

Josh Raphael | CM | Dr. Riley



Technical Report 1

Holiday Inn Express

Absecon, NJ

October 5, 2009



Holiday Inn Express Hotel & Suites

Absecon, New Jersey



Joshua D. Raphael | Construction Management

Project Team

Owner: Renuka Hospitality, LLC
GC, CM: DRK Associates
Architect, Structural, Mechanical, Electrical,
Fire Engineer: Harry S. Harpers Architects

Project Overview

Function: Hotel & Suite
Use Group: R-1 Residential/ A-3 Assembly
Construction Type: V-B
Size: Total Area - 53,390 SF
First Floor Area - 20,065 SF
Second Floor Area - 16,662 SF
Third Floor Area - 16,62 SF

Height: 3 Stories, 40'-0"
Construction Dates: April 2009 - April 2010
Delivery Method: Design - Bid - Build

Electrical System

Lighting: 2' x 2' Clg. Mtd. Fluorescent (Typ)
2' x 4' Clg. Mtd. Fluorescent (Typ)
Clg. Recessed Hi-Hats
Electrical: 600 A/3PH Panelboard w/ 6 New Panels
Panel "A" 250 A/3PH 1st Flr.
Panels "B, C, & D" 225 A/3PH 1st Flr.
Panels "E & F" 300 A/3PH 2nd & 3rd Flr.

Facade

First Flr: Cultured Stone Veneer, **Second & Third Flr:** EIFS (Typ.)

Mechanical System

1st Flr. HVAC Units:
-Unit #1 120,000 BTU Gas Hot Air w/ 5 Ton A/C
-Unit #2 40,000 BTU Gas Hot Air w/ 2 Ton A/C
-Unit #3 R/T 100,000 BTU Heat w/ 3.5 Ton A/C
HVAC (Typ) Rm. Units:
-Amana 9,000 BTU PTAC w/ Digital Controls on Unit
Pool Room:
-(2) Desert Air Systems
Stair Towers:
-Mitsubishi Slim-Ductless M-Series
Multi-Split Heat Pump Sized by Mfr.

Structural System

Footings:
-Cont. 3' x 12" Conc. Ftgs. under curtain wall
-Columns & Baring Walls Supported by
3' x 3' x 12" to 9'-3" x 11'-7" x 12" Conc. Ftgs.
First Floor Construction:
- 4" Thk. Conc. Slab W/ 6x6 W1.4 x W1.4 WWF
on 8mm VB on 6" of Drainage Fill & Comp. Soil
-Note: Conc. is Min. 28-Day 3500psi Comp. Strength
Second & Third Floor Construction:
- 16" L65 TJI Flr. Jst. @ 16" O/C Topped
W/ 3/4" Gypcrete on 3/4" T&G Plywood
- Supported by 4" x 4" x 3/16" to 5" x 5" 1/4"
& W10 x 68 Steel Columns
Wall Construction:
- 2 x 6 Stud Curtain Walls @ 16" O/C (Typ.)
- 8" CMU's at Stair Tower

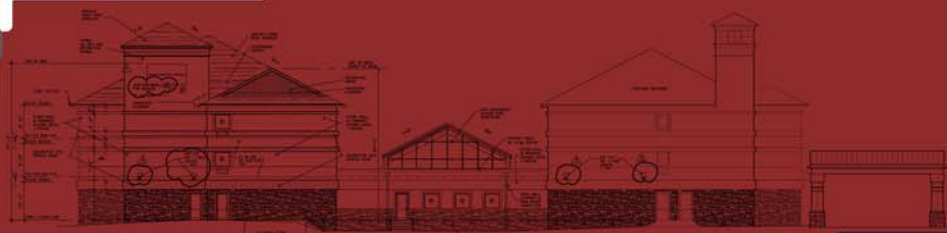


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Executive Summary

The technical report 1 for the Holiday Inn Express addition in Absecon, NJ is a combination of detailed summaries examining topics such as Schedule, Building Systems, Cost Estimates, Site Investigation, & Delivery Method.

The Holiday Inn Express addition was design for three main reasons. To increase the amount of hotel units by 39, create a business friendly resort by adding new meeting room areas, and amenities like a gym, pool, and spa area. The addition will be a 3 story hotel nearly identical to the existing structure and a 1 story pool enclosure which will connect the two hotel towers. The new buildings will use all existing utilities and the hotel shall function as one structure.

The design phase was a 3 month long process and ended in November 2008. The Project is to be constructed in 3 phases scheduled around peak revenue periods. The first phase of construction consists of excavation and constructing the substructure and starts in March 2009 and ends in August 2009. The second phase is a 5 month long process consisting of constructing the superstructure and interiors ending in December 2009. The third and final phase is a 6 month long process consisting of enclosing the building, sitework, and finishes ending in April 2010.

The owner Renuka Hospitality L.L.C. has contracted one design firm and one general contractor for the project. The project is delivered by Design-Bid-Build with lump sum contracts for both the Architect and GC. Harry S. Harper Architects and DRK associates were selected and were also the same two firms used for the design and construction of the existing hotel building.

The estimated total project cost is \$4 million with approximately a \$3 million construction contract, \$25 thousand design contract, and the remainder to be used by owner for FFE's.

The site is tight due to setbacks but should not pose any threats. The main project concern is constructing the addition without disrupting the existing facility which is to remain fully operable during construction.

Project Schedule Summary

The schedule for Holiday Inn Express addition was geared around peak revenue creating periods. For the Atlantic City, NJ area summer is the best time of the year for tourism and for hotel revenue. This is why the design had been completely finished 3 months before construction had started.

The substructure phase was started in March of 2009 and ends towards the end of August 2009. As you can see below there is a large amount of time allotted for the placement of underground plumbing. My instinct tells me that this delay is due to the continuous usage of the existing structure. The owner most likely did not want to bring more equipment and construction on site until after the summer so they don't lose summer revenue. Also a small portion of the first floor existing structure must be demolished in order to construct the first floor connection and the hotel would have to be closed during that process.

The superstructure begins in September of 2009 except the first floor structural steel which was installed during the substructure phase of construction. During the fall, winter, and early spring months the business is pretty slow and it is a great time for the superstructure to be constructed with little effect on revenue. By mid November 2009 all of the exterior curtain walls are framed and the floor trusses are installed. MEP rough-in is installed almost simultaneously with the superstructure and is completed in mid December 2009.

