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TRAFFIC ASSESMENT

2241 EAST 89TH STREET, LA CA 90002

Revised

June 3, 2010

INTRODUCTION

Mid Cities Engineering, Inc is pleased to submit this revised traffic assessment for the recycling facility proposed by Mr. Jose Diaz at 2241 East 89th Street in Los Angeles. This assessment presents our evaluation of the site location, on-site circulation of vehicles and truck maneuvering as well as a brief comparison to other projects in the area currently conducting similar operations. This assessment also provides an estimate of the trips generated by the project as well as an analysis of the project design and its effects on the level of service along Alameda Street.

OVERVIEW OF THE PROJECT

The proposed site is located at the North-West corner of Alameda Street and 89th Street in the un-incorporated area of the County of Los Angeles, in a zone classified M-2 or designated for Heavy Industrial Use. The site is almost an acre (0.96) of land and has a flat topography and it is currently improved with a concrete slab that was part of the prior warehouse development built in the 1940's.

The proposed project will be a recycling center for scrap metals as well as California Recycled Materials also known as CRV. These materials will be purchased from the public and resold to different processors and exporters.

The County of Los Angeles requires a Conditional Use Permit C.U.P. for Scrap Metal Yards for recycling centers operating in M-2 zones and for any scrap metal processing yard. The LA County Code Title 22.08.190 S provides this definition. *“Scrap metal processing yard” means any establishment or place of business which is maintained, used or operated solely for the processing and preparing of scrap metals for re-melting by steel mills and foundries.”*

Although there is no specific part the County Code that addresses recycling centers this particular project does not fully fall under this classification because essentially they will be not conducting any “processing or re-melting” The Los Angeles County still requires a conditional C.U.P to impose the conditions required for scrap metal yards mentioned in part 9 of section 22.52, which requires to provide a fence to prevent public view and parking requirements mentioned in section 12 of 22.52.

The County of Los Angeles in Title 22 has specific requirements in section 9 of their general regulations as well as in section 22.52.1205

Scrap metal processing, automobile dismantling and junk and salvage yards

- A. The following required parking spaces, and adequate access thereto, shall be maintained for each yard; these requirements are in addition to those imposed by Section 22.52.1140:*
- 1. One parking space for each 7,000 square feet of yard area or fraction thereof, up to the first 42,000 square feet;*
 - 2. One parking space for each 20,000 square feet of yard area or fraction thereof, in excess of 42,000 square feet;*
 - 3. Regardless of size of the yard area, a minimum of three parking spaces shall be provided.*

PROPOSED USE OF THE SITE

The proposed project site is located at the North-West corner of Alameda Street and 89th Street in the un-incorporated area of the County of Los Angeles, in a zone classified as M-2 which is reserved for Heavy Industrial Use. The site is 41,857 square feet in size (0.96 acres) and has a flat topography and it is improved with a concrete slab that was part of the prior warehouse development built in 1942 and 1942 as well as the previous parking surfaces that served the previous use.

The proposed project will be a recycling center for scrap metals (aluminum, bronze, cast iron, and many others) as well as California Redemption Value also known as CRV materials (aluminum cans, glass and plastic beverage containers). These materials are to be purchased from individuals who collect these types of commodities from different sources.

The project is composed of two main areas of service. The first area of service is dedicated to receive CRV materials. Customers will manually unload their vehicles and place them in a scale. The attendant will weight these materials in a small scale and place them in the appropriate containers. The second area of service is dedicated to the scrap metals. All customers bringing scrap metals will have their vehicles weighted first in the vehicle scale. Customers will proceed to dump their materials in the open stage area. These materials will be classified and then loaded into containers to be sent somewhere else for processing. Trucks will come to pick up and all deliver the containers from the open staging area

Exhibit "A-1" depicts the site plan of the proposed site and identifies the following important components.

1. A light truck scale (25' long by 10' wide)
2. 18 parking spaces for customers and 6 for employees (24 total spaces)
3. An open area exclusively for scrap metals of approximately 4,463 sq. ft. as indicated on exhibit A-1, A-2 and A-3.

