

TOWN OF DAVIE

TOWN COUNCIL AGENDA REPORT

TO: Mayor and Councilmembers

FROM/PHONE: Susan Dean/ 797-1042 by Herb Hyman/797-1016

SUBJECT: Resolution

AFFECTED DISTRICT: n/a

TITLE OF AGENDA ITEM: A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA, AUTHORIZING THE MAYOR TO EXECUTE CHANGE ORDER NUMBER 1 TO THE CONTRACT BETWEEN THE TOWN AND BROWN AND CALDWELL TO PROVIDE A WASTE WEIGHT GENERATION STUDY.

REPORT IN BRIEF: The Town Council previously awarded a contract to Brown and Caldwell to provide a waste weight generation study by Resolution R-2005-191. The study is being performed in July (representing the wet season) and January (representing dry season). Actual field experience in July 2005 plus a change in the Town's contract with Waste Management, Inc. regarding bulk waste pick up indicated a need to expend additional hours to complete the study. The need for expending these additional hours has been approved by Waste Management, Inc. Waste Management, Inc. will be reimbursing the Town for the entire cost of this study.

PREVIOUS ACTIONS: Contract awarded by Resolution R-2005-191, Resolution R-2004-148

CONCURRENCES: The change order has been reviewed by the Bid Specification Committee consisting of William Underwood, Russell Muniz, Bruce Bernard, Mark Kutney, Herb Hyman, and Susan Dean.

FISCAL IMPACT:

Has request been budgeted? Yes

If yes, expected cost: \$63,704.00

Account Name: n/a

Additional Comments: Waste Management, Inc. will be reimbursing the entire cost of this study to the Town

RECOMMENDATION(S): Motion to approve the resolution.

Attachment(s):

Change Order Number 1

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA, AUTHORIZING THE MAYOR TO EXECUTE CHANGE ORDER NUMBER 1 TO THE CONTRACT BETWEEN THE TOWN AND BROWN AND CALDWELL TO PROVIDE A WASTE WEIGHT GENERATION STUDY.

WHEREAS, the Town previously awarded a contract to Brown and Caldwell to provide a waste weight generation study by Resolution R-2005-191; and

WHEREAS, actual field experience in July 2005 and changes to the contract between the Town and Waste Management, Inc. regarding bulk waste pick up indicate a need for additional hours to be expended to complete the study; and

WHEREAS, the increased number of hours has been approved by Waste Management, Inc.; and

WHEREAS, this change will facilitate completion of the project.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF DAVIE, FLORIDA:

SECTION 1. The Town Council hereby authorizes the Mayor to execute Change Order Number 1 which results in a net increase of \$63,704.00.

SECTION 2. Waste Management, Inc. will reimbursed the entire cost of this study to The Town.

SECTION 3. This resolution shall take effect immediately upon its passage and adoption.

PASSED AND ADOPTED ____ DAY OF _____, 2006

MAYOR/COUNCILMEMBER

Attest:

TOWN CLERK

APPROVED THIS ____ DAY OF _____, 2006

“ The Work” : Schedule A to
Agreement for Professional Services

**Town of Davie
Residential Waste Generation Study**

General- For Both Residential Cart Service and Bulk Waste Service

The basic sampling unit for the Study is designated a "truck day", which means the operation of a single truck during a single day.

The sample size is 100%. This means that 100% of the number of truck days that operate per week will be the size of the sample.

Therefore, statistical variability between each geographic Section (an elongated area) is eliminated as a variable in the study because all Sections will be sampled.

The only source of statistical variability is between weeks. This is being addressed satisfactorily by sampling one week during 2 Seasons, Wet and Dry. The samples will be taken during one week in July 2005 (Wet Season) and one week in January 2006 (Dry Season.)

Residential Cart Service

Residential Cart Service is provided to 24 (twenty-four) distinct geographic Sections as shown in Table A1 on the next page.

The A through X designations used here for each of the 24 Sections are designations developed for purposes of the Waste Generation Study.