After the superstructure is complete the roof is enclosed and after rough-in is complete the curtain walls and pool are to be enclosed ending in late December 2009. Site work is being constructed during the enclosure phase.

Floor and exterior wall finishing began in mid December 2009 and finished in early April 2010 along with the installation of fixtures, elevators, and millwork. By mid April the owner has decided to use the rest of the budget to try and add as many wow factors as possible before the summer season and occupancy. Occupancy is permitted after April 19, 2010 but will depend on owner decisions.

Activity	Start Date	End Date	Notes
Preconstruction			
A1290 Design Phase	61-01-Sep-08	24-Nov-08	
A1000 Obtain Permits	31-26-Mar-09	13-Mar-09	
A1340 NTP	01-13-Mar-09		
Substructure			
A1010 Provide Building Pad	31-14-Mar-09	18-Mar-09	
A1020 Excavate/Pour Pigs. W/ Insp.	3-19-Mar-09	25-Mar-09	
A1030 Install Block Below Grade W/ Installation	8-26-Mar-09	04-Apr-09	
A1040 Backfill Foundations	3-05-Jun-09	09-Jun-09	
A1060 Install Underground Elec. W/ Insp.	5-10-Jun-09	16-Jun-09	
A1070 Excavate & Pour Conc. for Pool	15-10-Jun-09	25-Aug-09	
A1080 Install Underground Plumbing W/ Inspection	4-26-Aug-09	31-Aug-09	
A1090 Pour Pool Slab & 1st Flr. Pad	0-28-Sep-09		
A1370 Substructure Complete Install	118-03-Jun-09	17-Nov-09	
Superstructure			
A1050 Install Structural Steel at 1st Flr.	5-05-Jun-09	11-Jun-09	
A1100 Frame & Sheath 1st Flr. & Install Stair Towers CM...	15-01-Sep-09	21-Sep-09	
A1110 Install Flr. Trusses, Sheath, Gypcrete 2nd Flr.	15-11-Sep-09	01-Oct-09	
A1140 Frame & Sheath 2nd Flr.	8-02-Oct-09	13-Oct-09	
A1160 Install Flr. Trusses, Sheath, Gypcrete 3rd Flr.	15-14-Oct-09	03-Nov-09	
A1180 Frame & Sheath 3rd Flr.	10-04-Nov-09	17-Nov-09	
Interior			
A1120 Install Steel Stairs	10-22-Sep-09	05-Oct-09	
A1130 Install Sprinkler Pipes 1st Flr.	10-25-Sep-09	08-Oct-09	
A1150 Rough-in Plumb. Elec. 1st Flr. W/ Insp.	10-02-Oct-09	15-Oct-09	
A1170 Install Sprinkler Pipes 2nd Flr.	10-28-Oct-09	10-Nov-09	
A1190 Rough-in Plumb. Elec. 2nd Flr. W/ Insp.	10-04-Nov-09	17-Nov-09	
A1250 Install Sprinkler Pipes 3rd Flr./ Attic	10-30-Nov-09	11-Dec-09	
A1230 Rough-in Plumb. Elec. 3rd Flr.	10-07-Dec-09	18-Dec-09	
A1360 MEP Complete Install	0-18-Dec-09		
Enclosure			
A1200 Install Roof Trusses, Sheathing & Shingles	28-18-Nov-09	25-Dec-09	
A1240 Install Windows	13-18-Nov-09	04-Dec-09	
A1260 Install Pool Enclosure/ Glazing	5-07-Dec-09	11-Dec-09	
A1350 Structure Complete	15-07-Dec-09	25-Dec-09	
Stewwork			
A1210 Install Curbs/ Silewalks	0-25-Dec-09*		
A1220 Install Paving/Landscaping/ Site Lights/ Storage	5-30-Nov-09	04-Dec-09	
Finishes			
A1270 Install Cultured Stone & EIFS	821-14-Dec-09	06-Apr-10	
A1280 Install & Sheetrock, & Paint/ Install ReelBm. Flrs	30-14-Dec-09	22-Jan-10	
A1300 Install Millwork/ Elevators	37-25-Jan-10	16-Mar-10	
A1310 Install Plumb. Fixtures/ Doors/ Flr. Finishes	10-24-Feb-10	09-Mar-10	
Occupancy			
A1320 Perform Final Cleaning/ Obtain CO	20-10-Mar-10	06-Apr-10	
A1330 Finish & Occupancy	8-07-Apr-10	19-Apr-10	
A1330 Finish & Occupancy	0-19-Apr-10*		

Building Systems Summary

Demolition

- Demolition occurs in August 2009
- The existing unit directly across from the lobby will be demoed along with the lobby itself for renovations. The unit will be turned into a lobby expansion and will be the connection to the pool room and addition.
- Salvaged furniture and fixtures are to be reused in the new addition.

Structural Steel

- The only structural steel used on the project are columns on the first floor.
- Columns range from 4" x 4" x 3/16" to 5" x 5" x 1/4" and W10 x 68.
- Structural steel is installed in June 2009 and is completed in a 5 day period.

Cast in Place Concrete

- Continuous footings, Slab on grade, Concrete pool, Column footers
- All concrete has a minimum 28 day compressive strength of 3500psi.
- Footers used the ground as formwork, and the sizes ranged from 3' x 3' x 12" to 9'-3" x 11'-7" x 12".
- The slab on grade is 4" thick with 6 x 6 W1.4 x W1.4 WWM. Formwork was typical horizontal 2x4 edge forms. The concrete was placed via direct chute.
- All of the concrete is placed between May and August 2009.

Mechanical System

- The mechanical system is broken up into 3 main parts.
- The entire system consists of 2 desert air systems and 3 HVAC units.
- The hotel rooms each have Amana 9,000 BTU PTAC units with digital controls.
- The desert air systems are used in the pool area and are designed by the manufacturer.
- Unit #1 is a 120,000 BTU gas hot air with 5 ton A/C and is used in the new meeting room areas. Unit #1 is located in the storage room on the first floor.

