Albuquerque Transfer Station Feasibility Analysis

Prepared For

Solid Waste Department

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1. Introduction

1.1 Purpose

The Solid Waste Department (SWD) is considering the feasibility of constructing a new transfer station to be centrally located near the I-25 and I- 40 interchange. The new transfer station would provide a convenient location where SWD collection trucks could unload and avoid driving directly to the Cerro Colorado Landfill to unload. It will also provide a convenient location for the general public to unload. The primary goal of building a transfer station is to reduce the overall cost of transporting waste to the landfill. Other benefits include reducing the impacts on roads, saving energy, and increasing convenience for SWD collection trucks and other customers. It can also enhance SWD's ability to recover more materials.

JR Miller and Associates (JRMA) was retained to evaluate the feasibility of constructing and operating a new central transfer station. The facility's primary function would serve to receive waste delivered by SWD collection vehicles thus eliminating the need for these trucks to travel up to Nine Mile hill to the landfill. It would also accept waste from the general public. Similar to the existing transfer stations the facility would be open seven days per week. The facility would also include a recycling and a household hazardous waste (HHW) drop off center.

This analysis will entail a review of the impacts on the existing collection services and transfer station system. Currently, SWD operates three convenience centers that accept waste from the public center. The largest of the three is the Eagle Rock Station located on the north side of the City off the I-25 at the Alameda exit. The other two stations are smaller and located in the south and west sides of the City. Depending on the final location of the new central transfer station it may be reasonable to close one or more of the existing facilities thus reducing the operating expenses for these centers.

The feasibility analysis will provide the City with information to assist in making a decision of future facility needs to provide convenient and cost effective services.

1.2 Study Approach

Many communities have been forced to build larger transfer stations within the jurisdiction due to the fact that new landfills are typically located further from the urbanized areas where waste is generated. In the case of the City of Albuquerque the landfill is located about 20 miles west of the City center but at the top of the plateau. This location requires each collection truck to make two trips a day to the landfill to complete their routes. The time required driving to the landfill in conjunction with the operation and maintenance expenses associated with making these trips provide compelling reasons to evaluate the alternative of operating a central transfer station.

The approach for completing the analysis will entail several steps.

1. Evaluate the current transportation expenses for collection trucks to haul directly to the landfill. The analysis will consider labor cost as well as the operations and maintenance expenses associated with collection trucks traveling to the landfill. This information was provided by the SWD.
2. Using a hypothetical location for the new transfer station, evaluate the transportation cost if collection trucks can unload and return to their routes rather than direct haul to the landfill. The location used is a somewhat optimal location with easy access to the major freeways to allow transfer trucks to make the trip to the landfill efficiently. For the City of Albuquerque this would ideally be somewhere within 3 miles of the Big I interchange. With this location the cost to transport waste in larger trucks to the landfill can be established.
3. Once the transportation cost comparison was completed the capital investment needed to build a new transfer station was prepared. JRMA prepared criteria for building a new transfer station to handle the waste collected by SWD. The criteria were used to establish the size of buildings and other features for the facilities to be considered in the evaluation. The result was a basis for design for a new transfer station that established minimum requirements for the size of parcel needed.
4. Determine the equipment needs to operate the new transfer station. SWD currently operates the three convenience centers and has several tractor/ trucks and live bottom trailers to haul waste to the landfill. The new transfer station will require the purchase of additional rolling stock to handle the transport of about 1,600 tons of waste each day. The feasibility analysis considers the option to close convenience centers and assign existing rolling stock to the new facility.
5. A transfer station operation requires the SWD to take on additional operational expenses. This includes gatehouse personnel and staff to operate the facility and drivers to transport waste. It is assumed that the reduction of drivers resulting from the savings in time from using the transfer station versus hauling direct will be available to operate transfer trucks, thus eliminating the need to hire new drivers.

Once the cost of constructing and operating a new transfer station was determined, a comparison was made to the cost of continuing to operate the current system of collection trucks hauling directly to the landfill. A financial model was prepared to compare the 20 year life cycle of the alternatives. The financial analysis allows the City to evaluate the alternatives on a life cycle cost basis. The model also provides a tool to consider other options such as whether to close one or more of the existing convenience centers and determine the impacts.

2. Feasibility Analysis

The feasibility analysis entails developing financial information for the various aspects of building a new transfer station. This includes the cost of transporting waste, building a new transfer station and integrating the operational expenses into the SWD budgets. The first step in the feasibility study is to consider the transportation costs associated with the options. For this analysis it is necessary to compare the cost of the different types of collection vehicles to continue to haul directly to the landfill versus unloading at a centrally located transfer station and load a large trailer to haul to the landfill. The collection trucks can then return to the route and avoid the time to travel to the landfill.

Assuming the transportation cost appears favorable for building the new transfer station then the construction and operation expenses can be established to complete the feasibility analysis.

2.1 Background

In FY 2010 the Cerro Colorado Landfill received 529,615 tons of waste. Of this total, 404,929 tons or 76% was delivered by SWD collection vehicles and 54,686 tons or 10% was transferred from the three convenience centers operated by SWD. The breakdown is as follows:

City Collection trucks/other Departments	404,929 tons
Transfer /Convenient Centers	
Montessa	14,746 tons
Eagle Rock	32,318 tons
Don Reservoir	7,623 tons
	54,686 tons

The remaining 70,000 tons disposed at the landfill were generated by non-city sources, including commercial haulers (63,698 tons) and county departments (4,954 tons).

The payload for collection trucks varies on the type and size of the truck. Residential collection (automated) trucks hauled an average load of 7.7 tons in FY 2010. Commercial collection vehicles hauled an average of 8.1 tons during this period. Roll-off trucks carried an average load of 3.1 tons in the same time period. The average load for a rear loading (W&L/Large Item) collection truck was 4.7 tons during the same period. The average payloads are important to establish the transportation cost on a per ton basis. Since it is possible for transfer trailers to achieve payloads of 24 tons for each trip the cost benefits can be more accurately measured.

2.2 Existing Transportation Costs

Once SWD collection trucks have completed their routes or for roll-offs that have picked up a customer's waste, they will drive directly to the landfill to unload. Because almost all vehicles use either the I-25 or I-40 for their primary route to the landfill, it will be assumed that the start of the long haul to the landfill will be the Big I intersection. This will be referred to as the center of waste generation. From this interchange it is approximately 20 miles to the landfill. The trucks must travel up I-40 on what is referred to as "Nine Mile hill" with an average grade of 7%. Once off the I-40 freeway, collection trucks must travel 9 miles along a local access road to the gatehouse and onto the landfill. The roundtrip to the landfill and back to the Big I intersection takes about 80 minutes, not including the time spent at the landfill. Time spent at the landfill is about 20 minutes which includes the travel to the working face, and unloading, and back through the gatehouse. Total time per load for transport to the landfill and unloading is approximately 100 minutes.

The cost of directly hauling to the landfill has been established using actual operating and maintenance expenses in conjunction with actual labor costs. The cost per load was based on the roundtrip time to the landfill plus the unloading time multiplied by the hourly cost to operate each type of vehicle. The hourly operating expense for each type of collection truck does vary because actual fuel expenses and maintenance costs differ for each type of truck although the labor expenses are essentially the same. More information regarding the cost per hour for each type of vehicle is provided in Appendix A.

The loads-per-day for each vehicle type are based on the current number of vehicles SWD operates in each category multiplied by the average number of loads per day that vehicle category picks up. The cost per load for each vehicle type, as well as the total cost for transportation is presented in the following chart:

Transportation Cost for Direct Haul to Landfill

Vehicle Type	Per Hour Vehicle Cost	Roundtrip & Unloading Time	Transportation Cost per Load	Total Loads per Day	Transportation Cost per Day
Automated	$68	100 min	$113	85	$9,600
Front Loader	$68	100 min	$113	50	$5,700
FL w/ Assistant	$95	100 min	$158	13	$2,100
Rear Loader Comml & W/L	$78	100 min	$130	3	$400
Roll-off - Box	$55	100 min	$92	95	$8,700
Transfer Trucks	$52	N/A			$0.00
Total Estimated Cost Direct Haul / Day					**$26,500**

The chart above shows that the City currently spends approximately $26,500 per day for collection vehicles to transport waste directly to the landfill. Based on 5 days per week and 52 weeks per year of operations, the City spends approximately $6.9 million per year for transporting waste directly to the landfill. The transportation time to direct haul requires approximately 410 man-hours per day in addition to the time spent on the collection routes.

2.3 Transportation Cost with New Transfer Station

If SWD were to construct a new centrally located transfer station, collection vehicles would be able to avoid the time to travel directly to the landfill. The trucks would not be subject to the wear and tear associated with climbing Nine Mile hill or need to travel on unpaved landfill roads. For this analysis it is assumed the new transfer station would be located within 10 minutes of the centroid or in this case the Big I intersection. Therefore, collection trucks would travel only 10 minutes rather than the 80 minutes currently required to travel to the landfill. This 10 minute travel time also accounts for the fact that some collection vehicles do not travel through the interchange but might use surface streets to access the transfer station.

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Another time savings factor to consider is that it will take less time to unload at a transfer station than at a landfill. This is due in part to the fact that the vehicles will not have to travel out to the working face and maneuver on a rock pad to unload but rather drive inside a large building to unload. Also trucks would travel on paved roads rather than landfill roads.

At a new central transfer station, waste would be loaded into larger trailers for transport to the landfill. A transfer truck can carry a payload of about 24 tons based on current road limits, which is equivalent to the capacity of 3 to 5 collection vehicles. A well designed and operated transfer station will allow operators to efficiently fill each truck to capacity before transfer. Roundtrip to the landfill for transfer trucks will be approximately 80 minutes. The average time to load a transfer trailer (assumes top load) is 10 minutes and the time to unload at the landfill is assumed to be 15 minutes for a total time of 105 minutes. Currently, transfer trailers hauling from the Eagle Rock station make the round trip to the landfill in 115 minutes. Since the Eagle Rock station is located about 7 miles north of the Big I, the time from a new central location should be less.

Assuming a transfer station were designed to handle an initial capacity of 405,000 tons, approximately the amount of waste that SWD vehicles collected in FY 2010, the transfer trucks would make approximately 17,000 trips to the landfill per year. Based on operations of 5 days per week and 52 weeks per year, this is equivalent to approximately 65 trips to the landfill per day. To transfer the initial waste SWD would need 17 transfer trucks and trailers. Additional trucks and trailers will be needed to provide backup equipment for the operation. If SWD receives waste from the convenience centers and/or other private collection companies, additional trucks will be needed.

The following chart shows the cost that would be required to transport wastes to the landfill with a transfer station. This chart does not include the cost to operate the transfer station or finance the transfer station construction. The roundtrip and unloading times are based on the assumptions above.

Vehicle Type	Per Hour Vehicle Cost	Roundtrip & Unloading Time	Transportation Cost per Trip	Total Loads per Day	Transportation Cost per Day
Automated	$68	20 min	$23	85	$2,000
Front Loader	$68	20 min	$23	50	$1,200
FL w/ Assistant	$95	20 min	$32	13	$400
Rear Loader	$78	20 min	$26	3	$100
Roll-off - Box	$55	20 min	$18	95	$1,700
Transfer Trucks	$52	105 min	$91	65	$5,900
Total Estimated Cost / Day					**$11,300**

For this alternative the cost for collection trucks to deliver waste to the transfer stations and transport waste from the transfer station to the landfill is approximately $11,300 per day or $2.9 million per year. The result is that collection trucks would only use approximately 82 man-hours per day to haul waste to the transfer station. Transfer truck drivers would use 114 man-hours per day, for a total of 196 man-hours per day to transport waste to the landfill. This is a reduction of 231 man-hours per day of labor, which is equivalent to approximately 29 full time equivalents (FTE's).

2.4 Findings of Transportation Analysis

The transportation cost associated with operating a new transfer station presents a potential savings of about $15,200 per day, which is approximately $4.0 million per year. Of this $4.0 million per year, approximately $2.3 million represents the operations (i.e. fuel cost) and maintenance cost savings from reduced miles traveled. The remaining $1.6 million in savings is a result of reduced labor cost by avoiding the time to travel to the landfill. To fully realize these savings, the City could assign some to the operation of the new transfer station, reduce the work force through attrition/retirement, and/or use the resources to add or expand services.

As mentioned, if the City were to construct a new central transfer station it will be necessary to purchase both trucks and trailers for the operation. One option to committing the capital outlay for rolling stock may be to contract the long haul to the landfill operator. The reason is there may be several trucking companies with idle or standby equipment that could be used to perform this work. Both private and public transfer station operators have used this approach with success. Depending on availability of local trucking companies this option may have merit.

2.5 Other Factors

If the collection trucks do not need to travel to the landfill certainly the most direct cost savings to SWD is reduced fuel and labor. The analysis performed also accounts for potential savings on standard maintenance and equipment replacement schedules. However, there are other factors that could have direct impact on operations that will be recognized. The first is the avoidance of having 165 collection trucks travel up and back down the Nine Mile hill. This condition causes excessive wear on both the transmissions and braking systems on collection trucks. For this reason, it can be expected the SWD will experience a reduction in maintenance costs based on having to travel fewer miles each day.

2.6 Convenience Centers Operations

The SWD operates three convenience centers, and if a new transfer station were built they may wish to consolidate some or all of these convenience center operations into the new transfer station. Assuming the new transfer station is relatively centrally located with good access; all three stations may be located within 5 miles. Also, consolidating operations of three small stations to one large facility would result in less operating costs. For example, each of the smaller stations has a scale house and at least two operators / landfill attendants; and, each site has either a large front loader/dozer to handle waste and load trailers. These would be integrated into one facility requiring less labor and equipment.

The other factor impacted would be the cost of transporting waste. A new central station could reduce the overall cost to transport because of its central location. Also, because the smaller stations have little space for operating and interim storage, pay loads are less than maximum (i.e. 20 tons or less vs. maybe 24 tons). This is partly because the waste materials received at smaller station are from self haul customers that often contain bulky items. Unless operators have the space and equipment to break up these loads they cannot achieve the highest density in the trailer. In a large station there will be space to spread this material out, break it up and then blend it with higher density waste to achieve an overall higher density or payload in each trailer driving to the landfill.

