

**FINAL**

# VLT FACILITY OPERATION LICENSE IN PRINCE GEORGE'S COUNTY

## COMPILATION OF ALL APPLICANTS

Secondary Review of Applicants' Traffic Flow  
Studies

**FINAL**

December 18, 2013

**Sam  
Schwartz  
Engineering  
D.P.C.**

**TABLE OF CONTENTS**

1.	INTRODUCTION .....	1
2.	BACKGROUND.....	1
3.	PROJECTED CONDITIONS .....	2
3.1	Trip Distribution.....	4
3.2	Network Assignment.....	6
3.3	Mode Choice.....	7
4.	ANALYSIS .....	7
5.	PROPOSED IMPROVEMENTS.....	8
6.	PARKING AND INTERNAL ACCESS.....	9
7.	CONCLUSIONS .....	10

**LIST OF TABLES**

Table 1: Background Traffic Study Information.....	2
Table 2: Proposed Development Program (Full Build Out) .....	3
Table 3: Travel Demand Factors .....	5
Table 4: Trip Generation .....	6
Table 5: Network Assignment .....	7
Table 6: Proposed Roadway Improvements.....	9
Table 7: Proposed Parking.....	9

## **1. INTRODUCTION**

Sam Schwartz Engineering (SSE) performed a secondary review of the three applicants' traffic flow studies submitted with each of their responses to the Request for Proposal (RFP) for a Video Lottery Operation License in Prince George's County, MD. The proposals reviewed included:

- Hollywood Casino Resort at Rosecroft Raceway, Penn National Gaming, Inc. (Penn National Rosecroft)
- Parx Casino (Parx)
- MGM National Harbor Casino/Hotel (MGM National Harbor)

Prince George's County Planning Board and the staff of the Transportation Planning Section have established technical standards for the evaluation of the adequacy of transportation facilities. The Traffic Impact Analysis in Section 3 of the *Transportation Review Guidelines – Part 1, 2012*, prepared by The Maryland-National Capital Park and Planning Commission, was used as a reference for evaluating the applicant's Traffic Flow Studies.

The review included qualitative and quantitative traffic analyses performed and methodologies used, locations analyzed, the appropriateness of the peak hours selected, and the analysis results. It also included a detailed review of the trip generation estimates to determine if they are in line with VLT facilities of similar size. The assignment of these trips to different routes, arrival/departure rates; and travel modes were assumed for the study on both weekdays and weekends. The trip generation review looked at all underlying assumptions including trips per gaming position; trips associated with accessory/ancillary programming (retail, event spaces, etc.); and diverted trips (traffic already on the adjacent roadway) or linked trips (visitors moving between multiple on-site uses, such as between a racetrack and a casino). An evaluation was conducted of the potential benefits and feasibility of on- and off-site transportation improvements and mitigations. This also included a review of committed improvements by the applicant and their related costs. A review was conducted of the appropriateness of the preliminary design and size of the parking facilities and site access and circulation as it relates to autos, taxis, buses, shuttles, service vehicles, delivery trucks, and pedestrians and the potential for conflicts between these modes. Conclusions were developed to address the overall ability and feasibility for the surrounding roadway and highway network to accommodate the projected traffic.

## **2. BACKGROUND**

Friday and Saturday evenings are typically the peak hours of activity at a casino. Existing condition traffic volumes were collected by each of the applicants in the spring of 2013. Penn National Rosecroft and MGM National Harbor collected volumes on a weekday morning, weekday evening, and Saturday. Parx only collected this data on a weekday evening and Saturday. However, the weekday AM peak hour is helpful to understand since this is also one of the time periods when background volumes are high.

The Critical Lane Volume (CLV) Methodology used by Penn National Rosecroft and MGM National Harbor for their analyses is preferred for traffic impact analysis within Prince George's County as per the *Transportation Review Guidelines – Part 1, 2012*. However, Parx analyzed their study locations using the SYNCHRO software package. Since SYNCHRO is a more

robust analysis tool and considers many more factors when calculating intersection performance, its use for this study is acceptable.

