



Brookdale County Park

Master Plan

Liberty Township
Porter County, Indiana

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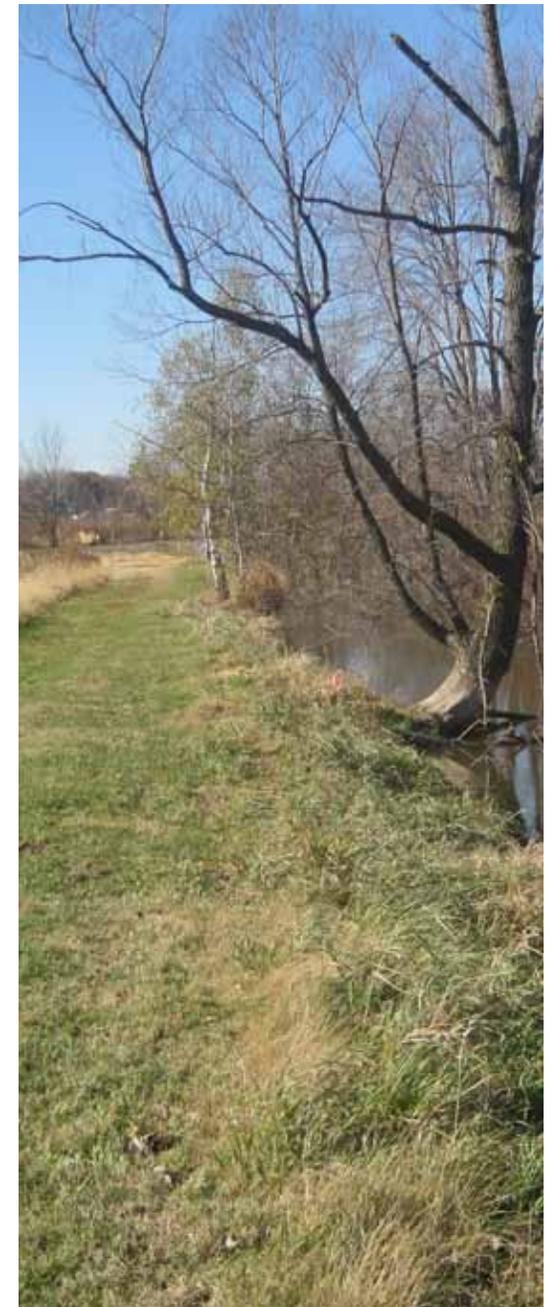
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Introduction

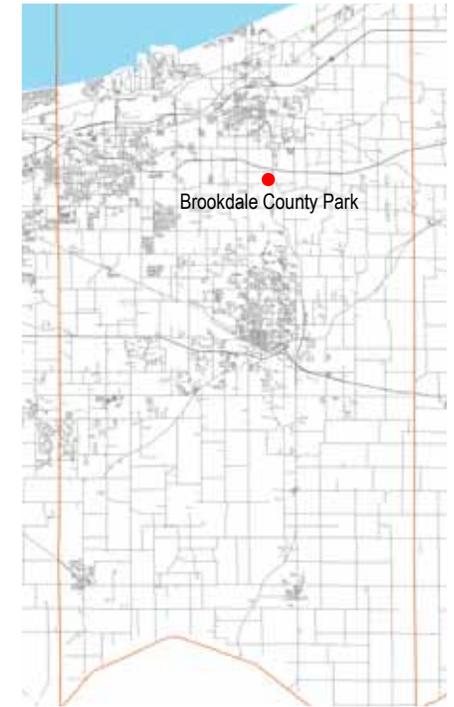
The development of Brookdale Park represents an opportunity to provide a new park model for Porter County that embraces both active and passive recreation in a seamless and sustainable way. This is in line with the department's broader mission and park development criteria and provides a template that may be replicated elsewhere in the county as demand dictates. It provides much needed facilities, open space and amenities that will benefit all county residents with linkage opportunities to other nearby north county properties that offer complementary programming.

History

The property was formerly owned by Mr. and Mrs. Bernard D. Michaels, who lived in the house on the property and managed the surrounding land. The Michaels business focus was crop production and topsoil sales and delivery.

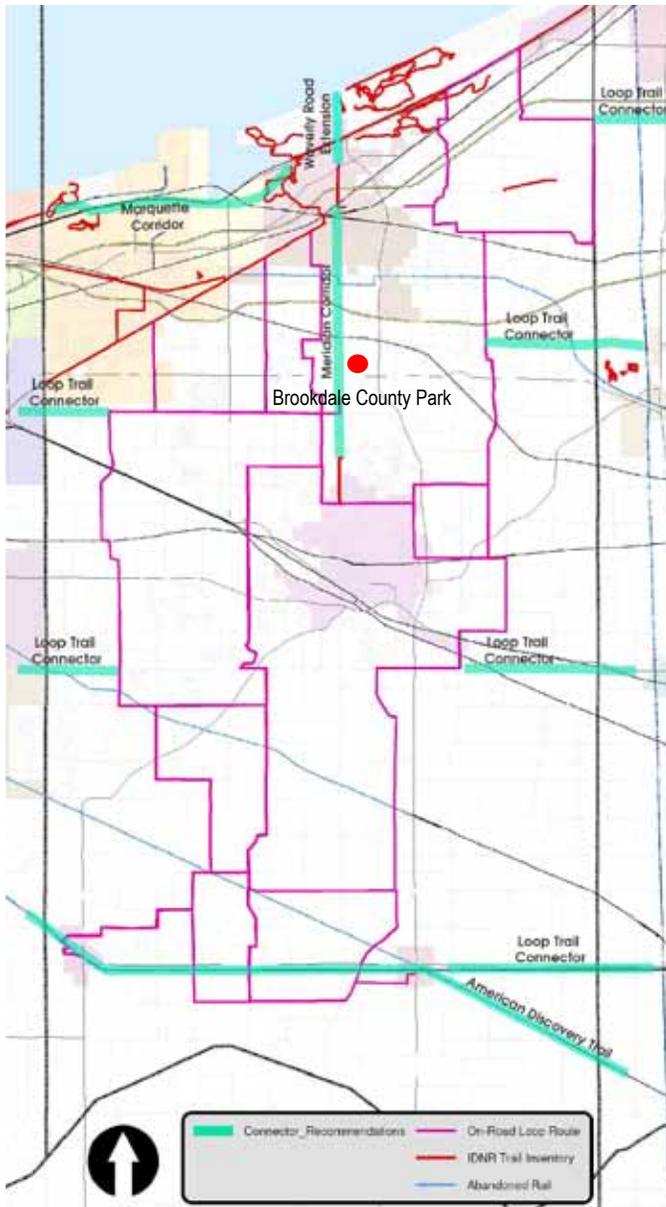
The existing large pond is a result of many years of topsoil excavation. The Western portion of the site, including the residence and pond, was purchased using Lake Michigan Coastal Land Grant funds and as a result must be in compliance with: Coastal Zone Management Act Section 306A Guidance and the Lake Michigan Coastal Program Grants Manual, for passive recreation. The Eastern balance of the site can be utilized for active sports field development.

