



**Waste Management Plan for the
Airway Road Industrial Project
San Diego, California**

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A handwritten signature in black ink, appearing to read "Nick Larkin".

Nick Larkin, Senior Project Manager

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Acronyms and Abbreviations

AB	Assembly Bill
C&D	Construction and Demolition
CalRecycle	California Department of Resources Recycling and Recovery
City	City of San Diego
ESD	Environmental Services Department
MHPA	Multi-habitat planning area
project	Airway Road Industrial Project
SDMC	San Diego Municipal Code
SB	Senate Bill
SWMC	Solid Waste Management Coordinator
WMP	Waste Management Plan

1.0 Introduction

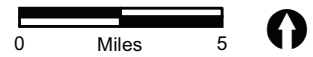
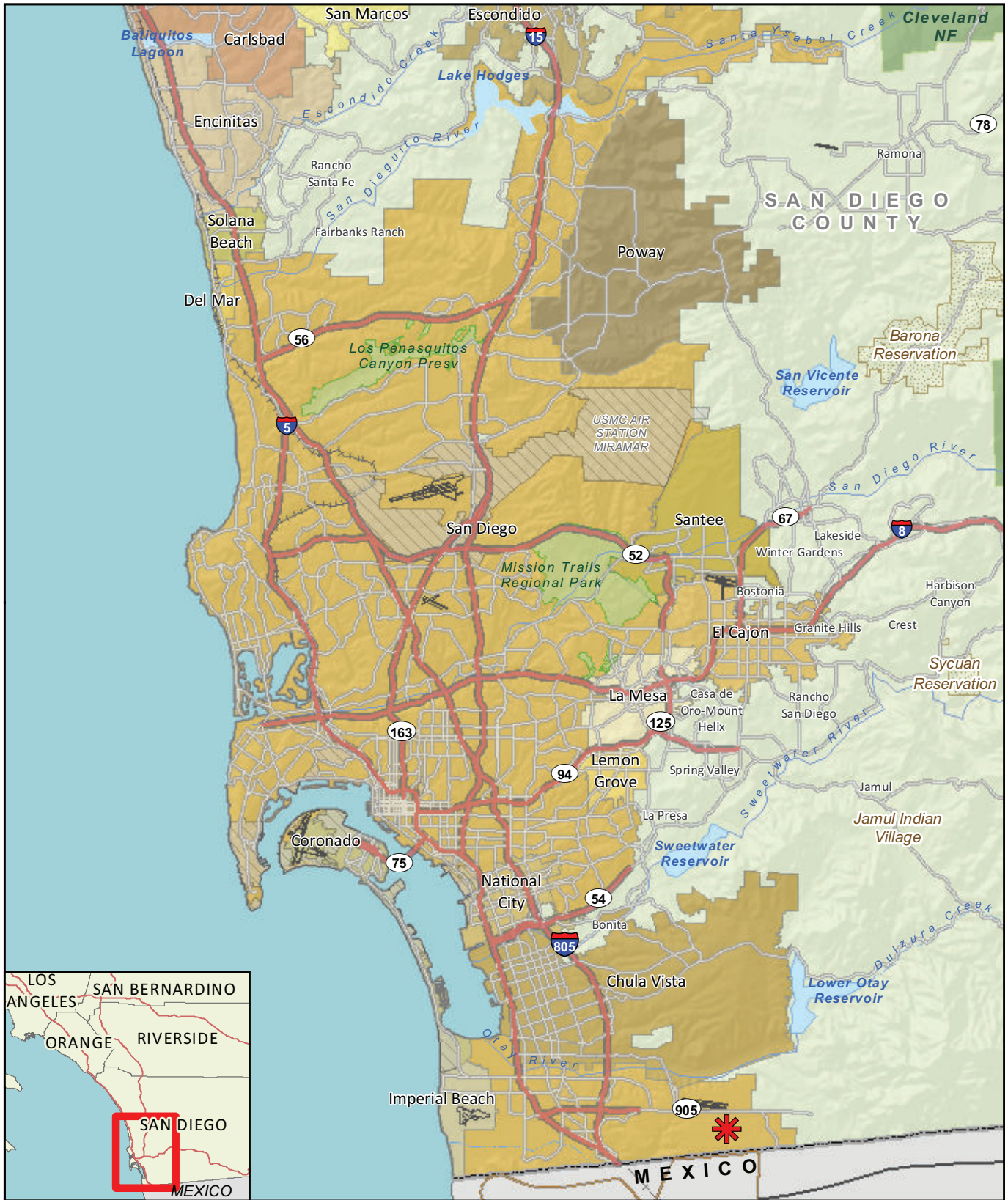
The purpose of this Waste Management Plan (WMP) is to identify the solid waste impacts that would be generated by construction and operation of the proposed Airway Road Industrial Project (project) and to identify measures to reduce those impacts. The direct impact threshold of significance for projects in the city of San Diego is 1,500.0 tons of waste per year, which would likely occur when developments are over 1 million square feet. Projects that generate more than 60.0 tons of waste per year would have the potential to result in a cumulative impact on solid waste services and are required to prepare a WMP to demonstrate how the project would reduce solid waste impacts to below a level of significance.

The WMP consists of four sections corresponding to the progress of site development, which are the Demolition Phase, the Grading Phase, the Construction Phase, and the Occupancy (post-construction) Phase. The WMP addresses each phase and describes the amount of waste that would be generated by project activities, waste reduction goals, and the recommended techniques to achieve the waste reduction goals. More specifically, for each phase, the WMP includes the following:

- Tons of waste anticipated to be generated.
- Material/type and amount of waste anticipated to be diverted.
- Project features that would reduce the amount of waste generated.
- Project features that would divert or limit the generation of waste.
- Source separation techniques for waste generated.
- How materials shall be reused on-site.
- Name and location of recycling, reuse, or landfill facilities where waste shall be taken.

