Attendance Projections and Admission Fee Recommendations for the Museum of Railroad Technology

Harrison Price Company

Recommended Citation
Charrette Conference

DEVELOPMENT POTENTIALS FOR
ADVENTURE AMERICA IN WASHINGTON, DC

December 11 & 12, 1986

Prepared for:
Adventure America, Inc.

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Section 1

INTRODUCTION

Harrison Price Company was retained in December 1986 to organize and carry out a charrette conference directed at defining an optimum concept and economic potential for Adventure America, a commercial attraction to be developed in Washington, DC.

The goal of the client is to offer an attraction developed on the immense historical and governmental thematic base of this great city. The project is aimed directly at the millions of visitors who come each year to the Nation's capital. Quoting the client concept paper:

"Washington attracts these people because it is the active center of American history and power, the location of our great moments and monuments, the site of or shrine to events and institutions we all know and revere.

While there are many places in Washington to 'visit,' there is no place that:

(1) makes American history and its heroes come to life;

(2) is entertaining and fun and allows the visitor to interact with the environment;

(3) puts both the American and Washington experience in perspective, i.e., that enables the visitor to better enjoy the other Washington attractions (e.g., the Washington Monument or Lincoln Memorial) by bringing alive the historic events they represents; and
(4) speaks to visitors of all ages in the media of today; there is no use of television, or robotics or holographics, no special effects, no thrills. This is not only true for children and adults but also for seniors."

Thus the client aims to intercept the visitor and provide an exposure to the historical lore and current ambience of Washington, DC in an overview sense much as the Universal City Tour center provides the visitor to Southern California with a first-hand perspective of the movie and television industry. The project will contain an educational, entertainment and orientation program mix that will complement the existing tourist attraction of the nation's capital. Location within an existing collection of national landmarks gives this development enormous potential for market penetration of the established tourism base.

Some consideration has been given to location of the project, but specific identification of sites has been deferred awaiting classification of specific scope and content. Similarly, precise content of the project is still to be firmed up; in fact, that is the prime first step of the charrette conference, in which Harrison Price Company was authorized to assemble a group of experts from the attraction business including designers, managers and planners to carry out this mission.

Participants are listed in Table 1. Barry Howard is an internationally known exhibit designer and museum and exposition master planner. James Wright, President of Space Needle Corporation, has an extensive background in attraction management at Six Flags and the Space Needle. Allen Eskew was responsible for the excellent site development plan at New Orleans for Louisiana World Exposition and heads up an extensive architectural practice with a heavy focus on recreation projects. Wayne Williams is a pioneer in the field of recreation project master planning and was the master planner retained to guide the
Table 1
LIST OF PARTICIPANTS

Samuel Berger
Gerald Gilbert
Michael Levitt
CLIENT REPRESENTATIVES

Allen Eskew (Architect)
ESKEW, VOGT, SALVATO AND FILSON

Barry Howard (Exhibit Designer)
BARRY HOWARD AND ASSOCIATES

Wayne R. Williams (Architect)
SMITH AND WILLIAMS

Jim Wright, President (Attraction General Manager)
SPACE NEEDLE CORPORATION

Harrison A. Price
Nicholas S. Winslow
HARRISON PRICE COMPANY
evolution of the Universal City attraction complex for over a decade. Nick Winslow and Harrison Price between them have 45 years of experience in economic planning and feasibility analysis for several hundred attractions including most of the new generation theme parks and sea life parks in existence and the Corning Glass, Busch Gardens, Hershey and Universal tours. As five year head of Paramount's Future General, Winslow has specialized background in high impact film and other high-tech approaches to the attractions industry which are relevant to the attraction proposed in Washington, DC.

The client group was represented by Samuel Berger, Gerald Gilbert and Michael Levitt.

Operating in the original storyboard conference style developed by Walt Disney, an agenda was prepared as an approximate guideline for conducting the meeting which then was chaired by Harrison Price. The agenda is outlined in Table 2.

