

INITIAL STUDY

PROJECT FILE NO.: CPA97-011-01, Premier Recycle

PROJECT DESCRIPTION:

Conditional Use Permit Amendment for an existing recycling facility to increase the amount of material received and/or transferred on site from the previously approved 300 tons to 550 tons daily, to extend operation hours to 24 hours a day, to extend operations to Sundays, and to add a conveyor sort line to the facility on a 1.75 gross acre site. No new construction, other than installation of the sort line, is proposed.

PROJECT LOCATION AND ASSESSOR'S PARCEL NUMBER(s): South side of Leo Avenue, approximately 400 feet westerly of South 7th Street (260 Leo Avenue) APN 477-25-040

EXISTING GENERAL PLAN DESIGNATION: Light Industrial

EXISTING ZONING: LI – Light Industrial

EXISTING LAND USE: Recycling Facility

SURROUNDING LAND USES / GENERAL PLAN / ZONING:

North: Auto Dismantler, Heavy Industrial, HI-Heavy Industrial

East: Church, Light Industrial, IP-Industrial Park

South: Corporation Yard, Light Industrial, HI-Heavy industrial

West: Auto Repair, Light Industrial, LI-Light Industrial

PROJECT APPLICANT'S NAME AND ADDRESS:

Premier Recycle Company, Attn. Brock Hill, 260 Leo Avenue, San Jose, CA 95112

LEAD AGENCY CONTACT INFORMATION:

City of San Jose Planning Division, Attn. Jodie Clark, AICP, 200 East Santa Clara Street,
San Jose CA 95113

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED: CalRecycle

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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DETERMINATION

On the basis of this initial study:

<input type="checkbox"/>	I find the proposed project could not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the project proponent has agreed to revise the project to avoid any significant effect. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find the proposed project could have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT(EIR) is required.
<input type="checkbox"/>	I find the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated impact” on the environment, but at least one effect has been (1) adequately analyzed in a previous document pursuant to applicable legal standards, and (2) addressed by mitigation measures based on the previous analysis as described in the attached sheets/initial study. An EIR is required that analyzes only the effects that were not adequately addressed in a previous document.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, no further environmental analysis is required because all potentially significant effects have been (1) adequately analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are included in the project, and further analysis is not required.

11/9/2011

 Date

John Davidson

 Signature

Name of Preparer: John Davidson

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PROJECT DESCRIPTION

1.1 INTRODUCTION

Premier Recycle Company operates a recycling/transfer facility, known as the Premier Recycle Facility (PRF). The facility is located in the County of Santa Clara in the City of San Jose (See Appendix A). The site is located at 260 Leo Avenue in San Jose, California. Access to the facility is from Leo Avenue. The land uses surrounding the facility consist primarily of industrial uses such as metal fabricators, a pest control facility, packing companies, sheet metal shops, auto wreckers, a bread company, recycling facility, and a United Parcel Service operation. There is also a mobile home park located approximately 330 feet east of the site on South Seventh Street. The PRF is located in an area zoned LI Light Industrial, with a General Plan land use designation of Light Industrial.

1.2 EXISTING OPERATIONS

PRF is contracted by various construction contractors to collect construction/demolition debris in roll-off boxes, to be retrieved by PRF and returned to the PRF for sorting and recycling purposes. Recyclable materials (i.e. wood, metal, cardboard, sheetrock, concrete, plastic, etc.) are sorted on site, and sent to other facilities for processing. Residual waste material is sent to local landfills for disposal. No grinding operations occur on site. The site is lined with thick reinforced concrete, except for perimeter landscaped areas. Nine (9) parking stalls are provided for both trucks and automobiles.

Trucks containing construction debris enter the site and proceed to the scale at the rear of the property to be weighed. After being weighed, the trucks unload the materials near the center of the yard. The materials are sorted physically by hand and aided by loaders and excavators, and are placed in material specific areas at the rear and northeast side of the property. Third party transfer trucks are loaded with the separated materials and transport them to recycling facilities off-site. The current hours of operation are 3am to 4pm Monday through Saturday. On site operations are conducted by 1 general manager and 14 sorters/machine operators. Currently, the existing facility generates approximately 184 daily vehicle trips on an average day. The proposed project would generate 288 daily vehicle trips, which equates to 104 new daily truck trips.

1.3 PROPOSED PROJECT

The proposed PRF facility would continue to be considered a large volume transfer/processing facility as defined under the California Code of Regulations, Title 14 (14 CCR), Section 17402 (a)(8). A large volume transfer/processing facility is "a facility that receives 100 tons or more of solid waste per operating day for the purpose of storing, handling, or processing the waste prior to transferring the waste to another solid waste operation or facility." PRF will accept solid waste under the California Public Resources Code 40191(b) including but not limited to demolition and construction wastes. The proposed project is to increase the processing tons per day limit of 300 to 550 tons per day, with the ability to accept public drop-off of material not in roll-off bins. The hours of operation for the public component of the project are from 7 a.m. to 5 p.m. daily. No physical changes to the existing facility are proposed, other than the installation of a conveyor sort line, to improve sorting efficiency. Per the Tonnage Capacity Study, which is attached as Appendix 2, the site has a tonnage capacity of 607 tons per day.

Waste Type and Volume

The PRF receives only non-hazardous recyclables and solid waste. Wastes received at the facility include construction/demolition wastes which include waste building materials, packaging and rubble resulting from construction, remodeling, repair and demolition operations on pavements, houses, commercial buildings and other structures.

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The PRF is permitted to receive and transfer 300 tons per day (tpd) of non-hazardous Class III waste primarily consisting of wood, fiber, plastic and paper products, construction/demolition waste and metals (both ferrous and non-ferrous). The design also allows adequate storage capacity for recyclables and residuals awaiting removal within short period of time. To the maximum extent possible, all waste is removed from the site within 48 hours. The current average daily inflow of waste consistently nears the 300 tpd permitted maximum.

Transfer Station Operations

Premier Recycle Company is contracted by various construction contractors to collect construction/demolition debris. Premier Recycle Company delivers roll-off boxes to construction sites, and picks them up when they are filled with construction/demolition debris. The boxes are inspected upon pick up to assure there are no prohibited materials (i.e., hazardous wastes), then covered with a tarp and transported to the Leo Avenue facility. The trucks transporting the boxes are weighed at the facility, and are unloaded onto the yard surface. The debris is inspected again for unacceptable or hazardous waste materials, which would be removed and set aside for proper disposal. The customer would be notified about the unacceptable waste, and mitigating actions would take place immediately. The load is photographed and composition is documented. The debris is then sorted for recyclable materials using an excavator, loader and by hand. Sorted recyclables include, but are not limited to: cardboard, scrap metal, wood, sheetrock, plastic, paper, and concrete.

The piles of sorted recyclables are loaded onto either a floor trailer or roll-off boxes for transport to various recyclable processors via a loader. The anticipated diversion rate of the facility is 80 percent. The sorted materials are removed from the site as soon as the floor trailer or roll-off boxes are full. Following the sorting, some residual waste material remains. The residual waste material generally consists of dry, non-recyclable construction/demolition debris (i.e., fiberglass insulation containing trace inert material such as dirt). The PRF is currently permitted to accept and process up to 300 tons per day (tpd) of non-hazardous waste which consist of inert non-petrecible refuse. Residual wastes are picked up off the yard surface by loaders and loaded into a walking floor transfer truck, which is then transported to Vasco Landfill in Livermore, CA and the John Smith Landfill in Hollister, CA. The Vasco landfill is located approximately 45 miles north of the site, and would be accessed by waste vehicles leaving the site via Seventh Street, Keyes Street, 11th Street and Interstate 280 (southbound), I-580, Vasco Rd. Estimated travel time is 1 hour. The John Smith Landfill is located approximately 52 miles south of the site, and would be accessed by waste vehicles leaving the site via South Seventh Street, Tully Road, US 101 (southbound), CA-25 (southbound). Estimated travel time from the site is approximately 1 hour.

The Premier Recycling facility occasionally operates near or at its permitted capacity of 300 tpd. The existing material processing operation at the site generates approximately 184 daily vehicle trips on an average day at peak operation (300 tpd); truck trips being defined as one entrance or one exit. The projected daily traffic generation of the facility at the proposed processing level of 550 tpd is 288 daily vehicle trips. Based on the existing inbound and outbound splits, it is estimated that the project would result in an increase of 5 truck trips during the AM peak hour (7am) and an increase of 2 truck trips during the PM peak hour (4pm) (See Appendix E). If severe weather or other emergency conditions require the storage of waste for more than 48 hours the event is noted in the Special Occurrence log which is maintained in the office on site.

The existing concrete pavement at 260 Leo Ave. is maintained and provides a smooth surface allowing all-weather access to the facility. A solid eight-foot high metal fence surrounds the entire site. The facility entrance and exit are secured with a metal gate which is locked during hours of closure. No additional equipment or personnel is needed for the proposed tonnage increase. There is existing lighting around the perimeter of the site to provide for safe operations during nighttime hours.

The site manager routinely inspects the facility for defective or deteriorated conditions. Facility personnel are instructed to report any defective or deteriorated conditions to the site manager. If a problem is identified, maintenance

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and facility repairs would be conducted as necessary. The facility grounds are cleaned of loose materials and litter in the morning prior to each operating day utilizing the on-site street sweeper. General housekeeping is conducted at the facility on a continual basis to minimize the accumulation of non-essential materials inherent in the operation of the facility by a full time employee dedicated to operational cleanliness. Containers utilized for the storage and/or transport of materials are cleaned on a regular basis off site. Constant monitoring of containers by facility personnel allows the operator to ensure that all containers are cleaned to prevent the harborage of vectors.

Dust control measures are conducted at the PRF, as needed. Any dusty loads are wetted utilizing existing portable hoses and sprinklers. The on-site street sweeper is also used to control dust. This is done to ensure no fugitive windblown dust leaves the site. Potential problems associated with litter are controlled at the PRF through the collection of any observed litter migrating off-site. Off-site litter is controlled by the existing eight-foot high fence that surrounds the site. The facility is located in a large commercial/industrial area with no noise sensitive receptors nearby. However, all trucks and equipment are outfitted with noise muffling devices.

The manager has instituted measures to control or prevent the propagation, harborage, and attraction of flies, rodents, or other vectors and animals, and minimize bird attraction. Any rodents or other vectors observed are exterminated. The materials accepted at the facility are dry and consist of primarily construction/demolition materials and wastes which minimize the potential for odor as well as bird attraction. In addition, residual waste which is generally non-putrescible, is removed in a timely manner, mandated by the Local Enforcement Agency, to a permitted landfill.

Hours of Operation

Operations at the PRF would increase from the current six days per week (Monday through Saturday) to seven days per week (Monday through Sunday). The proposed hours of operation would increase from the current 3:00 a.m. - 4:00 p.m. to 24 hours a day. Roll-off box unloading and transfer truck loading will be done between the hours of 3am to 6pm, with the main sorting activity done between the hours of 3pm to 3am.

Environmental Setting

The PRF is located in central San Jose, California, in an industrial portion of the City. Land uses surrounding the facility include a pest control facility, packing companies, sheet metal shops, auto wreckers, a bread company, a recycling facility, and a United Parcel Service operation. PRF is located in an area zoned for manufacturing and other light industrial uses, and is designated for light industrial use in the City’s General Plan.