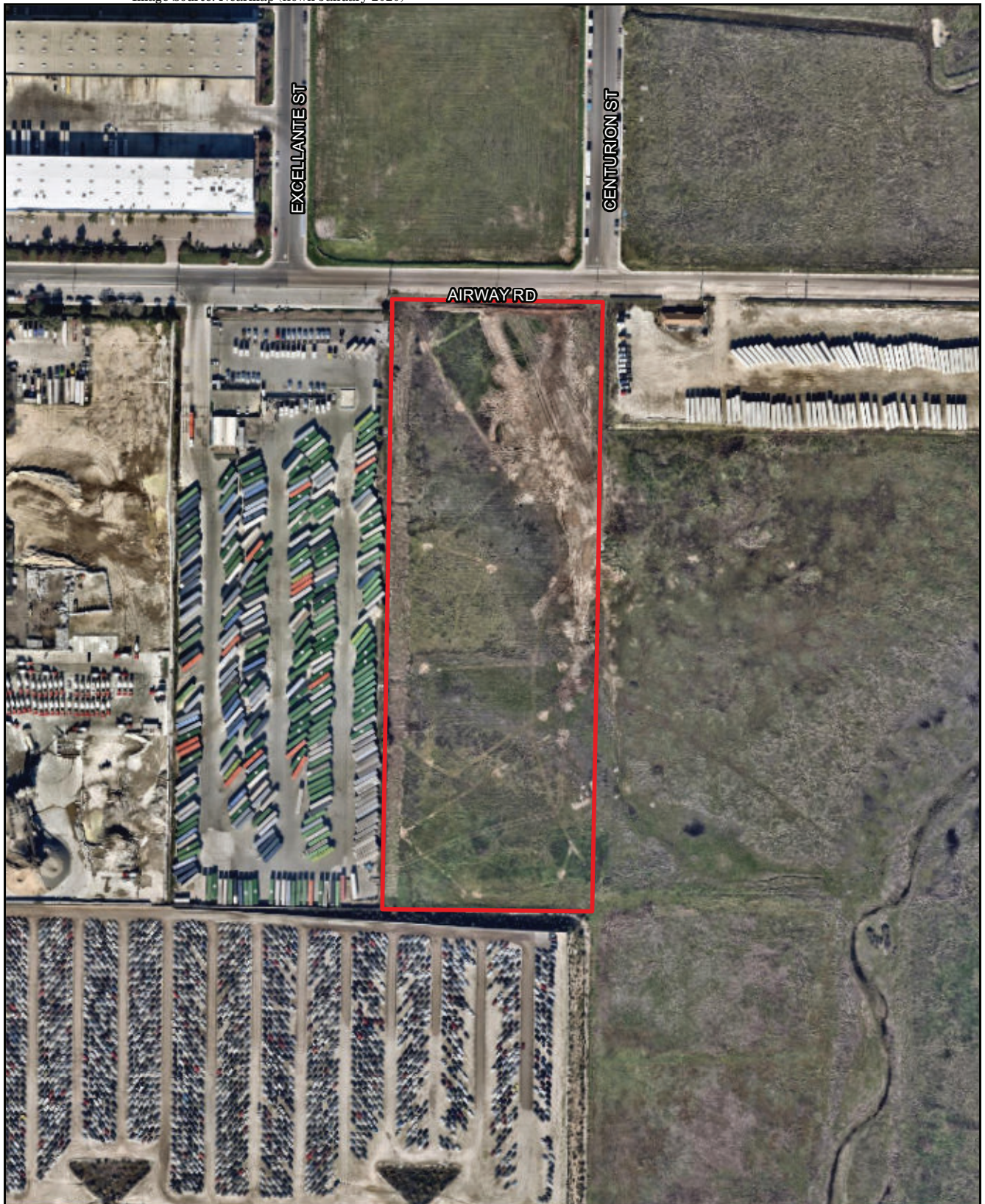
2.0 Existing Conditions

The project site is located on assessor parcel number 646-110-28, immediately south of Airway Road, in the Otay Mesa Community Plan area, in the city of San Diego, California. Figure 1 presents the regional location. Figure 2 presents an aerial photograph of the project site and vicinity. The 12.83-acre project site is currently undeveloped and surrounded by existing industrial uses to the west and south, a mix of existing industrial uses and undeveloped land to the east, and undeveloped land to the north.




***** Project Location

FIGURE 1
Regional Location



0 Feet 300



 Project Boundary

3.0 Proposed Conditions

The project would construct a 247,480-square-foot multi-tenant industrial distribution building that would include 235,480 square feet of warehouse space and 12,000 square feet of associated office space. The project would also include 66 dock doors and 276 parking spaces. Figure 3 presents the proposed site plan.

4.0 Regulatory Framework

4.1 State Regulations

The California state legislature has enacted several bills intended to promote waste diversion. In 1989, Assembly Bill (AB) 939, the Integrated Waste Management Act—as modified in 2010 by Senate Bill (SB) 1016—mandated that all local governments reduce disposal waste in landfills from generators within their borders by 50 percent by the year 2000 (State of California 1989 and 2010).