The main thrust of the charrette was to explore an entertainment program mix that would, in the opinion of the group, generate required visitor interest and a feasible economic return. Within that general direction, the charrette had these specific goals:

- Quantify the potential visitor market for the proposed entertainment orientation and educational facility.
- Quantify market penetrations within the primary, excursion and tourist markets.
- Identify entertainment mix.
- Establish a quality of experience which would distinguish this facility as a major tourist attraction in Washington, DC.
Table 2

ADVENTURE AMERICA CHARRETTE AGENDA

1. Introduction and orientation
   • Participants
   • Role of this charrette in the planning process

2. Project background
   • Development objectives
   • Review of site characteristics (size, location, accessibility, surrounding land uses)
   • Possible constraints on operations (weather conditions/seasonality, site terrain, local availability of supporting infrastructure—hotels/motels, campgrounds, food service)

3. Preliminary indications of market support
   • Resident market size and characteristics
   • Tourist market
   • Competitive environment (other attractions in area and attendance experience)
   • Visitor accommodations in the area

4. Experience of other attractions in the area
   • Market penetration and attendance
   • Operating season
   • Admission prices

5. Basic development parameters
   • General scope of project vis-a-vis indicated market support
   • Recommended operating season
   • Visitor length of stay objective

6. Specific concept and content
   • Thematic orientation
   • Entertainment/recreation activities
   • Food/beverage service facilities
   • Merchandise sales facilities
   • Administrative and support facilities
   • Probable phasing of development

7. Preliminary estimates for proposed attraction
   • Market penetration and attendance
   • Design day attendance
   • Physical capacity requirements
   • Overall acreage requirements (first phase plus future expansion)

8. Summary and adjournment
   • Recap of charrette findings
   • Projected schedule of completion of summary paper
   • Assignment of individual responsibilities and follow up input from participants
   • Adjournment
- Develop macro economics which would indicate development costs and square footage requirements for entertainment components.

- Analyze internal design sequences and configurations and planning constraints.

- Analyze thematic organization for exhibitry and filmic components.

This report attempts to highlight and summarize the consensus of the participants in the charrette. The group was essentially in accord on key elements of the project and its final concept, and the positiveness of the opportunity it represents.
Section 2

THE MARKET ENVIRONMENT

The charrette group had been circulated with a fairly recent ERA feasibility analysis for the proposed Childrens Island theme park exhibit center and specialty retail complex to be located in Washington, DC.

That report sizes the resident market in 1986 as follows (in millions):

<table>
<thead>
<tr>
<th>Resident Market</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary 0-50 miles</td>
<td>3.183</td>
</tr>
<tr>
<td>Secondary 50-100 miles</td>
<td>2.286</td>
</tr>
<tr>
<td>Total</td>
<td>5.469</td>
</tr>
</tbody>
</table>

The tourist market from beyond 100 miles, in two categories (business visitors and non-business visitors) is estimated in 1986 as follows (in millions):

<table>
<thead>
<tr>
<th>Visitor Market</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business visitors</td>
<td>4.900</td>
</tr>
<tr>
<td>Non-business visitors</td>
<td>6.500</td>
</tr>
<tr>
<td>Total</td>
<td>11.400</td>
</tr>
</tbody>
</table>

The total market available in Washington, DC in 1987 is thus estimated at 15.9 million.

It is enhanced by pass-through and day-trip visitors not staying overnight which is estimated to total 5.0 million.

A substantiating check on the foregoing level of overnight visitation is indicated by aggregate hotel room count estimated at 60,000 rooms and computation of overnight visitors as follows:
The number of visitors computed above (10.9 million) compares closely to the foregoing estimate of 11.4 million overnight visitors.

The total resident and overnight visitor market of 15.9 million is a major market for attraction development. Smaller than New York, Los Angeles or Orlando, it is, for example, as large as the San Francisco, Oakland Bay Area. It has a high non-resident component and is enhanced by a large quantity of day visitors.