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AESTHETICS - Would the project:

a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
b) Substantially damage scenic resources, including, but not limited to, trees, rock out-croppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2
e) Increase the amount of shading on public open space (e.g. parks, plazas, and/or school yards) ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2

FINDINGS: There are no scenic vistas in the vicinity of the PRF. The PRF is not located along a state scenic highway. No changes to the site are proposed, and therefore, no new impacts to scenic resources would occur. The proposed project would occur entirely within the existing PRF site. Operations at the facility allowing for a large volume transfer/processing facility would not result in a change to the visual character or quality of the site or its surroundings.

The PRF facility is proposed to be operated 24 hours a day. Currently, night time security lighting, as required by the City of San Jose, is present around the perimeter of the facility and is sufficient to provide for safe nighttime operations. All facility lighting conforms to the City of San Jose Outdoor Lighting Policy. All lights are fully shielded and no light extends above the horizontal plane of the light fixtures. There are no sensitive receptors adjacent to the project site, and therefore, no significant impacts would occur. No mitigation measures would be required.

As a part of the project design, the project shall implement the following measure:

- Maintenance of the site shall conform to the City’s *Industrial Design Guidelines*; in particular, material pile heights will be conditioned to not be visible from the public right-of-way.

I. AGRICULTURE AND FOREST RESOURCES - Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,3,4
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,3,4
c) Conflict with existing zoning for, or cause rezoning of, forest land [as defined in PRC Section 12220(g)], timberland, (as defined by PRC Section 4526), or timberland zoned Timberland Production [as defined by GC Section 51104(g)]?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,3,4
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,3,4
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,3,4

FINDINGS: The project site is not located in an area identified as prime farmland, nor is the site being used for or zoned for agricultural use. Therefore, the proposed project will not result in a significant impact on the City’s or Region’s agricultural resources.

MITIGATION MEASURES: None Required.

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II. AIR QUALITY - Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,14
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,14
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,14
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,14
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,14

FINDINGS: Premier Recycle handles construction, demolition and residential recycling. In addition to trucks that transport bins to and from the recycling yard, the operations use loaders and excavators in processing and sorting the incoming material. Air Quality impacts may result from the movement of materials around the site. Implementation of the following mitigation measures will reduce the temporary construction impacts to a less than significant level.

MITIGATION MEASURES: The following practices shall be implemented to prevent visible dust emissions from leaving the site.

- Water all active areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site; active areas adjacent to windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard;
- Sweep daily (or more often if necessary) to prevent visible dust from leaving the site all paved access roads, parking areas, and staging areas; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality; and
- Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.
- Enclose, cover, water at least twice daily, or apply not-toxic soil binders to exposed stockpiles (dirt, sand, etc.) to prevent visible dust from leaving the site

IV. BIOLOGICAL RESOURCES - Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,10
b) Have a substantial adverse effect on any aquatic, wetland, or riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,6,10
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act including, but not limited to, marsh, vernal pool, coastal, etc., through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,6

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d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,10
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,11
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2

FINDINGS: The proposed project would occur entirely on the existing PRF site, which is already in use as a recycling facility. No rare, threatened, endangered or special status species of flora or fauna are known to inhabit the site. The existing PRF site boundary does not contain any riparian or other sensitive habitat. The proposed project would not impact any new habitat. There are no wetlands occurring at the project site, or in the project vicinity. The site is not utilized by native species as a movement corridor. Thirty nine (39) trees exist on the site, and no trees will be removed as a part of this project. The subject site does not meet the threshold that requires and interim HCP project referral.

No changes to the existing site boundary would occur as a result of the proposed project. Project implementation would not conflict with any local policies or ordinances. Therefore, no impacts would occur, and no mitigation measures would be required.

MITIGATION MEASURES: None Required.

V. CULTURAL RESOURCES - Would the project:

a) Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,7
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,8
c) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,8
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,8

FINDINGS: No historical resources have been identified on the project site. The proposed project site is not located in an archaeologically sensitive area as depicted in the San Jose east quadrangle map. The existing project site has been fully graded and paved, and no additional earthwork would occur, and therefore there would be no impacts to archaeological resources.

No known paleontological resources, or unique geologic features exist at the PRF. No known human remains have been interred at the PRF. The site has previously undergone major excavation and grading activities, and is fully paved. No new grading or excavation activity is proposed with the project, therefore no impacts would occur, and no mitigation measures would be required.

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VI. GEOLOGY AND SOILS - Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
1) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,5,24
2) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,5,24
3) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,5,24
4) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,5,24
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,5,24
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,5,24
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,5,24
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,5,24

FINDINGS: The site is not located within a Geologic Hazard Zone or Liquefaction Zone. However, the project site is located within the seismically active San Francisco region, which requires any construction be designed and built in conformance with the requirements of the Uniform Building Code for Seismic Zone 4. The potential for geologic and soils impacts resulting from conditions on the site can be mitigated by utilizing standard engineering and construction techniques. As the project includes these required measures, the potential for seismic impacts will be less than significant.

MITIGATION MEASURES: None Required.

VII. GREENHOUSE GAS EMISSIONS - Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,14
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,14
(Note: Greenhouse gas(es) include, but are not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride)					

FINDINGS: The City of San Jose uses the screening level sizes established by the Bay Area Air Quality Management District (BAAQMD) to assess air quality impacts. Based on the BAAQMD June 2010 CEQA Guidelines, if a project would result in operational-related greenhouse gas emissions of 1,100 metric tons of carbon dioxide equivalents a year or more or 4.6 metric tons of carbon dioxide equivalents per service population per year, it would make a cumulatively

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considerable contribution to greenhouse gas emissions and result in a cumulatively significant impact to global climate change. BAAQMD does not have an adopted threshold of significance for construction related greenhouse gas emissions.

The following section is based on an “Analysis of Greenhouse Gas Emissions from a Material Recycling Facility” prepared by Air Permitting Specialists on March 18, 2011, which is available at the Department of Planning, Building and Code Enforcement. Premier Recycle handles construction, demolition and residential recycling. In addition to trucks that transport bins to and from the recycling yard, the operations use loaders and excavators in processing and sorting the incoming material. There are two main sources of GHG associated with the facility: 1) On-site equipment (loaders, excavators) and 2) Trucks and employee vehicles. The sources of GHG emissions will not change as a result of the proposed expansion in tonnage. Instead, the number of truck trips will increase which in turn would increase GHG emissions. However, the annual hours that the equipment would operate would not increase as a result of the proposed expansion.

A detailed traffic analysis was completed that quantifies the number of trips associated with the current and future operations. Emissions per vehicle mile were then calculated for each scenario, including an avoided emissions scenario. The avoided emissions accounts for the fact that the proposed project would eliminate the need for transporting the materials to landfills. No increase in GHG emissions from equipment is expected.

Overall, the proposed project would increase GHG emissions by 2,563 tons. However, given the material is being diverted from local landfills it will be reducing GHG emissions by 2,951 tons for a net effect of reducing GHG emissions by 388 tons per year. For this reason, the project is considered to have a less than significant greenhouse gas emissions impact.

MITIGATION MEASURES: None Required.

VIII. HAZARDS AND HAZARDOUS MATERIALS - Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,12
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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FINDINGS: The PRF is not permitted to receive hazardous materials, and no changes in waste types accepted at the facility are proposed with the project. Therefore, the risk of upset or accidental release of hazardous materials into the environment is minimal. All incoming loads are pre-screened for hazardous materials prior to delivery at the facility, then inspected a second time prior to sorting at the facility (see Section 1.3 – Proposed Project). Any hazardous materials discovered are removed and temporarily stored on-site for a period of no more than 48 hours, and are then removed for disposal at a proper facility. The waste piles may contain flammable materials - wood, cardboard and plastic. However, the nearest fire station (Station 26) is located within 1 mile of the site (528 Tully Road), and the estimated response time of three minutes would be within the City's level of service standard of 4 minutes.

The proposed project site is not listed on the hazardous materials site list. The project is not currently included on the State DTSC's Hazardous Waste and Substances Site List (Cortese List), the project site is not listed on other federal, state or local databases. (See the following websites: DTSC: <http://www.envirostor.dtsc.ca.gov/public/> SCCDEH: <http://lustop.sccgov.org/> RWQCB: <http://www.geotracker.swrcb.ca.gov/>). Historical uses of the site include auto repair and recycling. There is no historical information that indicates the location or use of hazardous materials at the subject site. The PRF is not located within an airport land use plan or where such a plan has been adopted. Nor is the site within two miles of a public airport or public use airport.

The proposed project would be located entirely within the existing PRF site boundaries, and would not interfere with any emergency response or evacuation plans. The project site is not located in the vicinity of any wildlands. No impacts would occur, and therefore, no mitigation measures would be required.

MITIGATION MEASURES: None Required.

IX. HYDROLOGY AND WATER QUALITY - Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,15
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
c) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,17
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,9
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,9

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
j) Be subject to inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1

FINDINGS:

Flooding/Drainage

Based on the FEMA flood insurance maps for the City of San Jose, the project site is not located within a 100-year floodplain and would therefore have no impact on 100-year flows. The project would not expose people to flood hazards associated with the 100-year flood. The site is not subject to seiche, tsunami or mudflow. Therefore, the proposed project would not result in the exposure of people to these potential impacts. No mitigation measures would be required.

Water Quality

The discharge of stormwater from the City’s municipal storm sewer system is regulated primarily under the federal Clean Water Act (CWA) and California’s Porter-Cologne Water Quality Control Act. The San Francisco Bay Regional Water Quality Control Board (RWQCB) implements these regulations at the regional level. Under the CWA, the RWQCB has regulatory authority over actions in waters of the United States, through the issuance of water quality certifications. Under Section 401 of the CWA, permits are issued in combination with permits issued by the Army Corps of Engineers (ACOE), under Section 404 of the CWA. When the Water Board issues Section 401 certifications, it simultaneously issues general Water Discharge Requirements for the project, under the Porter-Cologne Water Quality Control Act. Activities in areas that are outside of the jurisdiction of the ACOE (e.g., isolated wetlands, vernal pools, or stream banks above the ordinary high water mark) are regulated by the Water Board, under the authority of the Porter-Cologne Water Quality Control Act. Activities that lie outside of ACOE jurisdiction may require the issuance of either individual or general waste discharge requirements (WDRs) from the Water Board.

New construction in San Jose is subject to the conditions of the City’s National Pollutant Discharge Elimination System (NPDES) Permit adopted by the RWQCB in October 2009. Additional water quality control measures were approved in October 2001 (revised in 2005), when the RWQCB adopted an amendment to the NPDES permit for Santa Clara County. This amendment, which is commonly referred to as “C3” requires all new and redevelopment projects that result in the addition or replacement of impervious surfaces totaling 10,000 sq ft or more to 1) include storm water treatment measures; 2) ensure that the treatment measures be designed to treat an optimal volume or flow of storm water runoff from the project site; and 3) ensure that storm water treatment measures are properly installed, operated and maintained.