As mentioned above, each of the 24 Sections means an elongated geographic area served by one truck two days per week.

For example, a household in Section A will receive a pickup on Monday and Thursday each week; a household on Section H will receive a pickup on Tuesday and Friday each week. The Residential Cart Service collection schedule is shown on the next page in Table A1.

On any single day of the week from Monday through Saturday, there are 8 Residential Cart trucks operating. For example, on Monday, the 8 Sections A, D, G, J, M, P, S, and V are served. On Tuesday, the 8 Sections B, E, H, K, N, Q, T, and W are served.

Table A1

Geographic Sections A through X	Collection Vehicle	Truck Days Sampled					
		MON	TUE	WED	THU	FRI	SAT
A B C	Truck 1	1	1	1	1	1	1
D E F	Truck 2	1	1	1	1	1	1
G H I	Truck 3	1	1	1	1	1	1
J K L	Truck 4	1	1	1	1	1	1
M N O	Truck 5	1	1	1	1	1	1
P Q R	Truck 6	1	1	1	1	1	1
S T U	Truck 7	1	1	1	1	1	1
V W X	Truck 8	1	1	1	1	1	1
Total Truck Days Sampled		8	8	8	8	8	8
Total Truck Days Sampled Each Season							48

With approximately 20,200 households in the Town (as currently estimated by Waste Management), served 2 times each week, the number of households served with Residential Cart Service each truck day is approximately:

$$40,400 \text{ pickups/week divided by } 48 \text{ truck days} = 842 \text{ households per truck day}$$

Please note that the actual number of households served will be counted as part of the field data collection effort.

For each truck day, the field data collected by Brown and Caldwell personnel will be of two types:

- A) A copy of the tonnage ticket obtained at the disposal site each time the truck delivers to the disposal site (the South Broward Waste to Energy Facility); the copy should be made and retained by the Brown and Caldwell employee before leaving the disposal site to return to the field or before returning to base after the last load of the day; and
- B) A count of the households served each truck day; all households in the Section will be counted, without consideration whether a household has set out waste or not.

Brown and Caldwell will staff each truck day with a single vehicle following its assigned truck. Each vehicle will be staffed with a driver and a professional, degreed individual in charge of enumerating the households each truck day (" the Counter"). This 2-person arrangement will allow accurate counting of households by the Counter without distractions from driving. The Counter will also verify that all waste collected is only residential waste from within the Town of Davie boundaries.

Bulk Waste Service

Bulk Waste Service is provided to 12 (twelve) distinct geographic Sections as shown in Table A2 on the following page. Each of the 12 "Sections" essentially means an elongated geographic area served by one truck one day per week.

For example, a household in Section S will receive a pickup on Monday each week. A household in Section Z will receive a pickup on Friday each week. On any single day of the week from Monday through Saturday, there are 2 Bulk Waste trucks operating. For example, on Monday, the 2 Sections Y and AB are served. On Tuesday, the 2 Sections Z and AC are served.

With approximately 20,200 households in the Town, as currently estimated by Waste Management, served 1 time per week, the number of households served each truck day is approximately:

$$20,200 \text{ households divided by } 12 \text{ truck days} = 1,683 \text{ households per truck day}$$

For each truck day, the field data collected by Brown and Caldwell personnel will be of two types:

- A) The tonnage ticket obtained at the disposal site each time the truck delivers to the disposal site (the South Broward Waste to Energy Facility) and
- B) A count of the households served each truck day will not be performed for the Bulk Waste Service, since the total number of households will be obtained during the Residential Cart Service field data collection.