Seasonality of the market place is a factor to be reckoned with. Theme parks in the general area (Busch Gardens, The Old Country, Hershey Park, King's Dominion) and the amusement park, Wild World at Largo all operate seasonally, generally weekends after Easter until June and after Labor day, and full time in the summer for the period April through October. For these parks, the season is on the order of 140 to 150 days. According to 1983 data assembled by ERA, certain public attractions in Washington, DC operating throughout the year corroborate a relatively strong year around potentiality for the proposed project:

<table>
<thead>
<tr>
<th>Period</th>
<th>Air &amp; Space Museum</th>
<th>Washington Monument</th>
<th>Mount Vernon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime, June-September</td>
<td>39.1%</td>
<td>48.1%</td>
<td>46.0%</td>
</tr>
<tr>
<td>Shoulder, March-May, October</td>
<td>37.8%</td>
<td>35.1%</td>
<td>44.5%</td>
</tr>
<tr>
<td>Off Season, Jan-Feb, Nov-Dec</td>
<td>23.1%</td>
<td>16.8</td>
<td>9.6%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

What is indicated above is a strong shoulder season and potential for full year operation, particularly for a protected, indoor activity.
The group did some rough estimating on the makeup of market segments as follows:

<table>
<thead>
<tr>
<th>Segment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families without children</td>
<td>42%</td>
</tr>
<tr>
<td>Families with children</td>
<td>25%</td>
</tr>
<tr>
<td>School groups (mostly high school)</td>
<td>15%</td>
</tr>
<tr>
<td>Foreign/International</td>
<td>9%</td>
</tr>
<tr>
<td>Conventioneers</td>
<td>4%</td>
</tr>
<tr>
<td>Senior Citizens</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The importance of the family trade and visiting school children (82 percent of the market) is readily apparent.
Section 3

A RECOMMENDED CONCEPT OF DEVELOPMENT

The charrette group spent the second half of the first day and most of the second day of the process synthesizing a specific concept of a project that is appropriate for Washington, DC. In developing its concept, the charrette group considered the size and seasonality of all sectors of the marketplace, the objectives and agendas of visitation, the nature of competition and other factors and guidelines controlling the creation of the attraction. This was interspersed with a discussion of the size and type of site required for the proposed project and its probable economic performance which is treated in Section 4.

Goals and Objectives of the Project and Its Concept of Development

Washington, DC has few, if any, good quality, value priced family attractions. None are oriented to nighttime operation and only museums offer an agenda for bad weather attendance. Goals and objectives for the project ascertained by the group include the following:

- The project must be entertaining. This is a first priority. It must not be static with limited appeal for repeat attendance.

- The project must have educational substance.

- Although it is not a "tourist information center," per se, the project should serve a visitor orientation function; in a sense explaining why the visitor is there and what he can do. The experience serves as an historical and geographic road map for the Washington visit, improving visitor access to and appreciation of
the lore of the City. Too often a visit to Washington is limited to the Mall and Arlington Cemetery.

- The visitor experience must be uplifting, reinforcing a sense of pilgrimage and homage to the spiritual center of America.

- The project is a private for-profit venture standing on its own economic force.

- The project must be a high quality project making use of innovative and state-of-the-art technology in most of its presentations. To maintain freshness and gain repeat visitation, software must be changeable.

In evaluating these general objectives, the group made these additional comments:

- Beware of the dangers of too much glitz and show-biz in a Washington, DC attraction. The need for quality and authenticity must rule. The city already has a great collection of architecture and real national monuments. The tourists that we are trying to entertain must leave this facility with the feeling that they have experienced an attraction with as much perceived value and quality as anything they will visit during their stay.

- Size of attractions is not as important as quality. Push for a context of smaller and more intense development.

