

DATE: July 22, 2019

TO: RMC Governing Board

FROM: Mark Stanley, Executive Officer

SUBJECT: Item 9: Consideration of a Resolution approving a grant amendment to the City of Lynwood for a change in location from the Lynwood Park Infiltration, to the Fernwood Ave Development and Water Quality Improvement Project (RMC 17017)

PROGRAM AREA: Urban Lands

PROJECT TYPE: Design Build

JURISDICTION: City of Lynwood

PROJECT MANAGER: Marybeth Vergara

RECOMMENDATION: That the RMC authorize a grant amendment to the City of Lynwood for a change in location for the Lynwood Park Infiltration, to the Fernwood Avenue Development and Water Quality Improvement Project (RMC 17017).

PROJECT DESCRIPTION: The Lynwood Park Infiltration, Restoration, and Water Quality Improvement Project is proposed to be relocated to Fernwood Avenue and State Street, which is an extension of the existing Lara Linear Trail in the City of Lynwood. The reason for the relocation is due to the lack of permeability at the original site near City Hall. In an effort fulfill grant requirements for the completion of the project scope of work the City identified the new site at Fernwood Ave and State Street and conducted a series of percolation tests and have submitted their results. Based on the results of the boring percolation test, the site soils are coarse-grained and have high percolation rates for infiltration systems in general. See the attached Percolation Test Report dated June 7, 2019, Exhibit D.

The timeline for the Fernwood Avenue Development and Water Quality Improvement Project will be extended to March 2022 from the original timeline of February 1, 2020.

BACKGROUND: The Lynwood Park Infiltration, Restoration, and Water Quality Improvement Project was a grant that was approved by the RMC Board at its July 2016 Board meeting. That project included replacing the parking lot from the existing asphalt on the edge of Lynwood Park with permeable pavers; establishment of green space with native plants and shrubs in the parking lot perimeter; and installation of a bio-swale along the parking lot median. The ultimate goal of this Proposition 1 Grant application was to capture and improve the stormwater from this site. However, since this project was approved, the city proceeded with soil testing to determine water percolation at the Lynwood Park site. Upon receipt of the soil tests, it was determined that the soil was not conducive to proper percolation to be worth the time and effort for this grant.

The goal of LID stormwater infiltration is to reduce runoff from the site using stormwater control measures that retain runoff. The Stormwater Quality Design Volume (SWQDv) for this stormwater infiltration project was estimated to be between 1,000 and 10,000 gallons. This SWQDv placed it in the mid-scale range and required two (2) boring percolation tests per the County of Los Angeles Department of Public Works GS200.2 Administrative Manual dated June 30, 2017. The

predominant soil type of the proposed project site consisted of Silty Sand (SM) up to five (5) feet below existing ground surface. Based on the results of the boring percolation test, the site soils are coarse-grained and have high percolation rates for infiltration systems in general.

This project is actually a project that was identified in the Lower LA River Revitalization Plan completed in February 2018. Over 155 projects were identified in the plan.

On September 28, 2015 the RMC approved grant program guidelines which provided for project applications to be submitted for funding consideration.

At the July 25, 2016 RMC Board meeting, the Governing Board approved the San Gabriel and Lower Los Angeles Proposition 1 (2015) Tier 1 and Tier 2 Grant Recommendations (Resolution 2016-13). At the September 26, 2016 RMC Board meeting, the Governing Board approved the RMC Proposition 1 Grant Program (2015) Tier 1 and Tier 2 Grant Recommendations and preliminary authorized grant distributions of up to \$20,261,564 (Resolution 2016-23).

There were a total of twenty (20) projects being recommended for funding, including the Lynwood Park Infiltration, Restoration and Water Quality Improvement Project, City of Lynwood (\$1,692,575).

one (1) of these projects is being recommended for approval by the RMC board today with a total grant amount of \$617,385. This project is one of the remaining five (5) projects that are being brought before the board for approval. The remaining four (4) projects will be brought at future Board meetings in July and through the remainder of the year as they become ready for approval.

FISCAL INFORMATION: The RMC awarded funding in July 2016 for an amount of \$1,692,575. The updated terms include the grant amount minus any new estimated savings. The RMC will be funding this grant project from the \$30 million allocation to the Conservancy in Chapter 6 of Proposition 1 as provided for competitive grants multi-benefit water quality, water supply, and watershed protection and restoration projects for the watersheds of the state Section 79731(f).

LEGISLATIVE AUTHORITY AND RMC ADOPTED POLICIES/AUTHORITIES: The Rivers and Mountains Conservancy (RMC) statute provides in part that:

Section 32602: There is in the Resources Agency, the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, which is created as a state agency for the following purposes:

- (a) To acquire and manage public lands within the Lower Los Angeles River and San Gabriel River watersheds, and to provide open-space, low-impact recreational and educational uses, water conservation, watershed improvement, wildlife and habitat restoration and protection, and watershed improvement within the territory.
- (b) To preserve the San Gabriel River and the Lower Los Angeles River consistent with existing and adopted river and flood control projects for the protection of life and property.
- (c) To acquire open-space lands within the territory of the conservancy.

