Geotechnical Design Report
North Santa Monica Boulevard
Reconstruction
Beverly Hills, California

November 27, 2013

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

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NORTH SANTA MONICA BOULEVARD RECONSTRUCTION
BEVERLY HILLS, CALIFORNIA

1.0 INTRODUCTION

1.1 General

This report presents our geotechnical design recommendations for the proposed reconstruction of North Santa Monica Boulevard (NSMB) through the City of Beverly Hills (City). The NSMB project is divided into two phases:

- Phase 1 – Conceptual Design and Public Outreach, and;
- Phase 2 – Project Design.

The project extends from Moreno to Doheny Drives (west to east city limits) as shown in the Vicinity Map, Figure 1. The NSMB project includes reconstructing improvements within the right-of-way for NSMB and improvements to the Beverly Gardens Park. PSOMAS is the project civil engineer.

1.2 Project Description

The project consists of the reconstruction of an approximate 1.8-mile long section of NSMB. The proposed reconstruction will include pavement replacement within the existing 85-foot-wide right-of-way. Associated improvements will include new curb and gutter, sidewalks, underground utilities, street lighting, traffic signals, landscaping, and new bicycle and pedestrian facilities. Excavations up to two feet below existing grades are anticipated for the new pavement, sidewalks, and curb and gutter. We anticipate new underground utilities will be constructed prior to roadway reconstruction.

The project also includes landscape restoration of Beverly Gardens Park including storm water infiltration, if feasible. The park is located on the north side of NSMB between North Rodeo and North Crescent Drives.

2.0 SCOPE OF SERVICES

2.1 General

The scope of our services is described in our proposal dated May 3, 2013. We prepared our proposal based upon the City's Request for Proposal (RFP) dated January 25, 2013. We revised our proposal to incorporate revisions to the RFP dated March 13, 2013 and our discussions with PSOMAS. Mrs. Alysen Weiland from PSOMAS's Los Angeles office authorized our services on July 23, 2013. We described the following tasks in our proposal:

- Geotechnical file review;
- Field preparation including a site reconnaissance and utility locates;
- Field explorations including Falling Weight Deflectometer (FWD) testing, pavement coring, and soil borings;
- Geotechnical laboratory testing;
- Preliminary infiltration evaluation;
- Analyses and recommendations;
- Report preparation; and
- Attend meetings.

3.0 EXISTING SITE CONDITIONS

3.1 General

The following sections present a description of the current site conditions, a summary of our review of previous studies and other published information in the site vicinity. We observed the current site conditions during our site reconnaissance on October 10, 2013. A discussion of the existing pavement conditions is provided below.

3.2 Site Description

The NSMB alignment is shown on the Site and Exploration Plan, Figure 2. The site consists of the NSMB 85-foot wide right-of-way within the City and Beverly Gardens Park. NSMB contains four lanes of traffic, two in each direction, with a median for left turn pockets. From Doheny Drive to Wilshire Boulevard shoulders are not present, while bus turnouts and turn lanes are sparse. Shoulders are present on both sides of NSMB between Wilshire Boulevard and Moreno Drive.

Land usage along NSMB is mixed commercial and residential development. Southwest of Wilshire Boulevard, the Beverly Hilton hotel and a parking structure are located on the northwest side of the roadway. Retail is located on the southeast side. Northeast of Wilshire Boulevard, predominantly residential development is located on the northwest side of NSMB. The southeast side of NSMB contains a mix of retail, office, and government buildings.

Railroad tracks are shown in the Beverly Hills Quadrangle topographic maps (USGS, 1966), paralleling NSMB. The tracks are approximately 25 to 30 feet southeast of NSMB. These tracks (a.k.a. the Red Line) were originally a part of the Los Angeles Pacific Electric network. They previously extended past the City limits in both the southwest and northeast direction. Although the majority of the Red Line track through Beverly Hills has been removed, remnants are still present southwest of Wilshire Boulevard.

Beverly Gardens Park is located between NSMB and Park Way, from North Rodeo Drive to North Crescent Drive. North Beverly Drive and North Canon Drive, run north to south, dividing the park into three sections. Each section contains sidewalks, walkways, and landscaping including lawn, plants, and trees. Topographically, the park slopes toward NSMB at a gentle gradient, between 2 and 5 percent.

3.3 File Review

We searched for readily available documents regarding the mapped geology and geotechnical information in the vicinity of the site. Our search included the City website, available online documents, and our previous projects. We reviewed the following study for the project:

- "Westside Subway Extension Environmental Impact Statement and Environmental Impact Report," prepared by Los Angeles County Metropolitan Transportation Authority (Metro) dated March 2012 (Metro Report).

Logs of subsurface explorations performed within NSMB for the Metro Report are included in Appendix A. The locations of these borings are shown in Figure 2.

3.4 Roadway Conditions

We performed a site reconnaissance to review the existing roadway conditions and prepare for the field exploration program. The project site is relatively flat with elevations ranging from approximately +271 feet at the southwest end to +226 feet at the northeast end (Rick Engineering Company, 2011). In general, the pavement areas maximum slope is typically less than 2 percent.

Storm drain inlets for drainage are located on north and south sides of the roadway. We observed two isolated areas of standing water during our site reconnaissance as shown in Photograph 1 below. One location is at the intersection of a driveway near Charleville Boulevard. The other location is at an alleyway intersection between North Linden Drive and Walden Drive. The water observed is not the result of inclement weather as there has not been any rain within the last day or two. Bus stops, composed of Portland concrete cement (PCC) pavement, are adjacent to drive lanes as shown in Photograph 2 below.

Photograph 1 – Ponding water adjacent to NSMB next to driveway (left) and alleyway (right)

Photograph 2 – Typical PCC bus stop adjacent to NSMB

3.4.1 Pavement along Drive Lanes

Asphalt concrete (AC) pavement along the drive lanes typically exhibited less distress than the pavement within intersections and 100 to 200 feet on either side of them. Moderate to severe alligator (fatigue) cracking and minor longitudinal, transverse, and reflective cracking was observed in the majority of drive lanes as shown in Photographs 3 through 5 below.

Photograph 3 – Example of severe alligator cracking along drive lanes

Photograph 4 – Example of longitudinal and transverse cracking along drive lanes

Photograph 5 – Reflective cracking of AC over concrete gutter

3.4.2 Pavement near Intersections

The AC pavement at or within intersections and 100 to 200 feet on either side of the intersections exhibited more distress than the drive lanes, likely due to braking and accelerating vehicles. Larger, busier intersections often showed moderate to severe evidence of patching along utility trenches and potholes, while smaller and less trafficked intersections typically showed less distress. The majority of drive lanes leading up to intersections were severely distressed and showed signs of cracking, deformation, and deterioration. This included corrugation, one to four inches of rutting, potholes (maximum observed was 12 inches in diameter), severe alligator cracking, and slippage cracking as shown in Photographs 6 and 7 below.

Photograph 6 – Severe patching at the intersection of North Rexford Drive and NSMB

Photograph 7 – Severe deformation and deterioration of drive lanes leading up to the intersection of Beverly Boulevard and NSMB

4.0 FIELD EXPLORATIONS

4.1 General

We completed a two-stage exploration program to characterize the pavement section and subsurface materials. During the first stage of exploration, we drilled borings within the Beverly Gardens Park to observe and sample the subsurface materials to estimate the potential for storm water infiltration. The second stage explored the existing pavement section and subsurface conditions of NSMB using Falling Weight Deflectometer testing (FWD) and cores through the pavement section layers and into the underlying subsurface materials.

The following sections provided a synopsis of our field explorations. The report describing the FWD testing procedures and results is provided in Appendix B. The boring and core logs are provided in Appendix C. The location of borings drilled within Beverly Gardens Park and cores within NSMB are shown on Figure 2. Our field exploration program also included chemical screening for soil contamination as described below.

4.2 Falling Weight Deflectometer Testing

The FWD is a device designed to simulate deflection of a pavement surface caused by a truck. Based on the FWD testing, it is possible to estimate the stiffness of the pavement section. FWD testing was performed at an approximately 200 foot interval of each traffic lane. The testing procedures and results are summarized in the LaBelle Marvin (2013) report provided in Appendix B.

The purpose of the FWD testing was to obtain strength and behavioral measurements of the existing roadway pavement section to provide a basis for defining areas of similar and changing conditions. The measured deflections aided in estimating the uniformity of the existing pavement sections and potentially the underlying subgrade soils. These characteristics were used to locate the pavement cores to observe the existing conditions that may have affected the measured changes in the pavement section strength characteristics.

4.3 Pavement Coring

The existing pavement section and subgrade conditions at the site were explored with nine pavement cores, designated C-1 through C-9, to a depth of five feet below ground surface (bgs). The cores were drilled on October 13, 2013 and October 27, 2013 using truck-mounted drilling equipment subcontracted to us. The type and thickness of the pavement section components encountered in the cores were logged by our field representatives. The cores were brought back

to our laboratory for review, photographing, and storage. After coring, the underlying soils were explored using a hollow-stem auger. The materials were logged by our field representative, who also obtained bulk samples for laboratory testing. The holes were backfilled with fine gravel and concrete. Details of the explorations performed, logs and photographs of the cores, and photographs of the pavement surface in the vicinity of each core are presented in Appendix C, Field Exploration Procedures and Logs.

4.4 Borings

The subsurface conditions at Beverly Gardens Park were explored on October 1, 2013 with three borings. Designated borings B-1 through B-3, they were drilled to depths of 11.5 and 21.5 feet below the existing ground surface (bgs) using track-mounted drilling equipment subcontracted to us. The soil encountered in the borings were logged by our field representatives, who also obtained bulk samples for laboratory testing. Details of the explorations performed and the logs of the borings are presented in Appendix C.

4.5 Environmental Screening

During geotechnical explorations, soil samples were field screened for potential contamination. Field screening methods included using a photoionization detector (PID) to detect volatile organic compounds (VOCs) and visual observation. The PID measured VOC levels in the range of 0 to 43 parts per million (ppm) as noted on the boring logs.

5.0 LABORATORY TESTING

This section summarizes our geotechnical laboratory testing of selected samples collected from the cores drilled through NSMB and the borings performed at Beverly Gardens Park. For the cores along NSMB, the testing included visual classification, moisture content determinations, and R-value tests. For the borings drilled within the Beverly Gardens Park, the testing included visual classification, moisture content determinations, and grain size analyses. The moisture content is incorporated into the borings logs presented in Appendix C. Descriptions of laboratory test procedures and results are presented in Appendix D, Geotechnical Laboratory Testing Procedures and Results.

6.0 GEOLOGIC CONDITIONS

6.1 Regional Geology

The project site is located in the Los Angeles basin, in which four structural blocks have been mapped (Yerkes and others, 1965). The boundaries of these structural blocks are defined by faults and/or mountain ranges. The site is located in the northwest portion of the central block, which is wedge-shaped in plan view, widening to the southeast. The central block is bounded on the northwest by the Santa Monica Fault Zone and Santa Monica Mountains, on the northeast by the Whittier Fault Zone, on the southeast by the Santa Ana Mountains, and on the southwest by the Newport-Inglewood Fault Zone.

The central block is underlain by Triassic to Late Cretaceous (240 to 70 million years ago (mya)) basement rocks (crystalline or metamorphic rocks beneath a sedimentary cover). The rocks lie at depths ranging from approximately 15,000 feet at the distal ends of the block to 31,000 feet in the central part of the block (Yerkes and others, 1965).

The basement rocks are overlain with a thick sequence of marine and non-marine sedimentary rocks and alluvial deposits, ranging in age from Late Cretaceous to recent (Yerkes and others, 1965). The surficial geologic units are alluvial deposits, consisting of clay, silt, sand, and lesser amounts of gravel, derived from Santa Monica Mountains (Dibblee, 1991; CDMG, 1998). The mapped surficial deposits are provided in the Geologic Map, Figure 3 (CDMG, 1998).

6.2 Geologic Units

6.2.1 General

We reviewed geologic mapping of the site and vicinity, which shows the near surface geologic units. The geologic mapping indicates the geologic units underlying the site consist primarily of young alluvial deposits, with older alluvium mapped along the southwestern portion of the project area (CDMG, 1998). These units are slightly variable in composition and engineering characteristics, as described in the following sections.

6.2.2 Artificial Fill (af)

Artificial fill deposits were not mapped in the vicinity of the site. However, minor fills were likely placed during construction of NSMB and Beverly Gardens Park. Minor fills were likely placed during construction of NSMB to achieve subgrade elevations and as utility trench

backfill. Loosely placed fills were likely constructed for support of landscaping, to provide drainage, or as utility trench backfill at the park.

6.2.3 Younger Alluvium (Qya, Qya1, Qya2)

The younger Quaternary alluvial deposits can be differentiated by their geomorphic relationships and have been mapped within the limits of the site as Qya1 or Qya2 (CDMG, 1998). They are described as consisting of alternating beds of clay, silt, and fine- to medium-grained sand. In Qya1, gravel is abundant in many layers. In Qya2, fine-grained material becomes more dominant and gravel is less abundant.

6.2.4 Older Alluvium (Qoa)

Older alluvium is mapped along the southwest side of the project site in the vicinity of cores C-1 and C-2 (CDMG, 1998). The older alluvium is described as medium dense to dense, interbedded sand, silt, and clay with abundant gravel.

7.0 SUBSURFACE CONDITIONS

7.1 General

The following sections present a generalized summary of the subsurface conditions encountered in the field explorations at NSMB and Beverly Gardens Park. The soil conditions are consistent with the mapped geologic units described above. Refer to the exploration logs in Appendices A and C for specific information at each boring location.

7.2 North Santa Monica Boulevard

The nine cores drilled through NSMB encountered varying materials and thicknesses. The following sections describe the existing pavement section layers and subgrade soils.

7.2.1 Pavement Section Cores

The existing pavement section consists of varying thickness of AC, occasionally underlain by PCC, and occasionally with AC overlays. The pavement cores were transported to our Los Angeles, California laboratory for photographing and storage. The photographs are provided in Appendix C as Figures C-14 to C-22. The thickness of each material type encountered is summarized in Table 1 below.

TABLE 1
EXISTING NSMB PAVEMENT SECTION

Core	Asphalt Concrete (in) [(1), (2)]	Portland Cement Concrete (in)	Base (in)
C-1	5	8½	3½
C-2	9½	-	5
C-3	9½	-	-
C-4	8½	-	6
C-5	2	8	-
C-6	7	-	7
C-7	7	-	12
C-8	7	-	12
C-9	6	-	12

Notes:
(1) Total thickness of asphalt concrete.
(2) Overlay thicknesses provided on core logs, where present.

7.2.2 Subgrade Soil

The subgrade soil encountered under the NSMB pavement section is consistent with the younger and older alluvium descriptions provided in Section 6.2. The subgrade soil was slightly variable in composition, consisting of admixtures of sand and gravel with lesser amounts of silt and clay. The soil directly below the pavement and base appear to be alluvial deposits and/or artificial fill derived from the alluvial deposits. Grading for road construction likely consisted of leveling with some compaction effort.

7.3 Beverly Gardens Park

The borings drilled in Beverly Gardens Park predominantly encountered alluvial deposits to the maximum depth explored of 21½ feet bgs. The materials consisted of fine-grained soils varying from lean clay (CL) to sandy silt (ML). These soils were in a soft to stiff and moist condition. Standard Penetration Test (SPT) blow counts ranged from 3 to 11 blows per foot. The water content of the alluvial deposits ranged from 11 to 21 percent.

The near surface materials encountered in our borings consisted of disturbed alluvial deposits, likely from landscaping activities and park usage. SPT blow counts of these materials were on the order of 3 to 4 blows per foot. The water content of these near surface soils was consistent with the underlying alluvial deposits.

7.4 Groundwater

Groundwater was not encountered in the borings at Beverly Gardens Park or cores through NSMB. According to the Seismic Hazard Zone Report for the Beverly Hills Quadrangle, the project site's historic high groundwater varies from approximately 10 feet bgs at the eastern end of the site to approximately 40 feet bgs in the vicinity of Beverly Gardens Park, as shown in Figure 4 (CDMG, 1998). Groundwater level is anticipated to fluctuate in response to recent rainfall, seasonal variations, and other factors.

8.0 DESIGN RECOMMENDATIONS

8.1 General

Our recommendations for the reconstruction of the NSMB pavement section are presented below. The recommendations are based on our recent file review, field exploration, laboratory testing, and engineering analyses. Following our NSMB recommendations, we provide information on infiltration characteristics of the soils encountered in borings drilled within the Beverly Gardens Park. This information is based on the materials encountered and laboratory testing completed on select samples retrieved from the borings.

8.2 Pavement Design

8.2.1 General

The recommended pavement sections were calculated using the methodology described in the California Department of Transportation Highway Design Manual (HDM; Caltrans, 2012). This methodology takes into consideration the anticipated traffic loading, type of subgrade soils, and pavement section material properties when calculating a design section.

8.2.2 Traffic Index

The recommended pavement sections were determined using a 20-year design life for the traffic index (TI) provided by PSOMAS, calculated by Iteris, Inc. The TI provided was calculated from the equivalent single axle loads (ESALs), which is a function of the average daily traffic (ADT), total truck percentage of the ADT, percentage of trucks in each class (i.e. 2, 3, 4, and 5 axle trucks), and design life. The resulting total ESALs was reduced by applying a directional coefficient of 0.5 and converted to a TI using the expected lane distribution factor of 1.0. This process was performed for four sections of NSMB through Beverly Hill. A design TI of 10.5 was used in our calculations.

8.2.3 Subgrade Soils

Based on the geotechnical exploration performed at the site, the subgrade soils generally consist of silt to silty sand in a moist condition. Three R-value tests were performed on subgrade samples retrieved from the pavement cores. The tests resulted in values of 28, 30, and 51. Based on the test results, our observations of the subsurface conditions during pavement coring, and our experience with similar soils, we performed the pavement design using an R-value of 28.

8.2.4 Pavement Sections

We calculated three new pavement sections using the Caltrans HDM methodology (Caltrans, 2012). Three sections were calculated using the TI of 10.5 and R-value of 28. The pavement sections consist of asphalt concrete (AC) and aggregate base (AB) thicknesses, as presented in Table 2. Alternate pavement sections can be provided upon request.

TABLE 2
RECOMMENDED PAVEMENT SECTIONS

AC Thickness (in)	AB Thickness (in)
7.0	15.0
8.0	12.5
9.0	10.5

To provide support for paving, the subgrade soils should be constructed as described in the next section of this report.

We recommend that an asphalt binder of Performance Graded (PG) 70-10 or PG 64-28 Polymer Modified (PM) be used in the design. The PM grade binder reportedly provides improved resistance to rutting, thermal cracking, fatigue damage, stripping, and temperature susceptibility (Caltrans, 2012). The binder selection is based on the anticipated pavement temperatures, traffic patterns, and traffic speed. A tack coat should be placed between subsequent lifts if the underlying lift will be used for traffic or left uncovered for a significant period of time.

8.2.5 Drainage

Drainage is important to the long term performance of the pavement section. Proper drainage of the paved areas should be provided since this will reduce moisture infiltration into the subgrade and increase the life of the pavement. In pavement areas, excess water that

accumulates in the aggregate surfacing and base layers and does not drain quickly enough could weaken the subgrade support and reduce the pavement design life. Surface drainage should be provided to direct runoff to non-erosive drainage devices and away from structural improvements. Ponding of surface water on the pavement should be avoided.

8.3 Infiltration Characteristics

We performed laboratory grain size distribution testing to develop a preliminary assessment of the Beverly Gardens Park site's infiltration feasibility. We understand that the proposed target infiltration depth is approximately 5 to 10 feet below grade. We tested five soil samples from borings B-1 through B-3 for grain size distribution and textural analysis. Based on our explorations and analyses, the infiltration potential for the encountered site soils is low.

The results for two samples, from B-2 and B-3, plot within the range of textures recommended for infiltration on Figure D-4. Of these, one soil sample is a sandy silt, trace of clay ("loam" texture), collected at 5 feet deep (boring B-3, sample 2). The other soil sample is a silty, clayey sand ("sandy loam" texture), collected at 15 feet deep (boring B-2, sample 6). Ecology (2005) and Rawls (1982) recommend short-term infiltration rates of approximately 0.5 inch/hour for loam and 1 inch/hour for sandy loam. Based on our observations and testing, a short-term infiltration rate of about 0.5 inch/hour may be appropriate for the "loam" soil located at approximately 7.5 to 10 feet deep at B-2 and approximately 5 to 7.5 feet deep at B-3. A short-term infiltration rate of about 0.5 to 1 inch/hour may be applicable at B-2 for the sandy silt ("loam") to silty, clayey sand ("sandy loam") soils at approximately 12.5 to 17.5 feet. The other soils encountered at and below 5 feet deep by the three borings do not appear to be feasible for infiltration unless underdrains are incorporated in the design.

The Ecology Manual recommends the application of a correction factor of approximately 4 before to using texturally-based infiltration rates for infiltration facility design. The City of Los Angeles (2011) requires the application of a correction factor of 6 if laboratory soil test data are used for infiltration facility design. Use of this correction factor or "factor of safety" would result in anticipated design infiltration rates of about 0.08 inch/hour for the loam texture and about 0.17 inch/hour for the sandy loam texture soils. We understand that the City of Beverly Hills follows County of Los Angeles infiltration guidance. County guidance requires field testing be used to develop infiltration rates. Therefore, if infiltration is pursued at this site, field testing would be necessary, as described in the County GS200.1 Administrative Manual (2011).

9.0 CONSTRUCTION RECOMENDATIONS

9.1 General

The applicability of the design parameters recommended above depends on the conditions encountered during construction as well as the quality of construction practices. The following sections present general recommendations that should be considered.

9.2 Site Preparation

9.2.1 Clearing and Grubbing

Prior to site grading, construction areas should be cleared of surface structures within the limits of the proposed NSMB reconstruction including existing AC and concrete pavements, undocumented fills, and other deleterious material. Surface vegetation within construction areas should be removed by stripping. Debris from the stripping should not be used in general fill construction in pavement areas, but may be used in landscape areas, provided they are kept five feet or more from surface improvements, moisture conditioned, and compacted.

Difficulty in achieving subgrade compaction or soil instability may be indications of loose or soft materials associated with past subsurface items such as poorly compacted fills, utility lines, or saturated subgrade. Should these conditions exist, the unsuitable materials should be removed and the excavations backfilled with structural fill as described below.

9.2.2 Existing Utilities

Underground utilities are present beneath the existing NSMB pavement. The following utility lines, and associated pedestals, boxes, manholes, risers, vaults, valves, meters, and cleanouts, were identified on the Topographic & Utility Survey (Rick Engineering, Inc., 2011):

- Storm drain pipes
- Sanitary sewer lines
- Water lines
- Electric lines
- Gas lines
- Fiber-optic lines
- Telephone lines
- Cable TV / communication lines
- Street light conduits
- Signal conduits

Existing utilities may require additional protection against heavy surface loads caused by the weight or placement of fills, pavements, or other structures. Where existing utility trench backfill is observed to be loose and/or wet, the material should be removed and replaced with

properly compacted fill. Care should be taken to protect the existing utilities in place and not damage them during construction.

9.2.3 New Utilities

The following sections present our recommendations for design and construction planning of new underground utilities and considerations for existing utilities. The NSMB Project includes new street lighting, upgraded storm drains, new signage, and new conduits connected to signal controller cabinets. Types of excavations included in this project could consist of: (a) trench excavations for new pipes, (b) excavations for manholes or vaults, or (c) excavations to replace existing utilities. The type of excavation support system selected for construction of proposed utilities would depend on the proposed depth of excavation, proximity to existing structures, and materials exposed in the excavation. Excavation criteria should follow the Cal-OSHA guidelines (Requirements for Protective Systems). Applicable guidelines for excavations at the project site include:

- Native soils are considered "Cohesive Soils" and "Granular Soils" definitions; and
- Based on the soil properties and characteristics, the native soils should be considered "Type B" and "Type C" in accordance with the soil classification system.

For planning purposes we selected "Type B" for the project area given silty sand encountered in the majority of the explorations. In areas of decreased fines content (such as sandy gravel and gravelly sand), "Type C" classification could be used. While we did not observe caving soils inside the cores, they were limited to five feet in depth and typically open for less than one hour.

The Contractor should select the best excavation method, and must consider worker safety and the potential impacts of ground movements on adjacent facilities. In addition, the excavation must conform to all federal, state, and local safety regulations. The Contractor should be held solely responsible for all damages related to ground movements resulting from trench excavations.

Utility trench bedding and backfill for new or relocated underground utilities should conform to pipe manufacturer's recommendations and local agency requirements. Trench backfill should be composed of structural fill as described below, placed in thin lifts, moisture-conditioned to approximately the material's optimum moisture content and uniformly compacted to at least 95 percent of the maximum dry density (MDD) per ASTM D-1557.

9.2.4 Subgrade Preparation

Following removal of the existing pavement and excavation to the proposed subgrade level, the exposed subgrade should be proof-rolled with a fully loaded, tandem-axle, 10-yard dump truck or equivalent. Areas that are identified as being wet, loose, soft, or yielding during proof-rolling should be improved by over-excavating to expose a firm and unyielding subgrade and replaced with properly compacted fill. Our field representative should evaluate the underlying soil during proof-rolling.

Once wet, loose, soft, or yielding areas have been removed and replaced, the subgrade should be ripped to a depth of at least six-inches, watered or air dried (as needed) to approximately the material's optimum moisture content. Rocks larger than three-inches in maximum dimension should be removed. The prepared subgrade should be blended to provide a uniform material and compacted to the appropriate relative density as described below.

9.3 Structural Fill

New fill soil placed beneath pavements, walkways, or areas where settlements are to be minimized should be structural fill. Common fill could be placed in landscaped areas provided it is properly moisture conditioned.

Structural fill should consist of a well-graded mixture of on-site or imported granular soil that is free of organics, contaminants, debris, and rock fragments larger than 3 inches. The suitability of soil for use as structural fill would depend on its R-value, gradation, and moisture content. Laboratory testing should be performed during grading to determine the R-value used in the design calculations is representative of the materials encountered during construction. As the amount of fines (portion of soil particles passing a U.S. Standard No. 200 sieve, based on the minus ¾-inch fraction) increases, soil becomes more sensitive to small changes in moisture content, and adequate compaction becomes more difficult to achieve. The fines should be non-plastic, and the moisture content of the soil should be approximately the optimum moisture content as determined by ASTM D 1557 (Modified Proctor).

9.3.1 Suitability of On-Site Soils

In our opinion, the onsite soils are suitable for use as structural fill. The on-site soils observed during our field studies consist of silt to silty sand with varying quantities of clay and gravel. Depending on the silt and clay content, these soils may be moisture sensitive during

periods of inclement weather, or susceptible to disturbance by construction equipment. Wetter material may be encountered and will require drying before it could be used as structural fill.

The NSMB reconstruction spans a distance of approximately 1.8 linear miles. The on-site soils will likely vary throughout this distance. The on-site soils and fill material should be observed by a representative of Shannon & Wilson to verify the material properties used in the pavement section design calculations is appropriate for the materials encountered during construction. Laboratory testing (i.e. R-value or grain size distribution) may be performed during construction to determine the engineering properties of the materials encountered.

9.3.2 Import Fill

We recommend that import structural fill consist of select, granular, import material. Laboratory testing of the imported material should be performed to determine the R-value and corrosion potential. This material should consist of a well-graded sand and gravel with a maximum particle size smaller than 3 inches, at least 40 percent retained on the U.S. No. 4 sieve, and less than 5 percent passing the U.S. No. 200 sieve, based on that fraction passing the ¾-inch sieve. This material should conform to Section 19-3.06 (Type E Backfill) of the Caltrans Standard Specifications (Caltrans, 2010) with the exception of the grading requirements described above.

Higher fines content for import fill could be considered assuming earthwork occurs during periods of dry weather. We recommend that the fines content not exceed 30 percent.

9.3.3 Fill Placement

Before structural fill placement, the subgrade should be prepared as previously described for subgrade preparation, Section 9.2.4. Structural fill should be brought to approximately the material's optimum moisture content, thoroughly blended, placed in uniform lifts, and compacted to at least 95 percent. The appropriate lift thickness would depend on the Contractor's equipment and the moisture content and quality of the fill material. In general, fills should be placed in uniform, horizontal layers not exceeding eight-inches in loose thickness for heavy compactors, or four-inches for hand-operated mechanical compactors, and compacted to at least 95 percent.

If subgrade or fill soils become loosened or disturbed, additional excavation to expose competent, undisturbed soils and replacement with properly compacted structural fill would be required. We recommend that a representative from our firm be present during structural fill

placement to observe the contractor's work and perform in-place density tests to measure whether or not the specified compaction is being achieved.

9.3.4 Base Layer

The base layer should be constructed with material conforming to Class 2 aggregate base (AB) classification as described in the Caltrans Standard Specifications (Caltrans, 2010). As an alternative to Caltrans Class 2 AB, Crushed Miscellaneous Base (CMB) in conformance with gradations specified in the "Greenbook," Section 200-2 (Public Works Standards, 2012) could be considered for the project. However, we recommend the fine content (percent passing the No. 200 sieve) be limited to no greater than 5 percent.

The base layer should be placed in six-inch lifts and compacted to a relative compaction of at least 95 percent of the maximum dry density as determined in accordance with the Modified Proctor compaction test (ASTM D 1557).

9.4 Wet Weather Considerations

Wet weather generally begins about October and continues through about April, although rainy periods may occur at any time of year. As the compaction of structural fill is important for the preparation of the pavement section, it is advisable to schedule earthwork in dry weather conditions. Soil that contains sufficient fines may become difficult to proof-roll and properly compact if the moisture content significantly exceeds the optimum. Performing earthwork during dry weather would reduce these problems and costs associated with rainwater, trafficability, and handling of wet soil. However, should wet weather/wet condition earthwork be unavoidable, the following recommendations are provided:

- The ground surface in and surrounding the construction area should be sloped and sealed with a smooth-drum roller to promote runoff of precipitation away from construction areas and to prevent ponding of water.
- Construction areas, trenches, or slopes should be covered with plastic. The use of sloping, ditching, sumps, dewatering, and other measures should be employed as necessary to permit proper completion of the construction.
- Earthwork should be accomplished in sections sized to minimize exposure to wet conditions. That is, each section should be small enough so that the removal of unsuitable soils and placement and compaction of clean structural fill can be accomplished on the same day. The size of construction equipment may have to be limited to reduce soil disturbance. It may be necessary to excavate soils with a backhoe, or equivalent, and locate them so that equipment does not pass over the

constructed area. Thus, subgrade disturbance caused by equipment traffic will be significantly reduced.