- Length of stay should be short—around two hours, not five hours. Don't try to usurp too much of the visitor's schedule—don't substitute this program for the visitors' visits to the real monuments and landmarks.
Visitors to Washington are more focused on monuments and landmarks—a national sense of "Pilgrimage." They are looking for the heartbeat of the country. It is a real life glimpse of a high school civics class in action.

The personality of the attraction experience should be dynamic, not passive. The show components should have the type of exhibits that get the heart rate up! High impact film is one of the greatest of all mediums for conveying emotion and energizing the visitor and will be important in creating the concept. The visitor should leave feeling good and having satisfied his typically American appetite for education through entertainment.

The format should be strong on storytelling—portraying the subject manner in an entertainment format—something like the "Steve Allen Show." The project can humanize the people in our history, make history come alive. Its presentations should convey a Mark Twain-like humor reflective of the American quality of life.

Washington, DC is the spiritual heart of the country. The story of Washington is the story of the nation.

This project is not a ride park or a theme park; it is not a museum; it is not a visitor center. It may have elements of all three within its program but it has its own specific mix.

The relationship of this project to what is offered at Universal Studios Tour needs to be understood. The two are quite different. Universal succeeds because the entertainment industry it displays is not otherwise available to the visitor. The attractions of Washington, DC are real and, to a greater extent,
accessible. The problem of that access is that the visitor is more often than not disappointed. In Universal, illusion of reality and glitz is legitimate. In this project, it is necessary to avoid commercializing our history and our national monuments. The project must have higher aspirations. This project should avoid being cute in the manner of "It's a Small World" at Disneyland.

- The project can run all year in this market (with staffing varied by design to accommodate peaks and valleys).
- The project has no archival mandate, rather it is entertaining, educating, orienting and uplifting.
- The project must be sensitive to ethnicity (American history is largely dominated by white Protestants but the makeup of the nation is diverse).
- The project can fill several voids in the marketplace; something for children to do, something to do at night, a place with a family dining experience built into it.

With this preamble for considering concept development, the charrette proceeded with a discussion of design approaches.

**Project Concept**

Although many specific content ideas were put forth, the thrust of the concept development discussion was how to master plan the project rather than articulating its details.

Barry Howard called for an implosion of ideas for entertainment referring to concentration and intensity of the experience. The project design approach parallels the Monterey Aquarium (in a small space) as contrasted to Sea World on several acres.
The project should deal with the past, the present and the future of Washington, DC. It should show that America's dream is alive and well, and that freedom remains our central focus in spite of its heavy cost. It should deal with the City of Washington and the workings of government and what they represent.

Barry Howard recommended an approach to design organization using the symbology of the acronym ADROIT, as follows:

\[ \text{A} \rightarrow \text{D} \rightarrow \text{R} \rightarrow \text{O} \rightarrow \text{I} \rightarrow \text{T} \]

In the above sequence A stands for arrival at the portal or plaza, in this case arrival at the project and the city itself. This is where the visit to Washington starts. This is where a larger understanding of the drama and history of the city begins. D stands for decompression, a place for backing off and getting ready (also food service and merchandising). R stands for reception and sets up the pre-show. O stands for orientation (shows, kiosks, merchandise) and launches activity patterns in several nodes labelled I for interpretation. T stands for tabulation, a summary and final statement of the experience and a place where the visitor is prepared for his trip into the city.

This final stage of the project can function as a living calendar—providing orientation and access for the visitor as a major function of the facility. Perhaps a section of the post-show experience (T) could be devoted to the development of the most comprehensive calendar of daily events happening around DC. Such a listing would track not only cultural entertainment venues, but would also identify public hearings and committee work with the government. Such a service would let the visitor
choose a visit to a particular event where the inner workings, the wheels of government can be seen turning.

