

Initial Study and Mitigated Negative Declaration

Barnes Park Multi-Benefit Stormwater Capture Project

Appendix

Prepared for:



City of Baldwin Park
14403 E. Pacific Ave.
Baldwin Park, CA 91706
TEL (626) 960-4011

Prepared by:



1561 E. Orangethorpe Avenue, Suite 240
Fullerton, California, 92831

TEL (714) 526-7500 | FAX (714) 526-7004 | www.cwecorp.com

Appendix A
Barnes Park Geotechnical Engineering Report





Geotechnical Engineering Report

**Barnes Park Multi-Benefit Stormwater Capture
Baldwin Park, LA County, California**

September 7, 2021

Updated January 27, 2022

Terracon Project No. 60215111

Prepared for:

CWE Corp.
Fullerton, California

Prepared by:

Terracon Consultants, Inc.
Tustin, California



September 7, 2021
Updated January 27, 2022



1561 E. Orangethorpe Avenue, Suite 240
Fullerton, California 92831

Attn: Mr. Vik Bapna
P: (714) 526-7500 x 212
E: vbapna@cwecorp.com

Re: Geotechnical Engineering Report
Barnes Park Multi-Benefit Stormwater Capture
3251 Patritti Avenue
Baldwin Park, LA County, California
Terracon Project No. 60215111

Dear Mr. Bapna:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with CWE Work Order No. 21411W02s dated June 16, 2021, amended on August 31, 2021 and December 20, 2021. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations for diversion structures and park expansion and amenities, pipeline, pavements, and infiltration systems for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.



Victor V. Nguyen, E.I.T.
Senior Staff Engineer



S. Raj Pirathiviraj, P.E., G.E.
Senior Engineer

APR review by F. Fred Buhamdan, P.E.

REPORT TOPICS

INTRODUCTION.....	1
SITE CONDITIONS.....	1
PROJECT DESCRIPTION.....	2
GEOTECHNICAL CHARACTERIZATION.....	3
SEISMIC CONSIDERATIONS.....	4
LIQUEFACTION POTENTIAL.....	6
DRY SEISMIC SETTLEMENT ANALYSIS.....	6
CORROSIVITY.....	7
STORMWATER MANAGEMENT.....	7
GEOTECHNICAL OVERVIEW.....	9
EARTHWORK.....	9
SHALLOW FOUNDATIONS.....	14
CONCRETE SUPPORT SLAB.....	16
LATERAL EARTH PRESSURES AND TEMPORARY SHORING.....	16
PAVEMENTS.....	18
GENERAL COMMENTS.....	19

Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the [GeoReport](#) logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

SITE LOCATION AND EXPLORATION PLANS

EXPLORATION RESULTS (Boring Logs and Laboratory Data)

SUPPORTING INFORMATION (Horticulture Exerts, Liquefaction Analysis, General Notes, and Unified Soil Classification System)

Geotechnical Engineering Report
Barnes Park Multi-Benefit Stormwater Capture
3251 Patritti Avenue
Baldwin Park, LA County, California
Terracon Project No. 60215111
September 7, 2021
Updated January 27, 2022

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed diversion structure, park expansion and amenities, pipeline, pavements, and infiltration systems to be located at Barnes Park at 3251 Patritti Avenue in Baldwin Park, LA County, California. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Infiltration design and considerations
- Foundation design and construction
- Lateral earth pressures
- Seismic site classification per CBC
- Pavement design and construction

The geotechnical engineering Scope of Services for this project included the advancement of seven test borings to depths ranging from approximately 6½ to 50.8 feet below existing site grades (bgs) on August 18, 2021 and an additional six test borings December 30, 2021.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs and as separate graphs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located at the existing Barnes Park at 3251 Patritti Avenue in Baldwin Park, LA County, California. Approximate coordinates for the center of the regional park are 34.0696°N, 117.9997°W

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



Item	Description
Existing Improvements	Current improvements at Barnes Park consists of a recreation building, solar carport canopies, parking and drive areas, shade structures and picnic areas, landscaping and hardscaping, sports fields, and basketball courts.
Current Ground Cover	Asphalt concrete, earthen cover, and grass field.
Existing Topography	The site is relatively flat. Approximate elevations within the park, expansion area, and Patriitti Avenue range from 297 feet at the south end to 304 feet above mean sea level (MSL) at the north end. Approximate elevations along Torch Street and Syracuse Avenue range from 297 to 300 feet MSL.

PROJECT DESCRIPTION

Item	Description
Proposed Additions	<p>The following additions are proposed for the project:</p> <ul style="list-style-type: none">■ Addition of infiltration galleries underneath the existing grass field within Barnes Park. The invert of infiltration galleries are anticipated to be an approximate depth of 20 feet bgs.■ Addition of a diversion structure.■ Replacement of the grass on the existing soccer field with new sod.■ Addition of pipeline along Patriitti Avenue, Torch Street, and Syracuse Avenue connecting to the proposed infiltration galleries and diversion structure.■ Expansion of Barnes Park at the north end. New improvements at expansion area will consist of bioswales/dry riverbeds, new parking area, playground area, and soccer field with associated bleachers, benches, and concrete walkway. Based on discussion with the client, considerations are still being made regarding infiltration through bioswales/dry riverbeds. As such, infiltration testing was not performed at these areas. Furthermore, we understand that the proposed expansion is in preliminary stages and details regarding the expansion may change. As such, Terracon should be notified should the conceptual site plan changes as further exploration and/or analyses may be required to confirm or modify the conclusions and recommendations provided herein.
Construction	<p>We anticipate the following construction:</p> <ul style="list-style-type: none">■ Diversion structure will consist of a pre-fabricated concrete structure supported on a shallow foundation system consisting of a mat or spread footings.■ Park bleachers will be supported on a shallow foundation system consisting of a mat or spread footings.■ New playground area and equipment will be supported by concrete support slabs.
Finished Grade Elevation	Assumed to be within one foot of existing grade.
Grading	The grading will involve excavation for proposed infiltration galleries, diversion structure, pipeline, and foundations. Based on our understanding of the project, we anticipate cut/fill up to 20 feet bgs.

Item	Description
Pavements	We assume both rigid (concrete) and flexible (asphalt) pavement sections should be considered in the parking areas. Anticipated traffic is as follows: <ul style="list-style-type: none">■ Automobile Parking Area: Traffic Index of 4.5■ Driving Lanes: Traffic Index of 5.5 Actual traffic indices should be verified by the civil designer based on anticipated traffic loading.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the geologic setting and planned construction.

The geotechnical characterization forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. As noted in **General Comments**, the characterization is based upon widely spaced exploration points across the site, and variations are likely.

Subsurface Conditions

Surface cover within the field at Barnes Park field consisted of grass cover. Surface cover along Patriitti Avenue consisted of a 4-inch thick layer of asphalt concrete overlying a 3½-inch thick layer of aggregate base course. Surface cover within the expansion area consisted of earthen cover and asphalt concrete. Asphalt concrete at the expansion area was measured to be approximately 3-inches thick. Subsurface soils encountered at the site generally consisted of loose to very dense sand with varying amounts of silt, clay, and gravel.

Conditions encountered at each boring location are indicated on the individual boring logs shown in the **Exploration Results** section and are attached to this report. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual.

Lab Results

Laboratory tests were conducted on selected soil samples and the test results are presented in the **Exploration Results** section and on the boring logs. Atterberg limit test results indicate that the on-site soils generally are non-plastic. A collapse test performed on on-site soils encountered at an approximate depth of 2½ feet bgs indicated that these soils have a negligible collapse potential when saturated under normal footing loads of 2,000 psf. Direct Shear testing performed on samples taken at approximate depth of 5, 10, and 15 feet bgs indicate these soils have an effective cohesion of ranging from 230 to 530 psf and an effective friction angle ranging from 29° to 30°. A modified proctor test conducted on on-site near surface soils resulted in a maximum dry

density of 124.2 pounds per cubic foot (pcf) and corresponding optimum moisture content of 9.6 percent.

Horticulture testing was performed in samples collected from HA-1 and HA-3 within the proposed sod replacement area. The test report is presented in the **Exploration Results** section.

Groundwater Conditions

Groundwater was not observed in the borings while drilling, or for the short duration the boring remained open. These observations represent groundwater conditions at the time of the field exploration and may not be indicative of other times, or at other locations.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

According to data collected from the Los Angeles County Public Works Water Data Library for the State of California from well number 3003A, located approximately 0.43 mile southeast of the site, the highest groundwater elevation level, between March 20, 2000 and October 18, 2020, was recorded at greater than 50 feet bgs.¹ The most recent groundwater elevation recorded on October 18, 2020 was recorded at approximately 101 feet bgs.

SEISMIC CONSIDERATIONS

The 2019 California Building Code (CBC) Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool. This web-based software application calculates seismic design parameters in accordance with ASCE 7-16 and 2019 CBC. The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped S_1 value greater than or equal 0.2.

However, Section 11.4.8 of ASCE 7-16 includes an exception from such analysis for specific structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) states that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." Based on our understanding of the proposed structures, it is our assumption that the exception in Section 11.8.4 applies to the proposed structure. However, the structural engineer should verify the applicability of this exception.

¹ Groundwater elevation was obtained from a monitoring well (well id: 3003A) located at a distance of approximately 0.43 mile southeast of the project site (www.dpw.lacounty.gov/general/wells#).

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



Based on this exception, the spectral response accelerations presented below were calculated using the site coefficients (F_a and F_v) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC.

Description	Value
2019 California Building Code Site Classification (CBC) ¹	D ²
Site Latitude (°N)	34.0696
Site Longitude (°W)	117.9997
S_s Spectral Acceleration for a 0.2-Second Period	1.745
S_1 Spectral Acceleration for a 1-Second Period	0.636
F_a Site Coefficient for a 0.2-Second Period	1.000
F_v Site Coefficient for a 1-Second Period	1.700

1. Seismic site classification in general accordance with the 2019 California Building Code.

2. The 2019 California Building Code (CBC) requires a site soil profile determination extending to a depth of 100 feet for seismic site classification. The current scope does not include the required 100-foot soil profile determination. Borings were extended to a maximum depth of 50.8 feet in the existing borings, and this seismic site class definition considers that similar soils continue below the maximum depth of the subsurface exploration. Additional exploration to deeper depths would be required to confirm the conditions below the current depth of exploration.

A site-specific ground motion study may reduce design values and consequently construction costs. We recommend consulting with a structural engineer to evaluate the need for such study and its potential impact on construction costs. Terracon should be contacted if a site-specific ground motion study is desired.

Faulting and Estimated Ground Motions

The site is located in southern California, which is a seismically active area. The type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. As calculated using the USGS Unified Hazard Tool, the Puente Hills Fault which is considered to have the most significant effect at the site from a design standpoint has a maximum credible earthquake magnitude of 7.3 and is located approximately 11.3 kilometers from the site.

Based on the USGS Design Maps Summary Report, using the American Society of Civil Engineers (ASCE 7-16) standard, the modified peak ground acceleration (PGA_M) at the project site is expected to be 0.819 g. Based on the USGS Unified Hazard Tool, the project site has a

mean magnitude of 6.92. Furthermore, the site is not located within an Alquist-Priolo Earthquake Fault Zone based on our review of the State Fault Hazard Maps.²

LIQUEFACTION POTENTIAL

Liquefaction is a mode of ground failure that results from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose sandy soils exist below groundwater. The California Geological Survey (CGS) has designated certain areas as potential liquefaction hazard zones. These are areas considered at a risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table.

The project site is located within a liquefaction hazard zone as designated by the CGS. However, based on the anticipated depth to groundwater, liquefaction hazard potential at the site is considered low. Other geologic hazards related to liquefaction, such as lateral spreading, are therefore also considered low.

DRY SEISMIC SETTLEMENT ANALYSIS

Subsurface soils encountered at the site generally consisted of medium dense to very dense sand with varying amounts of silt and gravel.

The dry seismic settlement analysis for the site was performed in general accordance with the DMG Special Publication 117. The seismic settlement analysis utilized the software “LiquefyPro” by CivilTech Software and boring B-1. A Peak Ground Acceleration (PGA) of 0.819 g and the mean magnitude of 6.92 for the project site were used. Calculations utilized the historical high groundwater depth based on the available data. Settlement analysis used the Tokimatsu, M-correction method and the fines percentage were corrected for liquefaction using the Stark/Olson method.

Based on calculation results, seismically induced settlement of unsaturated sands is estimated to be on the order of 0.4 inch. Differential seismic settlement is anticipated to be between 0.1 to 0.3 inch. The detailed analysis and results are attached to this report in **Supporting Documents** section of the **Appendix**.

² California Department of Conservation Division of Mines and Geology (CDMG), “*Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region*”, CDMG Compact Disc 2000-003, 2000.

CORROSIVITY

The table below lists the results of laboratory soluble sulfate, soluble chloride, electrical resistivity, and pH testing. The values may be used to estimate potential corrosive characteristics of the on-site soils with respect to contact with the various underground materials which will be used for project construction.

Corrosivity Test Results Summary									
Boring	Sample Depth (ft)	Soil Description	Soluble Sulfate (%)	Sulfides (ppm)	Chlorides (ppm)	Red-Ox Potential (mV)	Electrical Resistivity (Ω-cm)	Total Salts (ppm)	pH
B-1	20	Poorly graded sand with gravel	0.01	Nil	45	+691	19,400	284	7.74
B-5	0-5	Sand with varying amounts of silt and gravel	<0.01	Nil	133	+688	1,989	754	8.17

Results of soluble sulfate testing indicate samples of the on-site soils tested possess negligible sulfate concentrations when classified in accordance with Table 19.3.1.1 of the ACI Design Manual. Concrete should be designed in accordance with the exposure class S0 provisions of the ACI Design Manual, Section 318, Chapter 19.

STORMWATER MANAGEMENT

Two (2) in-situ percolation tests were performed from approximate depths of 20 to 25 feet bgs. A 2-inch thick layer of gravel was placed in the bottom of each boring after the borings were drilled to investigate the soil profile. A 3-inch diameter perforated pipe was installed on top of the gravel layer in each boring. Gravel was used to backfill between the perforated pipes and the boring sidewall. The borings were then filled with water for a pre-soak period of 1 hour. Testing began after a pre-soak period. At the beginning of the test, the pipes were refilled with water and readings were taken at standardized time intervals. Percolation rates are provided in the following table:

TEST RESULTS				
Test Location (depth, feet bgs)	Soil Classification	Slowest Measured Percolation Rate (in/hr.)	Correlated Infiltration Rate ¹ (in/hr.)	Water Head (in)
P-1 (20 to 25 ft)	Poorly graded sand with varying amounts of silt and gravel	345	39.3	60
P-2 (20 to 25 ft)	Poorly graded sand, trace gravel	>500	>200	60

¹If proposed infiltration system will mainly rely on vertical downward seepage, the correlated infiltration rates should be used.

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



The field test results are not intended to be design rates. They represent the result of our tests, at the depths and locations indicated, as described above. The design rate should be determined by the designer by applying an appropriate factor of safety. Based on the County of Los Angeles Department of Public Works GS200.1 document, the following reduction factors are recommended:

LA County Reduction Factor	Value
Test-specific correction factor RF_t	2
Site variability correction factor RF_v	1
Long Term siltation, plugging, and maintenance correction factor RF_s	2 ¹
Total Reduction Factor $RF=RF_t \times RF_v \times RF_s$	4

1. This factor may be reduced to 1 if stormwater will be clear and filtered of silts and sediments prior to infiltration.

With time, the bottoms of infiltration systems tend to plug with organics, sediments, and other debris. Long term maintenance will likely be required to remove these deleterious materials to help reduce decreases in actual percolation rates.

The percolation tests were performed with clear water, whereas the storm water will likely not be clear, but may contain organics, fines, and grease/oil. The presence of these deleterious materials will tend to decrease the rate that water percolates from the infiltration systems. Design of the storm water infiltration systems should account for the presence of these materials and should incorporate structures/devices to remove these deleterious materials.

Based on the soils encountered in our borings, we expect the percolation rates of the soils could be different than measured in the field due to variations in fines and gravel content. The design elevation and size of the proposed infiltration system should account for this expected variability in infiltration rates.

Infiltration testing should be performed after construction of the infiltration system to verify the design infiltration rates. It should be noted that siltation and vegetation growth along with other factors may affect the infiltration rates of the infiltration areas. The actual infiltration rate may vary from the values reported here. Infiltration systems should be located a minimum of 10 feet from any existing or proposed foundation system.

GEOTECHNICAL OVERVIEW

The site appears suitable for the proposed construction based upon geotechnical conditions encountered in the test borings, provided that the recommendations provided in this report are implemented in the design and construction phases of this project.

The proposed additions may be supported by a shallow foundation system bearing on engineered fill. Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater. Grading for the proposed improvements should incorporate the limits of the shallow foundations plus a lateral distance of 2 feet beyond the outside edge of perimeter footings.

Based on the findings summarized in this report, it is our professional opinion that the proposed construction will not be subjected to a hazard from settlement, slippage, or landslide, provided the recommendations of our report are incorporated into the proposed construction. It is also our opinion that the proposed construction will not adversely affect the geologic stability of the site or adjacent properties provided the recommendations contained in our report are incorporated into the proposed construction.

The recommendations contained in this report are based upon the results of field and laboratory testing (presented in the **Exploration Results** section), engineering analyses, and our current understanding of the proposed project.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

The following recommendations include site preparation, excavation, subgrade preparation and placement of engineered fills on the project. The recommendations presented for design and construction of earth supported elements, including foundations, and pavements, are contingent upon following the recommendations outlined in this section.

Subgrade preparation recommendations for new sod should follow installation instructions provided by the landscaper.

Earthwork on the project should be observed and evaluated by Terracon. The evaluation of earthwork should include observation and testing of engineered fill, subgrade preparation, foundation bearing soils, and other geotechnical conditions exposed during the construction of the project.

Site Preparation

Strip and remove existing debris, pavements, and other deleterious materials from foundation areas. Exposed surfaces should be free of mounds and depressions which could prevent uniform

compaction. The site should be initially graded to create a relatively level surface to receive fill and provide for a relatively uniform thickness of fill beneath proposed improvements.

Although no evidence of fills or underground facilities such as septic tanks, cesspools, basements, and utilities was observed during the site reconnaissance, such features could be encountered during construction. If unexpected fills or underground facilities are encountered, such features should be removed, and the excavation thoroughly cleaned prior to backfill placement and/or construction.

Subgrade Preparation

The proposed structures may be supported by a shallow foundation system bearing on engineered fill. Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater. Grading for the proposed improvements should incorporate the limits of the shallow foundations plus a lateral distance of 2 feet beyond the outside edge of perimeter footings, where possible.

Exposed areas which will receive fill, once properly cleared and benched where necessary, should be scarified to a minimum depth of 10 inches, moisture conditioned, and compacted per the compaction requirements in this report.

Subgrade soils beneath pavements should be scarified, moisture conditioned, and compacted to a minimum depth of 10 inches. The moisture content and compaction of subgrade soils should be maintained until pavement construction.

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively workable. However, the workability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unworkable conditions develop, workability may be improved by scarifying and drying.

Excavation

It is anticipated that excavations for the proposed construction can be accomplished with conventional earthmoving equipment. The bottom of excavations should be thoroughly cleaned of loose soils and disturbed materials prior to backfill placement and/or construction.

Onsite soils consist of cohesionless sandy soils. Therefore, OSHA Soil Type C should be utilized for sloping considerations and on-site soils shall be sloped at a minimum of 1.5H:1V. Furthermore, benching is not permitted.

In addition, such soils have the tendency to cave and slough during excavations. As such, formwork may be needed for foundation excavations.

We recommend that the underground chambers be over-excavated by about 2 feet in plan area to provide adequate access around the excavation for chamber construction. The walls of the

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



proposed excavation should be shored or sloped in conformance with OSHA excavation and trench safety standards. If any excavation is extended to a depth of more than 20 feet, it will be necessary to have the side slopes designed by a professional engineer.

Soils from the excavation should not be stockpiled higher than six 6 feet or within ten 10 feet of the edge of an open trench. Construction of open cuts adjacent to existing structures, including underground pipes, is not recommended within a 1½ H:1V plane extending beyond and down from the perimeter of the structure. Cuts that are proposed within five 5 feet of light standards, other utilities, underground structures, and pavement should be provided with temporary shoring.

It may be necessary for the contractor to retain a geotechnical engineer to monitor the soils exposed in all excavations and provide engineering services for slopes. This will provide an opportunity to monitor the soils encountered and to modify the excavation slopes as necessary. It also offers an opportunity to verify the stability of the excavation slopes during construction

Individual contractors are responsible for designing and constructing stable, temporary excavations. Excavations should be sloped or shored in the interest of safety following local, and federal regulations, including current OSHA excavation and trench safety standards.

Fill Materials and Placement

All fill materials should be inorganic soils free of vegetation, debris, and fragments larger than 6 inches in size. Pea gravel or other similar non-cementitious, poorly-graded materials should not be used as fill or backfill without the prior approval of the geotechnical engineer.

Clean on-site soils or approved imported materials may be used as fill material for the following:

- general site grading
- foundation areas
- exterior slabs
- foundation backfill
- pavement areas
- sod replacement areas

Imported soils for use as fill material within structural areas should conform to low volume change materials as indicated in the following specifications:

<u>Gradation</u>	<u>Percent Finer by Weight (ASTM C 136)</u>
3"	100
No. 4 Sieve	50-100
No. 200 Sieve	10-40
■ Liquid Limit	30 (max)
■ Plasticity Index	15 (max)
■ Maximum expansion index*	20 (max)

*ASTM D 4829

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



The contractor shall notify the Geotechnical Engineer of import sources sufficiently ahead of their use so that the sources can be observed and approved as to the physical characteristic of the import material. For all import material, the contractor shall also submit current verified reports from a recognized analytical laboratory indicating that the import has a "not applicable" (Class S0) potential for sulfate attack based upon current ACI criteria and is "mildly corrosive" to ferrous metal and copper. The reports shall be accompanied by a written statement from the contractor that the laboratory test results are representative of all import material that will be brought to the job.

Engineered fill should be placed and compacted in horizontal lifts, using equipment and procedures that will produce recommended moisture contents and densities throughout the lift. Fill lifts should not exceed 10 inches loose thickness.

