

INFRASTRUCTURE REQUIREMENTS

Exhibit VIII. C.17.a

Projection of Electrical Demand

Proposed electrical demands were estimated based on the Sterling Forest Resort master plan and estimated demand factors. A summary of the major electrical needs from the plan are included in Table VIII. C.17.a-1.

Table VIII. C.17.a-1. Electric Design Load

Space	Interior Area (Sq Ft)	Total KVA (Connected Load)
Ground Floor	325,380	7,065
Second Floor	217,427	3,678
Tower	551,744	5,869
Hotel Basement	283,441	5,611
Hotel Parking Garage	2,834,170	1,134
Grand Hotel Misc.	n/a	7,979
Subtotal		31,336
Ski and Garden Areas	185,469	5,193
Total Development (KVA)		36,529
(KW)		34,703
(A @ 480 V)		43,938

Projection of Water Demand

Proposed water demands were calculated based on the proposed Sterling Forest Resort master plan, and hydraulic loading demand units outlined by New York State Department of Environmental Conservation's (NYSDEC) *Design Standards for Intermediate Sized Wastewater Treatment Systems*. A summary of the contributing water demands are found in Table VIII. C.17.a-2.

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Table VIII. C.17.a-2. Water Demand Forecast

Building	Demand Use	Area (sf)	Loading Unit	Units	Unit conversion (Area to Loading Unit)	Total gpd
World Fairgrounds						
Stables	Office Building	18,000	0.1 gpd/sf		-	1,800
Fairground Retail Walk	Shopping Center	31,897	0.1 gpd/sf		-	3,200
Garden Center and Café - Restaurant	Ordinary Restaurants	3,543	35 gpd/seat	75	-	2,600
Garden Center and Café - Retail	Retail	1,500	0.1 gpd/sf			200
Garden Center and Café - Office Building	Office Building	2,000	0.2 gpd/sf			400
Garden Amphitheater Shops	Shopping Center	720	0.1 gpd/sf		-	100
Garden Amphitheater Café	Cafeteria	720	35 gpd/seat	16	-	600
Greenhouse	N/A	18,678			-	-
Festival House	Ordinary Restaurants	4,372	35 gpd/seat	100	-	3,500
Castle on the Hill	N/A	4,481			-	-
Joust Area	N/A	8,193			-	-
Small Misc. Buildings (Ticketing)	Office Building	26,000	0.2 gpd/sf			5,200
Service Building 1	Office Building	7,000	0.2 gpd/sf			1,400
Service Building 2	Office Building	6,800	0.2 gpd/sf			1,400
New Ski Village						
Ski Café	Cafeteria	2,467	35 gpd/seat		164	5,800
Ski Maintenance Building	Office Building	3,037	0.2 gpd/sf	-	-	600
Ski Patrol Building	Office Building	3,200	0.2 gpd/sf	-	-	600
Ski Lodge	Building	25,516	0.2 gpd/sf	-	-	5,100

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Table VIII. C.17.a-2. Water Demand Forecast

Building	Demand Use	Area (sf)	Loading Unit	Units	Unit conversion (Area to Loading Unit)	Total gpd
Resorts World Grand Hotel						
Ground Floor Casino	Casino	125,861	0.3 gpd/sf	-	-	37,800
Second Floor VIP Casino	Casino	14,685	0.3 gpd/sf	-	-	4,400
Retail	Shopping Center	508	0.1 gpd/sf	-	-	100
Restaurants						
Sushi	Ordinary Restaurants	2,217	35 gpd/seat	49		1,715
Italian Restaurant	Ordinary Restaurants	4,627	35 gpd/seat	103		3,605
The Yard House	Ordinary Restaurants	4,442	35 gpd/seat	99		3,465
Burgers	Ordinary Restaurants	3,846	35 gpd/seat	85		2,975
Chinese Restaurant	Ordinary Restaurants	5,069	35 gpd/seat	113		3,955
Steakhouse Restaurant	Ordinary Restaurants	4,336	35 gpd/seat	96		3,360
Pub	Ordinary Restaurants	1,596	35 gpd/seat	35		1,225
Food Court	Cafeteria	3,548	25 gpd/seat	79		1,975
Grand Buffet	Cafeteria	17,432	25 gpd/seat	387		9,675
Noodle Bar	Cafeteria	1,917	25 gpd/seat	43		1,075
Coffee Shop	Cafeteria	1,310	20 gpd/seat	29		580
Grand Lux Coffee Shop	Cafeteria	3,700	20 gpd/seat	82		1,640
Bakery	Cafeteria	4,081	20 gpd/seat	91		1,820
Chocolate Shop	Cafeteria	1,300	20 gpd/seat	29		580
<i>Subtotal</i>						37,645

