



Holly Oaks Park Plan and Standards Manual

Appendix B. Site Development Concept Plan

**Oakland County Parks and
Recreation Commission**
Michigan Department of Natural Resources
**Off-Road Vehicle Park Site Development
Concept Plan**



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Assisted By:



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DEFINITIONS

The proposed features identified in this plan will follow the Handbook of Michigan Off-Road Vehicle Laws as posted by the Michigan Department of Natural Resources (MDNR) (<https://www.offroad-ed.com/michigan/handbook/book.html>) and the Michigan Motorized Trail Maintenance and Signing Handbook unless noted otherwise.

(https://www.michigan.gov/documents/dnr/Motorized_Trail_Signing_Handbook_646974_7.pdf)

Motorcycle Trail: minimum 24-inch ground clearance and 40-inch clear from 2- to 8-foot vertical.

All-terrain Vehicle Trail: minimum 50-inch horizontal clearance and 8-foot vertical clearance.

Off Road Vehicle Route: minimum 72-inch horizontal clearance and 8-foot vertical clearance.

[Additional use area and access route descriptions are included within the plan.](#)

EXECUTIVE SUMMARY

The site development plan is intended to provide recommendations on first phases of improvements as well as guidance on long-term improvements, maintenance, and operation. This report will be incorporated into the Holly Oaks ORV Park - Park Plan and Standards Manual. Future work will include an Operations Plan and more detailed Site Development Plan..

The county has engaged with stakeholders and businesses for the purpose of leveraging public funding with private sponsorships, stakeholder in-kind efforts, and other creative partnerships to help support the 'self-supporting' mandate for the operation.

Throughout the planning process for this facility, consensus has been reached through events and discussions with groups that represented a variety of ORV user type and skill levels regarding the most effective introductory phase of this off-road vehicle 'adventure gateway'.

The consultants from ROWE Professional Services and Trails Unlimited worked with a staff Design Team within Oakland County Parks and a Stakeholder Design Team that included volunteers that represented the various vehicle types, event managers and other potential site user groups. The combined experience within the group was engaged throughout the planning process to validate ideas and proposed concepts.

Phase 1 modifies existing technical features that were developed prior to acquisition of the property and will include park access for guest parking, Off-Road Vehicle (ORV) loading and unloading, signage and other support features, such as rest areas, vendor spaces and circulation routes. The technical features were developed by the previous property owner and modified by volunteer groups through MDNR permitted special events, with some input from Trails Unlimited.

The concept plan includes a primary point of entry, ticketing and parking area utilizing a use agreement with the adjacent private ski resort, Mt. Holly, between the months of April and October. Specific use areas as well as open riding areas described as experience areas are also included that can accommodate beginner through advanced skill levels, with future development opportunities for corporate and volunteer club sponsorships..

Throughout the planning process, safety and maintainability of the use area and associated support facilities has been a leading element. The success of the facility will rest on the ability to manage the site as it changes based on seasons, rain events, and use. In some aspects, the changes in the site provide variety; the challenge will be in finding the balance of active maintenance as well as adjusting for peak attendance.

The site layout accommodates both daily use as well as the opportunity to host special events; this will continue to evolve as the county explores ways to involve user groups, volunteers, and business within the operation and development of the site.

Holly Oaks ORV area provides a unique experience for a majority of the mid-west, close enough for convenience, diverse enough to provide an adventure for everyone.

I. SITE INVENTORY AND ANALYSIS

A. Existing Conditions (see Map 1)

The Phase 1 area existing conditions within the site have been in constant change based on the 40 plus years of mining operations occurring within the property. The landforms that remain include a basin that ranges from 30 to 90 feet below the surface elevation around the perimeter of the site. Wooded areas are limited to volunteer vegetation along the steeper slopes. There are three bodies of water within the site ranging from 1.5 to 2 acres in size. They collect surface drainage within the site and have no outlet. The water



body closest to Dixie Highway is at the aquifer elevation, approximately 950 feet. There is an existing 6-inch well located on the west end of the site adjacent to the existing haul road. The deposits on-site that have been mined include aggregates of various quality. The remaining soils are a fine silt and sand along with imported clay content in some portions of the site including the embankment along the west slope of the site north of the Phase 1 area.

The most prominent feature of the site is Mt. Holly Ski and Snowboard Resort located immediately north and east of the site, rising above the rest of the area. Other adjacent land uses include I-75 and Dixie Highway along the west and east borders, respectively. Existing



mining operations continue to the south and northwest. The site spans both Groveland and Holly Townships. Regionally, the site is surrounded by a series of quarries and recreation land that provide opportunities for future connectivity. Holly State Recreation Area (MDNR) has property west, north, and east of Holly Oaks. Across Dixie Highway is Groveland Oaks Campground (OCPRC). Other neighboring land uses include Consumers Energy at the southeast corner of the site and industrial and residential to the north. Hazel Park Schools owns a wooded parcel north of the site along I-75 frontage.

Access to the site is currently off Shields Road, a dirt road with a paved entry to Dixie Highway at the southeast corner of the site. I-75 access includes an interchange at Grange Hall Road ¼ mile to the south and via Dixie Highway to the north. Haul roads within the site provide a stable 24-foot-wide route that connects the Shield Road entrance, through the bottom of the quarry and to the west plateau. The route provides access to various features constructed by the former property owner, intended as ORV challenge features, obstacles, and landmarks.

Mt. Holly Resort is a private winter downhill ski and snowboard recreation facility that includes approximately 97 acres north of the site with frontage along Dixie Highway. It includes 4.6 acres of lighted, paved parking (490) stalls. The lodge includes recently renovated restrooms adjacent to a lobby and ticket sales area. A single lane gravel drive extends from the paved parking lot along the east base of the slope to the south end of the site. A vegetated berm separates Mt. Holly from the ORV site.



B. Analysis (see Map 2)

Cam Lockwood of Trails Unlimited identified the opportunities that this site offers as a series of “High Challenge” experiences, balanced within a wide range of conditions that provide recreation value for entry level ORV users and those with a moderate skill level. The following analysis of the site was developed based on input from stakeholders, ROWE, Trails Unlimited, and OCPRC and MDNR staff.

The site analysis for this phase of the project began in December 2018 with a kick-off meeting including ROWE and OCPRC and subsequent site meetings in January 2019. This effort was layered on years of prior investigations including and adjacent to the Phase 1 project area. The following evaluation provides a basis for recommended development for Phase 1 as well as laying the groundwork for future improvements and additional phases. Phase 1 includes approximately 115 acres.

Key evaluations of the site are as follows:

1. Site Access

Primary access to the site is from the east side of the site. Existing parking facilities are available at the Mt. Holly parking area, utilizing the use agreement negotiated by MDNR. It eliminates a large initial expense to develop and maintain a separate paved parking area and support facilities. Access off Dixie Highway provides existing paved parking with a defined entrance that will allow access by vehicles with trailers.

The ability to provide accessible restrooms and ticketing space is ideal. The additional opportunity of having kitchen and banquet facilities on site for large events could provide economic benefit to both Mt. Holly and Holly Oaks.

The existing service road will need to be widened to provide two-way access; it will need to extend through the berm and a control point established to restrict access during the winter season. There is a 1-acre level area approximately 500 feet south of the parking lot that provides an opportunity for a staging or testing location prior to access to the ORV site if needed.