Compaction Requirements

Recommended compaction and moisture content criteria for engineered fill materials are as follows:

Material Type and Location	Per the Modified Proctor Test (ASTM D 1557)		
	Minimum Compaction Requirement (%)	Range of Moisture Contents for Compaction Above Optimum	
		Minimum	Maximum
On-site soils and low volume change imported fill:			
Beneath foundations:	90	0%	+3%
Beneath exterior slabs:	90	0%	3%
Fill greater than 5 feet in depth	95	0%	+3%
Miscellaneous backfill:	90	0%	+3%
Beneath pavements:	95	-1%	+3%
Below new sod:	<i>per manufacturer guidelines</i>		
Utility Trenches*:	90	0%	+3%
Bottom of excavation receiving fill:	90	0%	+3%
Aggregate base (beneath pavements):	95	-1%	+3%

* Upper 12 inches should be compacted to 95% within structural areas.

Grading and Drainage

Positive drainage should be provided during construction and maintained throughout the life of the development. Infiltration of water into utility trenches or foundation excavations should be prevented during construction. In areas where sidewalks or paving do not immediately adjoin the structure, we recommend that protective slopes be provided with a minimum grade of approximately 5 percent for at least 10 feet from perimeter walls. Backfill against footings and in utility and sprinkler line trenches should be well compacted and free of all construction debris to reduce the possibility of moisture infiltration.

We recommend a minimum horizontal setback distance of 10 feet from the perimeter of any building and the high-water elevation of the nearest storm-water infiltration system.

Utility Trenches

It is anticipated that the on-site soils and fill materials will provide suitable support for underground utilities and piping that may be installed. Any soft and/or unsuitable material encountered at the bottom of excavations should be removed and be replaced with an adequate bedding material. A non-expansive granular material with a sand equivalent greater than 30 should be used for bedding and shading of utilities, unless allowed or specified otherwise by the utility manufacturer.

On-site materials are considered suitable for backfill of utility and pipe trenches from one foot above the top of the pipe to the final ground surface, provided the material is free of organic matter and deleterious substances.

Trench backfill should be mechanically placed and compacted as discussed earlier in this report. Compaction of initial lifts should be accomplished with hand-operated tampers or other lightweight compactors. Where trenches are placed beneath slabs or footings, the backfill should satisfy the gradation and expansion index requirements of engineered fill discussed in this report. Flooding or jetting for placement and compaction of backfill is not recommended.

Exterior Slab Design and Construction

Exterior slabs-on-grade, exterior architectural features, and utilities founded on, or in backfill may experience some movement due to the volume change of the backfill. To reduce the potential for damage caused by movement, we recommend:

- minimizing moisture increases in the backfill;
- controlling moisture-density during placement of backfill;
- using designs which allow vertical movement between the exterior features and adjoining structural elements;
- placing effective control joints on relatively close centers

Construction Considerations

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content prior to construction. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed, or these materials should be scarified, moisture conditioned, and recompacted prior to construction.

Construction Observation and Testing

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation, proof-rolling, placement and compaction of controlled compacted fills, backfilling of excavations to the completed subgrade.

The exposed subgrade and each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the structural areas and 5,000 square feet in pavement and sod replacement areas. One density and water content test for every 50 linear feet of compacted utility trench backfill. This testing frequency criteria may be adjusted during construction as specified by the geotechnical engineer of record.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. In the event that unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

Proposed additions may be supported on conventional spread footings or a structural mat bearing on engineered fill. Recommendations for foundations for the proposed improvements and related structural elements are presented in the following paragraphs.

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Shallow Foundation Design Recommendations

DESCRIPTION	RECOMENDATION
Foundation Type	Reinforced mat foundations or conventional spread foundations
Bearing Material	Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater
Design Modulus of Subgrade Reaction, k*	200 pci

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111

DESCRIPTION	RECOMENDATION
Modulus Correction Factor*	$k_c = k [(B+1)/2B]^2$
Allowable Bearing Capacity	2,500 psf
Minimum Width	18 inches
Minimum Depth	18 inches for spread footings 12 inches for mat foundations
Total Estimated Static Settlement	1 inch or less
Estimated Differential Settlement	½ inch

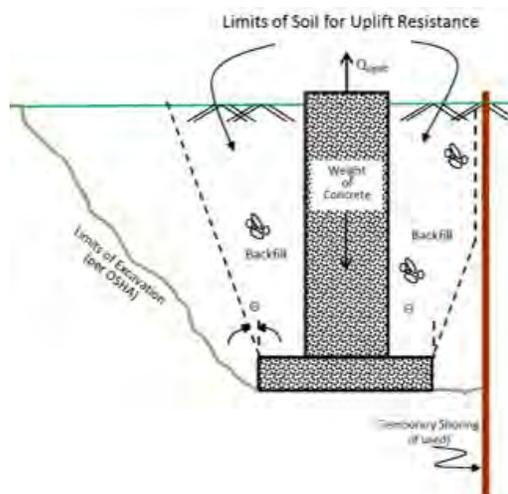
*K values should be reduced to account for dimensional effects of large loaded areas. Where k_c is the corrected or design modulus value and B is the mat width in feet.

Finished grade is defined as the lowest adjacent grade within five feet of the foundation. The allowable foundation bearing pressure applies to dead loads plus design live load conditions. The design bearing pressure may be increased by one-third when considering total loads that include wind or seismic conditions. The weight of the foundation concrete below grade may be neglected in dead load computations.

Foundations should be reinforced as necessary to reduce the potential for distress caused by differential foundation movement. Foundation excavations should be observed by the geotechnical engineer. If the soil conditions encountered differ significantly from those presented in this report, supplemental recommendations will be required.

Design Parameters - Uplift Loads

Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils. As illustrated on the subsequent figure, the effective weight of the soil prism defined by diagonal planes extending up from the top of the perimeter of the foundation to the ground surface at an angle, θ , of 20 degrees from the vertical can be included in uplift resistance. The maximum allowable uplift capacity should be taken as a sum of the effective weight of soil plus the dead weight of the foundation, divided by an appropriate factor of safety. A maximum total unit weight of 120 pcf should be used for the backfill.



CONCRETE SUPPORT SLAB

DESCRIPTION	RECOMMENDATION
Slab support	Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater
Modulus of subgrade reaction	200 pounds per square inch per inch (psi/in) (The modulus was obtained based on estimates obtained from NAVFAC 7.1 design charts). This value is for a small loaded area (1 Sq. ft or less) such as for forklift wheel loads or point loads and should be adjusted for larger loaded areas.

Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Joints or cracks should be sealed with a water-proof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments.

The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

LATERAL EARTH PRESSURES AND TEMPORARY SHORING

Cantilevered Shoring Recommendations

Recommended equivalent fluid pressures for cantilever shoring are as follows:

ITEM	VALUE ^a
Active Case	42 psf/ft
Passive Case	350 psf/ft
Surcharge Pressure	0.35 x (Surcharge)
Coefficient of Friction	0.40

^aNote: The values are based on engineered fill materials with an average total unit weight of 120 pcf.

The lateral earth pressures herein do not include any factor of safety and are not applicable for submerged soils/hydrostatic loading. Additional recommendations may be necessary if such conditions are to be included in the design.

The design of any shoring system should consider surcharge loads imposed by the existing structures and vehicular loads in the vicinity of the shoring. In general, surcharge loads should be considered where they are located within a horizontal distance behind the shoring equal to the height of the shoring.

Surcharge loads acting at the top of the shoring should be applied to the shoring over the backfill as a uniform pressure over the entire shoring height and should be added to the static earth

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



pressures. Surcharge stresses due to point loads, line loads, and those of limited extent, such as compaction equipment, should be evaluated using elastic theory.

Braced Shoring Recommendations

For the design of braced shoring, we recommend such shoring be designed using a rectangular-shaped distribution of lateral earth pressure of $27H$ (in psf) (H is the total height of excavation).

The design of the shored excavation should be performed by an engineer knowledgeable and experienced with the on-site soil conditions. The contractor should be aware that slope height, slope inclination or excavation depths should in no case exceed those specified in local, state or federal safety regulations, e.g. OSHA Health and Safety Standards for Excavation, 29 CFR Part 1926, or successor regulations. Such regulations are strictly enforced and, if not followed, the owner or the contractor could be liable for substantial penalties.

PAVEMENTS

General Pavement Comments

Pavement designs are provided for the traffic conditions and pavement life conditions as noted in **Project Description** and in the following sections of this report. A critical aspect of pavement performance is site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the **Earthwork** section.

Pavement Design Parameters

An estimated design R-Value was used to calculate the asphalt concrete pavement thickness sections and the Portland cement concrete pavement sections. R-value testing should be completed prior to pavement construction to verify the design R-value.

Assuming the pavement subgrades will be prepared as recommended within this report, the following pavement sections should be considered minimums for this project for the traffic indices assumed in the table below. As more specific traffic information becomes available, we should be contacted to reevaluate the pavement calculations.

Pavement Section Thicknesses

The following table provides options for AC and PCC Sections:

	Recommended Minimum Pavement Section Thickness (inches) ¹	
	Light (Automobile) Parking Assumed Traffic Index (TI) = 4.5	On-site Driveways and Delivery Areas Assumed TI = 5.5
<u>Section I</u> Portland Cement Concrete (600 psi Flexural Strength)	5.0-inches PCC over 4-inches Class II AB	6.0-inches PCC over 4-inches Class II AB
<u>Section II</u> Asphaltic Concrete	3-inches AC over 4-inches Class II AB	3-inches AC over 6-inches Class II AB

1. All materials should meet the CALTRANS Standard Specifications for Highway Construction.

AC: Asphalt Concrete

AB: Aggregate Base

These pavement sections are considered minimal sections based upon the expected traffic and the existing subgrade conditions. However, they are expected to function with periodic maintenance and overlays if good drainage is provided and maintained.

Subsequent to clearing, grubbing, and removal of topsoil, subgrade soils beneath all pavements should be scarified, moisture conditioned, and compacted to a minimum depth of 10 inches. All materials should meet the CALTRANS Standard Specifications for Highway Construction. Aggregate base materials should meet the gradation and quality requirement of Class 2 Aggregate Base (¾ inch maximum) in Caltrans Standard Specifications, latest edition, Sections 25 through 29.

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



All concrete for rigid pavements should have a minimum flexural strength of 600 psi (4,250 psi Compressive Strength) and be placed with a maximum slump of four inches. Proper joint spacing will also be required to prevent excessive slab curling and shrinkage cracking. All joints should be sealed to prevent entry of foreign material and dowelled where necessary for load transfer.

Preventative maintenance should be planned and provided for through an on-going pavement management program in order to enhance future pavement performance. Preventative maintenance activities are intended to slow the rate of pavement deterioration, and to preserve the pavement investment.

Preventative maintenance consists of both localized maintenance (e.g. crack sealing and patching) and global maintenance (e.g. surface sealing). Preventative maintenance is usually the first priority when implementing a planned pavement maintenance program and provides the highest return on investment for pavements.

Pavement Construction Considerations

Materials and construction of pavements for the project should be in accordance with the requirements and specifications of the State of California Department of Transportation, or other approved local governing specifications.

Base course or pavement materials should not be placed when the surface is wet. Surface drainage should be provided away from the edge of paved areas to minimize lateral moisture transmission into the subgrade.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Boring ID	Boring Depth (feet)	Planned Location
B-1, P-1, P-2	24.4 to 50.8	Infiltration Gallery Area
B-2, B-6	11½ to 16½	Patritti Avenue
B-3 to B-5	6½ to 16½	Diversion Structure and Expansion Area
B-7	11½	Torch Street
B-8	11½	Syracuse Avenue
HA-1 to HA-3	3	Sod Replacement Area

Boring Layout and Elevations: Boring locations were determined by Terracon and approved by CWE. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet) and approximate elevations were obtained from the Google Earth. If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advanced the borings with a track-mounted drill rig August 18, 2021 and a truck-mounted drill rig on December 30, 2021. Drill rigs utilized continuous flight augers (solid stem and/or hollow stem as necessary depending on soil conditions). Samples were obtained at intervals of 5 feet at the infiltration gallery area borings. Four samples were obtained in the upper 10 feet and at intervals of 5 feet thereafter in all other borings. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. A 3-inch O.D. split-barrel sampling spoon with 2.5-inch I.D. ring lined sampler was used for sampling in alternation with the 2-inch O.D split-barrel sampling spoon. Ring-lined, split-barrel sampling procedures are similar to standard split spoon sampling procedure. We did not encounter groundwater in our borings during drilling and sampling. As required by Los Angeles County, all borings extending beyond 10 feet or entering into groundwater were backfilled with cement grout slurry. All other borings were backfilled with auger cuttings. Surfaces were patched cold asphalt concrete where appropriate.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the

Geotechnical Engineering Report

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County, California
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D7263 Standard Test Methods for Laboratory Determination of Dry Density (Unit Weight) of Soil Specimens
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than 75- μm (No. 200) Sieve in Soils by Washing
- ASTM D3080 Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions
- ASTM D4546 Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading
- Corrosivity Testing will include pH, chlorides, sulfates, sulfides, Redox potential, and electrical lab resistivity

Additionally, samples from HA-1 and HA-3 collected in the proposed sod replacement area was analyzed for nutrient levels and soil suitability for a new landscape installation.

The laboratory testing program included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

SITE LOCATION AND EXPLORATION PLANS

SITE LOCATION

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County CA
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY QUADRANGLES INCLUDE: EL MONTE, CA (1/1/1994) and BALDWIN PARK, CA (1/1/1981).

EXPLORATION PLAN

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County CA
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

EXPLORATION PLAN

Barnes Park Multi-Benefit Stormwater Capture ■ Baldwin Park, LA County CA
September 7, 2021 ■ Updated January 27, 2022 ■ Terracon Project No. 60215111



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

BORING LOG NO. B-1

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patritti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT_1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0694° Longitude: -117.9997°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	SILTY SAND (SM) , trace gravel and mica, light brown to light gray-brown								
	5.0 POORLY GRADED SAND WITH GRAVEL (SP) , trace silt, light brown to light gray-brown, dense	5			33-28-35	12.4	98		3
	medium dense	10			11-11-12 N=23				
	very dense, no recovery	15			50/4"				
	dense	20			10-21-29 N=50				3
25.0 POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , light brown to light gray-brown medium dense	25				9-26-26	2.2	126	NP	8

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

BORING LOG NO. B-1

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT 1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0694° Longitude: -117.9997°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , light brown to light gray-brown (<i>continued</i>) very dense	30			17-31-27 N=58				
	SILTY SAND WITH GRAVEL (SM) , light brown to light gray-brown, dense very dense	35			14-26-34	24.6	98		25
	POORLY GRADED SAND (SP) , trace silt, light brown to light gray-brown, very dense	45			30-30-50/5"	7.1	101		3
	Boring Terminated at 50.8 Feet	50			41-50/4"				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

BORING LOG NO. B-2

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111_CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT 1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0705° Longitude: -117.9990°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
0.3	ASPHALT , 4" thickness								
0.6	AGGREGATE BASE COURSE , 3.5" thickness								
2.5	SILTY SAND (SM) , trace mica, light gray brown to light olive-brown								
5.0	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , light brown to light gray-brown, medium dense				10-17-24	2.0	110		
5.0	POORLY GRADED SAND (SP) , trace silt and gravel, medium dense	5			13-19-25	3.1	95		3
10.0	very dense, no recovery				50/3"				
10.0	POORLY GRADED SAND WITH GRAVEL (SP) , trace silt, light brown, medium dense	10			9-20-30	2.3	118		2
15.0	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , light gray-brown, medium dense	15			11-17-31	6.2	97		
16.5	Boring Terminated at 16.5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with cement grout upon completion. Surface capped with cold asphalt concrete.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

BORING LOG NO. B-3

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT_1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0713° Longitude: -117.9989°	DEPTH (Ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
	0.3' ASPHALT , 3" thickness									
	SILTY SAND WITH GRAVEL (SM) , trace clay, brown medium dense				3-10-14	7.1	110			
	POORLY GRADED SAND WITH SILT (SP-SM) , trace gravel, light gray, medium dense	5			4-14-23	2.4	113			
					12-15-16	1.1				
	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , light brown, medium dense grayish brown, dense	10 15			10-25-23	2.7	115	NP	7	
Boring Terminated at 16.5 Feet					16-29-37	2.7	103			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with cement grout upon completion. Surface capped with cold asphalt concrete.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

BORING LOG NO. B-4

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0715° Longitude: -117.9990°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
	DEPTH SILTY SAND (SM) , trace gravel, grayish brown 2.5 POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , light gray, medium dense grayish brown 6.5 Boring Terminated at 6.5 Feet	5			22-28-29	1.0			8
					9-19-23	2.6	91		
	Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic								

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered

1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/19/22

BORING LOG NO. B-5

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patritti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111_CWE-BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT_1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0713° Longitude: -117.9991°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
	DEPTH								
	0.3' ASPHALT , 3" thickness								
	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , grayish brown medium dense, no recovery	5		24-26-24					
5.0' SILTY SAND (SM) , trace clay, dark ash brown, medium dense					3-6-17	2.6	105		
6.5'	Boring Terminated at 6.5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method: Hollow Stem Auger	See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any). See Supporting Information for explanation of symbols and abbreviations.	Notes:
Abandonment Method: Boring backfilled with auger cuttings upon completion. Surface capped with cold asphalt concrete		
WATER LEVEL OBSERVATIONS <i>Groundwater not encountered</i>	<p>1421 Edinger Ave, Ste C Tustin, CA</p>	Boring Started: 08-18-2021 Boring Completed: 08-18-2021 Drill Rig: CME 75 Track Driller: 2R Drilling Project No.: 60215111

BORING LOG NO. B-6

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON DATATEMPLATE.GDT 1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0683° Longitude: -117.9997°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS		PERCENT FINES
								LL-PL-PI		
	0.3' ASPHALT , 3.5" thickness									
	0.6' AGGREGATE BASE COURSE , 4" thickness									
	SILTY SAND WITH GRAVEL (SM) , tan			✋						
	5.0' POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , tan, medium dense		5		X	12-18-17	1.6	111		6
very dense				X	50/6"	1.3	107			
10.0' POORLY GRADED SAND WITH GRAVEL (SP) , tan, medium dense		10		X	11-16-19	2.5	116	NP	2	
11.5' Boring Terminated at 11.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

BORING LOG NO. B-7

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0686° Longitude: -117.9990°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
	0.4 ASPHALT , 5" thickness								
	POORLY GRADED SAND WITH GRAVEL (SP) , tan			✋				NP	
	loose	5		X	5-7-7	5.2	107		3
	medium dense, sample disturbed	10		X	20-24-17				
	11.5 Boring Terminated at 11.5 Feet			X	7-13-13	1.7	99		

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/19/22

BORING LOG NO. B-8

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0675° Longitude: -117.9988°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
								LL-PL-PI	
	0.3 - ASPHALT , 3.5" thickness								
	0.6 - AGGREGATE BASE COURSE , 4" thickness POORLY GRADED SAND (SP) , trace gravel, tan			✋					
	5.0 - POORLY GRADED SAND WITH GRAVEL (SP) , tan, medium dense, sample disturbed	5		✕	9-12-23				2
	trace cobbles	10		✕	9-16-23	4.8	101		
	11.5 - Boring Terminated at 11.5 Feet	10		✕	16-23-32	2.1	113	NP	

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with Auger Cuttings
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT_1/19/22

BORING LOG NO. HA-1

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0695° Longitude: -117.9996°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
DEPTH									
	SILTY CLAYEY SAND (SC-SM) , brown			✎		18.3			
3.0	Boring Terminated at 3 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/19/22

BORING LOG NO. HA-2

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0692° Longitude: -117.9997°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
DEPTH									
	SILTY SAND WITH GRAVEL (SM) , brown			☞		21.8			
3.0	Boring Terminated at 3 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/19/22

BORING LOG NO. HA-3

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0690° Longitude: -117.9997°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
DEPTH									
	SILTY CLAYEY SAND (SC-SM) , brown			✎		29.0			
3.0	Boring Terminated at 3 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/19/22

BORING LOG NO. P-1

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE- BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT 1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	DEPTH							LL-PL-PI	
2.5	SILTY SAND (SM) , trace gravel, gray-brown to olive-brown								
15.0	POORLY GRADED SAND WITH SILT (SP-SM) , trace gravel, light olive-brown								
20.0	SILTY SAND WITH GRAVEL (SM) , light brown to gray, very dense			X	16-40-50/5"	1.8	112		26
23.5	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , light brown to gray, dense			X	15-35-43	3.3	107		5
24.4	POORLY GRADED SAND WITH GRAVEL (SP) , trace silt, light brown to gray, very dense			X	34-50/5"	2.9	117		2
Boring Terminated at 24.4 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

BORING LOG NO. P-2

**PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp
Fullerton, CA**

**SITE: 3251 Patriitti Ave
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_60215111 CWE-BARNES PARK.GPJ TERRACON DATATEMPLATE.GDT 1/19/22

GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 34.0696° Longitude: -117.9996°	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS	PERCENT FINES
	LL-PL-PI								
	POORLY GRADED SAND WITH GRAVEL (SP) , light brown to light gray	0							
	2.5	POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM) , dark brown							
	15	dense, no recovery		X		14-41-44			
	20.0	POORLY GRADED SAND (SP) , trace gravel and silt, light brown to gray-brown, dense		X	16-25-37	4.3	98		2
	25.0	medium dense		X	8-9-12 N=21				
	Boring Terminated at 25 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