The location and number of intersections (and ramps) studied by the applicants within their study areas appears to be appropriate given the scale of the project and likely paths taken by projected visitors to their site. Penn National Rosecroft analyzed the Existing 2013, No Build 2016, and Build 2016 conditions. Parx studied the Existing 2013 and Future Phase I (without Indian Head Highway interchange), Future Phase I (with Indian Head Highway interchange), and Future Phase II (with Indian Head Highway interchange). MGM National Harbor analyzed the Existing 2013, No Build and Build 2016, and No Build and Build 2036 conditions. The Background Traffic Study Information is provided in Table 1.

**Table 1: Background Traffic Study Information**

	<b>Penn National Rosecroft</b>	<b>Parx</b>	<b>MGM National Harbor</b>
<b>Prepared By</b>	Lenhart Traffic Consulting, Inc	Langan	The Traffic Group
<b># Intersections Studied</b>	8	5	10
<b># Ramps Studied</b>	0	0	7
<b>Analysis Methodology</b>	Critical Lane Volume (CLV)	SYNCHRO	Critical Lane Volume (CLV) / HCS
<i>Time Periods Analyzed</i>			
Weekday Morning (Commuter)	✓	✗	✓
Friday Evening (Commuter)	✓	✗	✗
Friday Evening	✗	✓	✓
Saturday Afternoon	✓	✗	✗
Saturday Evening	✗	✓	✓
<i>Analysis Years</i>			
Existing 2013	✓	✓	✓
No Build 2016	✓	✓	✓
Build 2016	✓	✓	✓
No Build 2036	✗	✗	✓
Build 2036	✗	✗	✓

### **3. PROJECTED CONDITIONS**

Penn National Rosecroft and MGM National Harbor each used an annual growth rate coupled with traffic projections for likely development sites in the area to calculate future background traffic volumes. However, Parx did not include background development in their future background traffic volumes which is a significant omission. This may underestimate future traffic conditions with the proposed project study area traffic network.

The Institute of Transportation (ITE) *Trip Generation Manual* is the standard by which traffic volumes are determined for specific land uses. However, empirical data that is available from surveys of analogous sites can be used to supplant the ITE data when appropriate. Trip rate per gaming position is typically used to determine traffic generation for a casino. In addition,

facilities within the casino such as hotel, food and beverage outlets, and retail are dealt with differently depending upon the facility and how the rates were calculated. Some studies have assumed that these facilities are used help to support the gambling operations while others provide a separate trip generation rate for these facilities.

In terms of casino development, Parx has proposed the highest number of gaming positions at 5,940 (Table 2). When considering only their proposed Phase I development, Parx's gaming positions is 4,130 and within the same range as the other proposals.

**Table 2: Proposed Development Program (Full Build Out)**

		Penn National Rosecroft	Parx	MGM National Harbor
<i>Background Growth</i>				
<b>Background Development</b>	<b>Growth Rate</b>	6% (2% per year for 3 years)	None	0.35% per year
		Southern Maryland Recreational Complex	None	All from Salubria/Tanger Outlet Mall
<i>Development Program</i>				
<b>Gaming Positions</b>	<b>Slots</b>	3,000 machines	4,750 machines	3,600 machines
	<b>Games</b>	140 tables	170 tables (50 Poker/120 gaming)	140 tables (30 poker/110 gaming)
		4,120 (1 per slot/8 per table)	5,940 (1 per slot/7 per table)	4,580 (1 per slot/7per table)
	<b>Entertainment</b>	2,500 seats	2,680 seats	1,000 seats
	<b>Racetrack</b>	685 seats	-	-
	<b>Hotel</b>	258 rooms	250 rooms	300 rooms
	<b>Retail</b>	-	-	-
	<b>Restaurant</b>	-	-	-