The property was purchased by Porter County over a multi-year period with the final piece acquired in 2010 for park and open space development due to extensive efforts on the part of Porter County citizens who are advocates of a local park that is able to host athletic events and sports tournaments.



View looking west from Meridian Road





Recommended connections in Regional Trail System (Porter County Comprehensive Plan 2007)



Site context looking southwest



View looking west from high point

The Planning Process

The master plan for Brookdale Park outlined in this report was developed through a careful, inclusive process to achieve meaningful public and stakeholder input with an eye towards implementation. This was achieved over a six month period with ideas being shared with the public and key stakeholders at each stage of the plan until a preferred concept was achieved. The end product is a visually attractive, sustainable, accessible and well operated park as envisioned when this property was purchased for a new county park in 2010. The process included:

- Careful collection and synthesis of important available site data to create evidenced-based solutions for the park.
- Meaningful stakeholder and public input at each phase of the project including a three open public meetings/open houses at key project milestones and a focused set of one-on-one and focus group input meetings during the data gathering phase of the project.
- A one day visioning workshop or “charrette” in Porter County culminating with a pin-up session with project stakeholders and the general public to gather input on the ideas generated in workshop.
- Three distinct plan alternatives with objective ranking criteria to determine a preferred alternative that achieves all the project goals while meeting the expectations and stated desires of the stakeholders and public.
- This final summary report that captures the process and final recommendations in written and graphical form.

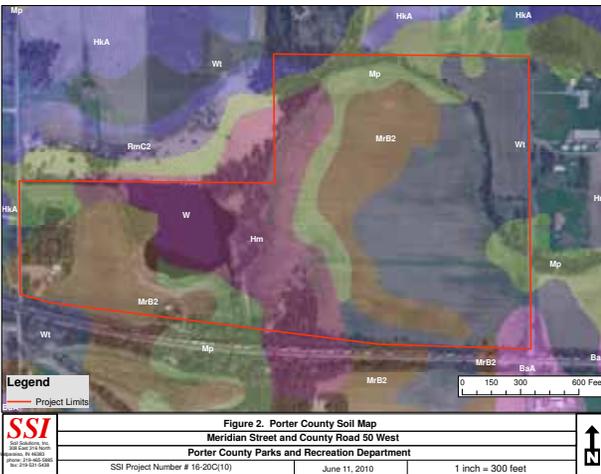
View looking west from wetland





Existing Conditions

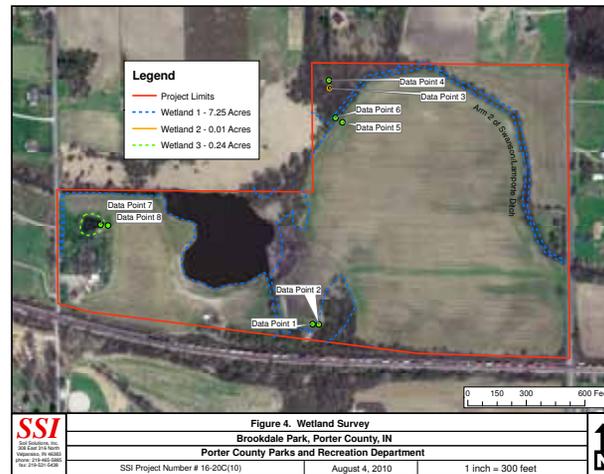
The Brookdale Park property is bounded by Meridian Road on the east, County Road 50 West on the west, CSX railroad tracks on the south and the Swanson-Lamport County legal drain, wetlands and residential properties on the north. The site contains, open rolling topography typical of the area with vegetated bands along the property boundaries and drainage corridors. The western portion of the property contains a series of wetlands and a moderate size lake that is the result of the general east-to-west drainage patterns as well as past topsoil mining on the site. An ANR gas pipeline crosses the southeast corner of the property. Vegetation on the site reflects past use and disturbance, with large areas in crop production and miscellaneous degraded vegetative communities around the periphery. The lone exception is a pocket of higher quality upland oak woods along the northern property border adjacent to the legal drain.



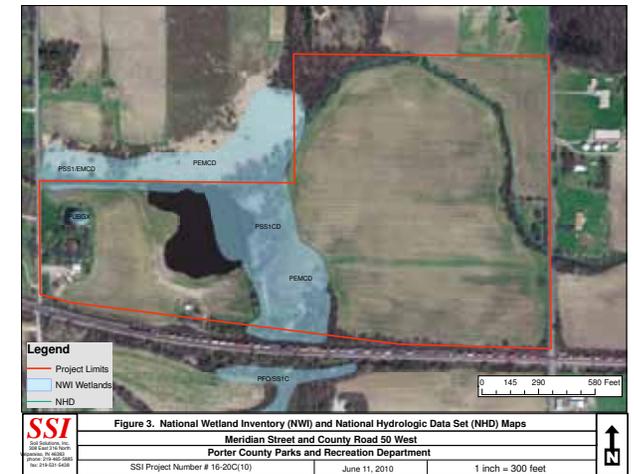
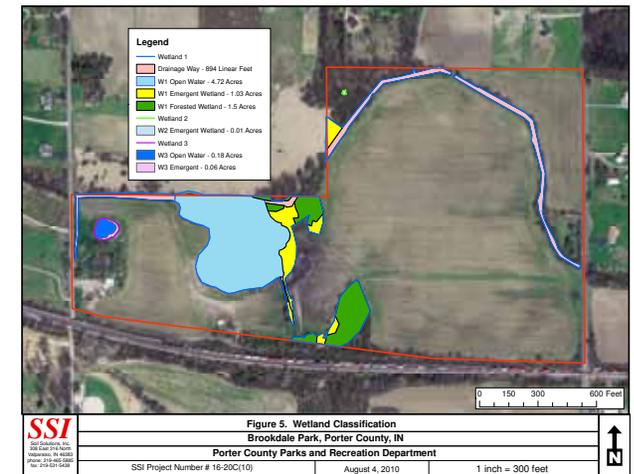
There are few structures on the site with the exception of remaining farm structures and residence near the western edge of the site.