Groundwater not encountered



1421 Edinger Ave, Ste C
Tustin, CA

Boring Started: 08-18-2021

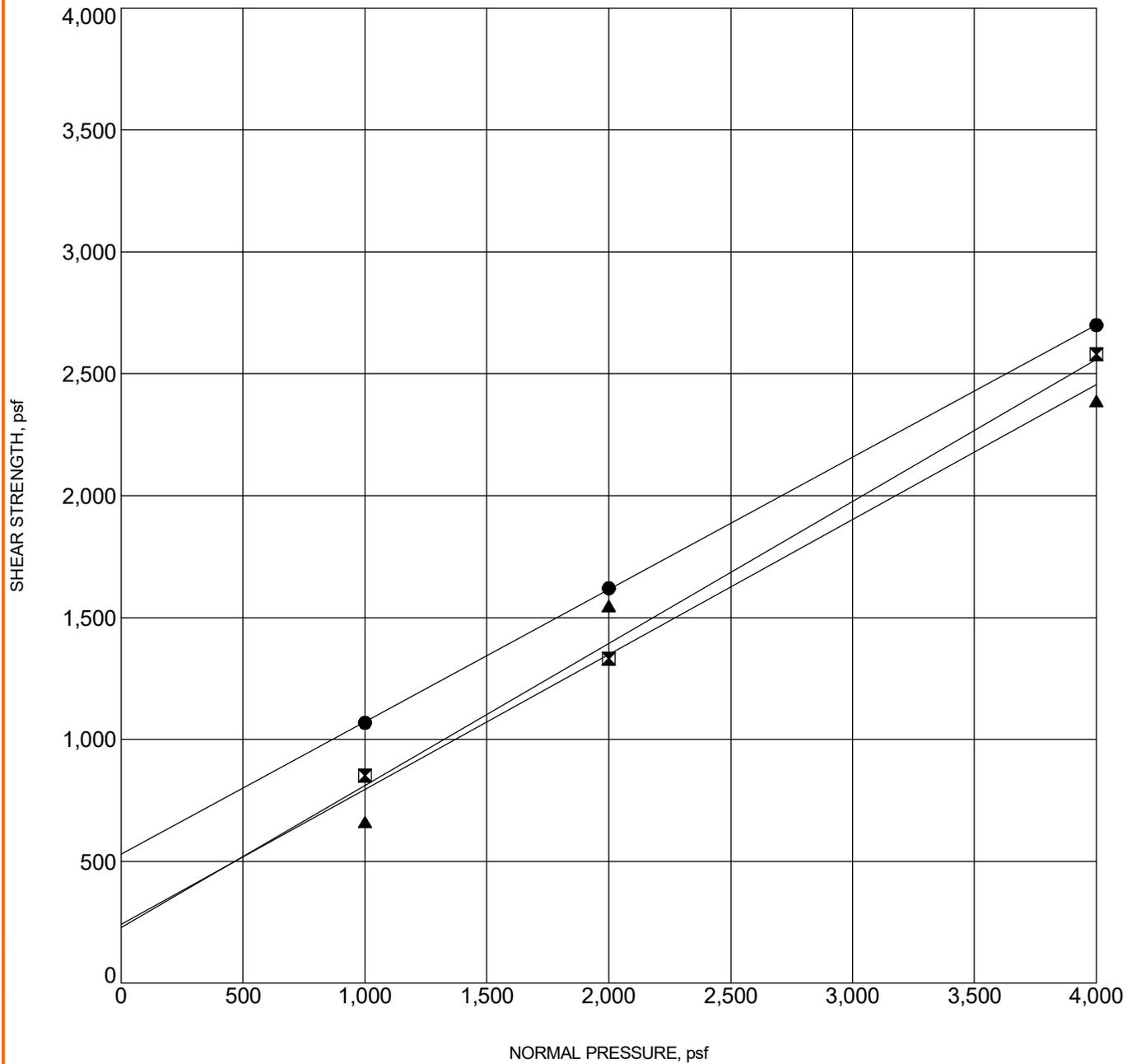
Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

DIRECT SHEAR TEST ASTM D3080



Specimen Identification	Classification		γ_d , pcf	WC, %	c, psf	ϕ°
● B-2 15.0ft	POORLY GRADED SAND with SILT and GRAVEL (SP-SM)		97	6	528	29
◻ B-6 10.0ft	POORLY GRADED SAND with GRAVEL (SP)		116	2	228	30
▲ B-7 5.0ft	POORLY GRADED SAND with GRAVEL (SP)		107	5	240	29

PROJECT: CWE - Baldwin Park Barnes Park
Multi-Benefit Stormwater Capture

SITE: 3251 Patritti Ave
Baldwin Park, CA



PROJECT NUMBER: 60215111

CLIENT: CWE Corp
Fullerton, CA

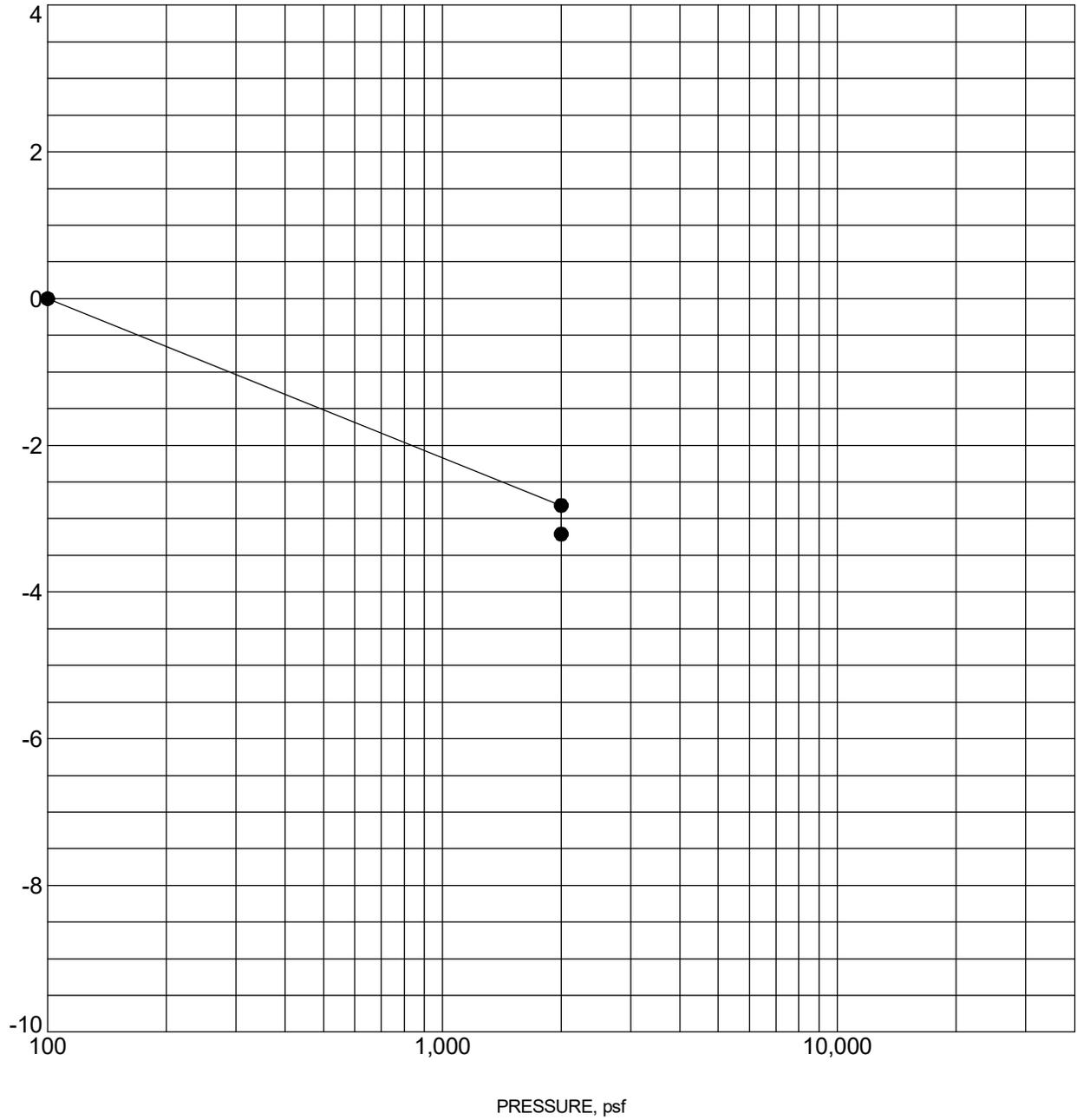
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. TC_DIRECT_SHEAR_60215111 CWE- BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/19/22

SWELL CONSOLIDATION TEST

ASTM D4546

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. TC_CONSOL_STRAIN-USCS 60215111 CWE-BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 9/7/21

AXIAL STRAIN, %



Specimen Identification	Classification	γ_d , pcf	WC, %
● B-3 2.5 - 4 ft	SILTY SAND with GRAVEL	110	7.1

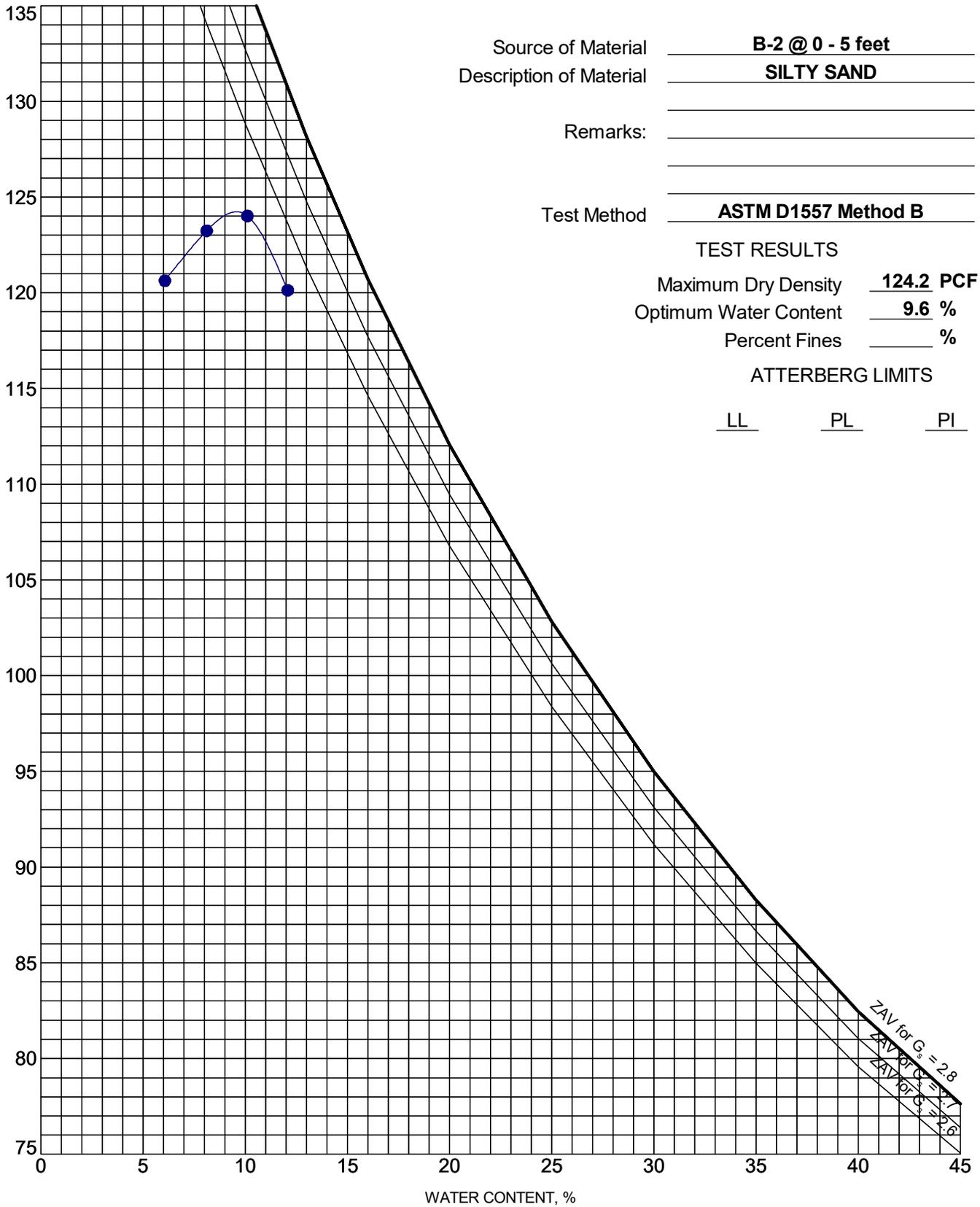
NOTES: Water added at 2,000 psf

PROJECT: CWE - Baldwin Park Barnes Park Multi-Benefit Stormwater Capture	 <small>1421 Edinger Ave, Ste C Tustin, CA</small>	PROJECT NUMBER: 60215111
SITE: 3251 Patriitti Ave Baldwin Park, CA		CLIENT: CWE Corp Fullerton, CA

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 60215111 CWE- BARNES PARK.GPJ TERRACON_DATATEMPLATE.GDT 9/7/21



Source of Material B-2 @ 0 - 5 feet
 Description of Material SILTY SAND
 Remarks: _____
 Test Method ASTM D1557 Method B

TEST RESULTS

Maximum Dry Density 124.2 PCF
 Optimum Water Content 9.6 %
 Percent Fines %

ATTERBERG LIMITS

LL PL PI

PROJECT: CWE - Baldwin Park Barnes Park
 Multi-Benefit Stormwater Capture

SITE: 3251 Patriitti Ave
 Baldwin Park, CA



PROJECT NUMBER: 60215111

CLIENT: CWE Corp
 Fullerton, CA

Client
CWE Corp

Project
CWE- Barnes Park Project - Baldwin Park

Sample Submitted By: Terracon (60)

Date Received: 8/30/2021

Lab No.: 21-0632

Results of Corrosion Analysis

Sample Number	--	--
Sample Location	B-1	B-5
Sample Depth (ft.)	20.0	0-5.0
pH Analysis, ASTM G 51	7.74	8.17
Water Soluble Sulfate (SO ₄), ASTM C 1580 (percent %)	0.01	<0.01
Sulfides, AWWA 4500-S D, (mg/kg)	Nil	Nil
Chlorides, ASTM D 512, (mg/kg)	45	133
Red-Ox, ASTM G 200, (mV)	+691	+688
Total Salts, AWWA 2540, (mg/kg)	284	754
Saturated Minimum Resistivity, ASTM G 57, (ohm-cm)	19400	1989

Analyzed By:



Trisha Campo
Chemist

SUPPORTING INFORMATION



Anaheim Office
Lab No: 22-011-0018
January 18, 2022

Terracon Consulting, Inc.
1421 Edinger Avenue, Suite C
Tustin, CA 92780

Attn: Victor Nguyen

Project: CWE - Barnes Park - Baldwin Park Job #: 60215111

Attached are the results of the analysis performed on two soil samples that were collected from the above mentioned project site from a depth of 0-3' by the client and received by our laboratory on 01/11/2022. These samples were analyzed for nutrient levels, agricultural suitability, and physical characteristics in preparation for a new landscape installation.

Analytical Results and Comments

The samples are moderately alkaline in reaction (pH 7.7-7.8). These levels could cause some plants to show yellowing of foliage beginning with the younger growth. Qualitative lime is favorably low allowing for downward pH adjustment. Incorporating soil sulfur to a depth of 6 inches will adjust the pH downward to the depth of incorporation. That change will happen slowly and plants that are selected for this project should be tolerant of alkaline soil conditions.

Salinity (ECe) and soluble sodium are safely low. The sodium adsorption ratios (SAR) are favorably low indicating that the sodium present is properly balanced by calcium and magnesium with regard to soil structure and water infiltration.

Boron is safely low for general ornamental plants and may be below optimum for plant nutritional purposes in both samples. Irrigation water in Southern California often supplies sufficient boron to meet plant nutritional requirements for that nutrient. However, if boron is low in the irrigation water and/or plants show symptoms of boron deficiency after they are well established, consider an application of a product containing boron at the manufacturer's label rate. Boron deficiency symptoms often include stunted or deformed younger growth and "tight" internodes.

In terms of fertility, nitrogen is low in HA-1 and low optimum in HA-3. Phosphorus is low in both. In the minor element group, manganese is fair in HA-1 and very low in HA-3. Iron is fair in HA-3. The remaining nutrient elements except for sulfate are in sufficient supply.

The texture of the less than 2mm fraction of the samples is classified as 'loamy sand' and 'sand' according to the USDA soil classification standards. The over 15% gravel present in the HA-3 sample classifies the soil as 'gravelly'. The estimated water infiltration rate of the 'loamy sand' material is 0.41 inch per hour. The estimated water infiltration rate of the 'gravelly sand' material is 0.50 inch per hour. The actual rates of infiltration may vary depending on the degree of soil compaction on site. Organic content is slightly higher than average for unamended soils (1.01-1.33% on a dry weight basis).

Recommendations

Surface Soil Preparation for Groundcover and Mass Planting

If feasible, prior to amending the areas where severe compaction exists, the surface soil should be ripped or tilled to a 9-inch depth. Uniformly broadcast and blend the following with existing soil to a 6-inch depth.

<u>Materials</u>	<u>Amount per 1000 sq. ft.</u>
Nitrogen fortified organic amendment (compost* or redwood or fir sawdust)	4 cu. yards
Soil Sulfur	12 lbs.
Ammonium Phosphate (16-20-0)	9 lbs.

*Rates and fertilizers may have to be adjusted depending on analysis of selected compost.

Tree and Shrub Planting Guidelines

1. Excavate planting pits at least twice the diameter of the rootball.
2. The top of the rootball should be at or slightly above final grade.
3. To improve soil chemistry, uniformly blend 1.5 lbs. of iron sulfate per cubic yard of backfill in both locations. Handle iron sulfate with caution since it will severely stain moist concrete.
4. Organic material is not required in the backfill; however, if you wish, the amended surface soil or a soil blend consisting of no more than 20% by volume organic matter can be placed in the upper 12 inches of backfill only. Soil below this depth should not contain any added organic matter because of the threat of plant disease and/or anaerobic soil conditions developing.
5. Place slow release fertilizer tablets in the upper 12 inches of backfill at manufacturer's recommended rates. If fertilizer amended soil is used as a backfill the addition of slow release fertilizer tablets is not necessary.
6. Do not cover the original rootball with other soil. Ideally, a temporary soil berm is often constructed around the outer edge of the rootball to help channel water into the rootball and then into surrounding soil until roots are established in the backfill and the rootball is no longer the sole source of water for the plant.
7. Ideally, a weed and turf free zone, preferably 2-3 ft. in diameter, should be maintained just beyond the diameter of the planting hole. A 2-4 inch deep layer of coarse mulch can be placed around the tree or shrub; mulch should be kept a minimum 4-6 inches from the trunk.

Page 3

Terracon Consulting, Inc.

January 18, 2022

Maintenance Fertilization

For groundcover and mass planting areas, uniformly broadcast sulfur coated urea at a rate of 5 lbs. per 1000 sq. ft.. The first application should occur approximately 45 days after installation, with repeat applications every 60-90 days or as growth and color dictate. In early fall and spring, substitute a complete fertilizer such as 15-15-15, or equal, for the sulfur coated urea at the rate of 6 lbs. per 1000 sq. ft. to ensure continuing supplies of phosphorus and potassium. Follow each fertilization with a thorough irrigation. When plants have become well established, fertilizer applications can be less frequent.

As noted above, iron is low in HA-3 and manganese is low in both samples. When these nutrients are low, especially in an alkaline soil, deficiencies can sometimes show in the plants. If deficiencies show once plants have become established, they may be addressed upon the first sign of deficiency. Symptoms of manganese deficiency may be seen as a general loss of color in the young leaves, followed by yellowing between veins and brownish-black spots appearing. Iron deficiency symptoms are often characterized by yellow, almost white, interveinal chlorosis on the youngest growth. If these symptoms are apparent once plants are established, then application of iron and/or manganese chelate at the manufacturer's label rate may improve appearance. Chelates are generally more effective on alkaline soils than some of the other forms of trace elements.

If we can be of any further assistance, please feel free to contact us.