Section 32604: The conservancy shall do all of the following:

- (a) Establish policies and priorities for the conservancy regarding the San Gabriel River and the Lower Los Angeles River, and their watersheds, and conduct any necessary planning activities, in accordance with the purposes set forth in Section 32602.
- (b) Approve conservancy funded projects that advance the policies and priorities set forth in Section 32602.

- (d) To provide for the public's enjoyment and enhancement of recreational and educational experiences on public lands in the San Gabriel Watershed and Lower Los Angeles River, and the San Gabriel Mountains in a manner consistent with the protection of lands and resources in those watersheds.

Section 32614: The conservancy may do all of the following:

- (b) Enter into contracts with any public agency, private entity, or person necessary for the proper discharge of the conservancy's duties, and enter into a joint powers agreement with a public agency, in furtherance of the purposes set forth in Section 32602.
- (e) Enter into any other agreement with any public agency, private entity, or person necessary for the proper discharge of the conservancy's duties for the purposes set forth in Section 32602.
- (f) Recruit and coordinate volunteers and experts to conduct interpretive and recreational programs and assist with construction projects and the maintenance of parkway facilities.

Further, Section 32614 provides that: The conservancy may do all of the following:

- (g) Undertake, within the territory, site improvement projects, regulate public access, and revegetate and otherwise rehabilitate degraded areas, in consultation with any other public agency with appropriate jurisdiction and expertise, in accordance with the purposes set forth in Section 32602. The conservancy may also, within the territory, upgrade deteriorating facilities and construct new facilities as needed for outdoor recreation, nature appreciation and interpretation, and natural resources protection. The conservancy may undertake those projects by itself or in conjunction with another local agency; however, the conservancy shall provide overall coordination of those projects by setting priorities for the projects and by ensuring a uniform approach to projects. The conservancy may undertake those projects with prior notification to the legislative body of the local agency that has jurisdiction in the area in which the conservancy proposes to undertake that activity.

Section 32614.5:

- (a) The conservancy may award grants to local public agencies, state agencies, federal agencies, and nonprofit organizations for the purposes of this division.
- (b) Grants to nonprofit organizations for the acquisition of real property or interests in real property shall be subject to all of the following conditions:
 - (1) The purchase price of any interest in land acquired by the nonprofit organization may not exceed fair market value as established by an appraisal approved by the conservancy.
 - (2) The conservancy approves the terms under which the interest in land is acquired.
 - (3) The interest in land acquired pursuant to a grant from the conservancy may not be used as security for any debt incurred by the nonprofit organization unless the conservancy approves the transaction.
 - (4) The transfer of land acquired pursuant to a grant shall be subject to the approval of the conservancy and the execution of an agreement between the conservancy and the transferee sufficient to protect the interests of the state.
 - (5) The state shall have a right of entry and power of termination in and over all interests in real property acquired with state funds, which may be exercised if any essential term or condition of the grant is violated.
 - (6) If the existence of the nonprofit organization is terminated for any reason, title to all interest in real property acquired with state funds shall immediately vest in the state,

except that, prior to that termination, another public agency or nonprofit organization may receive title to all or a portion of that interest in real property, by recording its acceptance of title, together with the conservancy's approval, in writing.

- (c) Any deed or other instrument of conveyance whereby real property is acquired by a nonprofit organization pursuant to this section shall be recorded and shall set forth the executor interest or right of entry on the part of the state.

Funding for this project will be allocated from the following sections of Proposition 1, under statute:

79731 (f): San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, the sum of thirty million dollars (\$30,000,000) and section 79735 (a) of the funds authorized by Section 79730, one hundred million dollars (\$100,000,000) shall be available, upon appropriation by the Legislature, for projects to protect and enhance an urban creek, as defined in subdivision (e) of Section 7048, and its tributaries pursuant to Division 22.8 (commencing with Section 79508....

Exhibit A: Scope of Work

Item 9



Imperial Hwy.

Fernwood Ave.

PROJECT SITE

Hwy. 105

State St.

FERNWOOD AVENUE PARK PROJECT

| | Cost Per Task | RMC Budget | Matching Funds |
|---------------------------------------|----------------------|---------------------|-----------------------|
| Design /Environmental | \$ 140,000 | \$ 140,000 | |
| Softscape | \$ 290,000 | \$ 290,000 | |
| Stormwater Capture/Infiltration | \$ 356,000 | \$ 356,000 | |
| Hardscape | \$ 100,000 | \$ 100,000 | |
| Curb Gutter | \$ 175,000 | \$ 175,000 | |
| Lighting | \$ 50,000 | \$ 50,000 | |
| Demolition/Excavation/Erosion Control | \$ 234,275 | \$ 234,275 | |
| Park Furniture | \$ 100,000 | \$ 100,000 | |
| Irrigation | \$ 230,000 | \$ 223,440 | \$ 6,560 |
| Contingency | \$ 167,528 | | \$ 167,528 |
| TOTAL | \$ 1,842,803 | \$ 1,668,715 | \$ 174,088 |

| | |
|------------------------------|--------------|
| Original Grant Amount | \$ 1,692,575 |
| Less Payment Request | \$ 23,860 |
| Total Remaining Grant Amount | \$ 1,668,715 |