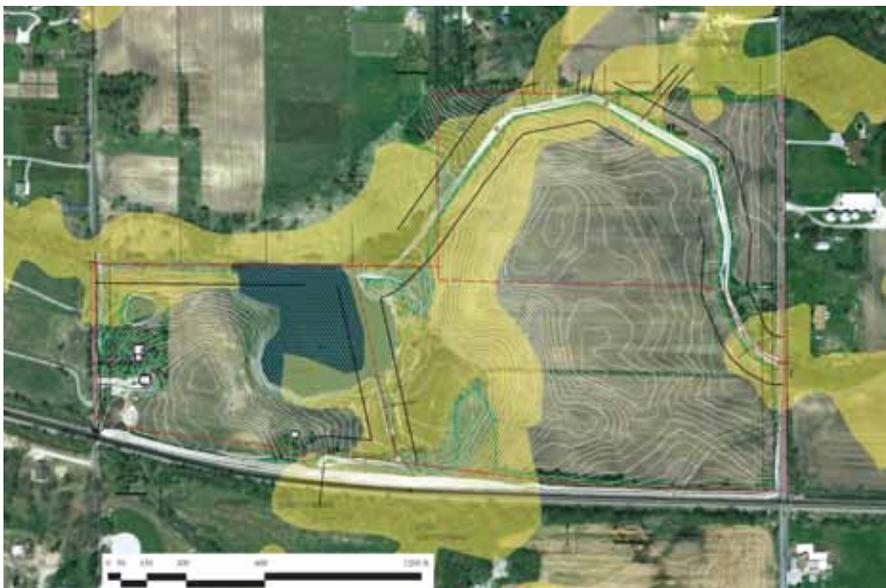
Analysis

It is important that the plan for Brookdale Park is grounded in technical reality and able to move smoothly into implementation. Based on this objective, the team looked closely at available physical data pertaining to the site to understand the development suitability for different potential programs that were being considered. The team reviewed existing surveys, utilities, traffic conditions, soils, drainage, topography, vegetation, views and site context, including proximity to neighboring land uses. This analysis was synthesized to understand development suitability in order to determine what should be developed on the property and how best to do it.



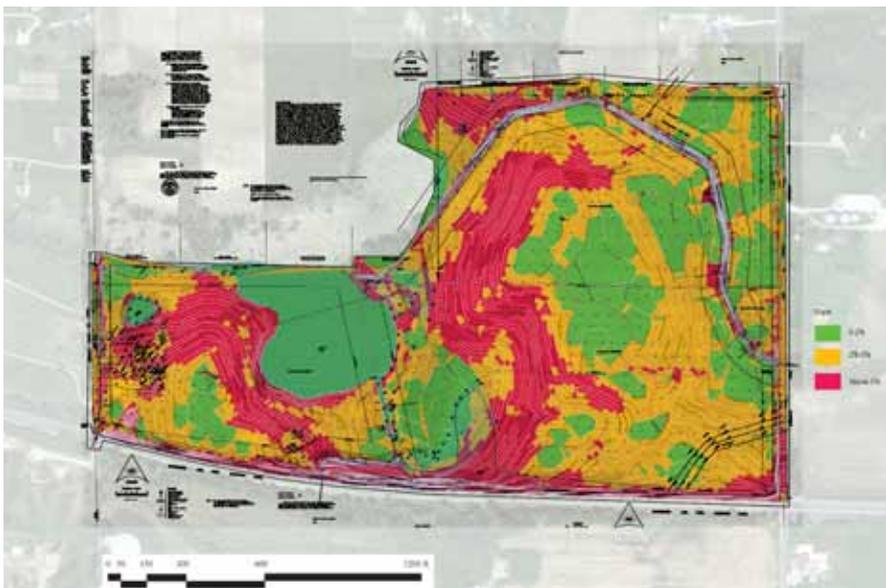
Total Area	= 65.44
Wetlands	= 7.5 acres
0-2%	= approx 15.3 acres (excludes any overlap with wetlands)
2-5%	= approx 25.7 acres
Slope above 5%	= approx 16.9 acres (excludes any overlap with wetlands, lake)





Hydric Soils

Slope



Viewsheds

Easements and Restrictions



Based on input from preliminary stakeholder interviews, a list of program elements was developed for public input and physical “test fit” on the site. A series of preliminary planning diagrams were developed during an open, public charrette on November to illustrate how different program combination would work together on the property based on preliminary site analysis of topography, drainage, soils, utilities, access, views and adjacencies.

The team utilized the input from the charrette to develop a series of guiding principles and three formal plan alternatives that were reviewed at the second public meeting on December 2, 2010. The results from the December 2 public meeting were shared at a Land Acquisition and Development Committee on January 10, 2011 and direction for a preferred alternative and potential phasing approaches was received.

GUIDING PRINCIPLES

A park to serve ALL Porter County residents

Environmentally and financially sustainable to build, maintain and operate

Link to current and future open space and recreation amenities in Porter County

Provide year-round activities

Safe and friendly recreation environment

Use of sustainable materials and methods to build and maintain

Porter County to manage and schedule



Recreation

- Walking and running trails, loop trails and linkages to other trail systems
- Nodes and meditation spots
- Boating and canoeing/kayaking
- Fishing
- Environmental Interpretation/Play
- Outdoor fitness
- Sledding
- Skating
- Snow shoeing/cross-country skiing
- Cultural venue / amphitheatre / pavilion
- Picnicking
- Meadow/informal open space
- Boardwalks and overlooks

Fields and Amenities

- Up to 2 Large and 2 Small Baseball/Softball fields
- Up to 4 Soccer/Grid Fields
- Restrooms/Concession
- Picnicking