The following presents the analysis of the potential reduction in transportation costs that might be experienced by closing the three convenience centers and consolidating services to one central site.

The three convenience centers received the following tonnages in FY 2010:

Montessa	14,746 tons
Eagle Rock	32,318 tons
Don Reservoir	7,623 tons
	54,686 tons

The Don Reservoir convenience center is the smallest of the three. This convenience center transports waste to the landfill in roll off trucks. This convenience center sent 2,545 trucks to the landfill during FY 2010, with the trucks carrying 3.0 tons on average. A round trip to the landfill takes approximately 80 minutes, including unloading time. If the waste had been collected at a transfer station near the Big I and transported by transfer trucks instead, this material would have only required 318 trips with a roundtrip time of 105 minutes. The following chart compares the cost of transporting from Don Reservoir with the cost of transporting the same volume of waste from a central transfer station:

Don Reservoir Transfer/Drop Off Center

	Tons	Vehicle Type	Vehicle Capacity (tons)	Vehicle Trips	Round Trip Time	Vehicle Operations	Transfer Cost per Trip	Transfer Cost per Year
Don Reservoir	7,623	Roll Off	3.0	2,545	80 min	$55/hr	$73.33	$186,633
Transfer Station	7,623	Transfer Truck	24.0	318	105 min	$52/hr	$91.00	$28,938
			Annual Transportation Savings:					**$157,695**

This data shows that the SWD could have saved approximately $160,000 in FY 2010 by hauling waste from a central transfer station and closing Don Reservoir.

Eagle Rock and Montessa both haul waste using transfer trucks. However neither facility has the ability to monitor the weight of the truck during loading to efficiently guarantee that the transfer truck has been loaded to the maximum capacity before it leaves the loading area. The City has the potential to decrease the cost of transporting the waste to the landfill by requiring the customers to bring it to a facility that is located closer to the landfill or by increasing the amount of material loaded into each truck. The SWD claims that roundtrips to the landfill from Eagle Rock take 105 minutes, and 10 minutes has been included for the loading of the truck. The following chart shows the potential transportation savings for the SWD if they were to close the Eagle Rock convenience center and require all the traffic to visit the proposed transfer station instead:

	Tons	Vehicle Type	Vehicle Capacity (tons)	Vehicle Trips	Round Trip Time	Vehicle Operations	Transfer Cost per Trip	Transfer Cost per Year
Eagle Rock	32,318	Transfer Truck	19.5	1,658	115 min	$52/hour	$99.67	$165,247
Transfer Station	32,318	Transfer Truck	24.0	1,347	105 min	$52/hour	$91.00	$122,577
							Annual Savings:	**$42,670**

SWD could save $43,000 per year on transportation by hauling waste from a new central transfer station instead of the Eagle Rock convenience center. This is less per ton than the other stations because the Eagle Rock station does have a larger tip floor and payloads are typically higher than the other stations.

Roundtrip travel from the Montessa convenience center to the landfill will require about 120 minutes, including loading. The following chart estimates the transportation savings that the SWD could experience by closing this convenience center and accept waste at the proposed transfer station instead.

	Tons	Vehicle Type	Vehicle Capacity	Vehicle Trips	Round Trip Time	Vehicle Operations	Transfer Cost per Trip	Transfer Cost per Year
Montessa	14,746	Transfer Truck	20.1	735	120 min	$52/hour	$104.00	$76,440
Transfer Station	47,064	Transfer Truck	24.0	615	105 min	$52/hour	$91.00	$55,965
							Annual Savings:	**$20,475**

By closing the Montessa convenience center, the City could save approximately $20,000 per year.

2.7 Findings of Transportation Analysis

If the SWD were to close all three convenience centers and only receive solid waste at the proposed transfer station, they could save an estimated $220,000 per year in transportation expenses. This transportation saving does not include the saving that could result from discontinuing operation at these facilities. Another option to consider is to possibly reduce the operating hours of these smaller stations if the City wished to continue providing some level of service to these areas.

3. Cost to Construct and Operate a New Transfer Station

A new central transfer station will be sized to handle all waste delivered by the SWD's collection fleet. It must also contain certain features necessary for the SWD to provide full services for its constituents. This section discusses the requirements for the new transfer station and other features to be used in defining the basis of design. Then a conceptual design and site layout was developed to estimate the relative construction cost for the analysis.

3.1 Site Features and Facilities

Based on information provided by the SWD, the features and facilities to be built for the new central transfer station were determined. The basis for the project is as follows.

- Transfer Station Building - Building will be sized to handle current waste flow of about 2,000 tpd and future growth. For estimating purposes it is assumed the transfer station should be between 50,000 and 70,000 sq ft. In the construction cost estimate, a 65,000 sq. ft. pre-engineered metal building (PEMB) was assumed.
- A central gate house and scale system will be installed. It will provide two inbound scales and one outbound scale for weighing outbound customers. A fourth scale may installed for to weigh out transfer trucks.
- The site will be large enough to provide adequate queue space for on-site stacking to prevent back-up onto public right-of-way.
- Employee space for on-site employees only i.e. foreman offices, restrooms and locker space, break room and training/conference area. This is typically about 4,000 sq ft. The main employee area for collection fleet drivers, maintenance staff and administrative functions are to remain at the SWD offices on Edith Blvd.
- A Household Hazardous Waste Collection Facility (assume 5,000 sq ft)
- Recycling Drop-Off for source-separated materials delivered by the public (assume 5,000 sq ft)
- Maintenance area for onsite mobile equipment i.e. front loader, skid loader and forklift etc. Parking area for transfer trucks and trailers. Note: One option will be to park trailers at the landfill.

Using this information, a generic site plan was developed. In order to have sufficient land to build the facilities described and to allow for a safe and efficient traffic circulation plan, it is desirable to have between 8 acres and 12 acres of land. The most efficient method to load transfer trailer is to load from the top or by gravity. Therefore, it is desirable to have the tipping floor at a different level which is typically 16 feet above the load out tunnel. Thus having a grade differential on the property can lead to a more efficient operation and can certainly reduce initial construction costs.

3.2 Construction Costs Estimate

Using the transfer station facility criteria described above JRMA prepared a planning level approximate construction cost estimate. This estimate is being developed to provide information for evaluating the feasibility of building a central transfer station for the purposes of reducing overall system cost (i.e. is it less than continuing to have collection vehicles haul directly to the landfill). The facility criteria are preliminary and if it is decided to move forward additional effort to define the basis for design for a permanent transfer station can be developed. After that step is completed a more defined construction cost can be prepared.

In addition to the site features described above there are several key assumptions used to prepare the cost estimate. First, it is assumed a new transfer station site would 1) be built on commercial/ industrial land within 3 miles from the Big I. 2) The site is within the urbanized area of the City and would have access to arterial streets and utilities would be readily available. 3) The terrain would be such that the soil cut and fill would be relatively balanced and 4) that the site is not a "brownfield" requiring remediation.

The other key assumptions used to develop construction cost are as follows.

- The transfer station will be built on 9 acre site
- Facilities to be included include:
    - A 70,000 sq ft Pre- Engineered metal building transfer station building
    - Recycling drop center
    - Household Hazardous waste building (HHW)
    - A gatehouse and scale complex to weigh vehicle and handle transactions
    - State Gross Receipts tax of 7%

The estimated design and construction cost is $24,700,000 plus the estimated cost for the land and site permitting is $5,300,000. The cost of land assumes the City needs to purchase a larger parcel based on preliminary review of available parcels and ensuring there is sufficient buffer space. Total cost to purchase land and to build a new transfer station on a "Generic Site" is estimated to be $29,000,000. The site is based on comparable land within 3 mile radius of the Big I interchange.

Appendix B provides a more detailed breakdown of the construction cost of the assumptions used. It is important to note the construction cost estimate is for a generic site and the actual construction cost will be based on information developed from a detailed programming effort conducted to define the project considering a specific site.

3.3 Cost to Operate a New Transfer Station

3.3.1 Existing Conditions

The SWD currently operates three convenience centers or small transfer stations. The total annual cost to operate these facilities is $5.9 million as reported in the 2011 Cost of Service study. These costs include several items that are not related to direct operations of the centers. For instance they include landfill disposal cost and administrative and interfund transfers that amount to $2.1 million. Thus, the direct operating expenditures for the three centers, including the cost to haul wastes from the centers to the landfill is about $3.84 million. If the transportation expenses are subtracted from the operational expenses, the actual direct operating expense is about $3.1 million ($3,837,000 - $427,000 transportation - $315,000 Truck R&M)

The operating expenses include $2,253,000 for labor cost. The total labor required to operate the three centers is as follows:

Supervisors	6
Gatehouse Attendants	6
Landfill Attendants (includes equipment operators)	14
Transport Operators	16
Total Labor (FTE's)	42

The convenience centers are open to the general public seven days per week. The general public can use the facilities each day accept for holidays from 8:00 am to 5:00 pm (9 hours). Certain SWD collection vehicles use the centers during the week and sometimes on Saturday. Actual operating hours are from 6:00 am to 6:00 pm which provides time for collection vehicles to use the facility in the early hours and time to load out materials at the end of the day.

3.3.2 Cost to Operate a Central Transfer Station

Eagle Rock is the largest center and it operates similar to that of a large scale transfer station. Waste is tipped on the floor inside a building and a large front loader or track loader pushes the waste into a load out port where it drops into a trailer located 16 feet below the tipping floor. This is referred to as a top load method and is considered the most efficient method to load transfer trucks. It is also the preferred method for larger transfer stations that handle more than 1,000 tons per day.

The new transfer station would be designed to handle 2,000 tons per day and would be capable of handling 3,000 tons per day. This can be accommodated by designing the station with two load out ports. The operating hours are assumed to be similar to that of the current convenience centers. The stations should be designed to allow for the SWD collection vehicles and self haulers to unload in separate areas. This will result in much safer traffic circulation and will require fewer floor spotters to direct cars and pickups to available unloading stalls.

The largest expense of operating the transfer station will be the labor costs. JRMA used information for the existing convenience centers to arrive at the labor expenses for the new station. Given the operating assumptions the amount of labor required to operate the new station is estimated as follows:

Supervisors	3
Gatehouse Attendants	3
Landfill Attendants (includes equipment operators)	8
Equipment Operators	3
Total Labor (FTE's)	17

In addition to the direct labor to operate the transfer station it is assumed that two current administrative positions would be part of the operating expenses. One is the Accountant Manager to be the administrator for the gatehouse/ scale complex and the second is the Accountant Assistant.

It is expected there will be between 18 and 20 drivers for transfer trucks. For the feasibility analysis we used 20 drivers. However, between the labor savings in the reduced collection vehicle time and potentially drivers from the existing convenience centers being re-assigned if they are closed, there will be no new employees needed to operate the transfer station. The labor expense for the transport drivers is accounted for in the transportation costs.

Operating expenses for the new transfer station were developed based on current operations and information from similar type facilities.

Estimated Operating Expenses	
Labor Expense	$1,100,000
Equipment Expenses	360,000
Equipment Maintenance	150,000
Equipment Replacement	300,000
Facility Replacement	300,000
Subtotal	$ 2,210,000
Operating Contingency (15%)	340,000
Transfer Station Operating Expenses	$ 2,550,000
Other Services	
Recycle Drop Off Center	$ 100,000
HHW Drop Off (5 days/wk)	$ 150,000
Subtotal Other Services	$ 200,000
Total Operating Expenses	$ 3,000,000

The new transfer station provides an opportunity to offer other new services. The site plan has included the area needed to operate a drop off facility for source separated materials and a new Household Hazardous Waste facility (HHW). It is assumed the recycling center would be open every day while the HHW facility would be available for five days per week. Some HHW facilities are operated by appointment only or just a few days per week.

The operating expenses were included in the feasibility model.

4.0 Evaluation of Edith Blvd site

The Solid Waste Departments (SWD) primary center of operations is located at 4600 Edith Blvd. On this 19 acre parcel SWD has its central offices and dispatch center and the main hauling yard where the collection fleet is parked and maintained. Drivers enter the site from Comanche Road and park their personnel vehicles enter the employee center and prepare for their routes. They access their collection vehicle in a separate parking lot. Mechanics and maintenance personnel also use the Comanche entrance. The City has several maintenance bays for servicing the collection fleet with both preventive maintenance and larger overall repairs. Visitors and office personnel use the drive off Edith Blvd.

There are several buildings on the premises that are over 15 years old. Some are occupied by support operations such as container repairs, bays for repairing transfer trailers and a paint shop while others are used for storage areas for miscellaneous items or are empty. A fueling station was recently constructed in the back portion of the site. The large parcel provides generous spaces for SWD to conveniently park and store equipment.

In considering using the Edith Blvd site for a new transfer station it was necessary to determine if a 9 acre area could be allocated for this operation. It was established that a 9 acres could be dedicated to building a new transfer station on the southern portion of the site. To make room certain older storage buildings would be demolished and some operations would need to be relocated. However, the primary office and employee complex and the maintenance building could remain along with collection truck parking area. The fueling station likewise will not be impacted.

A preliminary site plan was developed and a construction cost estimate prepared. The total construction cost for the facility was estimated to be $22,300,000. All assumptions used for the generic site were applied to the Edith Blvd site. The Edith Blvd site does have favorable conditions for building a transfer station. First, there are available utilities throughout the entire site making extensions to service new structures easy. Second, the site slopes at about 4% from east to west creating almost a 15 feet grade differential. This is beneficial for building a station to use top loading for the transfer trailers similar to Eagle Rock facility. Third, it is already permitted for the collection activities which, makes it more compatible for use as a transfer station. One example is traffic impacts are minimal because of existing operations.

The main cost difference is the City would not need to purchase a separate parcel. The Edith Blvd site is centrally located within 1.5 miles of the Big I and has good access to highways and arterials. These conditions make the Edith Blvd a very attractive option for constructing the new transfer station. The conceptual facility plans for the Edith Blvd site are presented in Appendix D.