During the ski season, winter access and parking will use the existing Shields Road entrance and gravel parking area along Dixie Highway. This parking lot can also accommodate overflow

parking during peak summer events or vehicles that have a higher decibel level that may be better suited away from the paved parking lot at Mt. Holly.

For future concession/vendor access, parcels off Big Sky Drive could provide space for a vendor/operator renting vehicles, and possibly controlled access to the site in future phases.

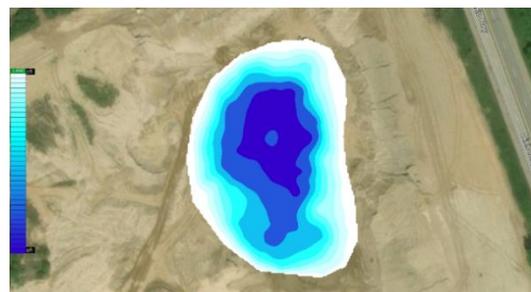
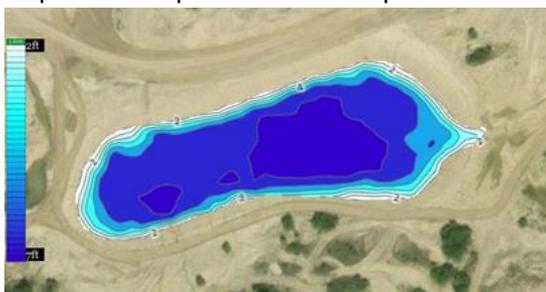
Existing haul roads can be maintained and extended to provide a perimeter road as well as a central spine to provide access within the site. This can provide function for entry level users, spectators, and emergency responders, as well as construction equipment and access for special events and transport of associated temporary facilities.

2. Views and Sound

Current views to the site are provided along I-75 and Dixie Highway, both of which have high traffic volumes. The high traffic volumes also minimize sound concerns from ORV operations on the site. The sunken areas within most of the site help contain sound. The “little Italy” area to the north adjacent to Big Sky Drive can be mined to lower this elevation, providing recreation value for users as well as providing a sound buffer for residences to the north. The site is very open and internal viewpoints are available from various high points within the site, providing key locations for observation points to be identified for users to gather and orient themselves. They also provide good vantage points for security and monitoring the site. Groveland Township would like to see a berm or other screening along Dixie Highway, which would filter views into the site.

3. Existing Features

Various landforms and existing ORV constructed features that were developed by the former owner can be used as-is or with minor adjustments. The central water body “the Bath Tub” receives most of the surface runoff, has a silty bottom approximately 8’ deep. Analysis has been provided by a stakeholder associated with BioBase, included in the appendix. Caution signs should be posted at the perimeter. As site drainage is improved the perimeter of this pond could be



evaluated for improvement to provide more access for mud bogging. The water area at the east side of the site, “Steve’s Pond” should be limited due to the steep banks, depth of the pond and connection with the aquifer. The previous owner excavated to a depth of 10 feet

as part of reclamation of the mine for use as an ORV park. Future improvements to the water bodies should provide a reservoir that can retain 6-10 feet of water, even during sustained dry periods. This work may also allow for a 3' depth for overflow during peak rain events that would accommodate ORV access for mud bogging. Access roads adjacent to these water bodies should be elevated to account for fluctuating water levels to maintain drainage. Some low points will act as sediment basins and will need more active management and sediment removal.

There are some steep slopes that should be managed which are identified in other sections of the report. The existing well could potentially be re-activated as a source to maintain the trail surfaces. The capacity would need to be verified based on volumes needed to maintain the park.

4. Adjacent Developments

Current planning by Mt. Holly includes a ski run expansion off the backside of the current hill to the northwest. This will eventually be coordinated through a series of property swaps and coordination with MDNR, mine operators, and both townships.

The northwest of the corner of the Phase 1 project area provides a good opportunity for single-track trail development due to the increased stability of the surface. As current mining operations solicit clay embankment from their clients, these soils can be applied strategically on areas where stable soils are needed.

II. CONCEPT SITE DEVELOPMENT PLAN

A. Budget and Approach

1. Funding

The MDNR has received two grants from the ORV Trail Improvement Fund for initial construction of the park. A \$160,000 grant was awarded in 2017, and a \$262,000 grant was awarded in 2019. These create a total development budget of \$422,000. OCPRC and MDNR are working together to utilize that funding for park development, focusing on access, circulation, parking, fencing, and signage. The target date for opening operations to the general public is July of 2020. The park will be opened as Phase 1 with a core set of facility improvements. As additional funding is identified, future improvements will be made. OCPRC can apply each year for additional funding through the ORV Trail Improvement Program, which is a competitive grant program funded by revenue from MDNR ORV sticker/license purchases.

Day use fees and other revenue generated by the facility will be reinvested into the site for maintenance and development. Additional funding opportunities will be explored by OCPRC and MDNR through special events, sponsorships, and vendor/concession licensing.

The site will be developed to support daily public use as well as the flexibility to allow for private use that may include, but not be limited to, corporate use (automotive testing, commercial filming and photography, demonstrations, etc.), special events (races, expos, competitions, etc.), and rentals by clubs or other groups.

OCPR and MDNR will not be staffed to coordinate and manage special events at the site. Through an RFP process in early 2019 bids were received regarding hosting and managing special events at the park. Staff will be recommending that OCPR enter into a contract for special event management so that the park can benefit from this type of use without committing significant staff resources.

Special events will help to bring both new potential park users as well as revenue to the park. Special events may also involve identified and approved park improvements that could be utilized for an event and then available for public use. Special events will be limited to a set number per year to ensure that public access to the park is not overly restricted due to special event use.



OCPR and MDNR will manage corporate rental or club/group rental of the park through OCPR's standard Facility Use Agreement process. The park will be available for rental only on specific/identified days each season. The park will not be able to be rented by individuals on these days, only organized groups, corporations, non-profits, etc.. Other features that may be improved and retained for use by public use after the event may include, but not be limited to enhancing trails, challenge features, or other elements. The benefit, monetary or functionality, gained by hosting special events is an advantage to the public use of the site. The size, location, unique characteristics of the site, and openness to adaptability will enhance the appeal of this site for special events. The success of the permitted events coordinated by user groups as part of the planning process is a testament to this.

2. Maintenance and Development

OCPRC has established as-needed contracts with several construction firms that will support developing and maintaining the park. An example of the value this creates is the success of the Bent Wheels Competition Club (motorcycle group) permitted special event in January 2019. Approximately 40 hours of contractor effort was invested in grading operations to create a one-way sand course and enduro course at the site. There were more than 200 participants, and various locations throughout the site required some adjustment due to wear or other issues to maintain safe and functional trails and facilities for the event.



Dedication to continuous maintenance will be critical, especially to maintain erosion issues so that small issues do not escalate into critical stability issues that impact safety and long-term

use of the site. Some critical areas on the site includes Skyline Drive (above the Oasis); Darlene’s Ridge (particularly the area above Base Camp and the Eastern Edge of The Big Easy); North and East Slopes around the perimeter of Flat Top; Haul Road drainage ditches between Flat Top and The Notch; the north facing slope of The Notch; and the Talladega Turn at Holly Glen.. The “Notch” event area at the central west end of the site should also be monitored, especially where it runs parallel to the entry road.