**LYNWOOD PARK INFILTRATION AND WATER QUALITY IMPROVEMENT PROJECT
PROJECT SCHEDULE (PROPOSED)**

| | Task Name | Start | Finish | | Duration (Days) |
|----|----------------------------|--------------|---------------|------------------------------|------------------------|
| 1 | Project Kickoff | 10/4/2017 | 10/4/2017 | Wednesday, October 4, 2017 | 0 |
| 2 | Bid Out Design | 3/21/2018 | 5/5/2018 | Saturday, May 5, 2018 | 45 |
| 3 | Award Design Contract | 8/21/2018 | 8/21/2018 | Tuesday, August 21, 2018 | 0 |
| 4 | Prepare Plans | 8/1/2019 | 7/30/2020 | Thursday, July 30, 2020 | 364 |
| 5 | Prepare Specifications | 2/28/2021 | 6/28/2021 | Monday, June 28, 2021 | 120 |
| 6 | Prepare Estimate | 6/28/2021 | 7/30/2021 | Friday, July 30, 2021 | 32 |
| 7 | Advertise Bid | 7/31/2021 | 10/1/2021 | Friday, October 1, 2021 | 62 |
| 8 | Open Bids | 10/1/2021 | 10/1/2021 | Friday, October 1, 2021 | 0 |
| 9 | Review Bids | 10/2/2021 | 10/23/2021 | Saturday, October 23, 2021 | 21 |
| 10 | Award Contract | 2/16/2021 | 2/16/2021 | Tuesday, February 16, 2021 | 0 |
| 11 | Start Construction | 3/9/2021 | 3/9/2021 | Tuesday, March 9, 2021 | 0 |
| 12 | Mobilizations | 3/23/2021 | 4/13/2021 | Tuesday, April 13, 2021 | 21 |
| 13 | Site Preparation | 4/14/2021 | 4/28/2021 | Wednesday, April 28, 2021 | 14 |
| 14 | Excavation for Filters | 4/29/2021 | 5/13/2021 | Thursday, May 13, 2021 | 14 |
| 15 | Install Filters | 5/14/2021 | 5/28/2021 | Friday, May 28, 2021 | 14 |
| 16 | Backfill Filters | 5/29/2021 | 6/12/2021 | Saturday, June 12, 2021 | 14 |
| 17 | Concrete Work | 6/13/2021 | 6/27/2021 | Sunday, June 27, 2021 | 14 |
| 18 | Landscaping/Habitat Area | 6/28/2021 | 7/26/2021 | Monday, July 26, 2021 | 28 |
| 19 | Bioswales | 7/27/2021 | 8/17/2021 | Tuesday, August 17, 2021 | 21 |
| 20 | Permeable Pavers | 8/18/2021 | 9/8/2021 | Wednesday, September 8, 2021 | 21 |
| 21 | Lighting | 9/9/2021 | 9/30/2021 | Thursday, September 30, 2021 | 21 |
| 22 | Final Landscape | 10/1/2021 | 10/15/2021 | Friday, October 15, 2021 | 14 |
| 23 | Construction Work Finished | 11/14/2021 | 12/14/2021 | Tuesday, December 14, 2021 | 30 |
| 24 | Awarding Agency Inspection | 12/15/2021 | 12/22/2021 | Wednesday, December 22, 2021 | 7 |
| 25 | Project Acceptance | 12/21/2021 | 12/21/2021 | Tuesday, December 21, 2021 | 0 |
| 26 | Notice of Completion | 12/31/2021 | 2/4/2022 | Friday, February 4, 2022 | 35 |
| 27 | Grant/Project Closing | 2/4/2022 | 3/6/2022 | Sunday, March 6, 2022 | 30 |

| | Days |
|------------------------------------|-------------|
| Design Phase | 364 |
| Construction | 301 |
| Post Construction /Grant Close Out | 82 |



Converse Consultants

Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

June 7, 2019

Ms. Lorry Hempe
Public Works Special Projects Manager
Public Works Department
City of Lynwood
11330 Bullis Road
Lynwood, California 90262

Subject: **PERCOLATION TEST REPORT**
Proposed Bioswale Project
Fernwood Avenue and State Street Intersection
City of Lynwood, Los Angeles County, California 90262
Converse Project No. 19-31-181-01

Dear Ms. Hempe:

Converse Consultants (Converse) is pleased to submit this percolation test report and hydrogeologic assessment to assist with the design and construction of the proposed bioswale project at the intersection of Fernwood Avenue and State Street located at a latitude 33.929117 North and longitude -118.218320 West in the City of Lynwood, Los Angeles County, California. The goal of LID stormwater infiltration is to reduce runoff from the site using stormwater control measures that retain runoff. This report was prepared in accordance with our proposal dated April 22, 2019.

The Stormwater Quality Design Volume (SWQDV) for this stormwater infiltration project was estimated to be between 1,000 and 10,000 gallons. This SWQDV placed it in the mid-scale range and required two (2) boring percolation tests per the County of Los Angeles Department of Public Works GS200.2 Administrative Manual dated June 30, 2017.

The predominant soil type of the proposed project site consisted of Silty Sand (SM) up to five (5) feet below existing ground surface. Based on the results of the boring percolation test, the site soils are coarse-grained and have high percolation rates for infiltration systems in general. Percolation test results are tabulated in Table No.1, *Percolation Test Results*.

