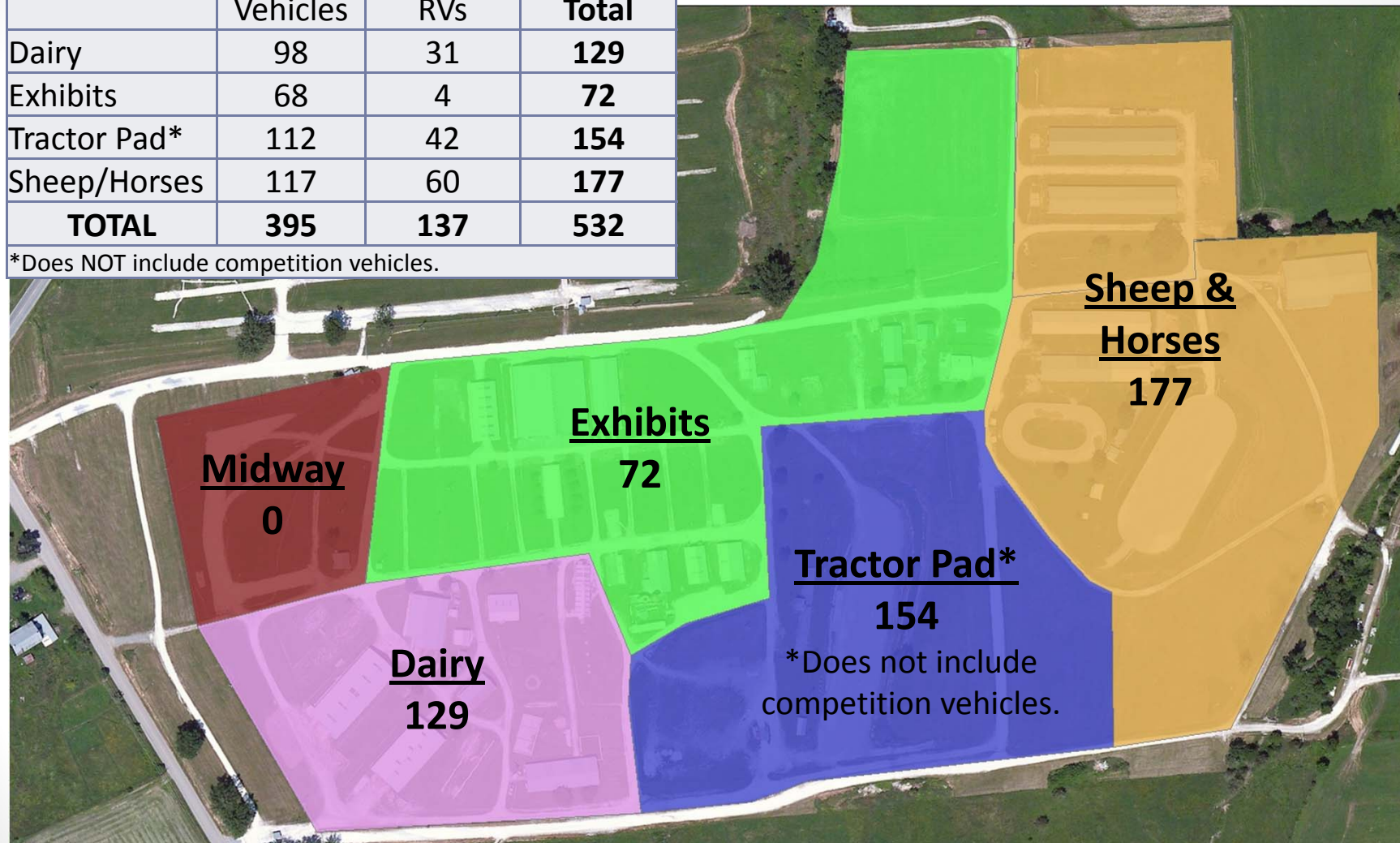
The number of parked vehicles were counted in the Main Lot and on the grounds/within the fence during Saturday (8/11/12) afternoon between 2PM and 6PM. The results are shown above.



# On Grounds Parking (Saturday afternoon)

	Passenger Vehicles	Trailers/ RVs	Total
Dairy	98	31	129
Exhibits	68	4	72
Tractor Pad*	112	42	154
Sheep/Horses	117	60	177
<b>TOTAL</b>	<b>395</b>	<b>137</b>	<b>532</b>

\*Does NOT include competition vehicles.



This figure provides additional detail as to the location of parked cars on-grounds during Saturday afternoon. The count in the Tractor Pad area did not include competition vehicles (that is, tractors participating in the Tractor Pull). Trailers counted are typically those used to tow livestock, competition vehicles, or other equipment.



# On Grounds Parking

- Why are there so many passenger vehicles on the grounds?
- Observed permits/hang-tags:
  - Forestry, Dairy, Antique, Director, Horses, Sheep
- The courtesy shuttle is very effective at helping people get around the area. It reduces traffic congestion by allowing people to park their vehicle and use the shuttle.