- Fill material (if imported) should consist of clean, well-graded, sand and gravel soils, of which not more than 5 percent fines by dry weight passes the No. 200 mesh sieve, based on wet-sieving the fraction passing the ¾-inch mesh sieve, in case wet weather condition is expected. In-place soil or fill soil that becomes wet and unstable and/or too wet to suitably compact should be removed and replaced with clean, granular soil with the specified gradation.
- No soil should be left uncompacted and exposed to moisture. A smooth-drum vibratory roller, or equivalent, should roll the surface to seal out as much water as possible.
- Excavation and placement of structural fill material should be observed on a full-time basis by Shannon & Wilson, Inc. to determine that work is being accomplished in accordance with the project specifications and our recommendations.
- Grading and earthwork should not be accomplished during periods of heavy, continuous rainfall.

The above recommendations apply for all weather conditions, but are provided for wet-weather earthwork. They should be incorporated into the contract specifications for pavement construction.

9.5 Near Surface Drainage

Steps should be made to limit the infiltration of irrigation water from adjacent landscape areas along the sides of the road or within landscaped medians. In such locations, consideration should be given to installing a cutoff wall or edge drains behind the curb. The cutoff wall should consist of a minimum six-inch wide trench excavated to a depth of at least six-inches below the bottom of the AB layer, and backfilled with a lean concrete mix. Edge drains can also be considered to limit migration of near surface water from infiltrating the base layer.

10.0 ADDITIONAL GEOTECHNICAL SERVICES

10.1 General

This report concludes our Phase 1 Geotechnical Design Report services as described in our proposal. We are prepared to submit our proposal for Phase 2 Supplemental Consultation and Plan Review for your review and approval. Our proposal for Phase 3 Construction Observation and Testing services will be prepared as the time for construction approaches.

10.2 Supplemental Consultation and Plan Review

We will be available to discuss our recommendations with the project team. We can also provide recommendations for alternative pavement designs and assist in permitting issues, as requested. As the project plans are completed, we should review the documents to determine the intent of our recommendations has been incorporated.

10.3 Construction Observation and Testing

The purpose of our construction observation and testing services will be to monitor compliance of the site grading, earthwork, and subgrade preparation with the project plans and specifications. This includes observing site preparation, placement and compaction of engineered fills, and preparation pavement subgrade. In particular, we should review subgrade conditions of pavement areas to identify areas of wet, soft, loose, or yielding conditions requiring over-excavation and replacement with compacted fill.

11.0 LIMITATIONS

This report was prepared for the exclusive use of, the City of Beverly Hills, PSOMAS, and other members of the design team for specific application to this project. This report should be provided to prospective Contractors for information on factual data only and not as a warranty of subsurface conditions, such as those interpreted from the exploration logs and discussions of subsurface conditions included in this report.

The analyses, conclusions, and recommendations contained in this report are based on site conditions as they presently exist. We assume that the explorations made for this project are representative of the subsurface conditions throughout the project alignment (i.e., the subsurface conditions everywhere are not significantly different from those disclosed by the explorations). If conditions different from those described in this report are observed or appear to be present during construction, we should be advised at once so that we can review these conditions and reconsider our recommendations, where necessary. If there is a substantial lapse of time between submission of our report and the start of construction at the site, or if conditions have changed because of natural forces or construction operations at or near the site, it is recommended that this report be reviewed for the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

Within the limitations of the scope, schedule, and budget, the analyses, conclusions, and recommendations presented in this report were prepared in accordance with generally accepted

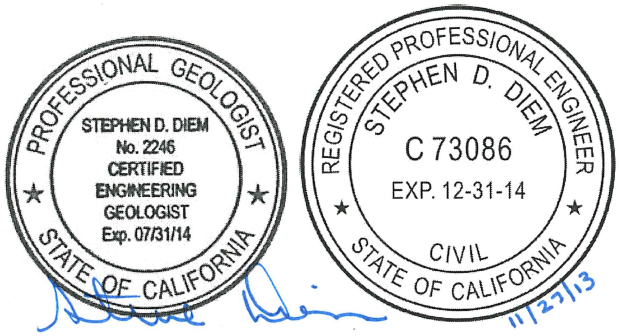
professional geotechnical engineering principles and practices in this area at the time this report was prepared. We make no other warranty, either express or implied. These conclusions and recommendations were based on our understanding of the project as described in this report and the site conditions as interpreted from the current explorations.

Unanticipated soil conditions are commonly encountered and cannot be fully determined by merely taking soil samples or completing exploratory excavations. Such unexpected conditions frequently require that additional expenditures be made to attain a properly constructed project. Therefore, some contingency fund is recommended to accommodate such potential extra costs.

The scope of our geotechnical services did not include any environmental assessment or evaluation regarding the presence or absence of wetlands or hazardous or toxic materials in the existing pavement section materials, subgrade or subsurface soils, surface water, groundwater, or air at the subject site. Shannon & Wilson, Inc. can provide these services at your request.

Shannon & Wilson, Inc. has prepared the document, "Important Information About Your Geotechnical/Environmental Report," in Appendix E to assist you and others in understanding the use and limitations of this report.

SHANNON & WILSON, INC.



Stephen D. Diem, P.E., P.G., C.E.G.
Principal Engineering Geologist

R. Travis Deane, P.E., G.E.
Senior Associate

JXM:SDD:RTD/jxm

Geological items related to the review of subsurface explorations and conditions were prepared by or prepared under the direct supervision of Stephen D. Diem, P.E., P.G., C.E.G.

Geotechnical items related to the review of the engineering analyses and recommendations were prepared by or prepared under the direct supervision of R. Travis Deane, P.E., G.E.

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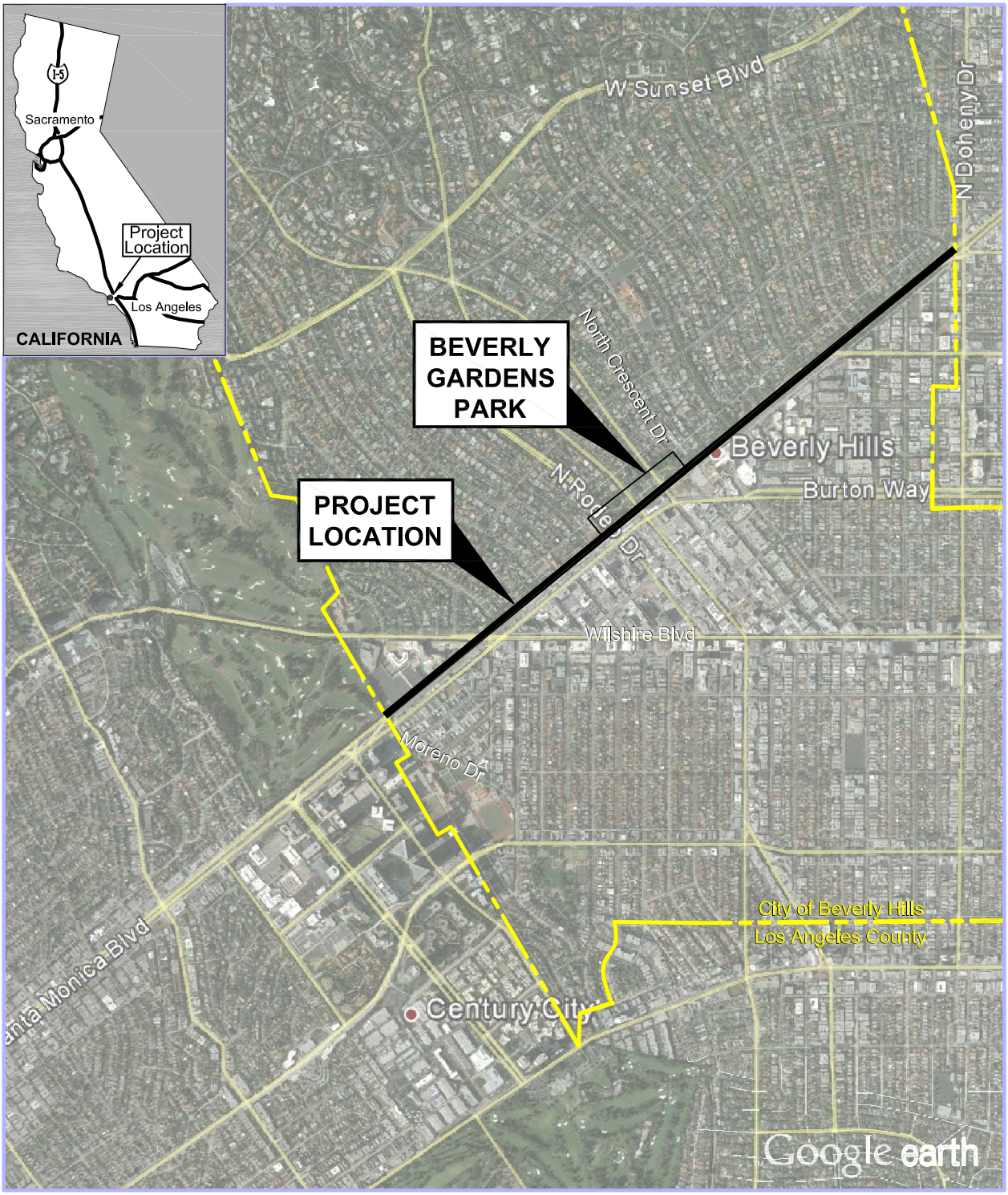

0 1000 2000 4000

SCALE: 1"=2000'

NOTE

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North Santa Monica Boulevard Reconstruction
Beverly Hills, California

VICINITY MAP

November 2013 51-1-10092-003

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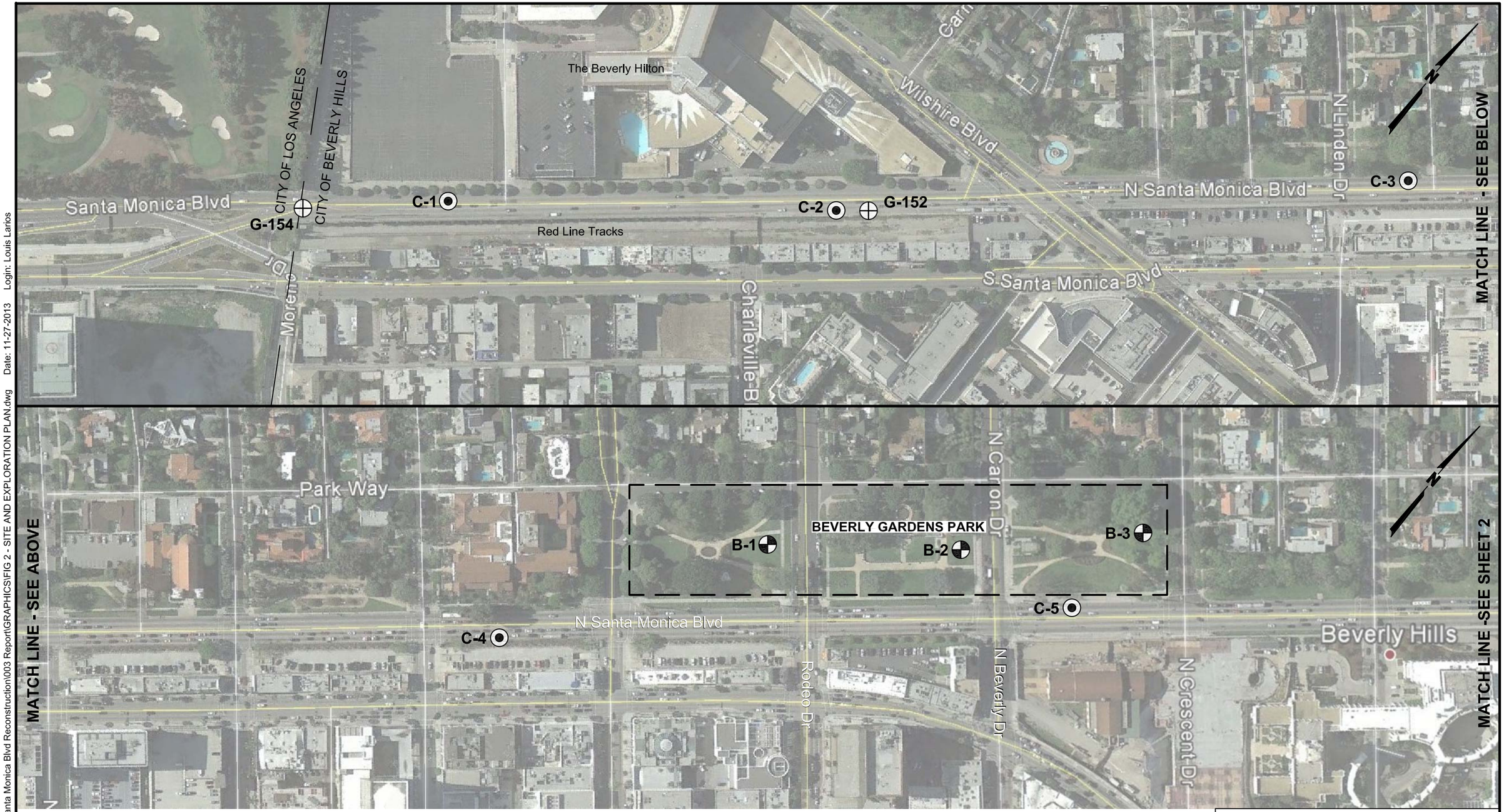
FIG. 1

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG 1 - VICINITY MAP.dwg Date: 11-27-2013 Login: Louis Larios

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG 2 - SITE AND EXPLORATION PLAN.dwg Date: 11-27-2013 Login: Louis Larios



LEGEND

- **B-1** — Approximate Location of Boring for Infiltration Study
- **C-1** — Approximate Location of Core for Pavement Study
- **G-154** — Approximate Location of Borings by Others (Metro, 2012)

0 100 200 400

SCALE: 1"=200'

NOTE

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North Santa Monica Boulevard Reconstruction
Beverly Hills, California

SITE AND EXPLORATION PLAN

November 2013 51-1-10092-003

SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 2
Sheet 1 of 2

LEGEND

C-1 Approximate Location of Core for Pavement Study

0 100 200 400

SCALE: 1"=200'

NOTE

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North Santa Monica Boulevard Reconstruction
Beverly Hills, California

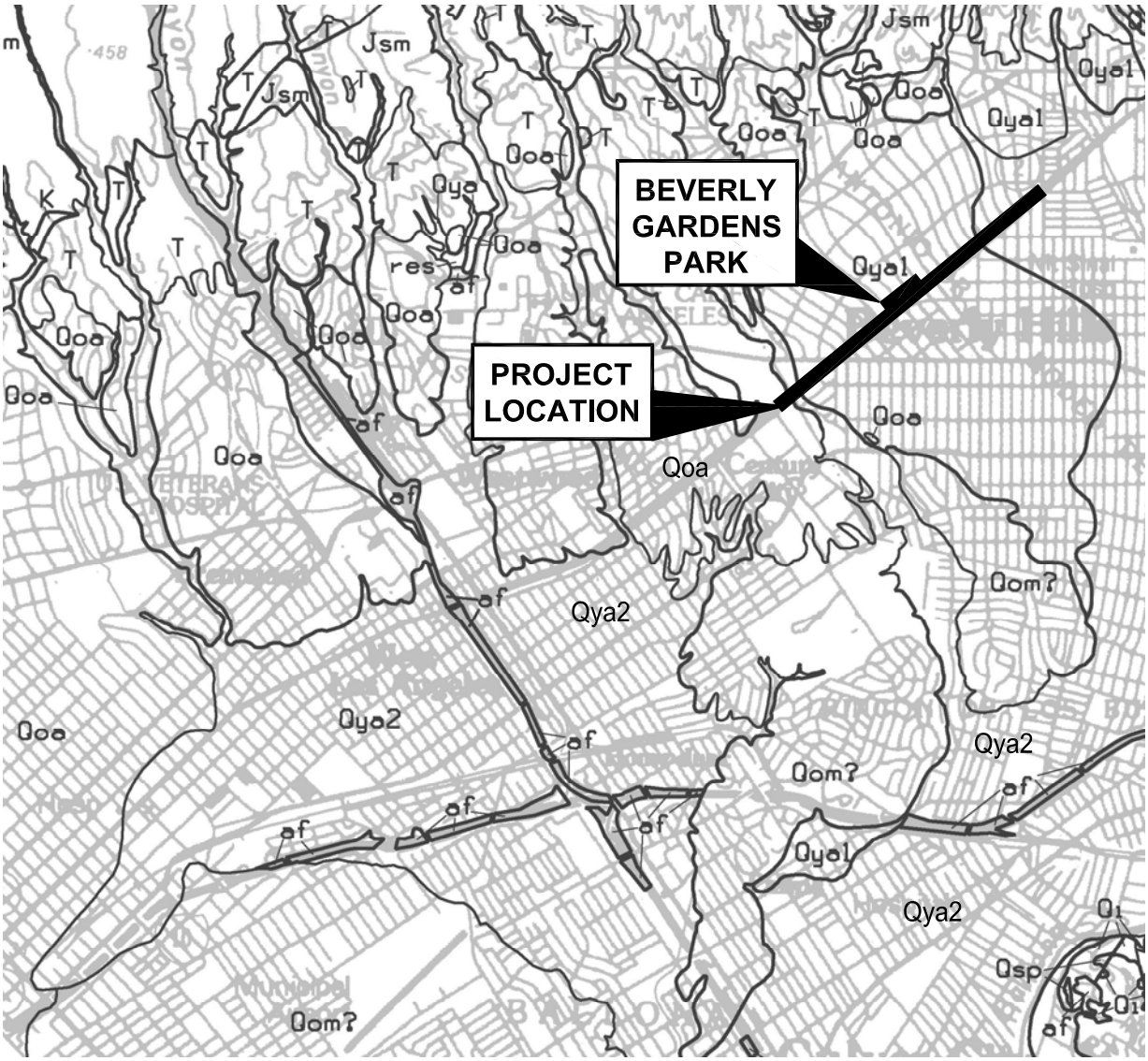
SITE AND EXPLORATION PLAN

November 2013 51-1-10092-003

SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 2
Sheet 2 of 2

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG 2 - SITE AND EXPLORATION PLAN.dwg Date: 11-27-2013 Login: Louis Larios



LEGEND

Older Alluvium (Qoa) = Medium dense to very dense beds of sand, clay and silt; abundant gravel.

Younger Alluvium (Qya1) = Beds of clay, silt, and fine- to medium-grained sand; abundant gravel.

Younger Alluvium (Qya2) = Beds of clay, silt, and fine- to medium-grained sand.

0 ½ 1 2

SCALE: 1"=1 Mile

NOTE

Map adapted from map titled Quaternary Geology, Plate 1.1, from Seismic Hazard Zone Report for the Beverly Hills 7.5-Minute Quadrangle, Los Angeles County, California, 1998, by the Department of Conservation, Division of Mines and Geology.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

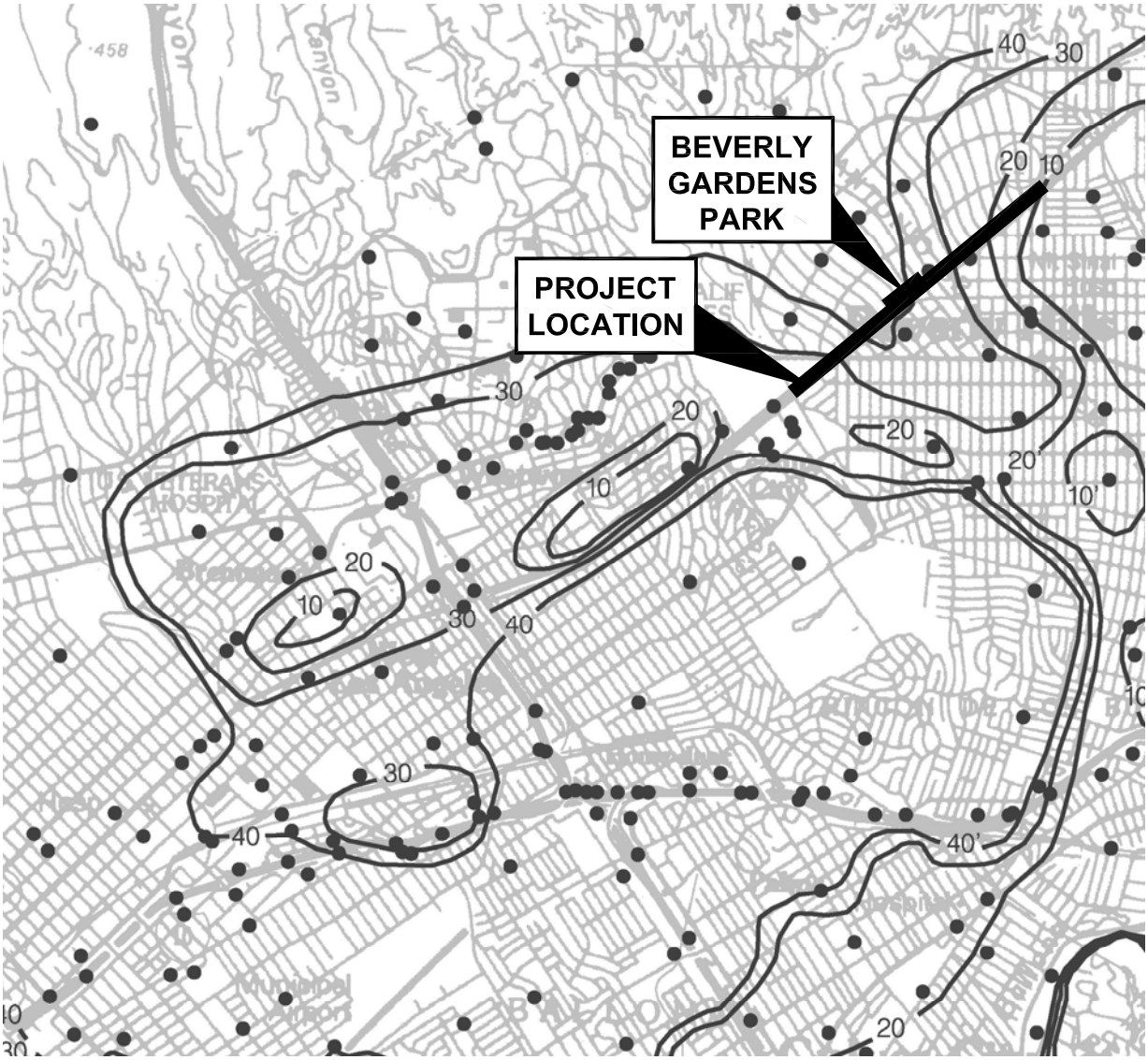
GEOLOGIC MAP

November 2013 51-1-10092-003

SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 3

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG 3 - GEOLOGIC MAP.dwg Date: 11-27-2013 Login: Louis Larios



LEGEND

30 — Depth to Groundwater in Feet

● Borehole Site

0 ½ 1 2

SCALE: 1"=1 Mile

NOTE

Map adapted from map titled Historically Highest Ground Water, Plate 1.2, from Seismic Hazard Zone Report for the Beverly Hills 7.5-Minute Quadrangle, Los Angeles County, California, 1998, by the Department of Conservation, Division of Mines and Geology.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

HISTORICALLY HIGH GROUNDWATER

November 2013 51-1-10092-003

SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. 4

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG 4 - GROUND WATER MAP.dwg Date: 11-27-2013 Login: Louis Larios

APPENDIX A

PREVIOUS EXPLORATION

APPENDIX A

PREVIOUS EXPLORATION

FIGURES

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
C & L Drilling / Mayhew 1000		G-152
DRILLING METHOD	**BOREHOLE LOCATION**	
Rotary Wash	Sta 683+20, Lt 40 feet	
DATES DRILLED	**HOLE DIAMETER**	**GROUND EL.**
1/31/2011 - 2/1/2011	4-7/8 inches	271 feet

GROUND-WATER READINGS
Drilling mud bailed on 2/1/2011. Ground-water level measured at 37 feet below the ground surface 20 minutes after bailing of drilling mud.

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA (ppm)**	MOISTURE CONTENT (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	DOWNHOLE TESTS		
270	0										5-inch thick Asphalt Concrete over 6-inch thick Portland Cement Concrete and 4-inch thick Base Course
										SM	**FILL [Af]** SILTY SAND - moist, light brown to brown, fine to medium-grained, some coarse, trace slate gravel
265	5										
										SM	**QUATERNARY YOUNGER ALLUVIUM [Qal]** SILTY SAND - moist, brown, fine to medium-grained
260	10		0.8	19.6	103	14				CL	LEAN CLAY - stiff, moist, dark olive brown, trace slate gravel (up to 1/4 inch in size)
255	15	8	5.4	22.6	-					CL	**QUATERNARY OLDER ALLUVIUM [Qalo]** LEAN CLAY - medium stiff, olive brown
250	20		3.7	15.5	104	7				SM	SILTY SAND - loose, moist, olive brown, fine to medium-grained, some coarse, some gravel
										ML	SILT - moist, olive brown, some clay
245	25	18	4.7	10.4	-		12			SW-SM	WELL GRADED SAND with SILT - medium dense, moist, gray, fine to coarse-grained, some gravel (up to 1/2 inch in size)
240	30		3.9	15.0	110	25				SM	SILTY SAND - medium dense, moist, olive brown, fine to medium-grained, some coarse
										ML	SANDY SILT - medium stiff, moist, gray, with sand lenses
235	35	8	13.1	28.3	-					SM	SILTY SAND - loose, moist, gray, fine to medium-grained, trace gravel
	40										

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared/Date: JF 3/31/2011
Checked/Date: LT/PE 9/19/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-2.47a

LA METRO PB-TUNNEL ZONE S:\70131 GEOTECH\GINT\LIBRARY MACTEC JUNE2011.GLB
G:\PROJECT_DIRECTORIES\4953\2010\10561_METRO_WESTSIDE_EXTENSION\6.2.3.1 GEOTECHNICAL DESIGN\3.2 ALL FIELD NOTES\GINT LOG\NEW TEMPLATE - MARCH 14, 2011\4953-10-1561_(140-160).GPJ 10/18/11

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
C & L Drilling / Mayhew 1000		G-152 (Continued)
DRILLING METHOD: Rotary Wash	BOREHOLE LOCATION: Sta 683+20, Lt 40 feet	
DATES DRILLED: 1/31/2011 - 2/1/2011	HOLE DIAMETER: 4-7/8 inches	GROUND EL.: 271 feet

GROUND-WATER READINGS
Drilling mud bailed on 2/1/2011. Ground-water level measured at 37 feet below the ground surface 20 minutes after bailing of drilling mud.

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA (ppm)**	MOISTURE CONTENT (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	DOWNHOLE TESTS			
230			3.0	15.6	107	57				SW	Becomes wet, brownish gray, some coarse sand WELL GRADED SAND with GRAVEL - dense, wet, brown, fine to coarse-grained
				-	-	38					(Sample not recovered)
	45	44	8.5	8.3	-						Becomes gray, gravel (up to 1 inch in size)
				10.8	116	55					
	50	50/6"	8.7	10.3	-		16			SM	SILTY SAND with GRAVEL - very dense, very moist, brown, fine to coarse-grained, gravel (up to 3/4 inch in size)
				4.9	116	49				ML	SILT - hard, moist, reddish brown
	55		3.0	30.9	88	10	39		NV	SM	SILTY SAND - loose, wet, light to dark brown, fine to medium-grained, some coarse, trace gravel (up to 1/2 inch in size), with thin layers of Clayey Silt
	60	28	9.6	19.2	-						Slate gravel (up to 1 inch in size) Becomes medium dense, thin layer of Well Graded Sand with gravel (up to 1 inch in size)
			5.1	18.8	99	29	59			CL	SANDY LEAN CLAY - very stiff, moist, olive brown, trace gravel (up to 1/2 inch in size), with thin layers of Silty Sand
205	65		4.5	23.9	97	54	82		NV		Becomes hard
	70	22	7.0	22.2	-		64			CH	FAT CLAY - very stiff, moist, dark and reddish brown, trace sand, trace gravel
200			3.7	27.4	95	67					Becomes hard
	75								NV		
195			3.7	15.3	112	57	50			CL	SANDY LEAN CLAY - hard, moist, brown, trace gravel (up to 3/8 inch in size)
	80										

Tunnel

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared/Date: JF 3/31/2011
Checked/Date: LT/PE 9/19/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-2.47b

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DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
C & L Drilling / Mayhew 1000		G-152 (Continued)
DRILLING METHOD: Rotary Wash	BOREHOLE LOCATION: Sta 683+20, Lt 40 feet	
DATES DRILLED: 1/31/2011 - 2/1/2011	HOLE DIAMETER: 4-7/8 inches	GROUND EL.: 271 feet

GROUND-WATER READINGS
Drilling mud bailed on 2/1/2011. Ground-water level measured at 37 feet below the ground surface 20 minutes after bailing of drilling mud.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA (ppm)**	MOISTURE CONTENT (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	DOWNHOLE TESTS		
190		55	1.4	14.0	-		26			SC	CLAYEY SAND with GRAVEL - very dense, wet, brown, fine to medium-grained, some coarse, gravel (up to 1 inch in size)
											Increase in gravel content
				11.1	123	75				SM	SILTY SAND - very dense, very moist, brown, fine to coarse-grained, gravel (up to 1/4 inch in size)
	85									SW	WELL GRADED SAND - very dense, wet, gray, fine to coarse-grained, with gravel (up to 3/4 inch in size)
185		50/5"	6.5	13.3	-						
			3.6	20.0	105	45				MH	ELASTIC SILT - hard, moist, olive gray to gray, trace sand, calcium carbonate nodules
	90										
180		41	5.8	19.5	-						Trace gravel (up to 1/4 inch in size)
			4.3	15.0	115	52				CL	SANDY LEAN CLAY - hard, moist, brown, with gravel (up to 1/4 inch in size)
	95										
175		42	4.9	17.1	-						
	100									ML	SANDY SILT - hard, moist, brown, some clay
170			4.3	21.8	105	42				SW	WELL GRADED SAND - wet, brown, fine to coarse-grained, with gravel (up to 1/4 inch in size)
	105										
165		59	2.9	15.1	-					SP	POORLY GRADED SAND - very dense, moist, fine to coarse-grained, trace gravel (up to 1/4 inch in size)
	110									SM	SILTY SAND - dense, moist, reddish brown, fine to coarse-grained, trace gravel
160			3.2	14.5	117	49					END OF BORING AT 111 FEET
	115										NOTES:
155											Hand augered upper 9 feet to avoid damage to utilities. Borehole grouted with cement-bentonite slurry and patched with asphalt concrete.
	120										"N" Value Standard Penetration Test: Number of blows required to drive the SPT sampler 18 inches using a 140 pound automatic hammer falling 30 inches
											*Number of blows required to drive the Crandall Sampler 12 inches using a 300 pound hammer falling 18 inches
											**Photo Ionization Detector used for OVA readings
											Downhole Test: NV = Noise/Vibration

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: AR
Prepared/Date: JF 3/31/2011
Checked/Date: LT/PE 9/19/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-2.47c

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G:\PROJECT_DIRECTORIES\4953\2010\101561_METRO_WESTSIDE_EXTENSION\6.2.3.1 GEOTECHNICAL DESIGN\3.2 ALL FIELD NOTES\GINT LOGNEW TEMPLATE - MARCH 14, 2011\4953-10-1561_(140-160).GPJ 10/18/11

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
C & L Drilling / Mayhew 1000		G-154
DRILLING METHOD	**BOREHOLE LOCATION**	
Rotary Wash	Sta 696+10, Lt 10 feet	
DATES DRILLED	**HOLE DIAMETER**	**GROUND EL.**
2/9/2011 - 2/10/2011	4-7/8 inches	274 feet

GROUND-WATER READINGS
Drilling mud bailed on 2/9/2011. Ground-water level measured at 50 feet below the ground surface on 2/10/2011.