The City has developed a policy that implements Provision C.3 of the NPDES Permit, requiring new development projects to include specific construction and post-construction measures for improving the water quality of urban runoff to the maximum extent feasible. The City’s Post-Construction Urban Runoff Management Policy (6-29) established general guidelines and minimum Best Management Practices (BMPs) for specified land uses, and includes the requirement of regular maintenance to ensure their effectiveness. Later, the City adopted the Post-Construction Hydromodification Management Policy (8-14) to manage development related increases in peak runoff flow, volume and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to local rivers, streams and creeks. Implementation of these Policies will reduce potential water quality impacts to less than significant levels.

The project site is paved and does not propose any physical changes that would result in additional impervious surface area. Therefore, the project would not contribute any additional runoff water to the City’s existing stormwater drainage system in the area. However, the subject site is a Land Use of Concern as defined by the City’s Post-Construction Urban Runoff Management Policy (6-29).

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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Runoff resulting from daily watering of the site for dust control purposes would not be of sufficient volume to impact the capacity of the City's stormwater drainage system. Filters installed in the on-site storm drain inlets, and maintained in conformance with the City's Post-Construction Urban Runoff Management Policy, will control pollutant levels in the runoff and thereby reduce potential water quality impacts to a less than significant level. Water is tested by a non-partial private third party on a monthly basis as written in the PRF stormwater pollution prevention program to verify that pollution levels are well below the allowed threshold.

The proposed large volume transfer/processing facility at the PRF would not result in the violation of any water quality standards or waste discharge requirements. The project complies with the City's Post-Construction Urban Runoff Management Policy. No hydrologic or water quality impacts would occur as a result of project implementation and no mitigation measures would be required. Filters are currently installed on all runoff drains. These filters are checked on a daily basis. Premier Recycle Company keeps all records of water runoff quality tests that are conducted monthly by a third party.

The project shall comply with the City of San Jose's Zoning Ordinance requirement of keeping adjacent streets free of dirt and mud.

Implementation of the following measures, consistent with NPDES Permit and City Policy requirements, will reduce potential construction impacts to surface water quality to less than significant levels:

Post-Construction

- Prior to the issuance of a Development Permit, the applicant must provide details of specific Best Management Practices (BMPs), including, but not limited to, bioswales, disconnected downspouts, landscaping to reduce impervious surface area, and inlets stenciled "No Dumping – Flows to Bay" to the satisfaction of the Director of Planning, Building and Code Enforcement.
- The project shall comply with Provision C.3 of NPDES permit Number CAS0299718, which provides enhanced performance standards for the management of stormwater of new development.
- The project shall comply with applicable provisions of the following City Policies – 1) Post-Construction Urban Runoff Management Policy (6-29) which establishes guidelines and minimum BMPs for all projects and 2) Post-Construction Hydromodification Management Policy (8-14) which provides for numerically sized (or hydraulically sized) TCMs.

X. LAND USE AND PLANNING - Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2

FINDINGS: Projects that have the potential to physically divide an established community include new freeways and highways, major arterials streets, and railroad lines. The proposed project would not divide an established community. The proposed large volume transfer/processing facility site would be located within the existing PRF boundaries. The location of a large volume transfer/processing facility site at the PRF would not result in any conflicts with applicable land use plans, policies, or regulations. The proposed operation changes at the PRF would be consistent with the existing land use and zoning designations for the area. The location of a large volume transfer/processing facility site

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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at the PRF would not result in any conflicts with habitat conservation plans. No impacts would occur, and no mitigation measures would be required.

MITIGATION MEASURES: None Required.

XI. MINERAL RESOURCES - Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2,23
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2,23

FINDINGS: Extractive resources known to exist in and near the Santa Clara Valley include cement, sand, gravel, crushed rock, clay, and limestone. Santa Clara County has also supplied a significant portion of the nation's mercury over the past century. Pursuant to the mandate of the Surface Mining and Reclamation Act of 1975 (SMARA), the State Mining and Geology Board has designated: the Communications Hill Area (Sector EE), bounded generally by the Southern Pacific Railroad, Curtner Avenue, State Route 87, and Hillsdale Avenue, as containing mineral deposits which are of regional significance as a source of construction aggregate materials.

Neither the State Geologist nor the State Mining and Geology Board has classified any other areas in San José as containing mineral deposits which are either of statewide significance or the significance of which requires further evaluation. Therefore, other than the Communications Hill area cited above, San José does not have mineral deposits subject to SMARA.

The project site is outside of the Communications Hill area, and will therefore not result in a significant impact from the loss of availability of a known mineral resource.

MITIGATION MEASURES: None Required.

XII. NOISE - Would the project result in:

a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,13,18
b) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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FINDINGS: The San Jose 2020 General Plan states that the City's acceptable exterior noise level is 55 DNL long term, and 60 DNL short term. The acceptable interior noise level is 45 DNL. The plan recognizes that the noise levels may not be achieved in the Downtown, and in the vicinity of major roadways and the Mineta San Jose International Airport.

Noise Standards

The City of San Jose’s Noise and Land Use Compatibility Guidelines stipulate that for new industrial uses, noise environments of up to 70 db DNL are satisfactory. The Zoning Ordinance states that noise levels should not exceed 70 dB along project property lines.

Existing Noise Levels

The project site is located in an industrial district in which the principal land uses are manufacturing, warehousing and automobile wrecking. The predominant source of noise in the area is truck traffic. There is an existing mobile home park located approximately 330 feet east of the project site, on the east side of South Seventh Street. The San Jose 2020 General Plan establishes a noise level of 60 DNL (average day/night noise level in decibels) as the threshold of acceptability for mobile home parks. The City’s Noise Contour Maps indicate that the background noise level in the vicinity of the mobile home park is approximately 60 dB.

Mei Wu Acoustics prepared an Environmental Noise Impact Study for the subject site, dated September 6, 2011. The noise study is contained in the technical appendix. Based on measurements of existing noise levels, the exterior noise level at the site currently averages 70.3 DNL.

Short-Term Construction Noise

The proposed project would not require any construction, paving, or grading or other temporary noise generating activities. Therefore, no impacts would occur, and no mitigation measures would be required.

Noise Impacts from the Project

As described in the Transportation section, the proposed project would generate approximately 104 net new average daily trips. As traffic would normally have to double to create a significant impact, traffic generated by this project is not expected to substantially increase noise levels in the project area.

Noise generated by the project would come primarily from equipment and recycling activities on the site, and particularly from the proposed conveyor system. According to the Noise Report prepared on September 6, 2011 noise levels, expressed in DNL, would be up to 73 DNL at the southern property line.

Although anticipated noise levels are less than the CEQA threshold for significant impacts, noise levels will be greater than the standard in the Zoning Code. To ensure that noise levels do not exceed the predicted 73 DNL, the project will be conditioned to limit operation of the conveyor belt system from 7 a.m. in the morning to 9 p.m. at night.

The proposed project site is not located within an airport land use plan, nor is it located within two miles of a public or private airport. No impacts would occur, and no mitigation measures would be required.

XIII. POPULATION AND HOUSING - Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
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FINDINGS: The proposed project would not result in a direct or indirect increase in population. The PRF would serve existing construction and demolition sites, and would not generate new or additional construction projects. The proposed project would not displace any existing housing or people. No impacts would occur.

MITIGATION MEASURES: None Required.

XIV. PUBLIC SERVICES

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2

FINDINGS: The project site is located in an urbanized area of San Jose, and well served by existing Fire, Police, School, Park and other Public Facilities. The proposed project would not create any increase in the demand for fire protection services. The location of a large volume transfer/processing facility would not result in any increased need for police protection. No impacts to existing or proposed school facilities would occur. The proposed project would not impact any parks in the area nor increase the demand for park facilities. No increased need for public services or facilities would result from project implementation. No impacts would occur, and no mitigation measures would be required.

MITIGATION MEASURES: None Required.

XIV. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2

FINDINGS: The proposed project will not increase the number of residents on the site, and therefore is not expected to impact the use of existing parks or recreation centers such that deterioration would occur or be accelerated. The proposed large volume transfer/processing facility would not include any recreational facilities or require the construction of any recreational facilities.

MITIGATION MEASURES: None Required.

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XV. TRANSPORTATION / TRAFFIC - Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,19
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,19
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,19
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,19
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,20
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,18

FINDINGS: Access to the project site is provided by Leo Avenue, which provides access to Monterey Highway via 7th Street and Phelan Avenue. The proposed project would not result in any changes to vehicular access to the PRF site.

A trip generation and operational analysis was submitted for this project by Hexagon Transportation Consultants Inc. on 2/10/09, available at the Department of Planning, Building and Code Enforcement. As identified in the Report, the existing facility generates approximately 184 daily vehicle trips on an average day. The proposed project would generate 288 daily vehicle trips, which equates to 104 new daily truck trips. Based on the existing inbound and outbound splits, it's estimated that the project would result in an increase of 10 truck trips during the AM peak hour and an increase of 4 truck trips during the PM peak hour.

The City's Department of Public Works has analyzed the proposed project and determined that based on the minimal net peak hour trips the project would be in conformance with the City's Transportation Level of Service Policy (Council Policy 5-3) and would not create a significant traffic impact.

The project would incrementally increase truck traffic along 7th Street, which has dedicated bike lanes; however, the vehicle travel lanes are standard width, and the increase of traffic would not significantly decrease bicycle safety along the corridor.

MITIGATION MEASURES: None Required.

XVI. UTILITIES AND SERVICE SYSTEMS - Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,15
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2,21

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,17
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,22
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,21
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,21
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,21

FINDINGS: The proposed project would not require construction of new facilities for wastewater treatment, storm drainage, water, and waste disposal because the subject site is located within the City of San Jose Urban Service Area where such facilities exist, and have the capacity to serve the proposed project.

The proposed large volume transfer/processing facility at the PRF would comply with all Waste Discharge Requirements imposed by the Regional Water Quality Control Board, San Francisco Bay Region.

Non-recyclable waste generated at the project site would not create any impacts to the landfills serving the project area. The project would assist in achieving mandated AB 939 recycling requirements by reducing the amount of filled waste at surrounding area landfills. No impacts to solid waste regulations would occur, and no mitigation measures would be required.

MITIGATION MEASURES: None Required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to (1) degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,10
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,16
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

FINDINGS: As discussed in the previous sections, the proposed project could potentially have significant environmental effects with respect to air quality. With the above noted mitigation, however, the impacts of the proposed project would be reduced to a less than significant level.

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The location of a large volume transfer/processing facility at the existing PRF would not result in the degradation of the environment. The existing site is fully paved, and no new grading or construction activities would occur. No biological resources would be impacted by the project, nor would any examples of California history or prehistory be eliminated. No impacts would occur, and no mitigation measures would be required.

The proposed project would result in a decrease in the amount of waste disposal occurring at landfill sites in the surrounding areas. This would result in a cumulatively beneficial impact. The proposed large volume transfer/processing facility would help achieve the waste diversion goal of AB 939. No cumulative impacts would occur.

The proposed large volume transfer/processing facility at the PRF would result in no adverse human impacts. No mitigation measures would be required.

MITIGATION MEASURES: None Required.