As will be developed later in Section 4, the project capacity goal is predicated on a design day with 2,561 visitors on site. This requires a spread of events, for example, like the following instantaneous activity distribution:

<table>
<thead>
<tr>
<th>Activities For</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 things for 10 people</td>
<td>100 people</td>
</tr>
<tr>
<td>10 things for 20 people</td>
<td>200 &quot;</td>
</tr>
<tr>
<td>4 things for 300 people</td>
<td>1,200 &quot;</td>
</tr>
<tr>
<td>Food service</td>
<td>300 &quot;</td>
</tr>
<tr>
<td>Shopping</td>
<td>300 &quot;</td>
</tr>
<tr>
<td>1 thing for</td>
<td>500 &quot;</td>
</tr>
<tr>
<td></td>
<td>2,600 people</td>
</tr>
</tbody>
</table>

A more specific schematic flow for the project developed in the second day is shown in Figure 1. Some of the possible show elements within this flow chart are identified as follows:

- A big show with perhaps a 360° screen or IMAX dealing with the history of the city, its institutions and its touchstones like the Oval Office.

- A Showscan/Intamin 40-seat simulated ride through the city. The vehicle could be the President's helicopter; its route would show all of Washington and finish up on the White House lawn. This is a very visceral "ride" experience and is comparable to the new Lucas attraction at Disneyland (Star Tours).

- By means of networked, large-scale video, a presentation from the gallery in Congress, the Supreme Court in session, critical hearings in process and other scenes of the government in action.
Figure 1

SCHEMATIC PLAN FOR THE PROJECT

Pre-Show

Why Am I Here?

The Government - How It Works

The City - Its Fabric

Heroes Villains Crises

Merchandise Service

Food Service

Final Show - Where Are We Going?

Post Show - How Do I Get There?

Gift Shop - What Can I Buy?

{ A strong welcome

A large scale multi-media environment, fixed program, an inspirational overview

Informational Function

Showscan/Intamin Simulator
A presentation on John F. Kennedy, his life, his involvement in politics and his contribution to American history.

TV retrieval functions as part of the informational and trip organizing functions of the center.

A combination film and live actor presentation like the Saskatchewan presentation at Expo 86 in Vancouver, or an actor's image treatment comparable to the Spirit Lodge presentation of General Motors at the same event.

Thematic treatment for the project was discussed at length and several possibilities were identified, as follows:

**Thematic Subjects:**
- Freedom
- Democracy
- Pluralism
- Politics
- Communications
- Discovery/Invention
- Crises
- Technology/Enterprise
- Participation
- Humor

**Thematic Storyline Vehicles:**
- The Physical City (architecture)
- National Heroes
- American History
- Government
- World Focus

Finally, the group discussed at length the constraints and opportunities of the project which must be dealt with in developing its format, such as:

- Adequate critical mass and entertainment value.
- A need for bi-partisan treatment.
- Sensitivity of the subject matter.
- Appeal to a broad cross-section of the population.
Section 4

ECONOMIC AND PHYSICAL PARAMETERS OF THE PROJECT

The charrette group made several iterations of economic performance during its two-day process. They are summarized in this section which first treats site requirements at different attendance levels and then, in sequence, site location considerations, required market penetration (to achieve 1.5 million attendance—the project attendance goal selected by the group from the matrix), development costs, project profitability and supportable investment.

Site Requirements

Area requirements for the proposed project are computed in Table 3, Project Area Requirements. This table shows that for 1.0 million attendance a 70,000-square-foot facility is required. For 3.0 million attendance a 210,000-square-foot facility is required. Space in between is shown for 1.5 million, 2.0 million and 2.5 million attendance. As indicated, space requirement for the kind of project under discussion is intense like a museum—not spread out as in the theme/amusement attraction business.