4. A 480 square feet office and a 200 sq. ft. operator both located next to the light truck scale.
5. Two driveways along Alameda Street (20' and 30' wide) and one driveway along 89th Street (26' wide).

OPERATIONS DESCRIPTION

The proposed operation will consist of four basic components, CRV materials, Scrap Metal operation, truck maneuvering and administration. For the purposes of this assessment we will be analyzing the first three components.

The first component is the area dedicated to CRV and small amounts of more valuable metals. This area is located on the northern easterly area of the project. The area is identified in Exhibit "A-1" as the area is delimited by customer parking spaces 1R to 8R and employee parking to the west. This area is designed to handle all CRV materials and metals that can be manually weighted in a small scale located behind parking space number two. The majority of vehicles entering this area will be automobiles, minivans and pick-up trucks. The average time to serve a customer is estimated at twenty five minutes to complete a full transaction. The transaction includes unloading the CRV containers, obtaining a weight slip and getting paid. Assuming a twenty five minute service for a full transaction; is expected that sixteen customers can be served every hour. This translates into one hundred and sixty cars (160) per day. At this point in time is optimistically expected that less than one hundred customers a day will use this portion of project by the end of their first year of operations. The project design has the capacity to handle up to one hundred and sixty vehicles a day. Additional efficiencies can be incorporated later into the project, therefore increasing the number of customers being served. This can be achieved by decreasing the average time to serve a customer to about twenty minutes therefore incrementing the number of customers.

The second component of the operations of this project is dedicated to the bulky and heavier scrap metals. The vehicles bringing only scrap metals will go directly to the truck scale located to the west of the project. (Please note that project is designed for trucks with a maximum wheel base of 25' or WB25)¹

The distance from the gate to the truck scale is 177' in straight direction from the southern driveway. In order to provide for a maximum queuing capacity the there will be two waiting lines that can accommodate nine vehicles in a queuing line as indicated in Exhibit A-2. The majority of the vehicles bringing scrap metal will be light duty pick up trucks that are described in box below:

¹ As expressed by management, customers driving larger trucks (over 25WB) will not be accepted at this facility they will be send directly to the exporters who have the scales and equipment to service them.

The most popular vehicles used by scrap metal collectors as observed by Mid Cities Engineering at the existing projects examined are described as:

- *Toyota Pick up truck DLS or SR5 with an average length of 15 feet for the regular cab and 16'-7" for the extended cab (Maximum weight capacity of 1700 to 1800 pounds); (models from 2000 and before)*
- *2. Toyota Tacoma with an average length of 15'-4" for the regular cab and 16'-11" for the extended cab; (Maximum weight capacity of 1700 to 1900 pounds) (models from 2005 and before)*
- *Nissan Frontier with an average length of 15'-4" for the regular cab and 16'-4" for the extended (Maximum weight capacity of 1700 to 1900 pounds) (models from 2004 and before)*
- *The Ford 150 pick up truck with an average length of 16'-4" for the regular cab and regular bed to 17'-13" for the regular cab with extended bed and a wheel base of 119" can turn curb to curb in 40'-1' and has a weight capacity of 2,300 to 4,300 pounds. (models from 2003 and before)*
- *The Chevrolet S-10 Pick up truck with an average length of 14'-10" for the regular cab short bed to 16'-4" for the regular cab and extended bed (models from 2001 and before)*
- *Other light pick up trucks were observed such as the Mazda and Mitsubishi pick trucks as well GMC Sierra, Dodge Ram but nothing that exceeds the 21' feet in length or 25' at the wheel base nor they exceed a turning radius of 41' feet from curb to curb.*

The incorporation of queuing lines into the project design provides the capacity for nine cars to be waiting in double line to be weighted. (Each queuing space described in exhibit "A-2" measures 10' by 21' which is consistent with the type of trucks used by the scrap collectors.

The incorporation of a traffic attendant as used in similar projects will guarantee a smooth circulation within the project. The traffic attendant will direct the vehicles waiting in the queuing line to proceed to get weighted as well to the nine spaces available to unload their scrap and any other needed directional needs. The traffic attendant or flagmen area of work is identified as area 1 in Exhibit A-2.