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Santa Monica / Centuty City Station

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA (ppm)**	MOISTURE CONTENT (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	DOWNHOLE TESTS		
											Grass Surface
										ML	**FILL [Af]** SANDY SILT - moist, brown to dark brown
	5										**QUATERNARY YOUNGER/OLDER ALLUVIUM [Qalo]**
			9.3	16.2	103	8				ML	SILT with SAND - medium stiff, moist, dark brown, slightly porous, some clay
	10	24	5.1	16.2	-					CL	SANDY LEAN CLAY - very stiff, moist, dark brown
	15		8.6	21.9	100	16					Becomes stiff, dark olive brown, trace sand
	20										**QUATERNARY OLDER ALLUVIUM [Qalo]**
		14	11.8	26.8	-					ML	SILT with SAND - stiff, moist, gray, some clay
	25		9.2	16.6	114	90/10"					Becomes hard
			8.7	17.3	110	88/10"				CL	LEAN CLAY with SAND - very stiff to hard, moist, brown and gray
	30	26	12.2	19.1	-						Some thin layers of Silty Sand
			5.3	13.4	113	55	78				Trace gravel (up to 3/8 inch in size), thin layer of Silty Sand
	35	42	11.6	17.1	-		46			SM	SILTY SAND - dense, moist, brown, fine to medium-grained, trace gravel
			10.9	21.6	103	20				CH	FAT CLAY - very stiff, moist, gray, trace sand
	40										

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared/Date: JF/WL 10/13/2011
Checked/Date: PE/RM 10/13/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-2.48a

LA METRO PB-TUNNEL ZONE S:\70131 GEOTECH\GINTW\LIBRARY MACTEC JUNE2011.GLB
G:\PROJECT_DIRECTORIES\4953\2010\10561_METRO_WESTSIDE_EXTENSION\6.2.3.1 GEOTECHNICAL DESIGN\3.2 ALL FIELD NOTES\GINT LOG\NEW TEMPLATE - MARCH 14, 2011\4953-10-1561_(140-160).GPJ 10/18/11

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
C & L Drilling / Mayhew 1000		G-154 (Continued)
DRILLING METHOD: Rotary Wash	BOREHOLE LOCATION: Sta 696+10, Lt 10 feet	
DATES DRILLED: 2/9/2011 - 2/10/2011	HOLE DIAMETER: 4-7/8 inches	GROUND EL.: 274 feet

GROUND-WATER READINGS
Drilling mud bailed on 2/9/2011. Ground-water level measured at 50 feet below the ground surface on 2/10/2011.

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Santa Monica / Century City Station

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA (ppm)**	MOISTURE CONTENT (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	DOWNHOLE TESTS		
		26	10.0	16.9	-					ML	SILT - very stiff, moist, brown and gray, trace sand, trace gravel (up to 1/4 inch in size), some clay
			11.4	12.6	115	68	31			SC	CLAYEY SAND with GRAVEL - very dense, moist, brown and gray, fine-grained, gravel (up to 3/4 inch in size)
	45	37	7.2	17.3	-					CL	LEAN CLAY with GRAVEL - hard, moist, brown and gray, gravel (up to 1/2 inch in size)
											Coarse gravel (6 inch layer)
			12.0	11.1	118	85/8"	24			SM	SILTY SAND with GRAVEL - very dense, moist, brown and gray, fine to coarse-grained, gravel (up to 1/2 inch in size)
	50	58	10.2	9.1	-					GW	WELL GRADED GRAVEL - very dense, moist, gray, gravel (up to 3/4 inch in size)
			11.8	10.3	129	68	14			GC	CLAYEY GRAVEL with SAND - very dense, wet, brown, fine to coarse-grained, gravel (up to 3/4 inch in size)
	55	83		1.7	-					GW	WELL GRADED GRAVEL - very dense, brown, gravel (up to 1 inch in size), very little recovery
			8.5	10.3	119	87	16			SM	SILTY SAND with GRAVEL - very dense, wet, brown and gray, fine to coarse-grained, gravel (up to 3/4 inch in size)
	60	23	10.2	30.1	-					ML	SILT - very stiff, wet, olive brown, trace sand, trace iron oxide stains, some clay
				18.5	110	36				CL	LEAN CLAY with SAND - very stiff to hard, moist, brown and gray
	65	29	10.5	21.6	-						Iron oxide stains
			10.1	26.3	99	37				SM	SILTY SAND - dense, wet, olive brown, fine-grained
	70	25	5.6	21.9	-					ML	SANDY SILT - very stiff, very moist, olive brown, some clay
			9.8	24.0	93	32				CL	LEAN CLAY - very stiff, moist, olive brown
	75	39	7.8	27.1	-					ML	SILT - hard, moist, brown and gray, some clay
											Thin layer of Silty Sand, fine-grained
195			9.2	33.7	87	32				CL	LEAN CLAY with SAND - very stiff, moist, olive gray
	80										

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared/Date: JF/WL 10/13/2011
Checked/Date: PE/RM 10/13/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-2.48b

LA METRO PB-TUNNEL ZONE S:\70131 GEOTECH\GINTW\LIBRARY MACTEC JUNE2011.GLB
G:\PROJECT_DIRECTORIES\4953\2010\101561_METRO_WESTSIDE_EXTENSION\6.2.3.1 GEOTECHNICAL DESIGN\3.2 ALL FIELD NOTES\GINT LOG\NEW TEMPLATE - MARCH 14, 2011\4953-10-1561_(140-160).GPJ 10/18/11

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
C & L Drilling / Mayhew 1000		G-154 (Continued)
DRILLING METHOD: Rotary Wash	BOREHOLE LOCATION: Sta 696+10, Lt 10 feet	
DATES DRILLED: 2/9/2011 - 2/10/2011	HOLE DIAMETER: 4-7/8 inches	GROUND EL.: 274 feet

GROUND-WATER READINGS
Drilling mud bailed on 2/9/2011. Ground-water level measured at 50 feet below the ground surface on 2/10/2011.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA (ppm)**	MOISTURE CONTENT (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	DOWNHOLE TESTS	
190	85	43	8.0	21.4	-			☒		SM SILTY SAND - dense, wet, grayish brown, fine-grained
			7.2	33.2	93	28		▩		CL LEAN CLAY - very stiff, moist, dark gray, trace sand
185	90	36	8.1	17.4	-			☒		Becomes hard, brown and gray, with sand, trace gravel (up to 1 inch in size), iron oxide stains
180	95									END OF BORING AT 86½ FEET
175	100									
170	105									
165	110									
160	115									
155	120									

NOTES:

Hand augered upper 6 feet to avoid damage to utilities.
Borehole grouted with cement-bentonite slurry.

"N" Value Standard Penetration Test: Number of blows required to drive the SPT sampler 18 inches using a 140 pound automatic hammer falling 30 inches

*Number of blows required to drive the Crandall Sampler 12 inches using a 300 pound hammer falling 18 inches

**Photo Ionization Detector used for OVA readings

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: AR
Prepared/Date: JF/WL 10/13/2011
Checked/Date: PE/RM 10/13/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING
Project No.: 4953-10-1561 Figure: A-2.48c

LA METRO PB-TUNNEL ZONE S:\70131 GEOTECH\GINT\LIBRARY MACTEC JUNE2011.GLB
G:\PROJECT_DIRECTORIES\4953\2010\10561_METRO_WESTSIDE_EXTENSION\6.2.3.1 GEOTECHNICAL DESIGN\3.2 ALL FIELD NOTES\GINT LOGNEW TEMPLATE - MARCH 14, 2011\4953-10-1561_(140-160).GPJ 10/18/11

APPENDIX B

FALLING WEIGHT DEFLECTOMETER REPORT BY LABELLE MARVIN, INC.

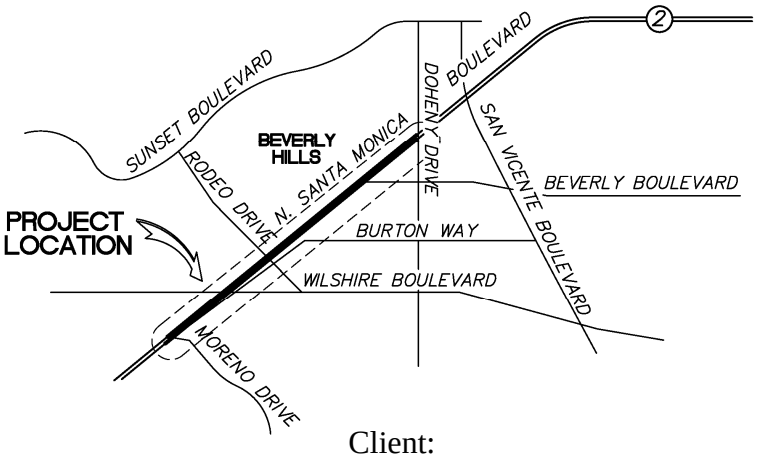
IN-PLACE STRENGTH TESTING REPORT

NORTH SANTA MONICA BOULEVARD

(MORENO DRIVE TO DOHENY DRIVE)

Beverly Hills, California

Project No. 38928



Client:
Shannon & Wilson, Inc.
664 West Broadway
Glendale, CA 91204

October 2013

Reviewed By: _____

STEVEN R. MARVIN
RCE 30659

LaBelle Marvin

Professional Pavement Engineering
2700 South Grand Avenue, Santa Ana, CA
714-546-3468 – labellemarvin.com

TABLE OF CONTENTS

1.0 – INTRODUCTION

North Santa Monica Boulevard within the City of Beverly Hills has evolved over time, including sharing right of way with various railroad/trolley operations. Caltrans was the most recent 'operator' of the roadway until relinquishment of the roadway and maintenance obligations to the City of Beverly Hills, California.

Consistent with any large number of historical travel corridors North Santa Monica Boulevard has been the subject of various improvements including but not limited to realignments associated with widening, abandonment of railroad use, changes in striping and parking configurations, increases in use, increases in the numbers and weights of transit buses and truck traffic, etc. Caltrans and possibly the City of Beverly Hills through various maintenance agreements have initiated or constructed improvements which likely included local reconstruction and placement of asphalt concrete overlays to improve the riding qualities reduce the noise associated with irregular pavement surfaces, etc.

Existing geometry, crown height, cross slopes, drainage patterns, curbs and gutters, cross street elevations, etc each impose vertical constraints which limit use of continued asphalt concrete overlay. Previous pavement conditions, joints within buried Portland cement concrete pavements, prior removals and widening joints, etc are ultimately reflecting through the new wearing surface resulting in further deterioration of riding qualities and increasing traffic tire noise. Continued maintenance has not been able to keep pace with the rate of distress to date.

Based on often conflicting criteria, the City of Beverly Hills has chosen to explore design alternatives for more permanent improvement of the roadway. These improvements may include complete removal and replacement of the roadway, including older buried pavements, buried or abandoned railroad improvements and active or abandoned utility improvements. Reconstruction of the roadway may also require relocation or refurbishment of existing utilities and provide for future utility or storm drain improvements.

Development of final designs may be enhanced through development of as complete an understanding as possible relative to construction history, maintenance history, changes in subgrade conditions and characteristics, etc. The purpose of this investigation is to provide close interval strength and behavioral measurements of the existing roadway section. Extrapolation

from the measured strengths and deflection basin characteristics aids in determining section uniformity, identifying areas of dissimilar strengths, identification of potential subgrade characteristic changes and potentially identifying changes in the as-built pavement section characteristics.

The current pavement surface includes joints and patches resulting from previous changes in alignment, changes in traffic use patterns, historical pavement damage and fatigue, and underground utility access. Longitudinal cracking and transverse cracking along the alignment appears to reflect an older, buried Portland cement concrete pavement of varying widths and conditions preceding the current asphalt concrete wearing surface. The specific limits and thicknesses of previous buried pavement structures are currently unknown.

The purpose of this investigation is to provide a basis for defining areas of similar and changing conditions along the roadway. The data developed may then be reviewed to assess areas of interest where site specific core sampling may provide additional insight into conditions which must be addressed during design and may be encountered during construction. These areas of interest may then be combined with general site exploration through pavement core sampling to provide a more complete picture of the existing roadway section.

Based on the robust nature of the design process alternatives for potential roadway overlay or resurfacing may be considered. The in place strength testing performed as part of this investigation may combined with actual field thickness measurements and geometric constraints imposed by the design process to develop design recommendations where future design alternatives include pavement rehabilitation through salvaging of some portion of the existing roadway structure.

2.0 – SCOPE OF SERVICES

Investigation of North Santa Monica Boulevard from Doheny Drive to Moreno Drive, Beverly Hills, California, focused on the existing roadway alignment and traffic use configurations throughout the length of the roadway segment. In place strength measurements were measured at distinct and discrete locations along the right wheel path of each of the primary travel lanes.

2.01 - Site Inspection

Review of prevailing conditions was performed during field review and data gathering periods.

- Site reconnaissance to determine the general roadway layout, traffic control requirements during testing and sampling and the variability of conditions to define testing and sampling intervals
- Documentation of site conditions during field strength (deflection testing sequence) testing

2.02 – In-Place Strength Testing

Pavement strength (FWD) testing was performed in accordance with California Test Method 356 to determine the current load carrying capacity of the roadway and ultimately develop rehabilitation/resurfacing potential. Pavement response to the Falling Weight Deflectometer (FWD) was obtained at each test site including

- Deflection at the loading point
- Correlating deflection at nine (9) additional locations spaced 6” to 12” on center at each test site defining the pavement deflection basin under loading
- Distance Measuring Instrument (DMI) project limits and cross street locations
- DMI curb and or gutter locations
- Median type and DMI location
- Visible changes in pavement conditions or types
- DMI longitudinal test location
- GPS spatial test location
- Pavement surface temperature

2.03 - Engineering Analysis

The Engineering Analysis included review of data trends and general pavement strength characteristics along the roadway. The combination of pavement strength and characteristics of the deflection basin were combined with engineering judgment to provide input to the design team relative to selection of biased site investigation

locations. These biased locations are intended to be combined with general site investigation planned at generally random locations along the length of the roadway.

2.04 - Report Preparation

The final report utilizes all information developed during the investigation, combined with engineering judgment and ongoing developments in pavement design and engineering.

3.0 – PROJECT DISCUSSION

The investigation performed utilizes a range of measuring techniques to ascertain the present structural condition of the roadways within the study area. The study was utilized to aid in selecting some portion of the planned pavement core sampling and define the existing section thicknesses. The specific 'hard' data may be combined with visual examination of the roadway during development of testing protocol, field core sampling and during engineering review of conditions prior to development of final design recommendations.

The current project scope limits use of the in place strength data to selection of biased core locations only. Final selection of core locations and field core sampling will be performed by others.

4.0 – CONDITION AND STRUCTURAL ANALYSIS – SUPPLEMENTAL INFORMATION

The primary focus of the investigation is to provide recommendations for selection of supplemental core locations only. Where final design results in consideration of pavement rehabilitation versus planned wholesale roadway replacement, the data gathered during this investigation may be combined with field sampling and thickness information, field conditions and engineering judgment to develop alternative rehabilitation recommendations.

5.0 – CONCLUSION / RECOMMENDATION

The field strength measurements obtained at each test location are included as part of this report. The current project scope includes review of the data by others to verify the location of both biased and randomly selected core locations along the length of the project.

Based on review of the data, the following locations have been identified to be of interest in addition to those locations already planned.

- Westbound Lane 2: west of Sierra Drive
- Westbound Lane 2: west of Elm Drive to Crescent Drive
- Westbound Lane 2: west of Camden Drive to Linden Drive
- Eastbound Lane 2: 1200' Easterly of Moreno Drive
- Eastbound Lane 2: east of Alpine to Foothill (very stiff)

The additional locations for investigation are based on a combination of the magnitude of pavement movement under loading combined with the interrelationships between multiple sensor measurements at a given location. The defined shape of the deflection basin provides some insight into the effective support below the pavement layers. Given the roadway includes some underlayment by a previous Portland Cement Concrete (PCC) roadway alignment, the support provided by each layer is impacted by the PCC layer.

Localized areas of weakness or undefined deflection basin shape may be the result of previous removal of the PCC layer, vertical or horizontal roadway realignment, utility access, loss of support or stress transfer at PCC joints and cracks, significant undermining of the roadbed by subsurface moisture conditions etc. The following is provided as a guide for the initial site investigation.

- Sensor 3/Sensor 1 $\geq$ 0.80 - PCC "Probable"
- Sensor 3/Sensor 1 $\geq$ 0.70 - CTB or PCC "Possible"
- Sensor 3/Sensor 1 $\geq$ 0.50 - Aggregate Base "Likely"
- Sensor 3/Sensor 1 $\leq$ 0.50 - Marginal to Poor Subgrade Support or unsupported joints/cracks and 'rocking' PCC Slabs

Additional insight into the interrelationships within the deflection basin may be developed upon review of the planned pavement core sampling. During the field core sampling, specific and accurate measurement of the pavement layers, including each layer, prior use of pavement reinforcement fabric layers asphalt rubber hot mix materials, hot in place or cold in place

recycling, etc should be noted. The thickness of each layer and sub layer should be determined to a reasonable accuracy, with measurements reported to 0.01' or 1/8" as is appropriate. Use of approximations, developed through flight auger exploration will limit the future value of such data.

APPENDIX A

STRUCTURAL ANALYSIS SUMMARY TABLE – DEFLECTION 80TH PERCENTILE

LABELLE • MARVIN INC
PAVEMENT ENGINEERING, DESIGN, INSPECTION & TESTING

Structural Analysis Summary Table

Date: 2013-10-05 20:28:56
Client:
Location: Beverly Hills
Project #: 38928

North Santa Monica Boulevard

Location: Beverly Hills — Doheny Drive to Moreno Drive — Date: 2013-10-05 20:28:56
Project: 38928

North Santa Monica Boulevard Westbound Lane 1

Limits	FWD_{80th}	TD_{80th}	'T'	T.I.
00+00 to 99+84	6.86	8.24	0.50	10.0 11.0 12.0

North Santa Monica Boulevard Eastbound Lane 1

Limits	FWD_{80th}	TD_{80th}	'T'	T.I.
00+00 to 72+22	7.30	8.77	0.50	10.0 11.0 12.0
72+22 to 76+23	17.37	20.85	0.50	10.0 11.0 12.0
76+23 to 98+68	6.93	8.32	0.50	10.0 11.0 12.0

North Santa Monica Boulevard Westbound Lane 2

Limits	FWD_{80th}	TD_{80th}	'T'	T.I.
00+00 to 06+32	9.12	10.94	0.50	10.0 11.0 12.0
06+32 to 28+98	15.57	18.68	0.50	10.0 11.0 12.0
28+98 to 46+67	28.24	33.88	0.50	10.0 11.0 12.0
46+67 to 59+61	8.20	9.84	0.50	10.0 11.0 12.0
59+61 to 75+09	25.43	30.52	0.50	10.0 11.0 12.0
75+09 to 99+83	7.22	8.66	0.50	10.0 11.0 12.0

North Santa Monica Boulevard Eastbound Lane 2

Limits	FWD_{80th}	TD_{80th}	'T'	T.I.
00+00 to 08+13	15.64	18.77	0.50	10.0 11.0 12.0
08+13 to 52+56	8.22	9.86	0.50	10.0 11.0 12.0
52+56 to 64+75	18.13	21.76	0.50	10.0 11.0 12.0
64+75 to 78+29	6.98	8.38	0.50	10.0 11.0 12.0
78+29 to 86+05	12.78	15.34	0.50	10.0 11.0 12.0
86+05 to 93+17	5.31	6.37	0.50	10.0 11.0 12.0
93+17 to 98+98	23.55	28.26	0.50	10.0 11.0 12.0

APPENDIX B

FWD DEFLECTION DATA

LABELLE • MARVIN INC
PAVEMENT ENGINEERING, DESIGN, INSPECTION & TESTING

North Santa Monica Boulevard

Location: Beverly Hills | Doheny Drive to Moreno Drive | Date: 2013-10-05 20:28:56 | Project: 38928

North Santa Monica Boulevard Westbound Lane 1

00+00
North Santa Monica Boulevard Westbound Lane 1
Notes: Begin Testing North Santa Monica Boulevard; North Santa Monica Boulevard Westbound Lane 1; CL of Doheny Drive
Pvt Temp: 0° F
GPS: 0.00000° Lat, 0.00000° Lon
Limit ☐ NIS ☐

01+15
North Santa Monica Boulevard Westbound Lane 1
Notes: Change in Pavement
Pvt Temp: 0° F
GPS: 0.00000° Lat, 0.00000° Lon
Limit ☐ NIS ☐

01+42
North Santa Monica Boulevard Westbound Lane 1
Notes: CL of Oakhurst Drive
Pvt Temp: 0° F
GPS: 0.00000° Lat, 0.00000° Lon
Limit ☐ NIS ☐

02+01 (test 1)
North Santa Monica Boulevard Westbound Lane 1
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.33333
Pvt Temp: 71.4° F
GPS: 34.08080° Lat, -118.39030° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.69	4.32	3.92	3.72	3.49	3.24	2.68	2.16	12.03	3.76	4.02
8.74	4.33	3.89	3.75	3.49	3.24	2.68	2.18	7.92	3.91	4.05
8.64	4.35	3.89	3.76	3.47	3.21	2.69	2.17	27.01	3.73	4.01

04+41 (test 2)
North Santa Monica Boulevard Westbound Lane 1
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.32
Pvt Temp: 73.2° F
GPS: 34.08042° Lat, -118.39094° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	8.39	7.04	6.37	5.45	4.62	3.31	2.24	1.59	7.34	7.95
9.08	8.36	7.02	6.36	5.47	4.62	3.28	2.26	1.6	7.3	7.89
9.06	8.21	6.9	6.29	5.39	4.58	3.24	2.25	1.58	7.21	7.75

06+29 (test 3)
North Santa Monica Boulevard Westbound Lane 1
Notes: CL of Sierra Drive
Avg FWD1: 7.87333
Pvt Temp: 58.2° F
GPS: 34.08010° Lat, -118.39143° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	7.81	6.75	6.19	5.46	4.68	3.27	2.35	1.71	7.86	8
9.01	7.89	6.79	6.26	5.52	4.72	3.28	2.36	1.73	7.95	8.06
8.98	7.92	6.84	6.27	5.52	4.75	3.27	2.33	1.73	7.92	8.08

08+00 (test 4)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 58.6° F

Avg FWD1: 4.11

GPS: 34.07981° Lat, -118.39186° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.2	4.15	3.49	3.3	3.04	2.75	2.28	6.46	1.41	3.42	3.53
9.16	4.12	3.46	3.32	3.05	2.79	2.28	4.35	1.39	3.43	3.53
9.08	4.06	3.41	3.26	2.98	2.73	2.21	2.61	1.38	3.35	3.48

10+24 (test 5)

North Santa Monica Boulevard Westbound Lane 1

Notes: CL of Alta Drive Lateral Cracks, Longitudinal Cracks

Pvt Temp: 60.8° F

Avg FWD1: 6.05

GPS: 34.07942° Lat, -118.39243° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	6.11	5.22	4.89	4.44	3.96	3.05	2.27	1.78	5.5	5.61
8.89	6.01	5.12	4.81	4.38	3.92	3.02	2.23	1.73	5.43	5.51
8.96	6.03	5.17	4.84	4.42	3.94	3.03	2.25	1.78	5.39	5.54

12+00 (test 6)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 59.7° F

Avg FWD1: 4.10667

GPS: 34.07911° Lat, -118.39287° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.13	4.16	3.5	3.28	2.97	2.76	2.21	1.81	1.47	3.52	3.63
8.94	4.05	3.41	3.21	2.91	2.68	2.17	1.77	1.4	3.4	3.53
9.01	4.11	3.42	3.27	2.96	2.71	2.16	1.78	1.45	3.48	3.54

14+06 (test 7)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 60.4° F

Avg FWD1: 4.23333

GPS: 34.07876° Lat, -118.39339° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	4.26	3.55	3.4	3.14	2.86	2.36	1.71	1.32	3.57	3.92
9.01	4.22	3.52	3.38	3.13	2.89	2.35	1.71	1.29	3.54	3.87
8.94	4.22	3.58	3.37	3.11	2.89	2.36	1.71	1.32	3.5	3.75

14+46

North Santa Monica Boulevard Westbound Lane 1

Notes: CL of Arden Drive

Pvt Temp: 0° F

GPS: 34.07876° Lat, -118.39339° Lon

Limit ☐ NIS ☐

16+00 (test 8)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 61.5° F

Avg FWD1: 4.64333

GPS: 34.07842° Lat, -118.39388° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	4.63	4.19	3.9	3.58	3.34	2.76	2.15	1.7	4.02	4.05

9.06	4.65	4.23	3.93	3.62	3.33	2.75	2.18	1.72	4.04	4.12
9.06	4.65	4.21	3.91	3.61	3.33	2.74	2.15	1.71	4	4.07

18+00 (test 9)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 70.3° F

Avg FWD1: 5.35333

GPS: 34.07807° Lat, -118.39439° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.16	5.38	4.94	4.78	4.47	4.26	3.65	3.09	2.6	4.86	4.93
9.16	5.36	4.95	4.77	4.47	4.23	3.67	3.06	3.16	4.8	4.92
9.01	5.32	4.93	4.72	4.44	4.21	3.62	3	2.5	4.77	4.83

18+68

North Santa Monica Boulevard Westbound Lane 1

Notes: CL of Hillcrest Road

Pvt Temp: 0° F

GPS: 34.07807° Lat, -118.39439° Lon

Limit ☐ NIS ☐

20+04 (test 10)

North Santa Monica Boulevard Westbound Lane 1

Notes: LTP Alligator Cracks

Pvt Temp: 66.3° F

Avg FWD1: 4.74333

GPS: 34.07772° Lat, -118.39491° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	4.74	4.24	4.11	3.84	3.63	3.15	2.65	2.19	4.22	4.2
8.91	4.72	4.2	4.05	3.8	3.6	3.1	2.63	2.18	4.1	4.15
8.98	4.77	4.23	4.1	3.84	3.64	3.15	2.62	2.18	4.2	4.23

22+07 (test 11)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 72.5° F

Avg FWD1: 4.55333

GPS: 34.07737° Lat, -118.39543° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.06	4.59	4.16	4.03	3.77	3.59	3.05	2.54	2.07	4.01	4.1
9.03	4.58	4.15	4.03	3.76	3.57	3.06	2.56	2.09	4.07	4.1
8.91	4.49	4.08	3.96	3.7	3.53	3	2.47	2.04	3.97	4.05

22+87

North Santa Monica Boulevard Westbound Lane 1

Notes: CL of Palm Drive

Pvt Temp: 0° F

GPS: 34.07737° Lat, -118.39543° Lon

Limit ☐ NIS ☐

24+04 (test 12)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 75.8° F

Avg FWD1: 4.86

GPS: 34.07704° Lat, -118.39595° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	4.84	4.41	4.26	3.97	3.75	3.25	2.73	2.23	4.33	4.43
8.98	4.89	4.45	4.31	4.01	3.78	3.3	2.76	2.26	4.35	4.47
8.96	4.85	4.41	4.25	4	3.77	3.26	2.7	2.23	4.28	4.43

26+10 (test 13)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 76.5° F

Avg FWD1: 5.06333

GPS: 34.07668° Lat, -118.39646° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	5.09	4.5	4.24	3.84	3.68	3.07	2.56	2.13	4.51	4.72
8.89	5.06	4.47	4.24	3.82	3.65	3.04	2.54	2.08	4.57	4.61
8.89	5.04	4.45	4.21	3.82	3.62	3.04	2.55	2.1	4.54	4.64

26+87

Notes: CL of Maple Drive

North Santa Monica Boulevard Westbound Lane 1

Pvt Temp: 0° F

GPS: 34.07668° Lat, -118.39646° Lon

Limit ☐ NIS ☐

28+03 (test 14)

Notes: Alligator Cracks

Avg FWD1: 4.55667

North Santa Monica Boulevard Westbound Lane 1

Pvt Temp: 63° F

GPS: 34.07634° Lat, -118.39695° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	4.55	3.85	3.67	3.37	3.12	2.54	2.11	1.71	3.75	3.93
8.98	4.56	3.83	3.65	3.35	3.15	2.56	2.09	1.71	3.85	3.93
9.01	4.56	3.87	3.68	3.38	3.17	2.56	2.1	1.73	3.84	3.97

30+02 (test 15)

Notes: Lateral Cracks, Longitudinal Cracks

Avg FWD1: 4.42667

North Santa Monica Boulevard Westbound Lane 1

Pvt Temp: 62.6° F

GPS: 34.07599° Lat, -118.39745° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.94	4.43	3.94	3.8	3.5	3.33	2.85	2.42	2.01	3.89	3.95
8.98	4.41	3.94	3.8	3.52	3.32	2.88	2.42	1.98	3.87	3.95
8.98	4.44	4	3.83	3.53	3.34	2.9	2.45	2.04	3.79	3.92

30+84

Notes: CL of Elm Drive

North Santa Monica Boulevard Westbound Lane 1

Pvt Temp: 0° F

GPS: 34.07599° Lat, -118.39745° Lon

Limit ☐ NIS ☐

32+05 (test 16)