Percolation Testing

Boring percolation tests were performed on the project site at two (2) planned infiltration boring locations on May 21, 2019 as shown on Drawing No. 1, *Percolation Location Map*. The locations were determined by a City of Lynwood representative. The percolation

borings were augered using a 4-inch diameter hand auger. Boring percolation tests were proposed as the proposed drainage feature is shallow. Clean water for the percolation tests was supplied by a water barrel with a water spigot, hose and slotted pvc pipe casing.

Upon completion of augering, a 2-inch thick gravel layer was placed at the bottom of the bore hole and a 2-inch diameter perforated pipe was installed above the gravel to the ground surface. The annulus around the pipe was filled with gravel. The purpose of the gravel is to reduce the potential for erosion and caving due to the addition of water to the holes and sandy soil conditions. The percolation test pipes were removed, and the borings were backfilled with soil cuttings following the completion of the percolation tests.

The test hole was presoaked by inundating the hole with water to the test elevation. The pre-soaked hole had drained between 10 and 30 minutes. Based on the percolation of water during presoaking, the site soils met the conditions for sandy soils (*Administrative Manual, Los Angeles County 2017*). The corresponding sandy soil test procedures were used. For sandy soil, the water level and total depth of the test hole were measured from the top of the pipe every 10 minutes for 30 minutes. After each set of measurements, the water level was adjusted to the original test elevation. There were at least three (3) sets of measurements taken for each test and each set consisted of at least three (3) measurements.

The percolation test hole data is presented in the table below.

| Percolation Test | Location | Test Hole Diameter (inches) | Total Depth of Test Hole (feet) | Perforated Pipe Inside Diameter (inches) | Porosity of Gravel (n) |
|------------------|----------------------------|-----------------------------|---------------------------------|--|------------------------|
| PT-1 | 33°55'45.6"N 118°13'07.9"W | 4 | 5 | 1.92 | 0.48 |
| PT-2 | 33°55'43.1"N 118°13'02.1"W | 4 | 5 | 1.92 | 0.48 |

Percolation rates describe the movement of water horizontally and vertically into the soil. Infiltration rates describe the downward movement of water through a horizontal surface. Percolation rates are related to infiltration rates but are generally higher and may require conversion before use in design. The percolation rate can be converted to an infiltration rate using reduction factors, in accordance with the Los Angeles County guidelines. The results of the percolation test and requirements are presented in Appendix A, *Percolation Testing*. The bioswale designer should determine whether additional design-related safety factors are appropriate and whether infiltration rates or percolation rates are appropriate for use in the design.

The field data of the most conservative test interval and percolation rates are presented in the following table.

| Percolation Test | Location | Test Depth (feet bgs) | Time Interval (min) | Average Change in Water Height In 10 Mins (feet) | Average Adjusted Percolation Rate (in/hour) | Lowest Adjusted Percolation Rate (in/hour) |
|------------------|-------------------------------|-----------------------|---------------------|--|---|--|
| PT-1* | 33°55'45.6"N 118°13'07.9"W | 5 | 10 | 4.8 | 21.9 | 19.4 |
| PT-2* | 33°55'43.1"N 118°13'02.1"W | 5 | 10 | 4.7 | 19.9 | 19.4 |

*Percolation rate was obtained from a 4-inch diameter bore hole to a depth which shows in the next column (Test Depth).

**Infiltration rates assume that moderate maintenance will be performed on the proposed BMP system to avoid sedimentation of fines and future clogging of said system.

Depth to Groundwater

While reviewing the seismic hazard zone report for the South Gate Quadrangle by the Department of Conservation, it was found that the historic high groundwater for the site is approximately 8 feet below ground surface. The Infiltration Facility Setback Requirements for Los Angeles County require the historic high to be at least 10 feet below the invert of the infiltration system or to use the seasonal high groundwater depth.

Closure

We appreciate the opportunity to be of continued service to City of Lynwood. If you have any questions or require additional information, please feel free to contact the undersigned at (626) 930-1275.

Sincerely,

CONVERSE CONSULTANTS

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F. ASCE
 Senior Vice President / Principal Engineer