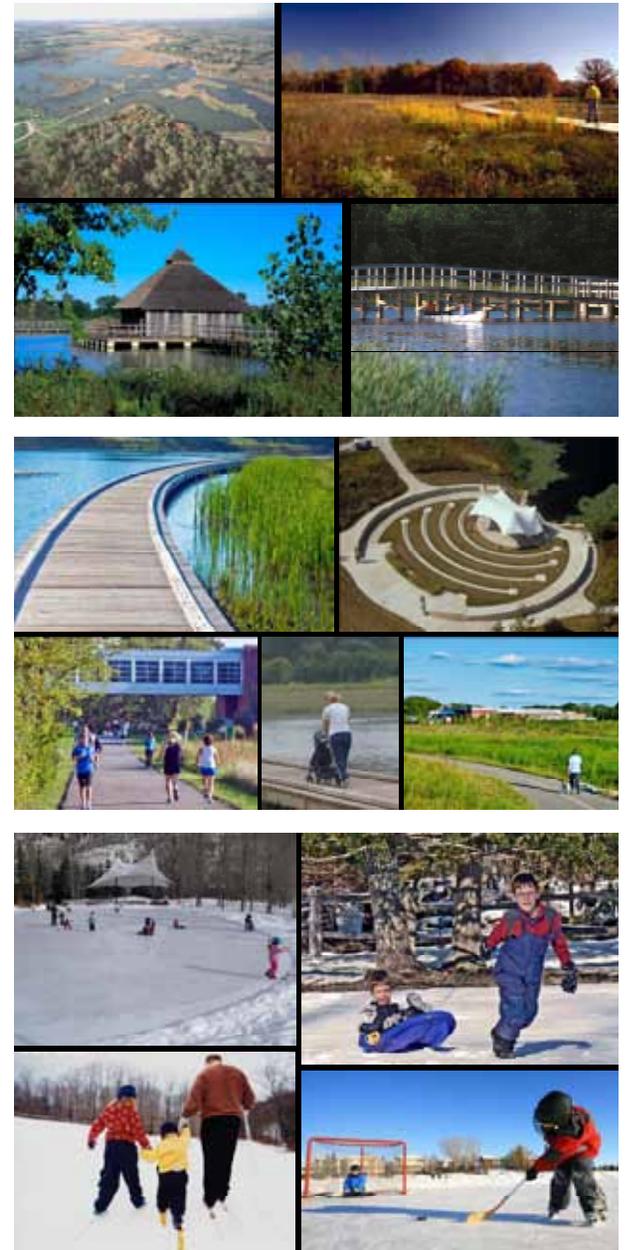
- Shelters/Storage/Meeting space
- Irrigation
- Power/Field lighting
- Batting cages/scoreboards/practice areas
- Dugouts with solid walls and roofs
- Active play

Other Amenities

- Safe access and adequate parking
- Emergency vehicle access
- Maintenance/support facility
- Storm water management
- Habitat creation and restoration
- Court games/dance

Boys and Girls Club (future potential)

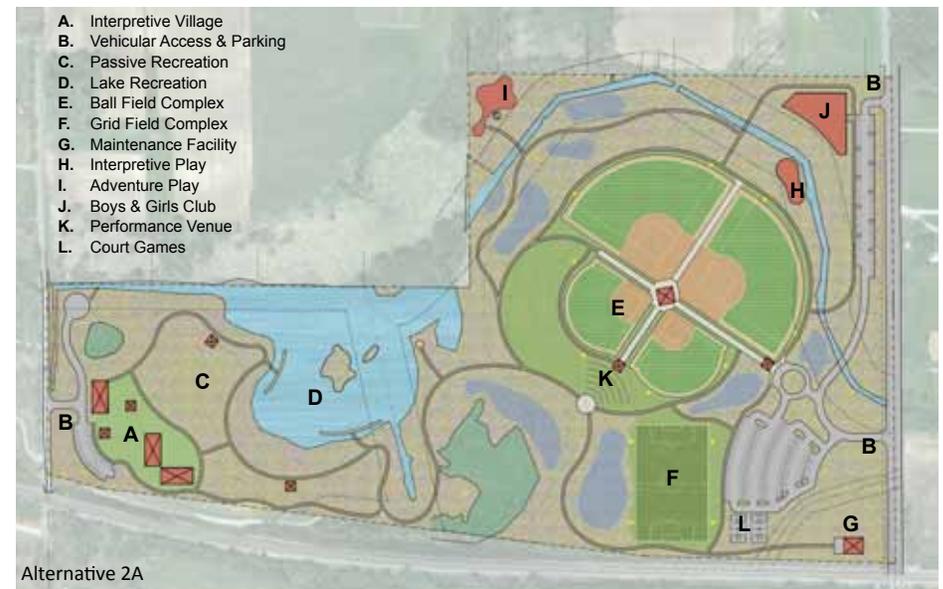
- 18,000 – 20,000 sf facility
- 7,000 sf gym expansion



	Alternative 1	Alternative 2A	Alternative 2B	Comments
Passive Recreation				
Active Recreation				
Access/Parking				
Year-Round Activities				
Operations and Maintenance				
Environmentally Sustainable				
Revenue Potential				
TOTAL:				

Ranking Criteria: 1 – Fair
 2 – Good
 3 – Outstanding

Ranking Criteria Matrix from December 2, 2010 Public Meeting



Brookdale Park has been designed as a year-round attraction with a balance of active and passive recreational programming. Active programming is contained in the eastern half of the park where a lighted pinwheel or fourplex of ball diamonds is placed along with lighted two synthetic turf grid fields for soccer, lacrosse or football. Hard courts for basketball are also located in this area along with two playgrounds. These eastern active spaces are wrapped by a passive corridor that follows the alignment of the Swanson-Lamport County legal drain that connects the eastern park entrance on Meridian Road with the other passive uses to the west. This corridor will be enhanced with native landscape and trails to improve the visual character, ecological quality and enjoyment.

In the western half of the park, the former agricultural setting will be transformed into a mix of native prairie, savanna, and woodlands with enhanced wetland habitats in bottomland areas along the legal drain and lake. A “low-impact” approach to stormwater management will be employed that strategically locates a “treatment train” of rain gardens throughout the park. These are typically located near existing water features and riparian corridors to improve the natural character and function of the park while enhancing the passive recreation experience for visitors.

An extensive trail network will be knit into this landscape along with outdoor classrooms, viewing hills, fishing and interpretive platforms, a canoe and kayak launch and picnic grove.

A picnic grove in the far western portion of the park will have open lawn areas and a grouping of shelters of varying sizes to accommodate both large and small scale gatherings. Public toilets and small concession areas will be located in both the eastern and western areas of the parks to serve daily users.







West Side

Vegetative Communities

Despite the high-intensity active programming in the eastern half of the park there is a strong desire for these programs to be nestled in a more natural setting reflective of local natural communities that would exist on the site without the current agricultural activities. This approach will improve habitat and the overall ecological quality of the park while aesthetically unifying it through the naturalistic greenway corridors that connect the east and west parcels. Communities would include emergent, sedge meadow and wet prairie in bottomland areas transitioning to open and closed savanna and woodlands in upland areas. The diagram on this page illustrates the recommended vegetative communities for the park.



Park Facilities and Infrastructure

The master plan identifies the type and location for a range of park facilities and structures, serving the various public needs for food, shelter, education as well as public toilets and park maintenance.