Joe Kiefer, CCA

Project : CWE - Barnes Park - Baldwin Park
Job #: 60215111

Report No : **22-011-0018**
Purchase Order :
Date Recd : 01/11/2022
Date Printed : 01/14/2022
Page : 1 of 1

COMPREHENSIVE SOIL ANALYSIS

Sample Description - Sample ID	Half Sat %	pH	ECe dS/m	NO ₃ -N ppm	NH ₄ -N ppm	PO ₄ -P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm	Organic % dry wt.	Lab No.
	TEC	Qual Lime		Sufficiency Factors											
HA-1 @ 0'-3'	13	7.8	0.3	2	11	5	77	829	103	1.0	5.6	3	23	1.33	30793
	52	Low		0.5	0.3	0.9	1.0	0.9	1.5	2.2	0.5	0.9			
HA-3 @ 0'-3'	14	7.7	0.3	6	14	10	100	689	81	0.7	1.7	0	11	1.01	30794
	43	Low		0.7	0.6	1.2	0.9	0.8	1.2	0.8	0	0.5			

Saturation Extract Values						SAR	Gravel %		Percent of Sample Passing 2 mm Screen					USDA Soil Classification	Lab No.
Ca meq/L	Mg meq/L	Na meq/L	K meq/L	B ppm	SO ₄ meq/L		Coarse 5 - 12	Fine 2 - 5	Very Coarse 1 - 2	Coarse 0.5 - 1	Med. to Very Fine 0.05 - 0.5	Silt .002-.05	Clay 0-.002		
1.7	0.7	0.3	0.2	0.04	0.3	0.3	4.3	3.6	6.8	25.8	51.1	10.5	5.6	Loamy Sand	30793
2.1	0.8	0.3	0.2	0.06	0.4	0.3	11.8	8.7	10.2	39.6	41.9	4.5	3.6	Gravelly Sand	30794

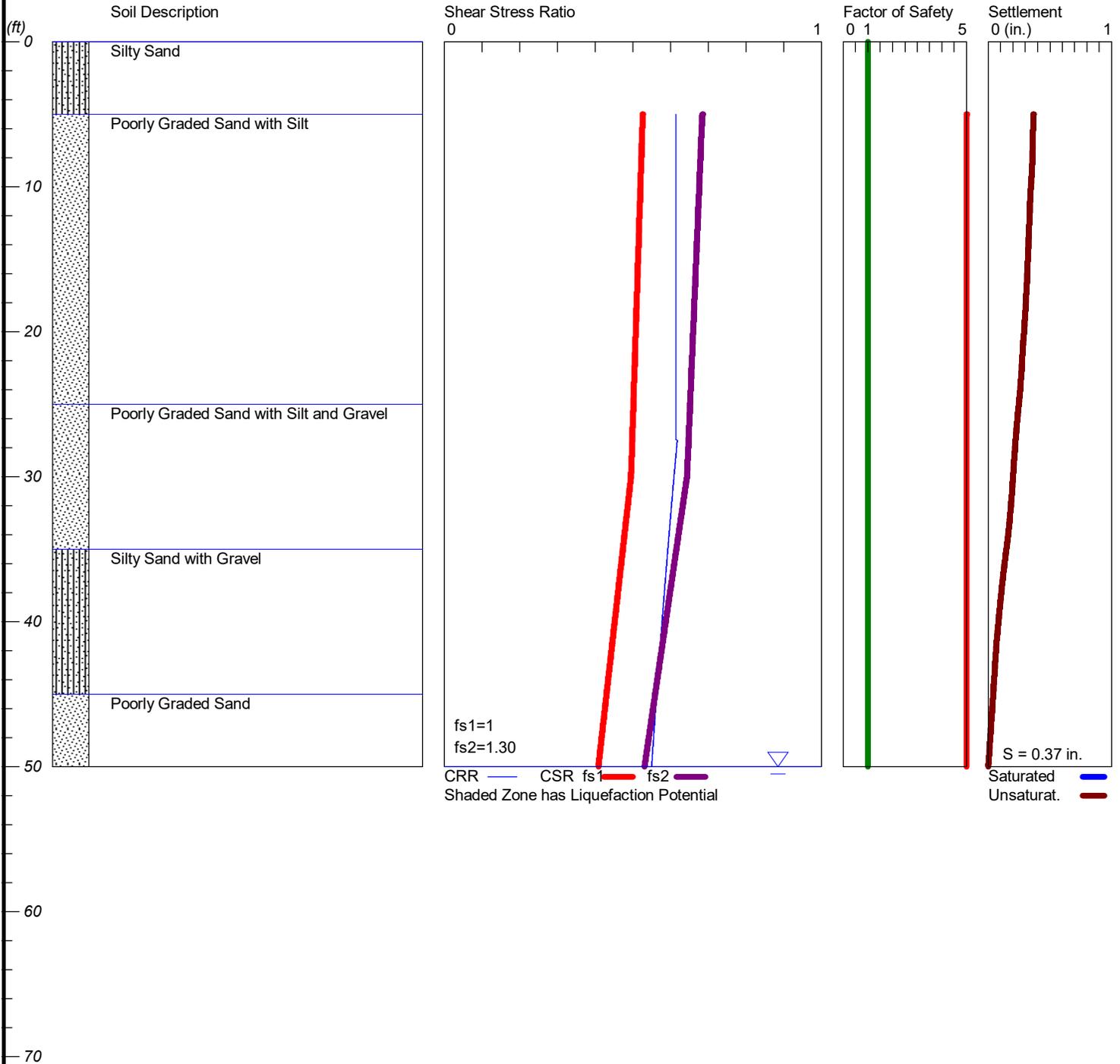
Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m), Boron (B), Sulfate(SO₄), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

LIQUEFACTION ANALYSIS

CWE Barnes Park Multi-Benefit Stormwater Capture

Hole No.=B-1 Water Depth=50 ft

**Magnitude=6.92
Acceleration=0.819g**



LiquefyPro CivilTech Software USA www.civiltech.com

LIQUEFACTION ANALYSIS SUMMARY

Copyright by CivilTech Software
www.civiltech.com

Font: Courier New, Regular, Size 8 is recommended for this report.
Licensed to , 9/1/2021 12:12:32 PM

Input File Name: C:\Users\vnguyen\OneDrive - Terracon Consultants
Inc\Desktop\Liquefaction\60215111\B-1.lig
Title: CWE Barnes Park Multi-Benefit Stormwater Capture
Subtitle: 60215111

Surface Elev. =
Hole No. =B-1
Depth of Hole= 50.00 ft
Water Table during Earthquake= 50.00 ft
Water Table during In-Situ Testing= 50.00 ft
Max. Acceleration= 0.82 g
Earthquake Magnitude= 6.92

Input Data:

Surface Elev. =
Hole No. =B-1
Depth of Hole=50.00 ft
Water Table during Earthquake= 50.00 ft
Water Table during In-Situ Testing= 50.00 ft
Max. Acceleration=0.82 g
Earthquake Magnitude=6.92
No-Liquefiable Soils: Based on Analysis

1. SPT or BPT Calculation.
 2. Settlement Analysis Method: Tokimatsu, M-correction
 3. Fines Correction for Liquefaction: Stark/Olson et al.*
 4. Fine Correction for Settlement: During Liquefaction*
 5. Settlement Calculation in: All zones*
 6. Hammer Energy Ratio, $C_e = 1.45$
 7. Borehole Diameter, $C_b = 1.15$
 8. Sampling Method, $C_s = 1.2$
 9. User request factor of safety (apply to CSR) , User= 1.3
Plot two CSR ($f_{s1}=1$, $f_{s2}=User$)
 10. Use Curve Smoothing: Yes*
- * Recommended Options

In-Situ Test Data:
Depth SPT gamma Fines

ft		pcf	%
5.00	32.00	110.00	3.00
10.00	23.00	115.00	3.00
15.00	50.00	120.00	3.00
20.00	50.00	125.00	3.00
25.00	26.00	129.00	8.00
30.00	58.00	115.00	8.00
35.00	30.00	115.00	25.00
40.00	50.00	115.00	25.00
45.00	50.00	115.00	3.00
50.00	50.00	115.00	3.00

Output Results:

Settlement of Saturated Sands=0.00 in.

Settlement of Unsaturated Sands=0.37 in.

Total Settlement of Saturated and Unsaturated Sands=0.37 in.

Differential Settlement=0.183 to 0.241 in.

Depth ft	CRRm	CSRfs	F. S.	S_sat. in.	S_dry in.	S_all in.
5.00	0.61	0.53	5.00	0.00	0.37	0.37
5.50	0.61	0.53	5.00	0.00	0.36	0.36
6.00	0.61	0.52	5.00	0.00	0.36	0.36
6.50	0.61	0.52	5.00	0.00	0.36	0.36
7.00	0.61	0.52	5.00	0.00	0.36	0.36
7.50	0.61	0.52	5.00	0.00	0.36	0.36
8.00	0.61	0.52	5.00	0.00	0.36	0.36
8.50	0.61	0.52	5.00	0.00	0.35	0.35
9.00	0.61	0.52	5.00	0.00	0.35	0.35
9.50	0.61	0.52	5.00	0.00	0.35	0.35
10.00	0.61	0.52	5.00	0.00	0.35	0.35
10.50	0.61	0.52	5.00	0.00	0.34	0.34
11.00	0.61	0.52	5.00	0.00	0.34	0.34
11.50	0.61	0.52	5.00	0.00	0.34	0.34
12.00	0.61	0.52	5.00	0.00	0.33	0.33
12.50	0.61	0.52	5.00	0.00	0.33	0.33
13.00	0.61	0.52	5.00	0.00	0.33	0.33
13.50	0.61	0.52	5.00	0.00	0.33	0.33
14.00	0.61	0.51	5.00	0.00	0.32	0.32
14.50	0.61	0.51	5.00	0.00	0.32	0.32
15.00	0.61	0.51	5.00	0.00	0.32	0.32
15.50	0.61	0.51	5.00	0.00	0.32	0.32
16.00	0.61	0.51	5.00	0.00	0.32	0.32
16.50	0.61	0.51	5.00	0.00	0.31	0.31
17.00	0.61	0.51	5.00	0.00	0.31	0.31
17.50	0.61	0.51	5.00	0.00	0.31	0.31
18.00	0.61	0.51	5.00	0.00	0.30	0.30
18.50	0.61	0.51	5.00	0.00	0.30	0.30

19.00	0.61	0.51	5.00	0.00	0.30	0.30
19.50	0.61	0.51	5.00	0.00	0.29	0.29
20.00	0.61	0.51	5.00	0.00	0.29	0.29
20.50	0.61	0.51	5.00	0.00	0.29	0.29
21.00	0.61	0.51	5.00	0.00	0.28	0.28
21.50	0.61	0.51	5.00	0.00	0.28	0.28
22.00	0.61	0.51	5.00	0.00	0.27	0.27
22.50	0.61	0.50	5.00	0.00	0.27	0.27
23.00	0.61	0.50	5.00	0.00	0.27	0.27
23.50	0.61	0.50	5.00	0.00	0.26	0.26
24.00	0.61	0.50	5.00	0.00	0.26	0.26
24.50	0.61	0.50	5.00	0.00	0.25	0.25
25.00	0.61	0.50	5.00	0.00	0.25	0.25
25.50	0.61	0.50	5.00	0.00	0.24	0.24
26.00	0.61	0.50	5.00	0.00	0.24	0.24
26.50	0.61	0.50	5.00	0.00	0.23	0.23
27.00	0.61	0.50	5.00	0.00	0.23	0.23
27.50	0.62	0.50	5.00	0.00	0.22	0.22
28.00	0.62	0.50	5.00	0.00	0.22	0.22
28.50	0.61	0.50	5.00	0.00	0.21	0.21
29.00	0.61	0.50	5.00	0.00	0.21	0.21
29.50	0.61	0.50	5.00	0.00	0.20	0.20
30.00	0.61	0.50	5.00	0.00	0.20	0.20
30.50	0.61	0.49	5.00	0.00	0.20	0.20
31.00	0.61	0.49	5.00	0.00	0.19	0.19
31.50	0.60	0.49	5.00	0.00	0.19	0.19
32.00	0.60	0.49	5.00	0.00	0.18	0.18
32.50	0.60	0.48	5.00	0.00	0.18	0.18
33.00	0.60	0.48	5.00	0.00	0.17	0.17
33.50	0.60	0.48	5.00	0.00	0.17	0.17
34.00	0.60	0.48	5.00	0.00	0.16	0.16
34.50	0.59	0.48	5.00	0.00	0.15	0.15
35.00	0.59	0.47	5.00	0.00	0.15	0.15
35.50	0.59	0.47	5.00	0.00	0.14	0.14
36.00	0.59	0.47	5.00	0.00	0.13	0.13
36.50	0.59	0.47	5.00	0.00	0.12	0.12
37.00	0.59	0.46	5.00	0.00	0.12	0.12
37.50	0.58	0.46	5.00	0.00	0.11	0.11
38.00	0.58	0.46	5.00	0.00	0.11	0.11
38.50	0.58	0.46	5.00	0.00	0.10	0.10
39.00	0.58	0.46	5.00	0.00	0.09	0.09
39.50	0.58	0.45	5.00	0.00	0.09	0.09
40.00	0.58	0.45	5.00	0.00	0.08	0.08
40.50	0.58	0.45	5.00	0.00	0.08	0.08
41.00	0.57	0.45	5.00	0.00	0.07	0.07
41.50	0.57	0.45	5.00	0.00	0.07	0.07
42.00	0.57	0.44	5.00	0.00	0.06	0.06
42.50	0.57	0.44	5.00	0.00	0.06	0.06
43.00	0.57	0.44	5.00	0.00	0.05	0.05
43.50	0.57	0.44	5.00	0.00	0.05	0.05
44.00	0.57	0.43	5.00	0.00	0.05	0.05

44.50	0.56	0.43	5.00	0.00	0.04	0.04
45.00	0.56	0.43	5.00	0.00	0.04	0.04
45.50	0.56	0.43	5.00	0.00	0.04	0.04
46.00	0.56	0.43	5.00	0.00	0.03	0.03
46.50	0.56	0.42	5.00	0.00	0.03	0.03
47.00	0.56	0.42	5.00	0.00	0.02	0.02
47.50	0.56	0.42	5.00	0.00	0.02	0.02
48.00	0.55	0.42	5.00	0.00	0.02	0.02
48.50	0.55	0.41	5.00	0.00	0.01	0.01
49.00	0.55	0.41	5.00	0.00	0.01	0.01
49.50	0.55	0.41	5.00	0.00	0.00	0.00
50.00	0.55	0.41	5.00	0.00	0.00	0.00

* F. S. <1, Liquefaction Potential Zone
(F. S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

1 atm (atmosphere)	= 1 tsf (ton/ft ²)
CRRm	Cyclic resistance ratio from soils
CSRsf	Cyclic stress ratio induced by a given earthquake (with user request factor of safety)
F. S.	Factor of Safety against liquefaction, F. S. =CRRm/CSRsf
S_sat	Settlement from saturated sands
S_dry	Settlement from Unsaturated Sands
S_all	Total Settlement from Saturated and Unsaturated Sands
NoLiq	No-Liquefy Soils

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING				WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP) Hand Penetrometer
						Water Level After a Specified Period of Time		(T) Torvane
						Water Level After a Specified Period of Time		(b/f) Standard Penetration Test (blows per foot)
					Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.			(OVA) Organic Vapor Analyzer
								(WOH) Weight of Hammer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance			
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.
	Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
	Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
	Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
	Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
	Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
				Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
			$Cu < 4$ and/or [$Cc < 1$ or $Cc > 3.0$] ^E	GP	Poorly graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}	
			Fines classify as CL or CH	GC	Clayey gravel ^{F, G, H}	
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I	
			$Cu < 6$ and/or [$Cc < 1$ or $Cc > 3.0$] ^E	SP	Poorly graded sand ^I	
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G, H, I}	
			Fines classify as CL or CH	SC	Clayey sand ^{G, H, I}	
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line	CL	Lean clay ^{K, L, M}	
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K, L, M}	
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K, L, M, N}
			Liquid limit - not dried			Organic silt ^{K, L, M, O}
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K, L, M}	
			PI plots below "A" line	MH	Elastic Silt ^{K, L, M}	
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K, L, M, P}
			Liquid limit - not dried			Organic silt ^{K, L, M, O}
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat	

^A Based on the material passing the 3-inch (75-mm) sieve.

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

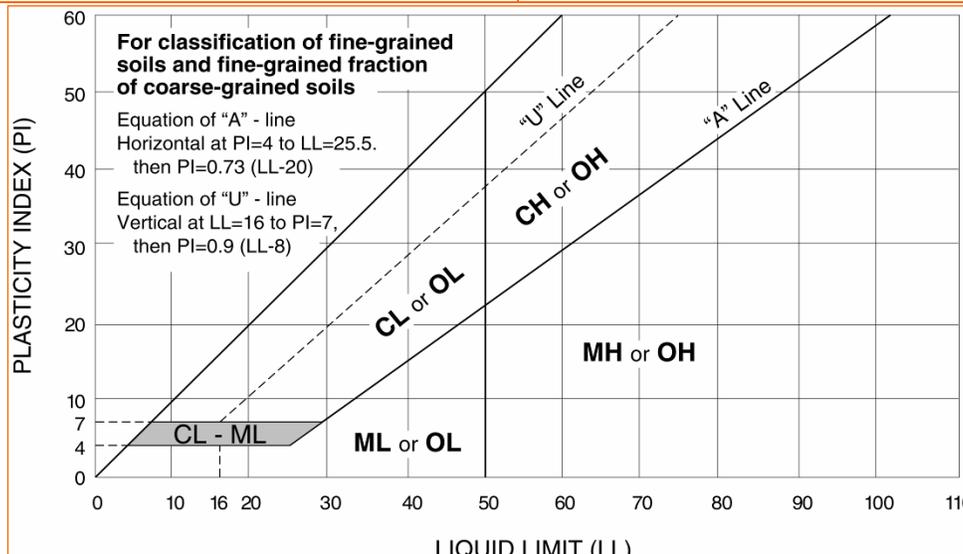
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



Appendix B
Barnes Park Air Quality & GHG Worksheets



City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	7.00	Acre	7.00	304,920.00	0
Parking Lot	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Expanded construction phases.

Off-road Equipment - This phase does not require excessive excavation.

Grading - Revised grading acreage

Off-road Equipment -

Trips and VMT - Revised # trips per worker per day, and number of vendor trips

Mobile Land Use Mitigation -

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	45.00
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	PhaseEndDate	11/21/2024	1/24/2024
tblConstructionPhase	PhaseEndDate	9/26/2024	12/7/2023
tblConstructionPhase	PhaseEndDate	11/9/2023	10/26/2023
tblConstructionPhase	PhaseEndDate	10/24/2024	12/28/2023
tblConstructionPhase	PhaseStartDate	10/25/2024	12/28/2023
tblConstructionPhase	PhaseStartDate	11/10/2023	10/27/2023
tblConstructionPhase	PhaseStartDate	9/27/2024	12/8/2023
tblGrading	AcresOfGrading	5.00	7.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblTripsAndVMT	VendorTripNumber	57.00	4.00

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	15.00	12.00

2.0 Emissions Summary

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2023	11-30-2023	0.7042	0.7042
2	12-1-2023	2-29-2024	0.6232	0.6232
3	3-1-2024	5-31-2024	0.5182	0.5182
4	6-1-2024	8-31-2024	0.5182	0.5182
5	9-1-2024	9-30-2024	0.1691	0.1691
		Highest	0.7042	0.7042

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.3000e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8577	4.8577	2.0000e-004	4.0000e-005	4.8751
Mobile	0.0116	0.0546	0.1491	6.0000e-004	0.0534	4.6000e-004	0.0539	0.0143	4.3000e-004	0.0148	0.0000	55.3833	55.3833	2.6100e-003	0.0000	55.4486
Waste						0.0000	0.0000		0.0000	0.0000	0.1218	0.0000	0.1218	7.2000e-003	0.0000	0.3017
Water						0.0000	0.0000		0.0000	0.0000	0.0000	29.5239	29.5239	1.2200e-003	2.5000e-004	29.6296
Total	0.0179	0.0546	0.1492	6.0000e-004	0.0534	4.6000e-004	0.0539	0.0143	4.3000e-004	0.0148	0.1218	89.7652	89.8869	0.0112	2.9000e-004	90.2552

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.3000e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.8577	4.8577	2.0000e-004	4.0000e-005	4.8751
Mobile	0.0116	0.0546	0.1491	6.0000e-004	0.0534	4.6000e-004	0.0539	0.0143	4.3000e-004	0.0148	0.0000	55.3833	55.3833	2.6100e-003	0.0000	55.4486
Waste						0.0000	0.0000		0.0000	0.0000	0.1218	0.0000	0.1218	7.2000e-003	0.0000	0.3017
Water						0.0000	0.0000		0.0000	0.0000	0.0000	29.5239	29.5239	1.2200e-003	2.5000e-004	29.6296
Total	0.0179	0.0546	0.1492	6.0000e-004	0.0534	4.6000e-004	0.0539	0.0143	4.3000e-004	0.0148	0.1218	89.7652	89.8869	0.0112	2.9000e-004	90.2552

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2023	9/28/2023	5	20	
2	Site Preparation	Site Preparation	9/29/2023	10/12/2023	5	10	
3	Grading	Grading	10/13/2023	10/26/2023	5	10	
4	Infiltration Gallery Installation	Building Construction	10/27/2023	12/7/2023	5	30	
5	BI 9705 Diversion Structure	Building Construction	12/8/2023	12/28/2023	5	15	
6	Diversion Pipeline to Pretreatment	Building Construction	12/28/2023	1/24/2024	5	20	
7	Pretreatment Works	Building Construction	1/25/2024	2/7/2024	5	10	
8	Diversion Pipeline to SWS w/ Meter and Valve	Building Construction	2/7/2024	2/20/2024	5	10	
9	Park Expansion	Building Construction	2/20/2024	4/1/2024	5	30	
10	Catch Basins	Building Construction	4/1/2024	4/19/2024	5	15	
11	Syracuse Ave Storm Drain (15-inch)	Building Construction	4/19/2024	5/9/2024	5	15	
12	Patritti Ave Storm Drain (18-inch)	Building Construction	5/9/2024	6/5/2024	5	20	
13	Basketball Courts	Building Construction	6/5/2024	6/18/2024	5	10	
14	Patritti Avenue Storm Drain (12-inch)	Building Construction	6/18/2024	7/1/2024	5	10	
15	Parking Lot Expansion	Building Construction	7/1/2024	7/19/2024	5	15	
16	Park Improvements	Building Construction	7/20/2024	9/20/2024	5	45	
17	Dog Park	Building Construction	9/20/2024	10/17/2024	5	20	
18	Paving	Paving	10/18/2024	11/14/2024	5	20	
19	Architectural Coating	Architectural Coating	11/15/2024	12/12/2024	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7

Acres of Paving: 1

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,614 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Park Improvements	Generator Sets	1	8.00	84	0.74
Dog Park	Generator Sets	1	8.00	84	0.74
BI 9705 Diversion Structure	Generator Sets	1	8.00	84	0.74
Diversion Pipeline to Pretreatment	Generator Sets	1	8.00	84	0.74
Pretreatment Works	Generator Sets	1	8.00	84	0.74
Diversion Pipeline to SWS w/ Meter and Valve	Generator Sets	1	8.00	84	0.74
Park Expansion	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Catch Basins	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Syracuse Ave Storm Drain (15-inch)	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Patriitti Ave Storm Drain (18-inch)	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Basketball Courts	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Patriitti Avenue Storm Drain (12 inch)	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Parking Lot Expansion	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Park Improvements	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Dog Park	Tractors/Loaders/Backhoes	3	7.00	97	0.37
BI 9705 Diversion Structure	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Diversion Pipeline to Pretreatment	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Pretreatment Works	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Diversion Pipeline to SWS w/ Meter and Valve	Tractors/Loaders/Backhoes	3	7.00	97	0.37

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Park Expansion	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Catch Basins	Welders	1	8.00	46	0.45
Syracuse Ave Storm Drain (15-inch)	Welders	1	8.00	46	0.45
Patriitti Ave Storm Drain (18-inch)	Welders	1	8.00	46	0.45
Basketball Courts	Welders	1	8.00	46	0.45
Patriitti Avenue Storm Drain (12 inch)	Welders	1	8.00	46	0.45
Parking Lot Expansion	Welders	1	8.00	46	0.45
Park Improvements	Welders	1	8.00	46	0.45
Dog Park	Welders	1	8.00	46	0.45
BI 9705 Diversion Structure	Welders	1	8.00	46	0.45
Diversion Pipeline to Pretreatment	Welders	1	8.00	46	0.45
Pretreatment Works	Welders	1	8.00	46	0.45
Diversion Pipeline to SWS w/ Meter and Valve	Welders	1	8.00	46	0.45
Park Expansion	Welders	1	8.00	46	0.45
Demolition	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Diversion Pipeline to Pretreatment	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	2	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Infiltration Gallery Installation	Cranes	1	7.00	231	0.29
Infiltration Gallery Installation	Forklifts	3	8.00	89	0.20
Infiltration Gallery Installation	Generator Sets	1	8.00	84	0.74
BI 9705 Diversion Structure	Pavers	2	8.00	130	0.42
BI 9705 Diversion Structure	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Infiltration Gallery Installation	Tractors/Loaders/Backhoes	3	7.00	97	0.37