Penn National Rosecroft used the higher casino trip rates from two relevant sources. When developing gaming positions used to determine traffic generation for a casino, the assumptions of one gaming position equating to each slot machine and eight gaming positions are assigned for every table game is appropriate. It was also appropriately assumed that the gaming, hotel, food and beverage, and retail were bundled together to the casino trip generation. The use of the adjacent road peak hour for the PM peak commuter hour is appropriate since the peak hour of the generator would be later in the evening. For the entertainment facility, a trip rate per seat from the ITE Trip Generation Manual was appropriate. In addition, since the applicant assumed that the racetrack would continue to operate, the trip rate per seat from the ITE Trip Generation Manual was appropriately used. Overall, the traffic volumes developed for the three time periods appear to be appropriate.

Parx used a comparable existing Pennsylvania casino they currently operate to estimate trip generation for the proposed casino. When developing gaming positions used to determine traffic generation for a casino, the assumption of one gaming position equating to each slot machine is appropriate. The assumption of seven gaming positions are assigned for every table game is slightly less than the eight that some studies have used. The weekday PM peak hour vehicle rate is higher than the Saturday peak hour vehicle rate because trips are more concentrated in the weekday PM peak hour based on data from their comparable existing Pennsylvania casino.

It was also appropriately assumed by Parx that the gaming and food and beverage were bundled together to the casino trip generation. However, since the applicant also assumes in the proposal that the entertainment venue is bundled with the casino trip generation, vehicle trips may be understated. The trip rate per room from the ITE Trip Generation Manual was appropriately used for the hotel component. The use of separate hotel and casino vehicle trip rates is conservative since some hotel guests frequent the casino.

MGM National Harbor used Maryland State Highway Administration Trip Generation Rates from three casino studies previously submitted to the Lottery Commission. When developing gaming positions used to determine traffic generation for a casino, the assumption of one gaming position equating to each slot machine is appropriate. The assumption of seven gaming positions are assigned for every table game is slightly less than the eight that some studies have used.

It was also appropriately assumed by MGM National Harbor that the gaming, and food and beverage were bundled together to the casino trip generation. However, the applicant also assumes in the proposal that nine leased outlets, potentially ranging in size from 1,200 to 9,500 square feet, be bundled with the casino trip generation. In view of the size and uniqueness of these "destination" establishments, part of their clientele could be people specifically coming to the site for retail and would not be patrons of the casino. Because of this, some additional vehicles should be included in the trip generation to account for this.

For the entertainment facility, an alternative methodology used by MGM National Harbor in lieu of the ITE Trip Generation Manual was appropriate because it was higher than what appears in the ITE Trip Generation Manual. In addition, the trip rate per room from the ITE Trip Generation Manual was appropriately used for the hotel component. Overall, the traffic volumes developed for the three time periods appear to be appropriate with the exception of the retail component that may be understated because it is destination based.

Travel Demand Factors are presented in Table 3 and Trip Generation rates are presented in Table 4 for the three applicants.

### **3.1 Trip Distribution**

As identified in Table 3, the trip distribution proposed by each applicant appears to be reasonable for their site.