4.1 Re-Development of Edith Blvd Site

One option to consider is to re-develop the entire Edith Blvd site in conjunction with building a new transfer station. The existing truck maintenance center is outdated and was not built to service size and type of collection trucks the City currently operates. For instance, the buildings lack adequate clearance to support efficient preventive maintenance functions thus requiring more time to change fluids, brakes and tires. Likewise, access to needed parts and equipment is not convenient and leads to inefficiencies. A new maintenance facility designed to handle the modern collection trucks and provide the infrastructure to allow efficient use of tools and support equipment could lead to more efficient vehicle maintenance procedures.

A new office structure would also be built as part of the project. The building would be approximately 9,000 sq ft and would house SWD management, administrative staff and dispatch operations.

A key advantage of considering redevelopment of the entire property is that it would open up options to consider the most efficient layout for the transfer station and customer services the City desires to provide. Thus instead of using the south portion for the transfer station a more practical approach would be to use the central portion of the site for the transfer station and move the collection fleet parking and maintenance operations to the south portion. This option supports a clear division of the professional drivers from the self haul traffic that would use the new transfer station.

In preparing this analysis a re-development plan for the entire site was prepared and is presented in Appendix D. It demonstrates some of the advantages discussed above. It should be noted this plan is conceptual and the scope of work did not include preparing a detailed site plan. The conceptual plan does however provide a basis for preparing a planning level construction cost estimate.

4.2 Construction cost for New Offices and Maintenance Center

A conceptual site plan that shows how a new transfer station would be placed on the 19 acre site was prepared to develop the Edith Blvd construction cost estimate. This estimate assumed that 9 acres of the site would be used for the constructing a new transfer station while the existing office complex and maintenance center remains in operation. In preparing a re-development plan for the entire site, operations were relocated to provide efficient overall traffic flow. The layout also preserves certain operational parameters important to SWD. For instance, the collection fleet operations are independent of customer traffic at the transfer station and were co-located with easy access to support facilities. The truck fueling station will remain in place. The main office is prominently located with easy access for visitors and customer traffic. The recycling drop off and HHW center is in front so that customers using this service do not have to drive through the site to have access.

A construction cost estimate was developed for the added cost to re-develop the entire site. This includes the cost to improve 8 additional acres, build a new office complex and maintenance center and new parking lots for the collection fleet and drivers. The construction cost is estimated to be $12,400,000. This is addition to the $22.3 million for the new transfer station. There may be some cost savings realized if the project is built under one contract. However, the City will need to maintain operations as the project is built. The site plan prepared shows how the project can be built in phases to keep the collection fleet and maintenance function operational during construction.

5.0 Feasibility Analysis

5.1 Description of Financial Analysis

In order to determine the feasibility of building a new central transfer station the projected cost savings, primarily associated with a reduction in transportation expenses, must be considered with cost of construction and operation over a certain period. To complete this analysis JRMA used the expenses and cost estimates discussed previously in the report and prepared a financial model that compares the current collection and transfer station system with that of a new centralized transfer stations. The model depicts the annual costs as well as the life cycle cost over a 20 year period.

The model was developed to allow the City to evaluate several different scenarios. One scenario is to consider the fact that perhaps not all of the labor cost savings from collection routes is fully realized. Some positions could be phased out through attrition while others could be transferred to other functions. This scenario provides the City with a sensitivity analysis of the feasibility. Another scenario considers what happens if the existing transfer stations remain in operation. Although a new transfer station would be centrally located and therefore within 5 miles of each of the current convenience stations, SWD could decide to keep one or all of the smaller stations open. Thus, the model shows the impact of these options.

The model also was initially developed to consider the cost of the City to develop a new transfer station on a generic site. The new site would be a parcel that is located within a 3 mile radius of the Big I, zoned for industrial and/ or commercial use with reason access to the primary highway system. There are several sites identified that meet this criteria but no specific site was assumed. However, an alternative to purchasing a new parcel for the station would be to build the facility on the existing SWD property on Edith Blvd. If this site can be used the City would not need to purchase a new parcel which would improve the feasibility.

5.1 Financial Projections and Results

The base scenario compares the cost to construct a new transfer station on a new parcel of land the City would purchase. Although to build a new transfer station would require about 9 acres in the preliminary review of sites the parcels that might be suitable were much larger at 15 to 17 acres. Information provided by the City suggests a new parcel of approximately 15 acres could cost between $4,000,000 and $5,100,000 plus the cost to permit the site. For the purpose of the analysis $5,000,000 was used for the purchase price of the land and $300,000 was used for permitting.

The existing transportation cost for collection vehicles to transport waste to the landfill and return to the Big I location was modeled with the cost to use the new transfer station. This information was presented in Chapter 2 of this report. The cost to construct a new transfer station including land cost is $29 million. Annual operating expenses are about $3.0 million in 2011 dollars.

The model shows that if the City would continue to transport to the landfill and operate the three convenience centers the total expenses over 24 years is projected to be about $471 million. If the new central transfer station is built and the three convenience centers are closed the estimated projected expense is $352 million over the same period. Therefore, the projected cost savings off constructing the transfer station is estimated to be potentially $118 million. The 24 year period considers that it will take four years to complete the project and 20 years for financing the capital improvements.

Two alternative scenarios were modeled to show the impacts if all the labor cost saving is not realized and also what happens when the existing transfer station / convenience centers remain open. In both cases there is cost savings over 24 years but is greatly reduced.

The alternative to purchasing a new site to build the new transfer station is to redevelop SWD's operating center on Edith Blvd. The estimated cost to build on a 9 acre site within the total 19 acres is $22.3 million. The construction cost is expected to be slightly less since the site has good access requiring minimal road improvements and utilities are readily available on site including a fire loop. These are assumed to be adequate for the new transfer station and therefore can be extended or relocated as needed. Also, there is no cost to purchase land.

When this alternative is modeled over the 24 year period the total savings is estimated to be potentially $129 million. The two scenarios were also modeled similar to the previous to the generic site option and result show a significant reduction in the cost savings. However, even under these circumstances it appears feasible to consider building a new transfer station.

If SWD were to redevelop the entire property and build a new office and maintenance center complex the additional capital expense is estimated to be $12.4 million. When this is added to the cost of the transfer station and amortized over the same period the potential cost savings is estimated to be $109 million, if all three convenience centers are closed. This scenario does not reflect directly on the feasibility of building or not building the new transfer station but is does show the impact of building the new facilities if constructed and financed over the same period. The models used for this analysis are presented in Appendix C.

Appendix A: Transportation Operation Expenses/ Hourly Costs

Appendix A :
Transportation Operating Expenses/ Hourly Costs

The hourly costs presented in the table above were taken from actual operating and costs data provided by the Solid Waste Department. The per hour cost to operate the vehicle classifications were determined by combining the labor, maintenance and repair, vehicle replacement, and overhead expenses such as insurance, licenses, etc.

The cost of labor for vehicle operations is based on the current average hourly rate for drivers and assistants as provided by the City.

LABOR Cost

Vehicle Type	Driver	Assistant	Labor per Hour
Automated	$26.89		**$26.89**
Front Loader	$26.89		**$26.89**
FL w/ Assistant	$26.89	$26.89	**$53.77**
Rear Loader	$26.89	$26.89	**$53.77**
Roll-off	$26.89		**$26.89**
Transfer	$26.89		**$26.89**

The hourly maintenance and repair cost for vehicles was determined by taking the average annual maintenance and repair cost for each vehicle type and converting it to a per hour rate. The costs were then divided by the fraction of time that the vehicles are used, so that the final hourly rate accounts for the downtime of each vehicle. Transfer vehicle maintenance was assumed at $30,000 per vehicle per year.

MAINTENANCE & REPAIR

Vehicle Type	Maintenance & Repair per Year				M&R Per Active Hour	Vehicle Activity	M&R Per Hour
	Labor	Parts	Commercial	Total			
Automated	$21,675	$19,666	$3,638	$44,979	**$21.62**	86%	$25.23
Front Loader	$21,293	$17,646	$8,961	$47,901	**$23.03**	86%	$26.87
Rear Loader	$9,756	$8,589	$1,386	$19,731	**$9.49**	86%	$11.07
Roll-off	$13,846	$10,547	$4,107	$28,500	**$13.70**	86%	$15.99
Transfer				$17,583	**$8.45**	86%	$9.86

A cost to replace the vehicle was also reflected in the hourly rate for vehicle operations. The actual allowance the City has per year for replacing each type of vehicle was divided by the number of vehicles of that type in operation and calculated to a per hour rate. Transfer Vehicle replacement funds were estimated at $500,000 per year.

VEHICLE REPLACEMENT

Vehicle Type	Vehicle Replacement Costs	Life Years	Annual Replacement Cost per Vehicle	Replacement per Vehicle Hour
Automated	$255,000	9	$28,333	**$13.62**
Front Loader	$220,000	9	$24,444	**$11.75**
Rear Loader	$220,000	9	$24,444	**$11.75**
Roll-off	$175,000	9	$19,444	**$9.35**
Transfer	$253,000	12	$21,083	**$10.14**

Fuel costs were calculated by dividing the average number of miles a vehicle of each type drivers per year by the average miles per gallon (MPG) for that vehicle type. Transfer truck MPG was estimated at 2.0 based on data from Argonne National Laboratory. Average annual mileage for transfer trucks was estimated based on vehicles making 4 trips to the landfill per day for 5 days per week and 52 weeks per year. Distance to the landfill was assumed to be 20 miles from the transfer station. Hourly fuel rates were divided by the average time that each vehicle is in use to account for vehicle downtime and backups.

FUEL

Vehicle Type	Avg. Miles per Year	Avg. MPG	Gallons Needed	Price per Gallon	Total per Year	Fuel Per Hour	Vehicle Activity	Fuel per Hour
Automated	21,238	3.0	7,175	$2.39	$17,112	$1.65	86%	**$1.92**
Front Loader	25,546	3.5	7,278	$2.39	$17,358	$1.67	86%	**$1.95**
Rear Loader	13,513	3.6	3,764	$2.39	$8,977	$0.86	86%	**$1.01**
Roll-off	47,467	4.6	10,387	$2.39	$24,772	$2.38	86%	**$2.78**
Transfer	41,600	2.0	24,613	$2.39	$58,703	$4.77	100%	**$4.77**

The following chart combines the above data to create a total per hour vehicle cost for each type of vehicles.

TOTAL PER HOUR VEHICLE COST

Vehicle Type	Labor	Maintenance & Repair	Vehicle Replacement	Fuel	Other	Per Hour Total
Automated	$26.89	$25.23	$13.62	$1.92		**$67.66**
Front Loader	$26.89	$26.87	$11.75	$1.95		**$67.45**
FL w/ Assistant	$53.77	$26.87	$11.75	$1.95		**$94.34**
Rear Loader	$53.77	$11.07	$11.75	$1.01		**$77.60**
Roll-off	$26.89	$15.99	$9.35	$2.78		**$55.00**
Transfer	$26.89	$9.86	$10.14	$4.77		**$51.66**

Albuquerque Transfer Station
Feasibility Analysis

Note: The total vehicle operating cost per hour was rounded to the nearest $ in the analysis.

Appendix B
Construction Cost Tables

Albuquerque Transfer Station
Feasibility Analysis

Albuquerque Transfer Station
Generic Site Centrally Located
Preliminary Construction Costs (December 2011 $)

Generic Site							
BUILDING/ SITE AREA		**DESCRIPTION OF WORK**	**QUANTITY**	**SF / LF**	**UNIT COST**	**EXTENDED VALUE**	**Assumpion Notes**
Site Work							
	Demoliton	Remove Debris / demo structures	1	LS	$100,000.00	$100,000	
	Site Preparation	Clear and Grade	350,000	SF	$1.00	$350,000	
	Soil Removal /Fill		40,000	CY	$8.00	$320,000	Varies depending on existing topography
			4,000	LF	$25.00	$100,000	
	Utilities						Utility coss expected to be more extensive than Edith site
		Water /Fire					
		Sewer	1,000	LF	$20.00	$20,000	" "
		Power	1	LS	$100,000.00	$100,000	" "
		Stormwater	1	LS	$300,000.00	$300,000	" "
	Paving	Parking areas	15,000	SF	$4.00	$60,000	" "
		Driveways and truck manuevering	150,000	SF	$6.00	$900,000	
	Landscaping	10% of Site Development	35,000		$5.00	$175,000	
SUBTOTAL SITE WORK						**$2,425,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL SITE WORK						**$2,425,000**	
ENTRANCE ROADS / SCALE COMPLEX							
	Access Roads	Includes entrance; access; and site parking	30,000	SF	$6.00	$180,000	
	Scale Approaches	Concrete	6,000	SF	$12.00	$72,000	
	Scale house	Scalehouse and bathrooms	500	SF	$400.00	$200,000	
	Scales	Two entrance plus 1 exit and transfer trucks	4	EA	$60,000.00	$240,000	
SUBTOTAL ONSITE ROADS AND SCALE COMPLEX						**$692,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL SITE IMPROVEMENTS AND SCALE COMPLEX						**$692,000**	
MAIN TRANSFER STATION							
	New Transfer Station	PEMB - with standard concrete base / skylighting	70,000	SF	$140.00	$9,800,000	
	Foundations/ Tunnel	Standard slab on grade	70,000	SF	$6	$420,000	
	New Push Wall	Standard concrete push walls	100	LF	$200.00	$20,000	
	Retaining Walls	Tunnel walls	6,000	SF	$40.00	$240,000	Assume site requires full tunnel
	Employee / Maintenance Area	Office space for foreman/ conference / break and lunch room / lockers	3,000	SF	$225.00	$675,000	Remote location requires larger office space than Edith site
SUBTOTAL NEW TRANSFER STATION W/EMPLOYEE SPACE						**$11,155,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL NEW TRANSFER STATION						**$11,155,000**	
Buy Back Center and HHW Drop Off							
	Paving	Drives and manuevering areas for drop offs	20,000	SF	$4	$80,000	
	Recycle Drop Off	Area for public to drop off recyclables	6,000	SF	$100.00	$600,000	
	HHW building	Assume 4,000 sq ft	4,000	SF	$225	$900,000	
	Misc.	Walls, dividers, boxes etc	1	LS	$100,000	$100,000	
						$0	
SUBTOTAL CONSTRUCTION COST - BUY BACK CENTER / HHW						**$1,680,000**	
SUMMARY OF ESTIMATED CONSTRUCTION COST							
Scalehouse and Entrance Improvements						**$2,425,000**	
Site Improvements and Scalehouse						**$692,000**	
Buyback & Recycle Drop Off Center						**$1,680,000**	
Transfer Station Expansion w/ Entrance / Employee and Mainatenance bays						**$11,155,000**	
Subtotal Construction Cost						**$15,952,000**	
Cost of Land		**Based on Information from City for 16 acres plus $300,000 for permitting**				**$5,300,000**	
		General Condition			12%	$1,914,240	
		Engineering /Construction Adm			12%	$1,914,240	
		Contingency			15%	$2,392,800	
		Gross Receipts Tax			7%	$1,552,130	
SUMMARY - TOTAL ESTIMATED CONSTRUCTION COST						**$29,025,410**	**USE $ 29,000,000**