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Table VIII. C.17.a-2. Water Demand Forecast

Building	Demand Use	Area (sf)	Loading Unit	Units	Unit conversion (Area to Loading Unit)	Total gpd
Bars						
Sports Bar	Bar-Lounge	4,973	20 gpd/seat	410		8,200
Bar 360	Bar-Lounge	4,478	20 gpd/seat	332		6,640
Wine Bar	Bar-Lounge	688	20 gpd/seat	299		5,980
McCallen Bar	Bar-Lounge	2,362	20 gpd/seat	46		920
Tao Club	Bar-Lounge	2,025	20 gpd/seat	157		3,140
High Limit Bar	Bar-Lounge	667	20 gpd/seat	135		2,700
Service Bars	Bar-Lounge	728	20 gpd/seat	44		880
Night Club <i>*assumed capacity</i>	Bar-Lounge	16,411	20 gpd/seat		250	1,000
<i>Subtotal</i>						26,620
Staffing	Casino	N/A	15 gpd/employee/shift		1000	15,000
Pool area	Swimming Pool	21,900	10 gpd/swimmer		465	4,600
Indoor Pool area (Third Floor)		18,366	10 gpd/swimmer		383	3,800
Gym/Spa	Health Club	40,199	20 gpd/user		450	9,000
Hotel Rooms (Includes floors 2-6)	Motel	623,953	130 gpd/sleeping unit		984	108,200
Meeting Rooms	Assembly Hall	20,880	5 gpd/seat	1,044		2,220
<i>Mass Casino Sub-total</i>						252,000
<i>South 17A Sub-total</i>						32,500
Total						284,500

Key: gallons per day (gpd); square feet (sf)

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The Greenhouse, Castle on the Hill, and Joust Area in the World Fairgrounds are not planned to have or need potable water service and therefore do not contribute to the water demand forecast. Based on the overall site plan, the proposed water demand for the new facilities is 285,000 gallons per day (gpd) average daily flow (ADF). A typical maximum day for Orange County is a factor of 1.8. With 100 percent of the irrigation proposed on-site using reclaimed water and not potable water and the proposed 6,665 toilets on site replacing an estimated 133,000 gpd of potable water with reclaimed water, the maximum daily demand for this facility is 370,000, a factor of 1.3.

Projection of Sewer Demand

Proposed sewer demands were calculated based on the Sterling Forest Resort master plan and hydraulic loading demand units outlined by NYSDEC's *Design Standards for Intermediate Sized Wastewater Treatment Systems*. A summary of the contributing water demands are found in Table VIII. C.17.a-3.

Table VIII. C.17.a-3. Sewer Demand Forecast

Building	Demand Use	Area (sf)	Loading Unit	Units	Unit conversion (Area to Loading Unit)	Total gpd
World Fairgrounds						
Stables	Office Building	18,000	0.1 gpd/sf		-	1,800
Fairground Retail Walk	Shopping Center	31,897	0.1 gpd/sf		-	3,200
Garden Center and Café - Restaurant	Ordinary Restaurants	3,543	35 gpd/seat	75	-	2,600
Garden Center and Café - Retail	Retail	1,500	0.1 gpd/sf			200
Garden Center and Café - Office Building	Office Building	2,000	0.2 gpd/sf			400
Garden Amphitheater Shops	Shopping Center	720	0.1 gpd/sf		-	100
Garden Amphitheater Café	Cafeteria	720	35 gpd/seat	16	-	600
Greenhouse	N/A	18,678			-	-
Festival House	Ordinary Restaurants	4,372	35 gpd/seat	100	-	3,500
Castle on the Hill	N/A	4,481			-	-
Joust Area	N/A	8,193			-	-
Small Misc. Buildings (Ticketing)	Office Building	26,000	0.2 gpd/sf			5,200
Service Building 1	Office Building	7,000	0.2 gpd/sf			1,400
Service Building 2	Office Building	6,800	0.2 gpd/sf			1,400

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Table VIII. C.17.a-3. Sewer Demand Forecast