**Table 3: Travel Demand Factors**

		Penn National Rosecroft	Parx	MGM National Harbor
<i>Trip Rate (source/variable/rate)</i>				
<b>Entertainment</b>	Gaming	Franklin County Ohio  Gaming Positions <b>AM (0.16 → 1/3 PM), PM (0.49), SAT (0.56)</b>	Suburban Pennsylvania Casino  Gaming Positions <b>AM (N/A), PM (0.38), SAT (0.29)</b>	Maryland State Highway Administration  Gaming Positions <b>AM (0.06), PM (0.27), SAT (0.33)</b>
	Racetrack	ITE LU Code 441  Seats <b>AM (Closed), PM (0.02), SAT (0.04 → 2x PM)</b>	-	Derived  Seats <b>AM (0.4), PM (0.6), SAT (0.6)</b>
	Hotel	ITE LU Code 452  Seats <b>AM (0.01), PM (0.06), SAT (0.12 → 2x PM)</b>	-	-
	Retail	-	ITE LU Code 310  Rooms <b>AM (N/A), PM (0.60), SAT (0.72)</b>	ITE LU Code 310  Rooms <b>AM (0.56), PM (0.59), SAT (0.72)</b>
	Restaurant	-	-	-
		-	-	-
<i>Trip Distribution (In/Out)</i>				
<b>Entertainment</b>	Gaming	In: <b>AM (53%), PM (53%), SAT (61%)</b> Out: <b>AM (47%), PM (47%), SAT (39%)</b>	In: <b>AM (N/A), PM (66%), SAT (45%)</b> Out: <b>AM (N/A), PM (34%), SAT (55%)</b>	In: <b>AM (75%), PM (60%), SAT (53%)</b> Out: <b>AM (25%), PM (40%), SAT (47%)</b>
	Racetrack	In: <b>AM (Closed), PM (50%), SAT (50%)</b> Out: <b>AM (Closed), PM (50%), SAT (50%)</b>	-	In: <b>AM (Closed), PM (50%), SAT (50%)</b> Out: <b>AM (Closed), PM (50%), SAT (50%)</b>
	Hotel	In: <b>AM (91%), PM (66%), SAT (66%)</b> Out: <b>AM (9%), PM (34%), SAT (34%)</b>	-	-
	Retail	-	In: <b>AM (N/A), PM (51%), SAT (56%)</b> Out: <b>AM (N/A), PM (49%), SAT (44%)</b>	In: <b>AM (61%), PM (53%), SAT (56%)</b> Out: <b>AM (39%), PM (47%), SAT (44%)</b>
	Restaurant	-	-	-
		-	-	-

**Table 4: Trip Generation**

		<b>Penn National Rosecroft</b>	<b>Parx</b>	<b>MGM National Harbor</b>
<i>Project Generated Trips</i>				
	Gaming	In: <b>AM (371), PM (1,071), SAT (1,401)</b> Out: <b>AM (330), PM (948), SAT (906)</b>	<i>Phase II</i> -	In: <b>AM (213), PM (736), SAT (808)</b> Out: <b>AM (71), PM (491), SAT (717)</b>
	Entertainment	In: <b>AM (Closed), PM (25), SAT (50)</b> Out: <b>AM (Closed), PM (25), SAT (50)</b>	-	In: <b>AM (Closed), PM (200), SAT (200)</b> Out: <b>AM (Closed), PM (200), SAT (200)</b>
	Racetrack	In: <b>AM (6), PM (27), SAT (54)</b> Out: <b>AM (1), PM (14), SAT (28)</b>	-	-
	Hotel	-	-	In: <b>AM (102), PM (94), SAT (121)</b> Out: <b>AM (66), PM (83), SAT (95)</b>
	Retail	-	-	-
	Restaurant	-	-	-
	Total	In: <b>AM (377), PM (1,123), SAT (1,505)</b> Out: <b>AM (331), PM (987), SAT (984)</b>	In: <b>AM (N/A), PM (1,561), SAT (873)</b> Out: <b>AM (N/A), PM (846), SAT (1,029)</b>	In: <b>AM (315), PM (1,030), SAT (1,129)</b> Out: <b>AM (137), PM (774), SAT (1,012)</b>
<b>Overall Trip Rate (per gaming position –not including racetrack)</b>		In: <b>AM (0.090), PM (0.266), SAT (0.352)</b> Out: <b>AM (.080), PM (0.236), SAT (0.232)</b>	In: <b>AM (N/A), PM (0.263), SAT (0.147)</b> Out: <b>AM (N/A), PM (0.142), SAT (0.173)</b>	In: <b>AM (0.069), PM (0.225), SAT (0.247)</b> Out: <b>AM (0.030), PM (0.169), SAT (0.221)</b>

### **3.2 Network Assignment**

Based on independent market research performed for the Commission, the routing assignment proposed by Penn National Rosecroft appears to be reasonable for the site. The routing assignment proposed by Parx does not appear to be reasonable for the site. It appears that the applicant understates the number of patrons that would travel to the site from outside of Prince George's County using the Capital Beltway and overstates the number of patrons that would travel to the site from the south (20% along Indian Head Highway) and from Prince George's County. As a result, more vehicles should be travelling north between the site and the Capital Beltway and less to the south.