It was the consensus of the group that the 1.5 million attendance model shown above is an appropriate target for this project assuming that a strong, broad based attraction is developed (a project perceived as a visitor center would not attract 1.5 million). This attendance requires building space of 105,000 square feet which suggests land requirements in the range of 1.5 acres (no less) up to 2.5 acres depending on number of floors and set backs. Probable site requirement is 2 acres excluding parking.
Table 3  
PROJECT AREA REQUIREMENTS

<table>
<thead>
<tr>
<th>Annual Attendance</th>
<th>1.0 Million</th>
<th>1.5 Million</th>
<th>2.0 Million</th>
<th>2.5 Million</th>
<th>3.0 Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Month @ 12%</td>
<td>120,000</td>
<td>180,000</td>
<td>240,000</td>
<td>300,000</td>
<td>360,000</td>
</tr>
<tr>
<td>Peak Week (divided by 4.43)</td>
<td>27,088</td>
<td>40,632</td>
<td>54,176</td>
<td>67,720</td>
<td>81,264</td>
</tr>
<tr>
<td>Peak Day @ 18%</td>
<td>4,896</td>
<td>7,314</td>
<td>9,751</td>
<td>12,189</td>
<td>14,627</td>
</tr>
<tr>
<td>Peak On-Site @ 35%</td>
<td>1,707</td>
<td>2,561</td>
<td>3,414</td>
<td>4,268</td>
<td>5,121</td>
</tr>
<tr>
<td>Cars @ 50% by car &amp; 3 persons per car</td>
<td>284</td>
<td>427</td>
<td>569</td>
<td>711</td>
<td>853</td>
</tr>
<tr>
<td>Total Parking</td>
<td>300</td>
<td>450</td>
<td>600</td>
<td>750</td>
<td>900</td>
</tr>
<tr>
<td>Space Needs @ 40 sf/person net of parking and setbacks)</td>
<td>68,300</td>
<td>102,440</td>
<td>136,560</td>
<td>170,720</td>
<td>204,840</td>
</tr>
<tr>
<td>Use (s.f.)</td>
<td>70,000</td>
<td>105,000</td>
<td>140,000</td>
<td>175,000</td>
<td>210,000</td>
</tr>
</tbody>
</table>

Source: Harrison Price Company.
Site Location

It was the unanimous opinion of the charrette that the site needs first to be in the district and second within the district it needs to be near the Mall within walking distance for most visitors and with close proximity to the Metro System. Ready access to available tourism is the key consideration. It is not a long stay project with inherent longer distance drawing power.

In addition, suburban locations for major attraction developments are fought strongly by local citizens. Local DC governmental processes will be more supportive of an attraction development because of its obvious contribution to employment, touristic enhancement and other impacts of economic development which are of less direct interest to suburban residents.

Location near the Mall is more important than availability of parking. However, the need for site location adjacent to the Mall will make it extremely difficult if not impossible to find an adequately sized property that is economically viable. Therefore, one possibility may be to embed the Adventure America facility within an existing building or complex. Care should be taken that the project have its own direct access and the possibility of major external signage.

In the context of location, it was stated that the most obvious architectural opportunity would be to design a free standing facility that in its own design would generate strong excitement and a signature statement with a clear purpose.

Rehabilitation of an existing structure probably involving mixed use (like the railroad station) is a possible approach to site location which could have salutary impact on site acquisition costs.
It does not appear to be a valid idea to consider Children's Island as the project site. It is too big for the project concept and its access is too difficult for the kind of project under consideration.

Required Market Penetration

Attendance of 1.5 million per year would require the following market penetrations:

<table>
<thead>
<tr>
<th>Segment</th>
<th>Market Penetration</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourists</td>
<td>11.4</td>
<td>1,170,000</td>
</tr>
<tr>
<td>Residents</td>
<td>5.5</td>
<td>330,000</td>
</tr>
<tr>
<td>Total</td>
<td>16.9</td>
<td>1,500,000</td>
</tr>
</tbody>
</table>

Market penetrations of this order-of-magnitude are obtainable with a project concept of sufficient force and impact.