Once a vehicle is weighted, the vehicle will proceed to the open stage area where up to ten cars can be unloading their materials at the same time. These ten unloading spaces will be numbered in order to facilitate drivers to identify their unloading area. Once the unloading is done the vehicles will be weighted again to determine the difference in weight. The traffic attendant will then direct the vehicles to park in parking spaces 9-16 to complete their transaction. Once the customers park in this area they will be taking their weight slip to the office for

payment. Finally they will be leaving the project via the driveway along 89th Street. As required by the Department of Public Works, the fence at this exit will be lowered to three feet on each side of the fence for ten feet on each side to allow drivers to have a better visibility of the traffic on 89th Street. A second fence may be needed at least eight feet height behind this point to prevent the public from viewing the open stage area as required by the Department of Regional Planning. Mirrors may be needed to improve the visibility of drivers leaving the project.

The average time per scrap customer is estimated at thirty minutes to complete a full transaction. This includes waiting in line, obtaining a weight in, unloading the materials, obtaining a weight out and parking to obtain payment. The most sensitive component is the unloading part where up to ten customers can be unloading at the same time. Three additional spaces are provided for those customers bringing special materials such as appliances or motor parts. This translates into ten customers every half an hour or up to twenty customers per hour for a maximum capacity of 200 customers per day assuming a half an hour window and not including the additional three spaces at the special materials dumping area. The equipment needed to move the materials from the staging area to the containers are forklifts with special attachments, because of their size and efficiency. This project will also use an excavator or a bob-cat. The path required to load the trucks has been calculated to be eight ten and half feet wide and should be clear at all times for the bob cat to maneuver.

Alameda Materials expects that at this point in time about one hundred customers will use this portion of project every day during the first year. The project has the capacity to handle up to two hundred vehicles a day without causing any interference to the traffic on Alameda Street because of the incorporation of the queuing lines and the unloading stalls. If additional efficiencies are incorporated later into the project the average time to serve a customer can be decreased therefore incrementing the number of customer to be served. It is expected that during the first three years this project will working at maximum capacity.

The third component of project and deals with the internal trucking circulation which is best described in exhibit "A-3". The trucks coming to deliver and pick up roll-off containers will be entering to the site via Alameda Street at the driveway closest to 89th street which is to be extended to be 30' wide. This width will allow for a full 90 degree turn that is needed for the roll-off trucks carrying the roll-off containers.

Roll-off containers are the preferred choice in the scrap metal industry because they are short and maneuverable in addition to provide wheels that facilitate rolling the containers in place. The more maneuverable the truck is the easier to get into containers tighter spots. The companies that provide these containers usually deliver these containers to commercial zones where the space is very limited. In this project they will have no problems delivering or picking up the containers because the open stage area is large enough to accommodate at least two trucks at the same time. Basic Fibers which is a leader in the industry of recycling was consulted regarding the type of trucks and containers used for this assessment.

Roll-Off containers will be used for CRV materials. Roll off container sizes are determined by the amount of cubic yards they contain. Typical container sizes are 10 yard, 20 yard, 30 yard, and 40 yards. The type of containers used in this particular project will not exceed 24 feet in length for the CRV materials while the containers for scrap metal will not exceed 30 to 40 feet in length.

The most popular type of trucks used by the scrap metal industry and as observed by Mid Cities Engineering at the headquarters of exporters and processors of scrap metals is:



- *International trucks with an average 24 feet container for the CRV materials and 30 feet for the scrap metals will be used*
- *The average height of these trucks is 11' and their average width is 8 feet. The length of the various models varies from 35' to 55' maximum (truck and the container). This picture was taken in conventional parking spaces 9 feet wide.*

As stated by Alameda Recycling & Metals management, all of the trucks delivering and picking up the containers for CRV will come early in the morning to avoid any potential conflict with customers. CRV containers will be in place before the site opens at eight in the morning. Trucks picking up scrap will come also in the morning to make sure that the scrap pile does not get higher than the fence. All trucks will be entering the site from Alameda and will be backed up into their designated position as indicated in schedule "A-3". The trucks will load their containers and leave via 89th street also. Once trucks are full they will exit via 89

Street which has a width of 50 feet which is enough to handle the turn of a roll-off trucks in either direction.