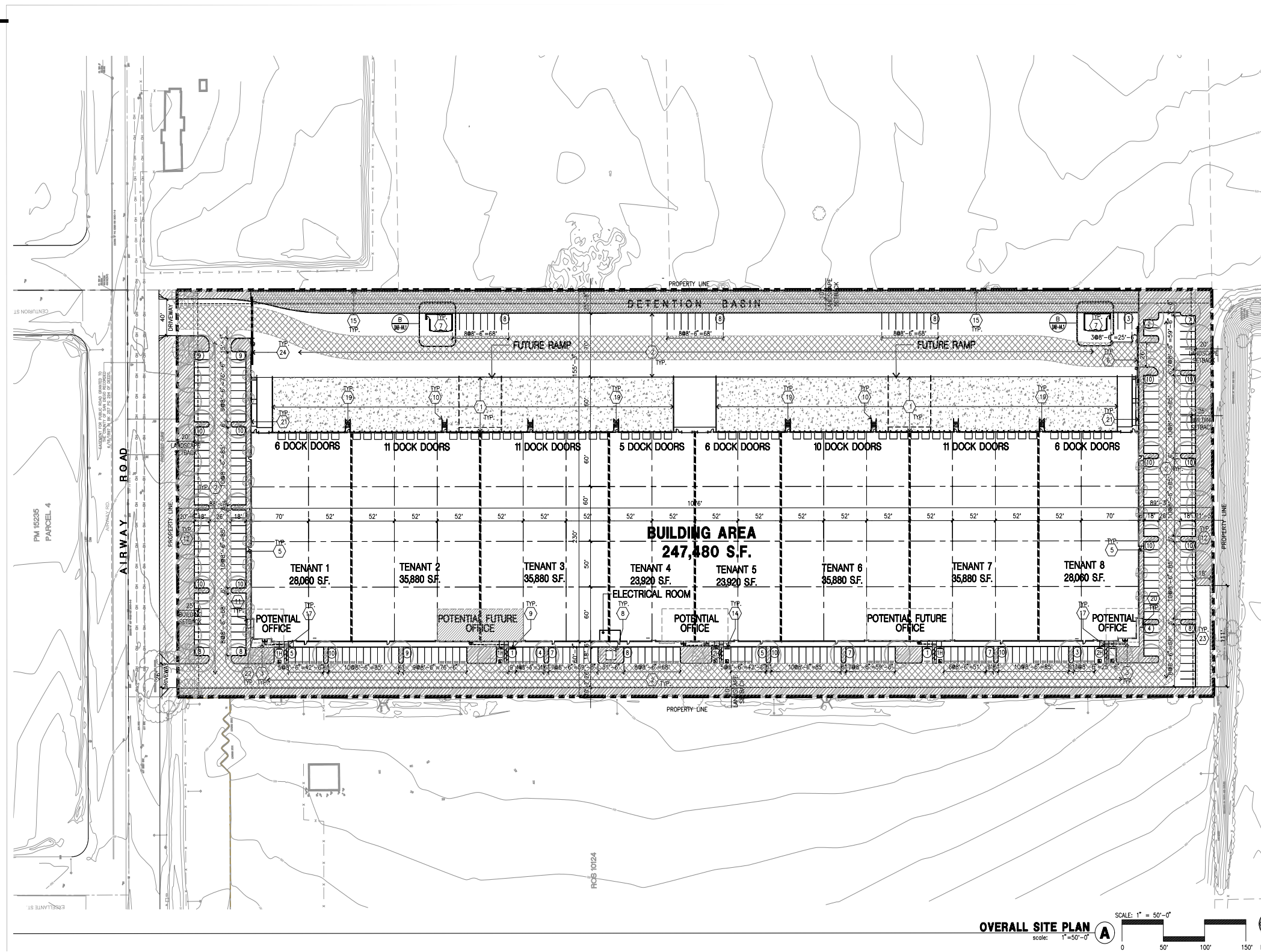
AB 341, approved October 2011, sets a policy goal of 75 percent waste diversion by the year 2020 (State of California 2011). This bill also created a mandatory commercial recycling requirement that would hold local jurisdictions responsible for implementing and to be in compliance with the 75 percent diversion rate through outreach and monitoring programs. SB 1383, approved in September 2016, established targets to reduce the amount of organic waste that is landfilled from the 2014 level by 50 percent by 2020, and by 75 percent by 2025. The law grants the California Department of Resources Recycling and Recovery (CalRecycle) the regulatory authority required to achieve the organic waste disposal reduction targets. SB 1383 granted CalRecycle the regulatory authority to achieve these organic waste disposal reduction targets, and it has been working to develop regulations necessary to implement the new law.

4.2 City of San Diego Requirements

All landfills within the San Diego region are approaching capacity and are due to close within the next 3 to 20 years. In compliance with the state requirements, the City of San Diego (City) Environmental Services Department (ESD) developed the Source Reduction and Recycling Element, which describes local waste management policies and programs. The City's Recycling Ordinance (San Diego Municipal Code [SDMC] Section 66.0701, et seq.), adopted November 2007, requires on-site recyclable collection for residential and commercial uses (City of San Diego 2007a). The ordinance requires recycling of plastic and glass bottles and jars, paper, newspaper, metal containers, and cardboard. The purpose of the ordinance is to establish requirements for recycling of recyclable materials to reduce the amount of material from landfill disposal. Recycling requirements for commercial facilities include an educational component that requires providing all occupants of commercial facilities information about types of recyclable materials accepted, the location of recycling

PROJECT DATA

SITE AREA	
In s.f.	558,927 s.f.
In acres	12.83 ac
BUILDING AREA	
Office	12,000 s.f.
Warehouse	235,480 s.f.
TOTAL	247,480 s.f.
COVERAGE	
	44.3%
AUTO PARKING REQUIRED	
Office: 3.3/1,000 s.f.	40 stalls
Whse: 1/1,000 s.f.	236 stalls
TOTAL	276 stalls
AUTO PARKING PROVIDED	
Standard (8.5' x 18')	224 stalls
Standard Accessible (9' x 18')	5 stalls
Van Accessible (12' x 18')	2 stalls
EV charging only (8.5' x 18')	15 stalls
Standard Accessible EV (9' x 18')	1 stalls
Van Accessible EV (12' x 18')	1 stalls
Clean Air/ Van Pool (8.5' x 18')	28 stalls
TOTAL	276 stalls
	@ 1.1/1000 SF
BICYCLE PARKING REQUIRED	
Short-term (0.1 per 1,000 s.f.)	25 spaces
Long-term (5% of total auto)	14 spaces
ZONING ORDINANCE FOR CITY	
Zoning Designation - Industrial Business and trade zone (IBT - 1-1)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - no limit	
MAXIMUM FLOOR AREA RATIO	
FAR - 2.0	
LANDSCAPE PROVIDED	
Percentage -	11.7%
In s.f.	65,117 s.f.
SETBACKS	
Building	Landscape
Front - 25'	20'
Street Side - 20' Side - 15'	10'
Rear - 25'	20'



SITE PLAN KEYNOTES

- 1 HEAVY BROOM FINISH CONCRETE PAVEMENT.
- 2 ASPHALT CONCRETE (AC) PAVING.
- 3 CONCRETE WALKWAY, MEDIUM BROOM FINISH.
- 4 NOT USED.
- 5 5'-0" x 4'-0" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH.
- 6 PROVIDE 8' HIGH METAL GATES W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
- 7 TRASH ENCLOSURE PER CITY STANDARD.
- 8 APPROXIMATE LOCATION OF TRANSFORMER.
- 9 PRE-CAST CONCRETE WHEEL STOP.
- 10 CONCRETE FILLED GUARD POST 6" DIA. U.N.O. 42" H.
- 11 DESIGNATED SMOKING AREA.
- 12 LANDSCAPE. ALL LANDSCAPE AREAS INDICATED BY SHADING.
- 13 ACCESSIBLE ENTRY SIGN.
- 14 ACCESSIBLE PARKING STALL SIGN.
- 15 8' HIGH METAL FENCE.
- 16 42" HIGH CONCRETE GUARDWALL.
- 17 TRUNCATED DOME.
- 18 EXTERIOR METAL STAIR WITH GUARDRAIL AND HANDRAIL.
- 19 EXTERIOR CONCRETE STAIR WITH GUARDRAIL AND HANDRAIL.
- 20 EXTERIOR BIKE RACK.
- 21 8' HIGH SCREEN WALL.
- 22 PROVIDE BUILDING ADDRESS NUMBER PER FHPS POLICY P-00-01(C) 9014.43
- 23 FUTURE 2,000 SF OUTDOOR AMENITIES
- 24 8' HIGH TELESCOPING GATE W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.