- Unit # 2 is a 40,000 BTU gas hot air with 2 ton A/C and is used in the new electrical room and vending area. Unit #2 is also located in the storage room on the first floor.
- Unit #3 is 100,000 BTU gas hot air with 3.5 ton A/C and is used in the gym, pool equipment room, pool toilet rooms, and the pool/gym vestibule. Unit #3 is located on the roof above the gym.
- Mitsubishi slim-ductless m-series multi-split heat pumps are used in the stair towers.
- Fire suppression consist of expanded sprinkler systems on all floors

Electrical System

- Lighting is typically 2' x 2' ceiling mounted fluorescent lights in the meeting room area. The hallways and pool room are illuminated by ceiling recessed hi-hats. The hotel units are lit using decorative lamps to match existing rooms.
- The electrical system for the addition is to be connected to the existing utilities.
- A new 600 Amp/3phase panelboard is added to the existing switchgear unit in the first floor electrical room.
- 6 new panels are installed. 3 of the panels are 225 Amp/3phase, one panels is 250 Amp/3phase, and the last 2 panels are 300 Amp/3phase.

Masonry

- The 2 stair towers are constructed of 8" CMUs and are fire-rated.
- Scaffolding is used for the entire height.

Curtain Wall

- The wall system is typical 2 x 6 stud walls @ 16" O/C.
- The first floor exterior is topped with cultured stone veneer.
- The second and third floor exteriors are topped with typical EIFS.

Excavation Support

- Little excavation is to be done since there is no basement. Excavation consist of digging for the pool and foundation.
- Typical shoring and trench-boxes were used.

Project Cost Evaluation

The Holiday Inn Express actual total project cost is \$4,000,000. This is a rough but close estimate of the project. The contract cost for the design of the architectural and MEPS drawings from Harry S. Harper Architects was \$25,000. The contract cost for the construction from DRK Associates was approximately \$3,092,937 (# is rough estimate and has changed.) The remaining balance of \$882,063 is budgeted to be used by the owner to purchase furniture, fixtures, and equipment.

In the figure below you can see the actual estimate and two other cost estimates. The first estimate which was created by using the 2009 RS Means Square Footage Estimate text. In appendix I you can see that I used the square foot estimate of a 2-3 story Motel and interpolated for the Cost/SF and you can also see where the cost adjustments and location factor were determined from. This estimated a total project cost of \$4,686,892 which is 117% larger than the actual cost. This estimate was most likely larger because part of project is a pre-manufactured pool house enclosure which would have a cheaper Cost/SF than a 2-3 story Motel.

The second estimate was created using the D4 Cost program and the probable cost statement can be found in appendix II. The D4 estimated a total project cost of \$3,532,364 which is under budget at only 88% the actual cost. The main reason for this budget to be low is most likely due to the fact that the owner plans to spend up to \$1,000,000 on FFE's and the D4 only accounted for about 25% of that.

Overall the best estimate to use would be the RS Means Square Foot estimate because although the cost was a little high the estimate was fairly close to the actual budget. Also the owner explained that because of these economic times and the location of the addition labor was surprisingly cheaper than usual and could also account for the RS means being over budgeted.

Cost Breakdown		
	Cost	Cost/SF
Total Project Cost	\$4,000,000	\$146
Total Hotel Cost	\$3,373,344	\$124
Total Pool Cost	\$340,000	\$12.53
Design Cost	\$25,000	\$0.92
Systems		.
Mechanical	\$257,432	\$9.42
Electrical	\$367,000	\$13.42
Plumbing	\$280,037	\$10.24
Structural Steel	\$95,000	\$3.47
Fire Suppression	\$65,000	\$2.38
Concrete (Site+Building)	\$200,000	\$7.31
Building Masonry	\$70,000	\$2.56
Square Footage Cost		
Total Building Area		27355 SF
Total Building Perimeter		493 LF
Story Height		10 FT
Interpolated RS Means Value		\$160.44 Cost/SF
Total Project Cost		\$4,388,836
Means Cost Adjustment & Breakdown		
Adjustment for Story Height	Add	\$1.60 Cost/FT
Adjustment for Perimeter	Add	\$4.60 Cost/100FT
Location Factor		1.05
Final RS Means SF Cost		\$171.34 Cost/ST
Total Project Cost		\$4,686,892
D4 Estimate		
Total Project Cost		\$3,532,364
Total Building Cost		\$3,062,580
General Requirements		\$183,350
Bidding Requirements		\$125,863
Site Work		\$286,309

Site Plan of Existing Conditions

The Holiday Inn Express addition is being constructed on the south side of the existing building. The addition is limited to setbacks of 35'-0" on the front and sides and 30'-0" on the rear from the property line as shown in the figure below. That being said the size of the addition was constrained to a limited area and the footprint is almost on each of the setback lines.