# On Grounds Parking

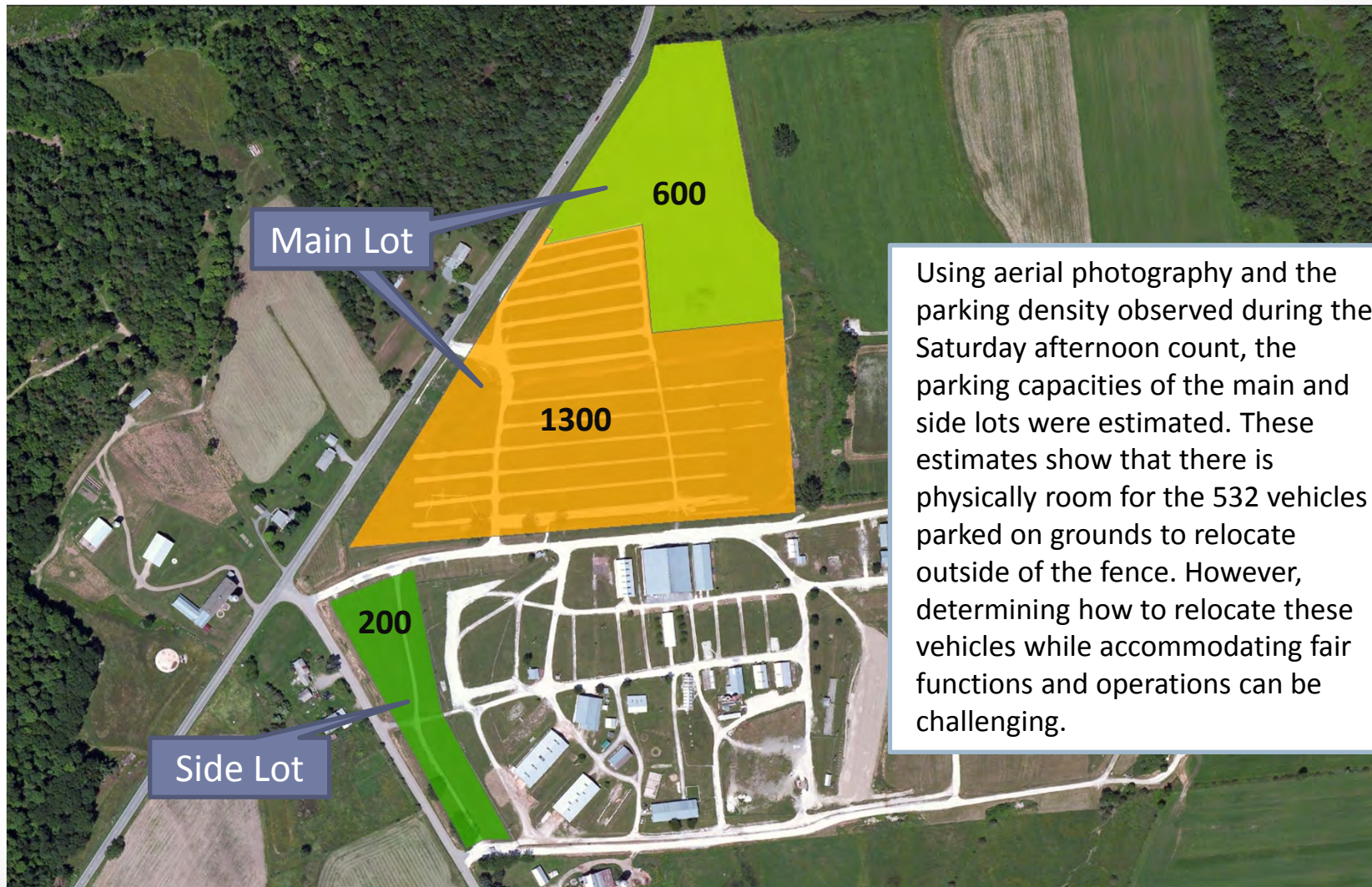
- There is room for these vehicles outside of the fence.
- ***Relocating vehicles outside of the fence leaves plenty of room for the fair to grow by making better use of existing space (rather than building new).***



Photo from Wednesday night during the Demolition Derby- a peak parking time.



# Estimated Parking Capacity



Using aerial photography and the parking density observed during the Saturday afternoon count, the parking capacities of the main and side lots were estimated. These estimates show that there is physically room for the 532 vehicles parked on grounds to relocate outside of the fence. However, determining how to relocate these vehicles while accommodating fair functions and operations can be challenging.





# Side Parking Lot



Trucks and trailers which transport carnival/midway rides park in the side lot, and unfortunately can damage the grounds if not driven properly, as shown to the right.

To improve functional organization and the sense of arrival at the Main Gate, it seems that the large trailers should be parked elsewhere after unloading rides/equipment. While a couple trucks will need to stay in this area to provide electrical generators, the majority could be moved off-site for the duration of the fair.

Another observation from this area is that a size limit on RV's/campers might be considered. Some of these vehicles are exceedingly large, consuming quite a bit of parking and requiring a lot of space to maneuver.



# Main Gate

There is understandably congestion at the Main Gate since it is the primary entrance for the majority of fairgoers. This complicates the already challenging situation arising from the nearness of the entrance to the VT 17-Field Days Road intersection and the confusing turning movements there.

Handicapped parking is provided along the north side of the driveway, while midway staff camp along the south. However, the large midway trucks/trailers that park at the north end of the side lot create an unattractive atmosphere at the spot which is the main welcome point for the fair.





# Dairy/South Gate

The Dairy/South Gate is perhaps the most problematic of all the entry points to the fair because of:

- Mix of traffic
  - General admission
  - Livestock trailers
  - Competition vehicle (e.g. tractors, demolition derby vehicles) deliveries
  - Equipment delivery (front loaders, etc.)
- Four travel lanes
  - in/out of the fence at the dairy area
  - in/out of the road to the south of the fence along the property line
- Five different approaches to this area
  - Field Days Road northbound & southbound
  - Side Lot
  - Dairy area
  - Southern road along the property line