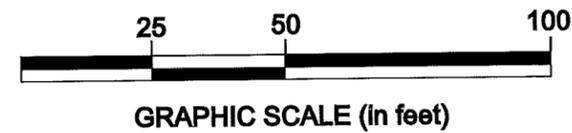
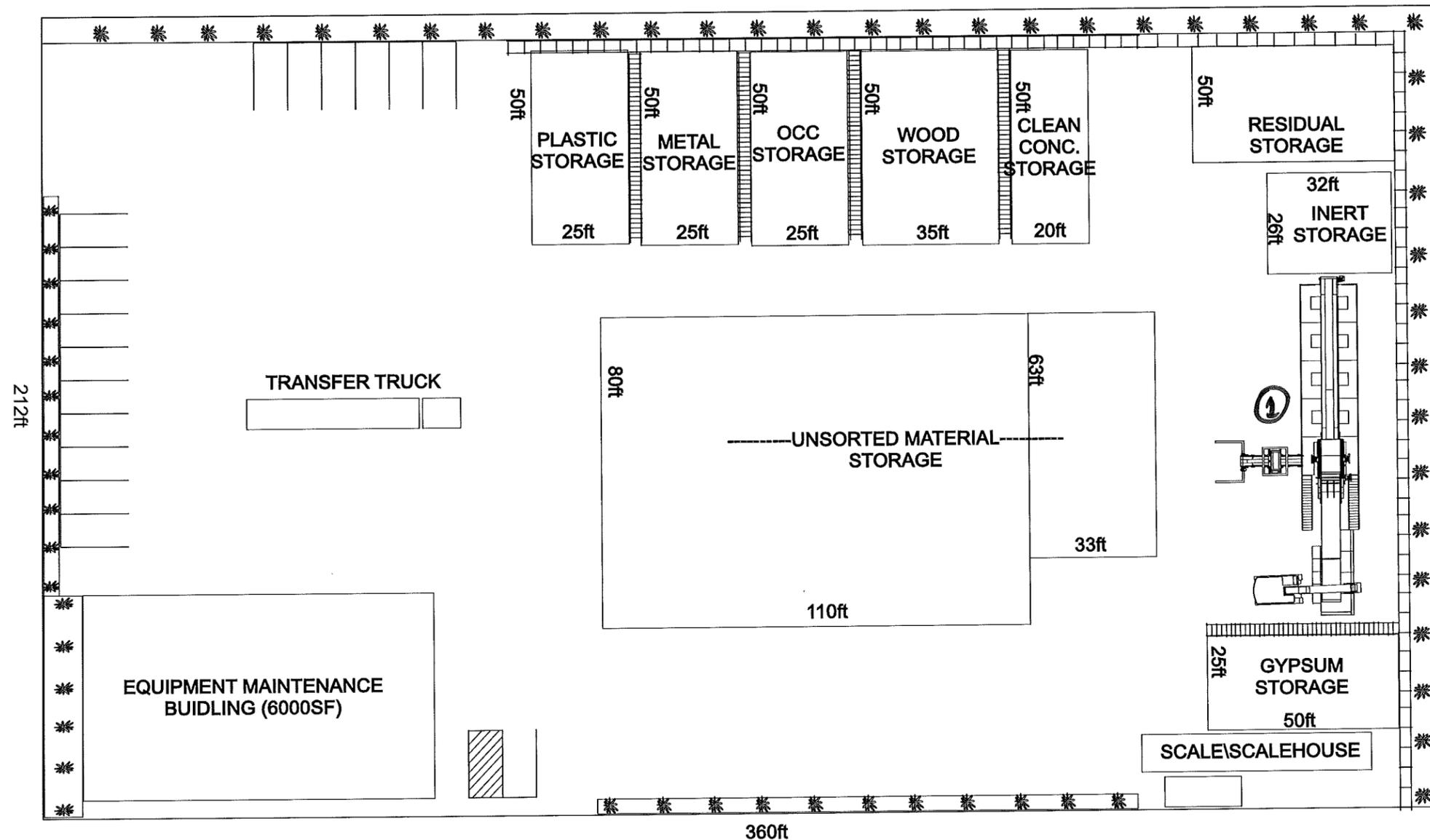
CHECKLIST REFERENCES

1. Environmental Clearance Application – File No. CPA97-011-01
2. San Jose 2020 General Plan
3. USDA, Soil Conservation Service, Soil Survey of SC County, August 1968
4. USDA, Soil Conservation Service, Important Farmlands of SC County map, June 1979
5. State of California’s Geo-Hazard maps / Alquist Priolo Fault maps
6. Riparian Corridor Policy Study 1994
7. San Jose Historic Resources Inventory
8. City of San Jose Archeological Sensitivity Maps
9. FEMA Flood Insurance Rate Map, Santa Clara County, 1986
10. California Department of Fish & Game, California Natural Diversity Database, 2001
11. City of San Jose Heritage Tree Survey Report
12. California Environmental Protection Agency Hazardous Waste and Substances Sites List, 1998
13. City of San Jose Noise Exposure Map for the 2020 General Plan
14. BAAQMD CEQA Guidelines, Bay Area Air Quality Management District. April 1996, revised 1999.
15. San Francisco Bay Regional Water Quality Control Board 1995 Basin Plan
16. Final Environmental Impact Report, City of San Jose, SJ 2020 General Plan
17. Santa Clara Valley Water District
18. City of San Jose Title 20 Zoning Ordinance
19. San Jose Department of Public Works

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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- 20. San Jose Fire Department
- 21. San Jose Environmental Services Department
- 22. San Jose Water Company, Great Oaks Water Company
- 23. California Division of Mines and Geology
- 24. Cooper Clark, San Jose Geotechnical Information Maps, July 1974
- 25. Bryan A Stirrat & Associates, “Initial Study for Premier Recycling Facility”, May 2001
- 26. Bryan A. Stirrat & Associates, "Premier Recycling Facility - Proposed Site Plan", June, 2000.
- 27. Bryan A. Stirrat & Associates, "Premier Recycling Facility Transfer/Processing Report."
- 28. Dennis Ferrier, REHS, City of San Jose Department of Planning, Building and Code Enforcement, Code Enforcement Division - Local Enforcement Agency, personal communication.
- 29. Do, Sylvia, City of San Jose Department of Planning, Building, and Code Enforcement Division – Planner II, personal communication.
- 30. Rocky Hill, Premier Recycling, personal communication.
- 31. Mei Wu Acoustics, “Environmental Noise Impact Study for Premier Recycle Center”, September 6, 2011

Revised 5-28-10 JAM



Project Location:
260 Leo Avenue
San Jose, CA 95112

Assessor's Parcel Number
477-25-040

Total Gross Acres:
1.75

Total Net Acres:
1.61

Total Existing Floor Space:
6,000 SF

Existing On-Site Parking Spaces:
17 (1 ADA)
31 (if double parking
is utilized)

Existing On-street Parking
9

Notes:

1. Conveyor/Sort line
(see location on site plan)
2. Maximum height of piles
shall be 25 feet and shall not
be visible for the public
right-of-way

PHASE 2: SITE MAP/PILE DIMENSIONS

PREMIER RECYCLE FACILITY

Scale: As shown
Drawn by: Brock Hill
Date: May 2011

Appendix 1
Noise Report

Apart from traffic increases, potential noise impacts would be the addition of a new conveyor belt material sorting system that will increase productivity and efficiency of the sorting process. The impact and implications of these sources is discussed at length below.

2. City of San Jose Noise Ordinances

Applicable noise restrictions are outlined in the City of San Jose Municipal Code 10.16 “Offenses Against Public Peace” as well as Chapter 20.50 “Industrial Zoning Districts.” Further guidelines are provided in the San Jose General Plan. Excerpts of these codes are provided below:

10.16.10 – Disturbing the peace prohibited

No person shall disturb the peace, quiet and comfort of any neighborhood by creating therein any disturbing or unreasonably loud noise.

20.50.300 Performance Standards

A. In the IP, LI and HI industrial districts no primary, secondary, incidental or conditional use or activity related thereto shall be conducted or permitted:

- 3. In a manner that constitutes a menace to persons or property or in a manner that is dangerous, obnoxious, or offensive by reason of the creation of a fire, explosion, or other physical hazard, or by reason of air pollution, odor, smoke, noise, dust vibration, radiation, or fumes; or*
- 4. In a manner that creates a public or private nuisance.*

B. Without limiting the generality of the preceding paragraph, the following specific standards shall apply in the industrial zoning districts:

- 2. Noise. The sound pressure level generated by any use or combination of uses on a property shall not exceed the decibel levels indicated in Table 20-135 at any property line, except upon issuance and in compliance with a conditional use permit as provided in Chapter 20.100.*

<i>Table 20-135 Noise Standards</i>	
	<i>Maximum Noise Level in Decibels at Property Line</i>
<i>Industrial use adjacent to a property used or zoned for residential purposes</i>	<i>55</i>
<i>Industrial use adjacent to a property used or zoned for commercial purposes</i>	<i>60</i>
<i>Industrial use adjacent to a property used or zoned for industrial or use other than commercial or residential purposes</i>	<i>70</i>

The City of San Jose General Plan includes a chapter on noise which outlines and elaborates upon the environmental noise goals of the city. The following section is taken from Chapter 4 (2009) of the General Plan entitled “Goals and Policies”:

- 1. The City's acceptable noise level objectives are 55 DNL as the long-range exterior noise quality level, 60 DNL as the short-range exterior noise quality level, 45 DNL as the interior noise quality level, and 76 DNL as the maximum exterior noise level necessary to avoid significant adverse health effects. These objectives are established for the City, recognizing that the attainment of exterior noise quality levels in the environs of the San José International Airport the Downtown Core Area, and along major roadways may not be achieved in the time frame of this Plan. To achieve the noise objectives, the City should require appropriate site and building design, building construction and noise attenuation techniques in new residential development.*

According to the DNL “figure 16” from the San Jose General Plan (see following page), 70 DNL levels are the threshold for satisfactory levels for industrial properties. This appears to be at odds with the statement above. Further discussion, taken from the General Plan, is provided here:

Because of the existing noise levels in San José and the need for State and Federal legislation to require quieter engine design in all forms of transportation, a short-term outdoor guideline of 60 DNL is considered to be more realistic than 55 DNL. However, since adequate construction technology is currently available, an indoor noise guideline of 45 DNL is feasible and coincides with Title 24, the State Sound Transmission Control law which is implemented by the City.

Figure 16 shows the compatibility of various land use categories with varying noise levels. The intent of the Plan is to ultimately achieve these levels; however, the Downtown Core Area the area around San José International Airport, and areas adjacent to major roadways have been identified as special noise impact areas. Because of the nature of these special areas, it may be impossible to attain the desired outdoor noise level of 55 DNL or even 60 DNL in the near term without eliminating the beneficial attributes of the exterior spaces. Examples of such situations are exterior balconies that face major roadways, rear yard areas and urban parks.

Additionally, in areas where the City guidelines for ambient noise are already exceeded, any noticeable increase (defined as a 3 dBA DNL increase) above that level is considered a significant impact.

