

WASTE MANAGEMENT PLAN

FOR

BDM Mixed-Use Project

San Diego, California
Project No. 673818

Prepared for:

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1.0 INTRODUCTION

The purpose of this Waste Management Plan (WMP) for the *BDM Mixed-Use Project* in the City of San Diego is to provide analysis of the solid waste impacts anticipated for the *BDM Mixed-Use Project* and how those impacts will be managed such that significant solid waste impacts are avoided. The goal of this WMP is to identify sufficient measures to reduce the potential impacts of the *BDM Mixed-Use Project* on solid waste services. Two acceptable approaches to managing waste are to reduce the tons disposed to 60 tons or less, or to provide diversion of 75 percent or more, thus meeting the goal established by Assembly Bill 341.

The *BDM Mixed-Use* project is proposed for 13.45-acre site, located on the south side of Otay Mesa Road, east of Emerald Crest Court, west of Corporate Center Drive, and north of State Route 905, within the Otay Mesa Community Plan area in the City of San Diego. The project site has been graded in accordance with a previously approved Vesting Tentative Map. (See Figure 1, *BDM Mixed-Use Project Location Map*.)

The project proposes 430 total multi-family residential dwelling units and approximately 6,000 square feet of commercial use. The multi-family residential use includes 378 market-rate dwelling units, situated in the northern portion of the site, and 52 affordable dwelling units (affordable to low-income households) situated in the western portion of the site. Commercial uses would be located in the northwestern portion of the site. Access to the project would be provided off Emerald Crest Court and by a new private drive off Otay Mesa Road. Parking would be provided in surface parking areas located throughout the project. The project requires an Amendment to the Otay Mesa Plan to change the land use designation from Community Commercial – Residential Prohibited to Community Commercial – Residential Permitted, Rezone from the existing CC-2-3 zone to CC-3-6, Vesting Tentative Map, Site Development Permit, Neighborhood Development Permit, and Public Right-of-Way Vacation to vacate Corporate Center Drive south of Otay Mesa Road.

This WMP consists of three sections corresponding to the implementation of site development: the *Grading Phase*, the *Construction Phase*, and the *Occupancy Phase* (post-construction). For all of these phases, this WMP addresses the projected amount of waste that could be generated by the project based on City generation rates and estimates; waste reduction goals; and recommended techniques to achieve the waste reduction goals, such as reducing, reusing, and recycling. Waste disposal sites and recycling methods and opportunities may change from those available today; however, it is not expected that waste diversion and disposal sites listed in this WMP would change by the time the project is anticipated to begin construction.