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
BI 9705 Diversion Structure	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Infiltration Gallery Installation	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Catch Basins	Cranes	1	7.00	231	0.29
Syracuse Ave Storm Drain (15-inch)	Cranes	1	7.00	231	0.29
Patritti Ave Storm Drain (18-inch)	Cranes	1	7.00	231	0.29
Basketball Courts	Cranes	1	7.00	231	0.29
Patritti Avenue Storm Drain (12 inch)	Cranes	1	7.00	231	0.29
Parking Lot Expansion	Cranes	1	7.00	231	0.29
Park Improvements	Cranes	1	7.00	231	0.29
Dog Park	Cranes	1	7.00	231	0.29
BI 9705 Diversion Structure	Cranes	1	7.00	231	0.29
Diversion Pipeline to Pretreatment	Cranes	1	7.00	231	0.29
Pretreatment Works	Cranes	1	7.00	231	0.29
Diversion Pipeline to SWS w/ Meter and Valve	Cranes	1	7.00	231	0.29
Park Expansion	Cranes	1	7.00	231	0.29
Catch Basins	Forklifts	3	8.00	89	0.20
Syracuse Ave Storm Drain (15-inch)	Forklifts	3	8.00	89	0.20
Patritti Ave Storm Drain (18-inch)	Forklifts	3	8.00	89	0.20
Basketball Courts	Forklifts	3	8.00	89	0.20
Patritti Avenue Storm Drain (12 inch)	Forklifts	3	8.00	89	0.20
Parking Lot Expansion	Forklifts	3	8.00	89	0.20
Park Improvements	Forklifts	3	8.00	89	0.20

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Dog Park	Forklifts	3	8.00	89	0.20
BI 9705 Diversion Structure	Forklifts	3	8.00	89	0.20
Diversion Pipeline to Pretreatment	Forklifts	3	8.00	89	0.20
Pretreatment Works	Forklifts	3	8.00	89	0.20
Diversion Pipeline to SWS w/ Meter and Valve	Forklifts	3	8.00	89	0.20
Park Expansion	Forklifts	3	8.00	89	0.20
Catch Basins	Generator Sets	1	8.00	84	0.74
Syracuse Ave Storm Drain (15-inch)	Generator Sets	1	8.00	84	0.74
Patritti Ave Storm Drain (18-inch)	Generator Sets	1	8.00	84	0.74
Basketball Courts	Generator Sets	1	8.00	84	0.74
Patritti Avenue Storm Drain (12 inch)	Generator Sets	1	8.00	84	0.74
Parking Lot Expansion	Generator Sets	1	8.00	84	0.74

Trips and VMT

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Infiltration Gallery Installation	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
BI 9705 Diversion Structure	15	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Diversion Pipeline to Pretreatment	10	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Catch Basins	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Syracuse Ave Storm Drain (15-inch)	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Patritti Ave Storm Drain (18-inch)	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Basketball Courts	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Patritti Avenue Storm Drain (12-inch)	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Parking Lot Expansion	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Park Improvements	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dog Park	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pretreatment Works	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Diversion Pipeline to SWS w/ Meter and Val	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Park Expansion	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0235	0.2262	0.2029	3.9000e-004		0.0105	0.0105		9.8000e-003	9.8000e-003	0.0000	34.2429	34.2429	9.6000e-003	0.0000	34.4830
Total	0.0235	0.2262	0.2029	3.9000e-004		0.0105	0.0105		9.8000e-003	9.8000e-003	0.0000	34.2429	34.2429	9.6000e-003	0.0000	34.4830

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.7000e-004	3.2000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9192	0.9192	2.0000e-005	0.0000	0.9198
Total	3.8000e-004	2.7000e-004	3.2000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9192	0.9192	2.0000e-005	0.0000	0.9198

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0235	0.2262	0.2029	3.9000e-004		0.0105	0.0105		9.8000e-003	9.8000e-003	0.0000	34.2429	34.2429	9.6000e-003	0.0000	34.4829
Total	0.0235	0.2262	0.2029	3.9000e-004		0.0105	0.0105		9.8000e-003	9.8000e-003	0.0000	34.2429	34.2429	9.6000e-003	0.0000	34.4829

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.7000e-004	3.2000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9192	0.9192	2.0000e-005	0.0000	0.9198
Total	3.8000e-004	2.7000e-004	3.2000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9192	0.9192	2.0000e-005	0.0000	0.9198

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0903	6.3300e-003	0.0967	0.0497	5.8200e-003	0.0555	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599
Total	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0903	6.3300e-003	0.0967	0.0497	5.8200e-003	0.0555	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599
Total	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0338	0.0000	0.0338	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5500e-003	0.0897	0.0738	1.5000e-004		3.8700e-003	3.8700e-003		3.5600e-003	3.5600e-003	0.0000	13.0303	13.0303	4.2100e-003	0.0000	13.1357
Total	8.5500e-003	0.0897	0.0738	1.5000e-004	0.0338	3.8700e-003	0.0377	0.0170	3.5600e-003	0.0205	0.0000	13.0303	13.0303	4.2100e-003	0.0000	13.1357

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599
Total	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0338	0.0000	0.0338	0.0170	0.0000	0.0170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5500e-003	0.0897	0.0738	1.5000e-004		3.8700e-003	3.8700e-003		3.5600e-003	3.5600e-003	0.0000	13.0303	13.0303	4.2100e-003	0.0000	13.1357
Total	8.5500e-003	0.0897	0.0738	1.5000e-004	0.0338	3.8700e-003	0.0377	0.0170	3.5600e-003	0.0205	0.0000	13.0303	13.0303	4.2100e-003	0.0000	13.1357

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599
Total	1.9000e-004	1.4000e-004	1.6000e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4596	0.4596	1.0000e-005	0.0000	0.4599

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.5 Infiltration Gallery Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0236	0.2158	0.2437	4.0000e-004		0.0105	0.0105		9.8800e-003	9.8800e-003	0.0000	34.7707	34.7707	8.2700e-003	0.0000	34.9775
Total	0.0236	0.2158	0.2437	4.0000e-004		0.0105	0.0105		9.8800e-003	9.8800e-003	0.0000	34.7707	34.7707	8.2700e-003	0.0000	34.9775

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.2500e-003	1.3600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.4201	1.4201	8.0000e-005	0.0000	1.4220
Worker	6.8000e-004	4.9000e-004	5.7700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6546	1.6546	4.0000e-005	0.0000	1.6557
Total	8.1000e-004	4.7400e-003	7.1300e-003	3.0000e-005	2.3500e-003	2.0000e-005	2.3700e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	3.0747	3.0747	1.2000e-004	0.0000	3.0777

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.5 Infiltration Gallery Installation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0236	0.2158	0.2437	4.0000e-004		0.0105	0.0105		9.8800e-003	9.8800e-003	0.0000	34.7707	34.7707	8.2700e-003	0.0000	34.9775
Total	0.0236	0.2158	0.2437	4.0000e-004		0.0105	0.0105		9.8800e-003	9.8800e-003	0.0000	34.7707	34.7707	8.2700e-003	0.0000	34.9775

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.2500e-003	1.3600e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.4201	1.4201	8.0000e-005	0.0000	1.4220
Worker	6.8000e-004	4.9000e-004	5.7700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6546	1.6546	4.0000e-005	0.0000	1.6557
Total	8.1000e-004	4.7400e-003	7.1300e-003	3.0000e-005	2.3500e-003	2.0000e-005	2.3700e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	3.0747	3.0747	1.2000e-004	0.0000	3.0777

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.6 BI 9705 Diversion Structure - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0118	0.1079	0.1218	2.0000e-004		5.2500e-003	5.2500e-003		4.9400e-003	4.9400e-003	0.0000	17.3854	17.3854	4.1400e-003	0.0000	17.4888
Off-Road	7.7500e-003	0.0764	0.1094	1.7000e-004		3.8300e-003	3.8300e-003		3.5200e-003	3.5200e-003	0.0000	15.0202	15.0202	4.8600e-003	0.0000	15.1416
Total	0.0196	0.1843	0.2312	3.7000e-004		9.0800e-003	9.0800e-003		8.4600e-003	8.4600e-003	0.0000	32.4055	32.4055	9.0000e-003	0.0000	32.6304

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1300e-003	6.8000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7101	0.7101	4.0000e-005	0.0000	0.7110
Worker	3.4000e-004	2.5000e-004	2.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8273	0.8273	2.0000e-005	0.0000	0.8279
Total	4.0000e-004	2.3800e-003	3.5600e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5374	1.5374	6.0000e-005	0.0000	1.5389

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.6 BI 9705 Diversion Structure - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0118	0.1079	0.1218	2.0000e-004		5.2500e-003	5.2500e-003		4.9400e-003	4.9400e-003	0.0000	17.3853	17.3853	4.1400e-003	0.0000	17.4887
Off-Road	7.7500e-003	0.0764	0.1094	1.7000e-004		3.8300e-003	3.8300e-003		3.5200e-003	3.5200e-003	0.0000	15.0201	15.0201	4.8600e-003	0.0000	15.1416
Total	0.0196	0.1843	0.2312	3.7000e-004		9.0800e-003	9.0800e-003		8.4600e-003	8.4600e-003	0.0000	32.4055	32.4055	9.0000e-003	0.0000	32.6303

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1300e-003	6.8000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7101	0.7101	4.0000e-005	0.0000	0.7110
Worker	3.4000e-004	2.5000e-004	2.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8273	0.8273	2.0000e-005	0.0000	0.8279
Total	4.0000e-004	2.3800e-003	3.5600e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5374	1.5374	6.0000e-005	0.0000	1.5389

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.7 Diversion Pipeline to Pretreatment - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7600e-003	0.0157	0.0181	3.0000e-005		7.7000e-004	7.7000e-004		7.3000e-004	7.3000e-004	0.0000	2.5734	2.5734	5.7000e-004	0.0000	2.5875
Total	1.7600e-003	0.0157	0.0181	3.0000e-005		7.7000e-004	7.7000e-004		7.3000e-004	7.3000e-004	0.0000	2.5734	2.5734	5.7000e-004	0.0000	2.5875

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.8000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0947	0.0947	1.0000e-005	0.0000	0.0948
Worker	5.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1103	0.1103	0.0000	0.0000	0.1104
Total	6.0000e-005	3.1000e-004	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.2050	0.2050	1.0000e-005	0.0000	0.2052

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.7 Diversion Pipeline to Pretreatment - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7600e-003	0.0157	0.0181	3.0000e-005		7.7000e-004	7.7000e-004		7.3000e-004	7.3000e-004	0.0000	2.5734	2.5734	5.7000e-004	0.0000	2.5875
Total	1.7600e-003	0.0157	0.0181	3.0000e-005		7.7000e-004	7.7000e-004		7.3000e-004	7.3000e-004	0.0000	2.5734	2.5734	5.7000e-004	0.0000	2.5875

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.8000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0947	0.0947	1.0000e-005	0.0000	0.0948
Worker	5.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1103	0.1103	0.0000	0.0000	0.1104
Total	6.0000e-005	3.1000e-004	4.7000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.2050	0.2050	1.0000e-005	0.0000	0.2052

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.7 Diversion Pipeline to Pretreatment - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1320	0.1618	2.7000e-004		6.0700e-003	6.0700e-003		5.7400e-003	5.7400e-003	0.0000	23.1644	23.1644	5.0600e-003	0.0000	23.2909
Total	0.0149	0.1320	0.1618	2.7000e-004		6.0700e-003	6.0700e-003		5.7400e-003	5.7400e-003	0.0000	23.1644	23.1644	5.0600e-003	0.0000	23.2909

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.5400e-003	7.9000e-004	1.0000e-005	2.3000e-004	0.0000	2.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.8487	0.8487	5.0000e-005	0.0000	0.8498
Worker	3.9000e-004	2.7000e-004	3.2200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9620	0.9620	2.0000e-005	0.0000	0.9626
Total	4.7000e-004	2.8100e-003	4.0100e-003	2.0000e-005	1.4100e-003	1.0000e-005	1.4200e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.8107	1.8107	7.0000e-005	0.0000	1.8124

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.7 Diversion Pipeline to Pretreatment - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1320	0.1618	2.7000e-004		6.0700e-003	6.0700e-003		5.7400e-003	5.7400e-003	0.0000	23.1643	23.1643	5.0600e-003	0.0000	23.2909
Total	0.0149	0.1320	0.1618	2.7000e-004		6.0700e-003	6.0700e-003		5.7400e-003	5.7400e-003	0.0000	23.1643	23.1643	5.0600e-003	0.0000	23.2909

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.5400e-003	7.9000e-004	1.0000e-005	2.3000e-004	0.0000	2.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.8487	0.8487	5.0000e-005	0.0000	0.8498
Worker	3.9000e-004	2.7000e-004	3.2200e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9620	0.9620	2.0000e-005	0.0000	0.9626
Total	4.7000e-004	2.8100e-003	4.0100e-003	2.0000e-005	1.4100e-003	1.0000e-005	1.4200e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.8107	1.8107	7.0000e-005	0.0000	1.8124

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.8 Pretreatment Works - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.8 Pretreatment Works - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.10 Park Expansion - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2017	0.2425	4.0000e-004		9.2000e-003	9.2000e-003		8.6500e-003	8.6500e-003	0.0000	34.7774	34.7774	8.2200e-003	0.0000	34.9830
Total	0.0221	0.2017	0.2425	4.0000e-004		9.2000e-003	9.2000e-003		8.6500e-003	8.6500e-003	0.0000	34.7774	34.7774	8.2200e-003	0.0000	34.9830

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.2300e-003	1.3200e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.4144	1.4144	8.0000e-005	0.0000	1.4163
Worker	6.5000e-004	4.5000e-004	5.3700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6033	1.6033	4.0000e-005	0.0000	1.6043
Total	7.8000e-004	4.6800e-003	6.6900e-003	3.0000e-005	2.3500e-003	2.0000e-005	2.3700e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	3.0178	3.0178	1.2000e-004	0.0000	3.0206

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.10 Park Expansion - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2017	0.2425	4.0000e-004		9.2000e-003	9.2000e-003		8.6500e-003	8.6500e-003	0.0000	34.7773	34.7773	8.2200e-003	0.0000	34.9829
Total	0.0221	0.2017	0.2425	4.0000e-004		9.2000e-003	9.2000e-003		8.6500e-003	8.6500e-003	0.0000	34.7773	34.7773	8.2200e-003	0.0000	34.9829

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.2300e-003	1.3200e-003	1.0000e-005	3.8000e-004	0.0000	3.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.4144	1.4144	8.0000e-005	0.0000	1.4163
Worker	6.5000e-004	4.5000e-004	5.3700e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6033	1.6033	4.0000e-005	0.0000	1.6043
Total	7.8000e-004	4.6800e-003	6.6900e-003	3.0000e-005	2.3500e-003	2.0000e-005	2.3700e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	3.0178	3.0178	1.2000e-004	0.0000	3.0206

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.11 Catch Basins - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915
Total	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1200e-003	6.6000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7072	0.7072	4.0000e-005	0.0000	0.7082
Worker	3.2000e-004	2.2000e-004	2.6900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8017	0.8017	2.0000e-005	0.0000	0.8022
Total	3.8000e-004	2.3400e-003	3.3500e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5089	1.5089	6.0000e-005	0.0000	1.5103

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.11 Catch Basins - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915
Total	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1200e-003	6.6000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7072	0.7072	4.0000e-005	0.0000	0.7082
Worker	3.2000e-004	2.2000e-004	2.6900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8017	0.8017	2.0000e-005	0.0000	0.8022
Total	3.8000e-004	2.3400e-003	3.3500e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5089	1.5089	6.0000e-005	0.0000	1.5103

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.12 Syracuse Ave Storm Drain (15-inch) - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915
Total	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1200e-003	6.6000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7072	0.7072	4.0000e-005	0.0000	0.7082
Worker	3.2000e-004	2.2000e-004	2.6900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8017	0.8017	2.0000e-005	0.0000	0.8022
Total	3.8000e-004	2.3400e-003	3.3500e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5089	1.5089	6.0000e-005	0.0000	1.5103

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.12 Syracuse Ave Storm Drain (15-inch) - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915
Total	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1200e-003	6.6000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7072	0.7072	4.0000e-005	0.0000	0.7082
Worker	3.2000e-004	2.2000e-004	2.6900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8017	0.8017	2.0000e-005	0.0000	0.8022
Total	3.8000e-004	2.3400e-003	3.3500e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5089	1.5089	6.0000e-005	0.0000	1.5103

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.13 Patritti Ave Storm Drain (18-inch) - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220
Total	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8200e-003	8.8000e-004	1.0000e-005	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.9430	0.9430	5.0000e-005	0.0000	0.9442
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	5.1000e-004	3.1200e-003	4.4600e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	2.0119	2.0119	8.0000e-005	0.0000	2.0138

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.13 Patritti Ave Storm Drain (18-inch) - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220
Total	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8200e-003	8.8000e-004	1.0000e-005	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.9430	0.9430	5.0000e-005	0.0000	0.9442
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	5.1000e-004	3.1200e-003	4.4600e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	2.0119	2.0119	8.0000e-005	0.0000	2.0138

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.14 Basketball Courts - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.14 Basketball Courts - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.15 Patritti Avenue Storm Drain (12 inch) - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5925	11.5925	2.7400e-003	0.0000	11.6610

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.15 Patritti Avenue Storm Drain (12 inch) - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610
Total	7.3600e-003	0.0672	0.0808	1.3000e-004		3.0700e-003	3.0700e-003		2.8800e-003	2.8800e-003	0.0000	11.5924	11.5924	2.7400e-003	0.0000	11.6610

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	2.2000e-004	1.5000e-004	1.7900e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5344	0.5344	1.0000e-005	0.0000	0.5348
Total	2.6000e-004	1.5600e-003	2.2300e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	1.0059	1.0059	4.0000e-005	0.0000	1.0069

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.16 Parking Lot Expansion - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915
Total	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1200e-003	6.6000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7072	0.7072	4.0000e-005	0.0000	0.7082
Worker	3.2000e-004	2.2000e-004	2.6900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8017	0.8017	2.0000e-005	0.0000	0.8022
Total	3.8000e-004	2.3400e-003	3.3500e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5089	1.5089	6.0000e-005	0.0000	1.5103

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.16 Parking Lot Expansion - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915
Total	0.0110	0.1008	0.1213	2.0000e-004		4.6000e-003	4.6000e-003		4.3300e-003	4.3300e-003	0.0000	17.3887	17.3887	4.1100e-003	0.0000	17.4915

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.1200e-003	6.6000e-004	1.0000e-005	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7072	0.7072	4.0000e-005	0.0000	0.7082
Worker	3.2000e-004	2.2000e-004	2.6900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8017	0.8017	2.0000e-005	0.0000	0.8022
Total	3.8000e-004	2.3400e-003	3.3500e-003	2.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.3000e-004	0.0000	1.5089	1.5089	6.0000e-005	0.0000	1.5103

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.17 Park Improvements - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3025	0.3638	6.1000e-004		0.0138	0.0138		0.0130	0.0130	0.0000	52.1661	52.1661	0.0123	0.0000	52.4744
Total	0.0331	0.3025	0.3638	6.1000e-004		0.0138	0.0138		0.0130	0.0130	0.0000	52.1661	52.1661	0.0123	0.0000	52.4744

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	6.3500e-003	1.9800e-003	2.0000e-005	5.7000e-004	1.0000e-005	5.7000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	2.1217	2.1217	1.1000e-004	0.0000	2.1245
Worker	9.7000e-004	6.7000e-004	8.0600e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4050	2.4050	6.0000e-005	0.0000	2.4065
Total	1.1600e-003	7.0200e-003	0.0100	5.0000e-005	3.5300e-003	3.0000e-005	3.5500e-003	9.5000e-004	3.0000e-005	9.8000e-004	0.0000	4.5267	4.5267	1.7000e-004	0.0000	4.5310

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.17 Park Improvements - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3025	0.3638	6.1000e-004		0.0138	0.0138		0.0130	0.0130	0.0000	52.1660	52.1660	0.0123	0.0000	52.4744
Total	0.0331	0.3025	0.3638	6.1000e-004		0.0138	0.0138		0.0130	0.0130	0.0000	52.1660	52.1660	0.0123	0.0000	52.4744

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	6.3500e-003	1.9800e-003	2.0000e-005	5.7000e-004	1.0000e-005	5.7000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	2.1217	2.1217	1.1000e-004	0.0000	2.1245
Worker	9.7000e-004	6.7000e-004	8.0600e-003	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.4050	2.4050	6.0000e-005	0.0000	2.4065
Total	1.1600e-003	7.0200e-003	0.0100	5.0000e-005	3.5300e-003	3.0000e-005	3.5500e-003	9.5000e-004	3.0000e-005	9.8000e-004	0.0000	4.5267	4.5267	1.7000e-004	0.0000	4.5310

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.18 Dog Park - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220
Total	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8200e-003	8.8000e-004	1.0000e-005	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.9430	0.9430	5.0000e-005	0.0000	0.9442
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	5.1000e-004	3.1200e-003	4.4600e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	2.0119	2.0119	8.0000e-005	0.0000	2.0138

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.18 Dog Park - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220
Total	0.0147	0.1344	0.1617	2.7000e-004		6.1300e-003	6.1300e-003		5.7700e-003	5.7700e-003	0.0000	23.1849	23.1849	5.4800e-003	0.0000	23.3220

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.8200e-003	8.8000e-004	1.0000e-005	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.9430	0.9430	5.0000e-005	0.0000	0.9442
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	5.1000e-004	3.1200e-003	4.4600e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.4000e-004	0.0000	2.0119	2.0119	8.0000e-005	0.0000	2.0138

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.19 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0112	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.19 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0112	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.20 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569
Total	7.8700e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

3.20 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568
Total	7.8700e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695
Total	4.3000e-004	3.0000e-004	3.5800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0689	1.0689	3.0000e-005	0.0000	1.0695

4.0 Operational Detail - Mobile

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0116	0.0546	0.1491	6.0000e-004	0.0534	4.6000e-004	0.0539	0.0143	4.3000e-004	0.0148	0.0000	55.3833	55.3833	2.6100e-003	0.0000	55.4486
Unmitigated	0.0116	0.0546	0.1491	6.0000e-004	0.0534	4.6000e-004	0.0539	0.0143	4.3000e-004	0.0148	0.0000	55.3833	55.3833	2.6100e-003	0.0000	55.4486

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	13.23	159.25	117.18	140,827	140,827
Parking Lot	0.00	0.00	0.00		
Total	13.23	159.25	117.18	140,827	140,827

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	15246	4.8577	2.0000e-004	4.0000e-005	4.8751
Total		4.8577	2.0000e-004	4.0000e-005	4.8751

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	15246	4.8577	2.0000e-004	4.0000e-005	4.8751
Total		4.8577	2.0000e-004	4.0000e-005	4.8751

6.0 Area Detail

6.1 Mitigation Measures Area

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.3000e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Unmitigated	6.3000e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	6.3000e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004
Total	6.3000e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-004	2.0000e-004	0.0000	0.0000	2.1000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	29.5239	1.2200e-003	2.5000e-004	29.6296
Unmitigated	29.5239	1.2200e-003	2.5000e-004	29.6296

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 8.34037	29.5239	1.2200e-003	2.5000e-004	29.6296
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		29.5239	1.2200e-003	2.5000e-004	29.6296

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 8.34037	29.5239	1.2200e-003	2.5000e-004	29.6296
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		29.5239	1.2200e-003	2.5000e-004	29.6296

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1218	7.2000e-003	0.0000	0.3017
Unmitigated	0.1218	7.2000e-003	0.0000	0.3017

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.6	0.1218	7.2000e-003	0.0000	0.3017
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.1218	7.2000e-003	0.0000	0.3017

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.6	0.1218	7.2000e-003	0.0000	0.3017
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.1218	7.2000e-003	0.0000	0.3017

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	7.00	Acre	7.00	304,920.00	0
Parking Lot	1.00	Acre	1.00	43,560.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Expanded construction phases.