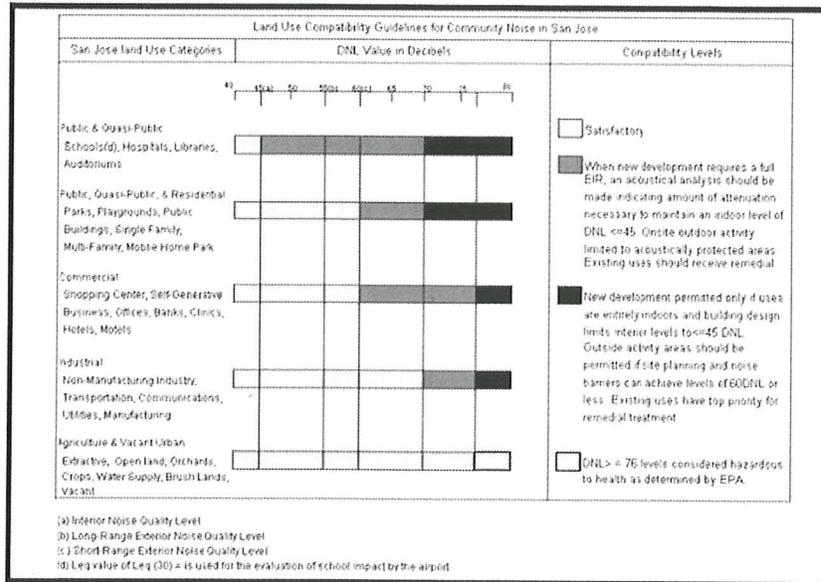


Figure 16. Land Use Compatibility Guidelines for Community Noise

San Jose General Plan Land Use Compatibility Guidelines for Community Noise

3. Current Ambient Measurements at 260 Leo Avenue

Ambient noise measurements were taken on July 20-21, 2011 at the eastern property line near the center of the property. Time averaged (LAeq) measurements were taken over the period of 24 hours and are provided in the table below. Measurements were performed with a Rion NL-21 Type II sound level meter.

Hour	L _{Aeq}
0:00	37.2
1:00	50.0
2:00	46.1
3:00	65.1
4:00	63.7
5:00	63.0
6:00	67.7
7:00	63.5
8:00	64.3
9:00	65.3
10:00	64.7
11:00	67.6
12:00	68.5
13:00	62.7
14:00	69.0
15:00	68.7
16:00	63.9
17:00	66.9
18:00	69.2
19:00	65.5
20:00	68.2
21:00	61.1
22:00	66.9
23:00	57.3
DNL	70.3

Figure 2: Measured L_{Aeq} at 260 Leo Ave July 20-21, 2011

DNL (or L_{dn}) is a single digit metric used to describe the cumulative noise exposure from all events occurring over a full 24-hour period. Events that occur between the hours of 10pm – 7am have a 10dB increase, or penalty, applied to account for greater nighttime sensitivity to noise.

The property at 260 Leo Avenue is zoned as (LI) Light Industrial and is bounded by an Industrial Park (IP) property to the east and Heavy Industrial (HI) properties on all other sides.

It must be stated that while the measurements provided in *Figure 2* describe the sound pressure levels at the property line of Premier Recycle Center, given the nature and activities of the surrounding properties, the sound measured may not be entirely attributed to activities at the Premier Recycle Center. Surrounding properties include car demolition and wrecking yards, granite and stone cutting facilities and other heavy industrial facilities which produce high levels of noise that can be heard and measured at Premier’s property.

The nearest residential property to the Premier property is a mobile home park located on 7th Street, zoned R-MH. Potential impact to this property has been evaluated in the sections below.

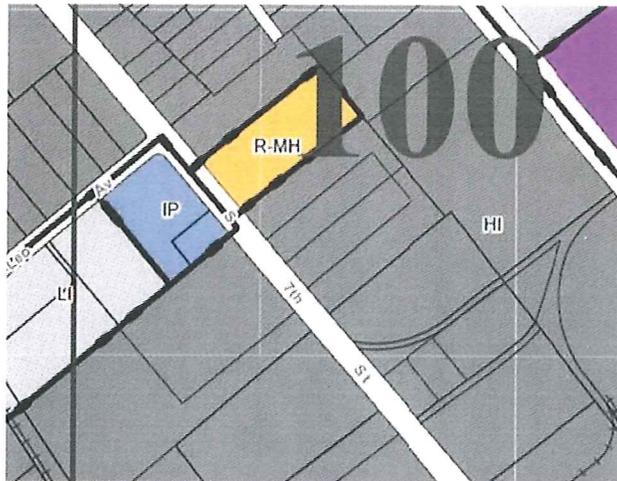


Figure 3: City of San Jose zoning map of site. (LI) Light Industrial, (IP) Industrial Park, (HI) Heavy Industrial, (R-MH) Residential Motor Home

The primary sources of noise from the Premier property have been identified as 2 excavators and 2 loaders used to sort and load material as well as traffic from heavy trucks delivering and receiving material.

A field measurement of a loader grabbing from a pile of wood, was measured at 96 dBA at 10 feet. This represents the extreme, as wood is the loudest material when loading due to snapping and breaking under the pressure of the loader teeth. An excavator, on the other hand, pushing mixed plastics was measured at roughly 86 dBA at 10 feet.

4. Predicted Noise Impact

Traffic

Predictive calculations can be used to estimate increases in noise levels due to increases in traffic counts and the addition of new machinery.

Traffic noise calculations were performed using hourly traffic models published by Cyril Harris, 1977. This traffic noise model estimates the hourly sound pressure level based on the number of vehicles in one hour, the type of vehicles, their traveling speed, listener location, the grade of the road, as well as any shielding from trees or erected barriers.

Our calculations used the current and predicted data provided in the Hexagon Transportation Consultants report from 2/10/09 (*Figure 1*) and assumed a 5 mph speed for vehicles entering and exiting the facility, and assumed “employee” vehicles are cars and all others vehicles are heavy trucks. The following table provides current and future sound levels for traffic at location 1 in *Figure 5*.

Hour	Current	Future
0:00		
1:00		
2:00		
3:00		
4:00		
5:00	44.2	48.2
6:00	46	51
7:00	47.2	50.8
8:00	49.6	51.6
9:00	49.6	51.8
10:00	48.2	51.6
11:00		
12:00	49.9	51.6
13:00	49.7	51.2
14:00	48.2	51.4
15:00	48.7	50.5
16:00	47.2	50.2
17:00	46	49.7
18:00	47.2	47.2
19:00		
20:00		
21:00		
22:00		
23:00		

Figure 4: Current and Future sound levels due to traffic noise based on predicted traffic counts in the Hexagon traffic study.

By comparing our traffic noise model with the measured ambient LAeq (*figure 2*), it is clear that traffic, being 10 dB below ambient, is not a dominant source at this property. Additionally, it can be demonstrated in the above table that the increase in traffic will result in a 2.3 dBA hourly increase in traffic noise, on average, between the hours of 5a.m. to 6p.m. This will not, however, increase the existing noise levels at the site because the traffic noise is substantially lower than the ambient levels.

Conveyor System and Material Volume Increases

In addition to traffic, another consideration for noise impact to adjacent properties is the addition of a new conveyor belt material sorting system that will increase productivity and efficiency of the sorting process, allowing the site to increase its daily material capacity.

In order to determine the impact of this equipment to the property lines at 260 Leo Avenue, a sound power spectrum was calculated by measuring a nearly identical conveyor system built by Krause Manufacturing. The sound power was obtained in accordance with ISO 3744 standard “*Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane*”. This standard defines a method for measuring the sound pressure levels of a stationary source using either a partially spherical or a rectangular parallelepiped surface enveloping the source, in order to calculate the sound power level produced by the source.

The computation of sound power level from sound pressure levels is based on the premise that the sound power output of the source is directly proportional to the mean-square sound pressure averaged over time and space. The source is represented by a hypothetical reference box with

the same dimensions as the source minus any elements protruding from the source which are not significant radiators of sound.

Our measurements were performed using continuous traversing microphone motions over subdivided, smaller measurement surfaces of this hypothetical reference box around the entire conveyor system to obtain time- and area-average of the sound pressure levels. The traversing speed was kept as close to a constant value as possible for each measurement, and did not exceed 1 foot per second for any measurements. We took great care in ensuring that the traversing paths do not overlap and that they are distributed evenly over the smaller areas as well as the total measurement areas. All time averaged measurements were longer than 1 minute.

Measurements were performed with a Type 1 Norsonic Nor118 sound level meter which was calibrated immediately prior on the measurement date with a Norsonic hand-held calibrator type 1251 (SN 27473) at 114.0 dBA. Our measurements always include a windscreen shielding the microphone; windscreen effect is automatically calculated into the measurements.

Following the ISO 3744 procedure described above, the sound power calculated for the entire conveyor system while in operation – including material sorter, overhead magnet, sorting crew, etc. – was determined to be 112 dBA. An image of a similar system is shown in *Figure 6* and a diagram of its proposed installation at the property is shown in *Figure 5*.



Figure 5: Aerial view of property. Yellow roughly indicates location and orientation of future conveyor system. Numbers indicate property line locations studied for predicted impact.



Figure 6: A conveyor sort line system similar in nature to the one planned for Premier Recycle.

As mentioned above, presently operational at 260 Leo Avenue are two excavators and two loaders. An additional excavator and loader are maintained at the site for backup purposes. These pieces of machinery are currently the loudest sound sources at the site. According to Premier, the number of excavators and loaders in use will likely remain the same. However, their degree of use or hours of their operation may actually decline with the installation of a conveyor belt system, even with an increase in material volume at the site. In order to provide a conservative estimate of noise impact to the property lines, our calculations assume that the excavators and loaders operate at their current rates and hours of operation.

see page 5
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Equipment	Sound Power (dBA)	SPL at 10 feet (dBA)
Excavator	104	87
Loader	101	84

Figure 7: Typical sound levels of equipment currently in use at 260 Leo Avenue

Noise impacts to each property line (see locations in Figure 5) have been calculated based on the sound power of the conveyor sorting system and the measured existing LAeq (Figure 2). The results are provided in the table below (Figure 8). The calculation assumes the measured existing LAeq is roughly equivalent at all property lines. As we understand it, the conveyor sorting system will operate during the hours of 7AM – 9PM. The contributed noise from this machinery has been added to the existing LAeq for each hour of operation and the predicted future DNL has been calculated at each property line.