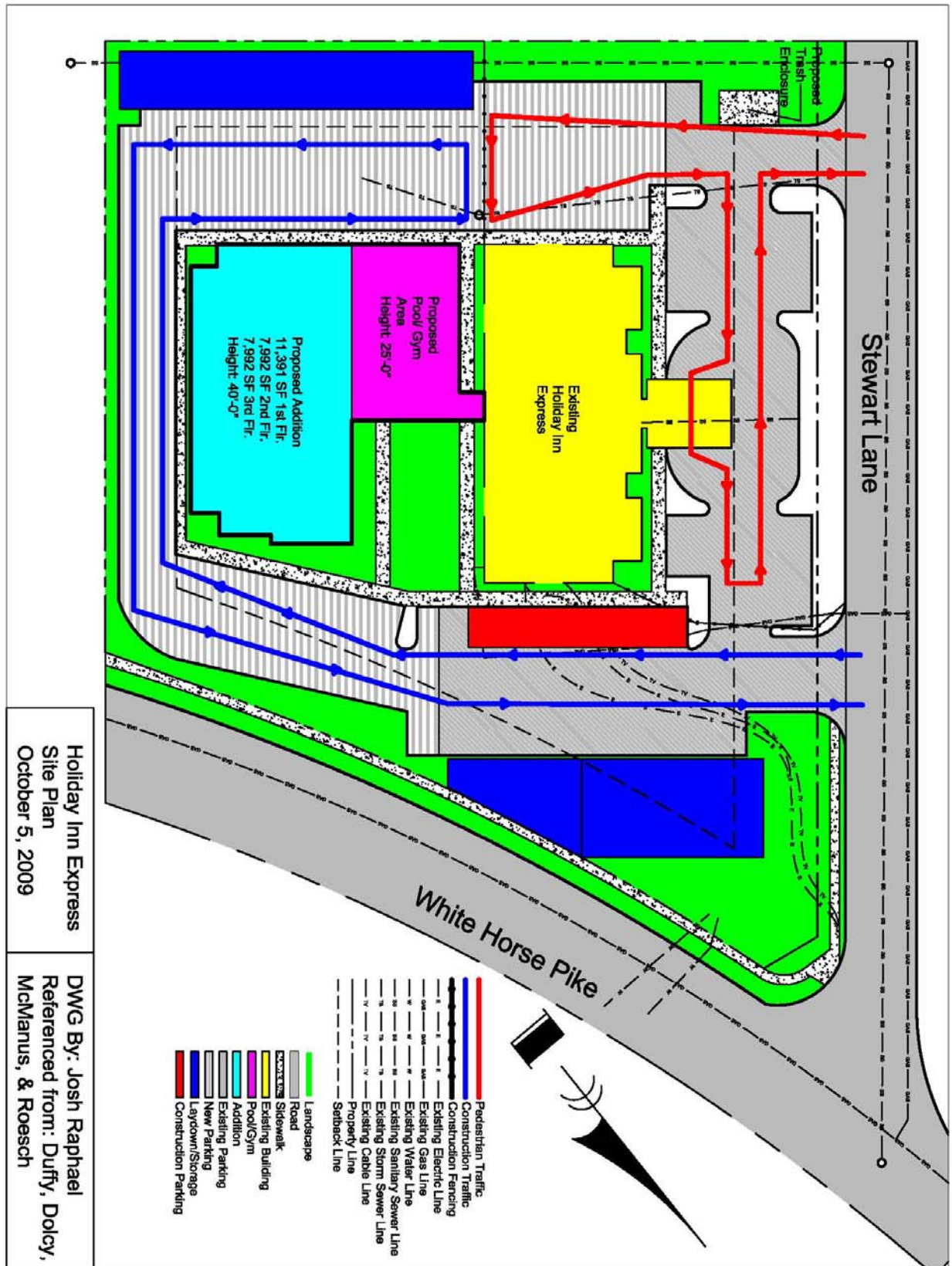
The addition plans to be connected to all the existing utilities available to the existing building. This will allow the existing and new buildings to act as one whole hotel.

Since the building will remain fully operable during construction the temporary customer parking will be in the front and to the right of the existing building. The rest of the existing and new parking spaces will be used for construction traffic, material laydown, storage, temporary trash facilities, equipment, and construction parking.

The site is accessible by making a right off of the White Horse Pike onto Stewart Lane. The accessible route could cause some delay due to traffic but all the materials and the contractors are local so this should not be a problem. The major concern for the site access is that with only one entrance is directing the customer parking away from the construction traffic. The use of signs and fencing will be very helpful in this situation.

The site is restricted to using only the area inside of the property line because surrounding the site on three sides are main roads and the last side is heavily forested area. This site could become tight and cluttered but luckily since DRK is the contractor for all MEPS systems they are the only ones on site and will have little coordination problems.

Overall the main concern for the site is construction traffic not interfering with pedestrian traffic and having construction areas noticeably fenced off with clear signage.



Local Conditions

The Holiday Inn Express Addition is being constructed in Absecon, NJ just outside of Atlantic City, NJ on a 2.18 acre property. This site currently has a 3-story existing hotel building and the majority of extra space is currently used for parking and landscape. The proposed addition will be located on the existing retention basin south of the existing hotel.

For the Absecon, NJ areas there are height and area restrictions. For a three story building the allowable height is 60'-0" and the allowable area is 25,200 SF/Floor. This building meets these requirements because the proposed height is 40'-0" and the total area is 53,390 SF which is less than the allowed 75,600 SF.

Absecon, NJ is very big on recycling and so is DRK Associates which is why they plan to achieve 50% recycling on the project. Wood, concrete, steel, and glass will be recycled and the rest of the debris will be separated. Teesdale Trash Removal will be responsible for renting out the dumpsters and for waste removal. The dumpsters will be pulled once or twice per week at a rate of \$350/pull.

Four soil samples were taking on the property and their complete detail can be seen in appendix III. The soil logs showed that the type of soil tends to be loamy sands for about 45" then medium-coarse sand below that. There are no signs of large aggregates or boulders so the site should be easy to excavate and backfill. No drilling is necessary. The highest water table is approximately 120" below grade but should not pose a threat since there is no basement and the foundation shall not exceed 48" below grade and the pool shall not exceed 96" below grade.

The contractor must construct inlet sediment filters specific locations to prevent transportation of sediment into the stormwater management system. Silt fences should also be constructed on downhill slopes. In addition the contractor is responsible for cleaning surrounding areas including public right-of-ways and neighboring properties.

Client Information

Renuka Hospitality L.L.C. is a private owner of one Holiday Inn Express in the south Jersey area. Their goal is to increase occupancy capacity and to provide alternate building usage.

Renuka Hospitality L.L.C. chose the location and size of the existing site to allow for expansion. The original design of the existing building was small to allow the business to grow. Once revenue was sufficient to expand the owner had the adjacent land to construct the new 3-story hotel addition and pool/gym facilities.

The expansion was developed for traditional growth of a company. With only 49 existing room units this particular Holiday Inn Express is on the smaller end of the spectrum. At the current size the hotel was not generating enough revenue to higher manager staff positions. Since those key staff members do not currently exist, the hotel must be operated internally meaning that the building owner must run the facility to generate profit. The owner also owns a large portion of the market share and they believe that their location outside of Atlantic City, NJ is a prime enough to fill their expanded 39 units.

The addition of a pool, spa, gym, and meeting rooms were also developed to increase profit. The pool itself is now a requirement of the Holiday Inn Express brand, and the gym and spas are other amenities that traveler's seek when looking for hospitality. The meeting rooms will help bring in corporate traveler's and be able to accommodate larger groups.

One of the largest concerns for the owner is that the construction does not affect the continuous operation of existing facilities. The existing hotel will be fully functional during the construction phases. With the hotel being a place for rest and comfort, the noise created by construction processes can pose troublesome therefore construction must be done during appropriate operating hours. Also keeping the site clean and having available parking spots is needed to allow for continuous business.

The schedule is also a very important concern for the owner. The end date of construction and occupancy is in April 2010. For this location summer is prime time for

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tourist and generates the largest revenue period. It is urgent that the schedule does not extend into this time frame.