Off-road Equipment - This phase does not require excessive excavation.

Grading - Revised grading acreage

Off-road Equipment -

Trips and VMT - Revised # trips per worker per day, and number of vendor trips

Mobile Land Use Mitigation -

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	10.00
tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	230.00	45.00
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	PhaseEndDate	11/21/2024	1/24/2024
tblConstructionPhase	PhaseEndDate	9/26/2024	12/7/2023
tblConstructionPhase	PhaseEndDate	11/9/2023	10/26/2023
tblConstructionPhase	PhaseEndDate	10/24/2024	12/28/2023
tblConstructionPhase	PhaseStartDate	10/25/2024	12/28/2023
tblConstructionPhase	PhaseStartDate	11/10/2023	10/27/2023
tblConstructionPhase	PhaseStartDate	9/27/2024	12/8/2023
tblGrading	AcresOfGrading	5.00	7.00
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblTripsAndVMT	VendorTripNumber	57.00	4.00

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	146.00	12.00
tblTripsAndVMT	WorkerTripNumber	15.00	12.00

2.0 Emissions Summary

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0345	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.2196	0.9426	2.7633	0.0111	0.9742	8.1900e-003	0.9824	0.2607	7.6100e-003	0.2683		1,130.0630	1,130.0630	0.0517		1,131.3552
Total	0.2541	0.9426	2.7641	0.0111	0.9742	8.1900e-003	0.9824	0.2607	7.6100e-003	0.2683		1,130.0647	1,130.0647	0.0517	0.0000	1,131.3570

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0345	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.2196	0.9426	2.7633	0.0111	0.9742	8.1900e-003	0.9824	0.2607	7.6100e-003	0.2683		1,130.0630	1,130.0630	0.0517		1,131.3552
Total	0.2541	0.9426	2.7641	0.0111	0.9742	8.1900e-003	0.9824	0.2607	7.6100e-003	0.2683		1,130.0647	1,130.0647	0.0517	0.0000	1,131.3570

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2023	9/28/2023	5	20	
2	Site Preparation	Site Preparation	9/29/2023	10/12/2023	5	10	
3	Grading	Grading	10/13/2023	10/26/2023	5	10	
4	Infiltration Gallery Installation	Building Construction	10/27/2023	12/7/2023	5	30	
5	BI 9705 Diversion Structure	Building Construction	12/8/2023	12/28/2023	5	15	
6	Diversion Pipeline to Pretreatment	Building Construction	12/28/2023	1/24/2024	5	20	
7	Pretreatment Works	Building Construction	1/25/2024	2/7/2024	5	10	
8	Diversion Pipeline to SWS w/ Meter and Valve	Building Construction	2/7/2024	2/20/2024	5	10	
9	Park Expansion	Building Construction	2/20/2024	4/1/2024	5	30	
10	Catch Basins	Building Construction	4/1/2024	4/19/2024	5	15	
11	Syracuse Ave Storm Drain (15-inch)	Building Construction	4/19/2024	5/9/2024	5	15	
12	Patritti Ave Storm Drain (18-inch)	Building Construction	5/9/2024	6/5/2024	5	20	
13	Basketball Courts	Building Construction	6/5/2024	6/18/2024	5	10	
14	Patritti Avenue Storm Drain (12-inch)	Building Construction	6/18/2024	7/1/2024	5	10	
15	Parking Lot Expansion	Building Construction	7/1/2024	7/19/2024	5	15	
16	Park Improvements	Building Construction	7/20/2024	9/20/2024	5	45	
17	Dog Park	Building Construction	9/20/2024	10/17/2024	5	20	
18	Paving	Paving	10/18/2024	11/14/2024	5	20	
19	Architectural Coating	Architectural Coating	11/15/2024	12/12/2024	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7

Acres of Paving: 1

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,614 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Park Improvements	Generator Sets	1	8.00	84	0.74
Dog Park	Generator Sets	1	8.00	84	0.74
BI 9705 Diversion Structure	Generator Sets	1	8.00	84	0.74
Diversion Pipeline to Pretreatment	Generator Sets	1	8.00	84	0.74
Pretreatment Works	Generator Sets	1	8.00	84	0.74
Diversion Pipeline to SWS w/ Meter and Valve	Generator Sets	1	8.00	84	0.74
Park Expansion	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Catch Basins	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Syracuse Ave Storm Drain (15-inch)	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Patriitti Ave Storm Drain (18-inch)	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Basketball Courts	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Patriitti Avenue Storm Drain (12 inch)	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Parking Lot Expansion	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Park Improvements	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Dog Park	Tractors/Loaders/Backhoes	3	7.00	97	0.37
BI 9705 Diversion Structure	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Diversion Pipeline to Pretreatment	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Pretreatment Works	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Diversion Pipeline to SWS w/ Meter and Valve	Tractors/Loaders/Backhoes	3	7.00	97	0.37

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Park Expansion	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Catch Basins	Welders	1	8.00	46	0.45
Syracuse Ave Storm Drain (15-inch)	Welders	1	8.00	46	0.45
Patriitti Ave Storm Drain (18-inch)	Welders	1	8.00	46	0.45
Basketball Courts	Welders	1	8.00	46	0.45
Patriitti Avenue Storm Drain (12 inch)	Welders	1	8.00	46	0.45
Parking Lot Expansion	Welders	1	8.00	46	0.45
Park Improvements	Welders	1	8.00	46	0.45
Dog Park	Welders	1	8.00	46	0.45
BI 9705 Diversion Structure	Welders	1	8.00	46	0.45
Diversion Pipeline to Pretreatment	Welders	1	8.00	46	0.45
Pretreatment Works	Welders	1	8.00	46	0.45
Diversion Pipeline to SWS w/ Meter and Valve	Welders	1	8.00	46	0.45
Park Expansion	Welders	1	8.00	46	0.45
Demolition	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Diversion Pipeline to Pretreatment	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	2	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Infiltration Gallery Installation	Cranes	1	7.00	231	0.29
Infiltration Gallery Installation	Forklifts	3	8.00	89	0.20
Infiltration Gallery Installation	Generator Sets	1	8.00	84	0.74
BI 9705 Diversion Structure	Pavers	2	8.00	130	0.42
BI 9705 Diversion Structure	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Infiltration Gallery Installation	Tractors/Loaders/Backhoes	3	7.00	97	0.37

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
BI 9705 Diversion Structure	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Infiltration Gallery Installation	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Catch Basins	Cranes	1	7.00	231	0.29
Syracuse Ave Storm Drain (15-inch)	Cranes	1	7.00	231	0.29
Patritti Ave Storm Drain (18-inch)	Cranes	1	7.00	231	0.29
Basketball Courts	Cranes	1	7.00	231	0.29
Patritti Avenue Storm Drain (12 inch)	Cranes	1	7.00	231	0.29
Parking Lot Expansion	Cranes	1	7.00	231	0.29
Park Improvements	Cranes	1	7.00	231	0.29
Dog Park	Cranes	1	7.00	231	0.29
BI 9705 Diversion Structure	Cranes	1	7.00	231	0.29
Diversion Pipeline to Pretreatment	Cranes	1	7.00	231	0.29
Pretreatment Works	Cranes	1	7.00	231	0.29
Diversion Pipeline to SWS w/ Meter and Valve	Cranes	1	7.00	231	0.29
Park Expansion	Cranes	1	7.00	231	0.29
Catch Basins	Forklifts	3	8.00	89	0.20
Syracuse Ave Storm Drain (15-inch)	Forklifts	3	8.00	89	0.20
Patritti Ave Storm Drain (18-inch)	Forklifts	3	8.00	89	0.20
Basketball Courts	Forklifts	3	8.00	89	0.20
Patritti Avenue Storm Drain (12 inch)	Forklifts	3	8.00	89	0.20
Parking Lot Expansion	Forklifts	3	8.00	89	0.20
Park Improvements	Forklifts	3	8.00	89	0.20

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Dog Park	Forklifts	3	8.00	89	0.20
BI 9705 Diversion Structure	Forklifts	3	8.00	89	0.20
Diversion Pipeline to Pretreatment	Forklifts	3	8.00	89	0.20
Pretreatment Works	Forklifts	3	8.00	89	0.20
Diversion Pipeline to SWS w/ Meter and Valve	Forklifts	3	8.00	89	0.20
Park Expansion	Forklifts	3	8.00	89	0.20
Catch Basins	Generator Sets	1	8.00	84	0.74
Syracuse Ave Storm Drain (15-inch)	Generator Sets	1	8.00	84	0.74
Patritti Ave Storm Drain (18-inch)	Generator Sets	1	8.00	84	0.74
Basketball Courts	Generator Sets	1	8.00	84	0.74
Patritti Avenue Storm Drain (12 inch)	Generator Sets	1	8.00	84	0.74
Parking Lot Expansion	Generator Sets	1	8.00	84	0.74

Trips and VMT

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Infiltration Gallery Installation	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
BI 9705 Diversion Structure	15	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Diversion Pipeline to Pretreatment	10	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Catch Basins	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Syracuse Ave Storm Drain (15-inch)	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Patritti Ave Storm Drain (18-inch)	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Basketball Courts	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Patritti Avenue Storm Drain (12-inch)	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Parking Lot Expansion	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Park Improvements	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dog Park	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pretreatment Works	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Diversion Pipeline to SWS w/ Meter and Val	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Park Expansion	9	12.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3453	22.6232	20.2904	0.0391		1.0544	1.0544		0.9803	0.9803		3,774.637 2	3,774.637 2	1.0583		3,801.095 1
Total	2.3453	22.6232	20.2904	0.0391		1.0544	1.0544		0.9803	0.9803		3,774.637 2	3,774.637 2	1.0583		3,801.095 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3453	22.6232	20.2904	0.0391		1.0544	1.0544		0.9803	0.9803	0.0000	3,774.637 2	3,774.637 2	1.0583		3,801.095 1
Total	2.3453	22.6232	20.2904	0.0391		1.0544	1.0544		0.9803	0.9803	0.0000	3,774.637 2	3,774.637 2	1.0583		3,801.095 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	2.6595	27.5242	18.2443	0.0381	18.0663	1.2660	19.3323	9.9307	1.1647	11.0954		3,687.3081	3,687.3081	1.1926		3,717.1219

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	2.6595	27.5242	18.2443	0.0381	18.0663	1.2660	19.3323	9.9307	1.1647	11.0954	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7644	0.0000	6.7644	3.3904	0.0000	3.3904			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	6.7644	0.7749	7.5394	3.3904	0.7129	4.1033		2,872.6910	2,872.6910	0.9291		2,895.9182

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7644	0.0000	6.7644	3.3904	0.0000	3.3904			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	1.7109	17.9359	14.7507	0.0297	6.7644	0.7749	7.5394	3.3904	0.7129	4.1033	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166
Total	0.0377	0.0241	0.3422	1.0600e-003	0.1118	8.5000e-004	0.1126	0.0296	7.8000e-004	0.0304		105.8482	105.8482	2.7300e-003		105.9166

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.5 Infiltration Gallery Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0453	0.0289	0.4107	1.2700e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		127.0178	127.0178	3.2800e-003		127.0999
Total	0.0537	0.3091	0.4974	2.2600e-003	0.1597	1.3400e-003	0.1611	0.0429	1.2500e-003	0.0442		232.5808	232.5808	8.8200e-003		232.8014

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.5 Infiltration Gallery Installation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0453	0.0289	0.4107	1.2700e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		127.0178	127.0178	3.2800e-003		127.0999
Total	0.0537	0.3091	0.4974	2.2600e-003	0.1597	1.3400e-003	0.1611	0.0429	1.2500e-003	0.0442		232.5808	232.5808	8.8200e-003		232.8014

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.6 BI 9705 Diversion Structure - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Total	2.6055	24.5765	30.8282	0.0497		1.2099	1.2099		1.1278	1.1278		4,762.7941	4,762.7941	1.3218		4,795.8396

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0453	0.0289	0.4107	1.2700e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		127.0178	127.0178	3.2800e-003		127.0999
Total	0.0537	0.3091	0.4974	2.2600e-003	0.1597	1.3400e-003	0.1611	0.0429	1.2500e-003	0.0442		232.5808	232.5808	8.8200e-003		232.8014

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.6 BI 9705 Diversion Structure - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Total	2.6055	24.5765	30.8282	0.0497		1.2099	1.2099		1.1278	1.1278	0.0000	4,762.7941	4,762.7941	1.3218		4,795.8396

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0453	0.0289	0.4107	1.2700e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		127.0178	127.0178	3.2800e-003		127.0999
Total	0.0537	0.3091	0.4974	2.2600e-003	0.1597	1.3400e-003	0.1611	0.0429	1.2500e-003	0.0442		232.5808	232.5808	8.8200e-003		232.8014

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.7 Diversion Pipeline to Pretreatment - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7644	15.6879	18.0551	0.0299		0.7706	0.7706		0.7293	0.7293		2,836.6580	2,836.6580	0.6247		2,852.2751
Total	1.7644	15.6879	18.0551	0.0299		0.7706	0.7706		0.7293	0.7293		2,836.6580	2,836.6580	0.6247		2,852.2751

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0453	0.0289	0.4107	1.2700e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		127.0178	127.0178	3.2800e-003		127.0999
Total	0.0537	0.3091	0.4974	2.2600e-003	0.1597	1.3400e-003	0.1611	0.0429	1.2500e-003	0.0442		232.5808	232.5808	8.8200e-003		232.8014

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.7 Diversion Pipeline to Pretreatment - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7644	15.6879	18.0551	0.0299		0.7706	0.7706		0.7293	0.7293	0.0000	2,836.6580	2,836.6580	0.6247		2,852.2751
Total	1.7644	15.6879	18.0551	0.0299		0.7706	0.7706		0.7293	0.7293	0.0000	2,836.6580	2,836.6580	0.6247		2,852.2751

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.4700e-003	0.2802	0.0868	9.9000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.5630	105.5630	5.5400e-003		105.7015
Worker	0.0453	0.0289	0.4107	1.2700e-003	0.1341	1.0200e-003	0.1352	0.0356	9.4000e-004	0.0365		127.0178	127.0178	3.2800e-003		127.0999
Total	0.0537	0.3091	0.4974	2.2600e-003	0.1597	1.3400e-003	0.1611	0.0429	1.2500e-003	0.0442		232.5808	232.5808	8.8200e-003		232.8014

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.7 Diversion Pipeline to Pretreatment - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6523	14.6626	17.9769	0.0299		0.6742	0.6742		0.6378	0.6378		2,837.1470	2,837.1470	0.6202		2,852.6519
Total	1.6523	14.6626	17.9769	0.0299		0.6742	0.6742		0.6378	0.6378		2,837.1470	2,837.1470	0.6202		2,852.6519

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.7 Diversion Pipeline to Pretreatment - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6523	14.6626	17.9769	0.0299		0.6742	0.6742		0.6378	0.6378	0.0000	2,837.1470	2,837.1470	0.6202		2,852.6519
Total	1.6523	14.6626	17.9769	0.0299		0.6742	0.6742		0.6378	0.6378	0.0000	2,837.1470	2,837.1470	0.6202		2,852.6519

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.8 Pretreatment Works - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.8 Pretreatment Works - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.10 Park Expansion - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.10 Park Expansion - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.11 Catch Basins - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.11 Catch Basins - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.12 Syracuse Ave Storm Drain (15-inch) - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.12 Syracuse Ave Storm Drain (15-inch) - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.13 Patritti Ave Storm Drain (18-inch) - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.13 Patritti Ave Storm Drain (18-inch) - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.14 Basketball Courts - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.14 Basketball Courts - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.15 Patritti Avenue Storm Drain (12 inch) - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.15 Patritti Avenue Storm Drain (12 inch) - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.16 Parking Lot Expansion - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.16 Parking Lot Expansion - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.17 Park Improvements - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.17 Park Improvements - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.18 Dog Park - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.18 Dog Park - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.2600e-003	0.2792	0.0841	9.8000e-004	0.0256	3.2000e-004	0.0259	7.3700e-003	3.1000e-004	7.6800e-003		105.1346	105.1346	5.4600e-003		105.2712
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0511	0.3055	0.4669	2.2100e-003	0.1597	1.3300e-003	0.1611	0.0429	1.2400e-003	0.0442		228.2160	228.2160	8.4700e-003		228.4278

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.19 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1192	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.19 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.1310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1192	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.20 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.6058					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	0.7866	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

3.20 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.6058					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	0.7866	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566
Total	0.0428	0.0264	0.3828	1.2300e-003	0.1341	1.0100e-003	0.1351	0.0356	9.3000e-004	0.0365		123.0814	123.0814	3.0100e-003		123.1566

4.0 Operational Detail - Mobile

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2196	0.9426	2.7633	0.0111	0.9742	8.1900e-003	0.9824	0.2607	7.6100e-003	0.2683		1,130.0630	1,130.0630	0.0517		1,131.3552
Unmitigated	0.2196	0.9426	2.7633	0.0111	0.9742	8.1900e-003	0.9824	0.2607	7.6100e-003	0.2683		1,130.0630	1,130.0630	0.0517		1,131.3552

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	13.23	159.25	117.18	140,827	140,827
Parking Lot	0.00	0.00	0.00		
Total	13.23	159.25	117.18	140,827	140,827

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841
Parking Lot	0.544880	0.044491	0.207704	0.117752	0.014693	0.006272	0.020732	0.032141	0.002572	0.001984	0.005239	0.000700	0.000841

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0345	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8600e-003
Unmitigated	0.0345	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.3200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0311					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8600e-003
Total	0.0345	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8600e-003

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	3.3200e-003					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	0.0311					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	8.0000e-005	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000			1.8600e-003
Total	0.0345	1.0000e-005	8.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000			1.8600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Appendix C
Barnes Park Cultural Resources Report



MEMORANDUM

DATE: January 13, 2022

TO: Katie Harrel, Special Projects Manager, CWE

FROM: Riordan Goodwin, RA, Senior Archaeologist

SUBJECT: Cultural Resources Records Search Results and AB 52 Consultation Assistance for the Barnes Park Multi-Benefit Stormwater Capture Project in the City of Baldwin Park, Los Angeles County, California (LSA Project No. CWE2107)

In June 2021, LSA, under contract to CWE, requested the results of a Sacred Lands File Search (SLF) from the Native American Heritage Commission and the results of a cultural resources records search for the Barnes Park Multi-Benefit Stormwater Capture Project in the City of Baldwin Park (City) in Los Angeles County, California. The project area is located in the southwestern portion of the City on 8.38 acres generally bound by the Interstate 605 right-of-way and vacant lots to the north, Patritti Avenue to the east, and Interstate 605 to the west and south (attached Figure 1). As part of the environmental review process for the proposed project, the City requires a cultural resources data review and assistance with Native American consultation. To accomplish this, LSA completed the following work.

RECORDS SEARCH

Data from the records search conducted at the South Central Coastal Information Center (SCCIC) on August 26, 2021, indicate there have been 36 previous studies within one mile, one of which included a portion of the project area (LA-04880, see attached Records Search Bibliography). Although no resources were documented within or adjacent to the project area, 30 historic-period resources including two archaeological sites (refuse scatters), and 28 built environment properties (residences, a farm/ranch, school, restaurant, railroad route, and power transmission lines) are within a mile (see attached Resource Listing). The nearest is a historic period power transmission line (33-0192581, SCE Antelope-Mesa 220 kV line) approximately 250 feet west of the project area. No prehistoric resources are documented within a mile.

AB 52 CONSULTATION ASSISTANCE

On June 29, 2021, LSA requested an SLF from the NAHC, which responded on July 21, 2021, with negative findings and a list of tribes designated for contact. The City contacted the Gabrieleno Band of Mission Indians—Kizh Nation, Gabrieleno Tongva Tribe, and Soboba Band of Luiseño Indians on October 18, 2021. No response has been received from any of the tribes to date.

RECOMMENDATIONS

The foregoing has outlined the methods and results of the records search and assistance with AB 52 consultation. No resources are documented within the project area, the nearest resource is a power transmission line, no archaeological resources are documented within one-half mile, and no prehistoric resources at all are documented within or within one mile of the study area. Also, none of the tribes contacted has responded within the specified 30-day time frame. Therefore, based on the available information, the City may consider the project area to have low sensitivity for potential impacts to cultural resources. However, standard regulatory compliance measures regarding buried cultural resources are required in conformance with Section 15064.5(e) of the *CEQA Guidelines*, PRC Section 5097.98, and State Health and Safety Code Section 7050.5.