While the specific architectural character for these structures would be determined in subsequent design phases, the intent of this master plan is a family of structures with similar character and materiality.

The facilities and programs illustrated in the master plan will require significant infrastructure to function properly. The following summarizes the team's findings and recommended approach:

- **Sanitary Sewer** - The Brookdale Park Site is not currently served by sanitary sewer. There are two sanitary sewer providers in the area - the Town of Chesterton, to the north, and the Damon Run Conservancy District, to the south. The Town of Chesterton system currently extends south to the intersection of Meridian Road and County Road 1050 North approximately 1.25 miles north of the Brookdale Park Site. The Damon Run Conservancy system currently extends north to the intersection of Meridian and County Road 900 North approximately .25 miles south of the Brookdale Park Site. Based on this assessment and the potential load created by the park's proposed activities the master plan recommends the use of septic fields and tanks for sanitary needs on site.
- **Water** - The Brookdale Park Site is not currently served by water. Water service in the area is provided by Indiana American Water. Currently, water service to the north is located at the intersection of Meridian Road and County Road 1050 North. To the south,

water service is located at the intersection of County Road 50 West and County Road 900 North (near Liberty Elementary / Intermediate School). Based on this assessment and the potential load created by the park's proposed activities the master plan recommends the use of a well system for the park's water needs.

- **Electric** - The Brookdale Park Site is currently served by electric. Electric service is provided by the Northern Indiana Public Service Company (NIPSCO). Overhead service lines are located on the east and west side of the park site.
- **Natural Gas** - The Brookdale Park Site is currently served by natural gas. Natural Gas service is provided by the Northern Indiana Public Service Company (NIPSCO). Underground service lines are located on the east and west side of the park site.

Access, Circulation and Parking

The primary mode of circulation in Brookdale Park will be a diverse network of trails and boardwalks that provide access to key park attractions and connect the eastern and western halves together and to surrounding regional trail linkages. In total nearly 3 miles of new trails are proposed.

From a vehicular perspective, getting visitors safely to the park requires careful placement of park entrances and geometric modifications to Meridian Road to achieve safe site distances and movement of cars entering and exiting the park including the construction of a bypass lane at the southeast and northeast entrances of the park. Parking has been sized and located to serve the programming illustrated in the master plan with approximately 350 permanent parking spaces and another 100 overflow spaces to serve peak demand. The bulk of this parking is in the more active eastern half of the park where a 40 cars/athletic field ratio was used to reflect industry standard.

A more detailed Traffic Impact Study is included as an appendix to this report.



Action Plan

If properly programmed and operated, comparable models in the region suggest that Brookdale Park has the potential to cover the costs of operation with the fees generated from field use, programs and other rentals in the park. Based on review of industry trends, comparable agencies are experiencing maintenance costs ranging from \$4,000 - \$5,000 per acre which, for Brookdale Park, would equate to \$260,000 - \$325,000 per year. Based on this assumption, it was critical to identify revenue producing programs wherever possible to offset this annual cost. The use of low maintenance native landscapes for the balance of the site not devoted to athletic fields is also a key component of the financial equation for this park. Because of the amount of passive space in the plan and desire for a high quality natural experience, large areas can be devoted to lower maintenance native landscapes.



Central Park, Carmel, IN

Carmel-Clay Parks and Recreation has determined that they could save over \$200,000 in maintenance over a twenty year period by converting 5 acres of turf to native prairie.

Once initial establishment occurs, these landscapes cost a fraction of what mown turf or traditional annual or perennial beds would cost as indicated in the case study below. In addition, reduced energy and other low impact, “green” building and site practices further reduce the operational costs of the park.

Despite the potential for some rental income from picnic groves and shelters in the west, the majority of gross revenue will come from the eastern, more active half of the park containing the lighted sports fields. There are many variables in determining the potential net revenue for a facility of this kind, ranging from number of participants, fees charged, operating costs for umpires and league officials and daily items such as the chalk and paint for sports fields.

Without a firm understanding of exactly what operational model will be employed for this park, it is difficult to provide a specific net revenue number and a true financial proforma, which is not part of this study, will ultimately be needed at a point when this programming and operation is better understood. Data for relevant Midwestern facilities suggest that lighted, three-season fields can generate \$250,000 - \$300,000 per field in gross revenue before expenses which can be a significant source of income with efficient operation however, comparable models in the region such as Portage and Valparaiso suggest more conservative models that range from break even to a modest profit level with traditional lighted, natural turf fields.

As one would expect in a cold weather climate, these revenues tend to peak in the prime use months of April through July and September/October and drop off in the collar months of March and August.

January and February are traditionally “dark” months with little or no activity or income.

Based on this understanding, it is important to maximize the amount of games and length of season that can be played on each field to maximize programming and associated revenue opportunities. Because acreage limits the sheer number of fields, the plan recommends lights on all fields to increase the number of potential programming hours for each field. In addition, to enhance the flexibility and quality of play on the gridded fields, the plan recommends a synthetic turf surface for these fields along with lighting. The amount of play, reduced level of maintenance and potential increase in fees due to the demand for these high quality synthetic turf fields is a legitimate difference maker in getting revenue levels trending towards the aforementioned Midwestern standards.

Implementation

In addition, the plan illustrates a scenario that could dramatically increase year-round programming and revenue generation in “dark” winter months that are typically cash neutral or negative. In this scenario, a temporary inflatable dome would be installed over the eastern soccer field, providing winter league opportunities as well as the potential for an indoor walking track that would be attractive to seniors and other fitness-minded users. Comparable models indicate that such a facility can turn the “dark” programming and financial months into perhaps the brightest as indicated in the case study below.



Plymouth Creek Center Fieldhouse, Plymouth, MN

Plymouth Parks and Recreation reported the Plymouth Creek Center Fieldhouse netted \$178,329 in 2010 and \$181,137 in 2009, primarily, during usually quiet winter months.

Phasing Strategy

It is understood that the plan for Brookdale Park may be implemented in multiple phases due to available funds and a number of other factors. Based on this assumption, the following illustrates to total construction cost as well as a potential first phase of construction that would achieve the goals for a successful park that were voiced during this planning process.

Phase One

West Side – Passive Elements	\$2,200,000
East Side – Active Elements	<u>\$7,700,000</u>
Subtotal – Phase One Construction	\$9,900,000
Design, engineering, testing, permitting and soft costs	\$1,500,000

Phase Two

West Side – Passive Elements	\$2,100,000
East Side – Active Elements	<u>\$1,400,000</u>
Subtotal – Phase Two Construction	\$3,500,000
Design, engineering and soft costs	\$ 350,000



Phase I

The following illustrates a five year action plan to complete Brookdale Park. This includes the needed design and permitting as well as construction schedule.