Hour	Existing LAeq	Future LAeq @ Location1	Future LAeq @ Location2	Future LAeq @ Location3	Future LAeq @ Location4
0:00	37.2	37.2	37.2	37.2	37.2
1:00	50.0	50.0	50.0	50.0	50.0
2:00	46.1	46.1	46.1	46.1	46.1
3:00	65.1	65.1	65.1	65.1	65.1
4:00	63.7	63.7	63.7	63.7	63.7
5:00	63.0	63.0	63.0	63.0	63.0
6:00	67.7	67.7	67.7	67.7	67.7
7:00	63.5	66.3	68.5	68.5	72.6
8:00	64.3	66.7	68.8	68.8	72.7
9:00	65.3	67.3	69.1	69.1	72.8
10:00	64.7	67.0	68.9	68.9	72.7
11:00	67.6	68.9	70.3	70.3	73.4
12:00	68.5	69.6	70.8	70.8	73.6
13:00	62.7	65.9	68.3	68.3	72.5
14:00	69.0	70.0	71.1	71.1	73.8
15:00	68.7	69.7	70.9	70.9	73.7
16:00	63.9	66.5	68.6	68.6	72.6
17:00	66.9	68.4	69.9	69.9	73.2
18:00	69.2	70.1	71.2	71.2	73.8
19:00	65.5	67.4	69.2	69.2	72.9
20:00	68.2	69.4	70.6	70.6	73.5
21:00	61.1	61.1	61.1	61.1	61.1
22:00	66.9	66.9	66.9	66.9	66.9
23:00	57.3	57.3	57.3	57.3	57.3
DNL	70.3	70.7	71.3	71.3	73.0

Figure 8: Predicted noise levels at four locations along property lines due to installation of conveyor belt system (see Figure 5 for diagram)

When evaluated independent of existing sound levels, the conveyor system’s noise contribution is given in the following table for each property line:

	Location 1	Location 2 & 3	Location 4
Conveyor System	63 dBA	66.8 dBA	71.9 dBA

Figure 9: Predicted levels of the conveyor system when measured at each property line (Figure 5)

Potential noise impact to the Residential Mobile Home Park (R-MH Figure 3), roughly 440 feet away, was also evaluated. We estimate the isolated impact from the conveyor belt system will be less than 50 dBA. This is due to distance attenuation and barrier effects provided by surrounding buildings, particularly the Industrial Park facility along the eastern property line. Given the hours of operation of the conveyor system, this equates to a DNL of 46 dBA.

5. Conclusion

The installation of the conveyor sorting system will be the dominant and defining feature at the site, acoustically speaking. It has been demonstrated that any traffic noise due to increases in material volume at the site will be below existing sound levels and therefore result in no significant impact.

The conveyor sorting system will result in a slight impact to the north, east and west property lines with a 1 dBA or less increase in DNL. The south property line will be more significantly impacted with an increase of 2.7 dBA DNL due to proximity to the conveyor system. However, the planned orientation of the conveyor system (*figure 5*) appears to be the best design in terms of achieving the minimum noise impact to property lines.

Based on current measured sound levels, the 260 Leo Avenue property presently complies with San Jose municipal codes. As discussed above, adjacent properties are zoned as heavy industrial and the existing sound levels measured may not be entirely attributable to Premier Recycling due to the loud industrial activities in the surrounding area.

Based on the predictive calculations, the introduction of the conveyor system and increase in material volume does appear to raise the sound levels to slightly exceed the municipal code performance standards of 70 dBA at industrial properties, particularly along the south property line. However, the predicted DNL at each property line is below the 76 DNL maximum threshold described in the General Plan and the predicted increases to the existing DNL are just below the 3 dBA criteria that would define this project as a “significant impact”.

Finally, the potential impact to the nearest sensitive receptor - the Residential Mobile Home Park along 7th Street – will be less than 50 dBA during the hours of 9 PM – 7 AM, which complies with San Jose’s codes and guidelines.

* * *

Appendix 2
Premier Recycle Sorting Facility
Tonnage Capacity Study

PREMIER RECYCLE COMPANY SORTING FACILITY TONNAGE CAPACITY STUDY/DESIGN CALCULATIONS

INTRODUCTION:

Premier Recycle Company has owned and operated a large scale transfer facility since 2001. Currently the facility is permitted to accept 300 tons per day as stated in our LEA regulations affixed to the CIWMB permit. Premier Recycle Company has requested a new acceptance limit of 550 tons per day.

PURPOSE:

It is the purpose of this study not only to show that the Premier Recycle Company facility can accept and process the requested 550 tons per day, but has the ability to exceed this amount in compliance with transfer/processing regulatory requirements. The study was developed using the following criteria:

1. The maximum space available for the storage of incoming unprocessed material accepted on a daily basis (tipping floor capacity);
2. The maximum amount of material that can be physically accepted at the facility on a daily basis;
3. The maximum amount of commingled material that can be processed through the facility sorting process on a daily basis;
4. The maximum amount of recovered material and residual material able to be transferred out of the facility on a daily basis;
5. The maximum space and tonnage amounts of sorted material able to be stored in type specific holding bays.

METHODS:

The study focused on different aspects of the facility material acceptance and processing operations. The aspects were determined to be the major operational factors controlling the amount of material that can be present at the facility.

1. *Unsorted material tipping area storage volume.* The purpose of this aspect of the study was to insure that the determined tonnage limit is reflective of space constraints at the facility and that the amount of material unloaded at the facility during full capacity operations is consistent with the requested increased amount. This aspect took the following into account.
 - a. The space occupied by a relatively constant pile of incoming unprocessed material;
 - b. The space required for transfer trailers' maneuvering and loading;
 - c. The space required for incoming material vehicles' maneuvering and unloading;
 - d. The physical and operational constraints of the facility.

Using these factors, the volume of the area available for incoming material was calculated. The dimensions of the proposed unsorted material tipping area are shown in Figure 1 of this study. The volume was calculated by adding the volumes of unsorted pile 1 and unsorted pile 2. Unsorted pile 2 is processed during periods of non-transfer truck outgoing activity in that vicinity of the yard. The total available tipping area at the facility was estimated from an average of daily measurements, as exact measurements were not possible or practical due to operational constraints at the site. A scale map of the facility was used to verify these measurements.

- Unsorted Pile 1 was determined to be 110ft long, 80ft wide, and 20ft high;
- Unsorted Pile 2 was determined to be 65ft long, 33ft wide, and 20ft high;

2. *Incoming Material.* The purpose of this aspect of the study was to determine the maximum incoming tonnage capacity of the facility. The data used for this study was calculated in the attached traffic study completed by Hexagon Transportation Consultants, Inc. (Appendix 1 of this study). This aspect of the study took the following into account:

- a. There is only one scale at the facility;
- b. The average time required for a truck to enter the facility, drive onto the scale, weigh-in, drive off the scale, unload, and exit;
- c. The maximum number of trucks that are able to enter the facility daily;
- d. The average mass of the materials entering the facility per incoming load;
- e. The physical and operational limitations for vehicle maneuvering and unloading.

Incoming traffic analysis was based on 4 inbound tipping bays for unsorted material, 10 minutes for total unloading time, and maximum inbound truck arrivals as 11 vehicles an hour (derived from the traffic study). Each incoming vehicle has an average of 6 tons per load based on years of incoming data collected at the facility.

3. *Material Processing.* The purpose of this aspect of the study was to determine the maximum amount of commingled material that can be processed daily at the facility. The data and calculations for this aspect of the study are in Appendix 2 of this study. This aspect took the following into account:

- a. The average mass of commingled material entering the processing phase;
- b. The processing capacity of the manual and mechanical sorting process at the facility.

The average mass of the material entering the sorting process along with the processing capacity of the sorting process were used to determine the maximum amount of material (See Appendix 2 of this study). Note that source-separated materials, usually consisting of heavy inert materials, do not enter the sorting process and are placed in its respective storage bay. The mass of these bays were not included in the material processing amount because their storage time varies, and are not an indicator of material flow. The unprocessed material density used for the processing calculations was 300 lb/yd³.

4. *Outgoing Sorted Material.* The purpose of this aspect of the study was to determine the maximum amount of sorted material that can be transported out of the facility daily. The data and calculations are included in the Hexagon traffic study (Appendix 1 of this study) and Appendix 2 of this study. This aspect of the study took the following into account:

- a. There is only one scale at the facility;
- b. The average time required for a truck to enter the facility, get loaded with material, drive onto the scale, weigh-in, drive off the scale, and exit;
- c. The maximum number of trucks that are able to enter/exit the facility daily;
- d. The average mass of the materials leaving the facility per outgoing load;
- e. The physical and operational limitations for vehicle maneuvering and unloading.

Outgoing traffic analysis was based on, 20 minutes for total transfer-truck loading time, and maximum outgoing trucks as 3 vehicles an hour (derived from the traffic study). Each outgoing vehicle has an average of 22 tons per load based on years of outgoing data collected at the facility.

5. *Sorted Material Storage Volume.* The purpose of this aspect of the study was to determine the maximum volume and tonnage of post-processing material before it is transferred out of the facility. The data and calculations are included in Appendix 3 of this study. This aspect of the study took the following into account:

- a. The space occupied by a relatively constant pile of incoming unprocessed material;

- b. The space required for transfer trailers' maneuvering and loading;
- c. The space required for incoming material vehicles' maneuvering and unloading;
- d. The physical and operational constraints of the facility.

Using these factors, the volumes of the area available for the storage of sorted material were calculated. The dimensions of the sorted material storage areas are shown in Figure 1 of this study. The volumes were calculated by using the truncated pyramid formula as a model for the piles. The calculations are shown in detail in Appendix 3 of this study. A scale map of the facility was used to verify these measurements.

RESULTS:

The following determinations were made with regard to the various aspects of the study:

1. *Unsorted Material Tipping Area Volume.* The calculations for this aspect of the study are in Appendix 3. It was found that the maximum space available for incoming material on the main tipping area is 4050.64 yd³ (607 tons).
2. *Incoming Material.* The data and calculations used to determine the average incoming load tonnage are found in Appendix 1 and Appendix 2 of this study. The following was determined:
 - a. The total average time for vehicle to enter, weigh-in, unload, and exit the facility is 10 minutes;
 - b. The facility can accommodate a maximum of 132 vehicle loads per day (at 6 tons each)
 - c. The average load mass of incoming waste accepted at the facility is 6 tons per vehicle.
 - d. The tonnage able to enter the facility is 792 tons per day.
3. *Material Processing.* The data and calculations for this aspect of the study are found in Appendix 2 of this study. The following was determined:
 - a. The maximum processing capability of the manual sorting process (with the help of equipment and excluding source-separated inert material) of the facility is 437.5 tons per day.
 - b. The maximum processing capability of the source-separated inert material based on 36.66% of overall incoming tonnage is 201 tons per day.
4. *Sorted Material Storage Volume.* The data and calculations for this aspect of the study are found in Appendix 3 of this study. The following was determined:
 - a. Plastic storage volume and tonnage were determined as 581 yd³ equating to 119.69 tons of storage.
 - b. Metal storage volume and tonnage were determined as 715.39 yd³ equating to 324.07 tons of storage.
 - c. Cardboard storage volume and tonnage were determined as 446.42 yd³ equating to 53.57 tons of storage.
 - d. Wood storage volume and tonnage were determined as 677 yd³ equating to 169.25 tons of storage.
 - e. Crushed Concrete/Dirty Concrete/Dirt storage volume and tonnage were determined as 272.23 yd³ equating to 258.62 tons of storage.
 - f. Clean Concrete storage volume and tonnage were determined as 189.93 yd³ equating to 180.43 tons of storage.
 - g. Plastic storage volume and tonnage were determined as 581 yd³ equating to 119.69 tons of storage.
 - h. Sheetrock/Gypsum storage volume and tonnage were determined as 285.13 yd³ equating to 142.56 tons of storage.

- i. Residual Material storage volume and tonnage were determined as 849.67 yd³ equating to 169.90 tons of storage.