If buried cultural materials are encountered during earthmoving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds and determine appropriate treatment.

In the event human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD will have the opportunity to offer recommendations for the disposition of the remains.

ATTACHMENTS

- Figure 1
- Records Search Bibliography
- Resource List

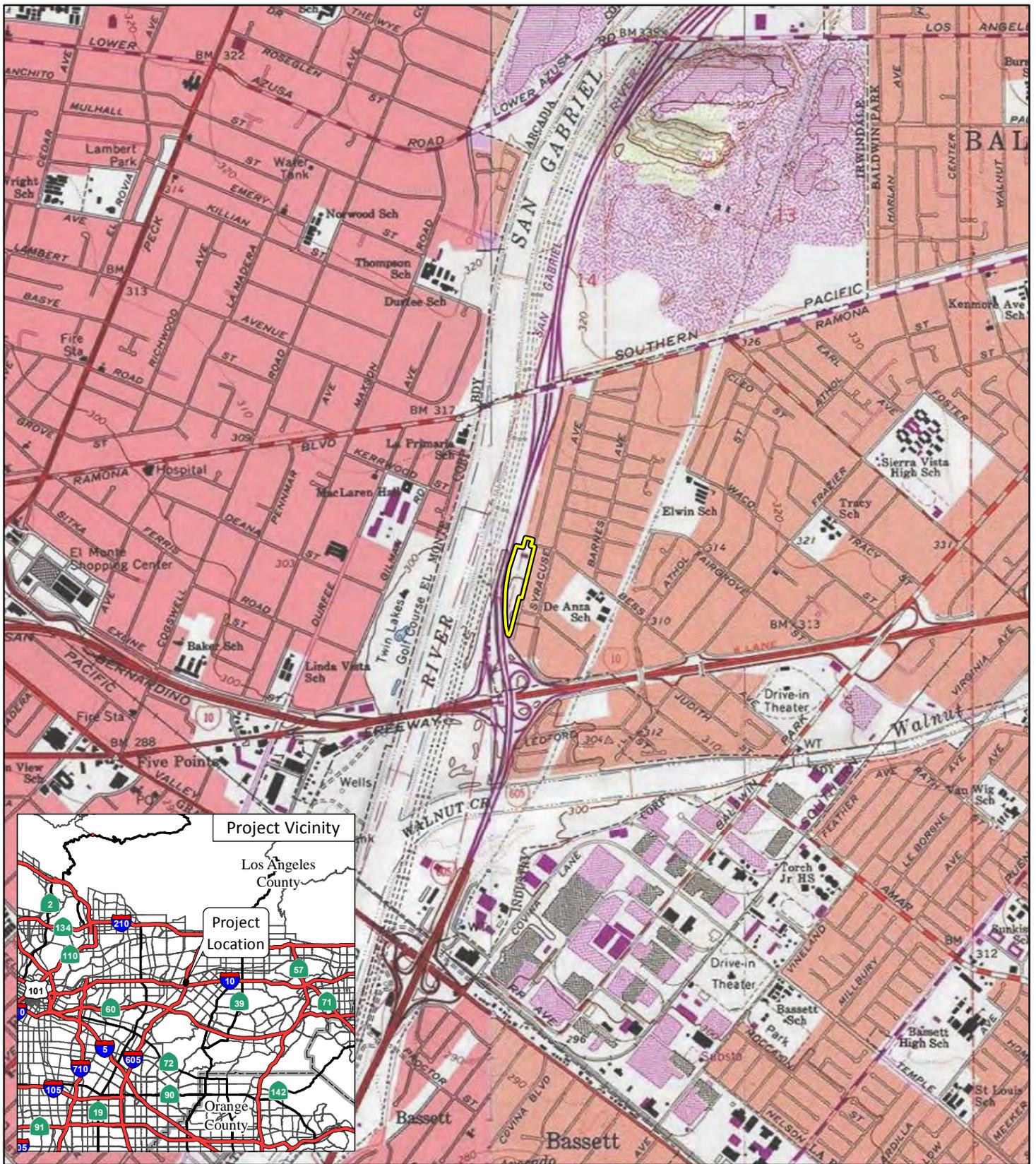


FIGURE 1

LSA

LEGEND

 Project Location



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Baldwin Park (1981); El Monte (1994), CA
I:\CWE2107\GIS\MXD\ProjectLocation_USGS.mxd (6/29/2021)

Barnes Park Multi-Benefit Project
Project Location and Vicinity

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-00637		1979	Zahniser, Jack L.	Final Environmental Impact Report S & S Construction Company Twin Lakes Condominium Project Zone Change 8-78	Chambers Group, Inc.	
LA-01220		1983	Boxt, Matthew, Richard Aycock, and Susan Colby	An Archaeological Survey and Impact Assessment of the Valley Blvd. Redevelopment Project, Located in the City of Industry, Los Angeles County, California	University of California, Los Angeles Archaeological Survey	
LA-02412		1968	Singer, Clay A.	Ucla Archaeological Survey Field Project Number Ucas-086.	University of California, Los Angeles Archaeological Survey	
LA-02871		1993	Wlodarski, Robert J. and Dan Larson	Department of Transportation Negative Archaeological Survey Report Dpd-ep-25 (revised 2/83) Interstate 10 (i-10) Between Baldwin Avenue in City of El Monte on the West and the Inbterchange Between I-10 and I-605	Historical, Environmental, Archaeological, Research, Team	
LA-02894		1993	De Barros, Phillip	Cultural Resources Survey of Area of Potential Effects of Proposed Dam Near Drop Structure No. 13 Within the San Gabriel River, Los Angeles County, California	Chambers Group, Inc.	
LA-03056		1994	Wlodarski, Robert J.	Negative Archaeological Survey Report Minor Widening for I-10 Malibu, California.	Historical, Environmental, Archaeological, Research, Team	
LA-03823		1981	Wlodarski, Robert J.	Literature Search for Property Located Along the South Side of Valley Boulevard, East of the San Gabriel Freeway, West of Turnbull Canyon Road, in the City of Industry, County of Los Angeles, California	Pence Archaeological Consulting	
LA-03834		1997	Wlodarski, Robert J.	A Phase 1 Archaeological Study for Proposed Senior Housing Facilities Located at 3843-3849 Maxson Road, El Monte, California	Historical, Environmental, Archaeological, Research, Team	
LA-04835		1999	Ashkar, Shahira	Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties	Jones & Stokes Associates, Inc.	19-186109, 19-186112, 19-187090
LA-04880		2000	Smith, Philomene and Siro, Adam	Pavement Rehabilitation Along Route 605 Within the Cities of Long Beach, Lakewood, Cerritos, Downey, Pico Rivera, Santa Fe Springs, Whittier, City of Industry, Baldwin Park and Irwindale.	Caltrans	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-06114		2002	Conkling, Steven W. and McLean, Deborah K.B.	Monitoring and Inadvertent Discovery Plan for Proposed Wells and Treated Water Pipelines for Treatment Plant B-6 and B-5, Cities of El Monte, Baldwin Park and Industry, Los Angeles County, California	LSA Associates, Inc.	19-000136
LA-06276		2001	Duke, Curt	Cultural Resource Assessment Cingular Wireless Facility No. Vy 126-01 Los Angeles County, California	LSA Associates, Inc.	
LA-06281		2001	Storey, Noelle	Highway Project Construction of Wheelchair Ramps at Ramona Blvd., Lower Azusa Road, Live Oak Avenue and Arrow Highway Along Route 605 in the City of Irwindale, Los Angeles County.	Caltran District 7	
LA-06282		2001	Duke, Curt	Cultural Resource Assessment for at & T Fixed Wireless Services Facility Number La_156_a, County of Los Angeles, California	LSA Associates, Inc.	
LA-06310		2002	Duke, Curt	Cultural Resource Assessment at & T Wireless Services Facility No. 11015a-01 Los Angeles County, California	LSA Associates, Inc.	
LA-08670		2007	Bonner, Wayne H. and Kathleen A. Crawford	Cultural Resources Records Search and Site Visit Results for Royal Street Communications, Llc Candidate La2314a (ramona Sce), Intersection of Ramona and I-605, El Monte, Los Angeles County, California	Michael Brandman Associates	
LA-08697		2006	Bonner, Wayne H.	Cultural Resources Records Search and Site Visit Results for Cingular Wireless Candidate Sv-0048-01 (moller Shopping Center) 12010 Ramona Boulevard, El Monte, Los Angeles County, California	Michael Brandman Associates	
LA-09134		2007	Bonner, Wayne H.	Direct APE Historic Architectural Assessment for Royal Street Communications, LLC Candidate LA 2314A (Ramona SCE), Intersection of Ramona and I-605, El Monte, Los Angeles County, California	Michael Brandman Associates	
LA-09242		2007	Bonner, Wayne H.	Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate IE25751A (Rebuilt Engines and Parts Store), 12156 Ramona Boulevard, El Monte, Los Angeles County, California	Michael Brandman Associates	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-09705		2007	Anonymous	Cultural Resources Inventory of the Southern California Edison Company Tehachapi Renewable Transmission Project, Kern, Los Angeles and San Bernardino Counties, California. ARR #05-01-01046	Pacific Legacy, Inc.	19-001128, 19-001299, 19-001300, 19-001315, 19-001359, 19-001382, 19-002131, 19-002206, 19-002212, 19-002350, 19-002363, 19-002411, 19-002412, 19-002998, 19-003018, 19-003025, 19-003031, 19-003032, 19-003136, 19-003141, 19-003152, 19-003720, 19-003721, 19-003722, 19-003723, 19-003727, 19-003728, 19-003729, 19-003730, 19-003731, 19-003732, 19-003733, 19-003734, 19-003735, 19-003736, 19-003737, 19-003738, 19-003739, 19-003740, 19-003741, 19-003742, 19-003990, 19-100631, 19-100806, 19-100807, 19-100808
LA-10151		2008	Cotterman, Cary D. and Evelyn N. Chandler	Cultural Resources Inventory of Proposed Pole Replacement in the City of Baldwin Park, Los Angeles County, CA	ECORP Consulting, Inc.	
LA-10175		2009	Unknown	Confidential Cultural Resources Specialist Report for the Tehachapi Transmission Project	Applied Earthworks, Aspen Environmental Group	19-000806, 19-001128, 19-001299, 19-001300, 19-001315, 19-001357, 19-001382, 19-001636, 19-001770, 19-001771, 19-001783, 19-001956, 19-001957, 19-002206, 19-002212, 19-002343, 19-002350, 19-002363, 19-002411, 19-002412, 19-003009, 19-003018, 19-003025, 19-003031, 19-003032, 19-003037, 19-003090, 19-003099, 19-003136, 19-003152, 19-003295, 19-003385, 19-003477, 19-003606, 19-003638, 19-003795, 19-003852, 19-003853, 19-003854, 19-100277, 19-100439, 19-100496, 19-100644, 19-120031, 19-120032, 19-120072, 19-120074, 19-180689, 19-186545, 19-186860, 19-186870, 19-186871, 19-186872, 19-186873, 19-186875, 19-186876, 19-186877, 19-186917, 19-186921, 19-186923, 19-186925, 19-187713

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-10189	Paleo -	2003	Gust, Sherri and Sara Alarcon	Archaeological and Paleontological Evaluation Report and Mitigation Plan for the Interstate 605 Soundwall Project, from Whittier to Baldwin Park, Los Angeles County, CA	Cogstone Resource Management Inc.	19-000136, 19-000182, 19-178611, 19-186112, 19-186571, 19-186804
LA-10190		2002	Harbert, Claudia	Supplemental Historic Property Survey Report for the I-10 HOV Lane Between I-605 and the SR-57/SR-71/I-210 Interchange in the Cities of Los Angeles, Baldwin Park, West Covina, Covina, San Dimas, and Pomona in Los Angeles County, CA	Caltrans	19-188913, 19-188914, 19-188915, 19-188916, 19-188917, 19-188918, 19-188919, 19-188920, 19-188921, 19-188922, 19-188923, 19-188924, 19-188925, 19-188926, 19-188927, 19-188928, 19-188929, 19-188930, 19-188931, 19-188932, 19-188933, 19-188934, 19-188935, 19-188936, 19-188937, 19-188938, 19-188939, 19-188940, 19-188941, 19-188942, 19-188943, 19-188944, 19-188945, 19-188946, 19-188947, 19-188948, 19-188949, 19-188950, 19-188951, 19-188952, 19-188953, 19-188954, 19-188955, 19-188956, 19-188957, 19-188958, 19-188959, 19-188960, 19-188961, 19-188962, 19-188963, 19-188964, 19-188965, 19-188966, 19-188967, 19-188968, 19-188969, 19-188970, 19-188971, 19-188972, 19-188973, 19-188974, 19-188975, 19-188976, 19-188977, 19-188978, 19-188979, 19-188980, 19-188981, 19-188982
LA-10501		1994	Toren, George A.	Cultural Resource Survey of Three Segments of the Proposed San Gabriel Valley Water Reclamation Project, Los Angeles County, California	Greenwood and Associates	19-002207
LA-10502		2001	Wrobleski, David E. and Richard A. Krautkramer	A Class III Archaeological Investigation for Proposed Wells and Treated Water Pipelines Adjoining the Plant B-6 and B-5 Treatment Facility Project, Los Angeles County, California	Express Archaeological Solutions	19-000136
LA-10532		1993	Landis, Daniel G.	A Preliminary Cultural Resources Overview for the Proposed San Gabriel Valley Reclamation Program, Los Angeles County, California	Greenwood & Associates	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-10600		2007	Strauss, Monica	Draft - Cultural Resources Assessment for the Proposed Woodland Duck Farm Project, Avocado Heights, Los Angeles County, California	EDAW, Inc.	19-004079
LA-10641		2010	Tang, Bai "Tom"	Preliminary Historical/Archaeological Resources Study, San Bernadino Line Positive Train Control Project, Southern California Regional Rail Authority, Counties of Los Angeles and San Bernadino	CRM Tech	
LA-10883		2008	Stewart, Noah M.	Finding of no adverse effect - Interstate Route 10-605 Interchange Improvement 07-LA-10/605 PM 31.2/20.9 EA:245400	California Department of Transportation, District 7	19-188983
LA-11784		2012	Stewart, Noah	Supplemental Finding of No Adverse Effect, Interstate Route 10-605 Interchange Improvement	California Department of Transportation	
LA-11851		2010	Long, Michelle and Holson, John	Archaeological Survey and National Register of Historic Places and California Register of Historical Resources Evaluation of 07-H-002 and 07-H-003, Starwberry Contractor Yard, for the Southern California Edison Company Tehachapi Renewable Transmission Pro	Pacific Legacy	19-003117, 19-003118
LA-11989		2010	Panich, Lee and Holson, John	Supplemental Archaeological Survey Report, 66KV Transmission Lines Access Roads, Tehachapi Renewable Transmission Project Segments 7 and 8, Los Angeles and San Bernardino Counties, California	Pacific Legacy	19-000858, 19-001009, 19-001311, 19-002583, 19-003121, 19-003551, 19-003813, 19-003814, 19-186112, 19-186889
LA-11990		2010	Wetherbee, Matthew, Jackson, Thomas, and Tinsley-Becker, Wendy	Supplemental Cultural Resources Survey Report for the Southern California Edison Tehachapi Renewable Transmission Project Segment 7 Rio Hondo-Amamdor-Jose-Mesa 66kv Line Relocation, Los Angeles County, California	Pacific Legacy & Urbana Preservation and Planning	19-003814, 19-004079, 19-004117, 19-004118
LA-11991		2010	Schneider, Tsim and Holson, John	Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 7, Los Angeles County, California	Pacific Legacy	19-003813, 19-186917
LA-12558	Paleo -	2012	Maxon, Patrick	Cultural Resources Study for the Proposed Interstate 605/Valley Boulevard Interchange Improvement Project, City of Industry, Los Angeles County, California	BonTerra Consulting	19-000136, 19-004079, 19-186112

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-003117	CA-LAN-003117H	Resource Name - 07-H-002	Site	Historic	AH04	2010 (L. Schrader, W. Bischoff, Pacific Legacy, Inc)	LA-11851, LA-13259
P-19-003118	CA-LAN-003118H	Resource Name - 07-H-003	Site	Historic	AH04; AH10	2010 (L. Schrader, W. Bischoff, Pacific Legacy, Inc)	LA-11851, LA-13259
P-19-004079	CA-LAN-004079H	Resource Name - Woodland Duck Farms & Equestrian Center, Louise A. Ward Residence; Other - Woodland Farm; Other - Duck Farm; Other - Louise A. Ward Residence	Building, Structure, Site, District	Historic	AH02; HP02; HP06; HP31; HP33; HP37; HP39	2010 (Wendy L. Tinsley Becker, AICP); 2010 (Lee Panich, Pacific Legacy, Inc.); 2018 (Christine Miller Cruieess, GPA)	LA-10600, LA-11990, LA-12558

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-186112		Resource Name - Union Pacific RR, Southern Pacific R R Los Angeles Division; Other - C-Los Angeles-A-1; Other - MetroLink Riverside Line; Other - SPRR Los Angeles Division; Other - SPRR Sunset Line; Other - Map Reference #2-35	Structure	Historic	AH07; HP11; HP39	1999 (S. Ashkar, Jones & Stokes); 2002 (Rand F. Herbert, JPR Historical Consulting Services); 2009 (R. Ramirez and F. Smith, SWCA Environmental Consultants); 2009 (F. Smith and J. Steely, SWCA Environmental Consultants); 2012 (Alyssa Newcomb, SWCA Environmental Consultants); 2018 (Audrey von Ahrens, GPA); 2019 (Jenna Kachour, GPA)	LA-04835, LA-05125, LA-05501, LA-05643, LA-07528, LA-07834, LA-07943, LA-07954, LA-08231, LA-08249, LA-08298, LA-08299, LA-08517, LA-08635, LA-08667, LA-08671, LA-08701, LA-08703, LA-08733, LA-08744, LA-08821, LA-08822, LA-08826, LA-08827, LA-08911, LA-09156, LA-09199, LA-09236, LA-09271, LA-09441, LA-09660, LA-09795, LA-09880, LA-09894, LA-10189, LA-10284, LA-10299, LA-10323, LA-10340, LA-10394, LA-10513, LA-10638, LA-10698, LA-10911, LA-10937, LA-10940, LA-10942, LA-10997, LA-10998, LA-11048, LA-11060, LA-11065, LA-11077, LA-11180, LA-11253, LA-11293, LA-11405, LA-11537, LA-11590, LA-11775, LA-11808, LA-11821, LA-11988, LA-11989, LA-12133, LA-12211, LA-12212, LA-12349, LA-12499,

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
							LA-12526, LA-12552, LA-12558, LA-12697, LA-12928, LA-13458, VN-03153
P-19-187085		Resource Name - The Mojave Rd;	Structure, Other	Historic	HP37	1989 (S. Elder); 2014 (Marc Beherec, AECOM)	LA-12788, LA-12808, LA-13259
P-19-188913		OHP Property Number - 136375	Building	Historic	HP03	2002 (Claudia A. Harbert, Caltrans)	LA-10190
P-19-188914		OHP Property Number - 136376	Building	Historic	HP03	2002 (Claudia A. Harbert, Caltrans)	LA-10190
P-19-188915		OHP Property Number - 136377	Building		HP02	2002 (Claudia A. Harbert, Caltrans)	LA-10190
P-19-188916		OHP Property Number - 136378	Building		HP03	2002 (Claudia A. Harbert, Caltrans)	LA-10190
P-19-188917		OHP Property Number - 136379	Building		HP03	2002 (Claudia A. Harbert, Caltrans)	LA-10190
P-19-188918		OHP Property Number - 136380	Building		HP02; HP06	2002 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188919		OHP Property Number - 136381	Building		HP03	2002 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188920		OHP Property Number - 136382; Resource Name - Burl Watson Realty Inc	Building		HP06	2002 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188921		OHP Property Number - 136383; OHP Property Number - 095025; OHP Property Number - 136386	Building		HP03	2001 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188922		OHP Property Number - 136384	Building	Historic	HP03	2001 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188923		OHP Property Number - 136385	Building		HP03	2001 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188924		OHP Property Number - 136387	Building		HP03	2001 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188925		OHP Property Number - 136388	Building		HP06	2002 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188926		OHP Property Number - 136389; Resource Name - The Aristocrat Motel	Building	Historic	HP05	2002 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188927		OHP Property Number - 136390; Resource Name - Taxcos Restaurant	Building	Historic	HP06	2002 (Kelly F. Ewing, Caltrans)	LA-10190
P-19-188928		OHP Property Number - 136391; Resource Name - Nextel	Building	Historic	HP06	2002 (Kelly F. Ewing, Caltrans)	LA-10190

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-188983		Resource Name - L A Dept of Water & Power Boudler Lines North & South; Other - LADWP Boulder Lines 1 & 2; Other - Boulder Dam-Los Angeles 287.5 kV Transmission Line	Structure, Element of district	Historic	HP09; HP11	1999 (Stephen Van Wormer, KEA); 2008 (Noah M. Stewart, Caltrans District 7); 2013 (Heather Gibson and Marc Beherec, AECOM); 2018 (Jessica B. Feldman, ICF)	LA-10883, LA-11400, LA-11746, LA-12041, LA-12096, LA-12103, LA-12133, LA-12296, LA-12306, LA-12465, LA-12756, LA-13259
P-19-190504		Resource Name - SCE Rio Hondo-Amador-Jose-Mesa-Narrows 66kV Transmission Line	Structure	Historic	HP09; HP11	2010 (Wendy L. Tinsley Becker, Urbana Preservation & Planning); 2018 (Audrey von Ahrens, GPA)	LA-12552, LA-13259
P-19-190510		Resource Name - San Gabriel River Levee - Arcadia-El Monte-Irwindale Span	Structure	Historic	HP20	2010 (Wendy L. Tinsley Becker, Urbana Preservation & Planning)	LA-13259
P-19-192581		Resource Name - Big Creek No. 4; Resource Name - Antelope-Mesa 220 kV Transmission Line; Other - Magunden-Mesa 220kV TL; Other - Antelope-Vincent No. 1	Structure	Historic	HP11	2010 (Wendy L. Tinsley, Urbana Preservation & Planning); 2010 (Wendy L. Tinsley, Urbana Preservation & Planning); 2014 (Daniel Leonard, BCR Consulting); 2017 (Audry Williams, SCE); 2018 (Audrey von Ahrens, GPA); 2019 (Audry Williams, SCE)	
P-19-192758		Resource Name - 3350 Gilman Road, El Monte, CA 91732	Building	Historic	HP08	2017 (Allyson Lyons, GPA)	
P-19-192817		Resource Name - 12127 Exline Street, El Monte, CA 91732	Building	Historic	HP02	2017 (Allison Lyons, GPA)	
P-19-192819		Resource Name - 12424, 12432, 12440 Exline Street, El Monte, CA 91732	Building	Historic	HP08	2017 (Allison Lyons, GPA)	
P-19-192820		Resource Name - 12955 Perez Place, La Puente, CA 91746	Building	Historic	HP06	2017 (Allison Lyons, GPA)	
P-19-192826		Resource Name - Jerry Voorhis Elementary School	Building	Historic	HP15	2017 (Allison Lyons, GPA)	

Appendix D
Barnes Park Paleontological Analysis Report



MEMORANDUM

DATE: September 16, 2021

To: Katie Harrel, CWE

FROM: Jacob Biewer, M.S., Paleontologist, and Sarah Rieboldt, Ph.D., Principal Paleontologist

SUBJECT: Paleontological Analysis of the Barnes Park Multi-Benefit Project, Baldwin Park, Los Angeles County, California

INTRODUCTION

This memorandum was prepared to ensure that the proposed Barnes Park Multi-Benefit Project (project) in Baldwin Park, Los Angeles County, California, is in compliance with all applicable State regulations and requirements regarding paleontological resources, as well as the standards of the Society of Vertebrate Paleontology (SVP, 2010). The applicable regulations and requirements include the California Environmental Quality Act (CEQA): Public Resources Code (PRC) Division 13, Chapter 2.6; the *State CEQA Guidelines*: California Code of Regulations, Title 14, Chapter 3, Appendix G; and PRC §5097.5. The City of Baldwin Park (City) is the Lead Agency for CEQA compliance.