Dist: 2/Addressee
 Encl: Figures
 Appendix A

VN/SKS:jjl

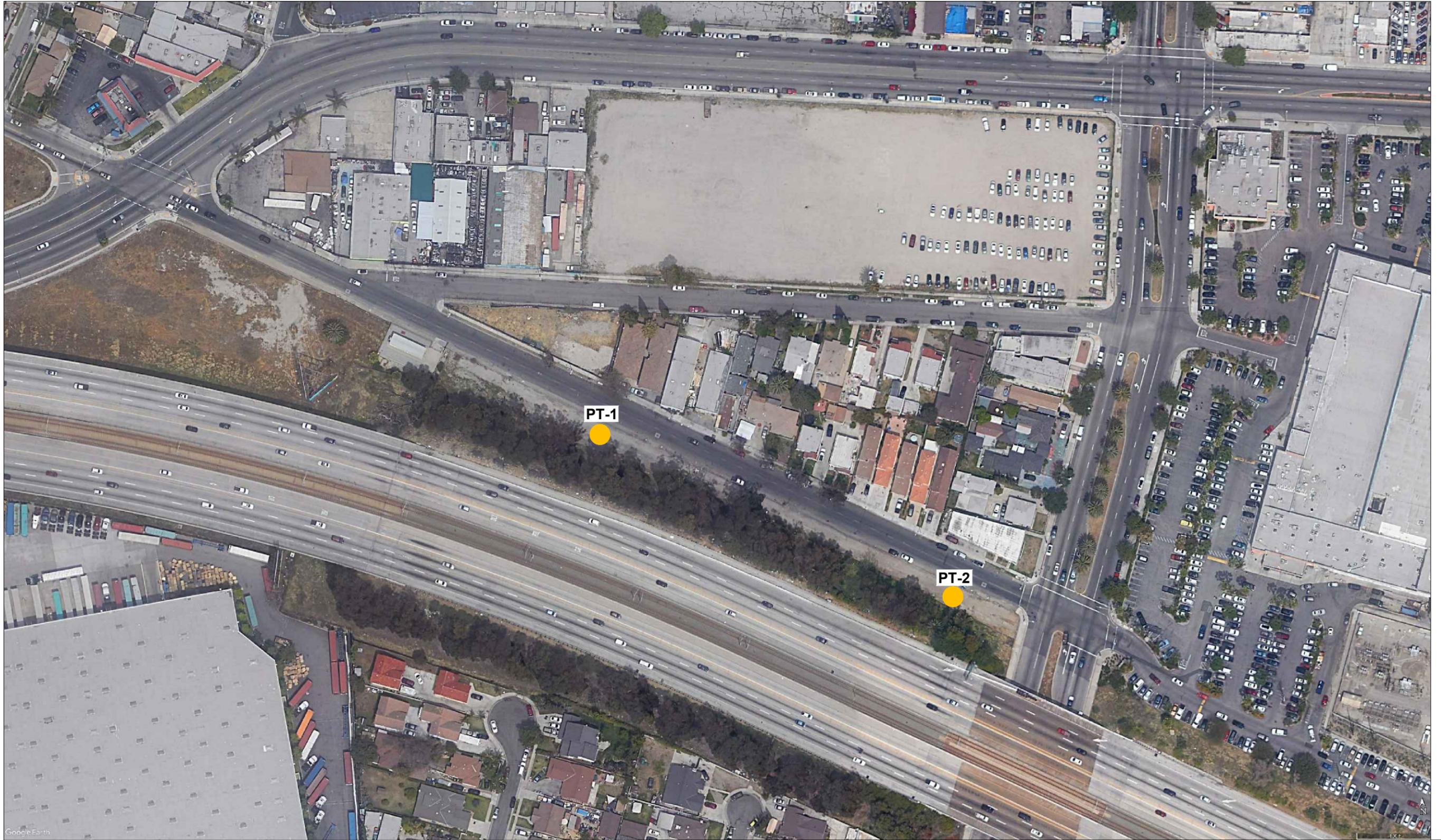
References

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS, *Low Impact Development, Standard Manual*, February 2014.

COUNTY OF LOS ANGELES, *Administrative Manual - Guidelines for Design, Investigation, and Reporting Low Impact Development Storm Water Infiltration*, 2017.

CALIFORNIA DEPARTMENT OF CONSERVATION – CALIFORNIA GEOLOGIC SURVEY, *SEISMIC HAZARD REPORT FOR THE SOUTH GATE 7.5-MINUTE QUADRANGLE*, LOS ANGELES COUNTY, CALIFORNIA 1998.