2011

April - Approval by Park Board

May - Presentation to County Commissioners / County Council

June/July - secure funding (for engineering, design and permitting)

August - contracting

September through February 2012 - Engineering/ Design/Permitting

2012

March/April - secure funding (for construction documents)

May - contracting

June through August - Develop Construction Documents

September / October - Bidding

November through August 2013 - Construction

2013

August 2013 - Grand Opening - Soccer

November 2013 - Grand Opening - Dome

2014

April 2014 - Grand Opening - Ballfields

2015

Achieve positive net revenues from 1st full year of operation.

Funding Sources – Pedestrian and Bicycle Activities

Surface Transportation Program (STP) (23 USC 133)

The Northwestern Indiana Regional Planning Commission (NIRPC) administers this program. The program funding for the upcoming cycle is approximately \$12 million. 4% of program funding is set aside for non-motorized projects. Applications for the current cycle are DUE March 16th.

Surface Transportation Program Transportation Enhancements Set-aside (TE) (23 USC 133(d)(2))

The Northwestern Indiana Regional Planning Commission (NIRPC) administers this program. The program funding for the upcoming cycle is approximately \$2 million. Applications for the current cycle are DUE March 17th. A second call for applications will be announced later in the year.

Congestion Mitigation and Air Quality Improvement Program (CMAQ) (23 USC 149)

The Northwestern Indiana Regional Planning Commission (NIRPC) administered this program.

The program funding for the upcoming cycle is approximately \$10 million. 15% of program funding is set aside for the construction of bicycle / pedestrian facilities. A call for applications will be announced later in the year.

Safe Routes to School (SRTS) (S-LU Sec. 1404)

The Northwest Indiana Regional Planning Commission (NIRPC) and the Indiana Department of Transportation (INDOT) administrate this program. The program funds both infrastructure and non-infrastructure projects. A call for applications will be announced later in the year.

Recreational Trails Program (RTP) (23 USC 206)

The Indiana Department of Natural Resources (IDNR) administers this program. The program will provide 80% matching reimbursement assistance for eligible projects. The minimum grant amount is \$10,000 and the maximum is \$150,000. Applications for the current cycle are DUE May 1st.

Lake Michigan Coastal Program (LMCP)

The Indiana Department of Natural Resources (IDNR) – Lake Michigan Coastal Program (ILMCP) administers this program. The program will provide a one to one matching reimbursement assistance to eligible projects. The minimum grant amount is \$5,000 and the maximum is \$150,000 (Land Acquisition only). A call for applications will be announced later in the year.

Artificial Turf

US Soccer Foundation
Footprint Field Grants
www.ussoccerfoundation.org

In cooperation with their National Partner, FieldTurf, the U.S. Soccer Foundation awards Footprint Fields grants to build artificial turf soccer fields that are durable and can be used in all weather conditions.

Requiring remarkably little maintenance, a Footprint Fields (Artificial Turf) field is a cost-saving alternative to the traditional field, that:

- has an eight-year warranty;
- withstands inclement weather;
- resists wear and tear;
- requires no watering, fertilizing, over-seeding or “rest” like natural grass; and
- may be played on around the clock as it is lighted

Through its Grants Program, the U.S. Soccer Foundation helps ensure that this technology is more affordable for communities throughout the nation, especially in economically disadvantaged urban areas where there is a severe shortage of fields. Supported by FieldTurf, the Foundation awards annual grants providing up to \$200,000 credit toward the cost of constructing or upgrading a full-size synthetic grass soccer field. As a result of these grants, Artificial Turf Fields have been built and are in use in cities across the U.S., such as Chicago, Los Angeles, New York, Washington D.C.

Sports Lighting

US Soccer Foundation
Lighting Finance Initiative
www.ussoccerfoundation.org

The U.S. Soccer Foundation recognizes the challenges of raising funds to light soccer fields and have partnered with Musco Sports Lighting and Musco Finance to provide a program that can help make financing available for local projects.

The Lighting Finance Initiative tailors both payment schedules and financing terms to project needs, and provides attractive, fixed interest rates with no penalties for early payments. With a 25% down payment, soccer organizations can immediately light their playing fields. Thanks to Musco Sports Lighting, a National Partner of the Foundation, the balance can typically be paid over the course of a four or five-year term.

In this partnership, the Foundation provides soccer organizations that were unable to secure a conventional loan with the opportunity to install a lighting system immediately.

Funding Made Easy:

- Financing through Musco Finance, LLC
- 25% down payment Fixed interest rates
- Finance terms of up to 5 years
- Flexible payment schedules to match cash in-flows
- Solutions available for Musco equipment and associated installation costs

Public Access/Water Based

- Land and Water Conservation Fund
- <http://www.in.gov/dnr/fishwild/5498.htm>

Public Access Program

The Division of Fish & Wildlife’s public access program was initiated in 1953 and strives to provide free access to Indiana waters for anglers and boaters. The program is part of a broader statewide access initiative. In addition to acquiring, developing and maintaining sites, the division works with various local, state and federal agencies to provide access to Indiana’s lakes and rivers. To date, the program has funded portions of the acquisition, development and maintenance of approximately 366 public access sites; 211 sites are located in northern Indiana and 155 in southern Indiana. The list of sites includes 115 on natural lakes; 89 on impoundments; 158 on rivers and 4 on Lake Michigan. In addition, the division operates and maintains 21 public fishing areas. Fish and Wildlife’s public access sites do not require a lake-use permit.