When feasible, bio-engineering solutions should be implemented versus infrastructure to minimize long-term maintenance. Suggestions include: Avoid disturbing any vegetation at this point without immediately providing some sort of cover; jumpstart the revegetation process by adding organic material, debris, and seeding; using volunteers to install low (no) cost sediment traps and water control devises to slow erosion and salvage material for repurposing; regrading areas to disperse, hold, and infiltrate water rather than concentrating and redirecting the water.

Other maintenance aspects of the site include signage, perimeter fencing, and regular site inspections. There will be opportunities for volunteers (clubs) to provide in-kind assistance on trail grooming, brush clearing, and other duties at the park. A suggested schedule of duties is provided below that can be further explored in maintenance and operations policies to be developed by the OCPRC:

	Establish perimeter and use area fencing	Maintain perimeter and use area fencing	Establish earth forms and construct trails and features	Establish signage, temporary and permanent	Keep trails clear of vegetation, identify erosion and signage issues	Address trail erosion and maintain trail surfaces	Maintain parking lot, entry drive, lobby, and restrooms
OCPR Staff							
User Group							
Contractor							
Mt. Holly							
Special Event Organization							

B. Concept Site Plan

1. Basis of Design

Recommendations are predicated on the function of this site as a gateway ORV experience that offers a wide range of experiences for beginner to advanced users. The intent of the site is to offer a balanced set of challenge levels. It will serve all ORV user types except snowmobiles and converted ATV sleds. It will be a day-use facility that is supported by adjacent camping facilities at Holly Recreation Area and Groveland Oaks Campground. The design for the site relies heavily on existing features, trails, roads, and access points. Phase I of the park design will focus on ingress/egress, circulation, parking, maintenance, fencing, and signage. Future phases may include additional feature development as revenue comes into the park. See Map 3.

2. Placemaking and Branding

There is value in identifying features and event areas within the site. Through the various special events and involvement with stakeholders, names for various features and locations on the site have evolved for the sake of referencing areas during the planning process. Most of these names represent the use or natural features of the location, representing the “themed adventure area” to help inform new guests with the site. The names referenced in the Concept Plan reflect the “placemaking” that has been formed through the planning process and have become known within the ORV users that have been on-site.

3. Parking and Access

The main parking for the summer season will utilize the paved lot at Mt. Holly. The space is striped for standard vehicles. Although parking delineation for most of the season is delineated by snow berms, Mt. Holly would prefer the current pavement marking be maintained. A concept parking layout has been developed for the Mt. Holly parking lot for peak ORV summer season use (off season for Mt. Holly). The Concept Plan (see Map 4) includes a parking stall configuration that relies on direction provided by temporary concrete barriers, flagging, signage and locations at key decision points that will be staffed during weekends and special events. The parking configuration follows a typical MDNR boat launch layout that allows for one-way travel and angled bays that provide for efficient parking of large trailers. There are also temporary single parking spaces for vehicles that need to check in prior to advancing to the site.. Wide drive lanes (18’ wide) and 12’x 65’ stalls are designed to fit large mobile home and trailer rigs, or the potential to double up smaller vehicles that are traveling together. The length of the stall allows for trailers to drop a protected 10’ ramp for unloading without backing into the drive lane. Extra large ‘super-rig’ spots up to 85’ long are located to the south of the main parking lot. The Mt Holly lot includes parking for approximately 218 vehicles including; (16) 12.5’ x 75’ spaces, (70) 12.5’x 62.5’ spaces, (19) 12.5’ x 50’ spaces, (62) 10’ x 20’ spaces and (51) 10’ x 20’ spaces for rentals.

The primary inbound lane supports parking from west to east to maximize stacking capacity within the parking lot for initial check-in. Additional stacking distance to enter the ORV riding area is included along the 2,000-foot access drive (enough for approximately 50 vehicles). There is potential capacity at the Renaissance Fair site down the road on Dixie Highway with shuttles for larger ‘mega’ events.

The parking lot layout is includes a ‘fast pass’ concept to maximize efficient parking and direct circulation. Vehicles ready for direct access to the site have a streamlined route to minimize congestion within the parking lot. Vehicles are identified by the following categories.

- Pre-Paid
 - “Off-Road Ready” – Street legal vehicles (Full size, Motorcycle, Side by Side) that are equipped to enter the ORV Riding Area and have the appropriate MDNR ORV stickers

- Trailer w/Large Vehicles – Trailer pulled by a full sized vehicle, hauling only full sized vehicles and side by sides. These vehicles are quieter and can be unloaded in the asphalt parking area with less potential impact on adjacent residences.
 - Trailer w/Small Vehicles – Trailer pulled by a full sized vehicle, hauling one or more small vehicles (potentially in addition to a full size or side by side). No small vehicles (motorcycles or ATVs) may be unloaded in or have access to the Mt. Holly Parking area, they will be directed to the Dixie Ledge parking area within the park.
 - Bed haulers – Full sized vehicle with one or multiple small vehicles in/off the bed.
- Payment Required
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 - Bed haulers – Full sized vehicle with one or multiple small vehicles in/off the bed.
 - ORV Renter
 - Non-Off-Road – A vehicle of any type that accesses the parking areas to access an ORV for the duration of their rental period.

Pre-paid single vehicles, trailer with motorcycles /ATV and singles with motorcycles and ATV advance directly into the site. Unloading of motorcycles and ATV vehicles in the park minimizes noise issues within the main parking lot and allow better access within the park for tune-ups. Trailer spaces for full-size vehicles are identified in the main parking lot so they can unload and progress into the site.

Parking spaces closer to the registration/ticket booth will be designed for short-term “Check-in” use. There is a space for vendor / rental vehicles near the ticketing office. The ticketing, lobby, and restroom area within Mt. Holly will require minimal upgrades. Seasonal park entrance signage will be added at the Dixie Highway entrance as well as the resort doorways and access drive. Signage will help guide flow for parking and ingress/egress and guide people from the parking lot to the park entrance. It is recommended to post notices in the Mt. Holly Parking Lot about low speeds and RPMs and no “revving” of engines in that parking lot for the safety and consideration of neighbors (in the small apartment building adjacent to the parking lot).



4. New Access Drive

A critical feature required for opening the facility will be the enhancement of the access drive to connect the Mt. Holly parking lot into Holly Oaks. The current dirt route will need to be widened to allow for two-way traffic. A gravel drive 24 feet in width with 3-foot gravel shoulders and ditches will provide a safe route for users and emergency access. Grading through a berm will allow access in the ORV park property. A gate will be installed



A gate will be installed to limit access during winter months. A pedestrian route along the entry drive will be located downslope of the drive to provide a separated access route for spectators and those accessing the site without a vehicle. The entry drive will route summer users through the parking lot along the east side of the site parallel with Dixie Highway and into the active park area along a constructed access road at the south end of the site. For winter users, the site will be accessed at the south end of the parking lot off Shields Road.