SITE PLAN GENERAL NOTES

1. THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY: TBD.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 8' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4" FINISH TO BE A MEDIUM BROOM FINISH U.N.O.
11. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
12. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
13. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
14. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
15. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.

SITE LEGEND

- CONCRETE PAVING
SEE "C" DRWS. FOR THICKNESS
- ASPHALT CONCRETE PAVING
SEE "C" DRWS. FOR THICKNESS
- STANDARD PARKING STALL (8'-6" X 18')
- ACCESSIBLE PARKING STALL (9' X 18')
+ 5' W/ ACCESSIBLE AISLE
- ACCESSIBLE PARKING (VAN)
STALL (12' X 18')
+ 5' W/ ACCESSIBLE AISLE
- LANDSCAPED AREA
- PATH OF TRAVEL
- 26" FIRE WIDE FREELANE
- EXISTING PUBLIC FIRE HYDRANT
- PRIVATE FIRE HYDRANT - APPROXIMATE LOCATION

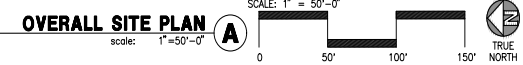


FIGURE 3
Site Plan

containers, and the occupants responsibility to recycle pursuant to the ordinance. The responsibility for conformance with the ordinance is shared between the ESD, haulers, and building owners and managers. On-site technical assistance, educational materials, templates, and service provider lists are provided by the ESD. Property owners and managers provide on-site recycling services and educational materials annually and to new tenants. Project strategies for compliance are discussed in Section 6.2, Waste Reduction Measures.

The City's Refuse and Recyclable Materials Storage Regulations (SDMC Section 142.0801, et seq.), adopted December 2007, set the minimum exterior refuse and recyclable material storage areas required at residential and commercial properties (City of San Diego 2007b). These regulations are intended to provide permanent, adequate, and convenient space for the storage and collection of refuse and recyclable materials; encourage recycling of solid waste to reduce the amount of waste material entering landfills; and meet the recycling goals established by the City Council and mandated by the State of California. The project's conformance with these regulations are discussed further in Section 6.3, Exterior Storage.

In July 2008, the Construction and Demolition (C&D) Debris Deposit Ordinance (SDMC Section 66.0601, et seq.) was adopted by the City (City of San Diego 2008). The ordinance requires that the majority of construction, demolition, and remodeling projects requiring building, combination, or demolition permits pay a refundable C&D Debris Recycling Deposit and divert at least 50 percent of their waste by recycling, reusing, or donating reusable materials. The required diversion rate is currently proposed for an increase to 65 percent. The ordinance is designed to keep C&D materials out of local landfills. Project requirements are discussed further in Section 5.4.1, Contractor Education and Responsibilities.

In December 2013, the City Council adopted the Zero Waste Plan, implementing the 75 percent diversion of waste target goal from landfills by the year 2020 and zero waste by 2040. An additional City target of 90 percent diversion by 2035 is proposed in the City's Zero Waste Plan, which is a component of the City's Climate Action Plan.

5.0 Demolition, Grading, and Construction Waste

This section discusses the waste generation and diversion rates from the demolition, grading, and construction phases of the project. According to the Waste Composition Study prepared by the ESD, C&D waste constituted approximately 657,455 tons (39.1 percent) of the overall 1,680,211 tons of waste that were disposed in 1999.

5.1 Demolition

As discussed in Section 2.0, Existing Conditions, the project site is currently undeveloped (see Figure 2). Therefore, no demolition would be involved and no demolition waste would be generated.

5.2 Grading

Project construction would require import of approximately 70,000 cubic yards of fill and, therefore, would not require any soil export.

Project grading would also generate green waste that would be source separated and recycled at the Otay Landfill facility for 100 percent diversion. Goals for this phase would be communicated to grading contractors through contract documents, the California Environmental Quality Act document, project conditions of approval that require implementation of WMP measures, and the Solid Waste Management Coordinator (SWMC) for the project.

5.3 Construction

As described in Section 3.0, Proposed Conditions, the project would construct a 247,480-square-foot multi-tenant industrial distribution building that would include 235,480 square feet of warehouse space and 12,000 square feet of associated office space.

The U.S. Environmental Protection Agency (2009) provides an average generation rate of 4.34 pounds of construction waste per square foot for non-residential types of uses. Table 1 shows how much project construction waste would be generated by the proposed land uses.

Land Use	Amount (square feet)	Generation Rate (pounds per square foot)	Tons Generated
Non-Residential (Industrial and Office Uses)	247,480	4.34	537.0
SOURCE: U.S. Environmental Protection Agency 2009.			

Non-Residential (Industrial and Office Uses):

$$247,480 \text{ square feet} \times \frac{4.34 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 537.0 \text{ tons}$$

5.4 Waste Diversion

Implementing the City’s 75 percent diversion of waste target goal adopted under the Zero Waste Objective requires a majority of waste to be handled at facilities other than landfills. There are two types of waste diversion: “mixed-debris diversion” and “source-separated diversion.” Mixed-debris diversion is a method in which all material waste is disposed of in a single container for transport to a mixed C&D recycling facility. Under source-separated diversion, materials are separated on-site before transport to appropriate facilities that accept specific material types. Generally, a greater diversion rate is achieved under source-separated diversion, as facilities that accept mixed debris typically achieve 50 to

70 percent diversion, whereas single material recyclers often achieve a nearly 100 percent diversion rate (City of San Diego 2013).

The project would implement source-separated diversion. Recyclable waste materials would be separated on-site into material-specific containers and diverted to an approved recycler selected from the City’s ESD directory of facilities that recycle specific waste materials from construction and demolition (Attachment 1). These facilities achieve a 100 percent diversion rate for most materials with the exception of a 75 percent diversion rate for roof material.

Table 2 provides a breakdown of the 537.0 tons by anticipated types of material and provides the most likely handling facility and diversion method. As shown in Table 2, use of the source separation method for most of the material types (where feasible) would result in the total diversion of approximately 447.5 tons, with 89.5 tons of trash/garbage being disposed of in the landfill.