EXISTING AND PROPOSED USES OF THE SITE

The zone classification where the project is proposed is M-2 or Heavy Industrial Use zone and the General Plan for the area is also major industrial. The nature of the project "is compatible with surrounding industrial uses" as described in the staff report prepared by Daniel Fierrros from Regional Planning for the October 6, 2009 hearing. The proposed site is vacant and it has not been in use since March 2009 when it the Clean Hands waiver was denied by the Department of Regional Planning. The property had two previous improvements as described in the Los Angeles County Assessor site that were built in 1942 and 1942. These improvements were removed before 1990 for a previous project that was never realized. At this time the only improvement on the property is the concrete slab for the old buildings as well as the parking area that used to serve the buildings.

EXISTING AND PROPOSED ROADWAYS AND INTERSECTIONS

The site is located on the northwest corner of Alameda Street and 89th Street. The site has three driveways that provide direct access to Alameda and one driveway that provides access to 89th Street. The site is served by Alameda street which is a 75 feet wide four lane undivided highway with two lines in each direction. Two lines traveling north and two traveling south. The access from Alameda will typically occur from the south bound since the divided highway has a double solid line where left turns are not allowed. Each line is 11 feet wide plus a parking line adjacent to the property line that is also 11 feet wide. The sidewalk is also 11 feet wide and there is a required 3 feet set back for the required fencing and landscaping.

Since the most sensitive turns would be for the roll-off trucks turning at the 30 feet driveway along Alameda in a 90 degree angle. The required one quarter turning radius for roll-off trucks is (28') twenty eight feet which is also the required swept path². The provided turning radius is 36 feet which is composed of 11 feet from line two and 11 feet from the parking line for a total of 22 feet in addition to the 11 feet from the width of the sidewalk plus three feet of the required landscaping. This distance is enough to offset the swept path and is also more than required twenty eight feet to complete a 90 degree angle turn required by most roll-off trucks.

² Swept path is the amount of roadway that a truck requires to make a turn without hitting anything.

The existing traffic data available from the Los Angeles Department of Public Works indicates that Alameda Street³ handles an average of 32,800 vehicles a day which translates into 1,270 vehicles per hour northbound and 892 vehicles per hour southbound during the morning hours. The two directions are now operating a level of service C because Alameda has total capacity to handle 2,800 vehicles per hour. The afternoon peak hours indicate that the northbound lines handle 1,804 vehicles per hour while southbound lines carry 1,194 vehicles per hour. This is still a level of service C because the total capacity of Alameda is 2,800.

TRIP GENERATION

Based on the Institute of Transportation Engineers Trip Generation Manual eight edition, the closest classification found for recycling centers or scrap metal yards would be the manufacturing classification, which is listed under the industrial classifications of the table Trip Generation Rate (PM peak hour. This list provides a factor of 0.40 per each thousand square feet at peak morning hours and a factor of 0.37 for the pm peak hours. The result can be obtained with the following formula.

ITE factor x each 1,000 square feet = total number of trips per hour.

For this project the site size of 43,857 is expressed as 43.8

$0.40 \times 43.8 = 17$ trips per peak am hour or 17×5 hours = 85 am trips.

$0.37 \times 43.8 = 16$ trips per peak pm hour or 16×5 hours = 80 am trips.

Total number of trips assuming only peaks hours = 165

Table 1.1 provides some examples of land use developments which would require a traffic impact analysis according to the thresholds recommended by ITE.

Table 1.1 Threshold Levels

Land Use	100 Peak Hour Trips	750 Daily Trips
Residential: Single Family	150 units	70 units
Apartments	245 units	120 units
Condos/Townhouses	295 units	120 units
Shopping Center	15,500 sq. ft.	2,700 sq. ft.
Fast Food Restaurant (GFA)	5,200 sq. ft.	1,200 sq. ft.
General Office	55,000 sq. ft.	45,000 sq. ft.
Medical/Dental Office	37,000 sq. ft.	26,000 sq. ft.
Research & Development	85,000 sq. ft or 4.5 acres	70,000 sq. ft or 4 acres
Light Industrial	115,000 sq. ft. or 8 acres	115,000 sq. ft. or 11.5 acres
Manufacturing	250,000 sq. ft.	195,000 sq. ft.