5. Internal Access Routes

A primary “Haul Road” will be maintained within the center spine of the site, providing access for all user types, emergency vehicles, and larger equipment for special events, etc. This is a 24-foot-wide two-way road that has been constructed through previous mining operations. Drainage improvements such as ditches and culverts will help reduce erosion along this primary route that connects to many areas of the site. ORV routes are bi-directional, 96-inch-wide access routes that provide perimeter circulation connecting to the Haul Road as well as all the Themed Adventure Areas.

6. Dixie Ledge Parking Area

A Concept Plan was developed (see

Map 5 and Map 6) that indicates the ability for access from both the north (Mt. Holly) during summer and south (shoulder seasons/winter only from Shields Road). It allows for approximately 231 vehicles including; (30) 12.5' x 75' spaces, (67) 12.5' x 55' spaces, (54) 12.5' x 25' spaces, (40) 10' x 20' spaces and (40) 10' x 20' spaces for rentals. Due to limited width, trailer parking is accessed via a one-



way circulation route with turn-arounds at each end. Access from the parking lot to the ORV use area will be limited to the south end using a constructed access route directly to the base of the site. Summer parking on the Dixie Ledge is targeted for motorcycle and ATV users. Emergency access will be available off Shields Road along an existing haul road. The location may also be used for special events as a tent area due to the flat ground and view of the site.

A schematic cross section of the proposed parking area and buffer along Dixie Highway is included in Map 6. This includes a cross slope that directs surface drainage to a swale along the west property line; minimizing erosion potential along the face of the slope to the site. Additional engineering and geotechnical recommendations will be needed to construct a

stable embankment, especially along the narrow section by “Steve’s Pond” which may require some fill at the base of the existing slope. A vegetated buffer is indicated along Dixie Highway to provide filtered views into the site. The parking area would consist of mill tailings with no permanent striping. Parking bays would be delineated by movable concrete barriers on each end and t-posts/rope and flagging. Perimeter fencing would isolate access to the site along the bank face; a swing gate would be located at the north and south ends controlling access to the site. The south end of the parking lot will be the “Disney Land” overlook / entry into the site that provides a broad overlook of the park before users descend from the ridge into the active area of the park.

7. Perimeter Fencing and Access Control

The need to secure the perimeter of the site includes control of access from adjacent properties and roadways as well as safety for individuals unaware of steep slope conditions within the site. Existing fencing along the I-75 right-of-way is standard Michigan Department of Transportation fencing. This frontage will be maintained by the State of Michigan and it is suggested that this would sufficiently manage access. Mt. Holly will maintain snow fencing along the limits of ski runs during winter operations, but additional fencing at the edge of the shared ORV/ski resort property is suggested, especially at the base of slopes that should be protected from access by ORV users due to erosion and slope stability concerns. It is recommended that this be temporary/snow fencing or posts with signs until the proposed property swap with Mt. Holly is completed (or abandoned). A landscape buffer is recommended along the Dixie Highway and fencing along the south perimeter adjacent to active mining areas. Storm water ditching along Dixie Highway provides another layer of access control. A perimeter site fence will be located between the parking lot and the site with a gate at the entry point.

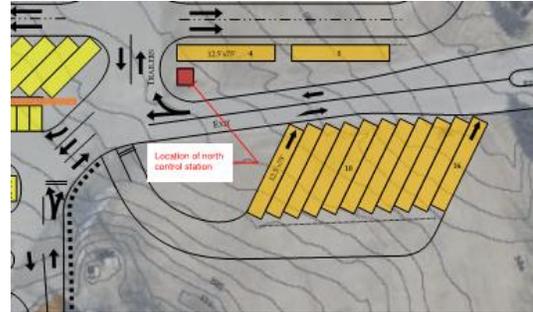
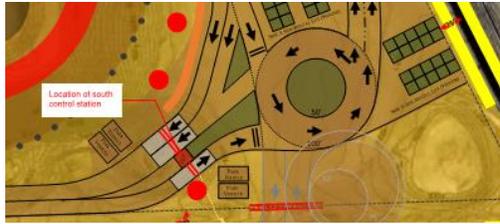


The suggested fence type for use along the perimeter is a t-post, wire farm fence style that is used in other OCPRC facilities. Chain link fence does not provide substantial benefit compared to the additional cost. The fence can include a color (red) marking at the top of posts as well as attached signs at regular intervals to identify park boundary/no trespassing. These markings would also serve as a safety feature for ORV users to clarify the presence of an obstacle.

The suggested fence type for use along the perimeter is a t-post, wire farm fence style that is used in other OCPRC facilities. Chain link fence does not provide substantial benefit compared to the additional cost. The fence can include a color (red) marking at the top of posts as well as attached signs at regular intervals to identify park boundary/no trespassing. These markings would also serve as a safety feature for ORV users to clarify the presence of an obstacle.

A movable, self-contained control station should be located at the access point(s) to the site. It is suggested that these locations be close to the parking areas. At the Mt. Holly parking lot, this should be at the entrance to the access drive which is a natural control point. The intent of the structure is to provide a staffed checkpoint for ensuring that users have required ORV passes and provide any clarification or supervision at the entry to the site. This can be occupied at the discretion of OCPRC based on volume. The control structure could be a small portable unit on sleds that could be moved for





special events or between the winter and summer access points. For special events, additional pop-up tents can be added at key locations.

8. Internal Site Control and Signage

The qualities of safety, durability, and flexibility dominate aspects of managing the site. Safety aspects include clear direction on bi-directional areas versus uni-directional tracks. Crossings should provide clear right-of-ways as well as the materials used within the site. While fixed steel posts in a concrete footing would be sturdy, such a sign may also be a hazardous obstacle and be in the wrong place based on the needs for a special event or changing use patterns over time. For longer term features or use areas that need delineation, such as the controlled access areas, the use of t-post and colored snow fencing is recommended. This can be installed efficiently and provide a clear yet flexible/forgiving barrier. Similarly, the use of Carsonite signs and posts can provide a way to inform without being a hazard to users. Overall, the site will be flexible and changing over time, and signage should be designed to do the same.



Designating use areas for specific vehicle types can be controlled by width as well as signage and degree of difficulty for individual activity areas of challenges. If a particular series of challenges are for advanced users, a “gate keeper” challenge can be installed at the initial entrance to self-police those that are able to safely utilize the course based on their own ability to clear the challenge. Some discussion included creating a gate that could be adjusted for various widths of vehicles. For the sake of flexibility, durability, and simplicity, one recommended device would be using one of the many truck tires on-site as a base, filled with concrete and installed with a sign post that can provide vehicle type, skill level, and direction. This could be adjusted for various widths and moved for special events without creating a specially engineered system requiring repair and possible hazard within the site.



9. Directional Signage and Wayfinding

It is expected that the site will evolve with features over time, courses may change based on user type, phasing, maintenance, and sponsorship/special use. Constructing various park

map kiosks throughout the site would be counter-productive if they are continually out of date. It is recommended that overlooks, entry-points, and other key locations for a display board be provided with paper copies of rules, notices, and maps that can be posted and updated easily. Suggested initial locations include the sidewalk area at the entrance to the ticket booth at Mt. Holly, the ORV park north gateway, Flat Top, and Rest Stop. OCPR has a standard kiosk design that could be adapted for use at Holly Oaks.