Notes: Lateral Cracks, Longitudinal Cracks

Avg FWD1: 5.99

North Santa Monica Boulevard Westbound Lane 1

Pvt Temp: 76.9° F

GPS: 34.07564° Lat, -118.39797° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.06	6	5.25	5.08	4.76	4.49	3.71	3.07	2.41	5.14	5.3
9.03	5.99	5.26	5.07	4.74	4.46	3.75	3.09	2.42	5.16	5.27
8.98	5.98	5.25	5.09	4.75	4.49	3.75	3.05	2.39	5.13	5.29

34+07 (test 17)

Notes: Lateral Cracks, Longitudinal Cracks

Avg FWD1: 4.52333

North Santa Monica Boulevard Westbound Lane 1

Pvt Temp: 78.7° F

GPS: 34.07527° Lat, -118.39848° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	4.54	3.95	3.79	3.54	3.33	2.8	2.29	1.93	3.97	4.01
9.01	4.51	3.95	3.79	3.5	3.32	2.8	2.3	1.95	3.96	4.03
9.06	4.52	3.95	3.78	3.52	3.29	2.76	2.28	1.91	3.92	4.01

34+79
Notes: CL of Foothill Road

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07527° Lat, -118.39848° Lon
Limit ☐ NIS ☐

36+05 (test 18)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 9.28

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 60.8° F
GPS: 34.07494° Lat, -118.39898° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	9.28	7.96	7.46	6.69	6.07	4.79	3.7	2.9	8.26	8.91
8.91	9.28	7.96	7.47	6.67	6.07	4.75	3.69	2.92	8.26	8.91
8.96	9.28	7.94	7.45	6.69	6.03	4.76	3.69	2.9	8.22	8.89

38+03 (test 19)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.35

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 77.6° F
GPS: 34.07460° Lat, -118.39949° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.18	6.39	5.49	5.25	4.87	4.51	3.78	3.07	2.4	5.87	5.92
9.06	6.32	5.44	5.22	4.79	4.47	3.76	3.05	2.38	5.82	5.9
9.13	6.34	5.47	5.22	4.8	4.5	3.79	3.08	2.45	5.85	5.92

38+61
Notes: Lateral Trench

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07460° Lat, -118.39949° Lon
Limit ☐ NIS ☐

38+76
Notes: CL of Alpine Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07460° Lat, -118.39949° Lon
Limit ☐ NIS ☐

39+00
Notes: Lateral Trench

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07460° Lat, -118.39949° Lon
Limit ☐ NIS ☐

40+08 (test 20)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.84

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 74.7° F
GPS: 34.07424° Lat, -118.40000° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	4.83	4.15	3.98	3.67	3.41	2.95	2.44	2	4.17	4.28
9.03	4.87	4.2	4.02	3.74	3.46	3.01	2.45	2.01	4.23	4.32
9.06	4.82	4.15	3.97	3.7	3.42	2.93	2.44	1.99	4.12	4.28

North Santa Monica Boulevard Westbound Lane 1

40+53
Notes: LTP

Pvt Temp: 0° F
GPS: 34.07424° Lat, -118.40000° Lon
Limit ☐ NIS ☐

42+06 (test 21)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.94333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 75.8° F
GPS: 34.07390° Lat, -118.40051° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	6.87	6.39	6.2	5.79	5.51	4.74	3.78	3.01	6.27	6.34
8.98	7.01	6.51	6.32	5.91	5.63	4.82	3.88	3.07	6.37	6.49
9.01	6.95	6.45	6.25	5.87	5.58	4.77	3.81	3.05	6.32	6.46

42+67
Notes: CL of Rexford Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07390° Lat, -118.40051° Lon
Limit ☐ NIS ☐

44+01 (test 22)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.85

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 79.1° F
GPS: 34.07356° Lat, -118.40100° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.11	4.81	4.36	4.2	3.93	3.77	3.22	2.62	2.2	4.29	4.38
9.06	4.86	4.42	4.24	3.97	3.75	3.24	2.65	2.17	4.31	4.42
9.11	4.88	4.42	4.27	3.98	3.74	3.24	2.66	2.21	4.33	4.4

46+06 (test 23)
Notes: Alligator Cracks
Avg FWD1: 7.22667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 76.2° F
GPS: 34.07320° Lat, -118.40152° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.96	7.23	6.49	6.28	5.84	5.52	4.56	3.66	2.87	6.45	6.55
8.89	7.19	6.45	6.21	5.8	5.47	4.55	3.65	2.79	6.41	6.48
9.08	7.26	6.5	6.34	5.88	5.5	4.61	3.7	2.85	6.46	6.53

46+61
Notes: CL of Crescent Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07320° Lat, -118.40152° Lon
Limit ☐ NIS ☐

47+99 (test 24)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.51333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 76.9° F
GPS: 34.07287° Lat, -118.40201° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	5.55	5.04	4.87	4.54	4.3	3.62	2.98	2.44	4.95	5.05
8.98	5.49	5.02	4.85	4.48	4.26	3.64	3.01	2.45	4.95	5.03
8.91	5.5	5	4.85	4.51	4.27	3.62	3.04	2.48	4.93	5.05

48+89
Notes: LTP

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07287° Lat, -118.40201° Lon
Limit ☐ NIS ☐

50+02 (test 25)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.64

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 79.8° F
GPS: 34.07251° Lat, -118.40252° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.03	5.62	5.06	4.88	4.54	4.24	3.63	3.04	2.56	4.98	5.07
8.98	5.64	5.06	4.86	4.52	4.25	3.6	3	2.57	4.99	5.07
9.03	5.66	5.06	4.88	4.52	4.27	3.63	3.02	2.58	5.01	5.06

50+65
Notes: CL of Canon Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07251° Lat, -118.40252° Lon
Limit ☐ NIS ☐

52+06 (test 26)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.29

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 64.8° F
GPS: 34.07216° Lat, -118.40304° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	4.29	3.81	3.67	3.4	3.25	2.79	2.39	1.98	3.78	3.82
8.96	4.3	3.85	3.7	3.45	3.31	2.81	2.4	2	3.84	3.88
8.86	4.28	3.8	3.66	3.41	3.27	2.81	2.39	1.97	3.77	3.8

52+81
Notes: LTP

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07216° Lat, -118.40304° Lon
Limit ☐ NIS ☐

54+02 (test 27)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.91

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 79.1° F
GPS: 34.07182° Lat, -118.40353° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	3.87	3.58	3.46	3.24	3.13	2.81	2.41	2.07	3.48	3.61
8.94	3.93	3.62	3.51	3.27	3.16	2.86	2.47	2.09	3.55	3.65
8.91	3.93	3.58	3.48	3.28	3.16	2.82	2.46	2.09	3.45	3.59

54+66
Notes: CL of Beverly Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07182° Lat, -118.40353° Lon
Limit ☐ NIS ☐

56+02 (test 28)

North Santa Monica Boulevard Westbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.00667

Pvt Temp: 65.9° F
GPS: 34.07147° Lat, -118.40403° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.06	4.04	3.62	3.49	3.25	3.13	2.65	2.25	1.91	3.63	3.71
8.96	3.98	3.6	3.44	3.22	3.04	2.62	2.23	1.91	3.55	3.66
8.96	4	3.57	3.43	3.21	3.06	2.62	2.23	1.91	3.59	3.65

57+00
Notes: LTP

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07147° Lat, -118.40403° Lon
Limit ☐ NIS ☐

58+03 (test 29)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.5

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 79.5° F
GPS: 34.07111° Lat, -118.40454° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	4.54	3.69	3.52	3.21	2.96	2.5	1.96	1.58	3.52	3.73
8.98	4.51	3.7	3.51	3.22	2.99	2.48	1.94	1.56	3.62	3.73
8.86	4.45	3.65	3.46	3.14	2.93	2.47	1.94	1.54	3.58	3.68

58+78
Notes: CL of Rodeo Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07111° Lat, -118.40454° Lon
Limit ☐ NIS ☐

60+07 (test 30)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.31667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 75.1° F
GPS: 34.07076° Lat, -118.40506° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	6.38	5.1	4.8	4.24	3.9	2.97	2.52	2.06	5.52	5.8
8.81	6.29	5.04	4.7	4.1	3.8	3	2.48	1.99	5.42	5.71
8.79	6.28	5.06	4.7	4.42	3.85	2.99	2.5	2.02	5.46	5.73

62+01 (test 31)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.19667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 65.9° F
GPS: 34.07042° Lat, -118.40555° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	4.19	3.78	3.64	3.37	3.18	2.75	2.25	1.87	3.83	3.86
8.94	4.17	3.77	3.6	3.36	3.2	2.7	2.3	1.83	3.83	3.84
9.06	4.23	3.8	3.67	3.4	3.22	2.77	2.33	1.86	3.88	3.88

62+80
Notes: CL of Camden Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07042° Lat, -118.40555° Lon
Limit ☐ NIS ☐

64+14 (test 32)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.71333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 77.3° F
GPS: 34.07005° Lat, -118.40609° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.08	4.73	4.37	4.23	3.97	3.75	3.28	2.8	2.33	4.37	4.37
9.06	4.73	4.37	4.22	3.97	3.79	3.34	2.82	2.32	4.36	4.4
8.98	4.68	4.31	4.15	3.93	3.73	3.32	2.8	2.29	4.31	4.35

64+50
Notes: LTP

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.07005° Lat, -118.40609° Lon
Limit ☐ NIS ☐

65+70 (test 33)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.16667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 77.3° F
GPS: 34.06978° Lat, -118.40648° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	6.15	5.38	5.15	4.71	4.4	3.69	3.01	2.47	5.75	5.85
8.86	6.18	5.41	5.15	4.72	4.4	3.68	3.04	2.49	5.83	5.91
8.91	6.17	5.4	5.16	4.72	4.4	3.68	3.04	2.48	5.84	5.88

66+66
Notes: CL of Bedford Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.06978° Lat, -118.40648° Lon
Limit ☐ NIS ☐

68+02 (test 34)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.39667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 74.7° F
GPS: 34.06938° Lat, -118.40707° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	4.37	4.02	3.85	3.62	3.4	2.97	2.47	2.09	4.01	4.09
9.01	4.45	4.08	3.95	3.66	3.51	3.02	2.53	2.11	3.97	4.13
8.91	4.37	4.03	3.88	3.62	3.4	2.94	2.5	2.12	4.01	4.13

70+01 (test 35)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.11333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 67.7° F
GPS: 34.06903° Lat, -118.40757° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.94	5.1	4.76	4.64	4.41	4.25	3.81	3.06	2.47	4.54	4.62
8.91	5.1	4.76	4.59	4.39	4.24	3.81	3.06	2.48	4.54	4.63
9.01	5.14	4.8	4.69	4.4	4.25	3.81	3.1	2.49	4.49	4.66

70+75
Notes: CL of Roxbury Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.06903° Lat, -118.40757° Lon
Limit ☐ NIS ☐

72+03 (test 36)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.58

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 66.7° F
GPS: 34.06868° Lat, -118.40808° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	5.61	5.14	4.99	4.74	4.56	4.08	3.43	2.88	4.92	5.09
8.86	5.56	5.15	4.97	4.69	4.55	4.08	3.46	2.86	4.88	5.1
8.91	5.57	5.12	5.01	4.72	4.56	4.08	3.47	2.84	4.88	5.07

73+86 (test 37)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.96333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 79.1° F
GPS: 34.06836° Lat, -118.40855° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	4.95	4.28	4.05	3.79	3.54	2.99	2.38	1.95	4.3	4.39
8.89	4.95	4.3	4.11	3.78	3.57	2.96	2.42	1.96	4.3	4.4
8.81	4.99	4.28	4.08	3.81	3.54	2.94	2.41	1.96	4.28	4.38

74+59
Notes: CL of Linden Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.06836° Lat, -118.40855° Lon
Limit ☐ NIS ☐

76+01 (test 38)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.64333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 82° F
GPS: 34.06798° Lat, -118.40909° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.94	4.68	4.26	4.15	3.93	3.78	3.06	2.49	2.01	4.2	4.18
8.64	4.56	4.14	4.04	3.82	3.65	2.99	2.4	1.95	4.1	4.1
8.98	4.69	4.27	4.15	3.91	3.78	3.07	2.49	2.02	4.16	4.18

78+04 (test 39)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.84333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 76.9° F
GPS: 34.06763° Lat, -118.40961° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	7.85	6.47	5.99	5.26	4.83	3.83	3.12	2.61	6.41	7.05
8.64	7.77	6.42	5.93	5.25	4.77	3.82	3.07	2.56	6.35	6.97
8.84	7.91	6.59	6.05	5.35	4.87	3.91	3.17	2.75	6.45	7.04

78+55
Notes: CL of Walden Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.06763° Lat, -118.40961° Lon
Limit ☐ NIS ☐

79+57 (test 40)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.44

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 69.2° F
GPS: 34.06736° Lat, -118.41000° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10

8.86	4.41	3.71	3.44	3.13	2.87	2.5	2.09	1.88	3.75	4.02
8.91	4.46	3.73	3.49	3.16	2.92	2.52	2.12	1.9	3.71	4
8.96	4.45	3.73	3.49	3.15	2.92	2.5	2.14	1.93	3.71	3.99

81+20
Notes: CL of Wilshire Boulevard

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.06736° Lat, -118.41000° Lon
Limit ☐ NIS ☐

82+52 (test 41)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 10.1567

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 84.6° F
GPS: 34.06684° Lat, -118.41074° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	10.35	8.43	7.61	6.53	5.7	4.79	3.24	2.55	8.83	9.79
8.74	10.04	8.17	7.43	6.36	5.56	4.19	3.2	2.55	8.65	9.46
8.74	10.08	8.19	7.44	6.39	5.59	4.2	3.18	2.49	8.59	9.45

84+11 (test 42)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.23333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 90.5° F
GPS: 34.06657° Lat, -118.41114° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	7.3	5.59	5.07	4.45	3.99	3.14	2.5	2.13	5.34	5.93
8.84	7.17	5.53	5.01	4.4	4.29	3.08	2.48	2.28	5.25	5.81
8.91	7.23	5.57	5.04	4.43	3.93	3.13	2.49	2.11	5.32	5.86

86+06 (test 43)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.03667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 82.8° F
GPS: 34.06623° Lat, -118.41164° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	7.07	5.18	4.63	3.95	3.45	2.69	2.1	1.67	5.3	5.73
8.72	7.02	5.18	4.64	3.99	3.45	2.7	2.12	1.69	5.28	5.74
8.79	7.02	5.2	4.67	4.02	3.46	2.69	2.12	1.67	5.32	5.72

88+07 (test 44)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.80333

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 93.4° F
GPS: 34.06589° Lat, -118.41216° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	6.88	5.94	5.51	4.98	4.63	3.93	3.08	2.34	5.87	6.24
8.91	6.82	5.87	5.47	4.95	4.56	3.93	3.04	2.32	5.85	6.2
8.84	6.71	5.79	5.38	4.87	4.52	3.85	2.99	2.29	5.73	6.08

90+06 (test 45)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.85

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 86.4° F
GPS: 34.06553° Lat, -118.41265° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	6.88	5.41	4.8	4.04	3.58	2.79	2.37	1.87	5.2	5.96
8.91	6.86	5.4	4.83	4.06	3.58	2.83	2.35	1.93	5.17	5.89
8.89	6.81	5.42	4.84	4.05	3.58	2.8	2.33	1.88	5.14	5.86

92+00 (test 46)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.36667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 86.4° F
GPS: 34.06520° Lat, -118.41315° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.72	7.47	6.03	5.57	4.94	4.47	3.5	2.75	2.32	6.43	6.88
8.62	7.31	5.92	5.48	4.88	4.43	3.47	2.74	2.64	6.34	6.79
8.74	7.32	5.94	5.5	4.91	4.45	3.51	2.77	2.76	6.36	6.74

92+48
Notes: CL of Merv Griffin Way

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.06520° Lat, -118.41315° Lon
Limit ☐ NIS ☐

94+03 (test 47)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.98

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 90.8° F
GPS: 34.06484° Lat, -118.41366° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	7.05	4.79	4.26	3.57	3.11	2.76	2.45	2.1	5.06	5.95
8.91	6.98	4.76	4.22	3.56	3.1	2.82	2.42	1.98	5.05	5.88
8.74	6.91	4.72	4.22	3.54	3.06	2.76	2.43	1.99	5.02	5.81

96+04 (test 48)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.56667

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 86.8° F
GPS: 34.06449° Lat, -118.41417° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	4.54	3.34	3.08	2.71	2.4	1.92	1.52	1.25	3.47	3.8
8.86	4.62	3.39	3.11	2.75	2.46	1.95	1.55	1.29	3.47	3.85
8.86	4.54	3.35	3.07	2.69	2.43	1.94	1.54	1.27	3.46	3.77

98+12 (test 49)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.34

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 82.4° F
GPS: 34.06412° Lat, -118.41468° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	5.38	4.56	4.32	3.98	3.62	2.96	2.34	1.85	4.7	4.92
8.81	5.34	4.56	4.3	3.93	3.62	2.94	2.35	1.85	4.68	4.92
8.72	5.3	4.5	4.28	3.91	3.59	2.93	2.33	1.83	4.62	4.9

99+84
Notes: CL of Moreno Drive

North Santa Monica Boulevard Westbound Lane 1
Pvt Temp: 0° F
GPS: 34.06412° Lat, -118.41468° Lon
Limit ☐ NIS ☐

North Santa Monica Boulevard Eastbound Lane 1

00+00
Notes: North Santa Monica Boulevard Eastbound Lane 1; CL of Moreno

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F

Drive

GPS: 34.06412° Lat, -118.41468° Lon
Limit ☐ NIS ☐

01+07
Notes: Median, Painted

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06412° Lat, -118.41468° Lon
Limit ☐ NIS ☐

01+07 (test 50)
Notes:
Avg FWD1: 4.46333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 75.8° F
GPS: 34.06409° Lat, -118.41459° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	4.51	3.92	3.76	3.53	3.3	2.76	1.75	1.42	3.95	4.31
8.64	4.43	3.83	3.71	3.43	3.26	2.7	1.73	1.4	3.95	4.21
8.67	4.45	3.87	3.71	3.47	3.28	2.71	1.72	1.36	3.81	4.21

02+18
Notes: Change in Pavement, City Limit

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06409° Lat, -118.41459° Lon
Limit ☐ NIS ☐

03+06 (test 51)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.52667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 84.6° F
GPS: 34.06446° Lat, -118.41410° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	3.54	3.07	2.96	2.75	2.63	2.23	1.87	1.54	3.03	3.15
8.76	3.51	3.06	2.93	2.73	2.6	2.27	1.85	1.56	2.87	3.12
8.89	3.53	3.06	2.94	2.77	2.64	2.24	1.88	1.56	3.03	3.15

04+07
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06446° Lat, -118.41410° Lon
Limit ☐ NIS ☐

05+00 (test 52)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.4

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 88.6° F
GPS: 34.06479° Lat, -118.41361° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	3.41	2.71	2.53	2.31	2.12	1.67	1.29	1.1	2.76	2.89
8.94	3.4	2.71	2.55	2.33	2.16	1.68	1.27	1.12	2.77	2.88
8.96	3.39	2.7	2.52	2.3	2.11	1.65	1.25	1.09	2.77	2.87

06+63
Notes: CL of Merv Griffin Way

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F

GPS: 34.06479° Lat, -118.41361° Lon
Limit ☐ NIS ☐

07+13 (test 53)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.50667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 85° F
GPS: 34.06517° Lat, -118.41307° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.96	3.52	2.96	2.82	2.62	2.47	2.1	1.78	1.6	3.14	3.1
8.91	3.5	2.96	2.82	2.59	2.46	2.08	1.76	1.57	3.1	3.09
8.86	3.5	2.94	2.81	2.59	2.43	2.06	1.75	1.6	3.05	3.07

09+06 (test 54)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.54333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 69.9° F
GPS: 34.06550° Lat, -118.41258° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	3.53	2.93	2.8	2.62	2.54	2.31	1.95	1.72	2.94	2.98
8.96	3.54	2.94	2.84	2.64	2.54	2.29	1.94	1.7	2.91	2.92
8.89	3.56	3	2.86	2.65	2.6	2.35	2	1.81	2.93	2.98

09+89
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06550° Lat, -118.41258° Lon
Limit ☐ NIS ☐

11+05 (test 55)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.45

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 98.5° F
GPS: 34.06585° Lat, -118.41208° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	4.51	4.08	4	3.69	3.53	3.05	2.63	2.24	3.85	3.99
8.89	4.43	4.03	3.91	3.67	3.49	2.99	2.57	2.2	3.82	3.88
8.79	4.41	3.99	3.87	3.64	3.49	2.98	2.56	2.2	3.77	3.86

13+05 (test 56)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.23

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 96.7° F
GPS: 34.06621° Lat, -118.41159° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	5.2	4.69	4.55	4.19	3.9	3.13	2.4	1.99	4.76	4.75
8.94	5.27	4.8	4.59	4.25	3.95	3.16	2.45	2	4.83	4.82
8.81	5.22	4.72	4.53	4.18	3.9	3.08	2.44	1.98	4.72	4.77

14+98 (test 57)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.61667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 92.3° F
GPS: 34.06655° Lat, -118.41111° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	5.64	4.54	4.16	3.65	3.18	2.47	1.92	1.59	4.7	5.07
8.74	5.61	4.52	4.13	3.62	3.22	2.47	1.96	1.6	4.64	5.02
8.72	5.6	4.53	4.16	3.61	3.2	2.47	1.94	1.61	4.66	4.99

17+05 (test 58)

North Santa Monica Boulevard Eastbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 91.6° F

Avg FWD1: 8.61333

GPS: 34.06692° Lat, -118.41059° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.69	8.67	7.45	6.98	6.25	5.57	3.82	3.51	2.79	7.7	8.17
8.52	8.55	7.35	6.84	6.12	5.55	4.35	3.48	2.8	7.59	8.03
8.52	8.62	7.44	6.89	6.17	5.56	4.48	3.52	2.8	7.51	8.08

18+09

North Santa Monica Boulevard Eastbound Lane 1

Notes: CL of Wilshire Boulevard

Pvt Temp: 0° F

GPS: 34.06692° Lat, -118.41059° Lon

Limit ☐ NIS ☐

19+55 (test 59)

North Santa Monica Boulevard Eastbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 89.4° F

Avg FWD1: 4.83667

GPS: 34.06736° Lat, -118.40996° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	4.87	4.16	3.91	3.6	3.37	3.08	2.44	2.16	4.15	4.41
8.84	4.81	4.09	3.87	3.52	3.31	2.95	2.36	2.04	4.08	4.35
8.81	4.83	4.12	3.88	3.54	3.3	3.01	2.37	2.1	4.11	4.36

20+58

North Santa Monica Boulevard Eastbound Lane 1

Notes: CL of Walden Drive

Pvt Temp: 0° F

GPS: 34.06736° Lat, -118.40996° Lon

Limit ☐ NIS ☐

21+13 (test 60)

North Santa Monica Boulevard Eastbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 96.3° F

Avg FWD1: 5.77333

GPS: 34.06763° Lat, -118.40955° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	5.79	4.81	4.55	4.15	3.83	3.24	2.64	2.19	4.9	5.16
8.74	5.75	4.78	4.49	4.12	3.76	3.21	2.6	2.13	4.83	5.08
8.69	5.78	4.79	4.54	4.14	3.81	3.25	2.62	2.16	4.89	5.09

23+07 (test 61)

North Santa Monica Boulevard Eastbound Lane 1

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 97.8° F

Avg FWD1: 6.96333

GPS: 34.06796° Lat, -118.40905° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	6.96	6.1	5.65	5.1	4.75	4.09	3.31	2.86	6.42	6.56
8.76	6.99	6.1	5.69	5.15	4.75	4.1	3.29	2.88	6.43	6.54
8.72	6.94	6.07	5.65	5.07	4.74	4.06	3.3	2.81	6.39	6.5

23+42

North Santa Monica Boulevard Eastbound Lane 1

Notes: LTP

Pvt Temp: 0° F

GPS: 34.06796° Lat, -118.40905° Lon

Limit ☐ NIS ☐

24+52
Notes: CL of Linden Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06796° Lat, -118.40905° Lon
Limit ☐ NIS ☐

25+02 (test 62)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.49

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 70.7° F
GPS: 34.06829° Lat, -118.40856° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	6.57	4.8	4.3	3.74	3.44	2.7	2.13	1.71	4.97	5.41
8.81	6.47	4.76	4.22	3.7	3.37	2.66	2.09	1.7	4.9	5.37
8.81	6.43	4.71	4.2	3.66	3.34	2.65	2.06	1.7	4.85	5.3

26+19
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06829° Lat, -118.40856° Lon
Limit ☐ NIS ☐

27+02 (test 63)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.72

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 68.1° F
GPS: 34.06864° Lat, -118.40805° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	8.65	8.05	7.86	7.37	7.06	6.14	5.22	4.33	8.09	8.18
8.79	8.74	8.14	7.92	7.46	7.18	6.28	5.32	4.51	8.07	8.19
8.72	8.77	8.19	7.99	7.51	7.2	6.3	5.35	4.51	8.14	8.23

28+38
Notes: CL of Roxbury Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06864° Lat, -118.40805° Lon
Limit ☐ NIS ☐

29+20 (test 64)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.84333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 68.8° F
GPS: 34.06902° Lat, -118.40750° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	8.92	8	7.69	7.16	6.87	5.95	4.93	3.91	7.69	7.99
8.81	8.79	7.91	7.56	7.12	6.78	5.89	4.86	3.85	7.58	7.89
8.74	8.82	7.92	7.64	7.15	6.86	5.96	4.91	3.89	7.61	7.88

30+83
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06902° Lat, -118.40750° Lon
Limit ☐ NIS ☐

31+15 (test 65)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.57333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 72.5° F
GPS: 34.06936° Lat, -118.40700° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	6.56	5.84	5.57	5.12	4.77	3.96	3.23	2.61	5.93	6.12
8.72	6.55	5.81	5.55	5.15	4.78	3.97	3.21	2.65	5.9	6.11
8.86	6.61	5.84	5.58	5.16	4.82	3.99	3.23	2.7	5.93	6.18

32+50
Notes: CL of Bedford Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.06936° Lat, -118.40700° Lon
Limit ☐ NIS ☐

33+32 (test 66)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.28667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 69.6° F
GPS: 34.06974° Lat, -118.40645° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.96	8.42	7.31	6.69	5.83	5.44	4.46	3.48	2.67	7.8	7.96
8.86	8.27	7.18	6.6	5.72	5.35	4.39	3.4	2.65	7.64	7.76
8.74	8.17	7.14	6.51	5.69	5.25	4.33	3.36	2.6	7.61	7.71

35+03 (test 67)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.26

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 69.9° F
GPS: 34.07003° Lat, -118.40601° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	5.29	4.69	4.49	4.2	3.94	3.32	2.71	2.4	4.53	4.63
8.84	5.26	4.66	4.48	4.18	3.9	3.26	2.7	2.31	4.49	4.59
8.81	5.23	4.62	4.46	4.15	3.92	3.27	2.69	2.4	4.48	4.59

35+40
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07003° Lat, -118.40601° Lon
Limit ☐ NIS ☐

36+30
Notes: CL of Camden Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07003° Lat, -118.40601° Lon
Limit ☐ NIS ☐

37+25 (test 68)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.31667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 66.7° F
GPS: 34.07041° Lat, -118.40545° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	5.4	4.7	4.56	4.27	3.99	3.34	2.73	2.19	4.58	4.7
8.76	5.26	4.65	4.48	4.15	3.91	3.31	2.68	2.12	4.48	4.59
8.72	5.29	4.64	4.47	4.18	3.89	3.26	2.68	2.13	4.51	4.62

38+53
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07041° Lat, -118.40545° Lon
Limit ☐ NIS ☐

39+08 (test 69)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.01667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 68.5° F
GPS: 34.07073° Lat, -118.40498° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	5.03	4.42	4.25	3.95	3.73	3.22	2.55	2.05	4.25	4.4
8.89	4.99	4.39	4.23	3.91	3.72	3.07	2.52	2.06	4.23	4.34
8.94	5.03	4.41	4.27	3.97	3.74	3.14	2.52	2.02	4.26	4.39

40+33
Notes: CL of Rodeo Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07073° Lat, -118.40498° Lon
Limit ☐ NIS ☐

41+25 (test 70)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.49

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 96.7° F
GPS: 34.07111° Lat, -118.40443° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	6.49	5.68	5.41	5.02	4.69	3.85	3.06	2.32	5.6	5.75
8.76	6.49	5.68	5.42	4.99	4.67	3.8	3	2.27	5.61	5.72
8.84	6.49	5.62	5.36	4.95	4.6	3.79	2.96	2.26	5.54	5.67

43+13 (test 71)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.07667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 69.6° F
GPS: 34.07143° Lat, -118.40396° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	7.07	6.14	5.87	5.4	4.9	3.93	3.04	2.31	6.27	6.37
8.76	7.1	6.2	5.92	5.44	4.94	4	3.08	2.39	6.29	6.41
8.76	7.06	6.15	5.86	5.38	4.91	3.95	3.06	2.31	6.21	6.32

44+43
Notes: CL of Beverly Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07143° Lat, -118.40396° Lon
Limit ☐ NIS ☐

45+27 (test 72)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.97667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 90.1° F
GPS: 34.07181° Lat, -118.40341° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	8.03	7.29	7.05	6.62	6.14	4.75	4.38	3.63	7.38	7.46
8.67	8.03	7.32	7.09	6.65	6.21	5.33	4.45	6.89	7.23	7.41
8.72	7.87	7.13	6.92	6.51	6.03	5.15	4.32	3.55	7.23	7.27

46+63
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07181° Lat, -118.40341° Lon
Limit ☐ NIS ☐

47+07 (test 73)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.89333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 76.5° F
GPS: 34.07212° Lat, -118.40296° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	5.97	5.25	5.1	4.76	4.46	3.82	3.09	2.97	5.18	5.37
8.74	5.87	5.22	5.01	4.69	4.41	3.77	3.08	2.43	5.1	5.28
8.74	5.84	5.14	4.99	4.66	4.37	3.74	3.05	2.44	5.17	5.27

48+15
Notes: Begin Patch

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07212° Lat, -118.40296° Lon
Limit ☐ NIS ☐

48+41
Notes: CL of Canon Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07212° Lat, -118.40296° Lon
Limit ☐ NIS ☐

49+31 (test 74)
Notes: On Patch
Avg FWD1: 5.61333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 102.5° F
GPS: 34.07251° Lat, -118.40239° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	5.6	5	4.8	4.5	4.27	3.67	3.02	2.49	4.97	5.07
8.69	5.62	4.97	4.79	4.49	4.22	3.66	3	2.47	4.97	4.99
8.86	5.62	4.97	4.81	4.51	4.27	3.65	3.02	2.49	4.98	5.04