DISCUSSION

1. The maximum available capacity to unload and store unprocessed commingled material at the facility is 607.60 tons. Based upon the results, this space is more than capable to accommodate the maximum amount of material entering the facility daily. The facility has adequate space for the storage of recovered recyclables and source-separated material, and the capability to remove this material as needed.
2. The study noted the physical limitations of the facility to weigh only one vehicle at a time, as well as the time needed to move trucks in and out of the facility. Current operational conditions and space limitations allow for 792 tons of incoming waste to be delivered into the facility per operating day (including inert source-separated material). 792 tons refers to the amount of tons that can be received based on 132 incoming truck trips at 6 tons a load.
3. Although 792 tons can be received at the facility from incoming trucks, the facility is limited by its manual sorting method for commingled material. Facility records show an average mechanical sorting capacity for inert material at 150 tons per hour. At the current rate of 3.12 tons/hr., 14 sorters are able to sort 350 tons per day (assuming an 8 hour workday), which exceeds the current average mixed debris amount of 189.99 tons per day. At the proposed 550 incoming tons per day, mixed material amounts to 348 tons. The current rate and length of the work day more than accommodate this amount. Furthermore, to maximize efficiency if unforeseen circumstances arise (i.e. higher proportion of mixed materials than normal), the typical sort time will be extended to 10 hours, equating to 437.5 tons per day able to be sorted. If mixed material did equate to 437.5 tons, inert material proportionately goes up to 253.21 tons, adding up to a grand total of 690.71 tons able to be processed per day with a 10 hour sort time. Both the incoming truck tonnage and sorting tonnage capacity both exceed the requested 550 tons per day.
4. The maximum capacity for outgoing sorted loads is 720 tons per day. This was calculated by 36 outgoing transfer trucks per day, multiplied by 22 tons a load. This far exceeds the requested incoming tonnage of 550 tons per day.

CONCLUSIONS:

It has been concluded based on the findings and calculations included in this study that the Premier Recycle Company sorting facility is capable to accept, process, and transport the requested 550 tons per day of material.

APPENDIX 2

ASSUMPTIONS:

1. Incoming Loads:

- a. Average tons per load: 6 tons
- b. Average unloading time: 10 minutes
- c. 11 trucks per hr. x 12hrs. = 132 incoming truck trips
- d. 132 truck trips x 6 tons per load = 792 tons per day (total tonnage able to be received daily)

2. Outgoing Loads:

- a. Average tons per load: 22 tons
- b. Average loading time: 20 minutes
- c. 3 trucks per hr. x 12 hrs. = 36 outgoing truck trips
- d. 36 truck trips x 22 tons per load = 792 tons per day (total tonnage able to be transported out daily)

3. Mechanical Sorting (Excavators and Loaders):

- a. Average sorting ability for inert material loads: 150 tons per hour
- b. Number of excavators on-site: 3
- c. Number of loaders on-site: 3

4. Manual Sorting Capability:

- a. Inert material (Concrete, crushed concrete, dirt, etc.) = 36.66% of all incoming material
- b. Mixed material = 63.34% of all incoming material
- c. Processing capability per man hour = 3.125 tons
 - i. Calculated at time of study at 300tns/12 men/8 hours = 3.125 tons per hour

5. Material Storage Capacity:

MATERIAL	STORAGE CAPACITY (CUBIC YARDS)	CONVERSION	STORAGE CAPACITY (TONS)
Plastic	581	1 cubic yard = 412 lbs	119.69
Metals	715.39	1 cubic yard = 906 lbs	324.07
OCC (Cardboard)	446.42	1 cubic yard = 240 lbs	53.57
Wood	677	1 cubic yard = 500 lbs	169.25
Concrete crushed/Dirt	272.23	1 cubic yard = 1900 lbs	180.43
Concrete Clean	189.93	1 cubic yard = 1900 lbs	180.43
Gypsum/Sheetrock	285.13	1 cubic yard = 1000 lbs	142.56
Residual	849.67	1 cubic yard = 400 lbs	169.90

(Conversions from cubic yards to weights were calculated using averages from outgoing transfer and end-dump trailers of type specific materials from the facility. These lb. and ton averages are used in the Premier Recycle Facility being that they are accurate for the facility. Average conversion rates found on the CalRecycle website were found to be inaccurate for this study)

6. Daily Incoming material composition

- a. Inert material = .95tn per yd³
- b. Mixed material = 300lb per yd³
- c. Current 300 tons per day
 - i. 300tns x 36.66% = 109.98 tons inert material = 115.76 yd³
 - ii. 300tns x 63.34% = 189.99 tons of mixed material = 1266.60 yd³
- d. Proposed 550 tons per day
 - i. 550tns x 36.66% = 201 tons inert material = 211 yd³
 - ii. 550tns x 63.34% = 348.37 tons of mixed material = 2320 yd³

APPENDIX 3

Tipping Area Volume and Tonnage Calculations

The Following factors were used in these calculations:

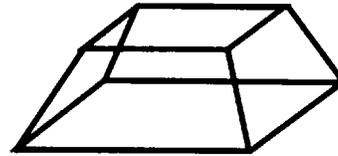
1. The maximum height of the piles is 20ft.
2. The maximum angle of the piles is 60 degrees
3. The volume of the piles were determined using a truncated pyramid as a model

Volume of a truncated pyramid is calculated as:

$$\text{Volume (V)} = 1/3 (\text{area1} + \text{area2} + \text{SqRoot}(\text{area1} \times \text{area2})) \times \text{height}$$

Area1 (base area) = Length_b x Width_b;
where Length_b is the base length (ft)
where Width_b is the base width (ft)

Area2 (top area) = Length_t x Width_t
where Length_t is the top length (ft)
where Width_t is the base width (ft)



Truncated Pyramid

$$\text{Length}_t = \text{Length}_b - 2X$$

$$\text{Width}_t = \text{Width}_b - 2X$$

$$X = \text{height} / \tan(60^\circ)$$

Givens: ft = foot, ft² = square foot, ft³ = cubic foot, yd³ = cubic yard, lb = pound, tn = ton

PLASTIC

Length: 50ft

Width: 38ft

Height: 20ft

Weight: 412lb per yd³

$$X = 20\text{ft} / \tan(60^\circ) = 11.5\text{ft}$$

$$\text{Area1} = 50\text{ft} \times 38\text{ft} = 1900 \text{ft}^2$$

$$\text{Area2} = (50-23)(38-23) = 405 \text{ft}^2$$

$$\begin{aligned} V &= 1/3 (1900 + 405 + \sqrt{1900 \times 405}) \times 20 \\ &= 1/3 (2305 + \sqrt{2305}) \times 20 \\ &= 15686.74 \text{ft}^3 \\ &= \mathbf{581 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 581\text{yd}^3 \times 412\text{lb} = 239,372\text{lb} = \mathbf{119.69 \text{ tn storage capacity}}$$

METAL

Length: 50ft

Width: 45ft

Height: 20ft

Weight: 906lb per yd³

$$X = 20\text{ft} / \tan(60^\circ) = 11.5\text{ft}$$

$$\text{Area}_1 = 50\text{ft} \times 45\text{ft} = 2250 \text{ft}^2$$

$$\text{Area}_2 = (50-23)(45-23) = 594 \text{ft}^2$$

$$\begin{aligned} V &= 1/3 (2250 + 594 + \sqrt{(2250 + 594)}) \times 20 \\ &= 1/3 (2844 + \sqrt{(2844)}) \times 20 \\ &= 19315.53 \text{ft}^3 \\ &= \mathbf{715.39 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 715.39\text{yd}^3 \times 906\text{lb} = 648,143.34 = \mathbf{324.07 \text{ tn storage capacity}}$$

CARDBOARD

Length: 50ft

Width: 31ft

Height: 20ft

Weight: 240lb per yd³

$$X = 20\text{ft} / \tan(60^\circ) = 11.5\text{ft}$$

$$\text{Area}_1 = 50\text{ft} \times 31\text{ft} = 1550 \text{ft}^2$$

$$\text{Area}_2 = (50-23)(31-23) = 216 \text{ft}^2$$

$$\begin{aligned} V &= 1/3 (1550 + 216 + \sqrt{(1550 + 216)}) \times 20 \\ &= 1/3 (1766 + \sqrt{(1766)}) \times 20 \\ &= 12053.47 \text{ft}^3 \\ &= \mathbf{446.42 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 446.42\text{yd}^3 \times 240\text{lb} = 107,140.80\text{lb} = \mathbf{53.57 \text{ tn storage capacity}}$$

WOOD

Length: 50ft

Width: 43ft

Height: 20ft

Weight: 500lb per yd³

$$X = 20\text{ft} / \tan(60^\circ) = 11.5\text{ft}$$

$$\text{Area}_1 = 50\text{ft} \times 43\text{ft} = 2150 \text{ft}^2$$

$$\text{Area}_2 = (50-23)(43-23) = 540 \text{ft}^2$$

$$\begin{aligned} V &= 1/3 (2150 + 540 + \sqrt{(2150 + 540)}) \times 20 \\ &= 1/3 (2690 + \sqrt{(2690)}) \times 20 \\ &= 18279.10 \text{ft}^3 \\ &= \mathbf{677 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 677\text{yd}^3 \times 500\text{lb} = 338,500\text{lb} = \mathbf{169.25 \text{ tn storage capacity}}$$

CRUSHED CONCRETE, DIRTY CONCRETE, DIRT

Length: 33ft
Width: 35ft
Height: 15ft
Weight: 1900lb per yd³

$$X = 15\text{ft} / \tan(60^\circ) = 8.66\text{ft}$$

$$\text{Area1} = 33\text{ft} \times 35\text{ft} = 1155 \text{ ft}^2$$

$$\text{Area2} = (33-17.32)(35-17.32) = 277.22 \text{ ft}^2$$

$$\begin{aligned} V &= 1/3 (1155 + 277.22 + \sqrt{(1155 + 277.22)}) \times 15 \\ &= 1/3 (1432.22 + \sqrt{1432.22}) \times 15 \\ &= 7350.32 \text{ ft}^3 \\ &= \mathbf{272.23 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 272.23\text{yd}^3 \times 1900\text{lb} = 517,237\text{lb} = \mathbf{258.62 \text{ tn storage capacity}}$$

CLEAN CONCRETE

Length: 33ft
Width: 26ft
Height: 15ft
Weight: 1900lb per yd³

$$X = 15\text{ft} / \tan(60^\circ) = 8.66\text{ft}$$

$$\text{Area1} = 33\text{ft} \times 26\text{ft} = 858 \text{ ft}^2$$

$$\text{Area2} = (33-17.32)(26-17.32) = 136.10 \text{ ft}^2$$

$$\begin{aligned} V &= 1/3 (858 + 136.10 + \sqrt{(858 + 136.10)}) \times 15 \\ &= 1/3 (994.1 + \sqrt{994.1}) \times 15 \\ &= 5128.15 \text{ ft}^3 \\ &= \mathbf{189.93 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 189.93\text{yd}^3 \times 1900\text{lb} = 360,867\text{lb} = \mathbf{180.43 \text{ tn storage capacity}}$$