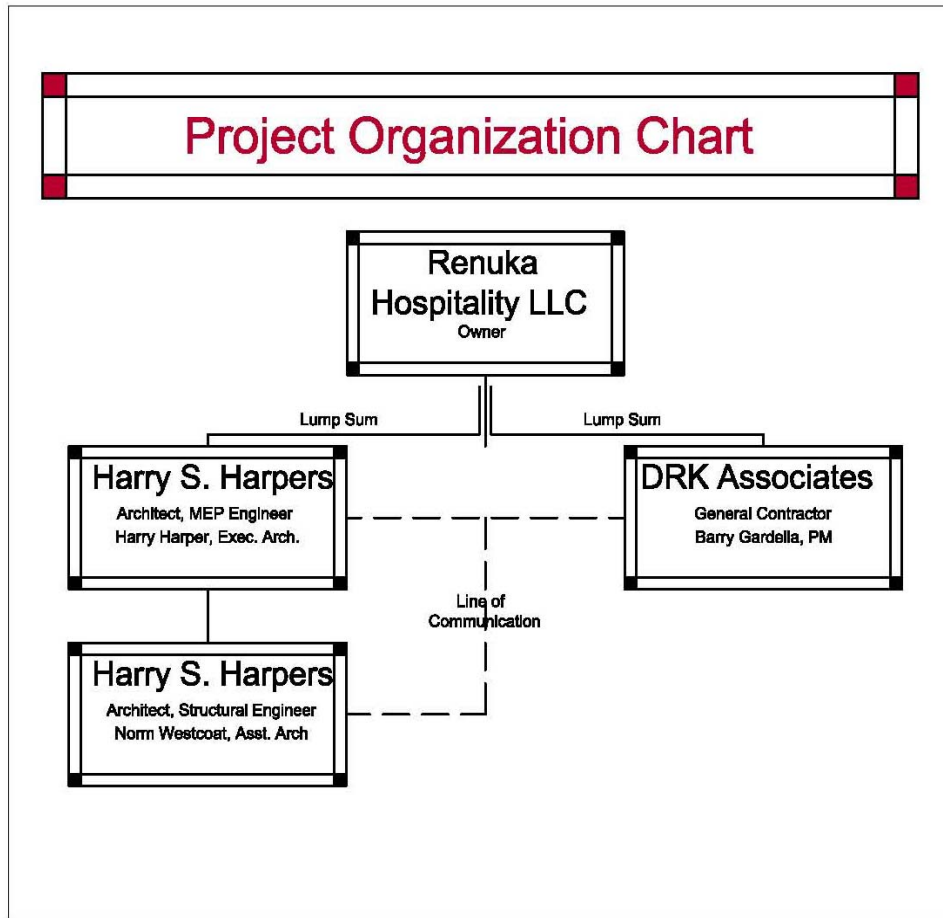
As for cost the owner is less worried about this because they are using a GC and the contract budget must be met. Any over charges or change orders are to be paid by the GC.

Project Delivery Systems

Renuka Hospitality L.L.C. decided to have the project delivered as a Design-Bid-Build project. Harry S. Harper Architects was selected as the primary architect and engineer for the Holiday Inn Express building. They were selected based on location, cost, and previous owner - architect relationships. Harry S. Harpers was the architect for the existing building design and with those blueprints it was very simple to create an almost identical building for the owner. This was the most reasonable solution for the owner and came at the cheapest cost. A lump sum contract was held between the owner and architect.

DRK Associates was selected as the General Contractor for the project and like Harry Harpers they were also the GC on the existing building. They were selected based on previous experience with the owner and the architect. DRK is a local GC and they are responsible for all construction processes on site. This allows the project to be done by one GC firm which eliminates any coordination issues. A lump sum contract is also held between the owner and GC. The contract has a strict budget and any overage charges are funded by the GC. The contract also calls for typical builder's risk insurance and general liability insurances.

The owner made a good choice going with DRK Associates and Harry S. Harper Architects based on previous experiences. Since the existing building which is a very similar project was done by the same team the owner can expect similar costs and schedule with little concern. In addition the owner will have a complete set of drawing for both new and existing buildings allowing them to easily continue to expand or use this building to create a new branch.

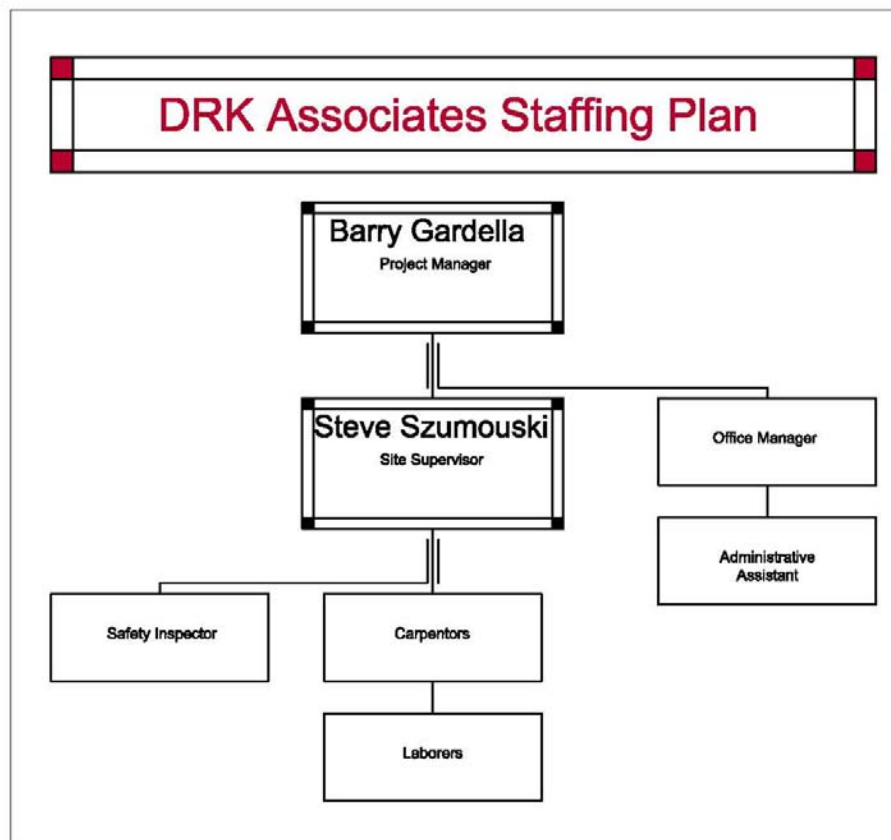


Staffing Plan

DRK Associates is a small firm in the Atlantic City, NJ area. They are a general contractor company and they employ a staff responsible for entire project construction. The office consists of one full time estimator who takes care of the bidding process. The projects are managed by Barry Gardella and the site supervisor is Steve Szumouski.