Table A2

Geographic Sections X through AJ	Collection Vehicle	Truck Days Sampled						
		MON	TUE	WED	THU	FRI	SAT	
Y Z AA	Truck 8	1	1	1				
AB AC AD	Truck 9	1	1	1				
AE AF AG	Truck 8				1	1	1	
AH AI AJ	Truck 9				1	1	1	
Total Truck Days Sampled =		2	2	2	2	2	2	
		Total Truck Days Sampled Each Season =						12

Brown and Caldwell will staff each truck day with a single vehicle following its assigned truck. Each vehicle will be staffed with a professional, degreed individual (" the Monitor" .) Since the number of households will be counted during the Residential Cart Service field data collection, there is no need for a second staff individual in each following vehicle. Rather, the Monitor will only verify that no waste is collected that is not residential waste from within the Town of Davie boundaries.

Data Analysis and Computations

Brown and Caldwell will compile field data, analyze, and process it to develop a total, overall Waste Generation Rate per household, which will be computed as:

$$\text{Residential Cart Waste Tons} + \text{Bulk Waste Tons} = \text{Total Waste Tons}$$

Waste Generation Rate (WGR) = Total Waste Tons / Total Number of Households

The WGR will be computed, as a final product, on an annual basis.

The WGR for the Wet Season will be submitted to the Town/WMI as part of an interim report within 6 weeks after completion of the Wet Season field data collection effort.

Compensation and "Agreement Price"

The Agreement Price, as defined in the Agreement for Professional Consulting Services to which this Schedule A is attached is based on the following budgeted field data collection staff hours per Season:

960 staff hours for Residential Cart Service
and
120 staff hours for Bulk Waste Service

For both Seasons, a total of 2,160 staff hours are required for field data collection. The high number of staff hours stems partially from the use of a 100% sample size.

In addition, adequate staff hours are budgeted for data compilation and analysis needed to prepare for field data collection and calculate the Waste Generation Rate.

The Agreement Price is therefore, on a lump sum basis:

\$ 119,600

Brown and Caldwell will invoice the Town as set forth in Section 6.0-Payment of the Agreement for Professional Consulting Services to which this Schedule A is attached. Each invoice will describe the percent completion during the invoice period. It is anticipated that 45.0% of the Agreement Price will be invoiced after each Season's data collection effort, and that 5.0 % of the Agreement Price will be invoiced after submittal of each Season's corresponding report.

The WGR for both the Wet Season and the Dry Season (the total tons per household per year) will be submitted to the Town/WMI as part of a final report within 6 weeks after completion of the Dry Season field data collection in January 2006.

END OF SCHEDULE A

Change Order to
Agreement for Professional Services

Town of Davie
Residential Waste Generation Study

General- Requirement for Change Order

The basic sampling unit for the Study is designated a "Truck Day", which means the operation of a single truck during a single day. The Brown and Caldwell effort of monitoring and following each truck each day is based on the number of Truck Days.

As a result of actual experience with the Summer field study in July 2005 (for Residential Cart Service only) and as a result of the change from weekly Bulk Waste to monthly Bulk Waste (affecting both Summer and Winter field studies for Bulk Waste) this Change Order is necessary to cover the additional effort required as generated by these changes.

Also, some of the changes are necessitated by the need identified during the Summer 2005 field study for Backup vehicles, which are necessary to avoid disrupting the actual collection operations when vehicle breakdowns occur. For reference, the original Schedule A to the Agreement for Professional Services is attached.

Residential Cart Service

During actual Residential Cart Service field study (Summer) in July 2005, the collection operations schedule required an additional 3 to 6 vehicle Days of effort for a Standby vehicle. In order to avoid interrupting the collection vehicle operations themselves, the Standby vehicle was called upon from time to time to follow newly assigned trucks that replaced trucks that became unserviceable during operations.