Trails that are uni-directional should have limited access with clear directional signage posted throughout the route. Areas where mixed use vehicles and single use trails cross should have advance notice for both directions. Crossings should have a stop condition for at least one user group. Effort should be made to reduce or eliminate crossings of high- and low-speed travel.



Standard Michigan Uniform Traffic Control Devices for Low-Volume Roads can be referenced for signage and sizes.

10. Level of Difficulty

Level of difficulty for various Themed Adventure Areas will vary based on the vehicle type for many open riding areas. There are many built obstacles that, for instance, attempted by a full-size four-wheel drive vehicle may be a different skill level than a trial bike user. Conditions also vary greatly based on weather impacts and maintenance. It is recommended that information on signage, web site and point-of-sale documents indicate that the facility is an “at your own risk” site; users should exercise their best judgement based on their skill level and equipment when attempting use areas. As facilities are developed, there should always be a “safer way out” option. These also reduce the maintenance aspect for additional signage throughout the site, which in itself poses hazards to users as well as liability to maintain cautionary signs. It is recommended that the park not utilize a "level of difficulty" system but rather describe various areas of the park and the experience they offer, while recommending park users use their judgement and their own personal skills/ability to navigate the park.

11. Overlooks

Key areas of the site provide elevated views that would be beneficial for users, spectators, and staff monitoring the site. These areas should include temporary parking areas, maps, trash receptacles, portable toilets, and potentially a shelter and picnic tables. The parking should be informal, not delineated. They should not be used as an all-day “camp” spot or internal parking area. Signage could be added if this becomes an issue. They should be connected by the perimeter trail road so users of all skill level can access the locations. The concept plan identifies three overlooks at Flat Top and Marine Hill, central to the site, and Badger Head, at the southwest corner of the site.

12. Open Access Areas

There will be portions of the site that can be utilized by a variety of user types. While the entire site will not be managed as a scramble area, there are multiple locations that do not have a controlled boundary and include multi-directional travel with clear visibility.



These areas can vary over time based on special use, construction of new features, or maintenance needs. All areas not designated for a specific vehicle type should be considered open riding areas. In these areas vehicles can get into and out of the area at various points, not a single entrance/exit, making them more of a "scramble" area than some of the more well-defined courses and trails. For Phase 1, approximately 34 percent or a total of 39 acres will be open riding areas. Skill level is beginner to advanced. Names for the different areas have come about over the past few years as volunteers and clubs have utilized the site for special events and volunteer activities. The names are open for discussion and may change as the plan and park evolves. These areas include the following Themed Adventure Areas:

- a. **The Big Easy.** This is a 3-acre area on the southwest slope of Mt. Holly that provides an open face for a "dune climb" experience for a variety of vehicle types. It is accessed from a park access road along the top and bottom and is open to all vehicle types.
- b. **The Troubles.** This 3.3-acre area west of the Big Easy provides moderate to steep slope traversing along the northern basin of the site that will be expanded into in future phases. This includes the steep vegetated tree-line that represented the former property delineation and divider between Holly and Groveland Township. It is open to all vehicle types but ideal for technical crawling on steep slopes.
- c. **Slop Town.** This .6-acre area provides access to the edge of the drainage area at the base of the slope and is open to all vehicle types.
- d. **Mt. Magna.** This 9.2-acre area is on the west side of the site including a major overlook and elevation change within the site. It includes an overlook location, 1-acre waterbody, and "the notch", one of the recently improved challenge areas for more advanced users. The area includes constructed challenge elements and various 96-inch-wide bi-directional access trails and is open to all vehicle types.
- e. **The Schoolyard.** This 2-acre area is centered along the I-75 frontage; it is fairly level and provides filtered views along the highway into the site. The Schoolyard will contain a youth motorcycle/atv course and will be open to youth motorcycles and ATVs only.
- f. **The Bottoms.** This 7.8-acre area is along the south central portion of the site including a 2-acre waterbody. The area includes constructed challenge elements and access to the water for mud-bogging and is open to all vehicle types.
- g. **Trial Run.** This is a 1-acre landmark 25-foot hill climb that includes some constructed challenge elements and provides some definition and place-making between the east and west portion of the site. The Trial Run is open to all vehicle types but is ideal for trials bikes and rock crawlers.

- h. **Base Camp.** This is a 2.7-acre area at the crossroads between the east and west portions of the site at the base of Darlene’s Ridge, along the Haul Road. It is a flat area that is conducive as the unofficial meeting spot within the site. There is a gateway to the proposed 24-inch single track course as well as proposed entrance to the Sandbox adventure area. Base Camp is open to all vehicle types.
- i. **The Oasis.** This is a 9.2-acre area at the northeast corner of the site that includes a 2-acre waterbody, a sandy washout area, and a steep slope at the base of Mt. Holly. This is adjacent to the primary entrance to the site from the Mt. Holly entry drive. And is open to all vehicle types.

13. Controlled Access Areas

There are proposed Themed Adventure Areas that are recommended to have a secured perimeter and designated access points due to the type of use, higher speeds, or intent to reinforce the uni-directional course.

- a. **The Sandbox.** This is a 7.5-acre area located in the center of the site, along the base of Mt. Holly, north of the Haul Road. It was recently constructed as part of the Bent Wheels event as a single directional course with various hills and switchbacks. The course will be open to all vehicle types but may have time slots for different vehicle types. The direction can be changed to offer diversity of the experience over time. Skill level is beginner to advanced.



- b. **Holly Glen.** This is a 10.5-acre area at the southeast corner of the site. It has steep banks along three sides and has been recently constructed as part of the Detroit 4Fest event held on September 14, 2019. This area is open to all vehicle types but course may have time slots for different vehicle types. Holly Glen included two separate looped trail short courses designed for each vehicle type. The two courses should be combined into one new course. Skill level is beginner to advanced.
- c. **Badger Head.** Badger Head is a clay plateau with steep slopes that consists of an overlook area with space for parking. This would be an ideal spot to place a pavilion or tent for spectators and to create a gathering spot for viewing activity within the park.
- d. **Dixie Ledge.** The Dixie Ledge is the parking and guest services area within the park and borders Dixie Highway. The Dixie Ledge will be utilized as priority parking for motorcycle and ATV hauling and unloading but will be utilized by all vehicles in the winter season.
- e. **Rim Runner.** This is a 4.7-acre area at the northwest corner of the site. It is located on a clay cap portion of the site with moderate to steep slopes that will provide interest and more stable soils for a single track motorcycle course. The Rim Runner area will be open to motorcycles and ATVs only, and the location along I-75 will minimize sound issues.
- f. **Flat Top.** Flat Top is a level plateau with steep erodible sides and features an overlook with space for parking and a pavilion/tent. Flat Top will be open to all vehicle types.