50+80
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07251° Lat, -118.40239° Lon
Limit ☐ NIS ☐

51+04 (test 75)
Notes: On Patch
Avg FWD1: 5.87

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 103.6° F
GPS: 34.07281° Lat, -118.40195° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	5.9	4.92	4.77	4.49	4.26	3.64	3.07	2.51	4.79	4.76
8.74	5.86	4.89	4.74	4.45	4.23	3.59	2.99	2.48	4.72	4.73
8.79	5.85	4.9	4.75	4.45	4.24	3.62	3.04	2.48	4.75	4.75

52+14
Notes: End Patch

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07281° Lat, -118.40195° Lon
Limit ☐ NIS ☐

52+49
Notes: CL of Crescent Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07281° Lat, -118.40195° Lon
Limit ☐ NIS ☐

53+30 (test 76)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.49

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 93° F
GPS: 34.07320° Lat, -118.40138° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	5.48	4.46	4.29	3.99	3.82	3.27	2.62	2.15	4.43	4.58
8.79	5.52	4.46	4.29	4.04	3.81	3.28	2.64	2.12	4.47	4.53
8.76	5.47	4.41	4.25	3.96	3.78	3.25	2.63	2.08	4.41	4.49

55+01 (test 77)
Notes: LTP Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.08667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 93.8° F
GPS: 34.07350° Lat, -118.40094° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	5.11	4.43	4.23	3.94	3.64	3.14	2.56	2.04	4.36	4.46
8.89	5.06	4.36	4.23	3.92	3.67	3.07	2.54	2.12	4.31	4.45
8.76	5.09	4.38	4.23	3.92	3.67	3.1	2.53	2.04	4.33	4.45

56+33
Notes: CL of Rexford Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07350° Lat, -118.40094° Lon
Limit ☐ NIS ☐

57+36 (test 78)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.06333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 90.8° F
GPS: 34.07390° Lat, -118.40035° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.69	6.15	5.86	5.78	5.65	5.6	5.25	2.31	2.09	5.37	5.52
8.64	6	5.74	5.64	5.51	5.48	5.1	2.19	2.04	5.28	5.41
8.67	6.04	5.69	5.67	5.52	5.52	5.1	2.2	1.98	5.26	5.47

59+05 (test 79)
Notes: LTP Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.36333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 89.4° F
GPS: 34.07420° Lat, -118.39992° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.72	5.34	4.79	4.62	4.3	4.07	3.51	3	2.52	4.76	4.9
8.74	5.38	4.82	4.61	4.32	4.14	3.6	3.07	2.64	4.75	4.89
8.74	5.37	4.8	4.62	4.32	4.13	3.56	3.03	2.53	4.75	4.85

60+36
Notes: CL of Alpine Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07420° Lat, -118.39992° Lon
Limit ☐ NIS ☐

60+46
Notes: Lateral Trench

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07420° Lat, -118.39992° Lon
Limit ☐ NIS ☐

61+07 (test 80)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.67667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 74.7° F
GPS: 34.07455° Lat, -118.39941° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.91	4.69	4.12	4.01	3.7	3.46	2.96	2.38	20.83	4.01	4.2
8.72	4.65	4.09	3.98	3.66	3.44	2.92	2.4	6.55	3.89	4.16
8.81	4.69	4.13	4.02	3.7	3.46	2.95	2.42	8.88	3.99	4.2

63+01 (test 81)
Notes: LTP Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.58667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 63.7° F
GPS: 34.07489° Lat, -118.39892° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.89	5.63	4.71	4.47	4.25	4.03	3.34	2.76	2.11	4.77	4.9
8.64	5.57	4.67	4.41	4.2	3.93	3.29	0.98	2.08	4.69	4.87
8.72	5.56	4.69	4.42	4.19	3.96	3.29	2.66	2.07	4.73	4.85

64+35
Notes: CL of Foothill Road

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07489° Lat, -118.39892° Lon
Limit ☐ NIS ☐

65+22 (test 82)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.90667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 83.9° F
GPS: 34.07528° Lat, -118.39835° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	5.94	4.97	4.65	4.16	3.74	2.94	2.27	3.28	5.2	5.42
8.62	5.88	4.94	4.59	4.1	3.74	2.91	2.24	1.84	5.14	5.42
8.64	5.9	4.94	4.58	4.08	3.72	2.91	2.25	3.12	5.13	5.33

67+01 (test 83)
Notes: LTP Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.9

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 60.8° F
GPS: 34.07558° Lat, -118.39790° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	4.91	4.08	3.91	3.55	3.35	2.71	2.11	19.25	4.05	4.25
8.74	4.94	4.13	3.95	3.58	3.37	2.73	2.14	62.17	3.96	4.27
8.69	4.85	4.05	3.86	3.54	3.27	2.68	2.1	27.3	3.94	4.23

68+27
Notes: CL of Elm Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07558° Lat, -118.39790° Lon
Limit ☐ NIS ☐

69+20 (test 84)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 9.52667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 69.6° F
GPS: 34.07597° Lat, -118.39735° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.69	9.54	8.17	7.73	6.61	6.12	5.67	4.48	3.76	8.04	8.51
8.52	9.45	8.09	7.64	6.58	6.08	5.66	4.39	3.69	8.19	8.46
8.67	9.59	8.23	7.79	6.69	6.21	5.72	4.46	3.77	8.31	8.56

71+01 (test 85)
Notes: LTP Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.29667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 61.9° F
GPS: 34.07630° Lat, -118.39690° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.67	8.39	6.47	5.77	4.06	3.36	2.33	1.64	1.55	6.59	7.51
8.57	8.23	6.37	5.7	4.03	3.34	2.28	1.62	1.6	6.44	7.27
8.72	8.27	6.42	5.75	4.06	3.36	2.31	1.66	1.71	6.45	7.31

72+22
Notes: CL of Maple Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07630° Lat, -118.39690° Lon
Limit ☑ NIS ☐

73+16 (test 86)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 12.0133

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 90.1° F
GPS: 34.07667° Lat, -118.39636° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.47	12.14	9.3	8.19	6.72	5.58	3.64	2.5	1.87	9.88	11.08
8.52	12.1	9.31	8.25	6.75	5.56	3.67	2.53	1.88	9.99	11.12
8.42	11.8	9.08	8.05	6.62	5.43	3.59	2.48	1.84	9.69	10.79

75+03 (test 87)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 16.9133

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 94.5° F
GPS: 34.07700° Lat, -118.39588° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.37	17.16	14.02	12.26	9.8	7.21	4.33	2.63	1.85	13.09	14.98
8.35	16.82	13.75	12.03	9.61	7.1	4.29	2.59	1.82	12.77	14.7
8.35	16.76	13.74	12.02	9.75	7.13	4.29	2.61	1.82	12.74	14.56

76+23
Notes: CL of Beverly Boulevard

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07700° Lat, -118.39588° Lon
Limit ☑ NIS ☐

77+37 (test 88)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.90667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 92.7° F
GPS: 34.07740° Lat, -118.39528° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.59	9.04	6.37	5.53	4.56	3.61	2.25	2.24	1.79	7.05	8.49
8.5	8.85	6.28	5.43	4.51	3.75	2.83	2.25	1.78	6.86	8.27
8.54	8.83	6.26	5.41	4.5	3.79	2.9	2.21	1.78	6.81	8.17

79+03 (test 89)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.66333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 59.3° F
GPS: 34.07768° Lat, -118.39486° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	4.67	4.07	3.89	3.56	3.33	2.77	2.19	1.73	4.01	4.14
8.76	4.64	4.07	3.93	3.6	3.37	2.8	2.17	1.73	4.05	4.12
8.76	4.68	4.06	3.87	3.6	3.33	2.77	2.17	1.68	3.99	4.08

79+71
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07768° Lat, -118.39486° Lon
Limit ☐ NIS ☐

80+43
Notes: CL of Hillcrest Road

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07768° Lat, -118.39486° Lon
Limit ☐ NIS ☐

81+15 (test 90)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.24667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 59.7° F
GPS: 34.07805° Lat, -118.39432° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.72	3.26	2.72	2.56	2.4	2.24	1.65	1.52	1.27	2.73	2.84
8.79	3.26	2.7	2.59	2.36	2.25	1.87	1.51	1.23	2.77	2.78
8.67	3.22	2.65	2.56	2.38	2.23	1.85	1.5	1.25	2.79	2.81

83+22 (test 91)
Notes: LTP Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.36333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 61.5° F
GPS: 34.07841° Lat, -118.39379° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.74	3.38	2.67	2.55	2.29	2.13	1.81	1.37	1.14	2.68	2.72
8.69	3.34	2.62	2.5	2.25	2.07	1.83	1.39	1.14	2.53	2.73
8.72	3.37	2.66	2.52	2.29	2.11	1.83	1.39	1.15	2.67	2.72

84+62
Notes: CL of Arden Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07841° Lat, -118.39379° Lon

Limit ☐ NIS ☐

85+42 (test 92)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.20667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 76.5° F
GPS: 34.07879° Lat, -118.39323° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	4.25	3.5	3.28	2.94	2.62	2.04	1.49	1.15	3.61	3.74
8.69	4.19	3.44	3.26	2.9	2.58	2	1.48	1.11	3.59	3.73
8.72	4.18	3.44	3.23	2.88	2.59	1.99	1.45	1.14	3.51	3.72

87+17 (test 93)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.42

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 60.8° F
GPS: 34.07909° Lat, -118.39279° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.72	4.44	3.71	3.5	3.25	2.96	2.43	1.93	1.51	3.86	3.97
8.69	4.42	3.66	3.5	3.23	2.95	2.41	1.92	1.51	3.84	3.93
8.72	4.4	3.67	3.5	3.23	2.95	2.41	1.91	1.49	3.83	3.92

87+66
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07909° Lat, -118.39279° Lon
Limit ☐ NIS ☐

88+89
Notes: CL of Alta Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07909° Lat, -118.39279° Lon
Limit ☐ NIS ☐

89+09 (test 94)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.45

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 88.3° F
GPS: 34.07943° Lat, -118.39230° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	3.44	2.75	2.57	2.33	2.13	1.75	1.35	1.09	2.84	2.82
8.81	3.44	2.73	2.59	2.35	2.15	1.77	1.36	1.1	2.87	2.85
8.84	3.47	2.76	2.57	2.33	2.15	1.74	1.35	1.1	2.87	2.79

91+02 (test 95)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 2.82333

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 58.6° F
GPS: 34.07977° Lat, -118.39181° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	2.82	2.21	2.08	1.93	1.8	1.47	1.19	1.07	2.06	2.12
8.76	2.84	2.24	2.11	1.94	1.79	1.45	1.18	0.96	2.12	2.11
8.76	2.81	2.21	2.1	1.92	1.82	1.45	1.18	0.95	2.1	2.07

91+39
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F

GPS: 34.07977° Lat, -118.39181° Lon
Limit ☐ NIS ☐

92+77
Notes: CL of Sierra Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.07977° Lat, -118.39181° Lon
Limit ☐ NIS ☐

93+16 (test 96)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.13667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 94.8° F
GPS: 34.08013° Lat, -118.39127° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.79	6.18	5.5	5.24	4.84	4.5	3.63	2.87	2.32	5.75	5.83
8.72	6.13	5.44	5.23	4.8	4.48	3.6	2.82	2.32	5.71	5.82
8.67	6.1	5.38	5.16	4.77	4.41	3.54	2.76	2.28	5.69	5.78

93+61
Notes: Median, Raised/Planted

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.08013° Lat, -118.39127° Lon
Limit ☐ NIS ☐

95+11 (test 97)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.99667

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 76.2° F
GPS: 34.08037° Lat, -118.39069° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.64	9.09	7.6	6.85	5.9	5.06	3.59	2.58	1.81	7.56	8.2
8.59	8.95	7.48	6.79	5.87	4.99	3.56	2.55	1.8	7.48	8.07
8.69	8.95	7.5	6.79	5.87	5.01	3.59	2.59	1.82	7.48	8.1

97+05 (test 98)
Notes: Lateral Cracks, Longitudinal Cracks, Near Traffic Sensors
Avg FWD1: 14.02

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 91.6° F
GPS: 34.08061° Lat, -118.39014° Lon
Limit ☐ NIS ☑

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.5	14.23	10.57	8.81	6.67	4.4	2.44	1.65	1.36	10.92	12.51
8.42	13.86	10.34	8.63	6.56	4.34	2.46	1.68	1.36	10.68	12.21
8.42	13.97	10.44	8.74	6.64	4.37	2.5	1.7	1.35	10.68	12.19

97+25
Notes: LTP

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.08061° Lat, -118.39014° Lon
Limit ☐ NIS ☐

97+59
Notes: Change in Pavement

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.08061° Lat, -118.39014° Lon

Limit ☐ NIS ☐

98+68
Notes: CL of Doheny Drive

North Santa Monica Boulevard Eastbound Lane 1
Pvt Temp: 0° F
GPS: 34.08061° Lat, -118.39014° Lon
Limit ☐ NIS ☐

North Santa Monica Boulevard Westbound Lane 2

00+00
Notes: North Santa Monica Boulevard Westbound Lane 2; CL of Doheny Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.08061° Lat, -118.39014° Lon
Limit ☐ NIS ☐

01+18
Notes: Change in Pavement

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.08061° Lat, -118.39014° Lon
Limit ☐ NIS ☐

01+42 (test 99)
Notes: CL of Oakhurst Drive Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.27667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 95.2° F
GPS: 34.08094° Lat, -118.39016° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.47	7.35	6.04	5.64	5.3	4.85	4.09	3.23	2.48	6.32	6.58
8.45	7.29	5.99	5.62	5.26	4.88	4.09	3.21	2.49	6.3	6.56
8.5	7.19	5.95	5.59	5.2	4.81	4.02	3.18	2.49	6.18	6.41

02+74
Notes: Curb and Gutter

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.08094° Lat, -118.39016° Lon
Limit ☐ NIS ☐

03+08 (test 100)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.47667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 94.1° F
GPS: 34.08068° Lat, -118.39060° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.69	6.43	5.6	5.33	4.86	4.43	3.65	2.62	1.99	5.61	5.7
8.67	6.48	5.64	5.33	4.86	4.44	3.6	2.66	1.98	5.67	5.68
8.79	6.52	5.64	5.34	4.87	4.45	3.61	2.64	2	5.68	5.69

05+04 (test 101)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 9.56

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 95.6° F
GPS: 34.08036° Lat, -118.39112° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.52	9.67	6.77	5.71	4.47	3.55	2.42	1.78	1.39	7.38	8.52
8.5	9.49	6.73	5.62	4.44	3.51	2.49	1.76	1.39	7.25	8.38
8.54	9.52	6.73	5.68	4.44	3.53	2.42	1.78	1.37	7.24	8.32

06+32
Notes: CL of Sierra Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.08036° Lat, -118.39112° Lon
Limit ☑ NIS ☐

07+02 (test 102)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 11.71

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 91.2° F
GPS: 34.08001° Lat, -118.39163° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.47	11.8	8.41	6.93	5.13	3.7	2.13	1.54	1.32	8.42	10.19
8.59	11.65	8.33	6.9	5.12	3.75	2.1	1.49	1.35	8.38	10
8.57	11.68	8.44	6.96	5.16	3.79	2.11	1.56	1.36	8.46	10.05

09+05 (test 103)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 13.51

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 90.8° F
GPS: 34.07966° Lat, -118.39214° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.47	13.6	10.1	8.34	6.13	4.6	2.81	1.96	1.61	9.94	11.85
8.4	13.43	10.05	8.32	6.1	4.57	2.81	1.99	1.62	9.88	11.67
8.5	13.5	10.13	8.33	6.11	4.59	2.77	1.95	1.63	9.92	11.68

10+21
Notes: CL of Alta Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07966° Lat, -118.39214° Lon
Limit ☐ NIS ☐

11+05 (test 104)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 9.56667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 65.2° F
GPS: 34.07931° Lat, -118.39265° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.86	9.51	6.87	5.68	4.33	3.39	2.16	1.62	1.36	6.98	8.18
9.33	9.9	7.17	5.96	4.54	3.58	2.28	1.7	1.42	7.37	8.5
8.74	9.29	6.72	5.57	4.26	3.38	2.14	1.6	1.33	6.86	7.97

13+01 (test 105)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 11.1433

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 91.6° F
GPS: 34.07897° Lat, -118.39314° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	11.25	7.92	6.8	5.52	4.61	3.32	2.56	2.04	8.14	9.41
8.96	11.11	7.87	6.78	5.54	4.61	3.34	2.61	2.03	7.98	9.22
8.91	11.07	7.85	6.77	5.52	4.61	3.33	2.59	2.06	8.01	9.16

14+49
Notes: CL of Arden Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07897° Lat, -118.39314° Lon
Limit ☐ NIS ☐

15+07 (test 106)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 16.2167

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 87.2° F
GPS: 34.07861° Lat, -118.39367° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.62	16.12	11.54	9.26	7.02	5.26	3.32	2.62	2.17	11.7	13.94
8.84	16.26	11.64	9.38	7.13	5.37	3.36	2.66	2.23	11.86	14.02
8.81	16.27	11.61	9.38	7.14	5.34	3.35	2.68	2.22	11.83	13.96

16+96 (test 107)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 14.0233

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 93.4° F
GPS: 34.07828° Lat, -118.39414° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.03	14.2	10.28	8.73	6.88	5.75	4.03	3.08	2.56	10.1	11.85
8.96	14	10.16	8.61	6.85	5.67	3.92	3.09	2.48	10.07	11.65
8.94	13.87	10.12	8.56	6.8	5.58	3.88	3.06	2.47	10.02	11.5

18+73
Notes: CL of Hillcrest Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07828° Lat, -118.39414° Lon
Limit ☐ NIS ☐

19+18 (test 108)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 13.7133

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 94.8° F
GPS: 34.07790° Lat, -118.39471° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.16	13.94	10.46	8.96	7.11	5.76	3.85	2.79	2.19	10.76	12.27
9.03	13.64	10.27	8.82	6.98	5.67	3.78	2.74	2.16	10.61	11.95
8.91	13.56	10.25	8.78	6.99	5.65	3.79	2.71	2.15	10.51	11.85

20+70
Notes: Begin Patch

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07790° Lat, -118.39471° Lon
Limit ☐ NIS ☐

21+13 (test 109)
Notes: On Patch
Avg FWD1: 13.0533

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 92.3° F
GPS: 34.07756° Lat, -118.39520° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.18	13.19	10.64	9.41	7.71	6.38	4.41	3.21	11.29	10.53	11.67
9.18	13.08	10.59	9.37	7.73	6.42	4.48	3.19	14.64	10.41	11.57
9.13	12.89	10.49	9.28	7.64	6.36	4.41	3.19	7.06	10.3	11.44

22+91
Notes: CL of Palm Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07756° Lat, -118.39520° Lon
Limit ☐ NIS ☐

23+56 (test 110)
Notes: On Patch
Avg FWD1: 16.8233

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 99.6° F
GPS: 34.07715° Lat, -118.39582° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.03	17.03	13.64	11.86	9.61	7.8	4.87	3.46	2.5	13.88	15.48
9.01	16.85	13.52	11.83	9.64	7.86	5.18	3.56	2.58	13.77	15.26
9.03	16.59	13.34	11.7	9.5	7.77	5.06	3.44	2.49	13.57	15.05

25+14 (test 111)
Notes: On Patch
Avg FWD1: 16.11

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 91.9° F
GPS: 34.07686° Lat, -118.39622° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.03	16.37	12.78	11.03	8.71	6.94	4.32	2.89	2.16	12.91	14.65
8.94	16.02	12.55	10.85	8.62	6.83	4.24	2.89	2.1	12.61	14.34
8.98	15.94	12.52	10.81	8.62	6.85	4.26	2.9	2.16	12.61	14.22

26+85
Notes: CL of Maple Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07686° Lat, -118.39622° Lon
Limit ☐ NIS ☐

27+26 (test 112)
Notes: On Patch
Avg FWD1: 14.57

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 101.8° F
GPS: 34.07650° Lat, -118.39676° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.18	14.79	10.77	9.26	7.49	6.38	4.6	3.4	2.55	10.98	12.62
9.11	14.44	10.62	9.16	7.43	6.31	4.58	3.44	2.56	10.83	12.32
9.23	14.48	10.69	9.26	7.54	6.43	4.69	3.45	2.61	10.86	12.34

28+98
Notes: End Patch

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07650° Lat, -118.39676° Lon
Limit ☑ NIS ☐

29+18 (test 113)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 17.9167

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 97.4° F
GPS: 34.07616° Lat, -118.39724° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.11	18.13	13.61	11.69	9.34	7.48	4.69	3.27	2.59	13.57	15.39
9.11	17.9	13.46	11.59	9.24	7.41	4.58	3.24	2.48	13.46	15.22

9.06	17.72	13.41	11.52	9.2	7.38	4.61	3.23	2.48	13.32	15.01

30+86
Notes: CL of Elm Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07616° Lat, -118.39724° Lon
Limit ☐ NIS ☐

31+14 (test 114)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 29.12

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 96.3° F
GPS: 34.07582° Lat, -118.39774° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.81	29.42	22.23	18.8	14.57	11.27	7.05	5.06	4.07	23.02	25.78
8.81	29.02	22.02	18.66	14.47	11.19	7.01	5.03	4.13	22.61	25.26
8.74	28.92	21.87	18.52	14.32	11.09	6.83	4.95	3.94	22.52	25.08

33+11 (test 115)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 28.4167

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 95.2° F
GPS: 34.07547° Lat, -118.39823° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.96	28.53	21.14	18.2	13.95	10.51	6.31	4.52	3.79	22.16	25.45
8.94	28.38	21.05	18.12	13.87	10.47	6.19	4.48	3.75	22.12	25.18
8.98	28.34	21.02	18.12	13.87	10.42	6.23	4.46	3.75	21.85	25.06

34+83
Notes: CL of Foothill Road

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07547° Lat, -118.39823° Lon
Limit ☐ NIS ☐

35+09 (test 116)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 24.4333

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 93.8° F
GPS: 34.07513° Lat, -118.39873° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.11	24.03	18.51	16.05	12	8.48	5.45	3.89	3.02	18.79	21.33
9.72	24.99	19.38	16.8	12.57	8.95	5.79	4.11	3.23	19.55	22.1
9.33	24.28	18.8	16.34	12.22	8.63	5.6	3.98	3.11	19	21.44

37+07 (test 117)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 29.72

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 94.8° F
GPS: 34.07479° Lat, -118.39924° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.11	27.1	21.28	17.83	13.55	10.47	6.15	4.34	3.3	21.23	23.71
10.52	30.62	24.05	20.22	15.59	11.97	7.04	5.02	4.12	23.69	26.47
10.86	31.44	24.64	20.79	15.76	12.39	7.23	5.18	3.92	24.41	27.13

38+80
Notes: CL of Alpine Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07479° Lat, -118.39924° Lon

Limit ☐ NIS ☐

39+14 (test 118)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 25.8467

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 105.1° F
GPS: 34.07443° Lat, -118.39977° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.13	26.24	20.86	17.21	13.24	10.35	6.5	4.67	3.69	19.74	22.32
8.91	25.45	20.27	16.73	12.79	10.04	6.34	4.6	3.58	19.17	21.77
9.06	25.85	20.6	17.04	13.03	10.29	6.44	4.61	3.59	19.5	22.04

41+05 (test 119)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 21.2733

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 95.2° F
GPS: 34.07409° Lat, -118.40025° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.13	21.51	16.62	14.46	11.46	9.2	6.06	4.4	3.55	16.01	18.52
8.81	20.85	16.18	14.11	11.17	8.97	5.93	4.31	3.44	15.45	17.94
9.2	21.46	16.68	14.52	11.54	9.27	6.07	4.44	3.52	15.88	18.35

42+73
Notes: CL of Rexford Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07409° Lat, -118.40025° Lon
Limit ☐ NIS ☐

43+31 (test 120)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 24.4433

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 104° F
GPS: 34.07370° Lat, -118.40082° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	24.18	17.74	14.88	11.52	8.89	5.57	3.98	3.14	18.35	21.34
9.03	24.6	18.11	15.27	11.8	9.22	5.72	4.09	3.21	18.71	21.54
9.08	24.55	18.09	15.26	11.76	9.22	5.75	4.09	3.24	18.48	21.48

45+01 (test 121)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 15.8833

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 103.3° F
GPS: 34.07341° Lat, -118.40125° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.08	16.18	12.2	10.63	8.51	7.12	5.02	3.9	3.2	12.07	13.6
9.03	15.83	11.94	10.38	8.3	6.96	4.94	3.81	3.05	11.68	13.25
8.98	15.64	11.82	10.3	8.25	6.87	4.91	3.77	3.04	11.65	12.99

46+67
Notes: CL of Crescent Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07341° Lat, -118.40125° Lon
Limit ☑ NIS ☐

47+47 (test 122)
Notes: Lateral Cracks, Longitudinal Cracks

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 98.1° F

Avg FWD1: 7.85

GPS: 34.07298° Lat, -118.40187° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.13	7.86	7.54	7.31	6.88	6.6	5.71	4.73	3.82	7.21	7.5
8.91	7.79	7.45	7.24	6.82	6.5	5.61	4.66	3.76	7.24	7.4
9.2	7.9	7.55	7.31	6.88	6.64	5.71	4.74	3.86	7.4	7.5

49+22 (test 123)

Notes: Lateral Cracks, Longitudinal Cracks

Avg FWD1: 6.66333

North Santa Monica Boulevard Westbound Lane 2

Pvt Temp: 98.1° F

GPS: 34.07268° Lat, -118.40232° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.06	6.71	6.25	5.99	5.53	5.16	4.25	3.54	2.8	6.22	6.34
9.01	6.65	6.22	5.99	5.5	5.14	4.24	3.53	2.73	6.21	6.28
8.98	6.63	6.19	5.98	5.51	5.12	4.21	3.54	2.73	6.24	6.26

50+64

Notes: CL of Canon Drive

North Santa Monica Boulevard Westbound Lane 2

Pvt Temp: 0° F

GPS: 34.07268° Lat, -118.40232° Lon

Limit ☐ NIS ☐

51+38 (test 124)

Notes: Lateral Cracks, Longitudinal Cracks

Avg FWD1: 6.35333

North Santa Monica Boulevard Westbound Lane 2

Pvt Temp: 88.3° F

GPS: 34.07230° Lat, -118.40286° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	6.39	5.94	5.74	5.32	5.02	4.3	3.59	2.95	5.88	5.97
8.96	6.33	5.87	5.7	5.29	4.99	4.29	3.58	2.92	5.97	5.95
9.08	6.34	5.88	5.67	5.26	4.94	4.24	3.52	2.9	6.03	5.96

53+08 (test 125)

Notes: Lateral Cracks, Longitudinal Cracks

Avg FWD1: 5.65

North Santa Monica Boulevard Westbound Lane 2

Pvt Temp: 100.7° F

GPS: 34.07200° Lat, -118.40329° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.96	5.6	4.94	4.78	4.43	4.2	3.59	2.96	2.5	4.97	5.02
8.89	5.6	4.94	4.76	4.41	4.22	3.57	2.95	2.52	4.8	4.97
9.13	5.75	5.07	4.86	4.52	4.3	3.68	2.99	2.51	4.99	5.09

54+71

Notes: CL of Beverly Drive

North Santa Monica Boulevard Westbound Lane 2

Pvt Temp: 0° F

GPS: 34.07200° Lat, -118.40329° Lon

Limit ☐ NIS ☐

55+42 (test 126)

Notes: Lateral Cracks, Longitudinal Cracks

Avg FWD1: 5.18

North Santa Monica Boulevard Westbound Lane 2

Pvt Temp: 103.3° F

GPS: 34.07159° Lat, -118.40388° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.06	5.17	4.58	4.41	4.12	3.85	3.28	2.73	2.29	4.54	4.66
9.03	5.21	4.66	4.5	4.19	3.91	3.34	2.87	2.37	4.72	4.73
8.98	5.16	4.63	4.44	4.16	3.85	3.26	2.75	2.3	4.62	4.68

57+10 (test 127)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.77333

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 105.5° F
GPS: 34.07130° Lat, -118.40430° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.03	6.78	5.57	5.39	5	4.67	3.87	3.17	2.54	5.55	5.54
8.89	6.71	5.51	5.34	4.94	4.62	3.83	3.13	2.51	5.54	5.49
9.16	6.83	5.64	5.42	5.03	4.7	3.9	3.23	2.61	5.55	5.56

58+82
Notes: CL of Rodeo Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07130° Lat, -118.40430° Lon
Limit ☐ NIS ☐

59+61 (test 128)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 9.82667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 103.6° F
GPS: 34.07086° Lat, -118.40494° Lon
Limit ☑ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.84	9.73	8.18	7.66	6.93	6.54	5.62	4.54	3.5	8.07	8.71
9.01	9.87	8.32	7.77	7.05	6.66	5.77	4.58	3.59	8.25	8.84
9.11	9.88	8.33	7.78	7.06	6.7	5.78	4.66	3.58	8.22	8.88

60+87
Notes: Begin Patch

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07086° Lat, -118.40494° Lon
Limit ☐ NIS ☐

61+19 (test 129)
Notes: On Patch
Avg FWD1: 17.36

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 108° F
GPS: 34.07059° Lat, -118.40534° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.76	17.08	13.74	12.15	9.95	8.15	5.36	3.7	2.69	14.25	15.72
9.16	17.56	14.18	12.57	10.33	8.52	5.56	3.86	2.91	14.49	15.98
8.98	17.44	14.16	12.58	10.46	8.65	5.76	4.1	3.11	14.47	15.93

62+56
Notes: End Patch

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07059° Lat, -118.40534° Lon
Limit ☐ NIS ☐

62+57
Notes:

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07059° Lat, -118.40534° Lon
Limit ☐ NIS ☐

62+59
Notes:

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07059° Lat, -118.40534° Lon
Limit ☐ NIS ☐

62+88
Notes: CL of Camden Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07059° Lat, -118.40534° Lon
Limit ☐ NIS ☐

63+07
Notes: Begin Patch

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.07059° Lat, -118.40534° Lon
Limit ☐ NIS ☐

63+43 (test 130)
Notes: On Patch
Avg FWD1: 21.7167

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 98.5° F
GPS: 34.07020° Lat, -118.40592° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.06	22.14	16.52	14.04	11.18	8.99	5.73	4.06	3.18	16.06	18.35
9.11	21.73	16.25	13.88	11.03	8.82	5.55	3.93	3.01	15.77	17.98
8.81	21.28	15.94	13.6	10.76	8.65	5.45	3.74	2.88	15.46	17.59