Building	Demand Use	Area (sf)	Loading Unit	Units	Unit conversion (Area to Loading Unit)	Total gpd
New Ski Village						
Ski Café	Cafeteria	2,467	35 gpd/seat		164	5,800
Ski Maintenance Building	Office Building	3,037	0.2 gpd/sf	-	-	600
Ski Patrol Building	Office Building	3,200	0.2 gpd/sf	-	-	600
Ski Lodge	Building	25,516	0.2 gpd/sf	-	-	5,100
Resorts World Grand Hotel						
Ground Floor Casino	Casino	125,861	0.3 gpd/sf	-	-	37,800
Second Floor VIP Casino	Casino	14,865	0.3 gpd/sf	-	-	4,400
Retail	Shopping Center	508	0.1 gpd/sf	-	-	100
Restaurants						
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Chocolate Shop	Cafeteria	1,300	20 gpd/seat	29		580
<i>Subtotal</i>						37,645

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Table VIII. C.17.a-3. Sewer Demand Forecast

Building	Demand Use	Area (sf)	Loading Unit	Units	Unit conversion (Area to Loading Unit)	Total gpd
Bars						
Sports Bar	Bar-Lounge	4,973	20 gpd/seat	332		6,640
Bar 360	Bar-Lounge	4,478	20 gpd/seat	299		5,980
Wine Bar	Bar-Lounge	688	20 gpd/seat	46		920
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Service Bars	Bar-Lounge	728	20 gpd/seat	50		1,000
Night Club <small>*assumed capacity</small>	Bar-Lounge	16,411	20 gpd/seat		250	5,000
<i>Subtotal</i>						26,260
Staffing	Casino	N/A	15 gpd/employee/shift		1,000	15,000
Pool Area	Swimming Pool	21,900	10 gpd/swimmer		465	4,600
Indoor Pool Area (Third Floor)		18,366	10 gpd/swimmer		383	3,800
Gym/Spa	Health Club	40,199	20 gpd/user		450	9,000
Hotel Rooms <small>(Includes floors 2-6)</small>	Motel	623,953	110 gpd/sleeping unit		984	108,200
Meeting Rooms	Assembly Hall	20,880	5 gpd/seat	1,044		5,220
<i>Mass Casino Sub-total</i>						252,000
<i>South 17A Sub-total</i>						32,500
Total						284,500

The Greenhouse, Castle on the Hill, and Joust Area in the World Fairgrounds are not planned to have or need sewer service and therefore do not contribute to the sewer demand forecast. Based on the overall site plan and the inclusion of the existing wwtp flows of 24,000 gpd with the replacement, the proposed sewer demand for the new facilities is 308,500 gpd ADF. With a peaking factor of 2.5, the peak flow is estimated to be 771,250 gpd.

With 100 percent of the irrigation proposed on-site using reclaimed water and not potable water and the proposed 6,665 toilets on site using reclaimed water for toilet flushing, the reclaimed water demand is estimated to be 133,000 gpd. Currently, the existing Tuxedo Ridge Ski Center uses surface water and a pump to make snow during the ski season. To better preserve surface water in the watershed, it is proposed to use reclaimed water for snowmaking, resulting in an additional 50,000 gpd (estimated) in reclaimed water demands.

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Projection of Natural Gas Demand

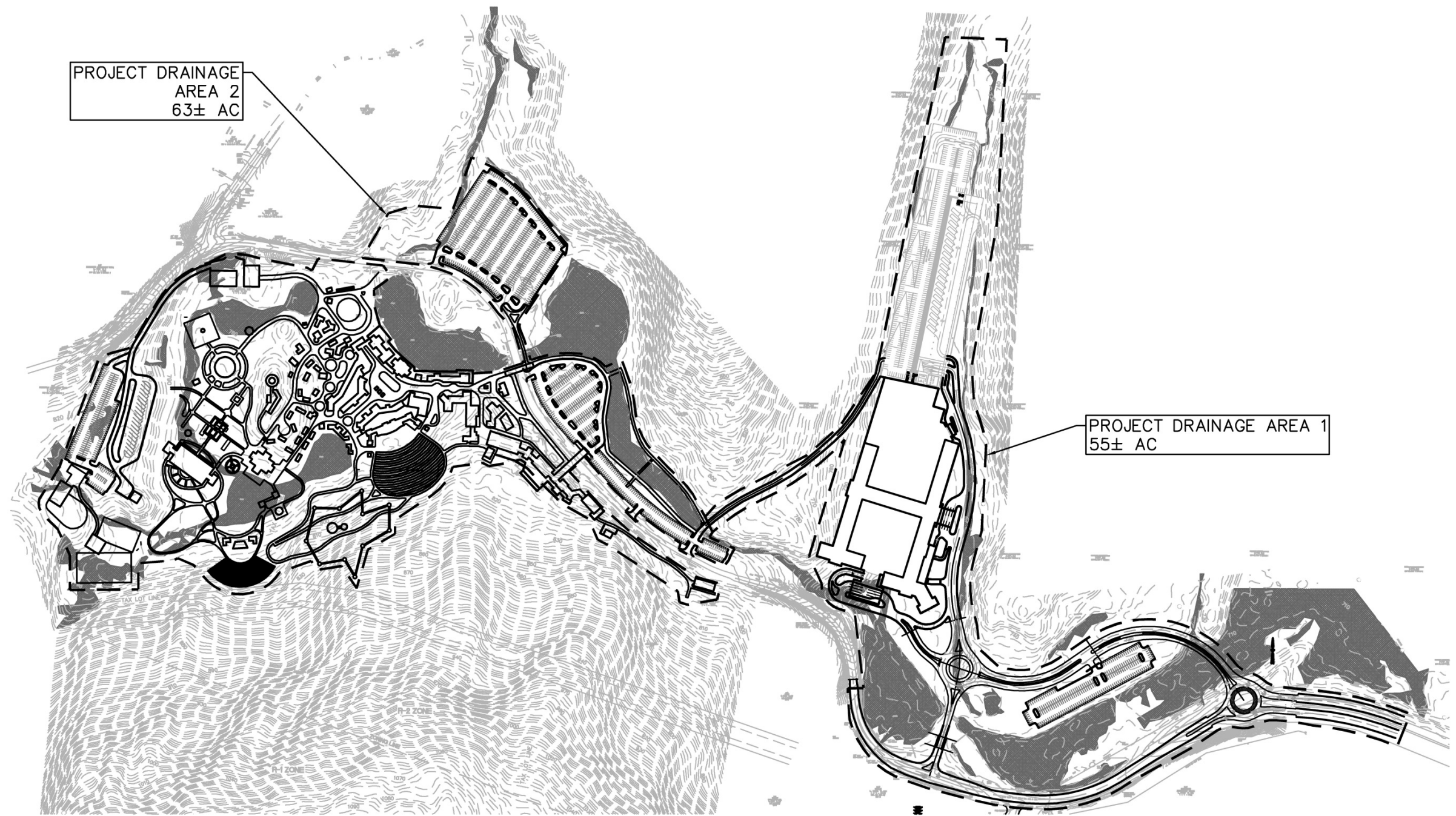
Proposed natural gas connected loads are estimated at 90,000,000 BTUH or 90,000 MBH. The demand originates from building heating, domestic hot water generation, and kitchens uses.

Projection of Storm Water Discharge

Proposed storm water discharges are based on the New York State *Stormwater Management Design Manual* dated August 2010. In accordance with the manual, storm water discharges are measured at several specific design storms. Those storms are described as one-, 10-, and 100-year storm events. Storm water discharge is calculated based on three variables, the time of concentration or duration of the storm event, the relative imperviousness of the development, and the size of the site.

For purposes of calculating storm water discharge increases, the project is divided into two areas identified in Figure VIII. C.17.a-1 as Storm Water Drainage Areas 1 and 2.

Figure VIII. C.17.a-1. Storm Water Drainage Areas



STERLING FOREST RESORTS
Tuxedo, NY



STORM WATER
DRAINAGE AREAS
06.17.2014 Scale: 1"=400'

Kimley»Horn
of New York, P.C.

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Area 1 consists of the Resort World Grand Resort while Area 2 consists of the balance of the development. Table VIII. C.17.a-4 provides pre-development and post-development values for the variables utilized in determining storm water increases. Rainfall depths remain constant in both the pre-development and post-development conditions and are based on values from the New York State *Stormwater Management Design Manual*. Those values are 2.64 inches for the one-year storm, 4.80 inches for the 10-year storm and 8.57 inches for the 100-year storm.

Table VIII. C.17.a-4. Storm Water Discharge Variables

Location	Area (acres)		C Value	
	Pre-Dev	Post-Dev	Pre-Dev	Post-Dev
Area 1	55	55	72	80
Area 2	63	63	76	81

Using the “SCS” as a means to estimate storm water increases, Table VIII. C.17.a-5 provides a summary of the estimated results. These results are preliminary in nature.

Table VIII. C.17.a-5. Storm Water Discharges

Location	1-year storm		10-year storm		100-year storm	
	Pre-Dev Flow (cfs)	Post-Dev Flow (cfs)	Pre-Dev Flow (cfs)	Post-Dev Flow (cfs)	Pre-Dev Flow (cfs)	Post-Dev Flow (cfs)
Area 1	18.9	35.0	73.0	99.5	188.5	220.0
Area 2	33.1	46.5	108.0	128.5	258.0	281.5