Notes JRMA 12/30/2011

The generic site and facility layout assume 9 acres of devlopment property
Estimates are preliminary and carry a confidence range of +20 /-15%.
Site Plans are conceptual but based on projects of similar size and complexity
Incomplete base maps with limited topographic data were used
Unit prices are based on projects in other areas in absence of unit prices for New Mexico region
Property purshase assumes the City may have to purchase larger site to obtain full 9 acres.
No environmental clean up/remediation is included

Albuquerque Transfer Station
Feasibility Analysis

Albuquerque Transfer Station

Edith St Transfer Station Facilities (9 Acres)

Preliminary Construction Costs (December 2011 $)

Generic Site							
BUILDING/ SITE AREA		**DESCRIPTION OF WORK**	**QUANTITY**	**SF / LF**	**UNIT COST**	**EXTENDED VALUE**	**Assumptions Notes 12/30/11**
Site Work							
	Demolition	Remove Debris / demo structures	1	LS	$200,000.00	$200,000	
	Site Preparation	Clear and Grade	350,000	SF	$0.50	$175,000	
	Soil Removal /Fill		20,000	CY	$8.00	$160,000	Import - can be reduced with precise grading plan
	Utilities	Water/Fire extension	1,000	LF	$20.00	$20,000	
		Sewer	1,000	LF	$20.00	$20,000	
		Power	1	LS	$100,000.00	$100,000	
	Paving	Employee parking		SF	$4.00	$0	
		Truck parking 8 in paving	0	SF	$6.00	$0	Employee parking 4 inch plus base
		Access roads - maneuver areas etc	120,000	SF	$6.00	$720,000	All truck access areas 8 Inch plus base
		Storm water	1	LS	$200,000.00	$200,000	
	Landscaping	Based on screening	35,000	SF	$5.00	$175,000	
SUBTOTAL SITE WORK						**$1,770,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL SITE WORK						**$1,770,000**	
ENTRANCE ROADS / SCALE COMPLEX							
	Access Roads	Includes entrance; access; and site parking	30,000	SF	$6.00	$180,000	
	Scale Approaches	Concrete	6,000	SF	$12.00	$72,000	
	Scale house	Scale house and bathrooms	500	SF	$400.00	$200,000	
	Scales	Two entrance plus 1 exit and transfer trucks	4	EA	$60,000.00	$240,000	
SUBTOTAL ONSITE ROADS AND SCALE COMPLEX						**$692,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL SITE IMPROVEMENTS AND SCALE COMPLEX						**$692,000**	
MAIN TRANSFER STATION							
	New Transfer Station	PEMB - with standard concrete base / skylights	70,000	SF	$140.00	$9,800,000	
	Foundations/ Tunnel	Standard slab on grade	70,000	SF	$6.00	$420,000	
	New Push Wall	Standard concrete push walls	200	LF	$200.00	$40,000	
	Retaining Walls	Build 150 ft on one side @ 10ft ave	3,000	sf	$40.00	$120,000	Only need to build about 300 ftbecuase of site topography
	Employee / Maintenance Area	Office space for foreman//break room and lunch/lockers	2,000	SF	$225.00	$450,000	
	Mech	Break room / showers etc.		SF	$150.00	$0	
	Driver Center	Employee Center w/ showers etc		SF	$150.00	$0	
	Truck Bays	Truck maintenance facility		SF	$175.00	$0	
SUBTOTAL NEW TRANSFER STATION W/EMPLOYEE SPACE						**$10,830,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL NEW TRANSFER STATION						**$10,830,000**	
Buy Back Center and HHW Drop Off							
	Paving	Drives and maneuvering areas for drop offs	20,000	SF	$4.00	$80,000	
				SF		$0	
	HHW building	Assume 4,000 sq ft	4,000	SF	$225.00	$900,000	
	Misc.	Walls, dividers, boxes etc	1	LS	$100,000.00	$100,000	
	Recycle Drop-Off	Area for public to drop-off recyclables	6,000	SF	$100.00	$600,000	
SUBTOTAL CONSTRUCTION COST - RECYCLING CENTER / HHW						**$1,680,000**	
SUMMARY OF ESTIMATED CONSTRUCTION COST							
Site Work - Grading, Drainage and Paving						**$1,770,000**	
Entrance Road and Scale complex						**$692,000**	
Buyback & Recycle Drop Off Center						**$1,680,000**	
Transfer Station Expansion w/ Entrance / Employee and Maintenance bays						**$10,830,000**	
	Subtotal Construction Cost					**$14,972,000**	
Cost of Land							
		General Condition			12%	$1,796,640	
		Engineering /Construction Adm			12%	$1,796,640	
		Contingency			15%	$2,245,800	
		Gross Receipts Tax			7%	$1,456,776	
SUMMARY - TOTAL ESTIMATED CONSTRUCTION COST						**$22,267,856**	**Use $22,300,000**

Notes **JRMA** **12/30/2011**

Estimates are preliminary and carry a confidence range of +20 /-15%.
Site Plans are conceptual but based on projects of similar size and complexity
Incomplete base maps with limited topographic data were used
Unit cost are based on projects in other areas in absence of unit prices for New Mexico region
No environmental clean up/remediation is included

Albuquerque Transfer Station
Feasibility Analysis

Albuquerque Transfer Station

Edith St SWD Offices/Hauling Yard & Maintenance Center Facilities (Approx 8 Acres)

Preliminary Construction Costs (December 2011 $)

BUILDING/ SITE AREA		DESCRIPTION OF WORK	QUANTITY	SF / LF	UNIT COST	EXTENDED VALUE	Assumptions Notes 12/30/11
Generic Site							
Site Work							
	Demolition	Remove Debris / demo structures	1	LS	$200,000.00	$200,000	
	Site Preparation	Clear and Grade	250,000	SF	$0.50	$125,000	
	Soil Removal /Fill		20,000	CY	$8.00	$160,000	Import - can be reduced with precise grading plan
	Utilities	Water/Fire extension	1,000	LF	$20.00	$20,000	
		Sewer	1,000	LF	$20.00	$20,000	
		Power	1	LS	$100,000.00	$100,000	
	Paving	Employee parking	55,000	SF	$4.00	$220,000	
		Truck parking 8 in paving	125,000	SF	$6.00	$750,000	Employee parking 4 inch plus base
		Access roads - maneuver areas etc	20,000	SF	$6.00	$120,000	All truck access areas 8 Inch plus base
		Storm water	1	LS	$200,000.00	$200,000	
	Landscaping	Based on screening	10,000	SF	$5.00	$50,000	
SUBTOTAL SITE WORK						**$1,965,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL SITE WORK						**$1,965,000**	
ENTRANCE ROADS / SCALE COMPLEX							
	Access Roads	Includes entrance; access; and site parking		SF	$6.00	$0	
	Scale Approaches	Concrete		SF	$12.00	$0	
	Scale house	Scale house and bathrooms		SF	$400.00	$0	
	Scales	Two entrance plus 1 exit and transfer trucks		EA	$60,000.00	$0	
SUBTOTAL ONSITE ROADS AND SCALE COMPLEX						**$0**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL SITE IMPROVEMENTS AND SCALE COMPLEX						**$0**	
MAIN TRANSFER STATION							
	New Transfer Station	PEMB - with standard concrete base / skylights		SF	$140.00	$0	
	Foundations/ Tunnel	Standard slab on grade		SF	$6.00	$0	
	New Push Wall	Standard concrete push walls		LF	$200.00	$0	
				LF		$0	
						$0	
	Employee / Maintenance Area	SWD Office	8,400	SF	$225.00	$1,890,000	New SWD Offices with no driver center
	Mech	Break room / showers etc.	1,600	SF	$150.00	$240,000	
	Driver Center	Employee Center w/ showers etc	3,000	SF	$150.00	$450,000	
	Truck Bays	Truck maintenance facility	22,000	SF	$175.00	$3,850,000	
SUBTOTAL NEW TRANSFER STATION W/EMPLOYEE SPACE						**$6,430,000**	
		General Condition				$0	
		Engineering				$0	
		Contingency				$0	
TOTAL NEW TRANSFER STATION						**$6,430,000**	
Buy Back Center and HHW Drop Off							
	Paving	Drives and maneuvering areas for drop offs		SF	$6.00	$0	
				SF		$0	
	HHW building	Assume 4,000 sq ft		SF	$225.00	$0	
	Misc.	Walls, dividers, boxes etc		LS	$100,000.00	$0	
	Recycle Drop-Off	Area for public to drop-off recyclables		SF	$100.00	$0	
SUBTOTAL CONSTRUCTION COST - RECYCLING CENTER / HHW						**$0**	
SUMMARY OF ESTIMATED CONSTRUCTION COST							
Site Work - Grading, Drainage and Paving						**$1,965,000**	
Entrance Road and Scale complex						**$0**	
Buyback & Recycle Drop Off Center						**$0**	
Transfer Station Expansion w/ Entrance / Employee and Maintenance bays						**$6,430,000**	
Subtotal Construction Cost						**$8,395,000**	
Cost of Land							
		General Condition			12%	$1,007,400	
		Engineering /Construction Adm			12%	$1,007,400	
		Contingency			15%	$1,259,250	
		Gross Receipts Tax			7%	**$746,316**	
SUMMARY - TOTAL ESTIMATED CONSTRUCTION COST						**$12,415,366**	**USE $ 12,400,000**

Notes **JRMA** **12/30/2011**

Estimates are preliminary and carry a confidence range of +20 /-15%.
Site Plans are conceptual but based on projects of similar size and complexity
Incomplete base maps with limited topographic data were used
Unit cost are based on projects in other areas in absence of unit prices for New Mexico region
No environmental clean up/remediation is included

Appendix C
Financial Models

Albuquerque Transfer Station

Feasibility Evaluation for Generic Site

SCENARIO # 1 - BASE CASE NEW TRANSFER STATION & CONVENIENCE CENTERS CLOSE 2014

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	459,687	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers			$3,410,000	$3,512,300	$3,617,669																						
Eagle Rock	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,278,181***	***$3,376,526***	***$3,477,822***	***$3,582,157***	***$3,689,622***	***$3,800,310***	***$3,914,320***	***$4,031,749***	***$4,152,702***	***$4,277,283***	***$4,405,601***	***$4,537,769***	***$4,673,902***	***$4,814,119***	***$4,958,543***	***$5,107,299***	***$5,260,518***	***$5,418,334***	***$5,580,884***	***$5,748,310***	***$5,920,760***	***$104,546,680***
Transportation Costs																											0
Transport to Cerro Landfill	459,687	$10.27/ton				$5,315,894	$5,530,125	$5,752,989	$5,984,834	$6,226,023	$6,476,932	$6,737,952	$7,009,492	$7,291,974	$7,585,841	$7,891,550	$8,209,579	$8,540,425	$8,884,605	$9,242,654	$9,615,133	$10,002,623	$10,405,729	$10,825,080	$11,261,330	$11,715,162	$170,505,925
Transport form Convenience Centers																											0
Eagle Rock	0	$5.11/ton	$165,247	$171,907	$178,835	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$515,989
Montessa Park	0	$5.11/ton	$75,399	$78,437	$81,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$235,434
Don Reservoir	0	$24.48/ton	$186,633	$194,155	$201,979	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$582,767
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,315,894***	***$5,530,125***	***$5,752,989***	***$5,984,834***	***$6,226,023***	***$6,476,932***	***$6,737,952***	***$7,009,492***	***$7,291,974***	***$7,585,841***	***$7,891,550***	***$8,209,579***	***$8,540,425***	***$8,884,605***	***$9,242,654***	***$9,615,133***	***$10,002,623***	***$10,405,729***	***$10,825,080***	***$11,261,330***	***$11,715,162***	***$171,840,115***
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$5,000,000																									
Site Permitting		$300,000																									
Construction cost		$23,700,000																									
Annualized Debt Service 0.08024		$2,326,960				$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960		$46,539,200
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks 10 100,000 ea		$1,000,000																									
Transfer trailers 10 55,000 Ea		$550,000																									
Rolling Stock 350,000		$350,000																									
Annualized Equipment Cost 0.09634		$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,326,960***	***$2,326,960***	***$2,326,960***	***$2,326,960***	***$2,326,960***	***$0***	***$49,284,955***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$11,104,085**	**$11,416,661**	**$11,740,821**	**$12,077,001**	**$12,425,655**	**$12,787,252**	**$13,162,282**	**$13,551,251**	**$13,954,686**	**$14,373,134**	**$14,807,161**	**$15,257,359**	**$15,724,338**	**$16,208,734**	**$16,711,207**	**$17,049,392**	**$17,590,101**	**$18,151,022**	**$18,732,923**	**$19,336,601**	**$17,635,921**	**$352,463,007**
Total Savings:			**$0**	**$0**	**$0**	**$2,762,849**	**$2,970,730**	**$3,186,851**	**$3,411,539**	**$3,645,135**	**$3,887,993**	**$4,140,483**	**$4,402,988**	**$4,675,907**	**$4,959,654**	**$5,254,660**	**$5,561,375**	**$5,880,264**	**$6,211,812**	**$6,556,525**	**$7,097,977**	**$7,470,613**	**$7,858,050**	**$8,260,878**	**$8,679,712**	**$11,442,149**	**$118,318,144**