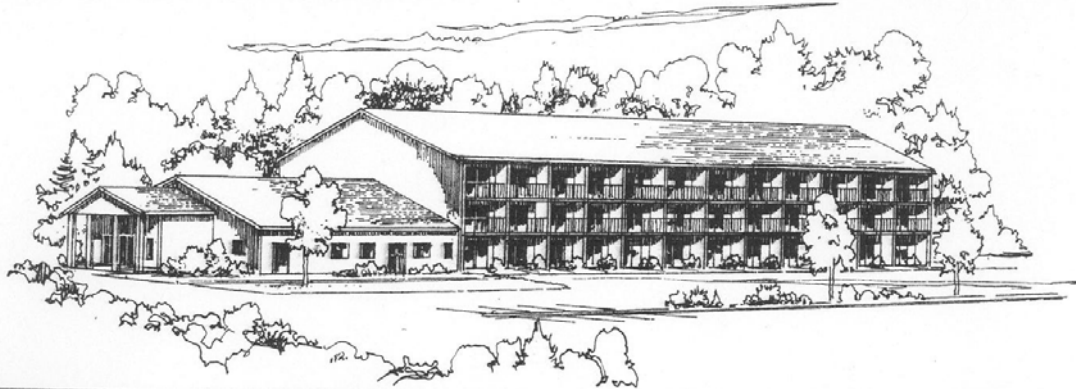
For this specific project they have 5 carpenters and 2 laborers on site daily. One service manager is in charge of procuring all of the equipment and materials and makes sure that they arrive on site and on time. He also oversees complete project clean up. Also on site almost daily is their full time safety inspector.

In addition there is an office manager and an administrative assistant who manage clerical work for the projects. The office also has two fulltime in-house carpenters who work on millwork and finish carpentry.



Appendix I

COMMERCIAL/INDUSTRIAL/ INSTITUTIONAL **M.430** **Motel, 2-3 Story**



Costs per square foot of floor area

Exterior Wall	S.F. Area	25000	37000	49000	61000	73000	81000	88000	96000	104000
	L.F. Perimeter	433	593	606	720	835	911	978	1054	1074
Decorative Concrete Block	Wood Joists	161.35	156.70	151.00	149.40	148.35	147.80	147.40	147.05	146.1
	Precast Conc.	172.70	168.10	162.35	160.75	159.75	159.15	158.80	158.40	157.5
Stucco on Concrete Block	Wood Joists	160.55	156.00	150.20	148.70	147.65	147.05	146.70	146.30	145.4
	Precast Conc.	172.55	168.00	162.25	160.70	159.65	159.05	158.70	158.30	157.4
Wood Siding	Wood Frame	157.70	153.30	148.20	146.75	145.75	145.15	144.85	144.45	143.7
Brick Veneer	Wood Frame	164.85	159.90	153.30	151.55	150.45	149.85	149.45	149.05	148.0
Perimeter Adj., Add or Deduct	Per 100 L.F.	4.60	3.20	2.35	1.90	1.55	1.40	1.35	1.20	1.05
Story Hgt. Adj., Add or Deduct	Per 1 Ft.	1.60	1.50	1.15	1.05	1.05	1.00	1.05	0.95	0.95

For Basement, add \$28.70 per square foot of basement area

The above costs were calculated using the basic specifications shown on the facing page. These costs should be adjusted where necessary for design alternatives and owner's requirements. Reported completed project costs, for this type of structure, range from \$60.40 to \$310.55 per S.F.

Common additives

Description	Unit	\$ Cost	Description	Unit	\$ Cost
Closed Circuit Surveillance, One station			Sauna, Prefabricated, complete		
Camera and monitor	Each	1850	6' x 4'	Each	5850
For additional camera station, add	Each	1000	6' x 6'	Each	6950
Elevators, Hydraulic passenger, 2 stops			6' x 9'	Each	8525
1500# capacity	Each	62,800	8' x 8'	Each	10,100
2500# capacity	Each	66,300	8' x 10'	Each	11,300
3500# capacity	Each	69,800	10' x 12'	Each	14,000
Additional stop, add	Each	7825	Smoke Detectors		
Emergency Lighting, 25 watt, battery operated			Ceiling type	Each	187
Lead battery	Each	282	Duct type	Each	480
Nickel cadmium	Each	805	Swimming Pools, Complete, gunite	S.F.	64 - 78.50
Laundry Equipment			TV Antenna, Master system, 12 outlet	Outlet	315
Dryer, gas, 16 lb. capacity	Each	885	30 outlet	Outlet	203
30 lb. capacity	Each	3600	100 outlet	Outlet	194
Washer, 4 cycle	Each	1075			
Commercial	Each	1450			