Development Costs

Based on unit cost factors for comparable kinds of exhibitry and attraction development, costs of development for the project exclusive of land costs are approximated as follows:

- **Project Building Space**: 105,000 square feet
  - Building Costs (105,000 x $150 per square foot): $15.75 million
  - Show Costs (105,000 divided by two x $300 per square foot): $15.75 million
- **Total Development Costs** (excluding land): $31.50 million

There was considerable discussion on the above unit costs. These values ($150 per square foot for building and $300 per square foot on half the space for show) are considered to be high enough to mount a first-class show and develop a building with a strong architectural statement.
Project Profitability

Table 4, Project Profitabilities and Supportable Investment, estimates profitability at 1,500,000 attendance. Three levels of per capita expenditure on gate, food and merchandise are shown, $10, $11 and $12. Net operating profit ranges from $2.815 million to $4.315 million for this per capita range.

Supportable investment levels are shown on two bases, the first 14 percent return, indicates a supportable investment ranging from $20.1 million to $30.8 million. The second, a rule of thumb in the attraction business for maximum supportable investment indicating that Gross Revenue divided by Investment = 0.6, suggests a supportable investment ranging from $26.3 million to $31.7 million.

These values at the high end relate satisfactorily to the development cost of $31.5 million if land is provided without cost. With real estate in the Mall at very high values, the project clearly cannot carry an open market purchase of land.

The key to the feasibility of the project is determining what kind of creative real estate arrangements can be made. If the project is created as part of a mixed use development either new or as a rehabilitation in which all or part of the land cost is carried by the overall development, then the indicated cost of developing Adventure America may be brought in line with its indicated profitability. The project may also pay rent and justify its investment in show costs if the right kind of rental can be negotiated for a building structure.

Costs of development may also be slightly offset by institutional investments of sponsors. The range of potential values considered likely by the group is 5 to 10 percent of development costs.
Table 4
PROJECT PROFITABILITIES AND SUPPORTABLE INVESTMENT
AT 1.5 MILLION ATTENDANCE LEVEL
(Revenue and Expense in Millions)

<table>
<thead>
<tr>
<th>Gate, Food and Merchandise Per Capita Expenditures</th>
<th>$10.00</th>
<th>$11.00</th>
<th>$12.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admissions Revenue</td>
<td>$7.500</td>
<td>$8.250</td>
<td>$9.000</td>
</tr>
<tr>
<td>Merchandise Revenue</td>
<td>3.750</td>
<td>4.125</td>
<td>4.500</td>
</tr>
<tr>
<td>Food Service</td>
<td>3.750</td>
<td>4.125</td>
<td>4.500</td>
</tr>
<tr>
<td>Miscellaneous Income</td>
<td>0.750</td>
<td>0.750</td>
<td>0.750</td>
</tr>
<tr>
<td>Gross Revenue</td>
<td>$15.750</td>
<td>$17.250</td>
<td>$19.000</td>
</tr>
<tr>
<td>Less Cost of Goods Sold</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td>$1.250</td>
<td>$1.375</td>
<td>$1.500</td>
</tr>
<tr>
<td>Merchandise</td>
<td>1.875</td>
<td>2.062</td>
<td>2.250</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.250</td>
<td>0.250</td>
<td>0.250</td>
</tr>
<tr>
<td></td>
<td>$3.375</td>
<td>$3.687</td>
<td>$4.000</td>
</tr>
<tr>
<td>Net Revenues</td>
<td>$12.375</td>
<td>$13.563</td>
<td>$15.000</td>
</tr>
<tr>
<td>Operating Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel</td>
<td>$5.000</td>
<td>$5.250</td>
<td>$5.500</td>
</tr>
<tr>
<td>Maintenance</td>
<td>0.750</td>
<td>0.750</td>
<td>0.750</td>
</tr>
<tr>
<td>Advertising</td>
<td>1.575</td>
<td>1.725</td>
<td>1.900</td>
</tr>
<tr>
<td>Utilities</td>
<td>0.735</td>
<td>0.735</td>
<td>0.735</td>
</tr>
<tr>
<td>Insurance</td>
<td>0.200</td>
<td>0.200</td>
<td>0.200</td>
</tr>
<tr>
<td>Taxes</td>
<td>0.300</td>
<td>0.300</td>
<td>0.300</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.250</td>
<td>0.275</td>
<td>0.300</td>
</tr>
<tr>
<td></td>
<td>$8.810</td>
<td>$9.235</td>
<td>$9.685</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>$3.565</td>
<td>$4.328</td>
<td>$5.315</td>
</tr>
<tr>
<td>Less Revenue for Reinvestment</td>
<td>$0.750</td>
<td>$0.875</td>
<td>$1.000</td>
</tr>
<tr>
<td>Net Operating Profit (Before Tax, Interest, and Depreciation)</td>
<td>$2.815</td>
<td>$3.453</td>
<td>$4.315</td>
</tr>
<tr>
<td>Supportable Investment at 14% ROI (millions)</td>
<td>$20.1</td>
<td>$24.7</td>
<td>$30.8</td>
</tr>
<tr>
<td>Supportable Investment at Gross Revenue divided by 0.6</td>
<td>$26.3</td>
<td>$28.8</td>
<td>$31.7</td>
</tr>
</tbody>
</table>
The first per capita expenditure level chosen by the group was the lower value of $10 in Table 4. The feasibility of driving that per capita higher to the $11 or $12 value shown depends on the creation of a very strong food service and merchandising program within the operation.
Section 5