65+06 (test 131)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 25.1

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 96.3° F
GPS: 34.06992° Lat, -118.40633° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.69	24.48	19.36	16.48	12.71	10	6.31	4.48	3.45	18.89	21.3
9.72	26.07	20.71	17.72	13.66	10.8	6.81	4.82	3.75	19.99	22.48
9.11	24.75	19.63	16.77	12.93	10.2	6.41	4.61	3.59	19.02	21.41

66+68
Notes: CL of Bedford Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06992° Lat, -118.40633° Lon
Limit ☐ NIS ☐

67+20
Notes: Lateral Trench

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06992° Lat, -118.40633° Lon
Limit ☐ NIS ☐

67+39 (test 132)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 24.1

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 100.3° F
GPS: 34.06951° Lat, -118.40692° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.38	24.45	19.43	16.41	13.52	11.17	7.4	5.57	4.55	18.1	20.62
9.23	23.99	19.07	16.14	13.3	11	7.25	5.41	4.33	17.78	20.28
9.18	23.86	19.04	16.12	13.27	11.03	7.31	5.46	4.44	17.64	20.06

69+12 (test 133)

North Santa Monica Boulevard Westbound Lane 2

Notes:

Pvt Temp: 98.9° F

Avg FWD1: 27.7167

GPS: 34.06921° Lat, -118.40736° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	27.78	20.43	17.29	13.46	10.56	6.51	4.51	3.47	22.16	24.93
8.91	27.5	20.25	17.15	13.37	10.5	6.46	4.45	3.4	21.82	24.56
9.13	27.87	20.58	17.45	13.64	10.69	6.61	4.62	3.54	22.19	24.87

70+76

North Santa Monica Boulevard Westbound Lane 2

Notes: CL of Roxbury Drive

Pvt Temp: 0° F

GPS: 34.06921° Lat, -118.40736° Lon

Limit ☐ NIS ☐

71+40 (test 134)

North Santa Monica Boulevard Westbound Lane 2

Notes:

Pvt Temp: 95.9° F

Avg FWD1: 17.6333

GPS: 34.06881° Lat, -118.40794° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.3	17.83	13.66	11.85	9.43	7.68	5.03	3.17	2.63	13.63	15.42
9.28	17.65	13.57	11.77	9.39	7.67	5.06	3.23	2.7	13.54	15.21
9.23	17.42	13.44	11.65	9.31	7.61	4.98	3.19	2.64	13.32	14.97

73+21 (test 135)

North Santa Monica Boulevard Westbound Lane 2

Notes:

Pvt Temp: 87.5° F

Avg FWD1: 24.4867

GPS: 34.06850° Lat, -118.40840° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.13	24.85	19.69	17.03	13.43	10.69	6.55	4.37	3.86	18.9	21.46
9.01	24.34	19.58	16.99	13.39	10.66	6.53	4.3	3.35	18.23	20.8
9.08	24.27	19.59	16.99	13.43	10.76	6.59	4.33	3.35	18.22	20.88

74+62

North Santa Monica Boulevard Westbound Lane 2

Notes: CL of Linden Drive

Pvt Temp: 0° F

GPS: 34.06850° Lat, -118.40840° Lon

Limit ☐ NIS ☐

75+09 (test 136)

North Santa Monica Boulevard Westbound Lane 2

Notes: Next to Catch Basin

Pvt Temp: 95.2° F

Avg FWD1: 14.6567

GPS: 34.06817° Lat, -118.40887° Lon

Limit ☑ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.96	14.72	11.12	9.64	8.04	6.77	4.42	3.32	2.55	11.83	13.38
9.08	14.66	11.24	9.71	8.13	6.85	4.45	3.43	2.64	11.78	13.29
9.03	14.59	11.12	9.66	8.08	6.83	4.43	3.34	2.56	11.73	13.22

77+11 (test 137)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.57333

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 96.3° F
GPS: 34.06781° Lat, -118.40937° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.4	6.58	6.21	6.05	5.67	5.35	4.61	3.9	3.25	6.13	6.09
9.45	6.57	6.2	6.02	5.66	5.38	4.6	3.86	3.22	6.16	6.08
9.38	6.57	6.17	6.02	5.68	5.41	4.59	3.9	3.27	5.98	6.02

78+52
Notes: CL of Walden Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06781° Lat, -118.40937° Lon
Limit ☐ NIS ☐

79+04
Notes: RTP

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06781° Lat, -118.40937° Lon
Limit ☐ NIS ☐

79+04 (test 138)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.52667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 97.8° F
GPS: 34.06747° Lat, -118.40986° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.5	5.47	4.87	4.77	4.51	4.34	4.17	3.25	2.75	4.75	4.8
9.5	5.57	4.97	4.84	4.59	4.45	3.88	3.32	2.82	4.78	4.88
9.47	5.54	4.97	4.83	4.59	4.42	3.85	3.31	2.77	4.82	4.84

81+37
Notes: CL of Wilshire Boulevard

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06747° Lat, -118.40986° Lon
Limit ☐ NIS ☐

83+19 (test 139)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.66333

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 110.6° F
GPS: 34.06675° Lat, -118.41091° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.59	4.68	3.96	3.9	3.69	3.53	3.13	2.68	2.54	3.79	3.89
9.62	4.68	3.98	3.89	3.7	3.58	3.1	2.63	2.48	3.79	3.84
9.5	4.63	3.93	3.81	3.64	3.55	3.08	2.61	2.53	3.7	3.79

85+04 (test 140)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.97

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 112.4° F
GPS: 34.06643° Lat, -118.41138° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.55	4.97	4.38	4.25	3.95	3.77	3.25	2.69	2.21	4.33	4.35
9.47	4.98	4.38	4.23	3.95	3.79	3.22	2.67	2.21	4.1	4.31
9.52	4.96	4.36	4.22	3.97	3.77	3.21	2.69	2.16	4.3	4.33

87+08 (test 141)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.37

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 113.5° F
GPS: 34.06608° Lat, -118.41190° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.55	6.4	5.28	5.02	4.66	4.31	3.6	2.85	2.31	5.47	5.49
9.5	6.38	5.26	5.04	4.61	4.3	3.67	2.85	2.3	5.46	5.49
9.55	6.33	5.22	5.01	4.6	4.3	3.62	2.82	2.26	5.45	5.46

89+08 (test 142)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.64

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 111.7° F
GPS: 34.06573° Lat, -118.41240° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.47	6.67	5.65	5.24	4.76	4.43	3.65	2.86	2.27	5.51	5.71
9.3	6.61	5.6	5.22	4.72	4.37	3.63	2.87	2.27	5.65	5.64
9.33	6.64	5.6	5.19	4.71	4.42	3.66	2.87	2.23	5.69	5.64

91+30 (test 143)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.49667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 118.7° F
GPS: 34.06535° Lat, -118.41297° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.57	6.54	5.29	5.1	4.71	4.44	3.71	3.01	2.44	5.45	5.3
9.38	6.47	5.25	5.05	4.66	4.42	3.66	2.99	2.42	5.41	5.28
9.45	6.48	5.3	5.1	4.67	4.4	3.69	2.99	2.43	5.45	5.33

92+53
Notes: CL of Merv Griffin Way

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06535° Lat, -118.41297° Lon
Limit ☐ NIS ☐

93+19 (test 144)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 9.09

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 106.6° F
GPS: 34.06501° Lat, -118.41346° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.11	9.18	7.9	7.16	6.74	6.19	5.01	3.94	11.76	7.93	8.46
8.94	9.03	7.78	7.05	6.6	6.09	4.96	3.88	3.1	7.87	8.3
9.01	9.06	7.85	7.07	6.65	6.08	4.99	3.9	3.21	7.89	8.3

95+09 (test 145)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 3.39667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 112.1° F
GPS: 34.06469° Lat, -118.41393° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.35	3.37	2.82	2.68	2.41	2.2	1.77	1.4	1.11	2.75	2.78
9.4	3.41	2.8	2.67	2.43	2.21	1.74	1.4	1.06	2.78	2.74
9.33	3.41	2.81	2.66	2.43	2.21	1.78	1.39	1.04	2.78	2.74

96+97
Notes: Change in Pavement

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06469° Lat, -118.41393° Lon

Limit ☐ NIS ☐

97+10 (test 146)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.72667

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 111° F
GPS: 34.06434° Lat, -118.41444° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.33	5.78	3.37	3.08	2.64	2.38	1.86	1.28	0.95	3.32	3.8
9.25	5.68	3.29	3.06	2.66	2.37	1.74	1.26	0.92	3.28	3.68
9.25	5.72	3.34	3.05	2.64	2.37	1.77	1.25	0.91	3.29	3.68

99+83
Notes: CL of Moreno Drive

North Santa Monica Boulevard Westbound Lane 2
Pvt Temp: 0° F
GPS: 34.06434° Lat, -118.41444° Lon
Limit ☐ NIS ☐

North Santa Monica Boulevard Eastbound Lane 2

00+00
Notes: North Santa Monica Boulevard Eastbound Lane 2; CL of Moreno Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06434° Lat, -118.41444° Lon
Limit ☐ NIS ☐

00+10
Notes: Curb and Gutter

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06434° Lat, -118.41444° Lon
Limit ☐ NIS ☐

02+59
Notes: , Limit

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06434° Lat, -118.41444° Lon
Limit ☐ NIS ☐

03+02 (test 147)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.10333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 108° F
GPS: 34.06436° Lat, -118.41420° Lon
Limit ☐ NIS ☑

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.33	6.14	4.74	3.92	2.39	2.16	1.63	1.2	0.97	4.54	5.06
9.25	6.04	4.66	3.87	2.4	2.17	1.67	1.21	0.94	4.4	4.95
9.35	6.13	4.76	3.88	2.41	2.17	1.68	1.21	0.96	4.46	5.02

04+20 (test 148)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 15.95

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 113.5° F
GPS: 34.06456° Lat, -118.41390° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.33	16.23	11.29	9.13	6.87	5.18	3.13	2.3	1.94	11.01	13.18
9.25	15.87	11.05	8.98	6.74	5.07	3.1	2.31	1.98	11	12.93
9.18	15.75	11	8.93	6.7	5.06	3.07	2.25	1.97	10.9	12.81

06+01 (test 149)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Alligator Cracks

Pvt Temp: 112.8° F

Avg FWD1: 13.89

GPS: 34.06488° Lat, -118.41344° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.2	14.07	10.93	9.17	6.99	5.31	2.95	1.91	1.58	9.42	11.36
9.25	13.87	10.83	9.13	6.96	5.31	2.76	1.89	1.6	9.4	11.23
9.28	13.73	10.78	9.07	6.94	5.29	2.73	1.91	1.59	9.25	11.09

07+02

North Santa Monica Boulevard Eastbound Lane 2

Notes: CL of Merv Griffin Way

Pvt Temp: 0° F

GPS: 34.06488° Lat, -118.41344° Lon

Limit ☐ NIS ☐

08+13 (test 150)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Alligator Cracks

Pvt Temp: 112.1° F

Avg FWD1: 11.5733

GPS: 34.06525° Lat, -118.41290° Lon

Limit ☑ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.28	11.74	8.79	7.69	6.35	5.24	3.64	2.59	2.07	8.35	9.68
9.28	11.51	8.7	7.62	6.32	5.3	3.65	2.57	2.08	8.33	9.62
9.25	11.47	8.66	7.61	6.3	5.25	3.66	2.63	2.12	8.29	9.66

10+02 (test 151)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 112.4° F

Avg FWD1: 7.91667

GPS: 34.06558° Lat, -118.41242° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.38	7.99	6.18	5.54	4.63	3.94	2.64	1.86	1.48	6.15	6.76
9.4	7.94	6.12	5.49	4.6	3.89	2.63	1.87	1.47	6.14	6.69
9.4	7.82	6	5.38	4.5	3.82	2.56	1.8	1.4	6.03	6.54

11+85 (test 152)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Alligator Cracks

Pvt Temp: 106.6° F

Avg FWD1: 27.6233

GPS: 34.06590° Lat, -118.41196° Lon

Limit ☐ NIS ☑

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	27.74	19.69	16.83	12.4	9.02	5.28	3.66	2.91	22.71	24.9
8.98	27.54	19.49	16.79	12.38	9.02	5.24	3.66	2.96	22.87	24.76
9.03	27.59	19.6	16.89	12.36	9.01	5.23	3.59	2.88	22.73	24.77

14+26 (test 153)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 112.4° F

Avg FWD1: 5.35333

GPS: 34.06632° Lat, -118.41136° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.52	5.37	4.86	4.71	4.4	4.22	3.42	2.88	2.41	4.71	4.77

9.52	5.31	4.84	4.68	4.39	4.17	3.43	2.89	2.43	4.72	4.76
9.57	5.38	4.9	4.75	4.43	4.23	3.5	2.91	2.4	4.77	4.77

15+80
Notes: RTP

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06632° Lat, -118.41136° Lon
Limit ☐ NIS ☐

16+09 (test 154)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.79667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 118.7° F
GPS: 34.06665° Lat, -118.41090° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.69	4.83	4.28	4.16	3.88	3.66	3.17	2.66	2.16	4.26	4.21
9.59	4.78	4.27	4.15	3.89	3.65	3.21	2.65	2.17	4.22	4.2
9.59	4.78	4.26	4.13	3.86	3.68	3.14	2.63	2.16	4.26	4.18

18+55
Notes: CL of Wilshire Boulevard

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06665° Lat, -118.41090° Lon
Limit ☐ NIS ☐

20+20 (test 155)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.21333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 115° F
GPS: 34.06736° Lat, -118.40986° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.25	7.23	6.39	6.22	5.86	5.75	5.02	4.41	3.61	6.51	6.53
9.25	7.22	6.39	6.22	5.85	5.7	4.97	4.37	3.78	6.56	6.56
9.23	7.19	6.36	6.18	5.83	5.7	4.95	4.36	3.69	6.57	6.54

20+98
Notes: CL of Walden Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06736° Lat, -118.40986° Lon
Limit ☐ NIS ☐

22+33 (test 156)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.05333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 118.3° F
GPS: 34.06773° Lat, -118.40932° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.28	6.03	5.28	5.15	4.87	4.65	4.06	3.48	3.05	5.31	5.25
9.4	6.1	5.32	5.2	4.92	4.74	4.07	3.45	2.97	5.42	5.3
9.42	6.03	5.3	5.2	4.92	4.72	4.08	3.49	3.12	5.28	5.22

24+04 (test 157)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.63667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 118.3° F
GPS: 34.06803° Lat, -118.40888° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10

9.38	6.62	6.01	5.85	5.44	5.14	4.38	3.46	2.66	5.98	5.87
9.18	6.69	6.02	5.84	5.42	5.14	4.42	3.49	2.7	6.01	5.89
9.16	6.6	5.92	5.79	5.33	5.03	4.34	3.4	2.66	5.92	5.82

24+92
Notes: CL of Linden Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06803° Lat, -118.40888° Lon
Limit ☐ NIS ☐

26+02 (test 158)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 9.24

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 92.3° F
GPS: 34.06837° Lat, -118.40837° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.28	9.3	8.52	8.24	7.56	6.98	5.79	4.59	3.6	8.48	8.45
9.18	9.2	8.43	8.18	7.5	6.9	5.58	4.46	3.51	8.25	8.32
9.2	9.22	8.42	8.18	7.49	6.87	5.57	4.48	3.53	8.33	8.39

28+03 (test 159)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.09333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 104.4° F
GPS: 34.06872° Lat, -118.40787° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.3	7.12	6.28	6.06	5.68	5.3	4.5	3.64	3.24	6.14	6.14
9.25	7.09	6.28	6.06	5.67	5.3	4.49	3.61	2.91	6.12	6.12
9.28	7.07	6.23	6.03	5.66	5.28	4.47	3.62	3.18	6.09	6.07

28+76
Notes: CL of Roxbury Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.06872° Lat, -118.40787° Lon
Limit ☐ NIS ☐

30+01 (test 160)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.83667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 86.1° F
GPS: 34.06907° Lat, -118.40737° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.01	7.89	7.19	6.92	6.48	5.97	4.88	3.89	2.97	7.1	7.44
8.98	7.85	7.17	6.88	6.4	5.95	4.85	3.84	2.95	7.1	7.41
8.94	7.77	7.09	6.8	6.32	5.9	4.8	3.83	2.94	6.91	7.32

32+05 (test 161)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.14333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 71.4° F
GPS: 34.06942° Lat, -118.40685° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.35	7.15	6.45	6.31	5.89	5.51	4.65	3.74	2.9	6.33	6.4
9.3	7.13	6.43	6.24	5.82	5.48	4.65	3.76	2.95	6.32	6.34
9.33	7.15	6.49	6.3	5.85	5.5	4.66	3.76	2.91	6.34	6.37

32+84

North Santa Monica Boulevard Eastbound Lane 2

Notes: CL of Bedford Drive

Pvt Temp: 0° F
GPS: 34.06942° Lat, -118.40685° Lon
Limit ☐ NIS ☐

34+13 (test 162)

Notes: Alligator Cracks

Avg FWD1: 10.1633

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 71.8° F
GPS: 34.06978° Lat, -118.40632° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.33	10.1	9.66	9.43	8.82	8.43	7.2	5.96	4.35	8.95	9.32
9.45	10.17	9.72	9.5	8.9	8.5	7.26	6.04	5.15	9.03	9.32
9.35	10.22	9.74	9.54	8.94	8.53	7.31	6.1	5.11	9.07	9.34

36+09 (test 163)

Notes: Alligator Cracks

Avg FWD1: 5.12333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 99.2° F
GPS: 34.07012° Lat, -118.40582° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.52	5.12	5.01	4.79	4.39	4.07	3.36	2.69	2.23	4.95	4.96
9.35	5.15	5.02	4.79	4.42	4.1	3.4	2.76	2.3	4.96	5
9.4	5.1	4.95	4.77	4.35	4.05	3.4	2.74	2.26	4.94	4.95

36+68

Notes: CL of Camden Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07012° Lat, -118.40582° Lon
Limit ☐ NIS ☐

38+10 (test 164)

Notes: Alligator Cracks

Avg FWD1: 6.81

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 67° F
GPS: 34.07047° Lat, -118.40531° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.47	6.85	6.33	6.02	5.58	5.14	4.24	3.34	2.6	6.23	6.35
9.45	6.83	6.29	5.99	5.55	5.08	4.16	3.36	2.62	6.21	6.25
9.42	6.75	6.2	5.93	5.45	5.03	4.05	3.26	2.49	6.13	6.18

39+78 (test 165)

Notes: Alligator Cracks

Avg FWD1: 5.28667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 71.8° F
GPS: 34.07076° Lat, -118.40489° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.5	5.3	4.38	4.23	3.96	3.7	3.13	2.48	2.03	4.38	4.39
9.33	5.27	4.36	4.23	3.92	3.75	3.12	2.53	2.01	4.38	4.38
9.33	5.29	4.4	4.26	3.94	3.69	3.15	2.5	2.04	4.39	4.36

40+76

Notes: CL of Rodeo Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07076° Lat, -118.40489° Lon
Limit ☐ NIS ☐

42+08 (test 166)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 81.7° F

Avg FWD1: 7.23667

GPS: 34.07116° Lat, -118.40430° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.35	7.24	6.61	6.28	5.65	5.11	4.13	3.24	2.46	6.71	6.72
9.3	7.23	6.58	6.25	5.6	5.1	4.09	3.19	2.43	6.65	6.68
9.33	7.24	6.61	6.25	5.66	5.17	4.12	3.25	2.49	6.7	6.71

44+02 (test 167)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 94.8° F

Avg FWD1: 5.72667

GPS: 34.07150° Lat, -118.40381° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.3	5.77	4.99	4.74	4.36	4.06	3.33	2.61	2.06	5.03	5
9.2	5.71	4.93	4.7	4.32	3.97	3.27	2.55	2.03	4.98	4.97
9.2	5.7	4.91	4.69	4.33	4.03	3.28	2.59	2.08	4.99	5

44+78

North Santa Monica Boulevard Eastbound Lane 2

Notes: CL of Beverly Drive

Pvt Temp: 0° F

GPS: 34.07150° Lat, -118.40381° Lon

Limit ☐ NIS ☐

46+08 (test 168)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 85.7° F

Avg FWD1: 6.13

GPS: 34.07186° Lat, -118.40329° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.35	6.14	5.65	5.5	5.12	4.83	4.23	3.5	2.93	5.58	5.53
9.38	6.12	5.6	5.47	5.1	4.84	4.17	3.49	2.94	5.61	5.51
9.35	6.13	5.63	5.47	5.08	4.82	4.15	3.51	2.93	5.58	5.51

48+08 (test 169)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Lateral Cracks, Longitudinal Cracks

Pvt Temp: 63.7° F

Avg FWD1: 7.60667

GPS: 34.07221° Lat, -118.40278° Lon

Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.33	7.62	6.95	6.74	6.21	5.82	4.85	3.87	3.02	6.95	7.03
9.33	7.63	6.94	6.71	6.22	5.85	4.88	3.91	2.99	7.04	7.05
9.35	7.57	6.89	6.64	6.18	5.79	4.82	3.81	2.94	6.91	6.97

48+52

North Santa Monica Boulevard Eastbound Lane 2

Notes: Begin Patch

Pvt Temp: 0° F

GPS: 34.07221° Lat, -118.40278° Lon

Limit ☐ NIS ☐

48+79

North Santa Monica Boulevard Eastbound Lane 2

Notes: CL of Canon Drive

Pvt Temp: 0° F

GPS: 34.07221° Lat, -118.40278° Lon

Limit ☐ NIS ☐

50+10 (test 170)
Notes: On Patch
Avg FWD1: 6.35667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 114.6° F
GPS: 34.07255° Lat, -118.40227° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.13	6.41	5.79	5.52	5.37	4.79	4.08	3.39	2.79	5.72	5.84
9.11	6.3	5.7	5.48	5.08	4.74	3.99	3.34	2.73	5.66	5.8
9.13	6.36	5.72	5.5	5.09	4.75	4.03	3.35	2.76	5.68	5.81

52+15 (test 171)
Notes: On Patch
Avg FWD1: 9.65

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 126° F
GPS: 34.07291° Lat, -118.40175° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.35	9.65	7.31	6.93	6.51	6.11	4.91	4.11	3.44	7.66	8.28
9.45	9.66	7.33	6.94	6.5	6.12	4.96	4.11	3.37	7.72	8.28
9.42	9.64	7.34	6.95	6.51	6.18	4.94	4.12	3.44	7.68	8.27

52+56
Notes: End Patch

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07291° Lat, -118.40175° Lon
Limit ☑ NIS ☐

52+83
Notes: CL of Crescent Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07291° Lat, -118.40175° Lon
Limit ☐ NIS ☐

54+16 (test 172)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 22.36

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 115.7° F
GPS: 34.07326° Lat, -118.40124° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.13	22.68	16.89	14.18	10.9	8.34	4.73	3.47	2.86	17.55	19.95
8.98	22.25	16.68	13.97	10.78	8.23	4.67	3.41	2.85	17.29	19.47
9.01	22.15	16.61	13.92	10.74	8.21	4.66	3.45	2.87	17.26	19.46

56+12 (test 173)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 11.14

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 116.8° F
GPS: 34.07360° Lat, -118.40074° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.28	11.13	10.21	9.86	8.92	8.3	6.86	5.58	4.3	9.62	10.04
9.25	11.12	10.21	9.82	8.94	8.31	6.93	5.57	4.31	9.59	9.98
9.2	11.17	10.26	9.9	8.99	8.37	7.02	5.59	4.41	9.66	10.04

56+74
Notes: CL of Rexford Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07360° Lat, -118.40074° Lon
Limit ☐ NIS ☐

58+08 (test 174)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 13.6067

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 120.5° F
GPS: 34.07394° Lat, -118.40024° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	14.18	9.96	8.93	7.43	6.33	4.58	3.58	2.8	9.12	10.39
9.03	13.3	9.89	8.81	7.37	6.3	4.54	3.55	2.77	9.09	10.39
9.01	13.34	9.86	8.8	7.39	6.3	4.59	3.55	2.79	9.08	10.38

60+03 (test 175)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.05667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 125.2° F
GPS: 34.07429° Lat, -118.39976° Lon
Limit ☐ NIS ☑

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.28	8.1	6.63	6.28	5.78	5.32	4.4	3.56	3.19	6.73	6.97
9.28	8	6.57	6.19	5.69	5.28	4.28	3.51	3.1	6.67	6.88
9.33	8.07	6.64	6.25	5.77	5.33	4.38	3.57	3.23	6.7	6.93

60+75
Notes: CL of Alpine Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07429° Lat, -118.39976° Lon
Limit ☐ NIS ☐

60+87
Notes: Lateral Trench

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07429° Lat, -118.39976° Lon
Limit ☐ NIS ☐

62+20 (test 176)
Notes: Alligator Cracks
Avg FWD1: 12.0867

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 65.6° F
GPS: 34.07466° Lat, -118.39920° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.35	12.25	6.94	5.64	4.55	3.85	2.86	1.93	1.49	8.34	10.19
9.23	12.03	6.8	5.59	4.53	3.78	2.48	1.91	1.52	8.26	9.99
9.25	11.98	6.82	5.62	4.53	3.84	2.49	1.94	1.55	8.2	9.9

64+08 (test 177)
Notes: Alligator Cracks
Avg FWD1: 12.0533

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 75.8° F
GPS: 34.07499° Lat, -118.39873° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.18	12.24	7.41	5.99	4.88	3.65	2.19	1.51	1.28	7.97	10.05
9.06	12.04	7.32	5.9	4.54	3.29	2.19	1.54	1.29	7.92	9.89
9.11	11.88	7.27	5.86	4.48	3.28	2.19	1.53	1.3	7.82	9.74

64+75
Notes: CL of Foothill Road

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07499° Lat, -118.39873° Lon
Limit ☑ NIS ☐

66+43 (test 178)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.76667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 73.2° F
GPS: 34.07539° Lat, -118.39814° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.45	6.76	5.49	5.14	4.57	4.12	3.54	2.73	2.1	5.47	5.8
9.52	6.79	5.51	5.15	4.61	4.17	3.47	2.74	2.11	5.51	5.84
9.42	6.75	5.53	5.19	4.61	4.15	3.52	2.7	2.08	5.42	5.77

68+05 (test 179)
Notes: Alligator Cracks
Avg FWD1: 5.72333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 82.8° F
GPS: 34.07568° Lat, -118.39772° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.59	5.74	4.77	4.44	3.99	3.66	2.9	2.25	1.79	4.6	4.85
9.42	5.7	4.76	4.38	3.94	3.65	2.94	2.26	1.83	4.57	4.82
9.57	5.73	4.76	4.42	3.96	3.69	2.95	2.28	1.86	4.6	4.83

68+69
Notes: CL of Elm Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07568° Lat, -118.39772° Lon
Limit ☐ NIS ☐

70+28 (test 180)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 7.16667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 112.8° F
GPS: 34.07607° Lat, -118.39716° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.25	7.22	6.22	6.07	5.88	5.42	4.64	3.87	3.13	6.14	6.45
9.28	7.15	6.17	5.99	5.76	5.37	4.62	3.85	3.11	6.09	6.44
9.23	7.13	6.15	5.99	5.77	5.37	4.62	3.85	3.06	6.11	6.38

72+12 (test 181)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.80667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 111.7° F
GPS: 34.07640° Lat, -118.39669° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.59	5.84	5.3	5.13	4.83	4.57	3.95	3.2	2.53	4.91	4.97
9.62	5.8	5.2	5.08	4.79	4.54	3.92	3.11	2.56	4.86	4.9
9.5	5.78	5.23	5.12	4.82	4.51	3.94	3.16	2.44	4.82	4.91

72+66
Notes: CL of Maple Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07640° Lat, -118.39669° Lon
Limit ☐ NIS ☐

72+94
Notes: RTP

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07640° Lat, -118.39669° Lon

Limit ☐ NIS ☐

73+22
Notes: Lateral Trench

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07640° Lat, -118.39669° Lon
Limit ☐ NIS ☐

74+06 (test 182)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.88333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 114.3° F
GPS: 34.07674° Lat, -118.39621° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.55	4.84	4.29	4.15	3.84	3.61	3.03	2.51	2	4.34	4.27
9.52	4.89	4.26	4.11	3.83	3.62	3.01	2.5	2.03	4.24	4.27
9.57	4.92	4.3	4.13	3.87	3.66	3.03	2.52	2	4.37	4.27

76+03 (test 183)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.84333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 120.5° F
GPS: 34.07708° Lat, -118.39571° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.55	6.82	6.28	6.04	5.63	5.35	4.56	3.74	2.99	6.11	6.13
9.55	6.83	6.25	6.04	5.61	5.28	4.54	3.72	2.97	6.12	6.15
9.52	6.88	6.3	6.06	5.66	5.33	4.58	3.78	3.03	6.16	6.2

76+63
Notes: CL of Beverly Boulevard

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07708° Lat, -118.39571° Lon
Limit ☐ NIS ☐

78+29 (test 184)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 6.81667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 121.9° F
GPS: 34.07746° Lat, -118.39512° Lon
Limit ☑ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.28	6.89	6.13	5.77	5.21	4.83	3.78	2.99	3	6.29	6.42
9.18	6.81	6.08	5.73	5.18	4.83	3.77	2.98	2.9	6.25	6.35
9.03	6.75	6.01	5.68	5.14	4.78	3.77	3	2.76	6.2	6.34

80+01 (test 185)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 10.4667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 68.8° F
GPS: 34.07776° Lat, -118.39468° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.5	10.59	7.51	6.18	4.76	3.56	1.92	1.46	1.04	6.71	8.21
9.42	10.46	7.43	6.1	4.72	3.57	2.1	1.48	1.06	6.7	8.11
9.5	10.35	7.41	6.08	4.7	3.57	2.1	1.46	1.06	6.65	8.06

80+83
Notes: CL of Hillcrest Road

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F

GPS: 34.07776° Lat, -118.39468° Lon
Limit ☐ NIS ☐

82+08 (test 186)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 12.9933

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 104° F
GPS: 34.07812° Lat, -118.39415° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.11	13.24	8.93	7.46	5.82	4.62	2.92	2.1	1.6	9.38	11.08
9.23	12.97	8.87	7.42	5.81	4.64	2.9	2.14	1.63	9.26	10.92
9.08	12.77	8.74	7.38	5.74	4.59	2.87	2.16	1.67	9.13	10.71

84+04 (test 187)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 8.16667

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 71° F
GPS: 34.07846° Lat, -118.39366° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.33	8.26	6.2	5.5	4.59	3.78	2.57	1.8	1.35	5.91	6.91
9.3	8.14	6.13	5.48	4.57	3.79	2.55	1.81	1.34	5.74	6.75
9.35	8.1	6.13	5.45	4.59	3.75	2.59	1.81	1.36	5.82	6.75