SHEETROCK/GYPSUM

Length: 50ft
Width: 25ft
Height: 15ft
Weight: 1000lb per yd³

$$X = 15\text{ft} / \tan(60^\circ) = 8.66\text{ft}$$

$$\text{Area1} = 50\text{ft} \times 25\text{ft} = 1250 \text{ ft}^2$$

$$\text{Area}_2 = (50-17.32)(25-17.32) = 250.98 \text{ ft}^2$$

$$\begin{aligned} V &= 1/3 (1250 + 250.98 + \sqrt{(1250 + 250.98)}) \times 15 \\ &= 1/3 (1,500.98 + \sqrt{1,500.98}) \times 15 \\ &= 7698.61 \text{ ft}^3 \\ &= \mathbf{285.13 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 285.13 \text{ yd}^3 \times 1000 \text{ lb} = 285,130 \text{ lb} = \mathbf{142.56 \text{ tn storage capacity}}$$

RESIDUAL MATERIAL

Length: 52ft

Width: 50ft

Height: 20ft

Weight: 400lb per yd³

$$X = 20 \text{ ft} / \tan(60^\circ) = 11.5 \text{ ft}$$

$$\text{Area}_1 = 52 \text{ ft} \times 50 \text{ ft} = 2600 \text{ ft}^2$$

$$\text{Area}_2 = (52-23)(50-23) = 783 \text{ ft}^2$$

$$\begin{aligned} V &= 1/3 (2600 + 783 + \sqrt{(2600 + 783)}) \times 20 \\ &= 1/3 (2600 + \sqrt{2600}) \times 20 \\ &= 22941.10 \text{ ft}^3 \\ &= \mathbf{849.67 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 849.67 \text{ yd}^3 \times 400 \text{ lb} = 339,868 \text{ lb} = \mathbf{169.90 \text{ tn storage capacity}}$$

UNSORTED PILE 1

Length: 63ft

Width: 33ft

Height: 20ft

Weight: 300lb per yd³

$$X = 20 \text{ ft} / \tan(60^\circ) = 11.5 \text{ ft}$$

$$\text{Area}_1 = 63 \text{ ft} \times 33 \text{ ft} = 2079 \text{ ft}^2$$

$$\text{Area}_2 = (63-23)(33-23) = 400 \text{ ft}^2$$

$$\begin{aligned} V &= 1/3 (2079 + 400 + \sqrt{(2079 + 400)}) \times 20 \\ &= 1/3 (2479 + \sqrt{2479}) \times 20 \\ &= 16858.60 \text{ ft}^3 \\ &= \mathbf{624.39 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 624.39 \text{ yd}^3 \times 300 \text{ lb} = 187,317 \text{ lb} = \mathbf{93.66 \text{ tn storage capacity}}$$

UNSORTED PILE 2

Length: 110ft

Width: 80ft
Height: 20ft
Weight: 300lb per yd³

$$X = 20\text{ft} / \tan(60^\circ) = 11.5\text{ft}$$

$$\text{Area}_1 = 110\text{ft} \times 80\text{ft} = 8800 \text{ ft}^2$$

$$\text{Area}_2 = (110-23)(80-23) = 4959 \text{ ft}^2$$

$$\begin{aligned} V &= 1/3 (8800 + 4959 + \sqrt{(8800 + 4959)}) \times 20 \\ &= 1/3 (13759 + \sqrt{13759}) \times 20 \\ &= 92508.66 \text{ ft}^3 \\ &= \mathbf{3426.25 \text{ yd}^3 \text{ storage capacity}} \end{aligned}$$

$$\text{Weight} = 3426.25\text{yd}^3 \times 300\text{lb} = 1,027,800\text{lb} = \mathbf{513.90 \text{ tn storage capacity}}$$

BOTH UNSORTED PILES TOGETHER

$$624.39 + 3426.25 = \mathbf{4050.64 \text{ yd}^3}$$

$$\text{Weight} = 4050.64\text{yd}^3 \times 300\text{lb} = 1,215,192\text{lb} = \mathbf{607.60 \text{ tn storage capacity}}$$



MEMORANDUM

TO: Ms. Sonia Nasser, Bryan A. Stirrat & Associates

FROM: Brian Jackson
Gary Black

DATE: February 10, 2009

SUBJECT: *Trip Generation and Queuing Analysis for the Proposed Expansion of the Premier Recycling Facility in San Jose, California*

Hexagon Transportation Consultants, Inc. has completed a trip generation analysis for the proposed expansion of operations at the existing Premier Recycling facility located on Leo Avenue in San Jose, California. The proposed project involves the expansion of the existing facility operations to process a larger volume of material, which would result in increased vehicular trips associated with the facility. The existing facility currently operates with a maximum peak daily material volume of 300 tons per day (tpd). The proposed expansion of the facility operations would enable the facility to process a maximum material volume of 550 tpd, which represents an increase of 83.3 percent.

Trip Generation

For developments such as the Premier Recycling facility, standard trip generation rates do not exist. Thus, the magnitude of new traffic generated by the facility was calculated based on comparing the existing vehicle trips at the site that are generated by the current maximum material volume of the existing facility (300 tpd), to the estimated vehicle trips at the site expected to be generated by the planned maximum material volume of the expanded facility (550 tpd). Based on data provided by Premier Recycling, the projected increase in the number of truck trips at the facility will be the direct result of an increase in material tonnage delivered to the facility. The number of employees (currently 28 on-site) will not change.

The Premier Recycling facility currently is operating near or at its permitted capacity of 300 tpd. The existing material processing operation at the site generates approximately 184 daily vehicle trips on an average day. The projected daily traffic generation of the facility at the proposed processing level of 550 tpd is 288 daily vehicle trips, which equates to 104 new daily truck trips. Based on the existing inbound and outbound splits, it's estimated that the project would result in an increase of 10 truck trips during the AM peak hour and an increase of 4 truck trips during the PM peak hour. The existing vehicular activity and traffic projections for the proposed expansion of facility operations are shown in Table 1.

Based on the small number of net peak hour vehicle trips that the proposed facility expansion would generate, the project would not produce a noticeable change in traffic volumes in the project area. Since the amount of peak hour project traffic added to the roadways in the vicinity of the project site would be negligible, it is our professional opinion that this project does not warrant preparation of a Traffic Impact Analysis (TIA).

Queuing Analysis

The City of San Jose has expressed concern regarding potential vehicle stacking at the entrance to the facility and the effect it could have on Leo Avenue. Therefore, truck access and unloading operations were evaluated



to determine the amount of queuing that would occur on-site with the proposed expansion. The critical pieces of information necessary to complete the queuing analysis are the service time for the trucks to unload and the arrival rate at the facility.

Truck Unloading Operations

The project site has one driveway on Leo Avenue to serve all truck traffic. There are 4 tipping bays on-site that can be used simultaneously for trucks to unload. Each truck takes approximately 10 minutes to complete the unloading process. Based on trip generation data contained in Table 1, up to 9 trucks would be entering the site in a one-hour period during the busiest times of the day. However, in order to analyze queuing for a worst-case scenario, it was assumed that all 11 trucks could potentially enter the site within the same one-hour period. Note that the analysis does not assume that all 11 trucks would arrive at the site at once, since that would be highly unlikely.

Queuing Analysis Methodology

The queuing analysis is based on the following assumptions: (1) there are 4 tipping bays to service inbound trucks, (2) the time for each inbound truck to unload is 10 minutes, (3) the maximum truck arrival rate during the busiest time of the day would be 11 vehicles per hour under project conditions, and (4) each truck occupies approximately 45 linear feet when waiting in a queue.

It is commonly accepted in the traffic engineering profession to describe random traffic flow (such as arrivals at a traffic signal) using the Poisson probability distribution. With the Poisson distribution, the arrivals in a particular system are assumed to be randomly distributed about a mean arrival rate or volume. The mean arrival rate at the Premier facility is expected to be about one truck every 5 ½ minutes (11 trucks per hour).

It is also common for queuing situations involving vehicular traffic to assume the service rates are randomly distributed and best described using a negative exponential distribution. This approach also assumes that the service times are randomly distributed about a mean service rate and that the probability of having a service time very different from the mean is low, whereas the probability of having a service time within a few seconds of the mean is high.

For queuing studies, the 95th percentile queue is commonly used to represent the effective maximum vehicle queue at a particular location. That is, there is only a 5 percent probability that the queue at the subject location would be longer than the 95th percentile queue.

Using the assumptions described above, the probability equation is used to calculate the number of vehicles in the system that would correspond to a 95 percent confidence level. The number of trucks in the system is defined as all of the trucks waiting to be serviced plus the trucks that are in service. Thus, the number of trucks in the queue would be the number of trucks in the system minus the number of inbound tipping bays.

Queuing Analysis Results

The results of the queuing analysis under project conditions (550 tpd) indicate that during the even busiest hours of the day, the 95th percentile number of trucks in the system would be only 1 or 2 vehicles with no vehicles waiting to be serviced. Therefore, the queuing analysis shows that Leo Avenue would not be affected by any queuing of inbound trucks. The details of the queuing calculations are shown in Table 2.

Table 2
Queuing Analysis Results

Premier Recycling Facility Analysis of Inbound Truck Queues Peak Hour Conditions - Multi-Channel Queuing Theory																																																																																																															
Hourly volume (vph) =	11																																																																																																														
Peak-Hour Factor =	1																																																																																																														
Arrival Rate [Peak Hr Vol] (trucks/sec) (λ) =	0.003056																																																																																																														
Scale Service Time (sec) =	600																																																																																																														
Service Rate (trucks/sec) (μ) =	0.001667																																																																																																														
Traffic Intensity ($\rho = \lambda/\mu$) =	1.833333																																																																																																														
Number of Service Channels (k) =	4																																																																																																														
Probability of exactly 0 vehicles in system, $P(0)$ =	0.270100																																																																																																														
$P(x = 0) = \frac{1}{\left[\sum_{n=0}^{k-1} \frac{1}{n!} \left(\frac{\lambda}{\mu} \right)^n \right] + \frac{1}{k!} \left(\frac{\lambda}{\mu} \right)^k \frac{k\mu}{k\mu - \lambda}}$																																																																																																															
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0	0.2701	0.270	0.0	← # in Queue																																																																																																											
1	0.4952	0.765	45.0	← # in System																																																																																																											
2	0.4539	1.219	90.0																																																																																																												
3	0.2774	1.497	135.0																																																																																																												
4	0.1271	1.624	180.0																																																																																																												
5	0.0583	1.682	225.0																																																																																																												
6	0.0267	1.709	270.0																																																																																																												
7	0.0122	1.721	315.0																																																																																																												
8	0.0056	1.727	360.0																																																																																																												
9	0.0026	1.729	405.0																																																																																																												
10	0.0012	1.730	450.0																																																																																																												
11	0.0005	1.731	495.0																																																																																																												
12	0.0002	1.731	540.0																																																																																																												
13	0.0001	1.731	585.0																																																																																																												
14	0.0001	1.731	630.0																																																																																																												
15	0.0000	1.731	675.0																																																																																																												
16	0.0000	1.731	720.0																																																																																																												
17	0.0000	1.731	765.0																																																																																																												
18	0.0000	1.731	810.0																																																																																																												
19	0.0000	1.731	855.0																																																																																																												
20	0.0000	1.731	900.0																																																																																																												