Figures



 Percolation Locations



Percolation Location Map

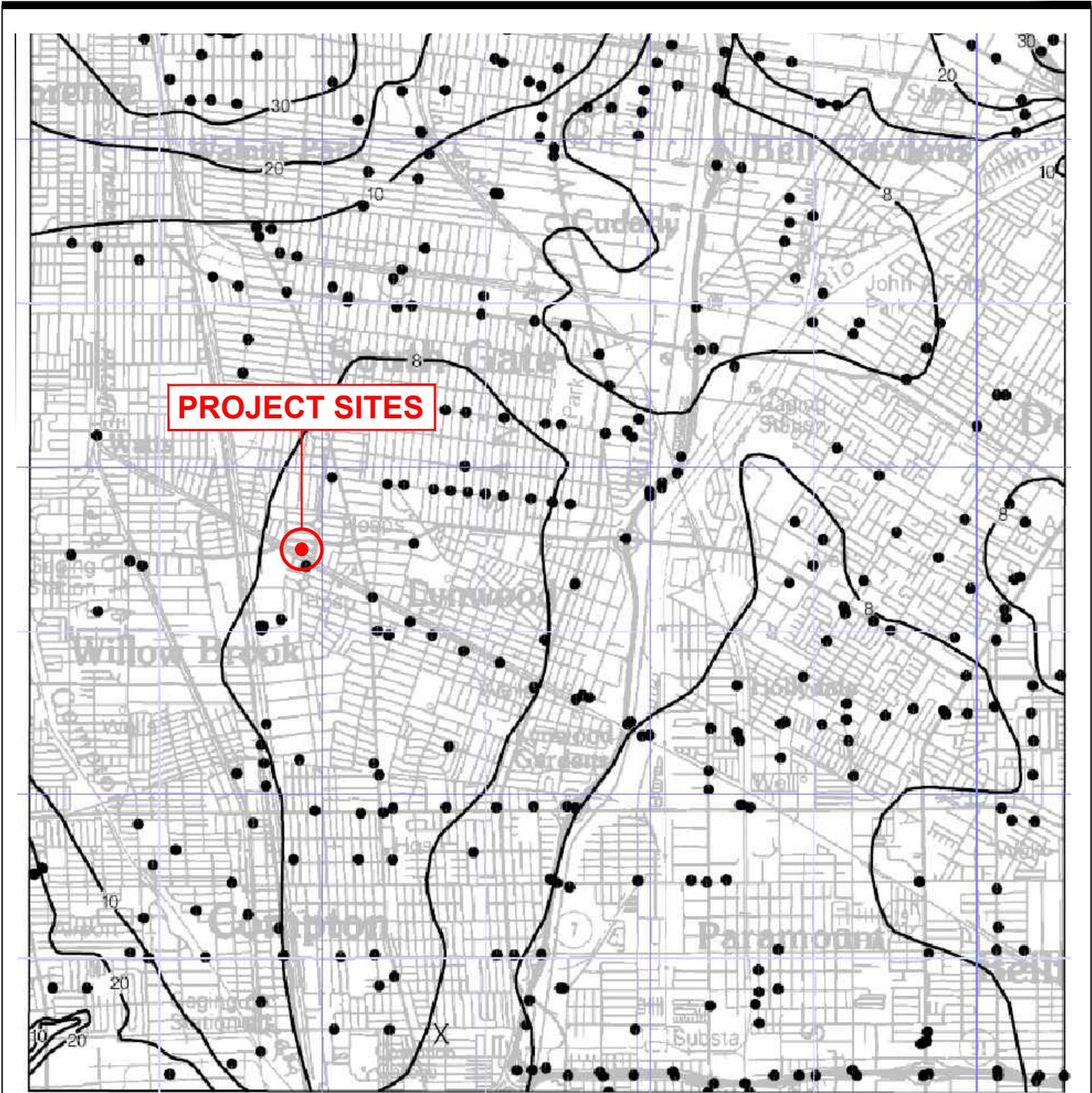
Proposed Bioswale
2940 Beechwood Ave.
Lynwood, CA 90262

Project No.

Drawing No.

19-31-181-01

1



SITE LOCATION MAP

Proposed Bioswale
2940 Beechwood Ave.
Lynwood, CA 90262

Project No.

19-31-181-01

Drawing No.

2



Converse Consultants

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Appendix A

Percolation Testing

Appendix A: Percolation Testing

Percolation testing was performed utilizing exploratory borings PT-1 and PT-2 on May 21, 2019. The continuous pre-soak falling-head test method for water percolation testing was utilized to evaluate soil infiltration rates of the soils encountered between depths of 0 to 5 feet below the ground surface at the respective boring location in accordance with Los Angeles County (2017), Administrative Manual--Guidelines for Design, Investigation, and Reporting Low Impact Development Storm Water Infiltration. The test location was prepared by placing a perforated 2-inch diameter PVC pipe surrounded by pea gravel after augering. Water was filled to the ground surface elevation to pre-soak prior to testing.

The boring was cased using a two-inch diameter perforated PVC casing. Water was added to the bore hole until the water level was as near the ground surface as could be achieved and allowed to pre-soak, the pre-soaked hole drained entirely within thirty minutes after filling the boring two (2) consecutive times. After pre-soak, water was added to the bore hole until the water level was as near the ground surface as could be achieved. The water level was measured to the nearest 1/8 inch. There were at least three (3) sets of measurements taken for each test and each set consisted of at least three (3) measurements. The results of the percolation tests are tabulated in the tables below:

Table No. A-1, Soil Boring Percolation Test Results

| Boring No. | Depth of Test (feet) | Topsoil Types (USCS) | Average Percolation Rate (inches/hour) | Lowest Percolation Rate (inches/hour) |
|------------|----------------------|-----------------------------------|--|---------------------------------------|
| PT-1* | 5 | Silty Sand (SM) With Trace Gravel | 21.9 | 19.4 |
| PT-2* | 5 | Silty Sand (SM) With Trace Gravel | 19.9 | 19.4 |

*Percolation rate was obtained from a 4-inch diameter bore hole to a depth which shows in the next column (Test Depth).

**Infiltration rates assume that moderate maintenance will be performed on the proposed BMP system to avoid sedimentation of fines and future clogging of said system.

In accordance with County of Los Angeles requirements, the minimum percolation rate for design of infiltration systems for storm water management is 0.3 inches per hour. It should be noted that per Los Angeles County Low Impact Development, Best Management Practices Guidelines, any planned infiltration systems should be at least 10 feet above historically highest groundwater levels. **The historic ground water level at the project site is 8 feet below ground level according to the seismic hazard zone report for the South Gate Quadrangle by the Department of Conservation.** The project Civil Engineer shall review the percolation rates presented for design of the proposed infiltration system. Additional details about bioswale design and requirements can be found in the Low Impact Development Manual, County of Los Angeles Department of Public Works, latest edition. The infiltration system should be properly maintained periodically to minimize sedimentation in the infiltration system.