Table C1 below presents the actual Truck Days monitoring effort required of 48 Truck Days per Season, based on the actual field collection schedule required for Residential Cart Service. Backup is budgeted at 3 Truck Days per Week (or 0.5 Truck Days per weekday), based on the concept that other monitoring vehicles that have completed their routes, or an on-call

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 Town of Davie

Supervisor can be brought in during the afternoons if necessary. The additional number of Backup Truck Days required for both Seasons is then $3 \times 2 = 6$, as shown below:

Table C1

Geographic Sections	Vehicle	MON	TUE	WED	THU	FRI	SAT
A		1			1		
B	1		1			1	
C				1			1
D		1			1		
E	2		1			1	
F				1			1
G		1			1		
H	3		1			1	
I				1			1
J		1			1		
K	4		1			1	
L				1			1
M	5	1			1		
N			1			1	
O		1			1		
P	6		1			1	
Q				1			1
R		1			1		
S	7		1			1	
T				1			1
U		1			1		
V	8		1			1	
W				1			1
X	9	1			1		
Sub-Total		9	8	7	9	8	7
Truck Days Each Season =							48
Standby Vehicle Days Each Season =							3
Total Truck Days Each Season =							51

Bulk Waste Service

Bulk Waste Service was originally scheduled to be accomplished Weekly, for geographic areas that varied with each day of the week. Recently, the schedule has been changed to a Monthly cycle, so that the entire Town is serviced once per month. A relatively large geographic area is served each day of the week. In this Monthly schedule, 10 trucks operate 6 Days per week for a total of 60 Truck Days of monitoring effort each Season.

A Standby vehicle, at least in the mornings, is expected to be essential for Bulk Waste (as it is for Residential Cart Service) if the collection operations themselves are not to be disrupted. The grand total of Truck Days monitoring effort each Season is therefore 60 (Monthly Schedule) + 3.5 (Standby Vehicle) = 63.5. Table C2 below presents the effort required under the Monthly schedule for each Season.

The original Schedule A budget was based on a total of 12 Truck Days of monitoring effort (please see original Table A2.) Table C2 below shows the required monitoring effort of 60 Truck Days for each Season under the new Monthly Bulk Service schedule, excluding Backup of 3.5 Truck Days per Season (0.583 per day, supplemented by an on-call Supervisor, if necessary), which is accounted for further below. This means that the new schedule requires, excluding Backup vehicles:

$$(60 \times 2) - (12 \times 2) = \\ 120 - 24 = 96$$

Truck Days of additional monitoring effort.

Backup required (but not budgeted earlier) is 3.5 Backup Days per Season, or 7 Backup Days in total.

Table B2

Geographic Sections	Collection Vehicles	MON	TUE	WED	THU	FRI	SAT
For the New Monthly Bulk Waste Schedule, one Geographic Section is served each day of the six-day week. Each day of the week, ten (10) trucks operate; here they are identified as collection vehicles 10 through 19 for reference purposes.	10,11,12,13,14,15,16,17,18,19	1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
		1	1	1	1	1	1
Sub-Total		10	10	10	10	10	10
Truck Days Each Season =							60
Standby Vehicle Days Each Season =							3.5
Total Truck Days Each Season =							63.5

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Residential Waste Generation Study
Town of Davie

Compensation and "Agreement Price"

The Agreement Price, as defined in the Agreement for Professional Consulting Services modified by this Change Order is hereby increased as follows:

Original Agreement Price:

\$119,600

Plus additional (Winter 2006 Field Study Only) Residential Cart Service Backup of 51 (Required) - 48 (Budgeted) = 3 Days per Season (6 in total) @ \$1,107/day:

\$6,642

Additional Bulk Waste Monitoring for both Seasons of 120 - 24 = 96 Days @ \$554/day:

\$53,184

Plus 3.5 days per Season or 7 Days total of additional Bulk Backup @ \$554:

\$3,878

The total value of the additional monitoring effort is therefore:

\$63,704

The total value of this Change Order is therefore:

\$63,704

The modified total Agreement Price is therefore, on a lump sum basis:

\$183,304.

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Town of Davie

Signatures

This Change Order to the referenced Agreement for Professional Services
is hereby authorized by:

For the Town of Davie:

Signature

Date

For Waste Management Inc. of Florida:

John Casagrande

Signature

1/24/06

Date

For Brown and Caldwell:

Shunt O'Connell

Signature

1/13/06

Date

END OF CHANGE ORDER

ATTACHMENT: Original Schedule A

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