SUMMARY

It was the consensus of the charrette group that the project potential of Adventure America is positive.

The resident and overnight visitor market totals 15.9 million and is enhanced additionally by a large day visitor count (5.0 million). The impact of seasonality is modest, and year around operation is feasible.

Competition of commercial attractions in the city is nominal. The visitor to Washington, DC would benefit from the orientation and visit organizing function of the project. Family entertainment is lacking and families dominate the market.

Although there are many constraints and sensitivities impacting the project, it was the consensus of designers and architects present at the charrette that these challenges can be met. Although the subject matter is large and difficult, sufficient technology is available to deal with that breadth and complexity in an interesting and stimulating manner.

The charrette group estimates that an annual attendance goal of 1.5 million is appropriate for the project. It requires a market penetration of 8.9 percent. An average visit of two hours is considered appropriate. This equates to a site size of 1.5 to 2.5 acres with a building area of 105,000 square feet exclusive of required parking which amounts to 450 cars assuming 50 percent arrival by auto. The on site design day attendance is 2,561.

Location near the Mall is crucial to access tourist circulation.
Preliminary feasibility analysis points to a project development cost on the order of $31.5 million exclusive of land cost.

Profitability analysis at $10 per capita expenditure points to a justifiable expenditure of $20 million to $26 million. At $12 per capita, justifiable development costs rise to $31 million to $32 million.

The higher per capita result is dependent on achieving a major success in food service and merchandising at the project.

A good site for a free standing structure near the Mall will be hard to find, and its purchase economically impossible. The practical alternative may be to take space within an existing building that is perceived as a major "People Place" in its own right, i.e., "The Post Office" or Union Station. If the attraction is embedded within an existing facility, it should have a direct access from the exterior so that signature graphics and entrance design can reinforce the "major attraction" image. Such a project, executed with style, authenticity and a dynamic collection of show components can establish itself as a premier attraction for any visitor to the city and a truly engaging showcase for "Adventure America."

It may be desirable to separate the development program into a non-profit foundation for owning the facility and a for-profit corporation with a management contract. Like the new Marine World Africa USA in Vallejo, this format might accommodate joint public/private financing and open the door for sponsorships.

This project must be carried off with great design and architectural flair to earn its share of visitor attention. The city is endowed with great monuments and institutions.
Timing of the project is enhanced by several important historical anniversaries; the bicentennial era 1976-1992 runs five more years, 1987 is the bicentennial of the Constitution, 1992/93 is the bicentennial for ratification of the Bill of Rights. There will be many opportunities of national focus and celebration in Washington.