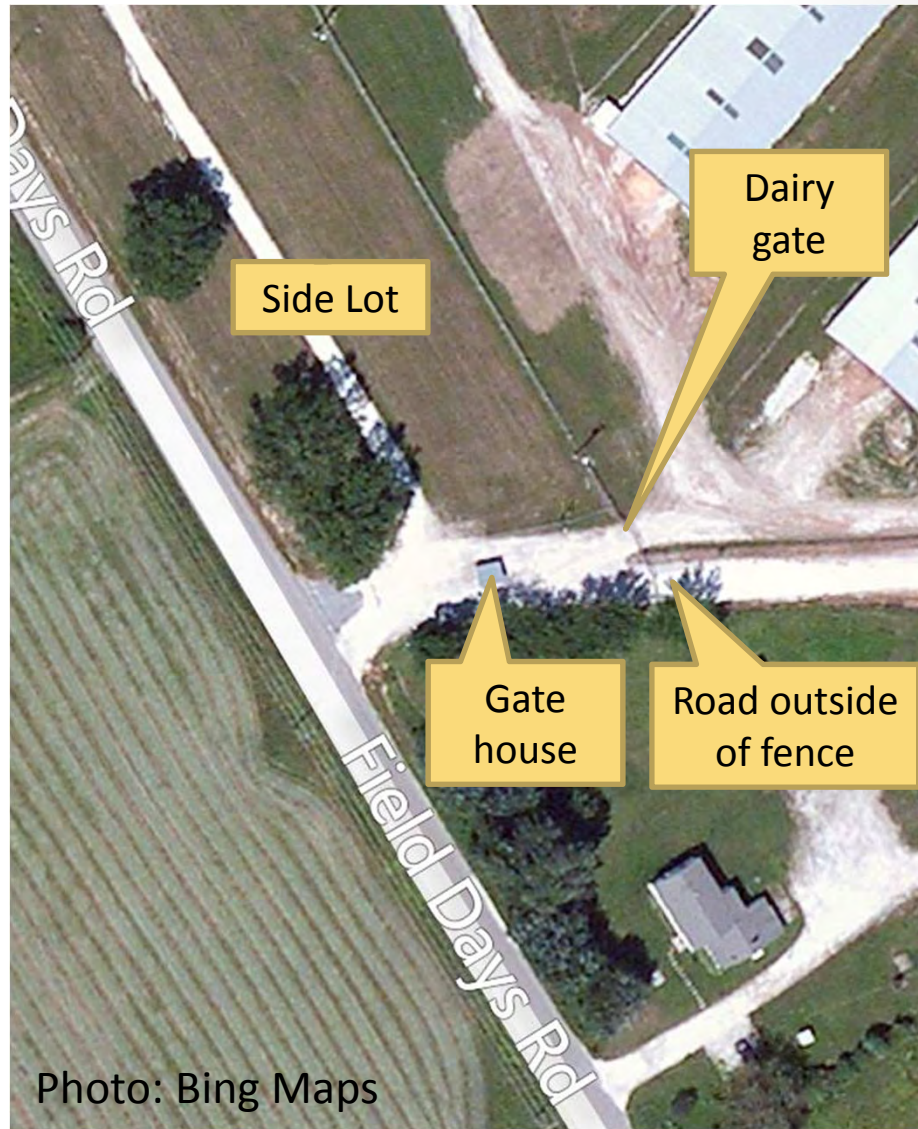


Photo: Bing Maps



# Dairy/South Gate

One way to improve congestion at the South Gate would be to schedule arrivals and departures. For example, this front loader (right) was observed on Wednesday evening immediately before the Demolition Derby, during the peak of traffic.

Consolidating approaches/access points, and separating traffic types would help to improve operations at this area.



# Improvement Strategies

CORE RECOMMENDATIONS + ALTERNATIVES



# Improvement Strategies

In order to address the problem areas identified through the observations during the fair, a set of core recommendations and alternative approaches have been developed.

The Core Recommendations address “Low Hanging Fruit,” Operations, and Overall Strategies.

The Alternatives are not exclusive- they could be implemented alone, in combination, or all together.

It is understood that there is limited staffing available for the Fair, particularly since nearly everyone is volunteering their time. Therefore, any improvement strategies that are pursued should involve minimal staffing needs.



# Core Recommendations

## Low-hanging Fruit

- Post a detailed site map in multiple locations around the grounds showing vendors as well as buildings. This would help people find their way around and make sure they can easily find agricultural exhibits (rather than getting overshadowed by the midway and large events).
- Trim vegetation/relocate fence post to improve sight distance from the main parking lot to VT 17, looking west/south. (This may already be complete with the VTrans VT 17 project.)
- Install bike racks in convenient places such as by entry gates.





# Core Recommendations (cont.)

## Operations

### ■ Gates

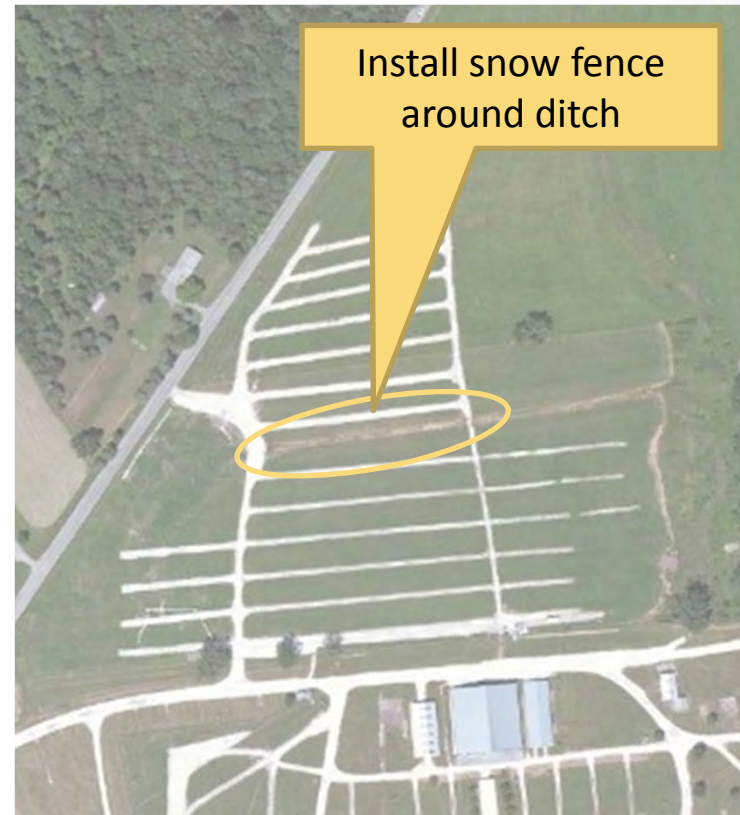
- Have a Director present at hotspots before problems arise, especially at the South/Dairy Gate.
- Ensure that rules are consistently enforced across the various gates and gatekeepers.

### ■ Hang-tags

- Hand out a map with each hang tag so people know which entrance gate they are allowed to use and where they can park on-grounds.

### ■ Parking

- Use temporary snow fence to delineate parking more clearly, such as blocking off the ditch, so that vehicles don't get blocked in.