Location Factors

STATE/ZIP	CITY	Residential	Commercial	STATE/ZIP	CITY	Residential	Commercial
MINNESOTA (CONT'd)				NEW JERSEY			
559	Rochester	1.03	1.01	070-071	Newark	1.12	1.10
560	Mankato	1.01	.99	072	Elizabeth	1.14	1.08
561	Windom	.82	.88	073	Jersey City	1.10	1.08
562	Willmar	.83	.90	074-075	Paterson	1.11	1.09
563	St. Cloud	1.06	1.05	076	Hackensack	1.10	1.08
564	Brainerd	.96	.97	077	Long Branch	1.11	1.07
565	Detroit Lakes	.95	.96	078	Dover	1.11	1.08
566	Bemidji	.94	.97	079	Summit	1.11	1.08
567	Thief River Falls	.94	.95	080,083	Vineland	1.08	1.05
MISSISSIPPI				081	Camden	1.09	1.06
386	Clarksdale	.78	.81	082,084	Atlantic City	1.11	1.05
387	Greenville	.84	.88	085-086	Trenton	1.10	1.07
388	Tupelo	.79	.83	087	Point Pleasant	1.09	1.07
389	Greenwood	.80	.82	088-089	New Brunswick	1.11	1.08
390-392	Jackson	.85	.87	NEW MEXICO			
393	Meridian	.83	.86	870-872	Albuquerque	.85	.90
394	Laurel	.80	.84	873	Gallup	.85	.90
395	Biloxi	.82	.83	874	Farmington	.85	.90
396	Mccomb	.77	.81	875	Santa Fe	.86	.91
397	Columbus	.78	.82	877	Las Vegas	.85	.89
MISSOURI				878	Socorro	.85	.89
630-631	St. Louis	1.03	1.03	879	Truth/Consequences	.84	.87
633	Bowling Green	.95	.94	880	Las Cruces	.83	.85
634	Hannibal	.86	.89	881	El Paso	.85	.88
635	Kirkville	.80	.88	882	Roswell	.85	.89
636	Flat River	.94	.95	883	Carrizozo	.85	.90
637	Cape Girardeau	.88	.94	884	Tucumcari	.86	.89
638	Sikeston	.82	.88	NEW YORK			
639	Poplar Bluff	.83	.88	100-102	New York	1.37	1.31
640-641	Kansas City	1.03	1.02	103	Staten Island	1.31	1.27
644-645	St. Joseph	.93	.95	104	Bronx	1.33	1.26
646	Chillicothe	.87	.84	105	Mount Vernon	1.14	1.14
647	Harrisonville	.96	.96	106	White Plains	1.17	1.14
648	Joplin	.83	.85	107	Yonkers	1.18	1.17
650-651	Jefferson City	.87	.92	108	New Rochelle	1.18	1.14
652	Columbia	.87	.93	109	Suffern	1.13	1.09
653	Sedalia	.85	.90	110	Queens	1.31	1.27
654-655	Rolla	.87	.85	111	Long Island City	1.34	1.28
656-658	Springfield	.87	.89	112	Brooklyn	1.35	1.28
MONTANA				113	Flushing	1.33	1.26
590-591	Billings	.88	.90	114	Jamaica	1.33	1.27
592	Wolf Point	.84	.89	115,117,118	Hicksville	1.20	1.20
593	Miles City	.86	.88	116	Fer Rockaway	1.32	1.28
594	Great Falls	.89	.91	119	Riverhead	1.21	1.21
595	Havre	.82	.89	120-122	Albany	.94	.96
596	Helena	.88	.90	123	Schenectady	.95	.97
597	Butte	.87	.90	124	Kingston	1.02	1.06
598	Missoula	.85	.88	125-126	Poughkeepsie	1.19	1.12
599	Kalispell	.83	.87	127	Monticello	1.04	1.06
NEBRASKA				128	Glens Falls	.88	.92
680-681	Omaha	.91	.91	129	Plattsburgh	.92	.92
683-685	Lincoln	.87	.89	130-132	Syracuse	.96	.96
686	Columbus	.87	.88	133-135	Utica	.94	.94
687	Norfolk	.91	.90	136	Watertown	.93	.96
688	Grand Island	.92	.91	137-139	Binghamton	.93	.93
689	Hastings	.93	.92	140-142	Buffalo	1.04	1.02
690	Mccook	.85	.88	143	Niagara Falls	1.00	.99
691	North Platte	.92	.92	144-146	Rochester	.96	.97
692	Valentine	.85	.88	147	Jamestown	.87	.90
693	Alliance	.85	.87	148-149	Elmira	.85	.91
NEVADA				NORTH CAROLINA			
889-891	Las Vegas	1.03	1.06	270,272-274	Greensboro	.83	.79
893	Ely	.85	.88	271	Winston-Salem	.83	.79
894-895	Reno	.93	.97	275-276	Raleigh	.84	.80
897	Carson City	.94	.97	277	Durham	.83	.80
898	Elko	.91	.90	278	Rocky Mount	.73	.74
NEW HAMPSHIRE				279	Elizabeth City	.75	.75
030	Nashua	.94	.94	280	Gastonia	.84	.78
031	Manchester	.94	.94	281-282	Charlotte	.85	.80
032-033	Concord	.92	.92	283	Fayetteville	.82	.81
034	Keene	.75	.78	284	Wilmington	.81	.77
035	Littleton	.81	.81	285	Kingston	.74	.73
036	Charleston	.74	.76	286	Hickory	.78	.75
037	Claremont	.75	.76	287-288	Asheville	.81	.78
038	Portsmouth	.93	.94	289	Murphy	.73	.71
				NORTH DAKOTA			
				580-581	Fargo	.78	.85
				582	Grand Forks	.75	.82
				583	Devils Lake	.78	.82
				584	Jamestown	.73	.79
				585	Bismarck	.78	.85

Appendix II

Thursday, October 1, 2009

Statement of Probable Cost

Page 1

HIE - Apr 2010 - NJ - Atlantic City

Prepared By:

Prepared For:

Fax: 27355
 Building Sq. Size: 27355
 Bid Date: 3/26/2009
 No. of floors: 3
 No. of buildings: 1
 Project Height: 40
 1st Floor Height: 10
 1st Floor Size: 11391

Fax: 123048
 Site Sq. Size: 123048
 Building use:
 Foundation:
 Exterior Walls:
 Interior Walls:
 Roof Type:
 Floor Type:
 Project Type:

Division		Percent	Sq. Cost	Amount
00	Bidding Requirements	3.56	4.60	125,863
	Bidding Requirements	3.56	4.60	125,863
01	General Requirements	5.19	6.70	183,350
	General Requirements	5.19	6.70	183,350
02	Site Work	8.11	10.47	286,309
	Site Work	8.11	10.47	286,309
03	Concrete	12.61	16.28	445,284
	Concrete	12.61	16.28	445,284
04	Masonry	4.39	5.66	154,916
	Masonry	4.39	5.66	154,916
05	Metals	2.19	2.82	77,272
	Metals	2.19	2.82	77,272
06	Wood & Plastics	8.84	11.42	312,278
	Wood & Plastics	8.84	11.42	312,278
07	Thermal & Moisture Protection	4.65	6.00	164,170
	Thermal & Moisture Protection	4.65	6.00	164,170
08	Doors & Windows	5.57	7.19	196,701
	Doors & Windows	5.57	7.19	196,701
09	Finishes	15.81	20.41	558,377
	Finishes	15.81	20.41	558,377
10	Specialties	0.99	1.27	34,802
	Specialties	0.99	1.27	34,802
11	Equipment	1.40	1.81	49,609
	Equipment	1.40	1.81	49,609
12	Furnishings	3.99	5.16	141,088
	Furnishings	3.99	5.16	141,088
13	Special Construction	0.93	1.21	32,972
	Special Construction	0.93	1.21	32,972
14	Conveying Systems	1.02	1.31	35,964
	Conveying Systems	1.02	1.31	35,964
15	Mechanical	13.24	17.09	467,554
	Mechanical	13.24	17.09	467,554
16	Electrical	7.53	9.72	265,855
	Electrical	7.53	9.72	265,855
Total Building Costs		100.00	129.13	3,532,364