Material Type	Estimated Waste (tons)	Percent Diverted ¹	Nearest Handling Facility ¹	Estimated Diversion (tons)	Estimated Disposal (tons)
Asphalt and Concrete	75.9	100%	Vulcan Otay Asphalt Recycling Center	75.9	0.0
Metals	119.3	100%	Cactus Recycling	119.3	0.0
Brick/Masonry/Tile	36.6	100%	Vulcan Carol Canyon Landfill and Recycle Site	36.6	0.0
Clean Wood/Wood Pallets	20.3	100%	Otay Landfill	20.3	0.0
Carpet, Padding/ Foam	43.4	100%	DFS Flooring	43.4	0.0
Drywall	119.3	68%	EDCO Recovery & Transfer	119.3	0.0
Corrugated Cardboard	32.5	100%	Cactus Recycling	32.5	0.0
Trash/Garbage	89.5	0%	Otay Landfill	0.0	89.5
Total	537.0			447.5 83.3%	89.5 16.7%

NOTE: Totals may vary due to independent rounding.
¹City of San Diego ESD 2020 Certified C&D Recycling Facility Directory (see Attachment 1).

With implementation of the diversion-estimated calculations outlined in Table 2, it is estimated that approximately 83.3 percent of the waste generated during the construction phase of the project would be diverted to appropriate facilities for reuse. Thereafter, 89.5 tons of trash/garbage, equivalent to 16.7 percent of the total construction waste, would be required to be disposed of in the landfill.

5.4.1 Contractor Education and Responsibilities

In order to ensure that the anticipated diversion of waste would occur during project construction, the project would include the designation of a SWMC for the duration of project construction. The SWMC would ensure that all contractors and subcontractors are educated and trained to follow City waste diversion regulations and that procedures for

waste reduction and recycling efforts are implemented. Specific responsibilities of the SWMC would include the following:

- Review the WMP at the preconstruction meeting, including the SWMC responsibilities.
- Distribute the WMP to all contractors when they first begin work on-site and when training workers, subcontractors, and suppliers on proper waste management procedures applicable to the project.
- Work with the contractors to estimate the quantities of each type of material that would be salvaged, recycled, or disposed of as waste, then assist in documentation.
- Use detailed material estimates to reduce risk of unplanned and potentially wasteful material cuts.
- Review and enforce procedures for source-separated receptacles. Containers of various sizes shall:
 - Be placed in readily accessible areas that will minimize misuse or contamination.
 - Be clearly labeled with a list of acceptable and unacceptable materials, the same as the materials recycled at the receiving material recovery facility or recycling processor.
 - Contain no more than 10 percent non-recyclable materials, by volume.
 - Be inspected daily to remove contaminants and evaluate discarded material for reuse on-site.
- Review and enforce procedures for transportation of materials to appropriate recipients selected from ESD's directory of facilities that recycle C&D materials (see Attachment 1 for ESD's facility directory).
- Ensure removal of C&D waste materials from the project site at least once every week to ensure no over-topping of containers. The accumulation and burning of on-site construction, demolition, and land-clearing waste materials will be prohibited.
- Document the return or reuse of excess materials and packaging to enhance the diversion rate.
- Coordinate implementation of a "buy recycled" program for green construction products, including incorporating mulch and compost into the landscaping.
- Coordinate implementation of solid waste mitigation with other requirements such as storm water requirements, which may include specifications such as the placement of bins to minimize the possibility of runoff contamination.

The SWMC would ensure that the project meets the following state law and City Municipal Code requirements. Adjustments would be made as needed to maintain conformance:

- The City's C&D Debris Diversion Deposit Program, which requires a refundable deposit based on the tonnage of the expected recyclable waste materials as part of the building permit requirements (City of San Diego 2008).
- The City's Recycling Ordinance, which requires that collection of recyclable materials is provided (City of San Diego 2007a).
- The City's Storage Ordinance, which requires that areas for recyclable material collection must be provided (City of San Diego 2007b).
- The name and contact information of the waste contractor provided to ESD at least 10 days prior to the start of any work and updated within 5 days of any changes.

5.4.2 Total Diversion

With the oversight of the SWMC, the project would meet City waste diversion goals. Table 3 summarizes the amount of waste estimated to be generated and diverted by each phase of the project. Of the 537.0 tons estimated to be generated, 447.5 tons would be diverted. This would result in the diversion and reuse of 83.3 percent of the waste material generated from the project from the landfill, which would meet the City's current 75 percent waste diversion goal.

Phase	Tons Generated	Tons Diverted	Tons Disposed
Demolition	0.0	0.0	0.0
Grading	0.0	0.0	0.0
Construction	537.0	447.5	89.5
TOTAL	537.0	447.5 83.3%	89.5 16.7%
NOTE: Totals may vary due to independent rounding.			

6.0 Occupancy – Operational Waste

6.1 Waste Generation

The estimated annual waste to be generated during occupancy of the project is based on the expected waste generation that was calculated using the City ESD Waste Generation Factors for non-residential uses (Attachment 2).

The estimated solid waste generation rate for industrial is 0.0058 ton/year (manufacturing) and the estimated solid generation rate for office uses is 0.0017 ton/year (office uses). The estimated annual amount in tons is calculated below.

Non-Residential (Industrial):

$$235,480 \text{ square feet} \times \frac{0.0058 \text{ tons}}{\text{square feet/year}} = 1,365.8 \text{ tons/year}$$

Non-Residential (Office):

$$12,000 \text{ square feet} \times \frac{0.0017 \text{ tons}}{\text{square feet/year}} = 20.4 \text{ tons/year}$$

Table 4 shows the amount of tons that would be generated during the occupancy phase. The proposed industrial use would generate approximately 1,365.8 tons of waste per year, and the office use would generate approximately 20.4 tons of waste per year. As discussed in the following section, Waste Reduction Measures, an ongoing plan to manage waste disposal in order to meet state and City waste reduction goals would be implemented by the applicant (or applicant’s successor in interest).

Land Use	Dwelling Units/ Square Feet	Generation Rate	Waste Generated (tons/unit/year)/ (tons/square feet/year)	Percent Diverted	Tons Diverted	Tons Disposed
Industrial	235,480 square feet	0.0058 tons/square feet/year	1,365.8	40%	546.3	819.5
Office	12,000 square feet	0.0017 tons/square feet/year	20.4	40%	8.2	12.2
Total			1,386.2		554.5	831.7

SOURCE: Attachment 2.