Figure 1
BDM Mixed-Use Project - Location Map and Aerial

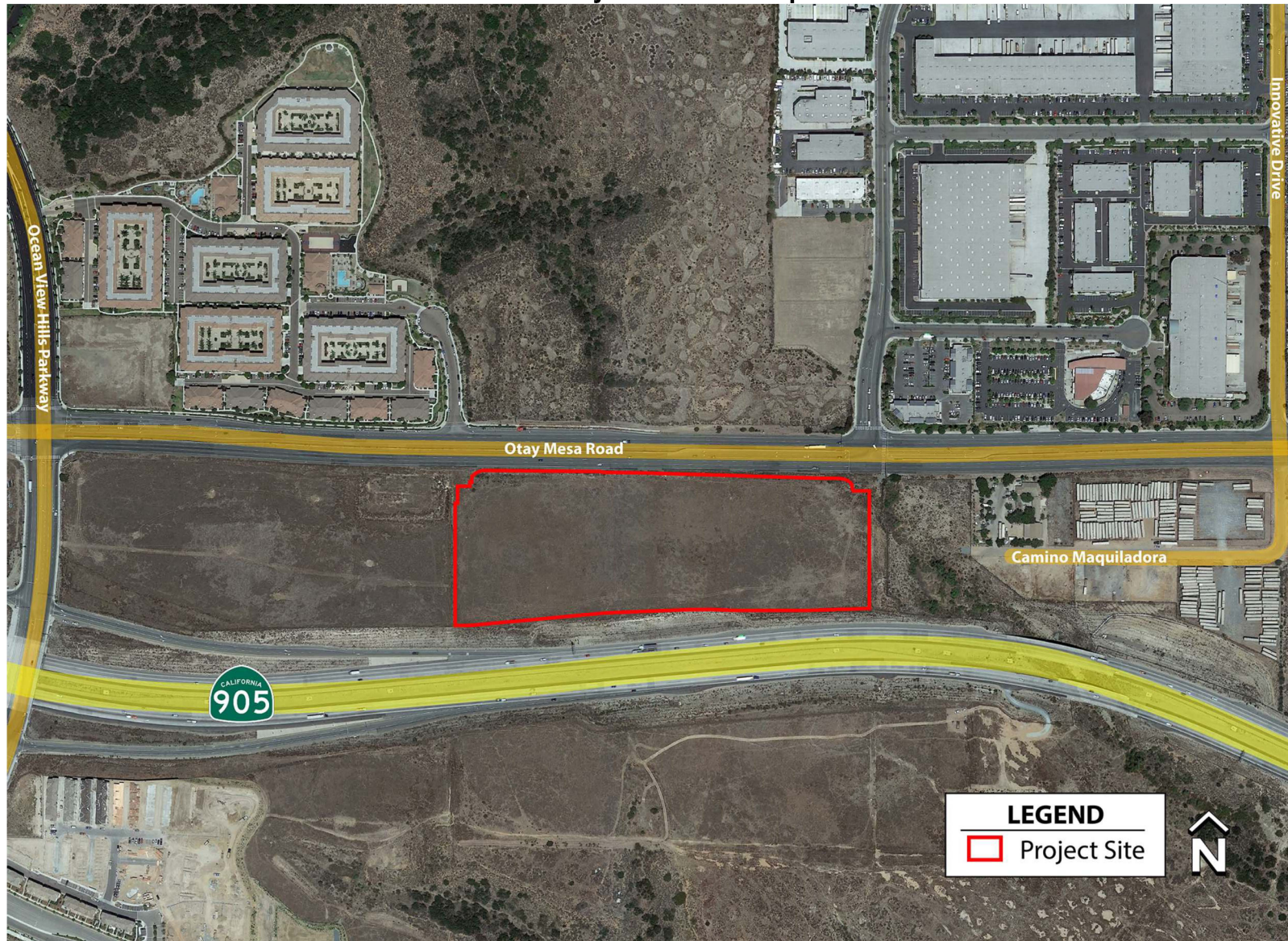
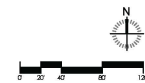
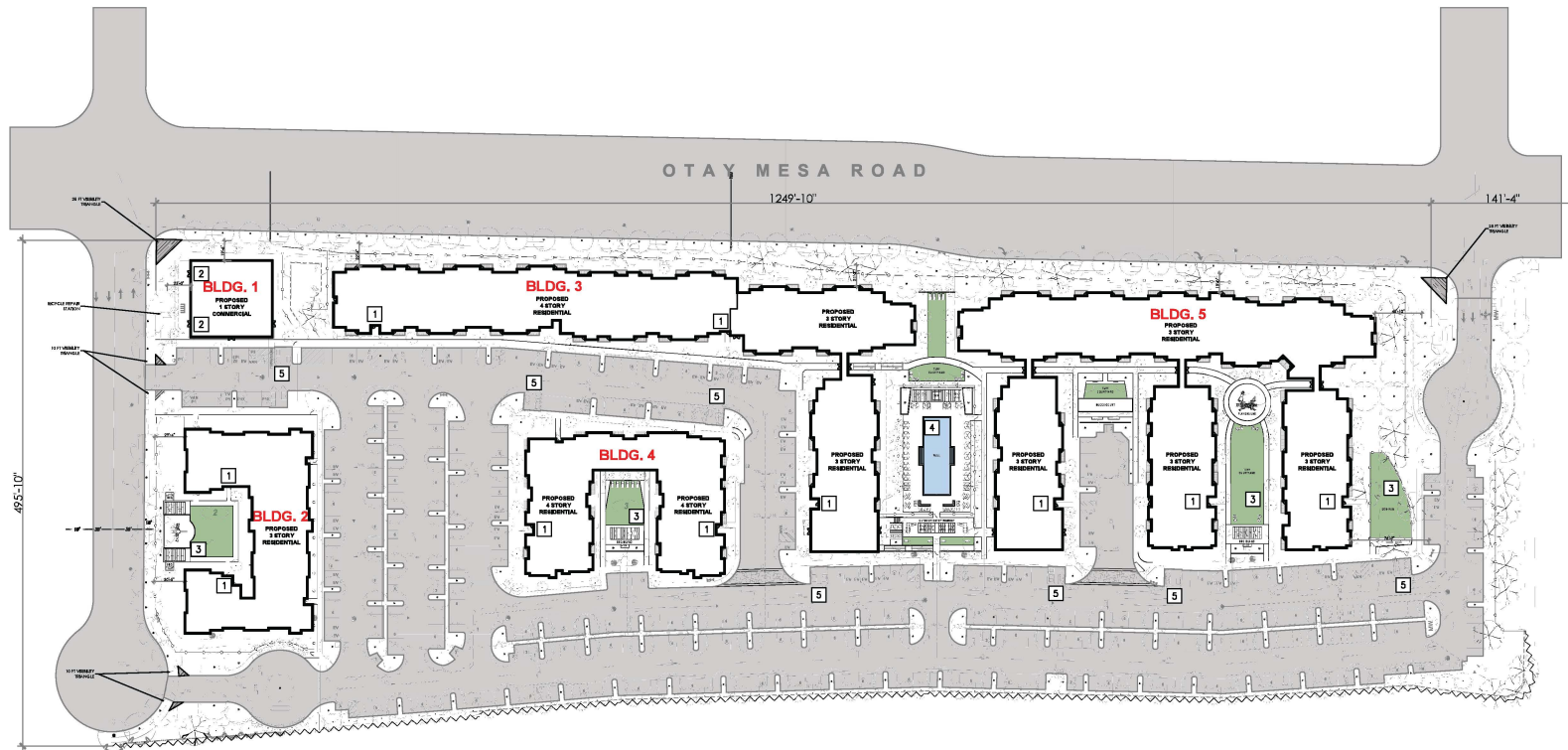


Figure 2
BDM Mixed-Use Project Site Plan



KEYNOTES	GENERAL NOTE	LEGEND
<ul style="list-style-type: none"> 1 STAR ACCESS 2 COMMERCIAL ENTRANCE 3 COURTYARD (SEE LANDSCAPE PLANS) 4 POOL (SEE LANDSCAPE PLANS) 5 TRASH AND GREEN WASTE ENCLOSURE 	<p>- NO OBJECTS HIGHER THAN 24 INCHES WILL BE PROPOSED IN THE VISIBILITY AREAS</p>	<ul style="list-style-type: none"> ACCESSIBLE AREA ACCESSIBLE PARKING STALL OFF-SITE PEDESTRIAN CIRCULATION ON-SITE PEDESTRIAN CIRCULATION PROPERTY LINE

Waste disposal sites and recycling methods and opportunities may change from those available today; however, it is not expected that waste diversion and disposal sites listed in Table 4 would change by the time the project is anticipated to begin construction. This WMP includes the following general information known at the time the WMP was prepared.