# Core Recommendations (cont.)

## Overall Strategies

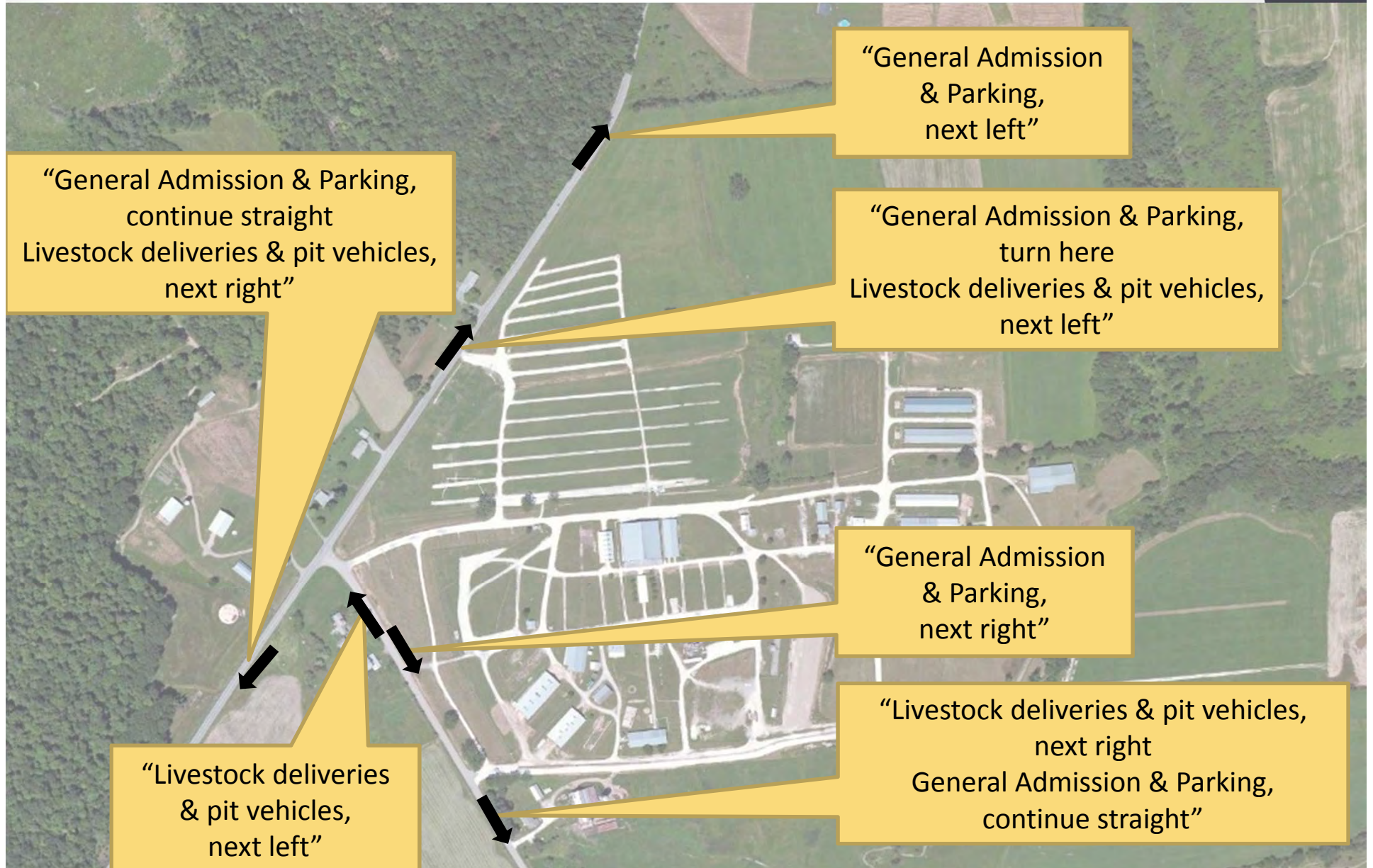
- Minimize vehicles coming on to grounds
  - Consider charging for hang-tags. This would provide a deterrent to bringing a vehicle on-grounds and prevent people from taking on-grounds parking for granted. Furthermore, it could provide a significant revenue source for Field Days. For example, charging \$5 for a one-day hang-tag could result in \$10,000 over the course of the 5-day fair (assuming 400 passenger vehicles park on-grounds each day).
  - Establish/enforce criteria for on-grounds passes (needs to be a livestock or equipment delivery, etc.).
  - Policy/practice should be: drop off animals/equipment, go park outside of fence.
- Implement a Sign Plan
  - Strategically locate messages to influence traffic patterns, as shown on the next page.
  - Make sure signs **face** traffic.



# Possible Sign Plan



Indicates direction that the sign should face.





# Core Recommendations (cont.)

## Overall Strategies (continued)

- Work closely with ACTR
  - Create a permanent and highly visible bus stop that is safe & ADA accessible.
  - Consider putting a portion of revenue gathered from on-grounds hang-tag sales to increasing ACTR service (sponsoring more trips during the Fair).
  - Expand bus marketing to increase ticket sales while reducing circulation issues.

- Develop a Site Master Plan

The cost of developing a master plan would vary widely, depending on whether it is simply a facilities plan that describes when and how to replace individual structures, or a more comprehensive plan that considers marketability and ticket sales, uses of the site during the off-season, the environmental friendliness of the site, historical and cultural education, etc.. Potential funding sources for a master plan might include VTrans, ACRPC, VT Department of Tourism, VT Historical Society, VT Arts Council Cultural Facilities Program, etc..

Elements to address in even a basic master plan include:

- Where to put the main gate? How many ticket lanes should it have? Should turnstiles be installed?
- Installing gravel walkways to separate pedestrians and vehicles in the parking lot.
- Redeveloping the fairgrounds with a linear layout to simplify operations/circulation.
- Ways to maintain the agricultural focus of Field Days so that it doesn't get overshadowed by the midway, Demolition Derby, etc.. Ways to circulate fairgoers through a wide variety events/experiences.