PROJECT LOCATION AND DESCRIPTION

The project site is situated primarily in Barnes Park, located at 3251 Patritti Ave, but also extends north of the park into two vacant parcels owned by the City and by the San Gabriel Valley Water Company. The project site is depicted on Figure 1 (Attachment B) on the United States Geological Survey (USGS) *Baldwin Park, California* and *El Monte, California* 7.5-minute topographic quadrangle maps in unsectioned land of the La Puente Land Grant (USGS, 1981, 1994).

The project will reduce pollutant loading to downstream water bodies by capturing wet- and dry-weather runoff. The project includes both subsurface and surface improvements. The subsurface infrastructure has a primary function of improving water quality, while the surface improvements provide community enhancements/benefits.

Subsurface improvements include the installation of a storage system with an approximate footprint of 1.2 acres and a dead storage capacity of 10 acre-feet, as well as a diversion pipeline and pretreatment unit. The diversion pipeline is under 600 feet long, extending from the storm drain on Bess Avenue at Patritti Avenue to just south of the parking lot at Barnes Park. The diversion pipe is expected to have a diameter no greater than 42 inches. The pretreatment system will be a precast concrete system capable of capturing and retaining trash, sediment, and debris to preserve downstream infiltration capacities and concentrate more frequent maintenance activities. The

pretreatment unit is expected to have a diameter greater than 12 feet and a depth of approximately 20 feet. The exact configuration and component sizing will be confirmed through the design process.

Surface improvements include increasing the size of Barnes Park with development planned for two vacant parcels north of the existing park boundary. The expansion concept is anticipated to include additional parking, modified trails, new basketball courts, new mini-pitch soccer field, landscape, and other enhancements. The exact amenities will be confirmed based on funding availability and through the design process. The project is also expected to include a new dog park area on the south side of the existing park. Fences and monument signs will be placed to create both a small dog area and an area for dogs of any size. The subsurface infiltration system will be located outside of the dog park limits, which will be refined during the design process.

Development of the project will involve demolition of some existing park and parking lot improvements; excavation for and installation of the subsurface storage system, pretreatment unit, and diversion pipeline; construction of park improvements and amenities; and installation of new wet and dry utilities, landscaping, and lighting.

Excavation Parameters

The deepest excavation associated with the project is expected to be for the subsurface storage system and will extend to a maximum depth of approximately 20 to 25 feet (ft). Excavation for the diversion pipe along Patrilli Avenue will not exceed 15 ft deep and excavation for the pretreatment unit will reach 20 ft.

METHODS

LSA examined geologic maps of the project site and reviewed relevant geological and paleontological literature to determine which geologic units are present in the project site and whether fossils have been recovered in the project site or from similar geologic units elsewhere in the region. Additionally, a fossil locality search was conducted through the Natural History Museum of Los Angeles County (NHMLAC) to determine the status and extent of previously recorded paleontological resources within and surrounding the project site. Pedestrian field survey of the project site was conducted on August 7, 2021. The purpose of the field survey is to note the sediments and identify any fossils that may be present within the project site.

RESULTS

Literature Review

The project site is in the northern Peninsular Ranges Geomorphic Province, a 900-mile (mi) long northwest–southeast trending structural block that extends from the Transverse Ranges in the north to the tip of Baja California in the south and includes the Los Angeles Basin (California Geological Survey, 2002; Norris and Webb, 1976). The total width of this province is 225 mi, extending from the Colorado Desert in the east, across the continental shelf, to the Southern Channel Islands (Santa Barbara, San Nicolas, Santa Catalina, and San Clemente) in the west (Sharp, 1976). This province is characterized by a series of mountain ranges and valleys that trend in a northwest–southeast direction roughly parallel to the San Andreas Fault Zone (Norris and Webb, 1976; Sharp, 1976). It

contains extensive pre-Cenozoic (more than 66 million years ago [Ma]) igneous and metamorphic rocks covered by a veneer of Cenozoic (66 Ma to Present) sedimentary deposits (Norris and Webb, 1976).

Geologic mapping by Morton and Miller (2006) indicates that the project site contains Young Alluvial Fan Deposits. Artificial Fill is likely present in the project site as the area is previously developed. These geologic units and their relative paleontological sensitivities are described in more detail below. The dates for the geologic time intervals are based on the International Chronostratigraphic Chart prepared by the International Commission on Stratigraphy (Cohen et al., 2021).

Artificial Fill

Artificial Fill consists of sediments that have been removed from one location and transported to another location by human activity, rather than by natural means. The transportation distance can vary from a few feet to many miles, and composition is dependent on the source and purpose. Artificial Fill will sometimes contain modern debris, such as asphalt, wood, bricks, concrete, metal, glass, plastic, or plant material, and may contain fossils.

Any fossils encountered in Artificial Fill have been removed from their original location and are thus out of stratigraphic context. Therefore, they are not considered important for scientific study. As such, Artificial Fill has no paleontological sensitivity.

Young Alluvial Fan Deposits

The Young Alluvial Fan Deposits are Holocene to late Pleistocene in age (less than 129,000 years ago) and consist of unconsolidated silt, sand, and gravel (Morton and Miller, 2006). Cobble- and boulder-size clasts are also present and become more abundant closer to the hills and mountains (Morton and Miller, 2006). These sediments were eroded from higher elevations, carried by flooding streams and debris flows, and deposited in a fan or lobe shape at the base of the hills. They show slight to moderate dissection by erosional gullies (Morton and Miller, 2006).

Although Holocene (less than 11,700 years ago) deposits can contain remains of plants and animals, only those from the middle to early Holocene (4,200 to 11,700 years ago) are considered scientifically important (SVP, 2010), and fossils from this time interval are not very common. These Holocene deposits overlie older, Pleistocene deposits, which have produced scientifically important fossils elsewhere in the region (Jefferson 1991a, 1991b; Miller 1971; Reynolds and Reynolds 1991; Springer et al. 2009). These older, Pleistocene deposits span the end of the Rancholabrean North American Land Mammal Age (NALMA), which dates from 11,000 to 240,000 years ago (Sanders et al., 2009) and was named for the Rancho La Brea fossil site in central Los Angeles. The presence of *Bison* defines the beginning of the Rancholabrean NALMA (Bell et al. 2004), but fossils from this time also include other large and small mammals, reptiles, fish, invertebrates, and plants (Jefferson 1991a, 1991b; Miller 1971; Reynolds and Reynolds 1991; Springer et al. 2009). There is a potential to find these types of fossils in the older sediments of this geologic unit, which may be encountered below a depth of approximately 10 ft. Therefore, these deposits are assigned a low paleontological sensitivity above a depth of 10 ft and a high sensitivity below that mark.

Fossil Locality Search

The fossil locality search through the NHMLAC indicated that no fossil localities are present within the boundaries of the project site. However, this search noted fossil localities nearby from the same or similar geologic units as those within the project site, either at the surface or possibly at depth. One fossil locality, LACM 7702, from an unnamed Pleistocene geologic unit to the south in Bell Gardens produced fish (*Gasterosteus*), snake (*Colubridae*), rodents (*Thomomys*, *Microtus*), and rabbit (*Sylvilagus*) from a depth of 30 ft below the surface. Another vertebrate locality, LACM 3363, from an unnamed Pleistocene geologic unit to the west in Monterey Park produced fossils of horse (*Equus*). A third locality also from an unnamed Pleistocene geologic unit to the east in Chino produced terrestrial vertebrate fossils of horse (*Equus*) and camel (*Camelops*). A copy of the fossil locality search results through the NHMLAC is included in Attachment C.

Field Survey

The small, flat rectangular lot is bound between Patriitti Avenue to the east, residential development to the north, and the I-605 to the west. The northern portion of the project site contains a gated asphalt lot, as well as the park's community center, parking lot, and basketball courts. The southern portion of the project site contains a large grassy field with sparse trees. A cement walking path follows the western perimeter of the park. Visibility was very poor across the majority of the project site at approximately 5 percent, with most areas obscured by grass, other vegetation, and various park amenities, including the basketball court, community center, parking area, and the asphalt lot. Open ground with exposed sediments was noted in a small band paralleling the walking path in the western portion of the project site. These sediments consisted of compacted dark gray silty sand with sparse interspersed gravel, indicative of Artificial Fill. No native sediments were seen within the entirety of the project area, and no paleontological resources were identified.

CONCLUSIONS AND RECOMMENDATIONS

The project site contains Artificial Fill, which has no paleontological sensitivity, as well as Young Alluvial Fan Deposits, which have low paleontological sensitivity from the surface to a depth of 10 ft and high sensitivity below that depth. With excavation for the subsurface project components extending to depths of 15 ft to 25 ft across the project site, development of this project is expected to extend into paleontologically sensitive sediments of Young Alluvial Fan Deposits and has the potential to impact scientifically significant paleontological resources. Therefore, in order to mitigate potential impacts to these resources, LSA recommends the following mitigation measures:

PALEO-1 A paleontologist who meets the qualifications of established by the Society of Vertebrate Paleontology (SVP) shall be retained to develop a Paleontological Resources Impact Mitigation Program (PRIMP) for this project. The PRIMP shall be consistent with the standards of the SVP and include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading.

PALEO-2 Excavation and grading activities in deposits with high paleontological sensitivity (i.e., Young Alluvial Fan Deposits below a depth of 10 ft) shall be monitored by a

qualified paleontological monitor following a PRIMP. No monitoring is required for excavations in deposits with no paleontological sensitivity (i.e., Artificial Fill). If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected, and the paleontologist or paleontological monitor shall be contacted to assess the find for scientific significance. If determined to be scientifically significant, the fossil shall be collected from the field.

PALEO-3 Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a museum repository. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.

Implementation of Mitigation Measures PALEO-1 through PALEO-3 will ensure that project impacts on paleontological resources will be reduced to a level that is less than significant.

Attachments: A: References
B: Figure
C: Fossil Locality Search Results from the Natural History Museum of Los Angeles County

ATTACHMENT A

REFERENCES

- Bell, Christopher J., Ernest L. Lundelius, Jr., Anthony D. Barnosky, Russell W. Graham, Everett H. Lindsay, Dennis R. Ruez, Jr., Holmes A. Semken, Jr., S. David Webb, and Richard J. Zakrzewski
2004 The Blancan, Irvingtonian, and Rancholabrean Land Mammal Ages. In M.O. Woodburne, ed., *Late Cretaceous and Cenozoic Mammals of North America*:232–314.
- California Geological Survey
2002 California Geomorphic Provinces. California Geologic Survey Note 36. California Department of Conservation.
- Cohen, K.M., S.C. Finney, P.L. Gibbard, and J.X. Fan
2021 The ICS International Chronostratigraphic Chart. Updated May 2021. *Episodes* 36(3):199–204.
- Jefferson, George T.
1991a A Catalogue of Late Quaternary Vertebrates from California: Part One: Non-marine Lower Vertebrate and Avian Taxa. Natural History Museum of Los Angeles County Technical Reports Number 5. Natural History Museum of Los Angeles County, Los Angeles.
1991b A Catalogue of Late Quaternary Vertebrates from California: Part Two: Mammals. Natural History Museum of Los Angeles County Technical Reports Number 7. Natural History Museum of Los Angeles County, Los Angeles.
- Miller, Wade E.
1971 Pleistocene Vertebrates of the Los Angeles Basin and Vicinity (Exclusive of Rancho La Brea). *Los Angeles County Museum of Natural History Bulletin, Science*: No. 10.
- Morton, Douglas M., and Fred K. Miller
2006 Geologic Map of the San Bernardino and Santa Ana 30-minute by 60-minute quadrangles, California. Digital preparation by Pamela M. Cosette and Kelly R. Bovard. Prepared by the United States Geological Survey (USGS) in cooperation with the California Geological Survey. USGS Open File Report 2006-1217. Map Scale 1:100,000.
- Norris, R.M., and R.W. Webb
1976 *Geology of California*. John Wiley and Sons, Inc., New York. 379 pp.
- Reynolds, R.E., and R.L. Reynolds
1991 The Pleistocene beneath Our Feet: Near-Surface Pleistocene Fossils in Inland Southern California Basins. In M.O. Woodburne, R.E. Reynolds, and D.P. Whistler, eds., *Inland Southern California: The Last 70 Million Years*. San Bernardino County Museum Special Publication 38(3 and 4):41–43.

Sanders, A.E., R.E. Weems, and L.B. Albright

- 2009 Formalization of the Middle Pleistocene “Ten Mile Beds” in South Carolina with Evidence for Placement of the Irvingtonian-Rancholabrean Boundary. *Museum of Northern Arizona Bulletin* 64:369–375.

Sharp, R.P.

- 1976 *Geology: Field Guide to Southern California*. 2nd ed. Kendall/Hunt Publishing Company. 181 pp.

Society of Vertebrate Paleontology (SVP)

- 2010 Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Impact Mitigation Guidelines Revision Committee. 11 pp.

Springer, Kathleen, Eric Scott, J. Christopher Sagebiel, and Lyndon K. Murray

- 2009 The Diamond Valley Lake Local Fauna: Late Pleistocene Vertebrates from Inland Southern California. In L.B. Albright, III, ed. *Papers in Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne*. *Museum of Northern Arizona Bulletin* 65:217–236.

United States Geological Survey (USGS)

- 1981 Baldwin Park, California 7.5-minute topographic quadrangle. Published 1966, photorevised 1981. Denver, Colorado.
- 1994 El Monte, California 7.5-minute topographic quadrangle. Published 1966, photorevised 1981, minor revisions 1994. Denver, Colorado.

ATTACHMENT B

FIGURES

Figure 1: Project Location Map

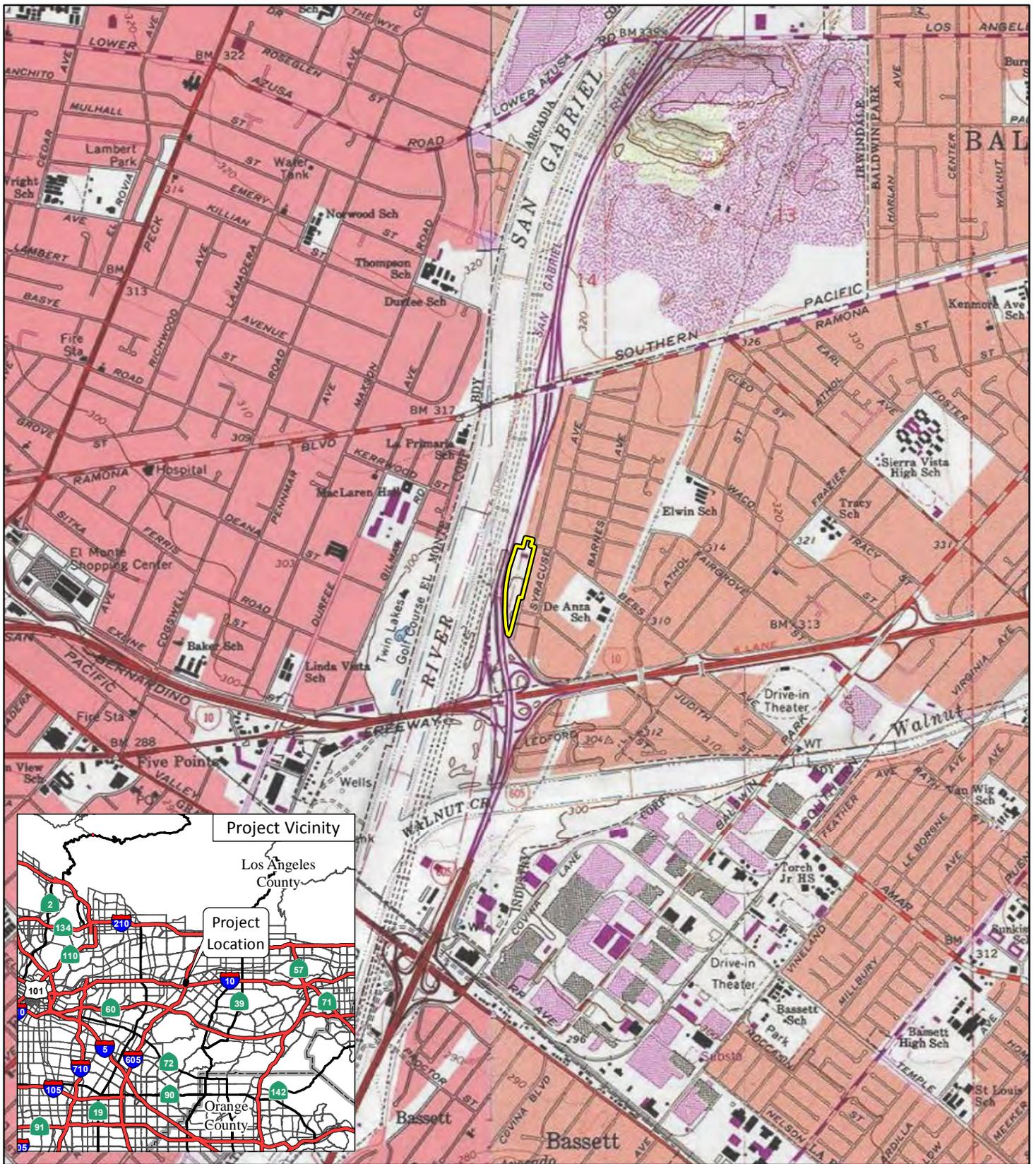


FIGURE 1

LSA

LEGEND

 Project Location



0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Baldwin Park (1981); El Monte (1994), CA
I:\CWE2107\GIS\MXD\ProjectLocation_USGS.mxd (6/29/2021)

Barnes Park Multi-Benefit Project
Project Location and Vicinity

ATTACHMENT C

FOSSIL LOCALITY SEARCH RESULTS FROM THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

July 4, 2021

LSA Associates, Inc.
Attn: Jacob Biewer

re: Paleontological resources for the Barnes Park Multi-Benefit Project (CWE2107)

Dear Jacob:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Barnes Park Multi-Benefit project area as outlined on the portion of the Baldwin Park USGS topographic quadrangle map that you sent to me via e-mail on June 30, 2021. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County.

Locality Number	Location	Formation	Taxa	Depth
VPLACM6350-6362; LACM IP 16968-16991	Puente Hills Landfill	Fernando Formation; Repetto Member (massive clayey siltstone)	Herring (<i>Ganolytes</i>), hake (<i>Merluccius</i>), rattail (<i>Coelorhynchus</i>), lanternfish (<i>Lampanyctus</i> , <i>Diaphus</i>), white shark (<i>Charcharodon carcharias</i>); marine mammals (Cetacea); Invertebrates (unspecified)	unknown
LACM VP 7930-7932; LACM IP 17925-17932	Near the intersection of Shadow Oak Dr & S Woodgate Dr; South San Jose Hills	Monterey Formation (Yorba Shale; sandstone & diatomaceous shale)	Bony fish (Osteichthyes), including ray-finned fishes (Clupeidae); Invertebrates (unspecified)	6.5 - 7 ft bgs
LACM VP 3347	11204 Bluefield; Whittier	La Habra Formation (lacustrine silt with caliche and plant detritus)	Horse (<i>Equus</i>)	2 feet bgs
LACM VP 7702	Intersection of 26th St and Atlantic Blvd, Bell Gardens	Unknown Formation (Pleistocene; silt)	Fish (<i>Gasterosteus</i>); Snake (Colubridae), Rodents (<i>Thomomys</i> , <i>Microtus</i>); Rabbit (<i>Sylvilagus</i>)	30 ft bgs

LACM VP 3363	W of Monterey Pass Road in Coyote Pass; E of the Long Beach Freeway & S of the N boundary of Section 32	Unknown Formation (Pleistocene; sand and silt)	Horse (<i>Equus</i>)	unknown
LACM VP 1728	W of intersection of English Rd & Peyton Dr, Chino	Unknown formation (Pleistocene; light brown shale with interbeds of very coarse brown sand)	Horse (<i>Equus</i>), camel (<i>Camelops</i>)	15-20 ft bgs

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the Natural History Museum of Los Angeles County (“NHMLA”). It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,



Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice