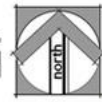
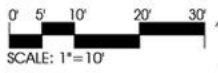


- EXISTING TRASH RECEPTACLE
- NEW WASHINGTONIA ROBUSTA PALM
- DOG WASTE POST
- DUAL DRINKING FOUNTAIN
- PARK SIGNAGE
- INSTALL TWO ORIGINAL PARK BRONZE BRICKS
- MUELLER'S FESCUE
- OAT GRASS
- SUCCULENT ACCENTS
- EXISTING RETAINING WALL
- BLONDE GRAMA GRASS
- DWARF MAT RUSH
- TYPICAL LAYERED PLANTING/ GRASSES/ DROUGHT TOLERANT LANDSCAPE/ NATIVE GRASSES AND SUCCULENT ACCENTS
- EXISTING MEXICAN FAN PALMS TO REMAIN IN PLACE
- SHELLOCK ARTISTIC PAVERS TO BE A NEUTRAL EARTH TONE COLOR AT HOTEL FRONT PAVING

- EXISTING STREE UTILITIES TO REMAIN
- EXISTING TRASH RECEPTACLE
- EXISTING WASHINGTONIA ROBUSTA PALMS TO REMAIN ALONG STREET
- VARIEGATED FLAX LILY
- LAYERED PLANTING/ GRASSES/ DROUGHT TOLERANT LANDSCAPE/ NATIVE GRASSES AND SUCCULENT ACCENTS
- DOUBLE ROW OF WASHINGTONIA ROBUSTAS (MEXICAN FAN PALM)
- NEW DRIVEWAY 30" CURB ON NORTH SIDE OF DRIVE
- NEW DRIVEWAY WITH SQUARE PAVERS IN A NEUTRAL SILVER GRAY COLOR. DRIVE TO HAVE APPROX. 11% SLOPE DOWN TO COLLINS WAY.
- NEW RETAINING WALL ON SOUTH SIDE W/ 42" HIGH STEEL GUARDRAIL ABOVE, ±7.8' HIGH RETAINING WALL.
- EXISTING STAIRCASE ALONG COLLINS WAY TO REMAIN

CONCEPTUAL LANDSCAPE DESIGN
THE BREAKERS HOTEL
 LONG BEACH, CA

DATE: 10-12-18



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Maximum Applied Water Allowance

The following calculations will help you determine your site specific water budget and establish a planting mix that will allow you to meet your water budget. Your Estimated Total Water Use must be less than your Maximum Applied Water Allowance.

1.) Maximum Applied Water Allowance (MAWA)

$$\text{MAWA} = (\text{ETo}) (0.62)[(0.7 \times \text{LA}) + (0.3 \times \text{SLA})]$$

Where:

ETo = Annual Net Reference Evapotranspiration (inches)

0.6 = ET Adjustment Factor

LA = Landscaped Area (square feet)

0.62 = Conversion factor (to gallons per square foot)

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

0.3 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.7 = 0.3)

A.) Net Evapotranspiration Calculation

39.70
<i>(Annual ETo)</i>

<i>(Annual Rainfall)</i>

x .25 =

0.00
<i>(Effective Rainfall)</i>

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall = 39.70

B.) Adjusted Landscape Area Calculation

6445	x 0.7	=	4511.5
<i>(Landscaped Area)</i>	<i>Adjustment Factor</i>		

0	x 0.3	=	0
<i>(Special Landscaped Area)</i>	<i>Adjustment Factor</i>		

Sum of Adjusted Landscape Area = 4511.5

MAWA = 39.70 x 0.62 x 4511.5 = 111046 gallons



Water Budget: All Landscape area Marathon II Sod

2.) **Estimated Total Water Use (ETWU)**

A.) Net Evapotranspiration Calculation

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall = **39.70**

B.) Adjusted Landscape Area Calculation

50 **[Bar]** x 0.3 = **0**
(Low water use plant sqft)

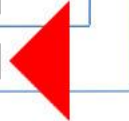
50 **[Bar]** x 0.6 = **0**
(Moderate water use plant sqft)

6445 **[Bar]** x 1.0 = **6445**
(High water use plant sqft)

Sum of Adjusted Landscape Area = **6,445**

ETWU = **39.70** x **0.62** x **6,445** / **0.71** = **223433 gallons**

Irrigation Efficiency Factor		
Percent of total landscape Irrigated with Drip		
0-25%		0.71
26-50%		0.75
51-75%		0.80
76-100%		0.85



Water Budget: Existing Approved Landscape Design

2.) **Estimated Total Water Use (ETWU)**

A.) Net Evapotranspiration Calculation

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall = **39.70**

B.) Adjusted Landscape Area Calculation

50 **6445** x 0.3 = **1933.5**
(Low water use plant sqft)

50 **0** x 0.6 = **0**
(Moderate water use plant sqft)

0 x 1.0 = **0**
(High water use plant sqft)

Sum of Adjusted Landscape Area = **1,934**

ETWU = **39.70** x 0.62 x **1,934** / **0.71** = **67030 gallons**

Irrigation Efficiency Factor		
Percent of total landscape Irrigated with Drip		
0-25%		0.71
26-50%		0.75
51-75%		0.80
76-100%		0.85