The routing assignment proposed by the applicant generally appears to be reasonable for the site. The applicant may have slightly understated the number of patrons that would travel to the site from the south along I-95 as this is projected to be the biggest draw for a casino in Prince George's County. The proposed routing of traffic to the local and regional traffic network to and from the site by each applicant is provided in Table 5.

**Table 5: Network Assignment**

	<b>Penn National Rosecroft</b>	<b>Parx</b>	<b>MGM National Harbor</b>
<i>Network Assignment by Direction/Type</i>			
North (Capital Beltway)	30%	50%	46%
South (Capital Beltway)	40%		38%
North (Local)	10%	10%	0%
South (Local)	5%	25%	6%
East (Local)	10%	10%	1%
West (Local)	5%	5%	1%
Internal	0%	0%	8%
Total	<b>100%</b>	<b>100%</b>	<b>100%</b>

### **3.3 Mode Choice**

Although transit service is provided on corridors near the Penn National Rosecroft site, it does not penetrate the site. The distances between existing bus stops and the attractions and jobs proposed for the site would be too far for most people to walk to existing transit. In order for transit to be a serious option as an alternative to a personal vehicle, service would need to be extended into the site by WMATA. Since there has been no such commitment or agreement presented as part of the application, the applicant appropriately does not reduce visitor or employee trips to the site by personal vehicle. Although not contemplated in the traffic analysis presented, these transit initiatives would reduce autos traveling to the site if implemented.

Although transit service is provided to the area around the proposed Parx site, it does not currently serve this site directly. Additional WMATA service to the site would need public funding. The applicant has presented the potential of a local shuttle bus that they could implement but no funding has been committed. These transit initiatives would reduce autos traveling to the site if implemented but they were not contemplated in the traffic analysis presented by the applicant.

Although transit service is provided to National Harbor, it does not currently serve the proposed MGM National Harbor site. The applicant has indicated that an internal shuttle bus will be provided between the main National Harbor development and hotels and the proposed casino site. The applicant does not reduce visitor or employee trips to the site by personal vehicle with the exception of the entertainment facility.

## **4. ANALYSIS**

For Penn National Rosecroft, the methodology used appears to be appropriate based on the traffic impact studies conducted in Prince George's County. Based on the results of the analysis, the effect of the project on area traffic would be extensive. However, this could be offset by measures to mitigate increased traffic in the area through applicant funded improvements at the affected intersections.

The methodology used by Parx appears to be appropriate since SYNCHRO is more robust than the CLV Method used for traffic impact studies conducted in Prince George's County. Based on the results of the analysis, the effect of the project on area traffic would be extensive. However,

with all of the proposed improvements in place, the affected movements would operate at acceptable levels of service during both time periods under Phase I and Phase II conditions. The proposed MD 210 interchanges at Old Fort Road and Livingston Road/Palmer Road would significantly add capacity and reduce congestion at these locations as compared with current conditions even with the inclusion of the projected casino traffic.

The methodology used by MGM National Harbor appears to be appropriate based on the traffic impact studies conducted in Prince George's County. Based on the results of the 2016 and 2036 analyses, the effect of the project on area traffic would be minimal as only one intersection would be adversely affected by the proposed project. However, the impact could be offset through the implementation of mitigation measures at the affected intersection (MD 414 and National Avenue).