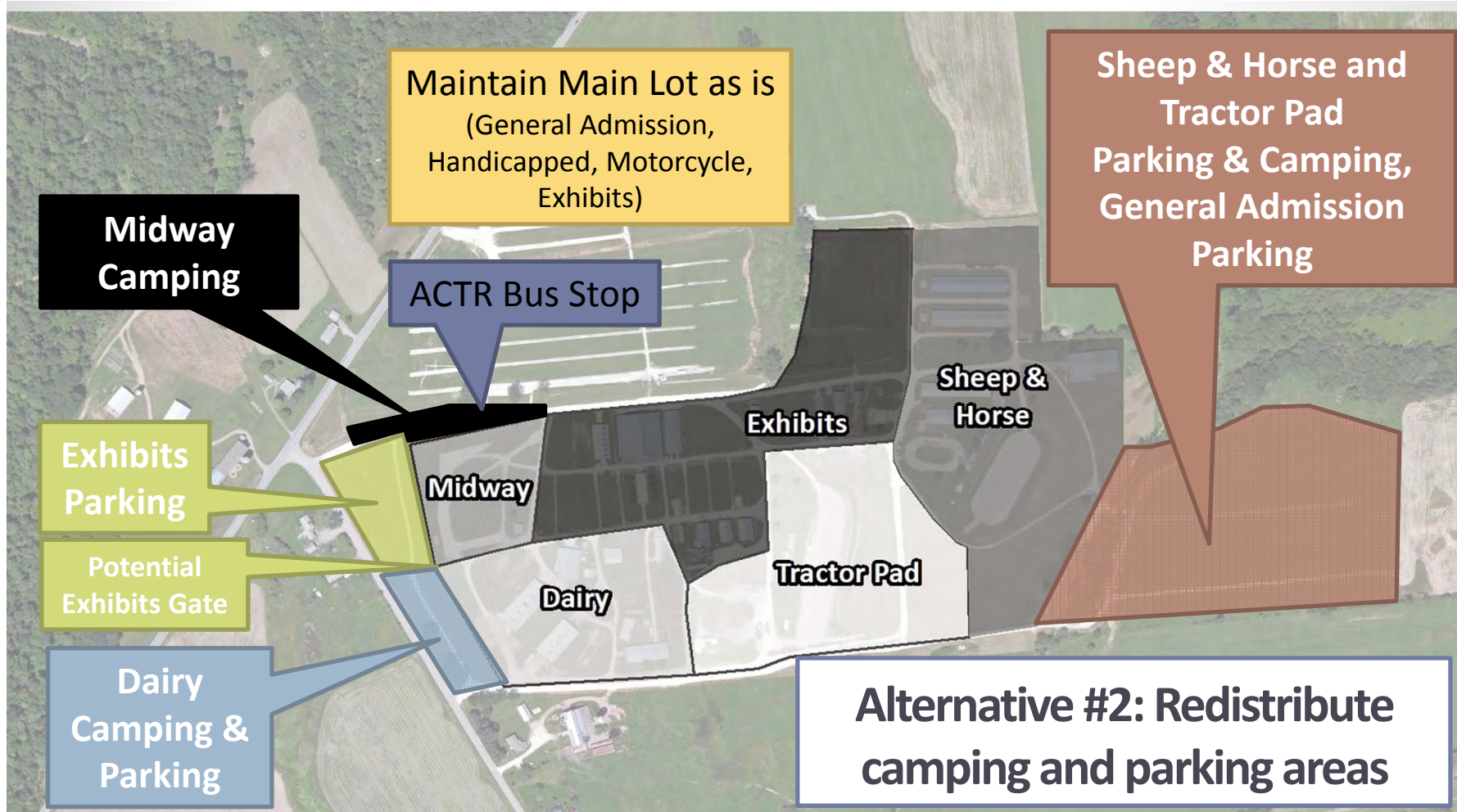
# Alternative #1: Schedule Access

Currently, there is a rule at the Main Gate that vehicles can only access the grounds via that point between 10PM and 10AM. Extending this rule to other gates would help to reduce the mix of traffic descending on other gates (particularly the South/Dairy Gate).

A variation of this alternative which is more complicated but could streamline operations further would be to schedule pick-ups/drop-offs by function. For example, horse trailers could enter the site for unloading between 11:00-12:00, followed by dairy loading between 12:00-1:00.

- **Pros:** Inexpensive
- **Cons:** Potentially very complicated; Realistic?