6.2 Waste Reduction Measures

According to the City’s Guidelines for a Waste Management Plan (City of San Diego 2013), compliance with the City’s Recycling Ordinance is expected to provide a minimum recycling service volume of 40 percent. Therefore, waste anticipated to be diverted during the occupancy phase would be approximately 554.5 tons per year. The remaining 831.7 tons per year would exceed the 60.0 ton-per-year threshold of significance for a cumulative impact on solid waste services in the City (City of San Diego 2016).

To mitigate for the cumulative impact on solid waste, the applicant (or applicant’s successor in interest) shall be responsible for implementing a long-term WMP, as outlined below, which would ensure that the development meets or exceeds the requirements set forth in AB 939 and AB 341. This program shall include recyclable collection services required by and in accordance with the Recycling Ordinance, as well as providing exterior storage space for refuse, recyclable materials, and a means of handling landscaping and green waste materials. Specific program measures shall include the following:

- For commercial facilities, which receive solid waste collection services from a franchisee, the responsible person shall provide on-site recycling services to occupants as required by the dates prescribed in the City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707a.
- For multi-family residential facilities, which receive solid waste collection services from a franchisee, the responsible person shall provide on-site recycling services to occupants as required by the dates prescribed in the City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706c.
- Occupants of commercial facilities, which receive solid waste collection services from a franchisee, shall participate in a recycling program by separating recyclable material from other solid waste and depositing the recyclable materials in the recycling container provided by the Franchisee or Recyclable Materials Collector.
- Occupants of multi-family residential facilities which receive solid waste collection services from a franchisee, shall participate in a recycling program by separating recyclable material from other solid waste and depositing the recyclable materials in the recycling container provided by the Franchisee or Recyclable Materials Collector (City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706d).
- At a minimum, commercial facilities' recycling services would include the following (City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707c):
 1. Collection of recyclable materials as frequently as necessary to meet demand.
 2. Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers.
 3. Collection of other recyclable materials for which markets exist, such as scrap metal, wood pallets, and food waste.
 4. Utilization of recycling receptacles which comply with the standards in the Container and Signage Guidelines established by the City ESD or its successor.
 5. Designated recycling collection and storage areas.
 6. Signage on all recycling receptacles, containers, and/or enclosures which comply with the standards described in the Container and Signage Guidelines established by the City ESD or its successor.
- At a minimum, multi-family residential facilities' recycling services would include the following (City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706e):
 1. Collection of recyclable materials at least two times per month.
 2. Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers.

3. Utilization of recycling receptacles which comply with the standards in the Container and Signage Guidelines established by the City ESD or its successor.
 4. Designated recycling collection and storage areas.
 5. Signage on all recycling receptacles, containers, chutes, and/or enclosures which comply with the standards described in the Container and Signage Guidelines established by the City ESD or its successor.
- Occupant Education – For commercial facilities, the responsible person shall ensure that occupants are educated about the recycling services as follows (City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707d):
 1. Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants' responsibility to recycle, shall be distributed to all occupants annually.
 2. All new occupants shall be given educational information on recycling programs and procedures and instructions upon occupancy.
 3. All occupants shall be given information and instructions upon any change in recycling service to the facility.
 - Occupant Education – For multi-family residential facilities, the responsible person shall ensure that occupants are educated about the recycling services as follows (City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706f):
 1. Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants' responsibility to recycle, shall be distributed to all occupants annually.
 2. All new occupants shall be given information and instructions upon occupancy.
 3. All occupants shall be given information and instructions upon any change in recycling service to the facility.

Implementation of a project-specific waste management program would reduce the project's cumulative portion of impacts on solid waste, as, per the City's California Environmental Quality Act Significance Determination Thresholds, the implementation of a WMP would ensure that the overall waste produced is reduced sufficiently to comply with waste reduction targets established in the Public Resources Code (City of San Diego 2016).

6.3 Exterior Storage

This WMP follows the SDMC regarding site refuse and recyclable material storage space requirements (City of San Diego 2007b). Table 5 shows the exterior storage area requirements for non-residential developments.

Table 5 Minimum Exterior Refuse and Recyclable Material Storage Areas for Non-Residential Development			
Gross Floor Area per Development (square feet)	Minimum Refuse Storage Area per Development (square feet)	Minimum Recyclable Material Storage Area per Development (square feet)	Total Minimum Storage Area per Development (square feet)
0-5,000	12	12	24
5,001-10,000	24	24	48
10,001-25,000	48	48	96
25,001-50,000	96	96	192
50,001-75,000	144	144	288
75,001-100,000	192	192	384
100,000+	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	384 plus 96 square feet for every 25,000 square feet of building area above 100,001
Project Total	480	480	960
SOURCE: City of San Diego Municipal Code, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, Section 142.0830, Table 142-08C; effective, January 2000.			

Because the project would construct 247,480 square feet of non-residential uses that would generate operational waste, a minimum of 480 square feet of refuse storage area and a minimum of 480 square feet of recyclable material storage area would be required. The total exterior refuse and recyclable material storage requirement for the project would be 960 square feet. The project has been designed to include two refuse/recycling material storage areas that would each be 480 square feet in size. Inclusion of these two refuse/recycling material storage areas would achieve the City requirement of providing 960 square feet of refuse and recyclable material storage.

6.4 Organic Waste Recycling

The project would require landscaping, landscape maintenance, and brush management. Drought-tolerant plants would be used to reduce the amount of green waste produced. Collection of organic waste and its disposal at recycling centers that accept organic waste would further reduce the waste generated by the project during occupancy. Implementation of ongoing WMP requirements would include a means for handling landscaping and other organic waste materials. The ongoing WMP measures discussed in Section 6.2, Waste Reduction Measures, would include a means for handling landscaping and other organic waste materials.

7.0 Conclusion

7.1 Demolition, Grading, and Construction Waste

Diversion goals would be communicated to contractors through contract documents; the project's California Environmental Quality Act document, this WMP and corresponding project conditions; and the SWMC for the project. The project would require import of approximately 70,000 cubic yards of fill and, therefore, would not require any soil export. All green waste would be recycled at the Otay Landfill facility for 100 percent diversion. Therefore, the project would achieve 100 percent diversion during grading. Of the 537.0 tons estimated to be generated during construction, 447.5 tons would be diverted. This would result in the diversion and reuse of 83.3 percent of the waste material generated from the project from the landfill, which would meet the City's current 75 percent waste diversion goal.