## **5. PROPOSED IMPROVEMENTS**

An assessment was conducted of the proposed improvements planned by the three applicants including relative costs, committed funding, and need for mitigating impacts so that their project can be implemented. For Penn National Rosecroft, it appears at the conceptual level that the proposed improvements would minimize traffic disruptions to the affected intersections as a result of the proposed project. However, the extent of the roadway widening proposed make it difficult at the conceptual level to assess the full cost of the right-of-way acquisitions, the availability of the properties needed for widening, and the approvals needed from Prince George's County and the State of Maryland. With the benefit of this information, the timeline and cost to implement these improvements could increase substantially. However, the applicant has agreed to pay \$26 million for these improvements including funds for utilities, right-of-way acquisition, and for contingencies.

In addition, the applicant does not address the sharp angle and sight distance issues at the Brinkley Road and Rosecroft Drive intersection. It should be recommended that as part of the mitigation, this intersection be modified so that Rosecroft Drive meets Brinkley Road as close to 90 degrees as possible. Without all of the recommended roadway improvements in place, it would be difficult for local traffic to operate without significant delays.

Parx is being constructed in an area that is currently challenged in terms of roadway capacity. A study of the MD 210 (Indian Head Highway) corridor identifies the degree to which extensive infrastructure improvements are needed including the grade separation of many of the at-grade intersections. Parx will fund the total cost of the MD 210 grade separation projects at Livingston Road/Palmer Road and Old Fort Road with the understanding that, in return Parx will recoup the contribution that exceeds \$100M through the local impact funding stream that is statutorily dedicated to Route 210 improvements. The proposed MD 210 interchange at Old Fort Road will follow the concept designs approved as part of the MD 210 Multi-Modal Study except that Parx has proposed to include a direct entrance ramp from southbound MD 210 (bypassing the Old Fort interchange) into the site and a direct exit ramp from the parking garage to southbound MD 210 at the MD 210 and Old Fort Road interchange.

Although completion of the interchanges within the projected timeframe (2 ½ years) is plausible, the schedule is very aggressive and does not provide much room for unforeseen delays (especially in terms of right-of-way acquisition). The completion of the MD 210 interchanges at Livingston Road/Palmer Road and Old Fort Road are critical for accommodating site generated traffic in both Phases I and II. Funding for other roadway improvements (previously identified as

\$10M for Phase I) is also needed to accommodate site generated traffic including the development of the two site driveways, widening of Livingston Road, and intersection improvements at the Livingston Road and Old Fort Road/Oxon Hill Road intersection.

For MGM National Harbor, it appears at the conceptual level that the proposed improvements would minimize traffic disruptions for the area roadway network as a result of the proposed project. The applicant is committed to pay 100% of the \$3,676,571 in roadway improvements proposed. The applicant would need to obtain the necessary approvals from Prince George's County and the State of Maryland to implement the planned improvements. Highlights of the costs presented by the applicants are provided in Table 6.

**Table 6: Proposed Roadway Improvements**

	Penn National Rosecroft	Parx	MGM National Harbor
<i>Proposed Roadway Improvements</i>			
<b>Number of Locations</b>	7	6	2
<b>Cost Estimate</b>	\$26,000,000	Phase 1: \$10,000,000 Phase 2: \$200,000,000+	\$3,676,571

## **6. PARKING AND INTERNAL ACCESS**

A preliminary qualitative assessment of internal access and parking concept plans was conducted for the three sites. At Penn National Rosecroft, the layout and overall size of the site allows for vehicles to move freely around the site and into and out of parking facilities. The Parx site takes advantage of multiple access points to accommodate entering and exiting flows. However, based on preliminary plans, the small overall size of the site layout may not allow for vehicles to move freely around the site and could be an issue. However, this could be addressed as detailed designs are prepared. The layout and overall size of the site allows for vehicles to move freely around the site and into and out of parking facilities at designated locations along the one-way counter-clockwise ring road. Based on the numbers presented in Table 7, all of the sites are proposing enough parking spaces to accommodate anticipated demand.