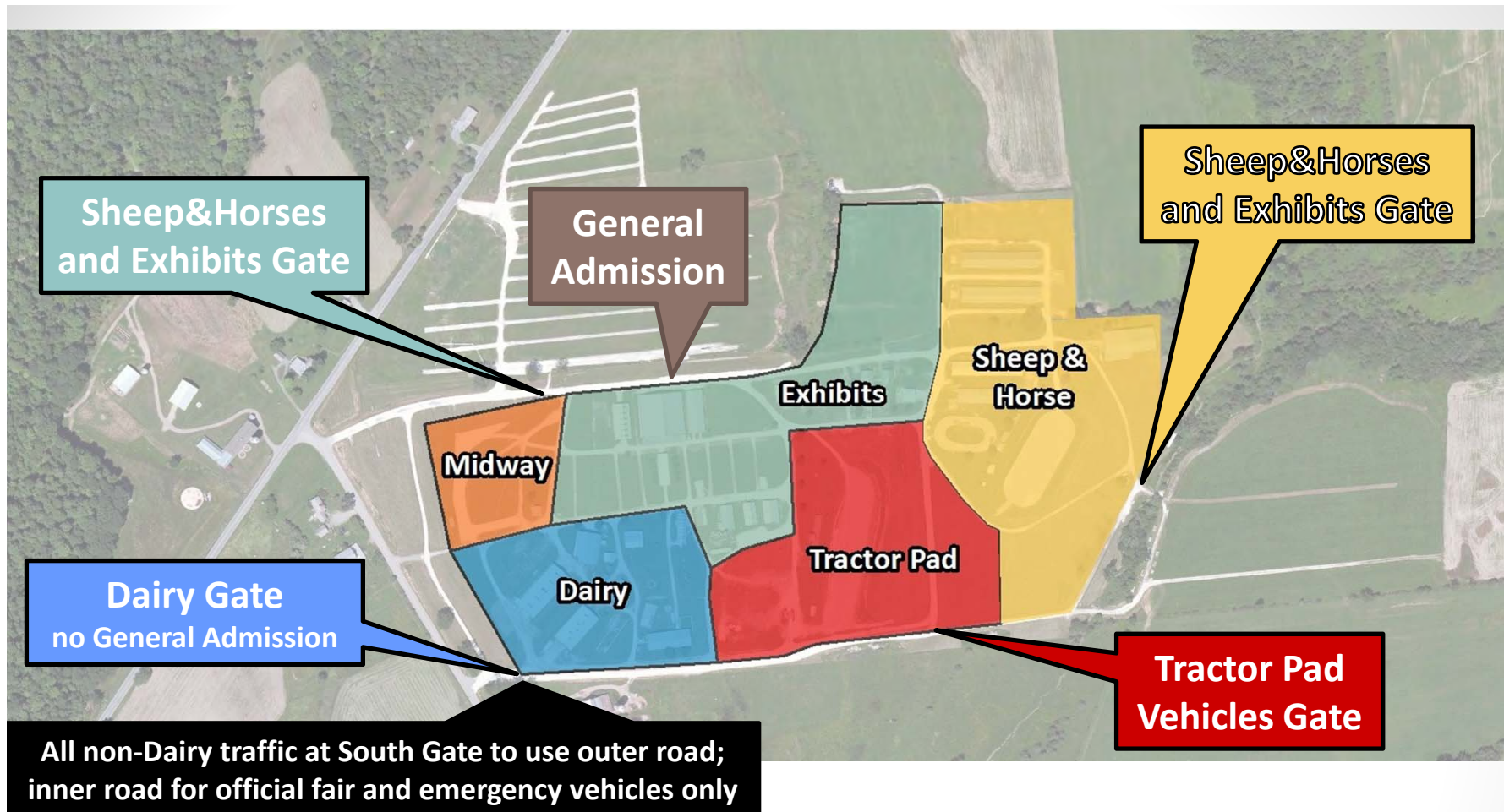




- Most camping (and the associated RVs/trailers) could take place outside of the fence/off grounds (as shown above), especially if it is located immediately adjacent to its functional area.
- Some Exhibits parking could be located in the area where midway trucks/trailers currently park. The midway trucks could be relocated to the rear lot for the duration of the fair, and the current Emergency Access gate between the Midway and the Dairy could be opened for a convenient Exhibits-only access.
- The rear lot is on a slope and would need to be terraced/re-graded in order to accommodate large RVs.
- A permanent ACTR bus stop should be established in a visible and convenient location.
- **Pros:** Organizes site; improves safety & congestion by reducing vehicles on-grounds; inexpensive
- **Cons:** Does not address circulation issues; unforeseen operational conflicts? Publicly acceptable?







### Alternative #3: Designate gates by function

- This concept separates traffic by sending various types of vehicles to designated gates.
- At the South Gate, there is no need to check non-Dairy vehicles (they can be sent along the outer road to get checked in at their respective gate), thereby thinning congestion.
- This alternative allows for a more organized circulation pattern at the Dairy area during the livestock turnover (next page).
- General Admission is consolidated at one gate, simplifying operations.
- **Pros:** Organizes site; improves safety & congestion by reducing vehicles on-grounds; inexpensive
- **Cons:** Unforeseen operational conflicts? Publicly acceptable?



# Possible dairy vehicle circulation plan

Safety fence to keep people out while large vehicles are circulating during livestock turnover

Active loading/unloading zones

Active loading/unloading zones

Dairy Gate  
Dairy vehicles ONLY

One of the issues that was noted was the congestion during the livestock turnover, particularly in the Dairy sector. By restricting traffic at the South Gate and directing vehicles to circulate as shown, the turnover may be smoother. Safety fence could be used to encircle the area and keep pedestrians out (particularly because it is next to the children's barnyard). Active loading/unloading areas would be located at either end of the barns so that trailers can pull up (rather than try to back up).



Restrict main drive  
to ACTR, handicapped vehicles,  
motorcycles, and exhibitors