7.2 Occupancy – Operational Waste

The project would develop 247,480 square feet of non-residential uses that would generate approximately 1,386.2 tons of waste per year. As such, the project would be required to provide a minimum of 480 square feet of exterior refuse area and 480 square feet of recyclable material storage area (total of 960 square feet; see Table 6). The project would meet this requirement by providing a two 480-square-foot refuse storage and recycling areas that would collectively meet the City requirement of 960 square feet of refuse and recyclable material storage.

The applicant (or applicant's successor in interest) would implement the ongoing waste reduction measures as prescribed in this WMP to ensure that the waste is minimized and the operation of the project complies with City ordinances. According to the City Guidelines for a Waste Management Plan (City of San Diego 2013), compliance with existing ordinances is expected to achieve a 40 percent diversion rate. Therefore, approximately 831.7 tons of non-recyclable waste per year would be generated from the project, exceeding the 60 ton-per-year threshold of significance for having a cumulative impact on solid waste services. However, preparation of this WMP and implementation of the Waste Reduction Measures, outlined in Section 6.2 above, would reduce cumulative solid waste impacts to a level less than significant.

8.0 Overall Compliance

With implementation of the strategies outlined in this WMP and compliance with all applicable City ordinances, solid waste impacts would be reduced to below a level of significance regarding collection, diversion, and disposal of waste generated from C&D, grading, and occupancy. Implementation of a SWMC for the project during the construction phase would achieve 83.3 percent diversion of construction waste from landfill disposal.

This would reduce the anticipated impact of waste disposal during construction to a level less than significant.

During occupancy, the applicant or applicant's successor in interest would be required to implement the ongoing WMP measures detailed herein to ensure maximum diversion from landfills. The project would provide two 480-square-foot refuse storage and recycling areas, consistent with City Municipal Code requirements described herein. Compliance with existing ordinances is expected to achieve a 40 percent diversion rate. Preparation of this WMP and implementation of the Waste Reduction Measures, outlined in Section 6.2 above, would reduce cumulative solid waste impacts to a level less than significant.

9.0 References Cited

California, State of

- 1989 Assembly Bill 939. Integrated Waste Management Act.
- 2010 Senate Bill 1016. Solid Waste Per Capita Disposal Measurement Act.
- 2011 Assembly Bill 341. Jobs and Recycling.

San Diego, City of

- 2000 Waste Composition Study 1999-2000. Final Report. San Diego Environmental Services Department. November.
- 2007a Recycling Ordinance. San Diego Municipal Code Chapter 6, Article 6, Division 7. November 20.
- 2007b Refuse and Recyclable Materials Storage Regulations. Municipal Code Chapter 14, Article 2, Division 8. December 9.
- 2008 Construction and Demolition Debris Diversion Deposit Program. San Diego Municipal Code Chapter 6, Article 6, Division 6.
- 2013 California Environmental Quality Act – Guidelines for a Waste Management Plan. June.
- 2016 Significance Determination Thresholds. California Environmental Quality Act. July.

U.S. Environmental Protection Agency

- 2009 Estimating 2003 Building-Related Construction and Demolition Materials Amounts. Available at <https://www.epa.gov/sites/production/files/2017-09/documents/estimating2003buildingrelatedcanddmaterialsamounts.pdf>.

ATTACHMENTS

ATTACHMENT 1

City of San Diego 2020 Certified Construction and Demolition Recycling Facility Directory



2020 Certified Construction & Demolition (C&D) Recycling Facility Directory

These facilities are certified by the City of San Diego to accept materials listed in each category. Hazardous materials are not accepted. The diversion rate for these materials shall be considered 100 percent, except mixed C&D debris, which update quarterly. The City is not responsible for changes in facility information. Please call ahead to confirm details such as accepted materials, days and hours of operation, limitations on vehicle types, and cost. For more information visit:

www.recyclingworks.com

<p><i>*Transfer Stations offer both recycling and trash disposal services. In order to receive recycling credit, you must:</i></p> <p><i>-Notify the weighmaster your load is subject to the City of San Diego C&D Ordinance.</i></p> <p><i>-If your load is mixed Construction and Demolition (C&D) debris, ensure it is coded correctly on the receipt. Tickets coded as "MSW, trash or refuse" will receive 0% credit.</i></p> <p><i>-Ensure the project address and Permit number are added to the receipt.</i></p> <p><i>Please note: Miramar Landfill and other landfills DO NOT recycle mixed C&D debris.</i></p>	Mixed C&D Debris	Asphalt/Concrete	Brick/Block/Rock	Building Materials for Reuse	Cardboard	Carpet	Carpet Padding	Ceiling Tile	Ceramic Tile/Porcelain	Clean Fill Dirt	Clean Wood/Green Waste	Drywall	Industrial Plastics	Lamps/Light Fixtures	Metal	Mixed Inerts	Styrofoam Blocks	Trash
<p>*EDCO Recovery & Transfer* 3660 Dalbergia St, San Diego, CA 92113 619-234-7774 www.edcodisposal.com</p>	68%	•										•						•
<p>*EDCO Station Transfer Station & Buy Back Center* 8184 Commercial St, La Mesa, CA 91942 619-466-3355 www.edcodisposal.com</p>	68%	•			•							•			•			•
<p>*EDCO CDI Recycling & Buy Back Center* 224 S. Las Posas Rd, San Marcos, CA 92078 760-744-2700 www.edcodisposal.com</p>	89%				•	•	•								•			•
<p>Escondido Resource Recovery 1044 W. Washington Ave, Escondido 760-745-3203 www.edcodisposal.com</p>	68%																	
<p>*Fallbrook Transfer Station & Buy Back Center* 550 W. Aviation Rd, Fallbrook, CA 92028 760-728-6114 www.edcodisposal.com</p>	68%				•										•			•
<p>Otay C&D/Inert Debris Processing Facility 1700 Maxwell Rd, Chula Vista, CA 91913 619-421-3773 www.sd.disposal.com</p>	87%																	
<p>*Ramona Transfer Station & Buy Back Center* 324 Maple St, Ramona, CA 92065 760-789-0516 www.edcodisposal.com</p>	68%				•										•			•
<p>SANCO Resource Recovery & Buy Back Center 6750 Federal Blvd, Lemon Grove, CA 91945 619-287-5696 www.edcodisposal.com</p>	68%				•	•	•								•			
<p>Allan Company 6733 Consolidated Wy, San Diego, CA 92121 858-578-9300 www.allancompany.com/facilities</p>					•										•			
<p>Allan Company Miramar Recycling 5165 Convoy St, San Diego, CA 92111 858-268-8971 www.allancompany.com/facilities</p>					•										•			
<p>Armstrong World Industries, Inc. 300 S. Myrida St, Pensacola, FL 32505 877-276-7876 (Press 1, Then 8) www.armstrong.com/commceilingsna</p>								•										
<p>CMS Recycling Inc. 1428 West Mission Rd, Escondido, CA 92029 760-741-6300 www.cmsmetals.com</p>					•										•			
<p>DFS Flooring 10178 Willow Creek Rd, San Diego, CA 92131 858-630-5200 www.dfsflooring.com</p>						•	•											