Advertising and Naming Rights

There are a number of advertising and naming rights opportunities that could be utilized to offset the cost of some items such as scoreboards and structures and increase the overall net revenue of this facility. TGI Systems, a partner of U.S. Soccer Foundation with representation in Porter County, is a world-wide leader in innovative sports and entertainment branding and signage strategies that help facilities maximize their advertising revenue potential. www.worldwidetgi.com

Traffic Impact Study

Brookdale Park Master Plan

Liberty Township, Porter County, Indiana

SEH No. JJRLL 114219

February 25, 2011

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Traffic Impact Study

Brookdale Park Master Plan

Prepared for:

Porter County Park and Recreation Board

Prepared by:

SEH of Indiana
9200 Calumet Avenue, Suite N501
Munster, Indiana 46321

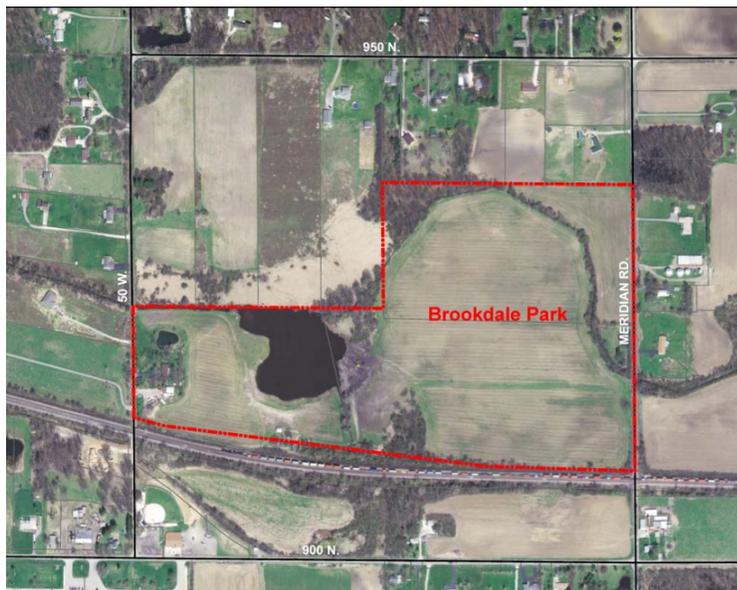
1.0 Project Overview

The Porter County Park and Recreation Board has commissioned the consultant team of JJR, SEH of Indiana, Design Organization and Carl Fisher to develop a Master Plan for the Brookdale Park Site.

2.0 Study Area

The Brookdale Park Site located in Liberty Township, Porter County Indiana totals approximately 65 acres. The Site is bordered on the north by single-family rural-residential and wetlands, on the south by the CSX Railroad, on the east by Meridian Road, and on the west by County Road 50 West. The park site and roadway corridors serving the site are illustrated in **Figure 1**.

Figure 1 – Brookdale Park Site



3.0 Study Purpose & Need

This Study was undertaken to address traffic impacts that may come as a result of the development of Brookdale Park. Both, the Meridian Road and County Road 50 West Corridors were evaluated to determine their ability to handle future traffic volumes generated by Brookdale Park. The Study also recommends future roadway geometric improvements along both corridors.

4.0 Existing Conditions

The Site is served by Meridian Road, on the east, and County Road 50 West, on the west. Meridian Road is a two-lane arterial road that serves central Porter County, linking the City of Valparaiso and the Town of Chesterton. Currently, the posted speed limit along the corridor is 35 mph. Meridian Road crosses the CSX Railroad at-grade at the southeast corner of the Site.

County Road 50 West is a two-lane collector road that serves Liberty and Westchester Townships, linking the Town of Chesterton to Liberty Township Elementary and Intermediate Schools and Liberty Township Volunteer Fire Department. Currently, the posted speed limit along the corridor is 30 mph. County Road 50 West crosses under the CSX Railroad via a one-lane underpass at the southwest corner of the Site.

Average Daily Traffic (ADT) Volumes

Average Daily Traffic Volumes (ADT) defined – the average number of vehicles passing a fixed-point in a 24-hour time frame; a standard for measuring traffic volume.

Existing data sources were reviewed to determine Average Daily Traffic (ADT) along Meridian Road including the Porter County Land Use and Thoroughfare Plan – 2020 Building the Foundation for the Future (2001) and traffic counts provided by the Northwestern Indiana Regional Planning Commission (NIRPC).

The Porter County Land Use and Thoroughfare Plan – 2020 Building the Foundation for the Future (2001) reports a total average daily traffic flow along Meridian Road between Vale Park Road and County Road 1100 North of 5,371 total trips.

5.0 Future Development and Trip Analysis

The Brookdale Park Master Plan envisions an active / passive park site that serves residents of Liberty Township and Porter County, Indiana. The Master Plan is illustrated in **Figure 2**. The Plan envisions the active recreation uses being located on the east side of the site and the passive recreation uses being located on the west side of the site.

Figure 2 – Brookdale Park Master Plan



The Porter County Land Use and Thoroughfare Plan – 2020 Building the Foundation for the Future 2020 (2001) projects a total average daily traffic flow along Meridian Road between Vale Park Road and County Road 1100 North of 7,949 total trips.

An analysis was conducted to determine the anticipated future traffic generation potential of this proposed development. The trip generation rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation, Eighth Edition* for County Park land use (ITE land use code 412) was used to calculate the daily and peak hour traffic generation potential of the proposed development. The calculations are summarized in **Table 1**.

Table 1 – Development Traffic Generation Analysis

BROOKDALE PARK PORTER COUNTY PARK AND RECREATION BOARD DEVELOPMENT TRAFFIC GENERATION ANALYSIS										
Land Use	Intensity		ITE Code	Weekday Trips						
				Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
County Park	65	acres	412	148	34	24	10	38	13	25
Land Use	Intensity		ITE Code	Weekend day Trips						
				Daily	Peak Hour					
					Total	In	Out			
County Park	65	acres	412	789	234	110	124			
Rates and equations used in the analysis: Daily (weekday) trip generation County Park 2.28 trips per acre [50% entering, 50% exiting] AM peak hour trip generation County Park 0.52 trips per acre [71% in, 29% out] PM peak hour trip generation County Park 0.59 trips per acre [35% in, 65% out] Daily (weekend day) trip generation County Park 12.14 trips per acre [50% entering, 50% exiting] Weekend day peak hour trip generation County Park 3.60 trips per acre [47% in, 29% out]										

5.1 Brookdale Park – East

Uses

The Master Plan calls for the development of four baseball / softball fields, two grid fields, two hard courts, concession stand, picnic shelters, recreation trails and paths, and a maintenance facility.

Site Access and Parking

The primary entrance is located along Meridian Road approximately 380’ north of the CSX Railroad right-of-way. A secondary entrance access is proposed along Meridian Road at the northeast corner of the park site.

The east side is served by two parking lots located at the southeast and northeast corners of the site. The southeast parking lot provides 195 parking spaces while the northeast parking lot provides 99 parking spaces. The parking lots are connected to allow park users to access one lot or the other without re-entering Meridian Road.

Projected Trips – Based on the future traffic summarized in **Table 1**, the traffic volume anticipated to access the driveways located on Meridian Road is calculated. The weekday and weekend day traffic volume for these two driveways are illustrated in **Figures 3 and 4**, respectively.

5.2 Brookdale Park – West

Uses

The Master Plan calls for the development of picnic shelters, recreation trails and paths, kayak launch, and fishing piers.