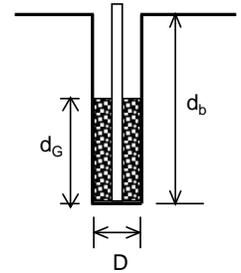
Table No. A-2, Infiltration Facility Setback Requirements per Los Angeles County

| Setback from | Distance |
|---|---|
| Property lines and public right of way | 5 feet |
| Any foundation | 15 feet or within 1:1 plane drawn up from the bottom of foundation, whichever greater |
| Face of any slope | H/2, 5 feet minimum (H is height of slope) |
| Water wells used for drinking water | 100 feet |
| Historically highest groundwater levels | 10 feet above |

Percolation Testing

Job Name: Corner of Fernwood and State, Lynwood
 Job No.: 19-31-181-01
 Location: PT-1
 Test Date: May 27, 2019

Test Boring No PT-1
 Depth of Boring (d_b): 5.0 feet
 Diameter of Boring (D): 0.33 feet
 Test Performer: JC



| Time of Testing | | | Water Level Measurement | | Water Level Calculations | | | | Percolation Rate Calculations | | |
|-------------------------|------------|---------------|-------------------------|----------------------|--------------------------------|------------------------------|------------------------|--------------------------------|-------------------------------|------------------|---------------------------|
| Initial Time | Final Time | Time Interval | Initial depth to water | Final depth to water | Initial Height of water column | Final Height of water column | Drop in Height | Average height of water column | Pre-adjusted Percolation Rate | Reduction Factor | Adjusted Percolation Rate |
| T_i | T_f | ΔT | d_i | d_f | d_i | d_f | $\Delta d = d_i - d_f$ | L_{ave} | $k_i = \Delta d / \Delta T$ | R_f | $k = k_i / R_f$ |
| | | (hr) | (feet) | (feet) | (feet) | (feet) | (feet) | (feet) | (inch/hr) | | (inch/hr) |
| Percolation Test | | | | | | | | | | | |
| 8:00:00 AM | 8:10:00 AM | 0.17 | 0.00 | 5.00 | 5.00 | 0.00 | 5.00 | 2.50 | 360.00 | 16.0 | 22.48 |
| 8:10:00 AM | 8:20:00 AM | 0.17 | 0.00 | 4.88 | 5.00 | 0.12 | 4.88 | 2.56 | 351.36 | 16.4 | 21.46 |
| 8:20:00 AM | 8:30:00 AM | 0.17 | 0.00 | 4.88 | 5.00 | 0.12 | 4.88 | 2.56 | 351.36 | 16.4 | 21.46 |
| 8:40:00 AM | 8:50:00 AM | 0.17 | 0.00 | 4.88 | 5.00 | 0.12 | 4.88 | 2.56 | 351.36 | 16.4 | 21.46 |
| 8:50:00 AM | 9:00:00 AM | 0.17 | 0.00 | 4.75 | 5.00 | 0.25 | 4.75 | 2.63 | 342.00 | 16.8 | 20.40 |
| 9:00:00 AM | 9:10:00 AM | 0.17 | 0.00 | 4.75 | 5.00 | 0.25 | 4.75 | 2.63 | 342.00 | 16.8 | 20.40 |
| 9:10:00 PM | 9:20:00 PM | 0.17 | 0.00 | 4.75 | 5.00 | 0.25 | 4.75 | 2.63 | 342.00 | 16.8 | 20.40 |
| 9:20:00 PM | 9:30:00 PM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |
| 9:30:00 PM | 9:40:00 PM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |

Note: Reduction Factor, $R_f = (2*d_i - \Delta d)/D + 1$

4.79

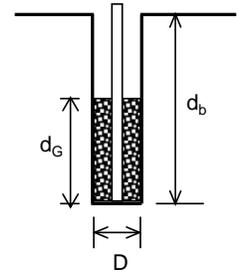
Lowest Percolaton Rate = 19.43 inch/hr
Average Percolation Rate = 20.77 inch/hr

Reference: Los Angeles County (2018). Administrative Manual - Guidelines for Design, Investigation, and Reporting Low Impact Development Storm Water Infiltration , 8/30/18.

Percolation Testing

Job Name: Corner of Fernwood and State, Lynwood
 Job No.: 19-31-181-01
 Location: PT-2
 Test Date: May 27, 2019

Test Boring No PT-2
 Depth of Boring (d_b): 5.0 feet
 Diameter of Boring (D): 0.33 feet
 Test Performer: JC