- g. **Roxor Ridge.** This 2.8-acre area along I-75 contains heavy clay, steep slopes and a mature tree line. It will feature a 96" ORV Challenge Route and a proposed shotcrete feature. Roxor Ridge will be open to all vehicle types.
- h. **Pit Stop.** This 2-acre area is at the southeast corner of the site. The topography and configuration does not support a high level of ORV activity. The proximity to the emergency access drive from Grand Haul Road and flat area creates an ideal location for the location of a maintenance shed, use by vendors providing food service, parts, training, etc. It may also serve as the location of a pavilion or tent for special events or guest services.
- i. **Endurance Trail.** This is a 1.5-mile uni-directional trail, 96 inches wide that winds throughout the site. It is intended for multiple vehicle types. At the six road crossings, there will be signed stop controls giving trail users right-of-way. These crossings will also have speed controls such as mounds in advance of the crossing to slow trail users and advance signage to warn them of the crossing ahead. Ultimately, concrete box culverts can be used at these locations to avoid conflicts and allow cross traffic above and below.
- j. **Darlene's Ridge.** This 4.3-acre area is centered at the base of Mt Holly. It has slopes that need to be vegetated to minimize erosion and preserve the integrity of Mt. Holly. This area will be for motorcycles only, and will provide two 24" single-track trails separated by the Endurance Trail.
- k. **Borderlands Straight Run.** This area consists of a clay loam straight course constructed on rolling hills with fragile vegetation cover. It will consist of a 24' straight course with rolling hills and obstacles and will be open to all vehicle types.
- l. **VIP Overlook.** This area is on the south side of Holly Glen and is a level plateau with steep erodible sides. It is an overlook area with space for a pavilion or tent and limited parking, and creates 360 degree views of the park.

C. Safety and Programming

Within the planning process, aspects of safety and programming were addressed as it related to development of the concept plan, circulation, and layout. This will be detailed further in the separate Operations Plan created by OCPR staff.

At least one deputy of the Oakland County Sherriff Department will be on site during weekends. On weekends the park will have a regular presence from the Oakland County Sheriff's Office (OCSO) but will not be there at all times. OCSO will patrol the park on a regular basis as they do the other 13 Oakland County Parks. Staffing levels may be adjusted based on attendance or additional contracted services for special events as needed. The park will also be regularly patrolled (though less frequently than OCSO) by the DNR Law Enforcement Division's Conservation Officers. Both OCSO deputies and MDNR Conservation Officers will be able to enforce park rules.

Non-emergency assistance is commonly addressed by users within the park; user groups have offered to host training courses to assist with knowing when and how to assist and when to call for help. OCPR will have a contract in-place for towing services at the site should they be needed. The costs to retrieve/tow a vehicle will be the sole responsibility of the vehicle owner. In emergency situations, park users and staff will use the 911 system. First responders from

Groveland Fire and North Oakland County Fire Authority (NOCFA) will address emergency calls. Groveland Fire has a four-wheel drive ambulance that will be able to access the site. Chief Mason indicated that they are used to having to carry someone back to the ambulance from out in a park or an inaccessible area, and that ambulance access to every area of the site was not required. Roads and trails provide a route to within approximately 200 feet of most use areas within the site. An emergency response plan will be completed as part of the Operations Plan that includes, but is not limited to, mapping and signage of emergency access points, gates, routes and staging areas, contacts, protocol, specialized training, and equipment needs. In addition, both full-size and side-by-side vehicles are expected to be donated to the park for park staff and first responder use. Details will be finalized in the park plan as those agreements are negotiated and executed.

Staff and stakeholders have discussed the possibility of lighting the park at night for night rides. After some discussion, the consensus was that a few times a year as a special event would be an attraction, but to stay open late every night in the peak season would likely not provide the return on investment.

Flags will be required for all vehicles except for motorcycles on a closed course. Alcohol will not be permitted on-site during regular hours of operation or as part of a special use permit or event.

D. Maintenance

Maintenance for Holly Oaks ORV Park will be a critical (possibly the most critical) component of park success. The topography and materials at the site are well-suited for ORV recreation, but will require constant maintenance and upkeep to provide a fun, unique, exciting experience. A plan for maintenance of each area within the park should be developed as part of the park Operation Plan.

1. Dust Control

The previous mining operation contracted for chloride treatments to attempt to manage dust on and off site. Depending on conditions, this application may have short-term effect compared to soil amendments such as adding compost/organic matter mixed into the soil that will hold moisture longer. Introducing some hardy native trees as a north-south windbreak may assist long-term with some of the dust that is carried on prevailing winds from the west.

2. Trail maintenance

Erosion generates the most maintenance for this site. In some cases it is an advantage, creating new features and challenges, or hazards that need to be addressed. It is suggested that a comprehensive observation of the site be completed once a week or after a storm event. Initial trail maintenance equipment should include the following for various trail types:

- Road grader for maintaining the Haul Road
- D6 Dozer for maintaining the 96-inch tread routes
- D3 Dozer for maintaining 50-inch routes in addition to hand trimming vegetation with support from user groups twice per season on the single track and endurance trail

- Several ATV, quad, gator, and/or pickup trucks for daily operations and response. These can also support specialized trail rakes, drags and graders for smaller trails. Examples can be found at <https://www.fs.fed.us/t-d/pubs/htmlpubs/htm98232837/page03.htm#rake>.

OCPR has been considering hours of operation and potential “maintenance days” where the park would not be open. Initial thoughts were Monday and Tuesday, which could be days for maintenance work or possibly days for private rental of the site.

It was indicated that, for original equipment manufacturers to use the site, they would need the park to be closed to the public while they were using it, while OCPR staff may be able to maintain sections of the park through limited access. This should be determined on a case by case basis if an areas needs repairs prior to a scheduled maintenance day. The design team agreed that if the park was going to be closed any days, it should be consistent every week..

3. Drainage

Drainage patterns have been identified by OCPR staff for the site with improvements identified for swales, ditches, and culverts that will minimize washouts on primary circulation routes with the site. The site is self-contained with no drain outlet and soils are generally well draining. The improvements will help reduce long-term maintenance and accessibility through the site.

4. Motocross Course

This feature was considered but not currently recommended due to the significant maintenance, irrigation, and grading of the course. This would require a dedicated volunteer effort which may not be sustainable long-term. It was determined if a special event were to construct a temporary facility, that this would meet a portion of the demand but such a facility would need to be dismantled after the event due to the long-term maintenance demand. A motocross course may be considered in the future as the park develops and expands in acreage.