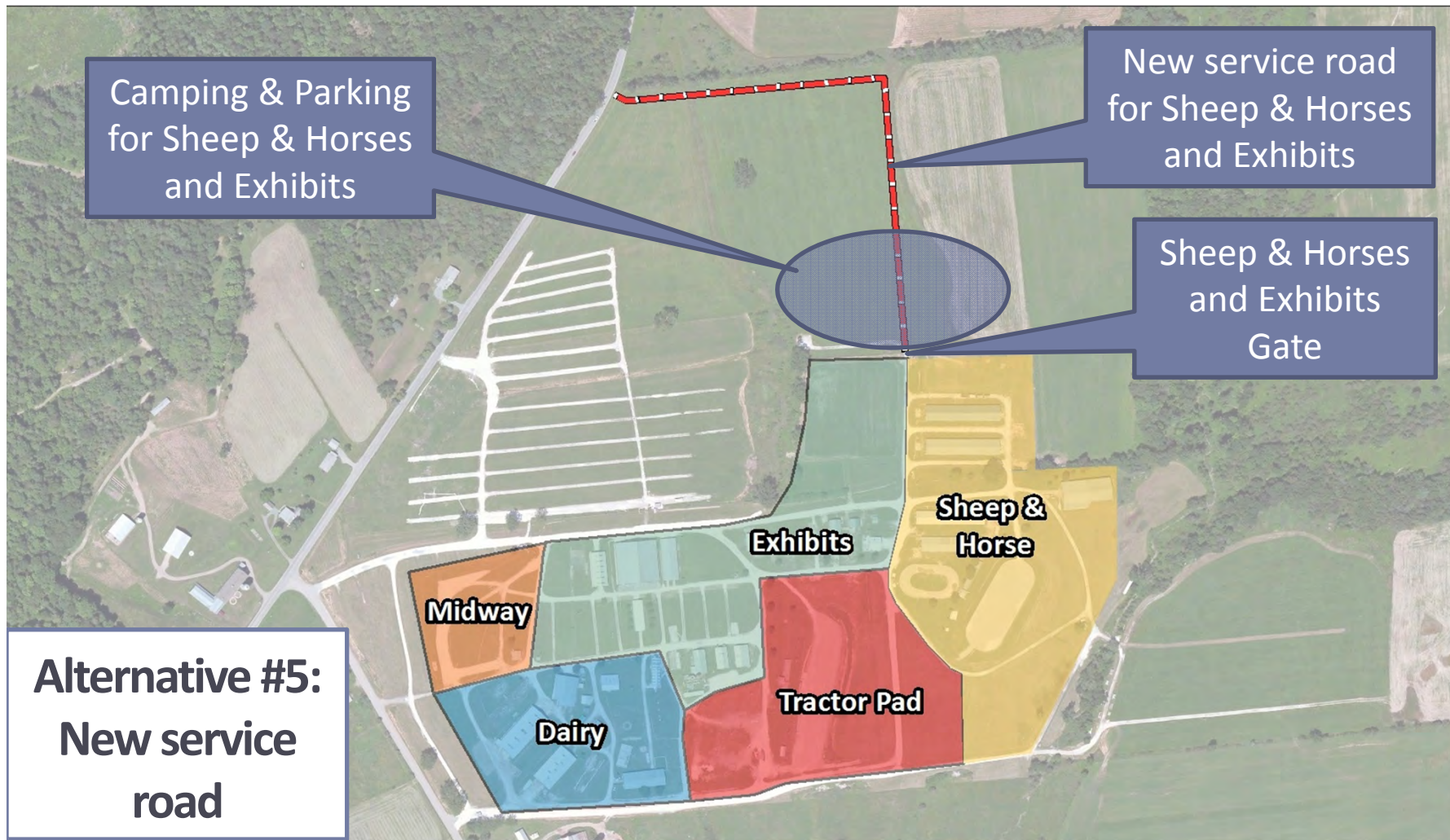
New access to main parking lot



## Alternative #4: Restrict use of main driveway

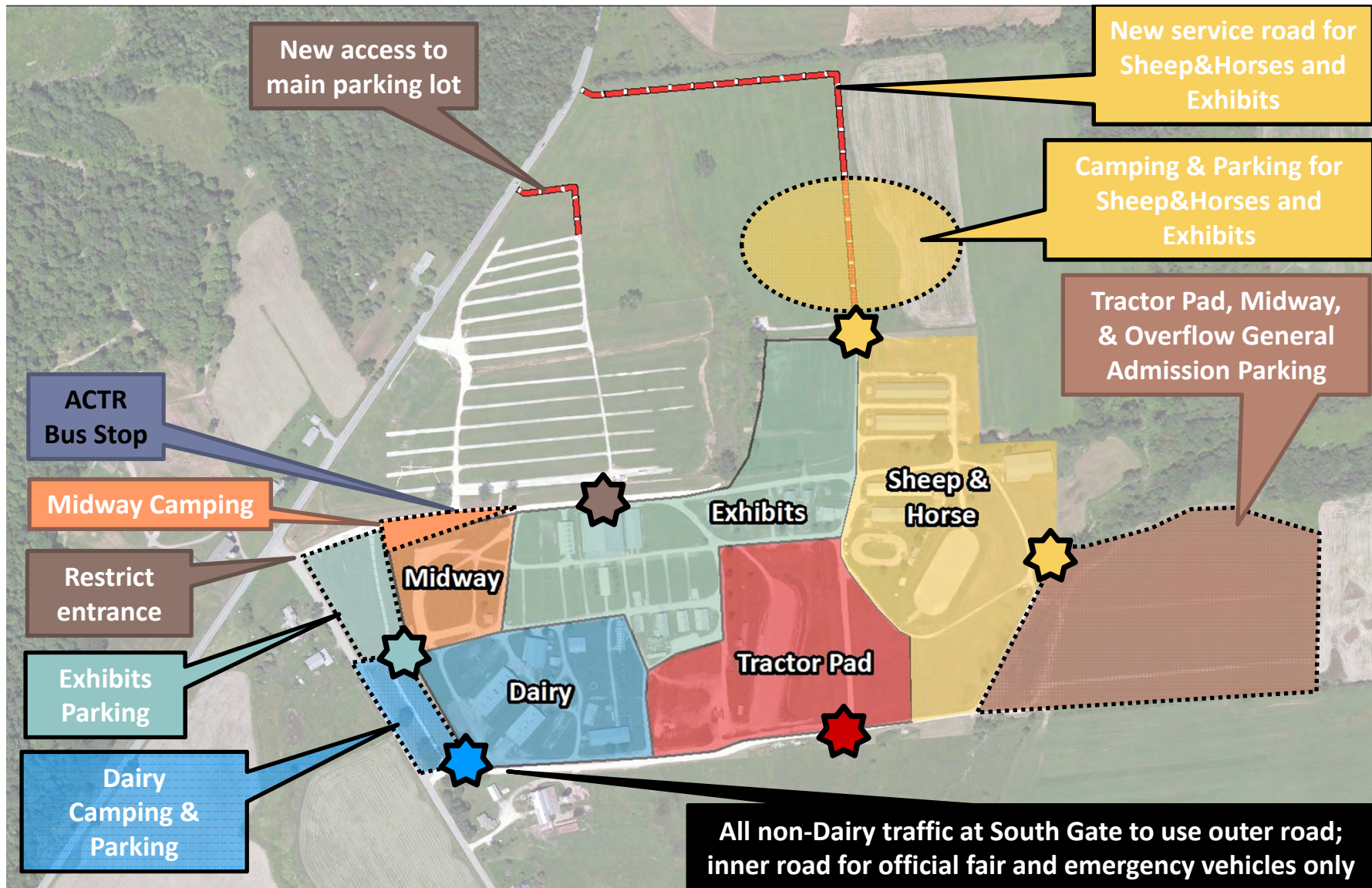
- Restricting use of the main driveway would reduce the conflicting maneuvers at the VT 17-Field Days Road-Main Entrance intersection. This restriction would be offset with a new driveway for the main lot on VT 17.
- The new driveway would be for General Admission parking and could be located approximately half-way between the existing driveway on VT 17 and the northern property line at the curve in the road. It is expected to disperse the concentration of left turns by adding another entrance to the main parking lot.
- It is possible that sight distance limitations would restrict exits from this new driveway to right-turn only.
- Since traffic entering from northbound Field Days Road comprised 26% of the observed traffic, it may be worthwhile to allow them to continue to use this main drive.
- **Pros:** Reduces conflicting turns at VT 17-Field Days Rd-Main Entrance; addresses congestion on main driveway; increases accessibility to parking; may help to reduce back-ups on VT 17
- **Cons:** Some expense would be incurred from new access to main parking lot (needed to help with closure of main drive)