³ These are the same numbers used by Urban Crossroads in their assessment prepared for this same project and are available from the Department of Public Works.

The second column indicates the type of development that will generate 100 peak hour trips. The manufacturing land use was used for this project as well as the following formula to estimate the number of trips to be generated:

100 vehicles are generated by every 250,000 sq. ft. of development. This means that the Alameda Recycling will only produce only a proportion of the 100 trips because it is a smaller project. The result can be obtained by a rule of 3.

250,000 = 100 trips then 48,857 will produce 19 trips per peak hour or 190 trips per day assuming ten hours of operation at peak levels only.

The third column indicates the type of development that will generate 750 trips a day. Using again the manufacturing land use we can use a rule of three as follows: 195,000 = 750 daily trips then 48,857 will produce 187 trips a day which is also consistent with the number of trips estimated by using the factors provided by the ITE for the peak hours.

Generally, a comprehensive traffic analysis should be completed whenever a development is expected to generate 100 or more new inbound or outbound trips during the peak hours (ITE recommended practice). Developments containing about 150 single-family homes, 220 multi-family units, 55,000 square feet of general office space, 15,500 square foot shopping center or 250,000 square feet of manufacturing sites would be expected to generate this level of traffic and hence, require a complete traffic analysis.

The ITE trip generation manual is based on hundreds of trip generation surveys nationwide for a range of land use types. It is the most commonly accepted data source for trip generation rates in the United States. Generally, examining those numbers based on the peak-hour conditions are used in traffic assessments. An analysis of peak-hour conditions results in a more accurate identification of site traffic impacts.

RELATED PROJECT LIST

There are five similar projects operating at this time in the vicinity of the project. They are generally larger scrap metal yards and or larger recycling centers.

1. Bestway Recycling, Inc is listed in the Department of Conservation as operating at 2268 East Firestone Boulevard in the un-incorporated County of Los Angeles jurisdiction. This project is almost two acres in size and according to the Department of Conservation it has been in operations since 1987. They buy different type of recycled materials such as plastic bags, cardboard and newspaper in addition to CRV materials. The observation taken at this location was during the late morning and reported a total of 25 vehicles bringing CRV materials. One roll-off containers was observed leaving this site during the one

hour observation to queuing was observed at their entrance along 88th Street.

2. The second site observed was Sun-Lite materials which is located at 2210 East 85th Street in the un-incorporated County of Los Angeles jurisdiction. This site has been in operation prior 2001 and acquired their Conditional Use permit to operate their scrap yard in 2008. This site is about one and half acres in size. They buy all type of scrap metals. The observation taken at this location was during mid morning and reported a total of 30 vehicles bringing scrap materials. One roll-off containers was observed leaving this site during the one half hour observation and no queuing was observed at their 85th street entrance.
3. The third site observed was SA Recycling which is located at 10401 Alameda Street in the in the City of Lynwood jurisdiction. No records were obtained about the type of entitlement they have from the city of Lynwood nor was any information found other that their registration with the Secretary of State to conduct business in California filed in 2007. This site is about four acres in size. They buy all type of scrap metals. The observation taken at this location was during mid morning and reported a total of 50 vehicles bringing scrap materials. Two containers were observed leaving this site during the one hour observation.
4. The fourth site observed was Atlas Metals which is located at 10019 South Alameda Street in the in the un-incorporated County of Los Angeles jurisdiction. According to the records found they have been in operation since the early 1990 and obtained their last Conditional Use Permit in 2005. This site is about three acres in size. They buy all type of scrap metals. The observation taken at this location was during mid morning and reported a total of 50 vehicles bringing scrap materials. One roll-off containers was observed leaving this site during the one hour observation.
5. The fifth site observed was Williams Recycling which is located at 2225 East 92nd Street in the in the un-incorporated County of Los Angeles jurisdiction. According to the records found at Regional Planning they have been in operation since 1980 and obtained their latest Conditional Use Permit in 1990. This site is about three acres in size. They buy all type of scrap metals. The observation taken at this location was during mid morning and reported a total of 40 vehicles bringing scrap materials. Two roll-off containers were observed leaving this site during the one hour observation.