<p>*Transfer Stations offer both recycling and trash disposal services. In order to receive recycling credit, you must:</p> <p>-Notify the weighmaster your load is subject to the City of San Diego C&D Ordinance.</p> <p>-If your load is mixed Construction and Demolition (C&D) debris, ensure it is coded correctly on the receipt. Tickets coded as "MSW, trash or refuse" will receive 0% credit.</p> <p>-Ensure the project address and Permit number are added to the receipt.</p> <p><u>Please note: Miramar Landfill and other landfills DO NOT recycle mixed C&D debris.</u></p>	Mixed C&D Debris	Asphalt/Concrete	Brick/Block/Rock	Building Materials for Reuse	Cardboard	Carpet	Carpet Padding	Ceiling Tile	Ceramic Tile/Porcelain	Clean Fill Dirt	Clean Wood/Green Waste	Drywall	Industrial Plastics	Lamps/Light Fixtures	Metal	Mixed Inerts	Styrofoam Blocks	Trash	
<p>Duco Metals 220 Bingham Drive Suite 100, San Marcos, CA 92069 760-747-6330 www.ducometals.com</p>																			
<p>Escondido Materials 500 N. Tulip St, Escondido, CA 92025 760-432-4690 www.weirasphalt.com</p>		•																	
<p>Habitat for Humanity ReStore 8101 Mercury Ct, San Diego, CA 92108 619-516-5267 www.sandiegohabitat.org</p>				•															
<p>Hanson Aggregates – Hollister St 389 Hollister St, San Diego, CA 92154 858-974-3849</p>		•																	
<p>Hanson Aggregates West – Lakeside Plant 12560 Highway 67, Lakeside, CA 92040 858-547-2141</p>		•																	
<p>Hanson Aggregates West – Miramar 9229 Harris Plant Rd, San Diego, CA 92126 858-974-3849</p>		•								•									
<p>HVAC Exchange 2675 Fairve St, Chula Vista, CA 91911 619-423-1564 www.hvacx.com</p>															•				
<p>Inland Pacific Resource Recovery 12650 Slaughterhouse Canyon Rd, Lakeside, CA 92040 619-390-1418 www.iprrgreen.com</p>											•								
<p>Los Angeles Fiber Company 4920 S. Boyle Ave, Vernon, CA 90058 323-589-5637 www.lafiber.com</p>						•	•												
<p>Miramar Greenery, City of San Diego 5180 Convoy St, San Diego, CA 92111 858-694-7000 www.miramargreenery.com</p>											•								
<p>Moody's 3210 Oceanside Blvd, Oceanside, CA 92056 760-433-3316 www.moodyselecorazonrecycling.com</p>		•								•						•			
<p>Planet Recycling 187 Mace St, Chula Vista, CA 91911 888-258-7755 www.planetrecyclingphoenix.com</p>						•													
<p>RAMCO 8354 Nelson Way, Escondido, CA 92026 760-205-1797 www.ramco.us.com</p>		•																	
<p>Reclaimed Aggregates Chula Vista 855 Energy Way, Chula Vista, CA 91913 619-656-1836</p>		•														•			
<p>Robertson's Ready Mix 2094 Willow Glen Dr, El Cajon, CA 92019 619-593-1856 www.rrmca.com</p>		•								•						•			
<p>Rockridge Crushing 12485 Highway 67, Lakeside, CA 92040 619-324-6570</p>		•																	
<p>SA Recycling 3055 Commercial St, San Diego, CA 92113 619-238-6740 www.sarecycling.com</p>															•				

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<p>SA Recycling 1211 S. 32nd St, San Diego, CA 92113 619-234-6691 www.sarecycling.com</p>																		
<p>SCOR Industries 2321 South Willow Ave, Bloomington, CA 92316 909-820-5046 www.scorindustries.com</p>		•	•		•				•		•	•			•	•		
<p>Terra Bella Nursery 302 Hollister St, San Diego, CA 92154 619-585-1118 www.terrabellanursery.com</p>										•	•							
<p>Vulcan Carol Canyon Landfill and Recycle Site 10051 Black Mountain Rd, San Diego, CA 92126 858-530-9465 www.vulcanmaterials.com</p>		•	•							•						•		
<p>Vulcan Materials Company 2275 Hard Rock Rd, Chula Vista, CA 91913 858-530-9472 www.vulcanmaterials.com</p>		•																
<p>Vulcan Otay Asphalt Recycle Center 7522 Paseo de la Fuente, San Diego, CA 92154 619-571-1945 www.vulcanmaterials.com</p>		•																

ATTACHMENT 2

City of San Diego Waste Generation Factors – Occupancy Phase

Waste Generation Factors – Occupancy Phase

The following factors are used by the City of San Diego Environmental Services Department to estimate the expected waste generation in a new residential or commercial development.

Residential Uses

Residential Unit = 1.6 tons/year/unit
 Multi-family Unit = 1.2 tons/year/unit

Example: To calculate the amount of waste that will be generated from a project with 100 new homes, multiply the number of homes by the generation factor.

100 single family homes x 1.6 = 160 tons/year
 100 multi-family units x 1.2 = 120 tons/year

Commercial/Industrial Uses

General Retail	0.0028
Restaurants & Bars	0.0122
Hotels/Motels	0.0045
Food Stores	0.0073
Auto/Service/Repair	0.0051
Medical Offices	0.0033
Hospitals	0.0055
Office	0.0017
Transp/Utilities	0.0085
Manufacturing	0.0059
Education	0.0013
Unclassified Services	0.0042

Example: To calculate the amount of waste that could be generated from a new building with 10,000 square feet for offices and 10,000 square feet for manufacturing, multiply the square footage for each use by the generation factor.

10,000 square feet x 0.0017 = 17 tons/year

10,000 square feet x 0.0059 = 59 tons per year

Total estimated waste generation for building = 76 tons/year