Site Access

The entrance is located along County Road 50 West approximately 200' north of the CSX Railroad right-of-way.

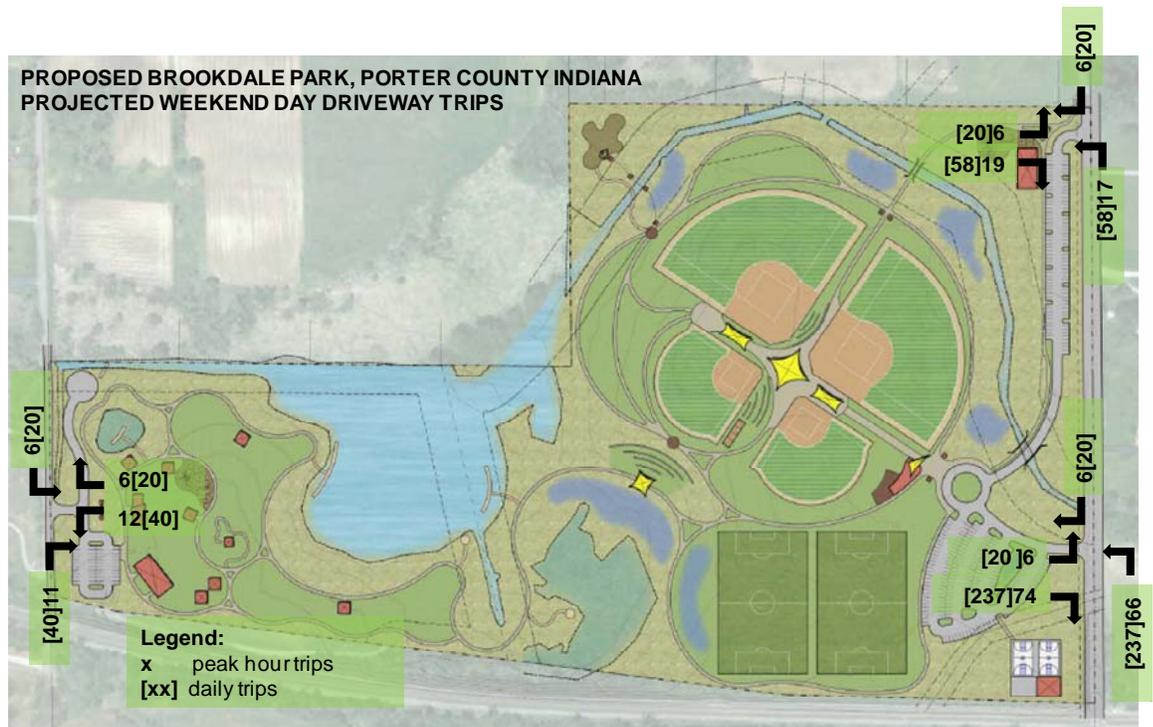
The west side is served by one parking lot located at the southwest corner of the site. The parking lot provides 44 parking spaces.

Projected Trips – Based on the future traffic summarized in **Table 1**, the traffic volume anticipated to access the driveway located on County Road 50 West is calculated. The weekday and weekend day traffic volume for these two driveways are illustrated in **Figures 3 and 4**, respectively.

Figure 3 – Weekday Driveway Trips



Figure 4 – Weekend Day Driveway Trips



6.0 Recommended Geometric Improvements

6.1 Meridian Road Corridor – South Entrance

The future northbound Meridian Road will require the installation of a dedicated left turn lane at this location to provide storage for northbound Meridian Road left turning movements into Brookdale Park. In order to install the dedicated left turn lane, a new northbound through lane will be required.

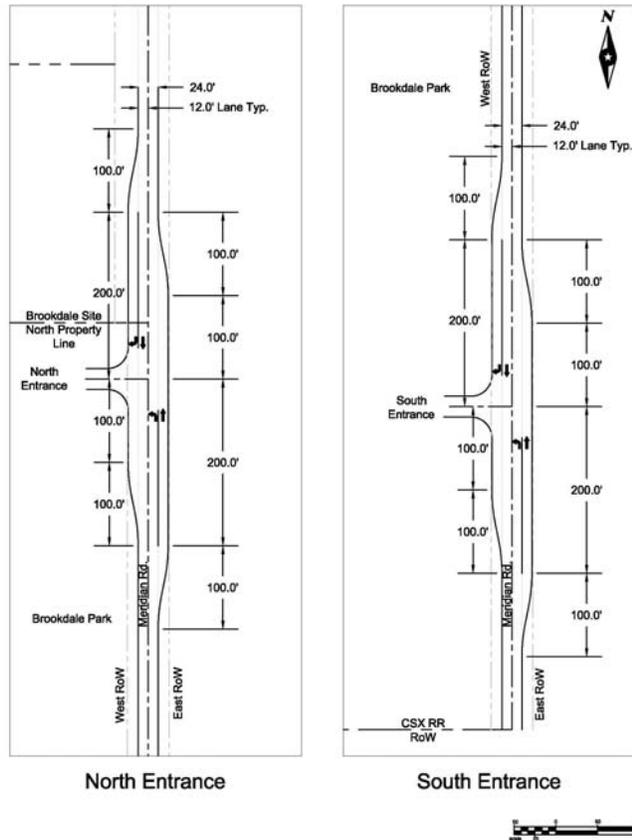
The future southbound Meridian Road right turn movement will require the installation of a dedicated right turn lane at this location to provide a deceleration lane for southbound Meridian Road right turning movements into Brookdale Park.

6.2 Meridian Road Corridor – North Entrance

The future northbound Meridian Road left turn movement will require the installation of a dedicated left turn lane at this location to provide storage for northbound Meridian Road left turning movements into Brookdale Park.

The future southbound Meridian Road right turn movement will require the installation of a dedicated right turn lane at this location to provide a deceleration lane for southbound Meridian Road right turning movements into Brookdale Park.

Figure 5 – Recommended Modified Geometry



6.3 County Road 50 West Corridor – Entrance

The future northbound and southbound County Road 50 West turning movements at this location do not require geometric modifications to this location.

7.0 Traffic Engineering Disclaimer

This Traffic Impact Study has been prepared as a component of the Brookdale Park Master Plan and is based solely on collection of currently available published data, site reconnaissance, and engineering judgment.

Should the Master Plan proceed to design and development stages, it is recommended that a detailed traffic analysis be conducted at the site including current traffic counts, traffic modeling, site surveys, and detailed traffic engineering of road geometrics and traffic control considerations.