85+05
Notes: CL of Arden Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07846° Lat, -118.39366° Lon
Limit ☐ NIS ☐

86+05 (test 188)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 12.2733

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 74.7° F
GPS: 34.07881° Lat, -118.39315° Lon
Limit ☑ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.35	12.48	9.28	7.78	6	4.86	2.93	2.33	1.81	8.87	10.51
9.2	12.22	9.12	7.66	5.87	4.77	3.19	2.33	1.8	8.77	10.36
9.2	12.12	9.03	7.6	5.87	4.75	3.17	2.32	1.76	8.72	10.24

88+22 (test 189)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 5.45333

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 123° F
GPS: 34.07919° Lat, -118.39261° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.4	5.48	4.44	4.19	3.8	3.37	2.69	1.98	0.49	4.18	4.41
9.45	5.44	4.42	4.18	3.8	3.41	2.74	1.97	1.46	4.32	4.42
9.38	5.44	4.42	4.16	3.78	3.41	2.67	1.98	1.47	4.31	4.37

89+24
Notes: CL of Alta Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07919° Lat, -118.39261° Lon
Limit ☐ NIS ☐

90+04 (test 190)

North Santa Monica Boulevard Eastbound Lane 2

Notes: Alligator Cracks
Avg FWD1: 4.60333

Pvt Temp: 110.6° F
GPS: 34.07951° Lat, -118.39214° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.4	4.64	3.94	3.66	3.24	2.89	2.23	1.73	1.32	3.86	3.97
9.4	4.59	3.87	3.61	3.2	2.85	2.18	1.62	1.25	3.86	3.96
9.45	4.58	3.87	3.61	3.23	2.85	2.22	1.66	1.3	3.82	3.95

92+23 (test 191)
Notes: Lateral Cracks, Longitudinal Cracks
Avg FWD1: 4.68

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 67.4° F
GPS: 34.07990° Lat, -118.39159° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.38	4.82	3.73	3.48	3.18	2.84	2.39	1.7	1.38	3.87	3.95
9.38	4.63	3.74	3.51	3.2	2.91	2.32	1.7	1.38	3.87	3.92
9.42	4.59	3.72	3.5	3.18	2.88	2.35	1.69	1.35	3.85	3.87

93+17
Notes: CL of Sierra Drive

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.07990° Lat, -118.39159° Lon
Limit ☑ NIS ☐

94+12 (test 192)
Notes: Alligator Cracks
Avg FWD1: 22.6933

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 122.3° F
GPS: 34.08020° Lat, -118.39109° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
9.03	22.9	18.75	15.43	10.44	6.82	3.55	2.43	2.48	16.66	18.61
8.96	22.56	18.7	15.37	10.55	6.75	3.55	2.48	2.42	16.37	18.22
9.11	22.62	18.86	15.42	10.41	6.77	3.6	2.43	2.6	16.33	18.12

95+26
Notes: Lateral Trench

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.08020° Lat, -118.39109° Lon
Limit ☐ NIS ☐

96+40 (test 193)
Notes: Alligator Cracks
Avg FWD1: 13.5433

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 117.2° F
GPS: 34.08043° Lat, -118.39040° Lon
Limit ☐ NIS ☐

Force	FWD1	FWD2	FWD3	FWD4	FWD5	FWD6	FWD7	FWD8	FWD9	FWD10
8.98	13.63	9.38	7.94	5.83	4.5	2.94	2.02	1.48	9.81	11.63
9.01	13.59	9.39	7.89	5.86	4.52	2.92	2.02	0.66	9.83	11.51
8.98	13.41	9.29	7.88	5.81	4.45	2.88	1.97	0.86	9.7	11.32

97+33
Notes: RTP

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.08043° Lat, -118.39040° Lon
Limit ☐ NIS ☐

97+98
Notes: Change in Pavement

North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.08043° Lat, -118.39040° Lon
Limit ☐ NIS ☐

98+98
Notes: CL of Doheny Drive

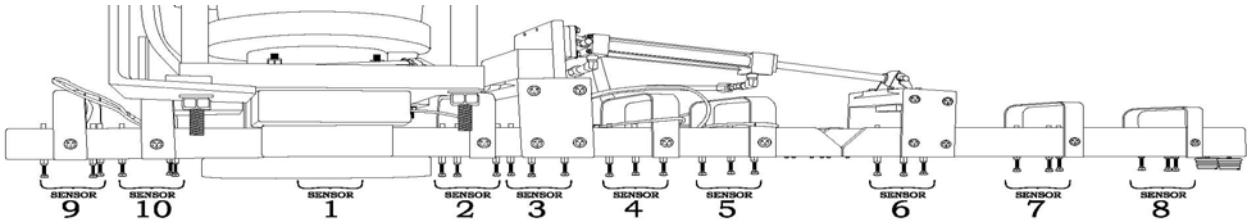
North Santa Monica Boulevard Eastbound Lane 2
Pvt Temp: 0° F
GPS: 34.08043° Lat, -118.39040° Lon
Limit ☐ NIS ☐

APPENDIX C

GLOSSARY OF TERMS

Glossary of Terms

Deflection Testing, CA Test Method 356, is a structural analysis of measured deflection values obtained during our field testing operations, utilizing our non-destructive JILS Falling Weight Deflectometer equipment. Data accumulated on the deflection values, thickness of AC pavement with aggregate base, subjected to various traffic loadings along with the tolerable deflection criteria, provides the basis of needed overlay and/or structural reinforcement. The Falling Weight Deflectometer, F.W.D., provides a tabulation of all test data, distance measurements DMI, field observations, in-situ pavement temperatures, global position GPS data, and permanent landmarks such as cross streets, patches, utility trenches, etc. taken in the field. The Individual deflection test data, provided with this report, was reviewed and grouped according to data trends and engineering judgment.



Sensors: FWD 1, FWD 2, FWD 3, FWD 4, FWD 5, FWD 6, FWD 7, FWD 8, FWD 9, FWD 10. These are the 10 separate deflection readings in 10^{-3} inches. FWD 1 represents the deflection directly beneath the load input.

Force: Standard Dynamic Loading measured.

GPR: Ground Penetrating Radar of in-situ pavement thicknesses. (optional)

GPS: The North American Datum (NAD 83).

NIS: Not included in sums.

Limits The station limits represent areas of like deflection determined during the engineering review of deflection data and field conditions. Limits are represented by local stationing gathered in the field per street, and is taken in each direction and lane.

FWD_{80th} The 80th percentile deflection value representing the strength under loading of the section/group being evaluated, reported in inches times 10^{-3}.

TD_{80th} The 80th percentile deflection value converted to an equivalent Traveling Deflectometer unit, reported in inches times 10^{-3}.

T The represented thickness (T) of existing pavement structure. This value is taken from our pavement coring data obtained in the field.

T.I. The Traffic Index (TI) used for the evaluation of the specific test loading. The traffic index represents the anticipated accumulation of equivalent axle loads with design period.

TDallow The maximum permissible deflection value where no reinforcement is necessary based upon asphalt concrete thickness and traffic index by Caltrans Test Method 356.

%Red. The percent reduction in measured deflection to match tolerable or allowable deflection levels, based upon Traveling Deflectometer conversions.

GE The equivalent thickness, in feet, of rock base required to effect the specified deflection reduction.

AC The equivalent thickness, in feet, of asphalt concrete thickness required to effect the specified deflection reduction.

NSL LaBelle Marvin, Inc.'s calculated Nominal Service Life of the existing pavement.

APPENDIX C

FIELD EXPLORATION PROCEDURES AND LOGS

APPENDIX C

FIELD EXPLORATION PROCEDURES AND LOGS

TABLE OF CONTENTS

FIGURES

APPENDIX C

FIELD EXPLORATION PROCEDURES AND LOGS

C.1. GENERAL

Shannon & Wilson performed 12 geotechnical subsurface explorations at the locations shown on Figure 2, Site and Exploration Plan. Three borings were drilled within the Beverly Gardens Park (BGP) and nine cores drilled through North Santa Monica Boulevard (NSMB). The borings were completed to depths of 11.5 to 21.5 feet below the existing ground surface (bgs) and the cores to five feet.

A description of the drilling methods and other field procedures used to perform the subsurface explorations is included in this appendix. Our soil and rock classification and log key is provided as Figure C-1. Logs of the explorations are included as Figures C-2 through C-10. For the NSMB exploration, photographs of the cores are provided as Figures C-14 to C-22. Photographs of the existing pavement at each core location are provided as Figures C-23 to C-31.

C.2. DRILLING PROCEDURES

C.2.1 Beverly Gardens Park Borings

The subsurface explorations performed as a part of our study consisted of drilling and sampling three borings. The borings were drilled with a track-mounted hollow-stem auger drill rig. Borings 1 and 3 were advanced to a depth of 10 feet below the ground surface (bgs) and sampled to 11½ feet bgs. Boring 3 was drilled to a depth of approximately 20 feet bgs and sampled to 21½ feet bgs.

C.2.2 North Santa Monica Pavement Coring

The subsurface explorations performed for this study included nine holes excavated to a depth of approximately five feet below the existing pavement surface. Each excavation consisted of coring through the existing pavement then extending the hole through the base material and subgrade with a truck-mounted hollow-stem auger. The cores were taken back to our Los Angeles, California laboratory for photographing and storage.

C.3. SAMPLING PROCEDURES

Sampling during drilling of the BGP borings consisted of Standard Penetration Test (SPT) samples and grab samples. Samples collected during coring of NSMB consisted of the pavement cores and grab samples of the base and subgrade materials.

C.3.1 Standard Penetration Test (SPT)

The SPT Method was performed in general accordance with ASTM Designation: D 1586, Standard Method for Penetration Testing and Split-barrel Sampling of Soils. SPTs were performed at 2½-foot intervals to the total depth. The SPT consists of driving a 2-inch outside-diameter (O.D.) split-spoon sampler a distance of 18 inches into the bottom of the borehole with a 140-pound hammer falling 30 inches. The number of blows required for the last 12 inches of penetration is termed the Standard Penetration Resistance (N-value). When the resistance exceeded 50 blows for 6 inches or less penetration, the test was terminated, and the number of blows and corresponding penetration were recorded. The value is an empirical parameter that provides a means for evaluating the relative density, or compactness, of granular soils and the consistency, or stiffness, of cohesive soils. The N-values are plotted on the boring logs.

The split-spoon sampler used during the penetration testing recovered a disturbed sample of the soil. The samples were field classified and recorded on the logs by our field representative, sealed in jars, and returned to our Los Angeles, California laboratory for testing.

C.3.2 Grab Samples

Grab samples are defined as soil samples that are "grabbed" from soil cuttings generated from the drilling process or directly from the side or bottom of the hole using a hand-operated tool. Grab samples were obtained from the cuttings during drilling.

While other types of sampling (e.g., rock core sampling or SPT sampling) cover a specific depth in the drilled hole, grab samples often have a less accurate depth because they are compiled from a depth range within a boring. The approximate sample depth was estimated and is noted on the exploration logs.

C.4. ENVIRONMENTAL FIELD SCREENING FOR VOLITILE ORGANIC COMPOUNDS (VOCS)

Soil samples were field screened by the Shannon & Wilson field representative for contamination in accordance with Shannon & Wilson's Field Inspector's Guidelines. Field-

screening methods consist of (a) visual observations, (b) photoionization detector (PID) measurements, (c) and/or olfactory observations. The PID was used to screen for the presence VOCs. When the field screening indicates potential soil contamination (i.e. ≥50 ppm), an environmental sample is obtained and the sample submitted for chemical analytical testing. Since the PID readings were less than 50 ppm and visual and olfactory observations did not suggest contamination, environmental samples were not collected during drilling of BGP or NSMB.

C.5. REVIEW AND CLASSIFICATION OF SAMPLES

C.5.1 Field Observations

The borings were observed by a Shannon & Wilson field representative, who collected, classified, stored, and transported the cores and soil samples; performed field screening; and prepared a detailed log of the exploration. In addition to examining and collecting soil samples, the field representatives also noted drill action, problems during drilling (e.g., heave, hole collapse, etc.), and other issues.

C.5.2 Soil Classification System

Soil classification for this project was based on ASTM D 2487, Standard Test Method for Classification of Soil for Engineering Purposes, and ASTM D 2488, Standard Recommended Practice for Description of Soils (Visual-Manual Procedure). The system is called the Unified Soil Classification System (USCS) and is summarized in Figure C-1.

C.5.3 Geologic Units and Descriptions

The geologic units as described in the report are used to maintain consistency when defining geology encountered in the borings and cores throughout the project area. These geologic units are interpretive and are based on our review of existing geologic literature for the project area. The geologic unit designations for each soil layer are shown in the descriptions in the boring logs included in this appendix.

C.5.4 Excavation Logs

An excavation log is a written record of the subsurface conditions encountered in the exploration. It shows the soil layers encountered in the exploration and the rock or USCS symbol of each layer. The boring logs presented in this appendix include a numerical representation of the uncorrected blow counts measured in the SPT's as well as the results of

selected laboratory index tests. Other information shown in the excavation logs includes the observed groundwater level (if present), horizontal coordinates, surface elevation, and types and depths of sampling.

The review and completion of the final excavation logs were performed by following a Quality Assurance/Quality Control (QA/QC) process developed by Shannon & Wilson. This program includes review of the soil samples by an experienced geologist after initial field observations are made, cross-checks with laboratory test results, and further cross-checks with developed geologic profiles. This detailed procedure is followed to provide consistency of the data presentation and to provide adequate QC for each exploration.

C.6. REFFERENCE

ASTM International (ASTM), 2006, Annual Book of Standards-Construction, v. 4.08, soil and rock, (I): D 420 – D 5611: West Conshohocken, Pa

Shannon & Wilson, Inc. (S&W), uses a soil identification system modified from the Unified Soil Classification System (USCS). Elements of the USCS and other definitions are provided on this and the following pages. Soil descriptions are based on visual-manual procedures (ASTM D2488) and laboratory testing procedures (ASTM D2487), if performed.

S&W INORGANIC SOIL CONSTITUENT DEFINITIONS

CONSTITUENT[2]	FINE-GRAINED SOILS (50% or more fines)[1]	COARSE-GRAINED SOILS (less than 50% fines)[1]
Major	***Silt, Lean Clay, Elastic Silt,*** or ***Fat Clay***[3]	***Sand*** or ***Gravel***[4]
Modifying (Secondary) Precedes major constituent	30% or more coarse-grained: ***Sandy*** or ***Gravelly***[4]	More than 12% fine-grained: ***Silty*** or ***Clayey***[3]
Minor Follows major constituent	15% to 30% coarse-grained: ***with Sand*** or ***with Gravel***[4]	5% to 12% fine-grained: ***with Silt*** or ***with Clay***[3]
	30% or more total coarse-grained *and* lesser coarse-grained constituent is 15% or more: ***with Sand*** or ***with Gravel***[5]	15% or more of a second coarse-grained constituent: ***with Sand*** or ***with Gravel***[5]

[1]All percentages are by weight of total specimen passing a 3-inch sieve.
[2]The order of terms is: *Modifying Major with Minor*.
[3]Determined based on behavior.
[4]Determined based on which constituent comprises a larger percentage.
[5]Whichever is the lesser constituent.

MOISTURE CONTENT TERMS

Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, from below water table

STANDARD PENETRATION TEST (SPT) SPECIFICATIONS

Hammer:	140 pounds with a 30-inch free fall. Rope on 6- to 10-inch-diam. cathead 2-1/4 rope turns, > 100 rpm NOTE: If automatic hammers are used, blow counts shown on boring logs should be adjusted to account for efficiency of hammer.
Sampler:	10 to 30 inches long Shoe I.D. = 1.375 inches Barrel I.D. = 1.5 inches Barrel O.D. = 2 inches
N-Value:	Sum blow counts for second and third 6-inch increments. Refusal: 50 blows for 6 inches or less; 10 blows for 0 inches.

NOTE: Penetration resistances (N-values) shown on boring logs are as recorded in the field and have not been corrected for hammer efficiency, overburden, or other factors.

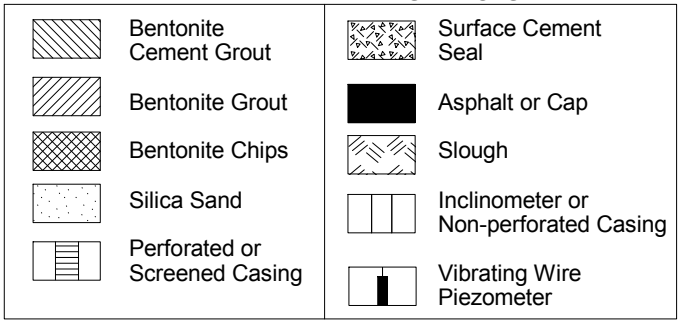
PARTICLE SIZE DEFINITIONS

DESCRIPTION	SIEVE NUMBER AND/OR APPROXIMATE SIZE
FINES	< #200 (0.075 mm = 0.003 in.)
SAND	
Fine	#200 to #40 (0.075 to 0.4 mm; 0.003 to 0.02 in.)
Medium	#40 to #10 (0.4 to 2 mm; 0.02 to 0.08 in.)
Coarse	#10 to #4 (2 to 4.75 mm; 0.08 to 0.187 in.)
GRAVEL	
Fine	#4 to 3/4 in. (4.75 to 19 mm; 0.187 to 0.75 in.)
Coarse	3/4 to 3 in. (19 to 76 mm)
COBBLES	3 to 12 in. (76 to 305 mm)
BOULDERS	> 12 in. (305 mm)

RELATIVE DENSITY / CONSISTENCY

COHESIONLESS SOILS		COHESIVE SOILS	
N, SPT, BLOWS/FT.	RELATIVE DENSITY	N, SPT, BLOWS/FT.	RELATIVE CONSISTENCY
< 4	Very loose	< 2	Very soft
4 - 10	Loose	2 - 4	Soft
10 - 30	Medium dense	4 - 8	Medium stiff
30 - 50	Dense	8 - 15	Stiff
> 50	Very dense	15 - 30	Very stiff
		> 30	Hard

WELL AND BACKFILL SYMBOLS



PERCENTAGES TERMS [1, 2]

Trace	< 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

[1]Gravel, sand, and fines estimated by mass. Other constituents, such as organics, cobbles, and boulders, estimated by volume.

[2]Reprinted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

SOIL DESCRIPTION AND LOG KEY

November 2013 51-1-10092-003

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. C-1
Sheet 1 of 3

2013 BORING CLASS1 51-1-10092-001.GPJ SWNEW.GDT 11/4/13

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)
(Modified From USACE Tech Memo 3-357, ASTM D2487, and ASTM D2488)

MAJOR DIVISIONS			GROUP/GRAPHIC SYMBOL		TYPICAL IDENTIFICATIONS
COARSE-GRAINED SOILS *(more than 50% retained on No. 200 sieve)*	Gravels *(more than 50% of coarse fraction retained on No. 4 sieve)*	Gravel *(less than 5% fines)*	GW		Well-Graded Gravel; Well-Graded Gravel with Sand
			GP		Poorly Graded Gravel; Poorly Graded Gravel with Sand
		Silty or Clayey Gravel *(more than 12% fines)*	GM		Silty Gravel; Silty Gravel with Sand
			GC		Clayey Gravel; Clayey Gravel with Sand
	Sands *(50% or more of coarse fraction passes the No. 4 sieve)*	Sand *(less than 5% fines)*	SW		Well-Graded Sand; Well-Graded Sand with Gravel
			SP		Poorly Graded Sand; Poorly Graded Sand with Gravel
		Silty or Clayey Sand *(more than 12% fines)*	SM		Silty Sand; Silty Sand with Gravel
			SC		Clayey Sand; Clayey Sand with Gravel
FINE-GRAINED SOILS *(50% or more passes the No. 200 sieve)*	Silts and Clays *(liquid limit less than 50)*	Inorganic	ML		Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt
			CL		Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay
		Organic	OL		Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay
	Silts and Clays *(liquid limit 50 or more)*	Inorganic	MH		Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt
			CH		Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay
		Organic	OH		Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay
HIGHLY-ORGANIC SOILS	Primarily organic matter, dark in color, and organic odor		PT		Peat or other highly organic soils (see ASTM D4427)

NOTE: No. 4 size = 4.75 mm = 0.187 in.; No. 200 size = 0.075 mm = 0.003 in.

NOTES

1. Dual symbols *(symbols separated by a hyphen, i.e., SP-SM, Sand with Silt)* are used for soils with between 5% and 12% fines or when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart. Graphics shown on the logs for these soil types are a combination of the two graphic symbols (e.g., SP and SM).

2. Borderline symbols *(symbols separated by a slash, i.e., CL/ML, Lean Clay to Silt; SP-SM/SM, Sand with Silt to Silty Sand)* indicate that the soil properties are close to the defining boundary between two groups.

North Santa Monica Boulevard Reconstruction
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SOIL DESCRIPTION AND LOG KEY

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SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. C-1
Sheet 2 of 3

2013_BORING_CLASS2 51-1-10092-001.GPJ SWNEW.GDT 11/4/13

GRADATION TERMS

Poorly Graded	Narrow range of grain sizes present or, within the range of grain sizes present, one or more sizes are missing (Gap Graded). Meets criteria in ASTM D2487, if tested.
Well-Graded	Full range and even distribution of grain sizes present. Meets criteria in ASTM D2487, if tested.

CEMENTATION TERMS[1]

Weak	Crumbles or breaks with handling or slight finger pressure
Moderate	Crumbles or breaks with considerable finger pressure
Strong	Will not crumble or break with finger pressure

PLASTICITY[2]

DESCRIPTION	VISUAL-MANUAL CRITERIA	APPROX. PLASITICTY INDEX RANGE
Nonplastic	A 1/8-in. thread cannot be rolled at any water content.	< 4
Low	A thread can barely be rolled and a lump cannot be formed when drier than the plastic limit.	4 to 10
Medium	A thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. A lump crumbles when drier than the plastic limit.	10 to 20
High	It take considerable time rolling and kneading to reach the plastic limit. A thread can be rerolled several times after reaching the plastic limit. A lump can be formed without crumbling when drier than the plastic limit.	> 20

ADDITIONAL TERMS

Mottled	Irregular patches of different colors.
Bioturbated	Soil disturbance or mixing by plants or animals.
Diamict	Nonsorted sediment; sand and gravel in silt and/or clay matrix.
Cuttings	Material brought to surface by drilling.
Slough	Material that caved from sides of borehole.
Sheared	Disturbed texture, mix of strengths.

PARTICLE ANGULARITY AND SHAPE TERMS[1]

Angular	Sharp edges and unpolished planar surfaces.
Subangular	Similar to angular, but with rounded edges.
Subrounded	Nearly planar sides with well-rounded edges.
Rounded	Smoothly curved sides with no edges.
Flat	Width/thickness ratio > 3.
Elongated	Length/width ratio > 3.

ACRONYMS AND ABBREVIATIONS

ATD	At Time of Drilling
Diam.	Diameter
Elev.	Elevation
ft.	Feet
FeO	Iron Oxide
gal.	Gallons
Horiz.	Horizontal
HSA	Hollow Stem Auger
I.D.	Inside Diameter
in.	Inches
lbs.	Pounds
MgO	Magnesium Oxide
mm	Millimeter
MnO	Manganese Oxide
NA	Not Applicable or Not Available
NP	Nonplastic
O.D.	Outside Diameter
OW	Observation Well
pcf	Pounds per Cubic Foot
PID	Photo-Ionization Detector
PMT	Pressuremeter Test
ppm	Parts per Million
psi	Pounds per Square Inch
PVC	Polyvinyl Chloride
rpm	Rotations per Minute
SPT	Standard Penetration Test
USCS	Unified Soil Classification System
q_u	Unconfined Compressive Strength
VWP	Vibrating Wire Piezometer
Vert.	Vertical
WOH	Weight of Hammer
WOR	Weight of Rods
Wt.	Weight

STRUCTURE TERMS[1]

Interbedded	Alternating layers of varying material or color with layers at least 1/4-inch thick; singular: bed.
Laminated	Alternating layers of varying material or color with layers less than 1/4-inch thick; singular: lamination.
Fissured	Breaks along definite planes or fractures with little resistance.
Slickensided	Fracture planes appear polished or glossy; sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps that resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay.
Homogeneous	Same color and appearance throughout.

[1]Reprinted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.
[2]Adapted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

SOIL DESCRIPTION AND LOG KEY

November 2013 51-1-10092-003

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. C-1
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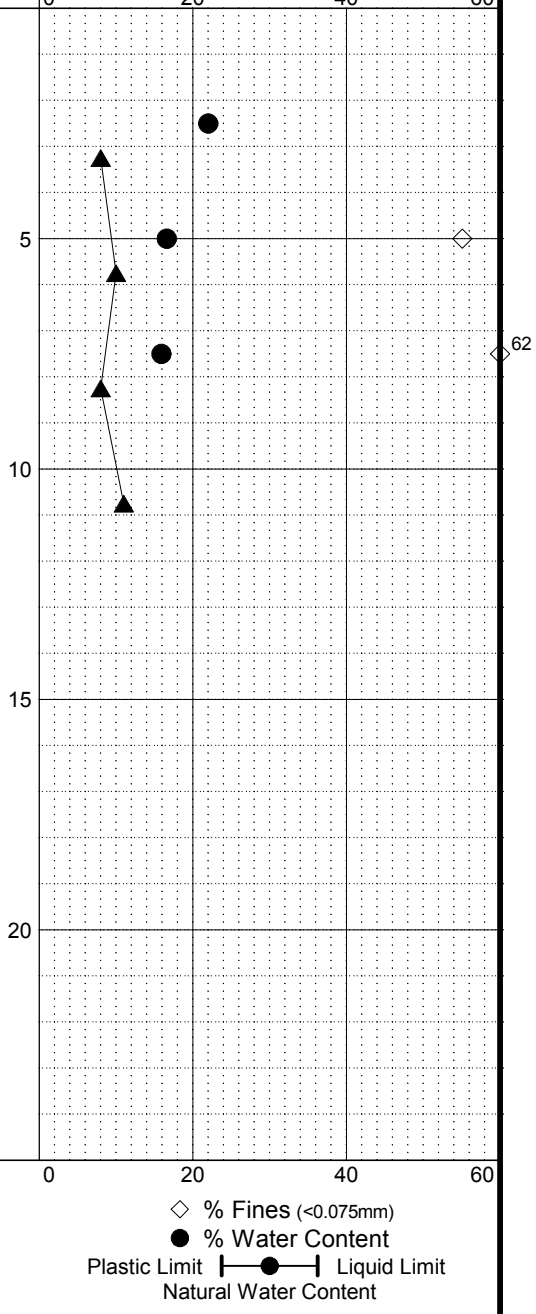
2013_BORING_CLASS3 51-1-10092-001.GPJ SWNEW.GDT 11/4/13

Total Depth:	*11.5 ft.*	Northing:	*~ 1,848,800 ft.*	Drilling Method:	*Hollow Stem Auger*	Hole Diam.:	*8 in.*
Top Elevation:	*~ 270 ft.*	Easting:	*~ 6,439,270 ft.*	Drilling Company:	*2R Drilling*	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	*CME 75 Track Mounted*	Hammer Type:	*Automatic*
Horiz. Datum:	*NAD83 State*	Offset:	~	Other Comments:			

SOIL DESCRIPTION	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water Depth, ft.
Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.					
Soft to medium stiff, dark red-brown, *Lean Clay (CL).* Quaternary Alluvium (Qal), disturbed near surface.			1.4	1	
Stiff, dark red-brown, *Sandy Lean Clay (CL);* occasional lenses of red-yellow sand ~1/2" diameter; trace clay.	5.0		2.3	2	
Medium stiff to stiff, red-brown, *Sandy Silty Clay (CL-ML).*	7.5		1.8	3	
			2	4	
BOTTOM OF BORING COMPLETED 10/1/2013	11.5				

PENETRATION RESISTANCE (blows/foot)

▲ Hammer Wt. & Drop: *140 lbs / 30 inches*



◇ % Fines (<0.075mm)

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

LEGEND

* Sample Not Recovered

⌶ 2.0" O.D. Split Spoon Sample

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF BORING B-1

November 2013 51-1-10092-003

SHANNON & WILSON, INC.
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FIG. C-2

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

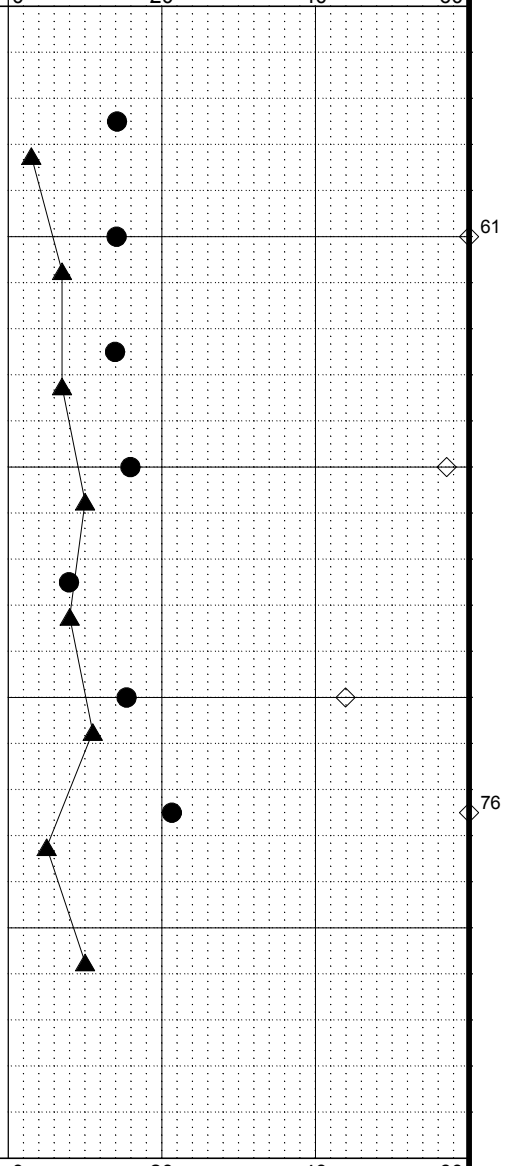
Total Depth:	21.5 ft.	Northing:	~ 1,849,050 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 270 ft.	Easting:	~ 6,439,610 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Track Mounted	Hammer Type:	Automatic
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:			

SOIL DESCRIPTION	Depth, ft.	PID, ppm	Samples
Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.			
Soft to medium stiff, dark red-brown, *Sandy Silt (ML);* moist. Quaternary Alluvium (Qal), disturbed near surface.		11.5	1
		11.5	2
Medium stiff, red-brown, *Sandy Silt (ML);* moist.	7.5	11.5	3
Stiff, reddish yellow, *Sandy Silty Clay (CL-ML);* moist.	10.0	11.5	4
Medium stiff to stiff, red-yellow, *Sandy Silt (ML);* moist; slate fragments.	12.5	11.5	5
Medium dense, red- yellow, *Silty Clayey Sand (SC-SM);* moist.	15.0	11.5	6
Medium stiff, red-yellow, *Lean Clay (CL);* moist.	17.5	11.5	7
Stiff, red-yellow, *Sandy Lean Clay (CL);* moist.	20.0	11.5	8
BOTTOM OF BORING COMPLETED 10/1/2013	21.5		

Ground Water Depth, ft.