Appendix III

SOIL LOG			
CLIENT:	Remuka Hospitality, LLC		
LOT LOCATION:	Block 189, Lots 1 & 2 Absecon, New Jersey		
SAMPLING LOCATION:	SP#10		
DATE:	20 August 2007		
LOG BY:	Janeann Armbruster P-07131		
Depth Inches	Color	Unified Classif.	Description
0 - 10	10YR 6/6, brownish yellow	SP/SM	Loamy sand (fill), 20% gravel
10 - 18	10YR 3/2, very dark grayish brown	SP/SM	Loamy sand
18 - 44	10YR 5/8, yellowish brown	SM	Sandy loam
44 - 74	10YR 6/6, brownish yellow	SP	Sand-coarse
74 - 107	10YR 6/4, light yellowish brown w/ 10YR 6/6, brownish yellow & 10YR 7/1, light gray mottles	SP	Sand-coarse
107 - 120	10YR 7/4, very pale brown w/ 10YR 6/6, brownish yellow & 10YR 8/1, white mottles	SP	Sand-coarse
Estimated seasonally high water table at: 74 inches Estimated actual water table at: >120 inches. Permeability test: Depth of test: 18 - 44 inches Permeability rate: 7.5 in/hr			

APPROXIMATE GRADE ELEVATION= 20.5'
APPROXIMATE HIGH WATER TABLE ELEVATION= 10.5'
SEASONAL HIGH WATER TABLE ELEVATION= 14.3'

SOIL LOG			
CLIENT:	Remuka Hospitality, LLC		
LOT LOCATION:	Block 189, Lots 1 & 2 Absecon, New Jersey		
SAMPLING LOCATION:	SP#11		
DATE:	20 August 2007		
LOG BY:	Janeann Armbruster P-07131		
Depth Inches	Color	Unified Classif.	Description
0 - 3	10YR 3/2, very dark grayish brown	SP/SM	Loamy sand
3 - 24	10YR 5/4, yellowish brown	SP/SM	Loamy sand, 20% gravel
24 - 46	10YR 5/8, yellowish brown	SP/SM	Loamy sand, 10% gravel
46 - 77	10YR 6/6, light yellowish brown w/ 10YR 5/8, yellowish brown lamellae	SP	Sand-med
77 - 123	10YR 6/4, light yellowish brown w/ 10YR 5/6, yellowish brown & 10YR 7/2, light gray mottles	SP	Sand-med
Estimated seasonally high water table at: 77 inches Estimated actual water table at: >123 inches. Permeability test: Depth of test: 24 - 46 inches Permeability rate: 17.1 in/hr			

APPROXIMATE GRADE ELEVATION= 18.5'
APPROXIMATE HIGH WATER TABLE ELEVATION= 8.2'
SEASONAL HIGH WATER TABLE ELEVATION= 12.1'

SOIL LOG			
CLIENT:	Remuka Hospitality, LLC		
LOT LOCATION:	Block 189, Lots 1 & 2 Absecon, New Jersey		
SAMPLING LOCATION:	SP#12		
DATE:	20 August 2007		
LOG BY:	Janeann Armbruster P-07131		
Depth Inches	Color	Unified Classif.	Description
0 - 3	10YR 3/2, very dark grayish brown	SP/SM	Loamy sand
3 - 25	10YR 5/8, yellowish brown	SM	Sandy loam, 20% gravel
25 - 36	10YR 6/6, brownish yellow	SP/SM	Loamy sand
36 - 45	10YR 6/4, light yellowish brown	SP	Sand-med
45 - 74	10YR 6/4, light yellowish brown w/ 10YR 5/8, yellowish brown lamellae	SP	Sand-coarse
74 - 122	10YR 7/4, very pale brown w/ 10YR 6/8, brownish yellow & 10YR 7/1, light gray mottles	SP	Sand-med/coarse
Estimated seasonally high water table at: 74 inches Estimated actual water table at: >122 inches. Permeability test: Depth of test: 25-26 inches Permeability rate: 16.5 in/hr			

APPROXIMATE GRADE ELEVATION= 17.2'
APPROXIMATE HIGH WATER TABLE ELEVATION= 7.0'
SEASONAL HIGH WATER TABLE ELEVATION= 11.0'

SOIL LOG			
CLIENT:	Remuka Hospitality, LLC		
LOT LOCATION:	Block 189, Lots 1 & 2 Absecon, New Jersey		
SAMPLING LOCATION:	SP#13		
DATE:	20 August 2007		
LOG BY:	Janeann Armbruster P-07131		
Depth Inches	Color	Unified Classif.	Description
0 - 4	10YR 7/1, light gray	SP	Sand-fine
4 - 30	10YR 5/6, yellowish brown	SP/SM	Loamy sand, 10% gravel
30 - 44	10YR 6/8, brownish yellow	SP/SM	Loamy sand/Sand
44 - 71	10YR 6/4, light yellowish brown w/ 10YR 6/8, brownish yellow lamellae	SP	Sand-fine
71 - 124	10YR 7/4, very pale brown w/ 7.5YR 6/8, reddish yellow & 10YR 7/1, light gray mottles	SP	Sand-med
Estimated seasonally high water table at: 71 inches Estimated actual water table at: >124 inches. Permeability test: Depth of test: 4 - 30 inches Permeability rate: 15.9 in/hr			
ARMBRUSTER ENVIRONMENTAL - 607 Discogne Avenue, Galloway, NJ 08205			

APPROXIMATE GRADE ELEVATION= 19.7'
APPROXIMATE HIGH WATER TABLE ELEVATION= 9.4'
SEASONAL HIGH WATER TABLE ELEVATION= 13.8'