- This concept proposes a new service road (no general admission) at the northern part of the property. This would allow for a new camping and parking area and a new gate just for Exhibits and Sheep&Horses.
- The sight distance appears to be adequate if the road intersects VT 17 near the curve.
- Previous discussions of a new road considered an alignment immediately north of the drainage ditch that runs east-west through the main parking lot. However, this would require vehicles using the road to travel through the parking lot and doesn't separate traffic types.
- A one-way circulation pattern could also be considered for this service road (either clockwise or counter clockwise), routing vehicles around the western edge of the site and the road along the southern edge of the property.
- **Pros:** Improves safety & congestion by reducing vehicles on-grounds; could relocate associated camping and parking to the new road, further reducing on-grounds vehicles; reduces demand at other gates
- **Cons:** Expensive; small structure needed to traverse drainage ditch





## Combination of Alternatives 2+3+4+5

- Reorganize camping & parking areas
- Designate gates (6) by function
- Restrict main entrance driveway
- New service road

### Legend



Gate

Sheep&Horses

Exhibits

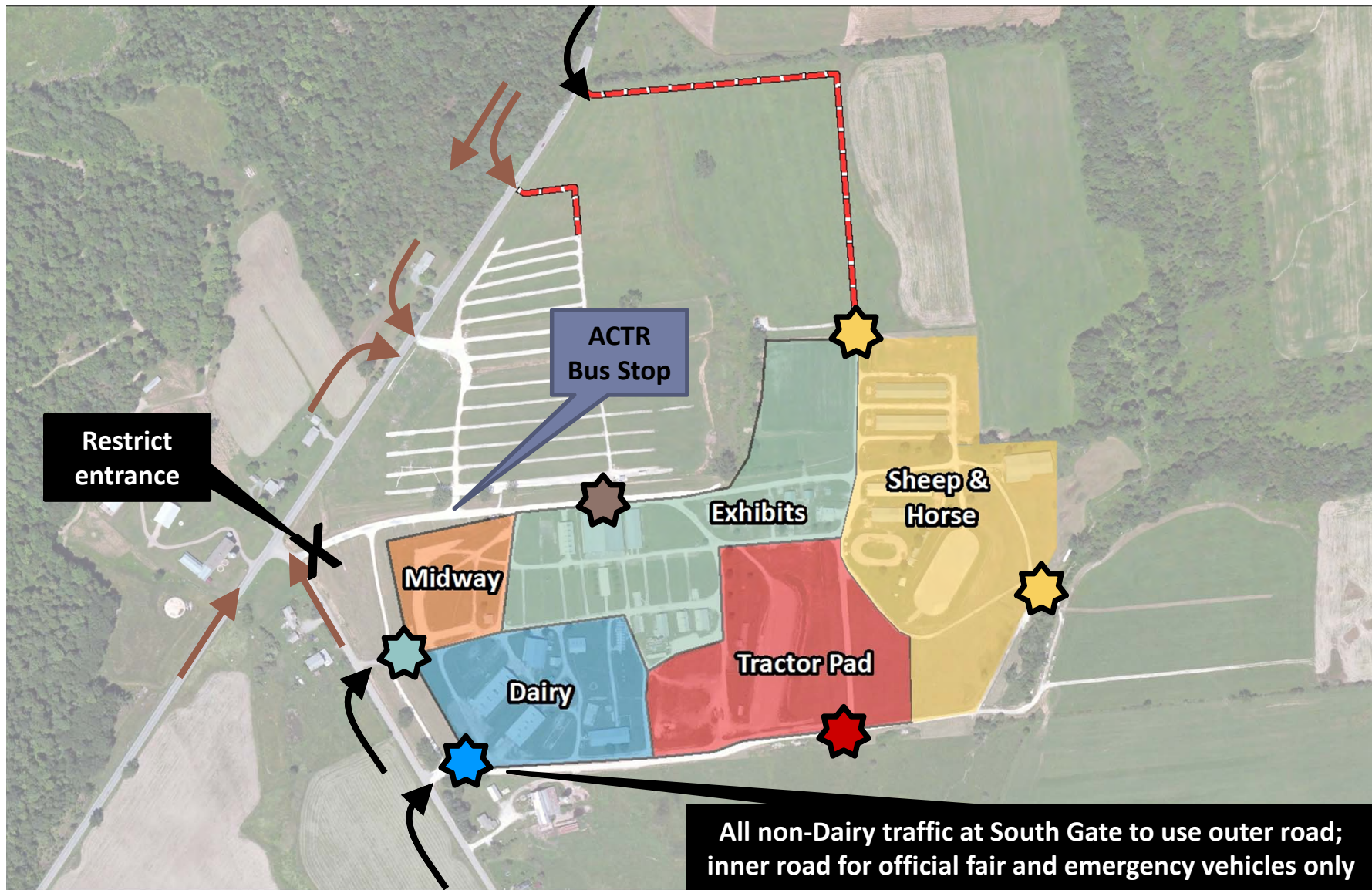
Midway

Dairy

Tractor Pad



General Admission





**Traffic pattern expected to result from combining Alternatives 2+3+4+5**

**Legend**

-  General Admission Vehicles
-  Trailers/RVs on Fair Business



Gate

**Sheep&Horses**

**Exhibits**

**Midway**

**Dairy**

**Tractor Pad**

**General Admission**



# Next Steps



# Next Steps

1. Implement the core recommendations presented here.
2. Decide which alternative strategies to pursue and implement new rules accordingly.
3. Decide on the appropriate level of depth for a fairgrounds master plan (that is, a basic facility plan or a comprehensive master plan) and research potential funding sources for developing it.

The VT Department of Tourism, VT Historical Society, VT Division for Historic Preservation, and VT Arts Council are some agencies to consider. For example, the Arts Council has a Cultural Facilities Program which grants funding to enhance the capacity of an existing building to provide cultural activities for the public.

4. Identify potential partnerships for improving operations, such as expanding the working relationship with ACTR.