The project will use the disposal sites and recycling facilities designated in this plan, or alternate facilities listed on the Environmental Services Department's website that achieve a comparable diversion rate. A facility (or facilities) substituted must not affect the overall diversion rate of the project. This WMP includes the following general information known at the time the WMP was prepared:

- Projected waste generation calculations and identification of types of waste materials generated;
- Source separation techniques for waste generated;
- How materials will be re-used on-site;
- Name and location of current recycling, re-use, and landfill facilities where waste will be disposed of if not re-used on-site;
- A "buy recycled" program;
- Measures to be implemented directed at reducing construction debris;
- Method(s) for communicating waste reduction and recycling goals to subcontractors;
- A general time line for construction and development; and
- A list of required progress and inspections by City staff, based on current ordinances.

1.1 Regulatory Framework

State

California Integrated Waste Management Act (AB 939)

The California Integrated Waste Management Act was enacted by the California Legislature in 1989 with the goal of reducing dependence on landfills for the disposal of solid waste and to ensure an effective and coordinated system for the safe management of all solid waste generated within the state. Assembly Bill 939 mandated a reduction in the amount of solid waste disposed of by jurisdictions and required diversion goals of 25 percent by 1995 and 50 percent by the year 2020. The Integrated Waste Management Act established a hierarchy of preferred waste management practices, which include (1) source reduction, (2) recycling and composting, and (3) environmentally safe disposal by transforming or landfilling. It addresses all aspects related to solid waste regulation, including the details regarding the lead enforcement agency's requirements and responsibilities; the permit process, including inspections and denials of permits; enforcement; and site clean-up and maintenance. It requires that each county prepare a countywide integrated waste management plan that is reviewed at least once every five years to assure that waste management practices remain consistent with the practices defined in the California Public Resources Code. In 2013, AB 341 increased the waste diversion target to 75 percent by 2020.

Waste Management (AB 1594)

“Alternative daily cover” (ADC) is a cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. CalRecycle has approved 11 ADC material types that can currently be reported as diversion: ash and cement kiln dust, treated auto shredder waste, construction and demolition waste, compost, green material, contaminated sediment, sludge, and shredded tires. Generally, these materials must be processed so that they do not allow gaps in the exposed landfill face.

Pursuant to California Public Resources Code Section 41781.3 and AB 1594, beginning January 1, 2020, the use of green material as ADC will not constitute diversion through recycling and will be considered disposal. “Green material” is defined as any plant material that is either separated at the point of generation or separated at a centralized facility that employs methods to minimize contamination. Green material includes, but is not limited to, yard trimmings, untreated wood wastes, paper products, and natural fiber products. Green material does not include treated wood waste, mixed demolition or mixed construction debris, or manure and plant waste from the food processing industry, alone or blended with soil. As of August 1, 2018, local jurisdictions are required to include information in an annual report on how the local jurisdiction intends to address the diversion requirements and divert green material that is being used as ADC. A jurisdiction that does not meet certain diversion requirements as a result of not being able to claim diversion for the use of green material as ADC would be required to identify and address, in an annual report, barriers to recycling green material and, if sufficient capacity at facilities that recycle green material is not expected to be operational before a certain date, to include a plan to address those barriers.

California Solid Waste: Diversion (AB 341)

AB 341, adopted in 2011, amended AB 939 by making a legislative declaration that it is the policy goal of the State of California that not less than 75 percent of solid waste generated be reduced, recycled, or composted by the year 2020. While a policy goal may not be legally enforceable, city and/or county ordinances and other mechanisms make AB 341 provisions enforceable within their jurisdictions. AB 341 also required a business (defined to include a commercial or public entity) that generates more than eight cubic yards of commercial solid waste per week or is a multifamily residential dwelling of five units or more to arrange for recycling services, starting July 1, 2012.

Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions (SB 1383)

In September 2016, Governor Brown signed into law SB 1383, establishing methane emissions reduction targets in a statewide effort to reduce emissions, or short-lived climate pollutants (SLCP) in various sectors of California’s economy. The new law codifies the California Air Resources Board’s Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605, to achieve reductions in the state’s emissions to short-lived climate pollutants. Actions to reduce short-lived climate pollutants are essential to address the many impacts to climate change on human health, especially in California’s most at-risk communities, and on the environment.

As it pertains to CalRecycle, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by

2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

Local

City of San Diego General Plan

The City of San Diego General Plan Public Facilities, Services, and Safety Element contains goals and policies related to the provision of public services within its city limits. Applicable policies include those listed below.

City of San Diego Zero Waste Plan: Road to Zero Waste, Next Stop 75 Percent

State of California regulations for solid waste (California Public Resources Code, Section 41700 et seq.) require that each region have a plan with adequate capacity to manage or dispose of solid waste for at least 15 years into the future. The City of San Diego's Zero Waste Plan establishes goals to target 75 percent diversion by 2020, 90 percent diversion by 2035, and "zero" by 2040 and outlines potential diversion strategies to help the City achieve these goals.

The Whitebook: Standard Specifications for Public Works Construction

The City created the Whitebook, a supplement which takes precedence over the specification language contained in the "Greenbook." Standard Specifications for Public Works Construction, and addresses the unique conditions in the City that are not addressed in the Greenbook. Specifically, Part 1 – General Provisions (A), Section 7-21 addresses construction and demolition waste management.

2.0 BACKGROUND

In 1989, the California Legislature passed Senate Mandate AB 939: Integrated Waste Management Act, which mandated that all cities reduce waste disposed in landfills from generators within their borders by 50 percent by the year 2000. AB 939 required all local governments to prepare a Source Reduction and Recycling Element, which incorporates waste management policies and programs to achieve the mandated waste reduction. Since 2004, the City has diverted more than 50 percent of its generated waste stream from disposal. Assembly Bill 341 was chaptered in 2011 and sets the new diversion target at 75 percent.

The City of San Diego CEQA Significance Determination Thresholds have established a threshold of 40,000 square feet of renovation, demolition, or construction as generating sufficient waste (60 tons) to have a potentially cumulative significant impact on solid waste services. According to the City's CEQA Significance Determination Thresholds, projects that are 1,000,000 square feet or more generating sufficient waste (1,500 tons) have potentially significant direct impacts on solid waste services and facilities. The *BDM Mixed-Use Project*, as proposed, exceeds these thresholds. The purpose of this WMP is to identify measures to manage waste generation and avoid potentially significant impacts.

In 2008, SB 1016 was chaptered. Known as the Solid Waste Disposal Measurement Act, SB 1016 maintained the 50 percent diversion requirement, but changed to a disposal-based measurement system, expressed as the 50 percent Equivalent Per Capita Disposal Target. This built upon AB 939 by implementing a simplified and timelier indicator of jurisdiction performance that focuses on reported disposal at Board-permitted disposal facilities. This established a goal of not recycling more, but disposing of less. AB 341: Jobs and Recycling, chaptered in 2011, was intended to create green jobs by expanding recycling to every multi-family dwelling and business. It charged CalRecycle with responsibility for ensuring that the State is diverting at least 75 percent of solid waste that is generated within the State by 2020. SB 1016 establishes that compliance with State law is measured by reducing the amount of waste material requiring disposal, and AB 341 increases the diversion target to 75 percent.

Additional local regulation pertaining to solid waste management includes the City of San Diego's Municipal Code Ch.14 Art.2 Div.8: §142.0810, §142.0820, Ch.6 Art.6 Div.7; §66.0706, §66.0709, §66.071; and Ch.6 Art6. Div6; §66.0711, §66.0604, §66.0606. These statutes designate refuse and recycling space allocation requirements for on-site refuse and recyclable material storage requirements, diversion of construction and demolition debris regulations, and diversion of recyclable materials generated from residential and commercial facilities. Approval of the *BDM Mixed-Use Project* is subject to approval of this plan by the ESD.

The City of San Diego has established a threshold of 40,000 square feet of development as generating sufficient waste (60 tons) to have a potentially cumulatively significant impact on solid waste services. The project as proposed exceeds this threshold. The purpose of this WMP is to identify measures that would be implemented to reduce this potential solid waste impacts such that significant impacts are avoided.

The City Recycling Ordinance is found in Municipal Code section 66.0701 et. Seq. It requires the provision of recycling service for all single-family residences; and commercial facilities and multifamily residences with service for four cubic yards or more. In addition, the ordinance also requires development of educational materials to ensure occupants are informed about the City's ordinance and recycling services including information on types of recyclable materials accepted.

Construction and Demolition (C&D) Debris Diversion Deposit Program applies to all applicants for building, demolition, and removal permits. This ordinance requires that the applicant post a deposit (Table 1, *C&D Debris Deposit Table*). The deposit is not returned until the applicant demonstrates that a minimum amount of the material generated has been diverted from disposal in landfills. Mixed construction debris recycling facilities in San Diego are evaluated quarterly to determine how much of the throughput is recycled, and how much is a "residual" material requiring disposal. Facilities that accept mixed debris typically achieve a 68 percent or less diversion rate. Single materials recyclers, such as metal recyclers, often achieve a nearly 100 percent diversion rate. When comingled materials are sent to a mixed facility, the 75 percent diversion goal established by AB 341 will not be met. Depending on the project, to ensure that the overall diversion goal is attained, some materials must often be separated and trucked to facilities with higher diversion rates, such as aggregate and metal recyclers.

**Table 1
C&D Debris Deposit Table**

Building Category	Sq. Ft. Subject to Ordinance*	Deposit per Sq. Ft.	Range of Deposits
Residential New Construction	500-125,000 detached 500-100,000 attached	\$0.40	\$200-\$50,000 \$200-\$40,000
Non-residential New Construction	1,000-25,000 commercial 1,000-75,000 industrial	\$0.20	\$200-\$5,000 \$200-\$15,000
Non-residential Alterations	286 with no maximum	\$0.70	\$200 and up
Residential Demolition	286 with no maximum	\$0.70	\$200 and up
Non-residential Demolition	1,000 with no maximum	\$0.20	\$200 and up
Roof Tear-off	All projects	-	\$200
Residential Alterations	500 and above	-	\$1,000

*Projects under the minimum square footage subject to the ordinance are exempt from the C&D debris recycling deposit.

2.1 Exterior Refuse, Organic Waste, and Recyclable Material Storage Area Requirements

Construction of the *BDM Mixed-Use Project* is expected to begin in early 2023. The project would take approximately 30 months to complete, with estimated completion of summer 2025. Because the *BDM Mixed-Use Project* includes residential and nonresidential development, exterior refuse, organic waste, and recyclable material storage areas will differ, as described below.

Table 2 provides the *Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Residential Development* in accordance with the City's Land Development Code. Table 3 provides the *Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Nonresidential Development*.

2.2 Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for the BDM Mixed-Use Project

The *BDM Mixed-Use Project* would develop a mixed-use project with a total of 430 residential units and 6,000 square feet of commercial retail. Table 2, *Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Residential Development*, shows the required amount of refuse and recyclable storage areas for the project's residential element. As shown in Table 2, the project would be required to provide 824 square feet each of exterior refuse and recyclable material storage area, for a total of 2,472 square feet of material storage area. Table 3, *Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Commercial and Industrial Development*, shows the required amount of refuse and recyclable storage areas for the project's commercial retail element. As shown in Table 3, the project would be required to provide 24 square feet each of exterior refuse and recyclable material storage area, for a total of 72 square feet of material storage area.

Table 2
Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Residential Development¹

Number of Dwelling Units per Development	Minimum Refuse Storage Area per Development (square feet)	Minimum Organic Waste Storage Area per Development (square feet)	Minimum Recyclable Material Storage Area per Development (square feet)	Total Minimum Storage Area per Development (square feet)
1	6.25	6.25	6.25	18.75
2-6	12	12	12	36
7-15	24	24	24	72
16-25	48	48	48	144
26-50	96	96	96	288
51-75	144	144	144	432
76-100	192	192	192	576
101-125	240	240	240	720
126-150	288	288	288	864
151-175	336	336	336	1,008
176-200	384	384	384	1,152
201+	384 plus 48 square feet for every 25 dwelling units above 201	384 plus 48 square feet for every 25 dwelling units above 201	384 plus 48 square feet for every 25 dwelling units above 201	1,152 plus 144 square feet for every 25 dwelling units above 201

¹ Per Section 142.0820©, alternative compliance via mechanical compactors or other comparable technology and/or via private refuse and recyclable materials hauling scheduled to meet the specific needs of a development may be allowed ministerially during building plan review if it can be demonstrated that the alternative compliance accommodates the same or greater capacity than shown in Table 2.

Source: City of San Diego Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, §142.0820, Table 142-08B, effective January 1, 2000.

Table 3
Minimum Exterior Refuse Organic Waste, and Recyclable Material Storage Areas for Nonresidential 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)	Minimum Organic Waste Storage Area Per Development (square feet)	Total Minimum Storage Area per Development (square feet)
0 – 5,000	12	12	12	36
5,001 – 10,000	24	24	24	72
10,001 – 25,0000	48	48	48	144
25,001 – 50,000	96	96	96	288
50,001 – 75,000	144	144	144	432
75,001 – 100,000	192	192	192	576
100, 001+	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	576 plus 144 square feet for every 25,000 square feet of building area above 100,001

Source: City of San Diego Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, §142.0830, Table 142-08C, effective January 1, 2000.

3.0 EXISTING CONDITIONS

The *BDM Mixed-Use Project* site encompasses an approximately 13.45-acre undeveloped lot. The site has been previously graded in accordance with Vesting Tentative Map 362532. The project site is bordered by Otay Mesa Road to the north, vacant land designated as Open Space in the Otay Mesa Community Plan to the immediate north and east; vacant land designated for Residential – Medium development (15 – 29 dwelling units) to the west; and State Route (SR) 905 on the south.

4.0 PROPOSED CONDITIONS

The proposed project involves construction of a mixed-use development consisting of 430 residential units and approximately 6,000 square feet of commercial retail space. (See Figure 2, *BDM Mixed-Use Site Plan*.) Construction of the *BDM Mixed-Use Project* is expected to begin in early 2023. The project would take approximately 30 months to complete, with estimated completion of summer 2025. Construction practices will comply with local, State, and Federal regulations regarding handling of building materials to ensure waste minimization requirements are met.

5.0 GRADING AND CONSTRUCTION WASTE

5.1 Grading

As discussed in Section 1.0, the project site is currently undeveloped. Based on the Grading Plan prepared for the project, the project would require approximately 2,193 cubic yards of cut and 65,467 cubic yards of fill. Approximately 63,274 cubic yards of material would be imported. Therefore, no waste materials (earth) would be required to be disposed of as a result on project grading operations.

5.2 Construction

Construction activities would generate packaging materials and unpainted wood, including wood pallets, and other miscellaneous debris. Construction debris would be separated on-site into material-specific containers to facilitate reuse and recycling and to increase the efficiency of waste reclamation. And/or would be collected by a contracted waste hauler and separated at the facility.

Construction for the project will occur over approximately 30 months. Construction activities would generate packaging materials and unpainted wood, including wood pallets, and other miscellaneous debris. Construction debris would be separated on-site into material-specific containers to facilitate reuse and recycling and to increase the efficiency of waste reclamation, and/or would be collected by a contracted waste hauler and separated at the facility.

Source separation of materials at the construction site is essential to (1) ensure appropriate waste diversion rate, (2) minimize costs associated with transportation and disposal, and (3) facilitate compliance with the C&D ordinance. The types of construction waste anticipated to be generated include:

- Asphalt and Concrete
- Brick/Masonry/Tile
- Cardboard
- Carpet, Padding/Foam
- Drywall
- Landscape Debris
- Mixed C&D Debris
- Roofing Materials
- Scrap Metal
- Unpainted Wood and Pallets
- Garbage/Trash

In accordance with City WMP requirements, the City's Construction and Demolition Ordinance, the City's current diversion targets, and AB 341, a minimum of 75 percent of construction materials will be diverted. Strategies for material reduction, and reuse would be identified by the contractor prior to the start of work, materials to be recycled would be redirected to appropriate recipients selected from ESD's directory of facilities that recycle construction materials, scrap metal, and yard waste.

To the extent practical, either post-consumer recycled or pre-consumer recycled materials would be used in the construction phase. Recycled content materials reuse waste products that would otherwise be deposited in landfills. Use of local materials supports the local economy and reduces transportation. Use of rapidly renewable materials minimizes natural resource consumption and improves the stewardship of forests and related ecosystems.

The following are examples of construction waste management strategies that shall be utilized in the design of future projects. Actual measures implemented as a part of each future development project will be reviewed by ESD at the preconstruction meeting as required by the project's Mitigation Monitoring and Reporting Program. Accepted measures will then be included in the contractor's construction documents.

- Recycling, salvage, reuse, and disposal options would be determined before each job begins.
- Materials that can be reused would be donated to charities and nonprofit agencies, when practical.
- Advertisements would be placed in local newspapers announcing salvageable and reusable materials for sale or donation.
- Refuse haulers and recycling facilities would be selected based on their responsiveness to the recycling plan, fees, and geographic proximity to the job site.
- Solid waste management coordinator will be responsible for educating contractors and subcontractors regarding waste management plan requirements.
- Recycling areas would be clearly identified with large bilingual signs to ensure contamination rates in bins are below five percent by weight.
- Recycling bins would be placed in areas that would minimize misuse or contamination by employees and the public (location to be approved by ESD staff).
- Reuse building materials, use materials that have recycled content, or use materials that are derived from sustainable or rapidly renewable sources to the extent possible.
- Scheduling time for deconstruction and recycling activities to take place during project construction phase.

In accordance with State diversion targets, a minimum of 75 percent of construction materials will be recycled. Materials to be recycled would be redirected to appropriate recipients selected from ESD's directory of facilities that recycle construction materials, scrap metal, and yard waste.

To facilitate management of construction materials, the developer shall identify one person or agency connected with the proposed development to act as Solid Waste Management Coordinator, whose responsibility it becomes to work with all contractors and subcontractors to ensure material separation and coordinate proper disposal and diversion of waste generated. The Solid Waste Management Coordinator will help to ensure all diversion practices outlined in this Waste Management Plan are upheld and communicate goals to all contractors involved efficiently.

The responsibilities of the Solid Waste Management Coordinator, include, but are not limited to, the following:

- Review the Solid Waste Management Plan including responsibilities of Solid Waste Management Coordinator.
- Work with contractors to estimate quantities of each type of material that will be salvaged, recycled, or disposed of as waste, then assist contractors with documentation.
- Review and update procedures as needed for material separation and verify availability of containers and bins needed to avoid delays.
- Review and update procedures for periodic solid waste collection and transportation to recycling and disposing facilities.

The contractors will perform frequent inspections of the construction site to ensure compliance with the requirements of the Waste Management Plan and all other applicable laws and ordinances and report directly to Solid Waste Management Coordinator. Inspections will include verifying the availability and number of dumpsters based on amount of debris being generated, correct labeling of dumpsters, proper sorting and segregation materials, and salvaging of excess materials. Additionally, the following apply:

- Solid waste management coordinator will be responsible for educating contractors and subcontractors regarding waste management plan requirements and ensuring that contractors and subcontractors carry out the measures described in the WMP.
- Solid waste management coordinator will ensure ESD attendance at a Precon and assure compliance with segregation requirements, and verification of recycled content in base materials.
- Recycling areas will be clearly identified with large signs, approved by ESD, and sufficient amounts of material-specific bins will be provided for necessary segregation.
- Recycling bins will be placed in areas that are readily accessible to contractors/ subcontractors and in areas that will minimize misuse or contamination by employees and the public.
- Solid waste management coordinator will be responsible for ensuring that contamination rates in bins remain below five percent by weight of the bin.

Table 4, *BDM Mixed-Use Project Waste Generation – Construction*, is included below to conservatively summarize the types of waste generated, the amount of each waste type diverted, and the overall amount remaining to be disposed of in landfills combined for all phases of the project. Construction

waste processing facilities that may be used for the construction phase include but are not limited to those facilities listed in Table 4.

Because certified diversion rates and authorized facilities are updated quarterly and the decision on which facility will be contracted for waste hauling will be made at the time of construction, the developer reserves the right to select any authorized facility as long as the facility is City-certified to meet minimum diversion requirements.

Construction debris will be separated onsite into material-specific containers, corresponding to the materials types in Table 4, to facilitate reuse and recycling and to increase the efficiency of waste reclamation. The *BDM Mixed-Use* project will implement a target of 20 percent recycled material and 75 percent for landfill diversion. As shown in Table 4, 89 percent of the construction materials generated by the project are expected to be diverted from landfills.

6.0 OCCUPANCY PHASE

While the construction phase for each future development project in the *BDM Mixed-Use* project site occurs as a one-time waste generation event as construction of the project proceeds, tenant/owner occupancy requires an on-going plan to manage waste disposal to meet the waste reduction goals established by the City and State. Future developments within the project site will comply with the City's Recycling Ordinance. Solid waste collection would be provided by a private hauler.

6.1 Implementation

Based on Table 142-08C of the City of San Diego Municipal Code, Table 5, *Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Multiple Unit Residential Developments within the BDM Mixed-Use Project*, expresses the anticipated refuse and recyclable storage requirements for the residential portion of the project. Table 6, *Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Non-Residential Developments within the BDM Mixed-Use Project*, expresses the anticipated refuse and recyclable storage requirements for the residential portion of the project.

The *BDM Mixed Use Project* would be required to provide a minimum of 824 square feet refuse storage area, 824 square feet of organic waste storage area, and a minimum of 824 square feet recyclable material storage area for a total of approximately 2,472 square feet minimum of exterior refuse, organic waste, and recyclable material storage area for residential developments within the *BDM Mixed-Use Project*. Additionally, the project proposes 6,000 square feet of commercial development. This will require a minimum of 24 square feet refuse storage area, 24 square feet or organic waste storage area, and a minimum of 24 square feet recyclable material storage area for a total of approximately 76 square feet minimum of exterior refuse, organic waste, and recyclable material storage area. For the *BDM Mixed-Use Project* as a whole, the project would be required to provide a minimum of 848 square feet refuse storage area, 848 square feet or organic waste storage area, and a minimum of 848 square feet recyclable material storage area for a total of approximately 2,544 square feet minimum exterior refuse, organic waste, and recyclable material storage area.

Table 4
BDM Mixed-Use Project Waste Generation – Construction

Material Type	Estimated Waste Quantity (tons)	Handling	Estimated Diversion (tons)	Estimated Disposal (tons)
CONSTRUCTION WASTE				
Asphalt and Concrete	420.67	Hanson Aggregates 9229 Harris Plant Road San Diego, CA 92126 (100% diversion)	420.67	--
Brick/Masonry/Tile	120.19	Vulcan Carroll Canyon Landfill and Recycle Site 10051 Black Mountain Road San Diego, CA 92126 (100% diversion)	120.19	--
Cardboard	11.81	Allan Company 6733 Consolidated Way San Diego, CA 92121 (100% diversion)	8.27	3.54
Carpet, Padding/Foam	6.01	DFS Flooring 10178 Willow Creek Road San Diego, CA 92131 (100% diversion)	6.01	--
Drywall	84.13	EDCO Station Transfer and Buy Back Center 8184 Commercial Street La Mesa, CA 91942 (70% diversion)	58.89	25.24
Landscape Debris	12.01	Miramar Greenery 5180 Convoy Street San Diego, CA 92111 (100% diversion)	12.01	--
Mixed C&D Debris	360.59	Otay C&D/Inert Debris Processing Facility 1700 Maxwell Road Chula Vista, CA 91913 (76% diversion)	270.45	90.15
Roofing Materials	6.09	LEED Recycling 8725 Miramar Place San Diego, CA 92121 (100% diversion)	6.09	--
Scrap Metal	29.21	Allan Company 6733 Consolidated Way San Diego, CA 92121 (100% diversion)	20.45	8.76
Unpainted Wood & Pallets	144.21	Miramar Greenery 5180 Convoy Street San Diego, CA 92111 (100% diversion)	144.21	--
Garbage/Trash	7.34	Miramar Landfill 5180 Convoy Street San Diego, CA 92111 (0% diversion)	--	7.34
TOTAL	1,194.93		1,067.23	127.69

**Table 5
Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Multiple Unit Residential Developments within the BDM Mixed-Use Project**

Land Use	Number of Dwelling Units	Minimum Refuse Storage Area (square feet)	Minimum Organic Waste Storage Area (square feet)	Minimum Recyclable Material Storage Area (square feet)	Total Minimum Storage Area (square feet)
Residential	430	824	824	824	2,208
TOTAL	430	824	824	824	2,208

**Table 6
Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Non-Residential Developments within the BDM Mixed-Use Project**

Land Use	Gross Floor Area	Minimum Refuse Storage Area (square feet)	Minimum Recyclable Material Storage Area (square feet)	Minimum Organic Waste Storage (square feet)	Total Minimum Storage Area (square feet)
Commercial	6,000	24	24	24	72
TOTAL	6,000	24	24	24	72

As shown in Table 7, *Estimated Solid Waste Generation from the BDM Mixed-Use Project – Occupancy Phase*, during occupancy, the expected generated waste per year from the BDM Mixed-Use Project when fully occupied would be approximately 533 tons.

**Table 7
Estimated Solid Waste Generation from the BDM Mixed-Use Project – Occupancy Phase**

Use	Intensity	Waste Generation Rate	Estimated Waste Generated (tons/year)
Residential	430 units	1.2 tons/year/unit	516
Commercial – General Retail	6,000 sq. ft.	0.0028 tons/year/sq. ft.	17
TOTAL			533

On-site recycling services shall be provided to all occupants of non-residential facilities within the *BDM Mixed-Use Project*. Occupants of non-residential facilities within the *BDM Mixed-Use Project* that receive solid waste collection service shall participate in a recycling program by separating recyclable materials from other solid waste and depositing the recyclable materials in the recycling container provided for the occupants. Recycling services are required by Section 66.0707 of the City of San Diego Land Development Code. Based on current requirements, these services shall include the following:

- Continuous assessment of new technologies for recycling, composting, cogeneration, and disposal to maximize efficient use of resources and environmental protection;
- Collection of recyclable materials as frequently as necessary to meet demand;
- Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers;
- Collection of other recyclable materials for which markets exist, such as scrap metal, wood pallets
- Collection of food waste for recycling by composting;
- Utilization of recycling receptacles or containers which comply with the standards in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department;
- Designated recycling collection and storage areas to include a blue bin for recycling plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers; and a green bin for recycled organic waste; and
- Signage on all recycling receptacles, containers, chutes, and/or enclosures which complies with the standards described in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department

For the *BDM Mixed-Use Project*, including non-residential facilities (as required by Section 66.0707 of the City of San Diego Land Development Code), the building management or other designated personnel shall ensure that occupants are educated about the recycling services as follows:

- 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;
- All new occupants shall be given information and instructions upon occupancy; and
- All occupants shall be given information and instructions upon any change in recycling service to the commercial facility.

6.2 Landscaping and Green Waste Recycling

Plant material selection will be guided by the macro-and micro-climate characteristics of the project site and surrounding region to encourage long-term sustainability without the excessive use of water pesticides and fertilizers. Irrigation of these areas, where practical, will utilize reclaimed water applied via low precipitation rate spray heads, drip emitters, or other highly efficient systems. Landscape maintenance would include the collection of green waste and recycling of green waste at recycling centers that accept green waste. This will help further reduce the waste generated by developments within the *BDM Mixed-Use Project* during the occupancy phases. Additionally, a green bin will be provided for recycled green waste.

7.0 CONCLUSION

The City of San Diego Development Services Department is requiring that this WMP be prepared and submitted to the City of San Diego's ESD.

This WMP will be implemented to the fullest degree of accuracy and efficiency. Additionally, the project will be required to adhere to City ordinances, including the *Construction and Demolition Debris Diversion*

Deposit Program, the City's Recycling Ordinance, and the Refuse, Organic Waste, and Recyclable Materials Storages Regulations. The WMP for the *BDM Mixed-Use Project* is designed to implement and adhere to all City ordinances and regulations with regards to waste management. The measures in the WMP would ensure that significant impacts relative to solid waste generation would be avoided.

Prior to the issuance of any ~~grading or~~ construction permits, the Solid Waste Coordinator will ensure ESD's attendance at a precon. The Solid Waste Coordinator will ensure that 1) the proposed approach to contractor education is approved, 2) the written specifications for base materials, concrete pavers, decomposed granite, and mulch, is approved, and 3) that the ESD inspector approves the separate waste containers, signage, and hauling contract(s) for the following materials:

- Asphalt/concrete
- Brick/masonry
- Cardboard
- Carpet/padding/foam
- Drywall
- Landscape debris
- Mixed C&D debris
- Scrap metal
- UNTREATED woodwaste
- Refuse

The project will be designed to achieve 75 percent of construction waste to be source reduced and/or recycled. While diversion activities during occupancy may not fully achieve this goal, the project incorporates several measures above and beyond the requirements of local ordinances. These measures include but are not limited to:

- The project includes landscaping that will reduce yard waste and will provide transportation to a composting facility for the yard waste that is produced. The project proponent will ensure that ESD reviews the landscaping plans and hauling contract for the facility to verify that waste reduction goals are met.
- In accord with the City's Conservation Element, the project seeks to reduce its "environmental footprint" through a variety of sustainable design features. The project will comply with or exceed the voluntary measures specified in the California Green Building Standards Code relative to cool/green roofs and would provide electric vehicle (EV) charging spaces. The project will also provide plumbing fixtures or fittings that are low-flow.
- The project will target 20 percent of solid waste to be recycled material and 75 percent for landfill diversion.

These measures ensure that the waste generated by the project will be properly managed and that solid waste services will not be impacted. The following standard measures apply to the project to reduce cumulative impacts on solid waste to below a level of significance.

1.0 Prior to Permit Issuance or Bid opening/Bid award

- A. LDR Plan check

1. Prior to the issuance of any construction permit, including but is not limited to, demolition, ~~grading~~, building or any other construction permit, the Assistant Deputy Director (ADD) Environmental Designee shall verify that the all the requirements of the Refuse & Recyclable Materials Storage Regulations and all of the requirements of the waste management plan are shown and noted on the appropriate construction documents. All requirements, notes and graphics shall be in substantial conformance with the conditions and exhibits of the associated discretionary approval.
2. The construction documents shall include a waste management plan.
3. Notification shall be sent to:

MMC Environmental Review Specialist
Development Service Department
 9601 Ridgehaven Court
 Ste. 220, MS 1102 B
 San Diego, California 92123 1636
 (619) 980 7122

Environmental Services Department (ESD)
 9601 Ridgehaven Court
 Ste. 210, MS 1102 A
 San Diego, California 92123 1636
 (858) 573-1236

II. Prior to Start of Construction

- A. ~~Grading and Building Permit~~ - Prior to issuance of any ~~grading or building~~ permit, the permittee shall be responsible to arrange a preconstruction meeting to coordinate the implementation of the WMP. The Precon Meeting that shall include: the Construction Manager, Building/~~Grading~~ Contractor; MMC; and ESD and the Building Inspector and/or the RE (whichever is applicable) to verify that implementation of the waste management plan shall be performed in compliance with the plan approved by LDR and the San Diego ESD, to ensure that impacts to solid waste facilities are below a level of significance.

1. At the Precon Meeting, the Permittee shall submit reduced copies (11" x 17") of the approved waste management plan, the RE, BI, MMC, and ESD.
2. Prior to the start of construction, the Permittee/Construction Manager shall submit a construction schedule to the RE, BI, MMC, and ESD.

III. During Construction

The Permittee/Construction Manager shall call for inspections by the RE/BI and both MMC and ESD, who will periodically visit the demolition/construction site to verify implementation of the waste management plan. The Consultant Site Visit Record (CSVSR) shall be used to document the Daily Waste Management Activity/progress.

IV. Post Construction

- A. For any demolition or construction permit, a final results report shall be submitted to both MMC and ESD for review and approval to the satisfaction of the City. MMC will coordinate the approval with ESD and issue the approval notification. ESD will review/approve City Recycling Ordinance-required educational materials prior to occupancy.