**Table 7: Proposed Parking**

	Penn National Rosecroft	Parx	MGM National Harbor
<i>Parking Spaces by Type</i>			
<b>General Surface</b>	1,335	300	0
<b>General Garage</b>	3,098	5,011	3,516
<b>Valet</b>	-	-	649
<b>Handicapped</b>	97	-	65
<b>Employee</b>	490	-	752
<b>Reserved</b>	51	-	10
<b>Racing</b>	61	-	-
<b>Total</b>	<b>5,132</b>	<b>5,311</b>	<b>4,992</b>

## 7. CONCLUSIONS

### Penn National Rosecroft

The project will generate levels of traffic during key hours on Friday and Saturday evenings that will require extensive mitigation. However, the applicant's plan to accommodate projected site traffic is workable at the schematic level. More detailed design work is needed to confirm that is the case. In addition, the applicant has committed to fully fund the \$26 million cost for mitigation measures proposed to make sure the local community is not adversely affected by traffic generated by the proposed development. However, without all of the recommended roadway improvements in place, it would be difficult for local traffic to operate without significant delays.

**Outstanding Issues:** The applicant needs to address the sharp angle and sight distance issues at the Brinkley Road and Rosecroft Drive intersection. They also need to confirm the full cost of the right-of-way acquisitions, the availability of the properties needed for widening, and the approvals needed from Prince George's County and the State of Maryland.

### Parx

The project is being constructed in an area that is currently challenged in terms of roadway capacity. A study of the MD 210 (Indian Head Highway) corridor identifies the degree to which extensive infrastructure improvements are needed including the grade separation of many of the at-grade intersections. Parx will fund the total cost of the MD 210 grade separation projects at Livingston Road/Palmer Road and Old Fort Road with the understanding that, in return Parx will recoup the contribution that exceeds \$100M through the local impact funding stream that is statutorily dedicated to Route 210 improvements. The proposed MD 210 interchange at Old Fort Road will follow the concept designs approved as part of the MD 210 Multi-Modal Study except that Parx has proposed to include a direct entrance ramp from southbound MD 210 (bypassing the Old Fort interchange) into the site and a direct exit ramp from the parking garage to southbound MD 210 at the MD 210 and Old Fort Road interchange.

Funding for other roadway improvements (previously identified as \$10M for Phase I) is needed to accommodate site generated traffic including the development of the two site driveways, widening of Livingston Road, and intersection improvements at the Livingston Road and Old Fort Road/Oxon Hill Road intersection. With all of the proposed improvements in place, the affected movements would operate at acceptable levels of service during both time periods under Phase I and Phase II conditions. Based on the analysis results, the proposed MD 210 interchanges at Old Fort Road and Livingston Road/Palmer Road would significantly add capacity and reduce congestion at these locations as compared with current conditions even with the inclusion of the projected casino traffic.

**Outstanding Issues:** Although completion of the interchanges within the projected timeframe (2 ½ years) is plausible, the schedule is very aggressive and does not provide much room for unforeseen delays (especially in terms of right-of-way acquisition). The completion of the MD 210 interchanges at Livingston Road/Palmer Road and Old Fort Road are critical for accommodating site generated traffic in both Phases I and II.

**MGM National Harbor**

This project is being constructed on a site that already has the existing roadway infrastructure in place to accommodate it. Based on the analysis, there is only one intersection out to the year 2036 that requires infrastructure improvements as a result of site traffic. The applicant has committed to pay for the improvements needed for this intersection as well as roadway improvements needed to facilitate on site traffic circulation.

**Outstanding Issues:** The size and uniqueness of the nine leased outlets proposed, potentially ranging in size from 1,200 to 9,500 square feet, have been categorized as "destination" establishments by the applicant. Since part of their clientele could be people specifically coming to the site for retail and would not be patrons of the casino, some additional vehicles should be included in the trip generation to account for this.