Assumptions

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer truck
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range
6. All capital construction costs includes 7% gross receipts tax

JRMA *12/30/2011*

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%

Albuquerque Transfer Station

Feasibility Evaluation for Generic Site

SCENARIO # 2 - NEW TRANSFER STATION & CONVENIENCE CENTERS CLOSE - LABOR COST SAVING NOT REALIZED

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		*$3,400,000*	*$3,410,000*	*$3,512,300*	*$3,617,669*	*$3,726,199*	*$3,837,985*	*$3,953,125*	*$4,071,718*	*$4,193,870*	*$4,319,686*	*$4,449,277*	*$4,582,755*	*$4,720,237*	*$4,861,845*	*$5,007,700*	*$5,157,931*	*$5,312,669*	*$5,472,049*	*$5,636,210*	*$5,805,297*	*$5,979,456*	*$6,158,839*	*$6,343,604*	*$6,533,913*	*$6,729,930*	*$117,394,263*
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			*$9,007,279*	*$9,370,273*	*$9,747,895*	*$10,140,735*	*$10,549,407*	*$10,974,548*	*$11,416,822*	*$11,876,920*	*$12,355,560*	*$12,853,489*	*$13,371,484*	*$13,910,355*	*$14,470,942*	*$15,054,121*	*$15,660,803*	*$16,291,933*	*$16,948,498*	*$17,631,522*	*$18,342,073*	*$19,081,258*	*$19,850,233*	*$20,650,197*	*$21,482,400*	*$22,348,141*	*$353,386,887*
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	459,687	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers			$3,410,000	$3,512,300	$3,617,669																						
Eagle Rock	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			*$3,410,000*	*$3,512,300*	*$3,617,669*	*$3,278,181*	*$3,376,526*	*$3,477,822*	*$3,582,157*	*$3,689,622*	*$3,800,310*	*$3,914,320*	*$4,031,749*	*$4,152,702*	*$4,277,283*	*$4,405,601*	*$4,537,769*	*$4,673,902*	*$4,814,119*	*$4,958,543*	*$5,107,299*	*$5,260,518*	*$5,418,334*	*$5,580,884*	*$5,748,310*	*$5,920,760*	*$104,546,680*
Transportation Costs																											0
Transport to Cerro Landfill	459,687	$10.27/ton				$5,315,894	$5,530,125	$5,752,989	$5,984,834	$6,226,023	$6,476,932	$6,737,952	$7,009,492	$7,291,974	$7,585,841	$7,891,550	$8,209,579	$8,540,425	$8,884,605	$9,242,654	$9,615,133	$10,002,623	$10,405,729	$10,825,080	$11,261,330	$11,715,162	$170,505,925
Transport form Convenience Centers																											0
Eagle Rock	0	$5.11/ton	$165,247	$171,907	$178,835	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$515,989
Montessa Park	0	$5.11/ton	$75,399	$78,437	$81,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$235,434
Don Reservoir	0	$24.48/ton	$186,633	$194,155	$201,979	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$582,767
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			*$9,007,279*	*$9,370,273*	*$9,747,895*	*$5,315,894*	*$5,530,125*	*$5,752,989*	*$5,984,834*	*$6,226,023*	*$6,476,932*	*$6,737,952*	*$7,009,492*	*$7,291,974*	*$7,585,841*	*$7,891,550*	*$8,209,579*	*$8,540,425*	*$8,884,605*	*$9,242,654*	*$9,615,133*	*$10,002,623*	*$10,405,729*	*$10,825,080*	*$11,261,330*	*$11,715,162*	*$171,840,115*
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$5,000,000																									
Site Permitting		$300,000																									
Construction cost		$23,700,000																									
Annualized Debt Service 0.08024		$2,326,960				$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960		$46,539,200
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks 10 100000 Ea		$1,000,000																									
Transfer trailers 10 55,000 Ea		$550,000																									
Rolling Stock 350,000		$350,000																									
Annualized Equipment Cost 0.09634		$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			*$0*	*$0*	*$0*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,510,010*	*$2,326,960*	*$2,326,960*	*$2,326,960*	*$2,326,960*	*$2,326,960*	*$0*	*$49,284,955*
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$11,104,085**	**$11,416,661**	**$11,740,821**	**$12,077,001**	**$12,425,655**	**$12,787,252**	**$13,162,282**	**$13,551,251**	**$13,954,686**	**$14,373,134**	**$14,807,161**	**$15,257,359**	**$15,724,338**	**$16,208,734**	**$16,711,207**	**$17,049,392**	**$17,590,101**	**$18,151,022**	**$18,732,923**	**$19,336,601**	**$17,635,921**	**$352,463,007**
Total Savings:			**$0**	**$0**	**$0**	**$2,762,849**	**$2,970,730**	**$3,186,851**	**$3,411,539**	**$3,645,135**	**$3,887,993**	**$4,140,483**	**$4,402,988**	**$4,675,907**	**$4,959,654**	**$5,254,660**	**$5,561,375**	**$5,880,264**	**$6,211,812**	**$6,556,525**	**$7,097,977**	**$7,470,613**	**$7,858,050**	**$8,260,878**	**$8,679,712**	**$11,442,149**	**$118,318,144**
Labor:		*$1,614,843*				*$1,764,582*	*$1,817,520*	*$1,872,045*	*$1,928,207*	*$1,986,053*	*$2,045,634*	*$2,107,004*	*$2,170,214*	*$2,235,320*	*$2,302,380*	*$2,371,451*	*$2,442,595*	*$2,515,872*	*$2,591,349*	*$2,669,089*	*$2,749,162*	*$2,831,637*	*$2,916,586*	*$3,004,083*	*$3,094,206*	*$3,187,032*	*$50,602,018*
Savings Less Labor:						**$998,266**	**$1,153,210**	**$1,314,806**	**$1,483,332**	**$1,659,082**	**$1,842,359**	**$2,033,480**	**$2,232,775**	**$2,440,587**	**$2,657,274**	**$2,883,209**	**$3,118,780**	**$3,364,391**	**$3,620,464**	**$3,887,436**	**$4,348,815**	**$4,638,976**	**$4,941,464**	**$5,256,795**	**$5,585,507**	**$8,255,118**	**$67,716,126**

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%
Annual Labor Rate Increase:	3%

Assumptions

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer truck
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range
6. All capital construction costs includes 7% gross receipts tax

JRMA *12/30/2011*

Albuquerque Transfer Station

Feasibility Evaluation for Generic Site

SCENARIO # 3 - NEW TRANSFER STATION & CONVENIENCE CENTERS OPEN

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	405,000	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$7,004,380***	***$7,214,511***	***$7,430,947***	***$7,653,875***	***$7,883,491***	***$8,119,996***	***$8,363,596***	***$8,614,504***	***$8,872,939***	***$9,139,127***	***$9,413,301***	***$9,695,700***	***$9,986,571***	***$10,286,168***	***$10,594,753***	***$10,912,596***	***$11,239,974***	***$11,577,173***	***$11,924,488***	***$12,282,223***	***$12,650,690***	***$211,400,974***
Transportation Costs																											0
Transport to Cerro Landfill	405,000	$10.27/ton				$4,683,485	$4,872,229	$5,068,580	$5,272,844	$5,485,340	$5,706,399	$5,936,367	$6,175,602	$6,424,479	$6,683,386	$6,952,726	$7,232,921	$7,524,408	$7,827,641	$8,143,095	$8,471,262	$8,812,654	$9,167,804	$9,537,266	$9,921,618	$10,321,459	$150,221,563
Transport form Convenience Centers																											0
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,164,532***	***$5,372,663***	***$5,589,181***	***$5,814,425***	***$6,048,747***	***$6,292,511***	***$6,546,099***	***$6,809,907***	***$7,084,346***	***$7,369,845***	***$7,666,850***	***$7,975,824***	***$8,297,250***	***$8,631,629***	***$8,979,484***	***$9,341,357***	***$9,717,814***	***$10,109,442***	***$10,516,852***	***$10,940,681***	***$11,381,591***	***$166,985,220***
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$5,000,000																									
Site Permitting		$300,000																									
Construction cost		$23,700,000																									
Annualized Debt Service 0.08024		$2,326,960				$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960	$2,326,960		$46,539,200
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks 10 100,000Ea		$1,000,000																									
Transfer trailers 10 55,000 Ea		$550,000																									
Rolling Stock 350,000		$350,000																									
Annualized Equipment Cost 0.09634		$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,510,010***	***$2,326,960***	***$2,326,960***	***$2,326,960***	***$2,326,960***	***$2,326,960***	***$0***	***$49,284,955***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$14,678,923**	**$15,097,185**	**$15,530,138**	**$15,978,311**	**$16,442,248**	**$16,922,518**	**$17,419,706**	**$17,934,421**	**$18,467,296**	**$19,018,983**	**$19,590,162**	**$20,181,535**	**$20,793,831**	**$21,427,808**	**$22,084,247**	**$22,580,913**	**$23,284,747**	**$24,013,575**	**$24,768,300**	**$25,549,864**	**$24,032,280**	**$454,462,406**
Total Savings:			**$0**	**$0**	**$0**	**-$811,989**	**-$709,793**	**-$602,466**	**-$489,771**	**-$371,459**	**-$247,272**	**-$116,940**	**$19,818**	**$163,297**	**$313,804**	**$471,660**	**$637,199**	**$810,770**	**$992,739**	**$1,183,485**	**$1,566,456**	**$1,775,966**	**$1,995,498**	**$2,225,501**	**$2,466,449**	**$5,045,791**	**$16,318,745**

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%

Assumptions

JRMA *12/30/2011*

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer truck
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range
6. All capital construction costs includes 7% gross receipts tax

Albuquerque Transfer Station

Feasibility Evaluation for Edith Blvd w/ New SWD Facilities

SCENARIO # 1 - BASE CASE NEW TRANSFER STATION & CONVENIENCE CENTERS CLOSE 2014

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	459,687	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers			$3,410,000	$3,512,300	$3,617,669																						
Eagle Rock	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,278,181***	***$3,376,526***	***$3,477,822***	***$3,582,157***	***$3,689,622***	***$3,800,310***	***$3,914,320***	***$4,031,749***	***$4,152,702***	***$4,277,283***	***$4,405,601***	***$4,537,769***	***$4,673,902***	***$4,814,119***	***$4,958,543***	***$5,107,299***	***$5,260,518***	***$5,418,334***	***$5,580,884***	***$5,748,310***	***$5,920,760***	***$104,546,680***
Transportation Costs																											0
Transport to Cerro Landfill	459,687	$10.27/ton				$5,315,894	$5,530,125	$5,752,989	$5,984,834	$6,226,023	$6,476,932	$6,737,952	$7,009,492	$7,291,974	$7,585,841	$7,891,550	$8,209,579	$8,540,425	$8,884,605	$9,242,654	$9,615,133	$10,002,623	$10,405,729	$10,825,080	$11,261,330	$11,715,162	$170,505,925
Transport form Convenience Centers																											0
Eagle Rock	0	$5.11/ton	$165,247	$171,907	$178,835	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$515,989
Montessa Park	0	$5.11/ton	$75,399	$78,437	$81,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$235,434
Don Reservoir	0	$24.48/ton	$186,633	$194,155	$201,979	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$582,767
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,315,894***	***$5,530,125***	***$5,752,989***	***$5,984,834***	***$6,226,023***	***$6,476,932***	***$6,737,952***	***$7,009,492***	***$7,291,974***	***$7,585,841***	***$7,891,550***	***$8,209,579***	***$8,540,425***	***$8,884,605***	***$9,242,654***	***$9,615,133***	***$10,002,623***	***$10,405,729***	***$10,825,080***	***$11,261,330***	***$11,715,162***	***$171,840,115***
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$0																									
Site Permitting		$100,000																									
Construction cost		$34,700,000																									
Annualized Debt Service 0.08024		$2,792,352				$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352		$55,847,040
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks 10 100,000 ea		$1,000,000																									
Transfer trailers 10 55,000 Ea		$550,000																									
Rolling Stock 350,000		$350,000																									
Annualized Equipment Cost 0.09634		$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$0***	***$58,592,795***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$11,569,477**	**$11,882,053**	**$12,206,213**	**$12,542,393**	**$12,891,047**	**$13,252,644**	**$13,627,674**	**$14,016,643**	**$14,420,078**	**$14,838,526**	**$15,272,553**	**$15,722,751**	**$16,189,730**	**$16,674,126**	**$17,176,599**	**$17,514,784**	**$18,055,493**	**$18,616,414**	**$19,198,315**	**$19,801,993**	**$17,635,921**	**$361,770,847**
Total Savings:			**$0**	**$0**	**$0**	**$2,297,457**	**$2,505,338**	**$2,721,459**	**$2,946,147**	**$3,179,743**	**$3,422,601**	**$3,675,091**	**$3,937,596**	**$4,210,515**	**$4,494,262**	**$4,789,268**	**$5,095,983**	**$5,414,872**	**$5,746,420**	**$6,091,133**	**$6,632,585**	**$7,005,221**	**$7,392,658**	**$7,795,486**	**$8,214,320**	**$11,442,149**	**$109,010,304**

Assumptions

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer truck
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range
6. All capital construction costs includes 7% gross receipts tax

JRMA *12/30/2011*

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%

Albuquerque Transfer Station

Feasibility Evaluation for Edith Blvd w/New SWD Facilities

SCENARIO # 2 - NEW TRANSFER STATION & CONVENIENCE CENTERS CLOSE - LABOR COST SAVING NOT REALIZED

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	459,687	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers			$3,410,000	$3,512,300	$3,617,669																						
Eagle Rock	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,278,181***	***$3,376,526***	***$3,477,822***	***$3,582,157***	***$3,689,622***	***$3,800,310***	***$3,914,320***	***$4,031,749***	***$4,152,702***	***$4,277,283***	***$4,405,601***	***$4,537,769***	***$4,673,902***	***$4,814,119***	***$4,958,543***	***$5,107,299***	***$5,260,518***	***$5,418,334***	***$5,580,884***	***$5,748,310***	***$5,920,760***	***$104,546,680***
Transportation Costs																											0
Transport to Cerro Landfill	459,687	$10.27/ton				$5,315,894	$5,530,125	$5,752,989	$5,984,834	$6,226,023	$6,476,932	$6,737,952	$7,009,492	$7,291,974	$7,585,841	$7,891,550	$8,209,579	$8,540,425	$8,884,605	$9,242,654	$9,615,133	$10,002,623	$10,405,729	$10,825,080	$11,261,330	$11,715,162	$170,505,925
Transport form Convenience Centers																											0
Eagle Rock	0	$5.11/ton	$165,247	$171,907	$178,835	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$515,989
Montessa Park	0	$5.11/ton	$75,399	$78,437	$81,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$235,434
Don Reservoir	0	$24.48/ton	$186,633	$194,155	$201,979	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$582,767
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,315,894***	***$5,530,125***	***$5,752,989***	***$5,984,834***	***$6,226,023***	***$6,476,932***	***$6,737,952***	***$7,009,492***	***$7,291,974***	***$7,585,841***	***$7,891,550***	***$8,209,579***	***$8,540,425***	***$8,884,605***	***$9,242,654***	***$9,615,133***	***$10,002,623***	***$10,405,729***	***$10,825,080***	***$11,261,330***	***$11,715,162***	***$171,840,115***
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$0																									
Site Permitting		$100,000																									
Construction cost		$34,700,000																									
Annualized Debt Service 0.08024		$2,792,352				$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352		$55,847,040
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks 10 100000 Ea		$1,000,000																									
Transfer trailers 10 55,000 Ea		$550,000																									
Rolling Stock 350,000		$350,000																									
Annualized Equipment Cost 0.09634		$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$0***	***$58,592,795***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$11,569,477**	**$11,882,053**	**$12,206,213**	**$12,542,393**	**$12,891,047**	**$13,252,644**	**$13,627,674**	**$14,016,643**	**$14,420,078**	**$14,838,526**	**$15,272,553**	**$15,722,751**	**$16,189,730**	**$16,674,126**	**$17,176,599**	**$17,514,784**	**$18,055,493**	**$18,616,414**	**$19,198,315**	**$19,801,993**	**$17,635,921**	**$361,770,847**
Total Savings:			**$0**	**$0**	**$0**	**$2,297,457**	**$2,505,338**	**$2,721,459**	**$2,946,147**	**$3,179,743**	**$3,422,601**	**$3,675,091**	**$3,937,596**	**$4,210,515**	**$4,494,262**	**$4,789,268**	**$5,095,983**	**$5,414,872**	**$5,746,420**	**$6,091,133**	**$6,632,585**	**$7,005,221**	**$7,392,658**	**$7,795,486**	**$8,214,320**	**$11,442,149**	**$109,010,304**
Labor:		*$1,614,843*				*$1,764,582*	*$1,817,520*	*$1,872,045*	*$1,928,207*	*$1,986,053*	*$2,045,634*	*$2,107,004*	*$2,170,214*	*$2,235,320*	*$2,302,380*	*$2,371,451*	*$2,442,595*	*$2,515,872*	*$2,591,349*	*$2,669,089*	*$2,749,162*	*$2,831,637*	*$2,916,586*	*$3,004,083*	*$3,094,206*	*$3,187,032*	*$50,602,018*
Savings Less Labor:						**$532,874**	**$687,818**	**$849,414**	**$1,017,940**	**$1,193,690**	**$1,376,967**	**$1,568,088**	**$1,767,383**	**$1,975,195**	**$2,191,882**	**$2,417,817**	**$2,653,388**	**$2,898,999**	**$3,155,072**	**$3,422,044**	**$3,883,423**	**$4,173,584**	**$4,476,072**	**$4,791,403**	**$5,120,115**	**$8,255,118**	**$58,408,286**

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%
Annual Labor Rate Increase:	3%

Assumptions

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer trucks.
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations.
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock.
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range.
6. All capital construction costs includes 7% gross receipts tax

JRMA *12/30/2011*

Albuquerque Transfer Station

Feasibility Evaluation for Edith Blvd w/New SWD Facilities

SCENARIO # 3 - NEW TRANSFER STATION & CONVENIENCE CENTERS OPEN

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	405,000	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$7,004,380***	***$7,214,511***	***$7,430,947***	***$7,653,875***	***$7,883,491***	***$8,119,996***	***$8,363,596***	***$8,614,504***	***$8,872,939***	***$9,139,127***	***$9,413,301***	***$9,695,700***	***$9,986,571***	***$10,286,168***	***$10,594,753***	***$10,912,596***	***$11,239,974***	***$11,577,173***	***$11,924,488***	***$12,282,223***	***$12,650,690***	***$211,400,974***
Transportation Costs																											0
Transport to Cerro Landfill	405,000	$10.27/ton				$4,683,485	$4,872,229	$5,068,580	$5,272,844	$5,485,340	$5,706,399	$5,936,367	$6,175,602	$6,424,479	$6,683,386	$6,952,726	$7,232,921	$7,524,408	$7,827,641	$8,143,095	$8,471,262	$8,812,654	$9,167,804	$9,537,266	$9,921,618	$10,321,459	$150,221,563
Transport form Convenience Centers																											0
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,164,532***	***$5,372,663***	***$5,589,181***	***$5,814,425***	***$6,048,747***	***$6,292,511***	***$6,546,099***	***$6,809,907***	***$7,084,346***	***$7,369,845***	***$7,666,850***	***$7,975,824***	***$8,297,250***	***$8,631,629***	***$8,979,484***	***$9,341,357***	***$9,717,814***	***$10,109,442***	***$10,516,852***	***$10,940,681***	***$11,381,591***	***$166,985,220***
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$0																									
Site Permitting		$100,000																									
Construction cost		$34,700,000																									
Annualized Debt Service 0.08024		$2,792,352				$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352	$2,792,352		$55,847,040
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks 10 100,000Ea		$1,000,000																									
Transfer trailers 10 55,000 Ea		$550,000																									
Rolling Stock 350,000		$350,000																									
Annualized Equipment Cost 0.09634		$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,975,402***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$2,792,352***	***$0***	***$58,592,795***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$15,144,315**	**$15,562,577**	**$15,995,530**	**$16,443,703**	**$16,907,640**	**$17,387,910**	**$17,885,098**	**$18,399,813**	**$18,932,688**	**$19,484,375**	**$20,055,554**	**$20,646,927**	**$21,259,223**	**$21,893,200**	**$22,549,639**	**$23,046,305**	**$23,750,139**	**$24,478,967**	**$25,233,692**	**$26,015,256**	**$24,032,280**	**$463,770,246**
Total Savings:			**$0**	**$0**	**$0**	**-$1,277,381**	**-$1,175,185**	**-$1,067,858**	**-$955,163**	**-$836,851**	**-$712,664**	**-$582,332**	**-$445,574**	**-$302,095**	**-$151,588**	**$6,268**	**$171,807**	**$345,378**	**$527,347**	**$718,093**	**$1,101,064**	**$1,310,574**	**$1,530,106**	**$1,760,109**	**$2,001,057**	**$5,045,791**	**$7,010,905**

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%

Assumptions

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer trucks.
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations.
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock.
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range.
6. All capital construction costs includes 7% gross receipts tax

JRMA *12/30/2011*

Albuquerque Transfer Station

Feasibility Evaluation for Edith Blvd

SCENARIO # 1 - BASE CASE NEW TRANSFER STATION & CONVENIENCE CENTERS CLOSE 2014

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	459,687	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers			$3,410,000	$3,512,300	$3,617,669																						
Eagle Rock	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,278,181***	***$3,376,526***	***$3,477,822***	***$3,582,157***	***$3,689,622***	***$3,800,310***	***$3,914,320***	***$4,031,749***	***$4,152,702***	***$4,277,283***	***$4,405,601***	***$4,537,769***	***$4,673,902***	***$4,814,119***	***$4,958,543***	***$5,107,299***	***$5,260,518***	***$5,418,334***	***$5,580,884***	***$5,748,310***	***$5,920,760***	***$104,546,680***
Transportation Costs																											0
Transport to Cerro Landfill	459,687	$10.27/ton				$5,315,894	$5,530,125	$5,752,989	$5,984,834	$6,226,023	$6,476,932	$6,737,952	$7,009,492	$7,291,974	$7,585,841	$7,891,550	$8,209,579	$8,540,425	$8,884,605	$9,242,654	$9,615,133	$10,002,623	$10,405,729	$10,825,080	$11,261,330	$11,715,162	$170,505,925
Transport form Convenience Centers																											0
Eagle Rock	0	$5.11/ton	$165,247	$171,907	$178,835	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$515,989
Montessa Park	0	$5.11/ton	$75,399	$78,437	$81,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$235,434
Don Reservoir	0	$24.48/ton	$186,633	$194,155	$201,979	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$582,767
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,315,894***	***$5,530,125***	***$5,752,989***	***$5,984,834***	***$6,226,023***	***$6,476,932***	***$6,737,952***	***$7,009,492***	***$7,291,974***	***$7,585,841***	***$7,891,550***	***$8,209,579***	***$8,540,425***	***$8,884,605***	***$9,242,654***	***$9,615,133***	***$10,002,623***	***$10,405,729***	***$10,825,080***	***$11,261,330***	***$11,715,162***	***$171,840,115***
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$0																									
Site Permitting		$100,000																									
Construction cost		$22,300,000																									
Annualized Debt Service 0.08024		$1,797,376				$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376		$35,947,520
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks 10 100,000 ea		$1,000,000																									
Transfer trailers 10 55,000 Ea		$550,000																									
Rolling Stock 350,000		$350,000																									
Annualized Equipment Cost 0.09634		$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$0***	***$38,693,275***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$10,574,501**	**$10,887,077**	**$11,211,237**	**$11,547,417**	**$11,896,071**	**$12,257,668**	**$12,632,698**	**$13,021,667**	**$13,425,102**	**$13,843,550**	**$14,277,577**	**$14,727,775**	**$15,194,754**	**$15,679,150**	**$16,181,623**	**$16,519,808**	**$17,060,517**	**$17,621,438**	**$18,203,339**	**$18,807,017**	**$17,635,921**	**$341,871,327**
Total Savings:			**$0**	**$0**	**$0**	**$3,292,433**	**$3,500,314**	**$3,716,435**	**$3,941,123**	**$4,174,719**	**$4,417,577**	**$4,670,067**	**$4,932,572**	**$5,205,491**	**$5,489,238**	**$5,784,244**	**$6,090,959**	**$6,409,848**	**$6,741,396**	**$7,086,109**	**$7,627,561**	**$8,000,197**	**$8,387,634**	**$8,790,462**	**$9,209,296**	**$11,442,149**	**$128,909,824**

Assumptions

JRMA *12/30/2011*

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer trucks.
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations.
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock.
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range.
6. All capital construction costs includes 7% gross receipts tax

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%

Albuquerque Transfer Station

Feasibility Evaluation for Edith Blvd

SCENARIO # 2 - NEW TRANSFER STATION & CONVENIENCE CENTERS CLOSE - LABOR COST SAVING NOT REALIZED

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System																											
Operations																											
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost																											
Convenience Centers																											
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station																											
Operations																											
Central Station Operations	459,687	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers			$3,410,000	$3,512,300	$3,617,669																						
Eagle Rock	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,278,181***	***$3,376,526***	***$3,477,822***	***$3,582,157***	***$3,689,622***	***$3,800,310***	***$3,914,320***	***$4,031,749***	***$4,152,702***	***$4,277,283***	***$4,405,601***	***$4,537,769***	***$4,673,902***	***$4,814,119***	***$4,958,543***	***$5,107,299***	***$5,260,518***	***$5,418,334***	***$5,580,884***	***$5,748,310***	***$5,920,760***	***$104,546,680***
Transportation Costs																											0
Transport to Cerro Landfill	459,687	$10.27/ton				$5,315,894	$5,530,125	$5,752,989	$5,984,834	$6,226,023	$6,476,932	$6,737,952	$7,009,492	$7,291,974	$7,585,841	$7,891,550	$8,209,579	$8,540,425	$8,884,605	$9,242,654	$9,615,133	$10,002,623	$10,405,729	$10,825,080	$11,261,330	$11,715,162	$170,505,925
Transport form Convenience Centers																											0
Eagle Rock	0	$5.11/ton	$165,247	$171,907	$178,835	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$515,989
Montessa Park	0	$5.11/ton	$75,399	$78,437	$81,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$235,434
Don Reservoir	0	$24.48/ton	$186,633	$194,155	$201,979	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$582,767
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483																						
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,315,894***	***$5,530,125***	***$5,752,989***	***$5,984,834***	***$6,226,023***	***$6,476,932***	***$6,737,952***	***$7,009,492***	***$7,291,974***	***$7,585,841***	***$7,891,550***	***$8,209,579***	***$8,540,425***	***$8,884,605***	***$9,242,654***	***$9,615,133***	***$10,002,623***	***$10,405,729***	***$10,825,080***	***$11,261,330***	***$11,715,162***	***$171,840,115***
New TS - Capital Investments																											
Real Estate																											
Land Purchase		$0																									
Site Permitting		$100,000																									
Construction cost		$22,300,000																									
Annualized Debt Service	0.08024	$1,797,376				$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376		$35,947,520
5% @ 20 yrs																											
Transfer Station Equipment																											
Transfer trucks	10 100000 Ea	$1,000,000																									
Transfer trailers	10 55,000 Ea	$550,000																									
Rolling Stock	350,000	$350,000																									
Annualized Equipment Cost	0.09634	$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs																											
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$0***	***$38,693,275***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$10,574,501**	**$10,887,077**	**$11,211,237**	**$11,547,417**	**$11,896,071**	**$12,257,668**	**$12,632,698**	**$13,021,667**	**$13,425,102**	**$13,843,550**	**$14,277,577**	**$14,727,775**	**$15,194,754**	**$15,679,150**	**$16,181,623**	**$16,519,808**	**$17,060,517**	**$17,621,438**	**$18,203,339**	**$18,807,017**	**$17,635,921**	**$341,871,327**
Total Savings:			**$0**	**$0**	**$0**	**$3,292,433**	**$3,500,314**	**$3,716,435**	**$3,941,123**	**$4,174,719**	**$4,417,577**	**$4,670,067**	**$4,932,572**	**$5,205,491**	**$5,489,238**	**$5,784,244**	**$6,090,959**	**$6,409,848**	**$6,741,396**	**$7,086,109**	**$7,627,561**	**$8,000,197**	**$8,387,634**	**$8,790,462**	**$9,209,296**	**$11,442,149**	**$128,909,824**
Labor:		*$1,614,843*				*$1,764,582*	*$1,817,520*	*$1,872,045*	*$1,928,207*	*$1,986,053*	*$2,045,634*	*$2,107,004*	*$2,170,214*	*$2,235,320*	*$2,302,380*	*$2,371,451*	*$2,442,595*	*$2,515,872*	*$2,591,349*	*$2,669,089*	*$2,749,162*	*$2,831,637*	*$2,916,586*	*$3,004,083*	*$3,094,206*	*$3,187,032*	*$50,602,018*
Savings Less Labor:						**$1,527,850**	**$1,682,794**	**$1,844,390**	**$2,012,916**	**$2,188,666**	**$2,371,943**	**$2,563,064**	**$2,762,359**	**$2,970,171**	**$3,186,858**	**$3,412,793**	**$3,648,364**	**$3,893,975**	**$4,150,048**	**$4,417,020**	**$4,878,399**	**$5,168,560**	**$5,471,048**	**$5,786,379**	**$6,115,091**	**$8,255,118**	**$78,307,806**

Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%
Annual Labor Rate Increase:	3%

Assumptions

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer trucks.
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations.
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock.
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range.
6. All capital construction costs includes 7% gross receipts tax

JRMA *12/30/2011*

Albuquerque Transfer Station

Feasibility Evaluation for Edith Blvd

SCENARIO # 3 - NEW TRANSFER STATION & CONVENIENCE CENTERS OPEN

	Current Waste Volumes		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Existing System														
Operations														
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations		***$3,400,000***	***$3,410,000***	***$3,512,300***	***$3,617,669***	***$3,726,199***	***$3,837,985***	***$3,953,125***	***$4,071,718***	***$4,193,870***	***$4,319,686***	***$4,449,277***	***$4,582,755***	***$4,720,237***
Transportation Cost														
Convenience Centers														
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226
Collection Direct haul	405,000	$21.19/ton	$8,580,000	$8,925,774	$9,285,483	$9,659,688	$10,048,973	$10,453,947	$10,875,241	$11,313,513	$11,769,447	$12,243,756	$12,737,180	$13,250,488
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$10,140,735***	***$10,549,407***	***$10,974,548***	***$11,416,822***	***$11,876,920***	***$12,355,560***	***$12,853,489***	***$13,371,484***	***$13,910,355***
Total Existing			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$13,866,934**	**$14,387,392**	**$14,927,672**	**$15,488,540**	**$16,070,790**	**$16,675,246**	**$17,302,765**	**$17,954,239**	**$18,630,593**
New Central Transfer Station														
Operations														
Central Station Operations	405,000	$3,000,000				$3,278,181	$3,376,526	$3,477,822	$3,582,157	$3,689,622	$3,800,310	$3,914,320	$4,031,749	$4,152,702
Convenience Centers		$3,410,000	$3,410,000	$3,512,300	$3,617,669	$3,726,199	$3,837,985	$3,953,125	$4,071,718	$4,193,870	$4,319,686	$4,449,277	$4,582,755	$4,720,237
Eagle Rock	32,318		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	14,746		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	7,623		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations			***$3,410,000***	***$3,512,300***	***$3,617,669***	***$7,004,380***	***$7,214,511***	***$7,430,947***	***$7,653,875***	***$7,883,491***	***$8,119,996***	***$8,363,596***	***$8,614,504***	***$8,872,939***
Transportation Costs														
Transport to Cerro Landfill	405,000	$10.27/ton				$4,683,485	$4,872,229	$5,068,580	$5,272,844	$5,485,340	$5,706,399	$5,936,367	$6,175,602	$6,424,479
Transport form Convenience Centers														
Eagle Rock	32,318	$5.11/ton	$165,247	$171,907	$178,835	$186,042	$193,539	$201,339	$209,453	$217,894	$226,675	$235,810	$245,313	$255,199
Montessa Park	14,746	$5.11/ton	$75,399	$78,437	$81,598	$84,887	$88,308	$91,867	$95,569	$99,420	$103,427	$107,595	$111,931	$116,442
Don Reservoir	7,623	$24.48/ton	$186,633	$194,155	$201,979	$210,119	$218,587	$227,396	$236,560	$246,093	$256,011	$266,328	$277,061	$288,226
Collection Direct haul			$8,580,000	$8,925,774	$9,285,483									
Subtotal Transportation			***$9,007,279***	***$9,370,273***	***$9,747,895***	***$5,164,532***	***$5,372,663***	***$5,589,181***	***$5,814,425***	***$6,048,747***	***$6,292,511***	***$6,546,099***	***$6,809,907***	***$7,084,346***
New TS - Capital Investments														
Real Estate														
Land Purchase		$0												
Site Permitting		$100,000												
Construction cost		$22,300,000												
Annualized Debt Service	0.08024	$1,797,376				$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376
5% @ 20 yrs														
Transfer Station Equipment														
Transfer trucks	10 100,000Ea	$1,000,000												
Transfer trailers	10 55,000 Ea	$550,000												
Rolling Stock	350,000	$350,000												
Annualized Equipment Cost	0.09634	$183,050				$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050
5% @ 15 yrs														
Subtotal Capital Cost for New Transfer Station			***$0***	***$0***	***$0***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***
Total annual Cost for New Transfer Station			**$12,417,279**	**$12,882,573**	**$13,365,564**	**$14,149,339**	**$14,567,601**	**$15,000,554**	**$15,448,727**	**$15,912,664**	**$16,392,934**	**$16,890,122**	**$17,404,837**	**$17,937,712**
Total Savings:			**$0**	**$0**	**$0**	**-$282,405**	**-$180,209**	**-$72,882**	**$39,813**	**$158,125**	**$282,312**	**$412,644**	**$549,402**	**$692,881**

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total for 24 years
Existing System													
Operations													
Convenience Centers	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations	***$4,861,845***	***$5,007,700***	***$5,157,931***	***$5,312,669***	***$5,472,049***	***$5,636,210***	***$5,805,297***	***$5,979,456***	***$6,158,839***	***$6,343,604***	***$6,533,913***	***$6,729,930***	***$117,394,263***
Transportation Cost													
Convenience Centers													
Eagle Rock	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul	$13,784,483	$14,339,997	$14,917,899	$15,519,090	$16,144,510	$16,795,134	$17,471,977	$18,176,098	$18,908,595	$19,670,611	$20,463,337	$21,288,009	$336,623,230
Subtotal Transportation	***$14,470,942***	***$15,054,121***	***$15,660,803***	***$16,291,933***	***$16,948,498***	***$17,631,522***	***$18,342,073***	***$19,081,258***	***$19,850,233***	***$20,650,197***	***$21,482,400***	***$22,348,141***	***$353,386,887***
Total Existing	**$19,332,787**	**$20,061,821**	**$20,818,734**	**$21,604,602**	**$22,420,547**	**$23,267,733**	**$24,147,369**	**$25,060,714**	**$26,009,072**	**$26,993,802**	**$28,016,313**	**$29,078,071**	**$470,781,151**
New Central Transfer Station													
Operations													
Central Station Operations	$4,277,283	$4,405,601	$4,537,769	$4,673,902	$4,814,119	$4,958,543	$5,107,299	$5,260,518	$5,418,334	$5,580,884	$5,748,310	$5,920,760	$94,006,711
Convenience Centers	$4,861,845	$5,007,700	$5,157,931	$5,312,669	$5,472,049	$5,636,210	$5,805,297	$5,979,456	$6,158,839	$6,343,604	$6,533,913	$6,729,930	$117,394,263
Eagle Rock	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Montessa Park	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Don Reservoir	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Operations	***$9,139,127***	***$9,413,301***	***$9,695,700***	***$9,986,571***	***$10,286,168***	***$10,594,753***	***$10,912,596***	***$11,239,974***	***$11,577,173***	***$11,924,488***	***$12,282,223***	***$12,650,690***	***$211,400,974***
Transportation Costs													0
Transport to Cerro Landfill	$6,683,386	$6,952,726	$7,232,921	$7,524,408	$7,827,641	$8,143,095	$8,471,262	$8,812,654	$9,167,804	$9,537,266	$9,921,618	$10,321,459	$150,221,563
Transport form Convenience Centers													0
Eagle Rock	$265,484	$276,183	$287,313	$298,891	$310,937	$323,467	$336,503	$350,064	$364,172	$378,848	$394,116	$409,998	$6,483,227
Montessa Park	$121,134	$126,016	$131,095	$136,378	$141,874	$147,591	$153,539	$159,727	$166,164	$172,860	$179,826	$187,073	$2,958,156
Don Reservoir	$299,842	$311,926	$324,496	$337,573	$351,178	$365,330	$380,053	$395,369	$411,302	$427,878	$445,121	$463,060	$7,322,275
Collection Direct haul													
Subtotal Transportation	***$7,369,845***	***$7,666,850***	***$7,975,824***	***$8,297,250***	***$8,631,629***	***$8,979,484***	***$9,341,357***	***$9,717,814***	***$10,109,442***	***$10,516,852***	***$10,940,681***	***$11,381,591***	***$166,985,220***
New TS - Capital Investments													
Real Estate													
Land Purchase													
Site Permitting													
Construction cost													
Annualized Debt Service	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376	$1,797,376		$35,947,520
5% @ 20 yrs													
Transfer Station Equipment													
Transfer trucks													
Transfer trailers													
Rolling Stock													
Annualized Equipment Cost	$183,050	$183,050	$183,050	$183,050	$183,050	$183,050							$2,745,755.20
5% @ 15 yrs													
Subtotal Capital Cost for New Transfer Station	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,980,426***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$1,797,376***	***$0***	***$38,693,275***
Total annual Cost for New Transfer Station	**$18,489,399**	**$19,060,578**	**$19,651,951**	**$20,264,247**	**$20,898,224**	**$21,554,663**	**$22,051,329**	**$22,755,163**	**$23,483,991**	**$24,238,716**	**$25,020,280**	**$24,032,280**	**$443,870,726**
Total Savings:	**$843,388**	**$1,001,244**	**$1,166,783**	**$1,340,354**	**$1,522,323**	**$1,713,069**	**$2,096,040**	**$2,305,550**	**$2,525,082**	**$2,755,085**	**$2,996,033**	**$5,045,791**	**$26,910,425**

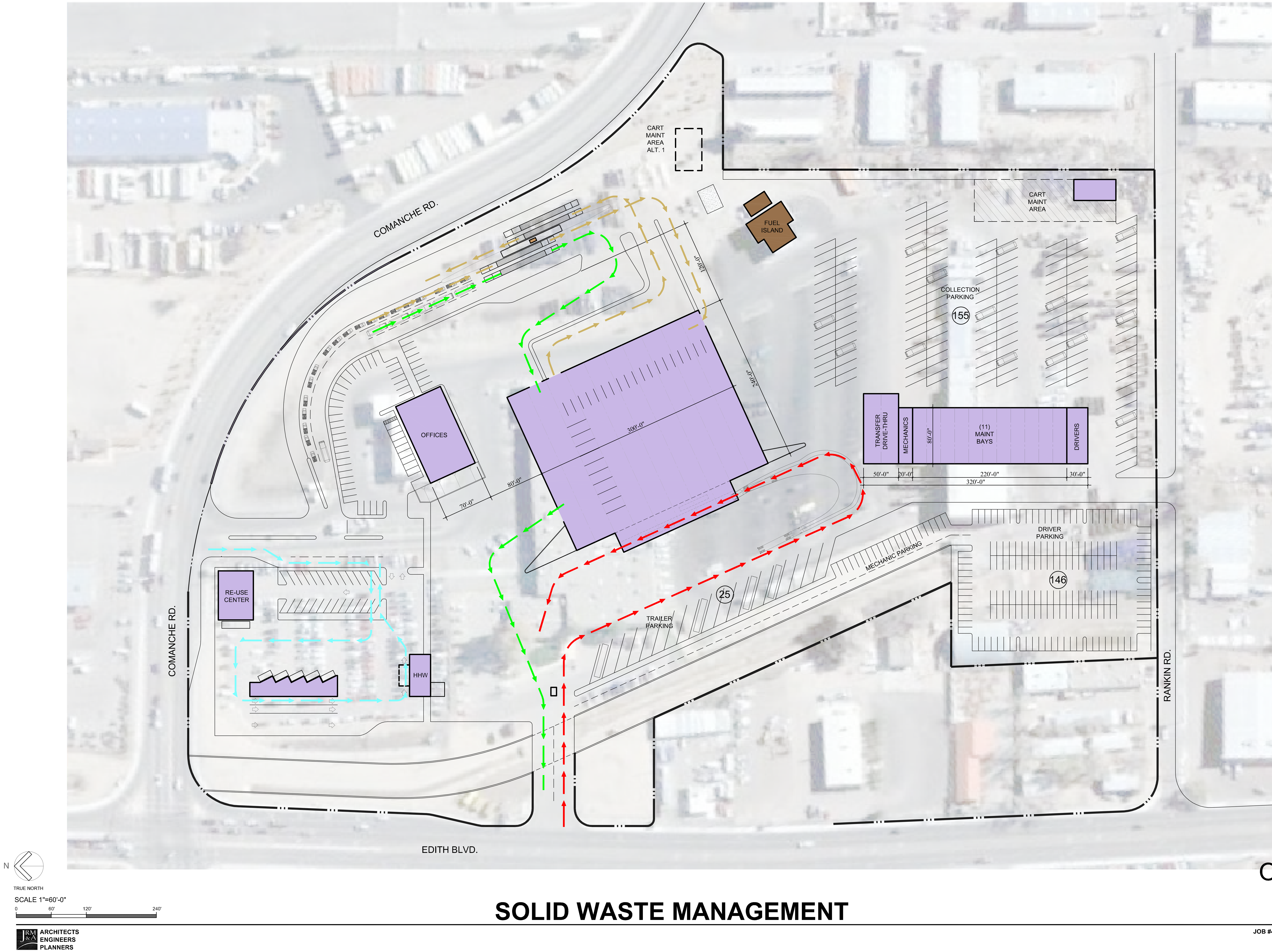
Annual Generation Rate Increase:	1%
Annual Hauling Cost Increase:	3%
Annual Operations Cost Increase:	3%