ANALYSIS AND CONCLUSION

Generally, a comprehensive traffic analysis should be completed whenever a development is expected to generate 100 or more new inbound or outbound trips during the peak hours (This is the ITE recommended practice). Developments

containing about 150 single-family homes, 220 multi-family units, 55,000 square feet of general office space or a 15,500 square foot shopping center would be expected to generate this level of traffic and hence, require a complete traffic analysis. Manufacturing sites in excess of 195,000 square feet may also create this type of trip generation according ITE.

The ITE trip generation manual is based on hundreds of trip generation surveys nationwide for a range of land use types. It is the most commonly accepted data source for trip generation rates.

Based upon our review of the proposed project site plans and related exhibits it is clear that the design proposed by Alameda Recycling incorporates more than adequate mitigations measures that will prevent any potential negative impacts on the traffic patterns along Alameda Boulevard.

In addition, the proposed project will not generate a significant number of trips to alter the level of services along the south bound lines of Alameda Street and does not require a full traffic study according to the guidelines requirements⁴ published by the County of Los Angeles Department of Public Works. The guidelines requirements mentioned in part II were observed to prepare this assessment.

The impact on the level of service must be of more than four percent in order to be considered significant. This is clearly stated in the guidelines requirements⁵ published by the County of Los Angeles Department of Public Works part III, letter C number 5 or page 6.

This conclusion was based on the fact that Alameda Street is now handling 892 vehicles per hour in morning peak hours and 1,194 in the afternoon hours. The number of trips to be added by the project is 17 in the morning and 16 in the afternoon during the peak hours. The increase is less than 4 percent and therefore is not significant.

In addition there are a number of significant findings that support our conclusion and they are described below:

Number one there is no left turn alternative permitted for the vehicles traveling on north bound lines. The solid line dividing the highway indicated that no turns are permitted. Most users will be deterred of making a left turn from the northbound because this constitutes a traffic violation and the customers using this type of facility will generally be concerned of the monetary repercussions of getting fine. No impacts to the northbound lines will occur or to the level of service of the northbound lines.

⁴ The LA County Department of Public Work guidelines state in part II or Requirements that the report is generally needed if a project generates over 500 trips per day.

⁵ The LA County Department of Public Work guidelines state in part II or Requirements that the reports are generally needed if a project generates over 500 trips per day.

Secondly there no possibility of making a left turn exiting the project as the exit of the project is located along 89th Street. If an accidental exit is done from Alameda the only alternative is a right turn because there is double solid line. (A sign indicating "NO RIGHT TURN" may be necessary at the driveways along Alameda in case someone does not follow the directional arrows or the directions from the traffic attendants.

Thirdly, the site configuration allows for large roll-off trucks to enter and leave the facility without having to back into the yard from Alameda Street. The scrap metal and CRV industries use the most appropriate equipment for their operations therefore this should not be a concern.

There is ample and adequate maneuvering space to load and unload the roll-offs containers into staging area of the project.

Fourth; the location of the truck scale provides for ample waiting area before any queuing affects the south bond lines of Alameda Street.

Fifth; the observation of the five project in proximity of the proposed site are consistent with the trip generation data provided by the Institute of Traffic Engineers and does not suggest the need for further analysis. According to this table provided above only projects 3, 4 and 5 may be close to requiring mitigations measures in the future.

Sixth, Mr. Diaz, estimates that his project will generate 180 vehicles for the scrap metal and 160 for the CRV with the high possibility that 30-40 percent of the times they will the same is valid and demonstrates his many years of experience in the recycling industry.

Finally, it can be stated that there will be no traffic impact on the transportation network in the community as a result of the proposed project and most specifically along Alameda Street. What will happen is that some of the trips that would have been traveling to the other five sites may switch their travel preference to the new site as when a new restaurant opens where there are existing eating venues. A traffic impact study is not necessary for this project. This recycling center is unlikely to generate significant traffic and generally does not need a traffic impact assessment.