Map 1: Inventory

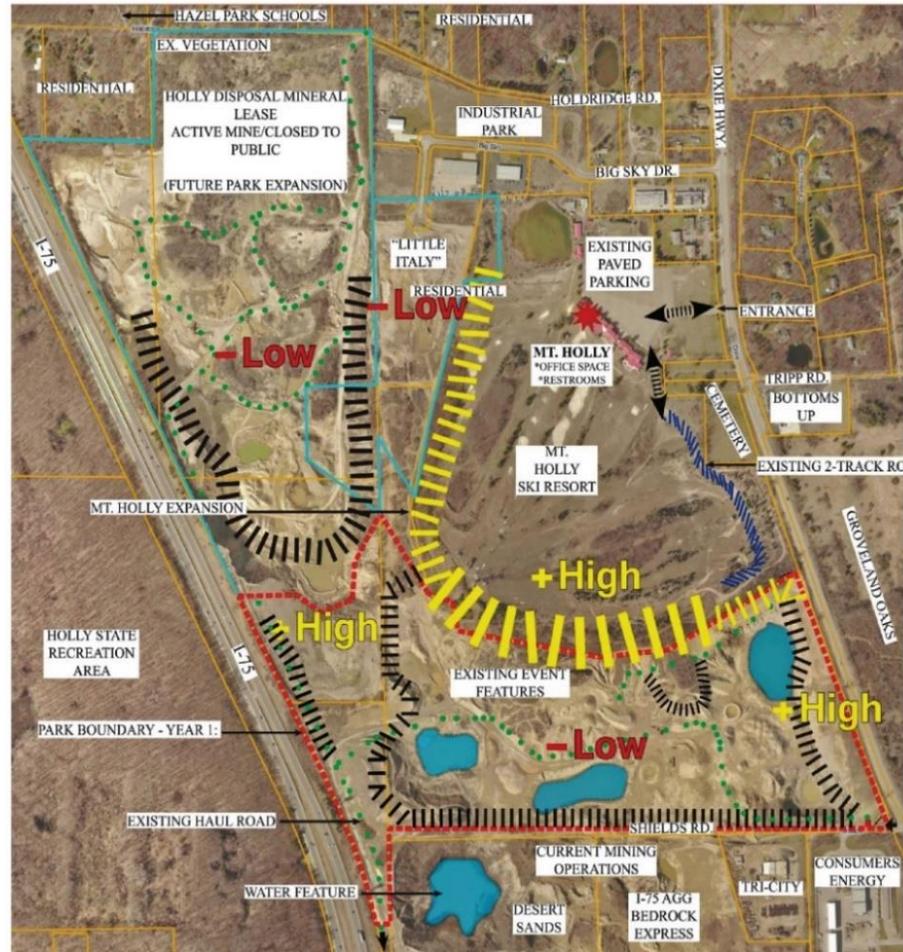


ORV PLAN PARK - YEAR ONE

GROVELAND/HOLLY TOWNSHIP, OAKLAND COUNTY, MICHIGAN
ACRES: 122



EXISTING CONDITIONS:



Map 2: Analysis

Analysis

COMMENTS:

1. Locate main summer entrance at Mt Holly; utilize existing paved parking lot, bathrooms and ticketing office, concessions.
2. Improve existing access drive for 2-way traffic. Allows for internal que. Cut through existing berm to connect to ORV site. Lower elevation to transition to interior trails.
3. Use Shields Road to access site during winter months (low season) to avoid conflict with Mt Holly (high season).
4. High site visibility along Dixie Highway; opportunity for branding. Need to buffer noise with land forms, landscaping, etc.
5. High visibility along I-75 at key points; opportunity for branding. Keep billboards for revenue. Less concern for noise buffering due to traffic.
6. Steep slopes; less stable soils. Need to limit access and stabilize soils. Extend existing haul road to complete perimeter trail.
7. Utilize plateau to create winter parking; limit access to adjacent steep slopes.
8. Utilize plateau to create parking for trailers / motocross track users.
9. Protect existing pond, limit access from vehicles due to depth.
10. Shallow water body, utilize for mud bog users.
11. Use sloped area to create a single track motorcycle route; contained area within the site, and associated with the motocross location. Locate tot-lot near motocross area; most activity likely to be motorcycle users.
12. Complete perimeter trail along ridgeline. Locate overlooks, pavilions and porta-johns at high points for visibility.
13. Work with mine operator to lower grade in "Little Italy" as a method to provide land form buffer to minimize sound travel to the north
14. Gated access can be utilized for optional emergency access or 'special event' access.
15. Existing ORV features throughout the park. Level area for base camp.
16. Mt. Holly Ski-Run Expansion