| Time of Testing | | | Water Level Measurement | | Water Level Calculations | | | | Percolation Rate Calculations | | |
|-------------------------|-------------|---------------|-------------------------|----------------------|--------------------------------|------------------------------|------------------------|--------------------------------|-------------------------------|------------------|---------------------------|
| Initial Time | Final Time | Time Interval | Initial depth to water | Final depth to water | Initial Height of water column | Final Height of water column | Drop in Height | Average height of water column | Pre-adjusted Percolation Rate | Reduction Factor | Adjusted Percolation Rate |
| T_i | T_f | ΔT | d_i | d_f | d_i | d_f | $\Delta d = d_i - d_f$ | L_{ave} | $k_i = \Delta d / \Delta T$ | R_f | $k = k_i / R_f$ |
| | | (hr) | (feet) | (feet) | (feet) | (feet) | (feet) | (feet) | (inch/hr) | | (inch/hr) |
| Percolation Test | | | | | | | | | | | |
| 10:00:00 AM | 10:10:00 AM | 0.17 | 0.00 | 4.88 | 5.00 | 0.12 | 4.88 | 2.56 | 351.36 | 16.4 | 21.46 |
| 10:10:00 AM | 10:20:00 AM | 0.17 | 0.00 | 4.88 | 5.00 | 0.12 | 4.88 | 2.56 | 351.36 | 16.4 | 21.46 |
| 10:20:00 AM | 10:30:00 AM | 0.17 | 0.00 | 4.75 | 5.00 | 0.25 | 4.75 | 2.63 | 342.00 | 16.8 | 20.40 |
| 10:40:00 AM | 10:50:00 AM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |
| 10:50:00 AM | 11:00:00 AM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |
| 11:00:00 AM | 11:10:00 AM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |
| 11:10:00 PM | 11:20:00 PM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |
| 11:20:00 PM | 11:30:00 PM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |
| 11:30:00 PM | 11:40:00 PM | 0.17 | 0.00 | 4.63 | 5.00 | 0.38 | 4.63 | 2.69 | 333.00 | 17.1 | 19.43 |

Note: Reduction Factor, $R_f = (2*d_i - \Delta d)/D + 1$

4.70

Lowest Percolaton Rate = 19.43 inch/hr
Average Percolation Rate = 19.99 inch/hr

Reference: Los Angeles County (2018). Administrative Manual - Guidelines for Design, Investigation, and Reporting Low Impact Development Storm Water Infiltration , 8/30/18.

July 22, 2019 – Item 9

RESOLUTION 2019-26

RESOLUTION OF THE SAN GABRIEL AND LOWER LOS ANGELES RIVERS AND MOUNTAINS CONSERVANCY (RMC) APPROVING A SCOPE AUGMENTATION TO THE CITY OF LYNWOOD TO TRANSFER FUNDING FROM THE LYNWOOD PARK INFILTRATION IMPROVEMENT PROJECT to the FERNWOOD AVENUE DEVELOPMENT AND WATER QUALITY IMPROVEMENTS PROJECT (RMC 17017)

WHEREAS, The legislature has found and declared that the San Gabriel River and its tributaries, the Lower Los Angeles River and its tributaries, and the San Gabriel Mountains, Puente Hills, and San Jose Hills constitute a unique and important open space, environmental, anthropological, cultural, scientific, educational, recreational, scenic, and wildlife resource that should be held in trust to be preserved and enhanced for the enjoyment of, and appreciation by, present and future generations; and

WHEREAS, The people of the State of California have enacted the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (“Proposition 1”) and

WHEREAS, the State of California has authorized an expenditure of funds from Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014 to the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy for capital outlay and local assistance multi-benefit grants for ecosystem and watershed protection and restoration projects; and

WHEREAS, The RMC may award grants to local public agencies, state agencies, federal agencies, and nonprofit organizations for the purposes of Division 22.8 the Public Resources Code; and

WHEREAS, The proposed project meets an objective of the California Water Action Plan for more reliable water supplies, restoration of important species and habitat, more resilient and sustainably managed water infrastructure; and

WHEREAS, The proposed project meets the goals of reducing greenhouse gas emissions consistent with AB 32; and

WHEREAS, The proposed project is consistent with the San Gabriel and Los Angeles River Watershed and Open Space Plan; and

WHEREAS, The proposed project protects land and water resources; and

WHEREAS, The grantee has requested a grant from Proposition 1, Section 79731 (f) or Section 79735 (a) of the Water Code; and

This action is exempt from the environmental impact report requirements of the California Environmental Quality Act (CEQA); and NOW

Therefore be it resolved that the RMC hereby:

- 1 FINDS that this action is consistent with the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy Act and is necessary to carry out the purposes and objectives of Division 22.8 of the Public Resources Code.
- 2 FINDS that the Proposition 1 RMC Grant Program is consistent with the Water Quality²⁰

Resolution No. 2019-26

Supply, and Infrastructure Improvement Act of 2014 (“Proposition 1”), which provides funds for the RMC grant program.

- 3 FINDS the proposed project meets at least one of the purposes of Proposition 1.
- 4 FINDS the proposed project meets at least one of the three objectives of the California Water Action Plan.
- 5 FINDS that the proposed action is consistent with the San Gabriel and Lower San Gabriel and Los Angeles River Watershed and Open Space Plan as adopted by the Rivers and Mountains Conservancy;
- 6 FINDS that the actions contemplated by this resolution are exempt from the environmental impact report requirements of the California Environmental Quality Act.
- 7 ADOPTS the staff report dated July 22, 2019.
- 8 AUTHORIZE a scope augmentation to the City of Lynwood to transfer Proposition 1 funds in the amount of \$ 1,692,575 from the Lynwood Park Infiltration Project to the Fernwood Avenue Development and Water Quality Improvements Project (RMC 17017).

~ End of Resolution ~

Passed and Adopted by the Board of the
SAN GABRIEL AND LOWER LOS ANGELES RIVERS AND MOUNTAINS
CONSERVANCY on July 22, 2019.

Motion _____ Second: _____

Ayes: _____ Nays: _____ Abstentions: _____

Frank Colonna, Chair

ATTEST: _____
David Edsall, Jr.
Deputy Attorney General