Assumptions

1. All transportation labor and operating expenses related to direct haul are realized. Therefore the labor savings is realized by attrition and assigning transportation labor to jobs for new services. Some drivers can be assigned to transfer trucks.
2. Labor savings from closing existing convenience centers is realized by assigning drivers to transfer trucks and for operations of the new transfer stations.
3. This scenario includes an allocation of $5,000,000 to purchase new property.
4. The City will purchase 10 new live bottom trailers and 10 new trucks - the remaining fleet of 10 trucks and 10 trailers will be provided from existing rolling stock.
5. All construction cost and projections are planning level estimates and carry a plus 15% and minus 10% range.
6. All capital construction costs includes 7% gross receipts tax

JRMA *12/30/2011*

Appendix D
Site Plans



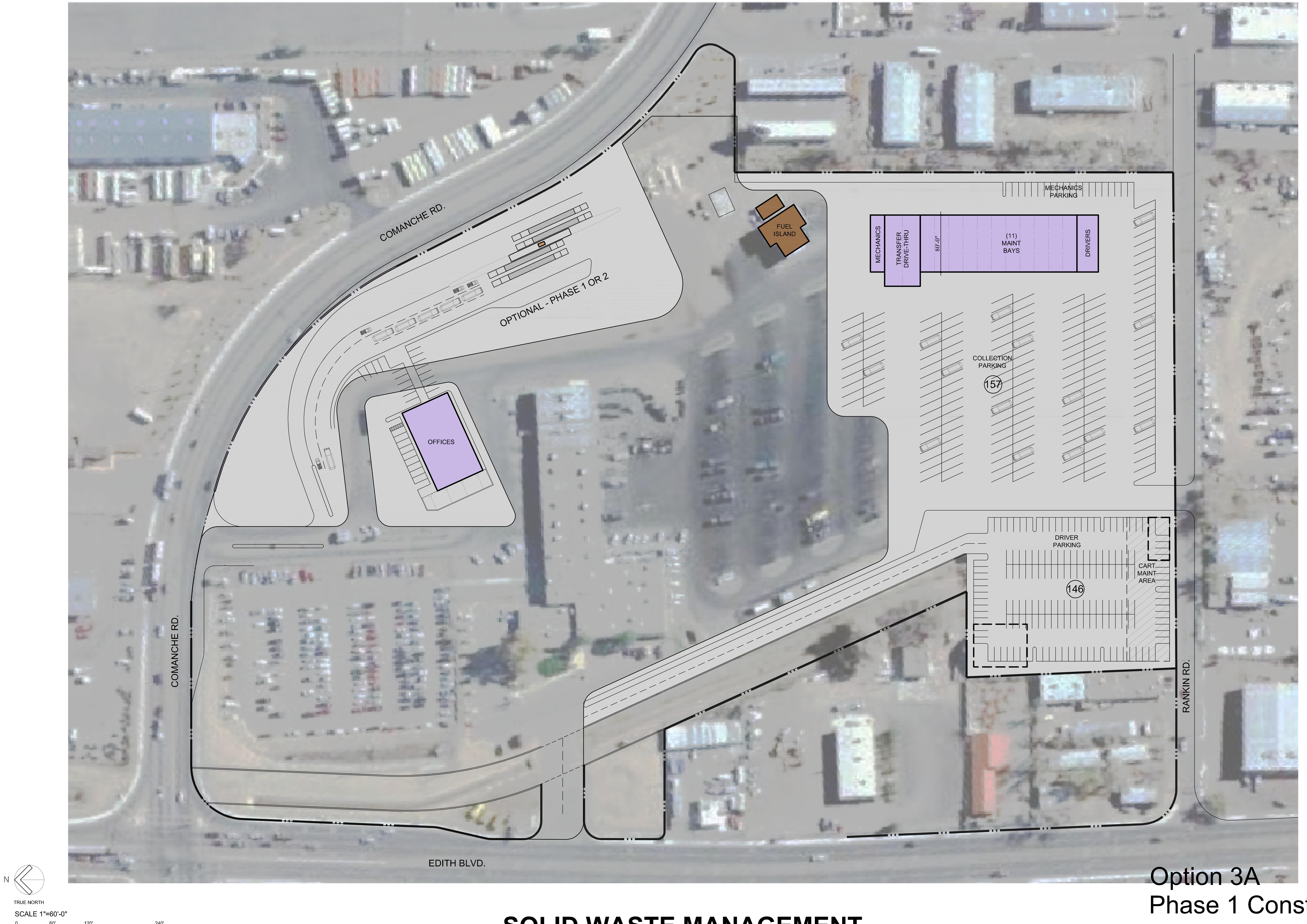
Option 4A

SOLID WASTE MANAGEMENT

SITE PLAN

JOB #4315 | 21 JULY 2011

ARCHITECTS
ENGINEERS
PLANNERS

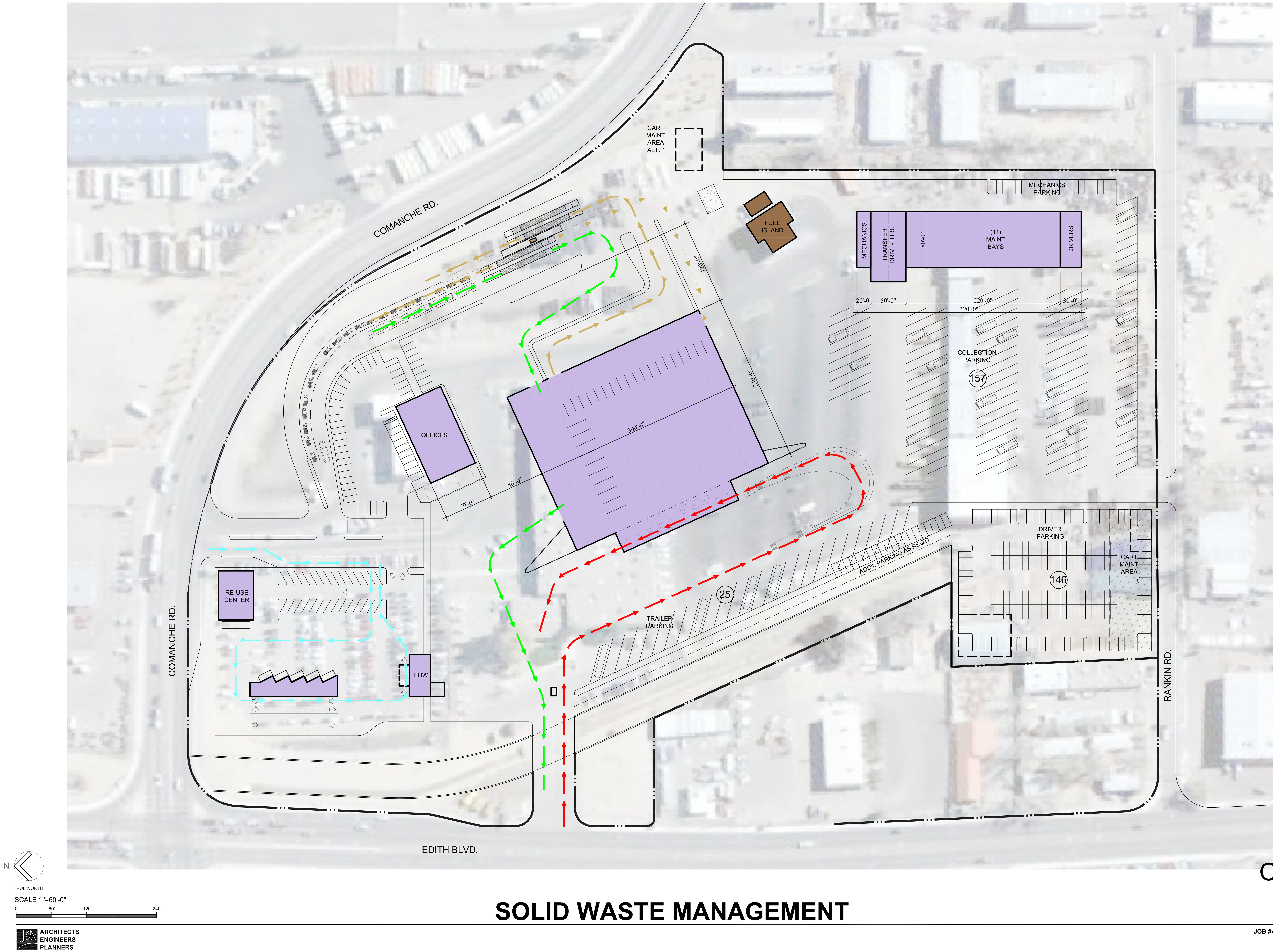


Option 3A
Phase 1 Construction
SITE PLAN

SOLID WASTE MANAGEMENT

JRM&A ARCHITECTS ENGINEERS PLANNERS

JOB #4315 | 21 JULY 2011



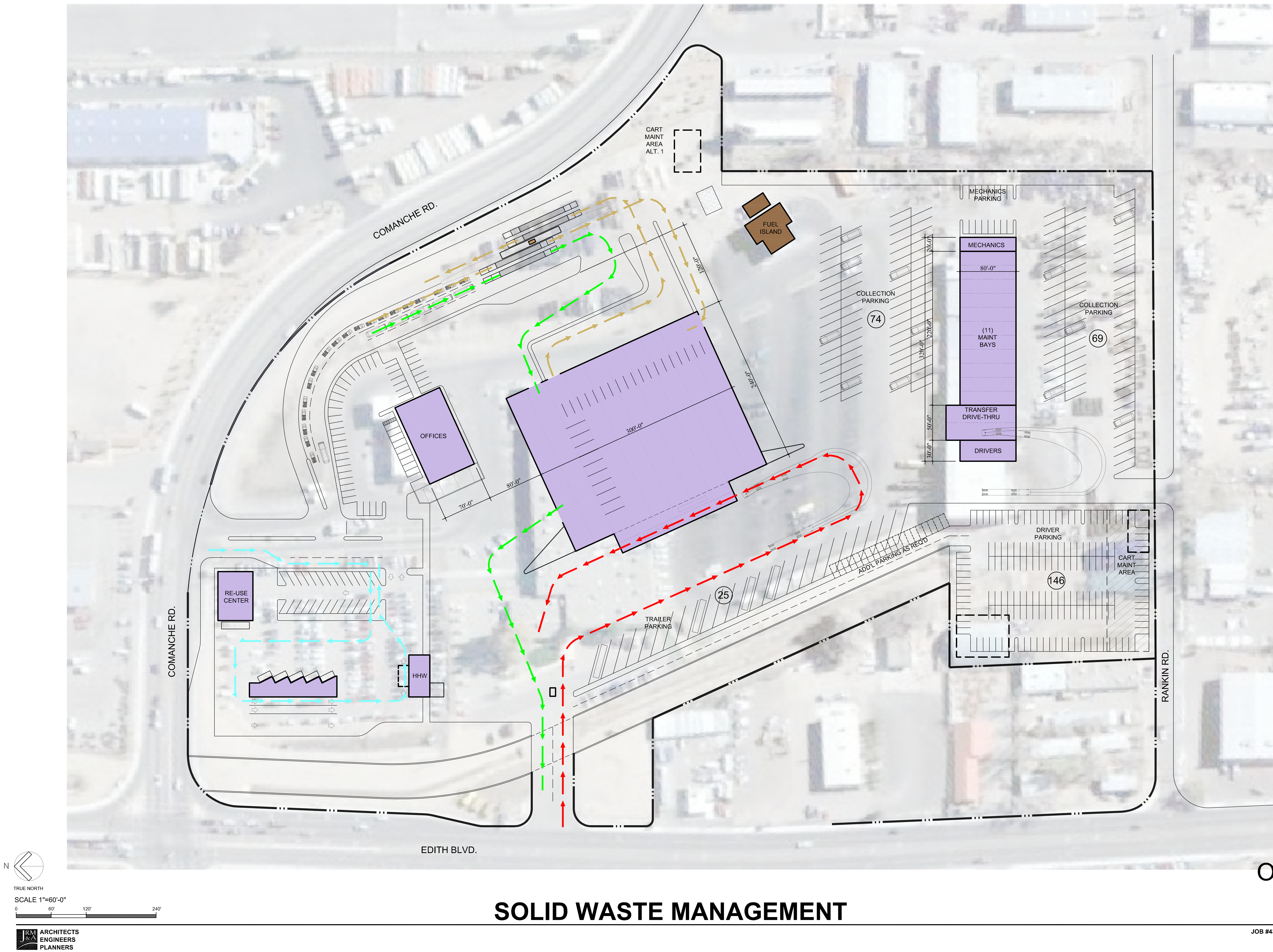
Option 3A

SOLID WASTE MANAGEMENT

SITE PLAN

JRM&A ARCHITECTS ENGINEERS PLANNERS

JOB #4315 | 21 JULY 2011



Option 3

SOLID WASTE MANAGEMENT

SITE PLAN

JRM&A ARCHITECTS ENGINEERS PLANNERS

JOB #4315 | 21 JULY 2011