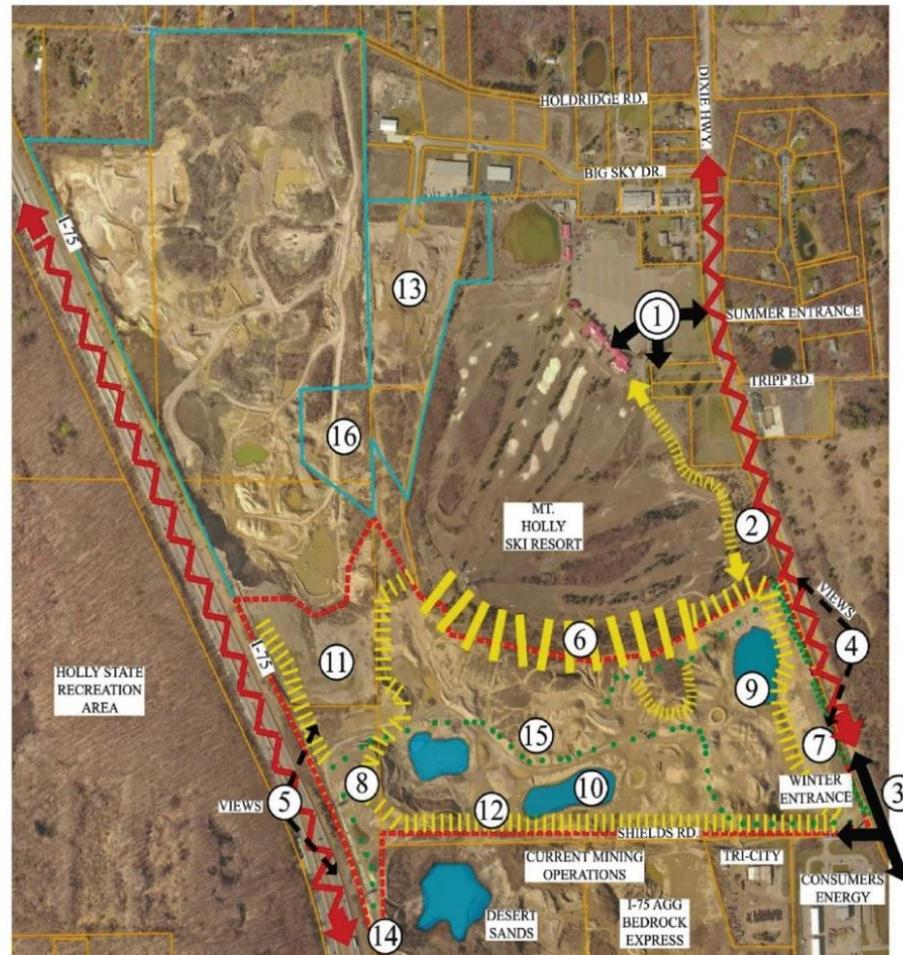



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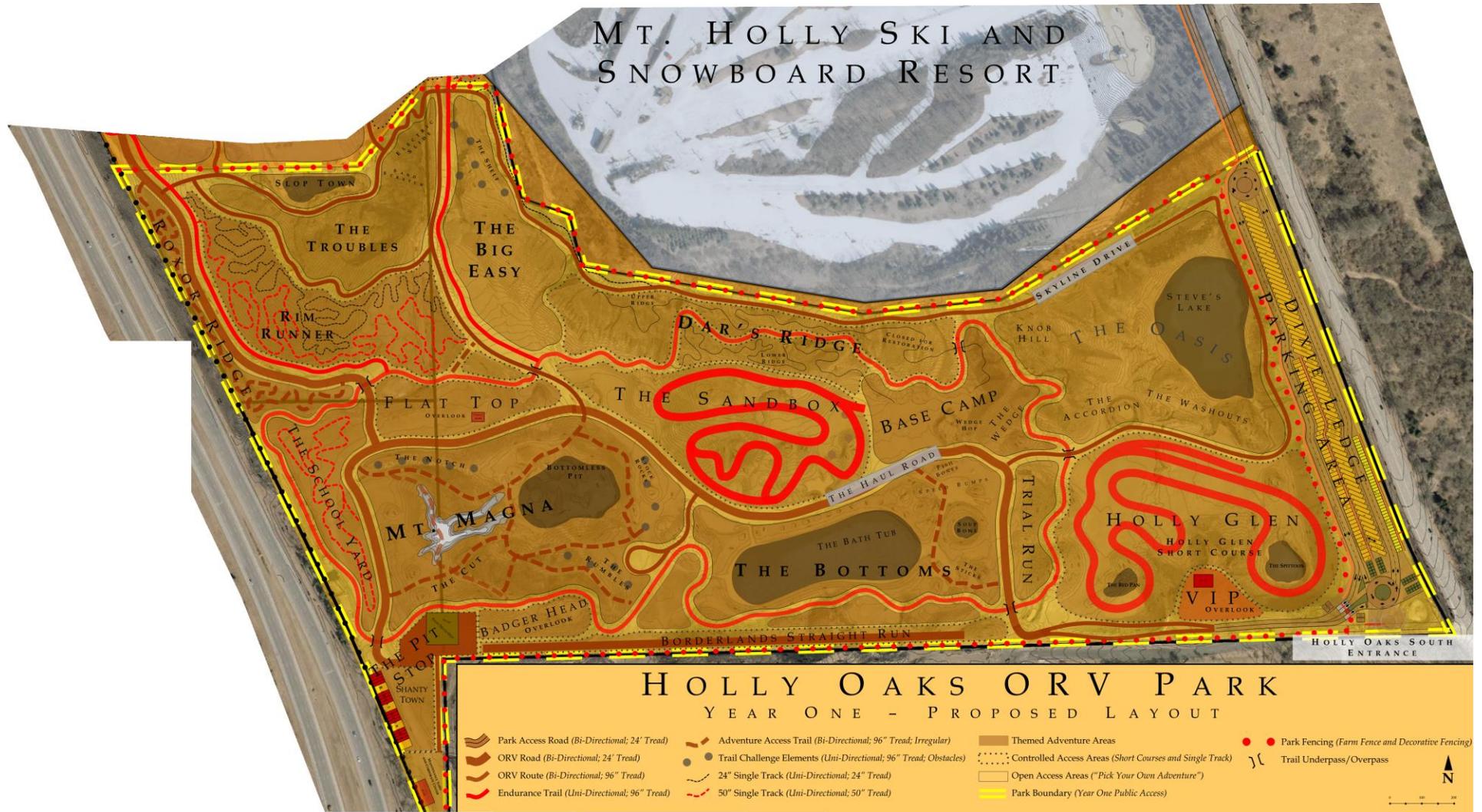
ORV PARK PLAN- YEAR ONE

GROVELAND/HOLLY TOWNSHIP, OAKLAND COUNTY, MICHIGAN
ACRES: 122

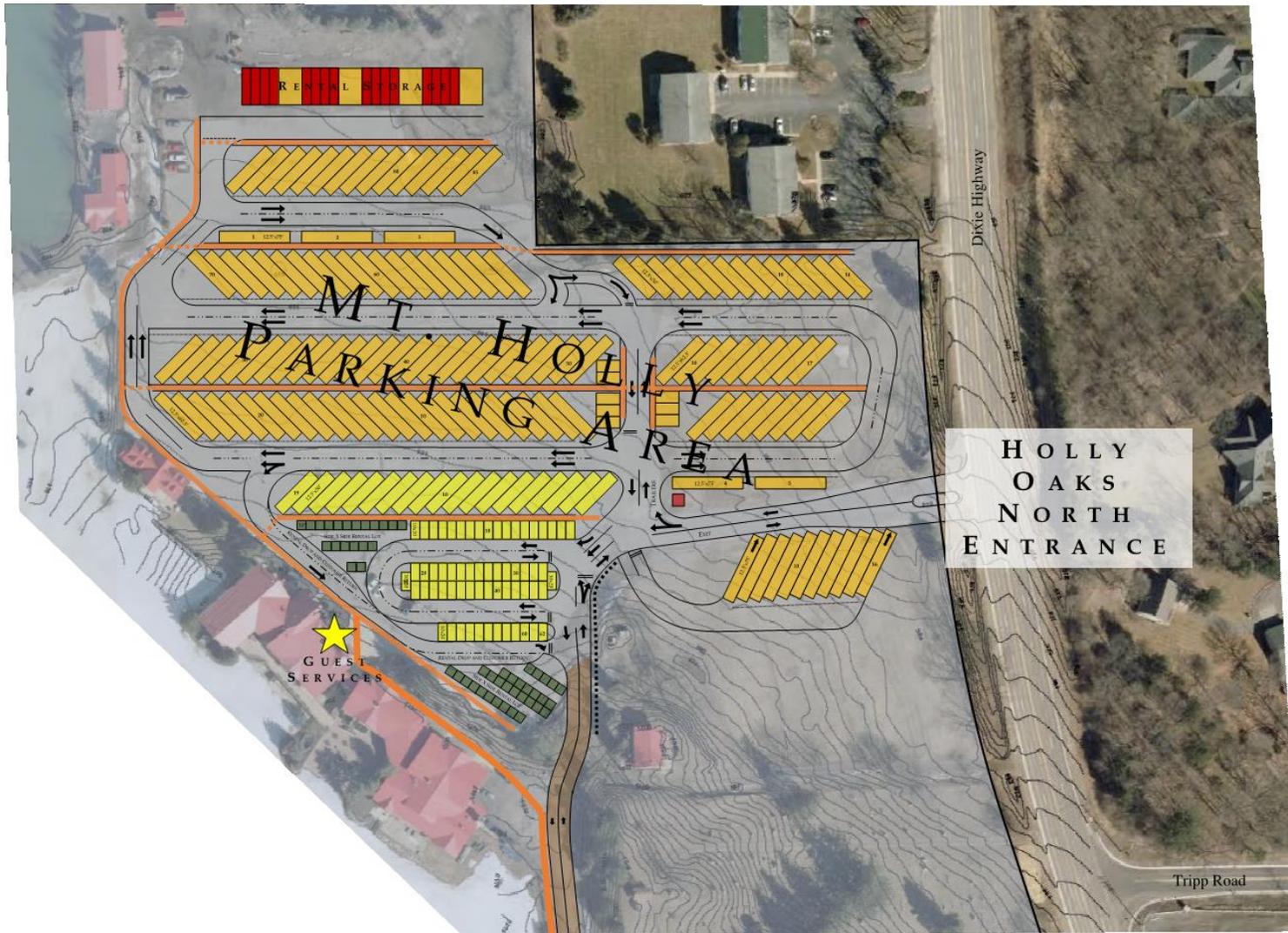
ANALYSIS:



Map 3: Proposed Layout



Map 4: Mount Holly North Entrance



Map 5: South Park Entrance



Map 6: Dixie Ledge Parking Area

Holly Oaks ORV
Dixie Ledge Parking Area
'Draft'