PENETRATION RESISTANCE (blows/foot)

▲ Hammer Wt. & Drop: *140 lbs / 30 inches*



◇ % Fines (<0.075mm)

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

LEGEND

* Sample Not Recovered

⌶ 2.0" O.D. Split Spoon Sample

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF BORING B-2

November 2013 51-1-10092-003

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. C-3

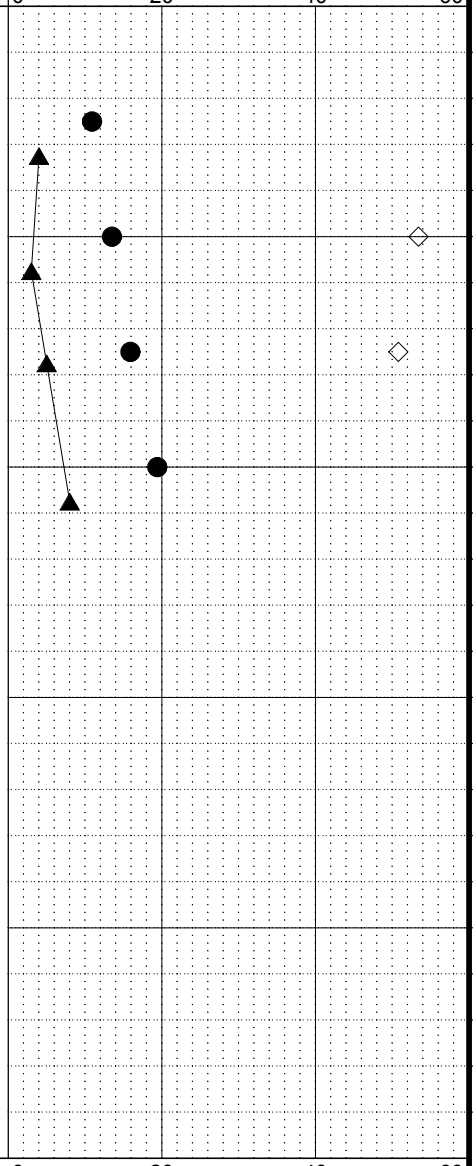
MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 12/2/13 Rev: Typ: LOL

Total Depth:	*11.5 ft.*	Northing:	*~ 1,849,300 ft.*	Drilling Method:	*Hollow Stem Auger*	Hole Diam.:	*8 in.*
Top Elevation:	*~ 268 ft.*	Easting:	*~ 6,439,870 ft.*	Drilling Company:	*2R Drilling*	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	*CME 75 Track Mounted*	Hammer Type:	*Automatic*
Horiz. Datum:	*NAD83 State*	Offset:	~	Other Comments:			

SOIL DESCRIPTION	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water Depth, ft.
Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.					
Soft to medium stiff, dark red-brown, *Sandy Silt (ML);* moist. Quaternary Alluvium (Qal), disturbed near surface.			4	1	
Soft, dark red-brown, *Sandy Silt (ML);* moist; trace clay.	5.0		3.8	2	
Medium stiff, red-brown, *Sandy Silty Clay (CL-ML);* moist.	7.5		4.1	3	
			3.8	4	
BOTTOM OF BORING COMPLETED 10/1/2013	11.5				

PENETRATION RESISTANCE (blows/foot)

▲ Hammer Wt. & Drop: *140 lbs / 30 inches*



◇ % Fines (<0.075mm)

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

LEGEND

* Sample Not Recovered

⌶ 2.0" O.D. Split Spoon Sample

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF BORING B-3

November 2013 51-1-10092-003

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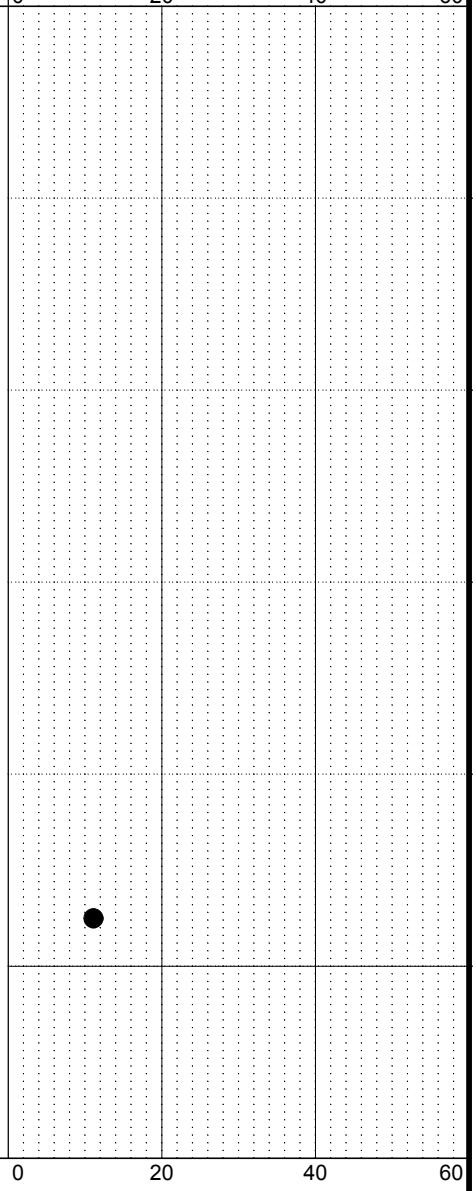
FIG. C-4

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 12/2/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,846,288 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 268 ft.	Easting:	~ 6,436,425 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION *Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.*	Depth, ft.	PID, ppm	Samples	Ground Water Depth, ft.
Asphalt Concrete				
Concrete	0.4			
Dense, brown, *Well Graded Sandy Gravel with Silt (GW);* moist.	1.1	0	1 G	
Base (Fill)	1.4			
Dense to medium dense, light brown, *Well Graded Silty Sand (SM);* moist; fine gravel fraction.		0	2 G	
Subgrade, likely fill material (Fill)				
		0	3 G	
BOTTOM OF CORE COMPLETED 10/13/2013	5.0			



LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF CORE C-1

November 2013 51-1-10092-003

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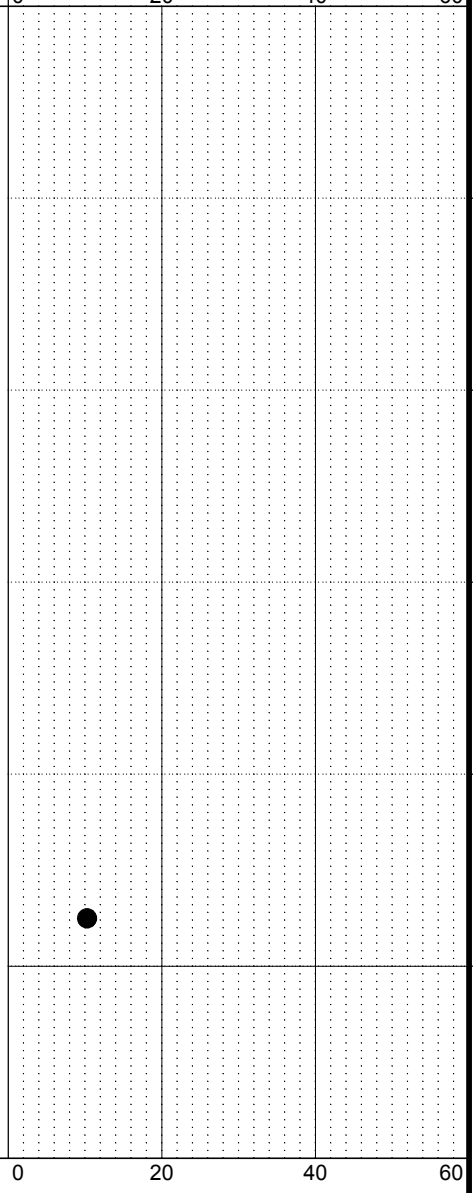
FIG. C-5

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,846,821 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 268 ft.	Easting:	~ 6,437,107 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION *Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.*	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water Depth, ft.
Asphalt concrete: 0' to 0.15', asphalt concrete overlay; 0.15' to 0.30', asphalt concrete overlay; 0.30' to 0.75', asphalt concrete.					
Dense, brown, *Gravelly Sand with silt (SM-GM);* moist. Base (Fill)	0.8 1.2		0	1 G	
Dense, red-brown, *Silty Sand with Gravel (SM);* moist. Subgrade			0	2 G	
			0	3 G	
BOTTOM OF CORE COMPLETED 10/13/2013	5.0				



LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF CORE C-2

November 2013 51-1-10092-003

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FIG. C-6

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	*5 ft.*	Northing:	*~ 1,847,566 ft.*	Drilling Method:	*Hollow Stem Auger*	Hole Diam.:	*8 in.*
Top Elevation:	*~ 268 ft.*	Easting:	*~ 6,437,994 ft.*	Drilling Company:	*2R Drilling*	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	*CME 75 Truck*	Hammer Type:	
Horiz. Datum:	*NAD83 State*	Offset:	~	Other Comments:	*12-inch Core Barrel / 8-inch Hollow Stem Auger*		

SOIL DESCRIPTION *Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.*	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water Depth, ft.
Asphalt Concrete				1 G	
Dense, dark brown, *Poorly Graded Gravel with Sand (GP);* moist. Subgrade (Fill)	0.8		0	2 G	
Dense, dark brown, *Poorly Graded Gravel with Sand (GP);* moist.	3.0		0	3 G	
BOTTOM OF CORE COMPLETED 10/27/2013	5.0				

0 20 40 60

5

0 20 40 60

LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF CORE C-3

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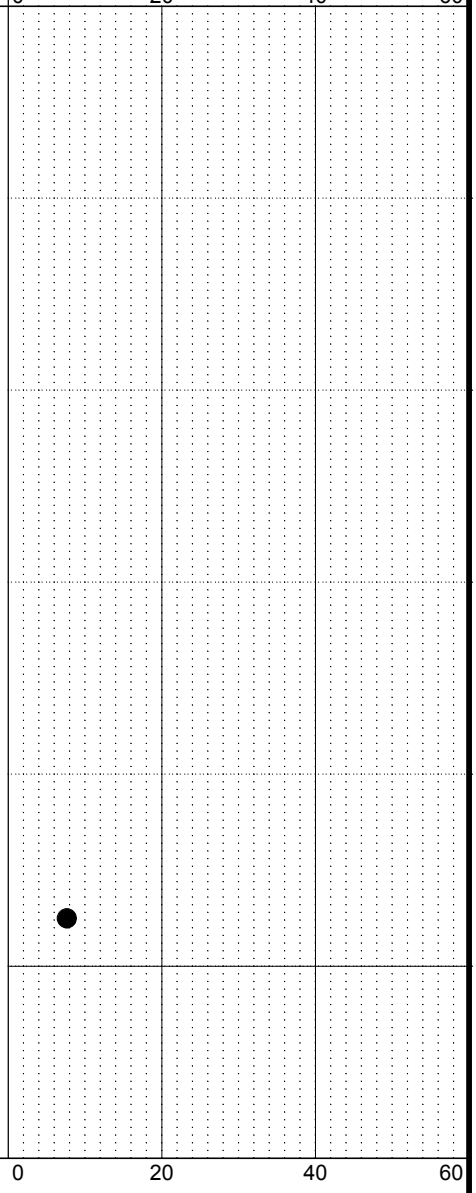
FIG. C-7

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,848,268 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 267 ft.	Easting:	~ 6,438,924 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION *Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.*	Depth, ft.	PID, ppm	Samples	Ground Water Depth, ft.
Asphalt concrete: 0' to 0.15', broke off in core barrel, overlay (?); 0.15' to 0.4', Asphalt with loose chips, overlay (?); 0.4' to 0.7', Asphalt concrete (Intact).	0.7	0	1 G	
Grey-brown, *Sandy Gravel with Silt (GP);* moist. Base (Fill)	1.2	0	2 G	
Brown, *Silty Sand with Gravel (SP);* moist. Subgrade (Fill)		0	3 G	
BOTTOM OF CORE COMPLETED 10/13/2013	5.0			



LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF CORE C-4

November 2013 51-1-10092-003

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FIG. C-8

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,849,052 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 265 ft.	Easting:	~ 6,439,845 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION *Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.*	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water Depth, ft.
Asphalt concrete					
Concrete. Sample adjacent to bus stop pull out.	0.2			1 G	
Dense, dark-brown, *Silty Sand with Coarse Gravel (SM); moist.* *Subgrade*	0.8		0	2 G	
BOTTOM OF CORE COMPLETED 10/27/2013	5.0				

0 20 40 60

5

0 20 40 60

LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF CORE C-5

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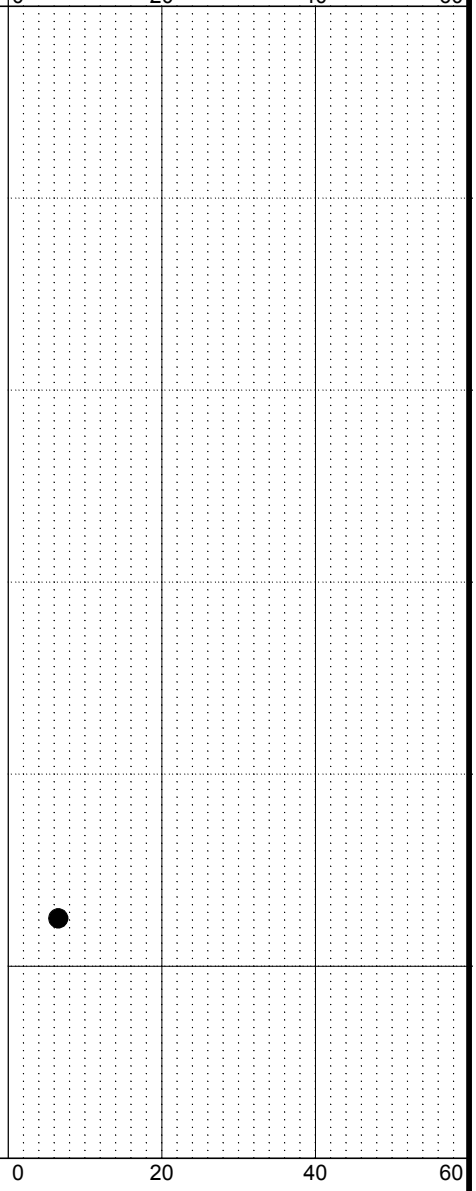
FIG. C-9

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,849,759 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 252 ft.	Easting:	~ 6,440,732 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION	Depth, ft.	PID, ppm	Samples
Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.			
Asphalt concrete: 0' to 0.2', asphalt concrete overlay; 0.2' to 0.6', asphalt concrete.			
Dense, grey-brown, *Sandy Gravel with Silt (GP);* moist. Base (Fill)	0.6	0	1 G
Dense, brown, *Silty Sand with Gravel (SM);* moist. Subgrade (Fill)	1.2	0	2 G
		0	3 G
BOTTOM OF CORE COMPLETED 10/13/2013	5.0		

Ground Water Depth, ft.



LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

LOG OF CORE C-6

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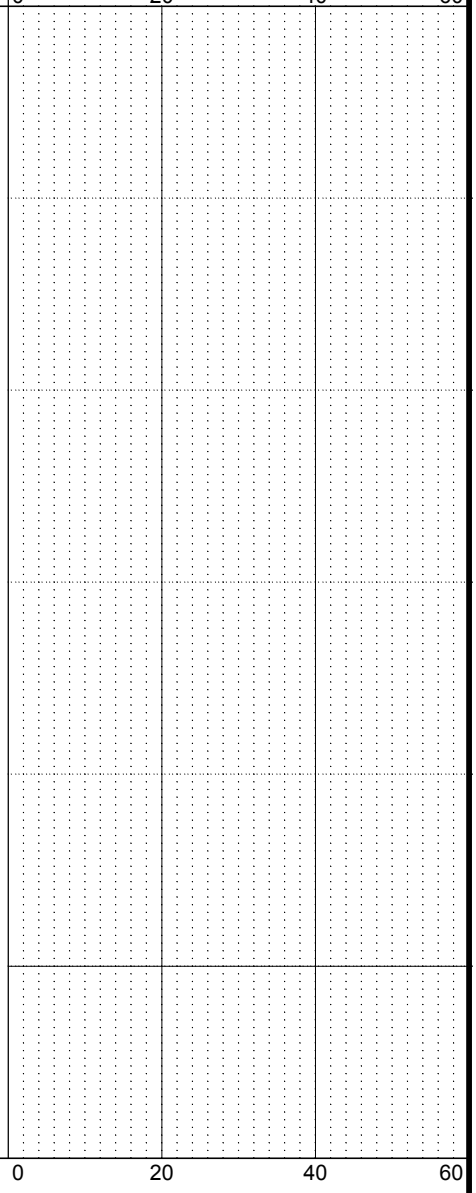
FIG. C-10

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,850,394 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 246 ft.	Easting:	~ 6,441,488 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION *Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.*	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water Depth, ft.
Asphalt concrete: 0' to 0.15', asphalt concrete overlay; 0.15' to 0.65', asphalt concrete.				1 G	
Dense, dark brown, *Poorly Graded Gravel with Sand (GP);* moist. Base (Fill)	0.6		0	2 G	
Dense, dark brown, *Silty Sand (SM);* moist. Subgrade	1.6		0	3 G	
BOTTOM OF CORE COMPLETED 10/27/2013	5.0				



LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
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LOG OF CORE C-7

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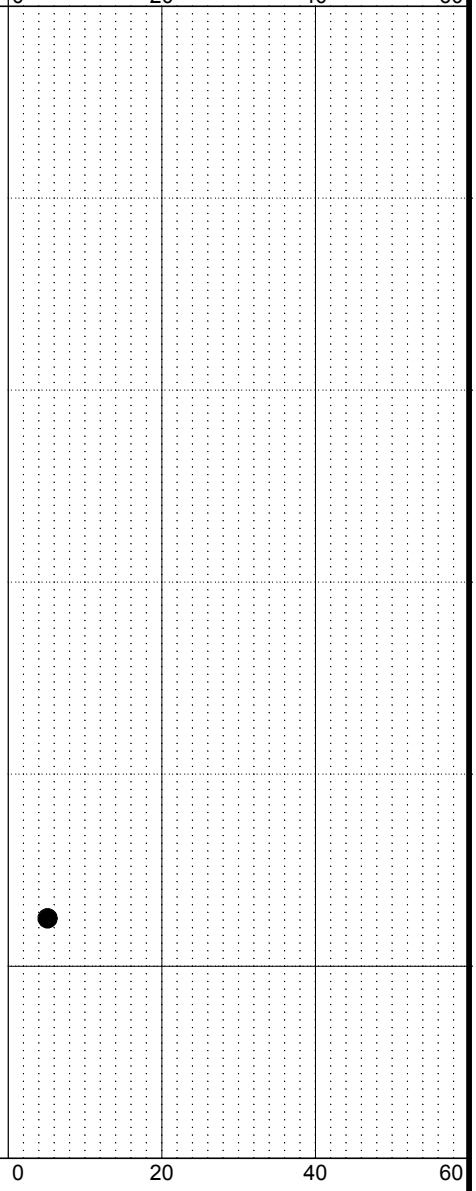
FIG. C-11

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,851,037 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 238 ft.	Easting:	~ 6,442,282 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water Depth, ft.
Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.					
Asphalt concrete: 0' to 0.2', asphalt concrete overlay; 0.2' to 0.5', asphalt concrete; 0.5' to 0.6', asphalt concrete.	0.6				
Grey-brown, *Slightly Silty Sandy Gravel (GM);* moist. Base (Fill)			0	1 G	
Brown, *Silty, Gravelly Sand (SM);* moist. Subgrade (Fill)	1.6		0	2 G	
			0	3 G	
BOTTOM OF CORE COMPLETED 10/13/2013	5.0				



LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
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LOG OF CORE C-8

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FIG. C-12

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

Total Depth:	5 ft.	Northing:	~ 1,851,818 ft.	Drilling Method:	Hollow Stem Auger	Hole Diam.:	8 in.
Top Elevation:	~ 229 ft.	Easting:	~ 6,443,184 ft.	Drilling Company:	2R Drilling	Rod Diam.:	
Vert. Datum:		Station:	~	Drill Rig Equipment:	CME 75 Truck	Hammer Type:	
Horiz. Datum:	NAD83 State	Offset:	~	Other Comments:	12-inch Core Barrel / 8-inch Hollow Stem Auger		

SOIL DESCRIPTION *Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.*	Depth, ft.	PID, ppm	Samples
Asphalt concrete: 0' to 0.15', asphalt concrete overlay; 0.15' to 0.5', asphalt concrete.	0.5		1 G
Dense, dark brown, *Poorly Graded Gravel with Sand (GP); moist.* *Base (Fill)*	1.5	0	2 G
Dense, dark brown, *Silty Gravel with Sand (GM); moist.* *Subgrade*		43	3 G
BOTTOM OF CORE COMPLETED 10/27/2013	5.0		

Ground Water Depth, ft.

0 20 40 60

5

0 20 40 60

LEGEND

* Sample Not Recovered

G Grab Sample

● % Water Content

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. The hole location was measured using a cloth tape from existing site features and should be considered approximate.

North Santa Monica Boulevard Reconstruction
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LOG OF CORE C-9

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FIG. C-13

MASTER_LOG_E_NO_SHEAR 51-1-10092-001.GPJ SHAN_WIL.GDT 11/22/13 Rev: Typ: LOL

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-1

November 2013 51-1-10092-003

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FIG. C-14

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-2

November 2013 51-1-10092-003

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FIG. C-15

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-3

November 2013 51-1-10092-003

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FIG. C-16

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-4

November 2013 51-1-10092-003

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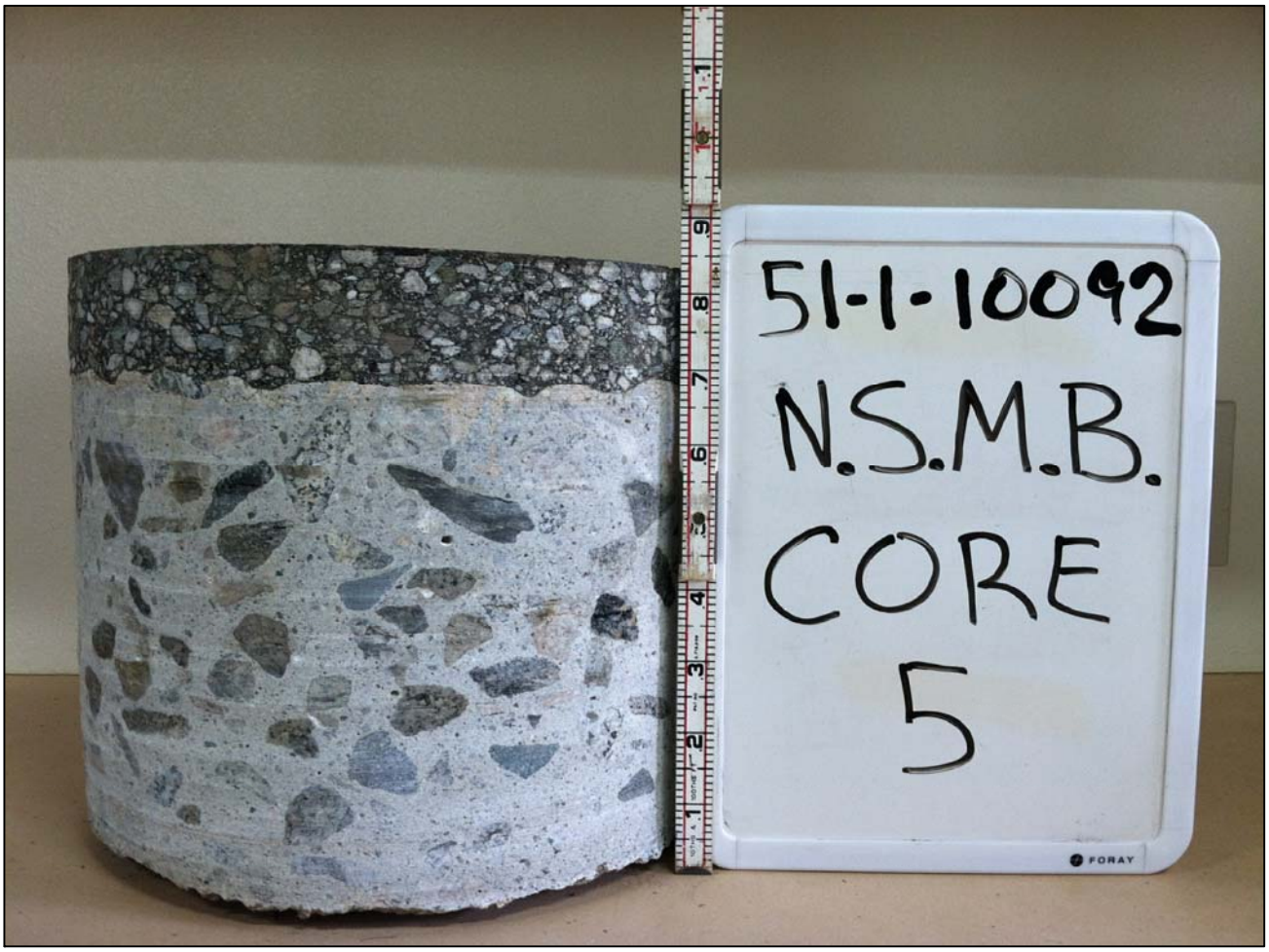
FIG. C-17

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios



North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-5

November 2013 51-1-10092-003

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FIG. C-18

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-6

November 2013 51-1-10092-003

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. C-19

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-7

November 2013 51-1-10092-003

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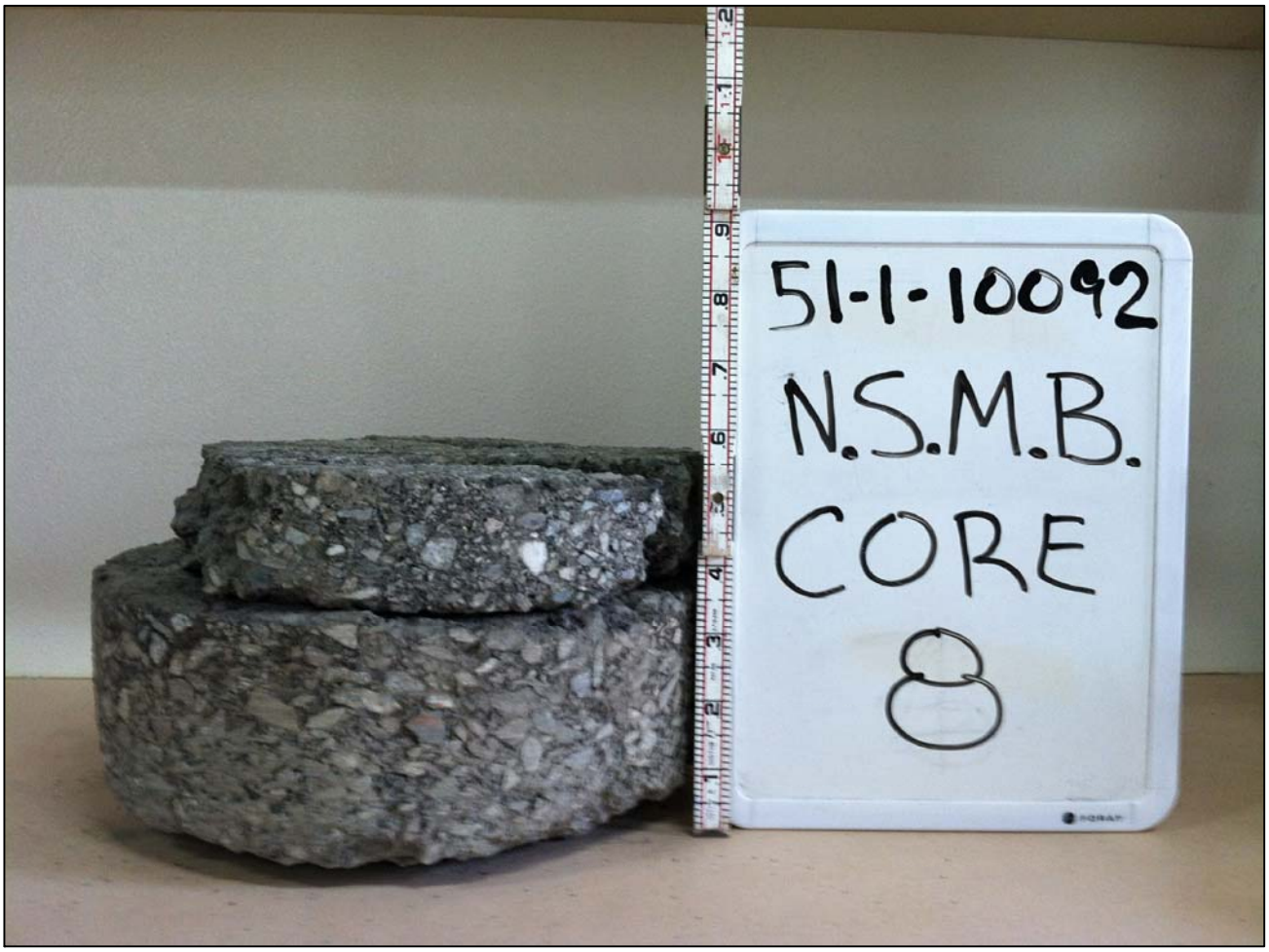
FIG. C-20

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios



North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-8

November 2013 51-1-10092-003

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FIG. C-21

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

CORE PHOTO
C-9

November 2013 51-1-10092-003

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FIG. C-22

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-14 TO 22 - CORE PHOTOS.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

PAVEMENT IN VICINITY OF C-1

November 2013 51-1-10092-003

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FIG. C-23

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

PAVEMENT IN VICINITY OF C-2

November 2013 51-1-10092-003

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FIG. C-24

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

PAVEMENT IN VICINITY OF C-3

November 2013 51-1-10092-003

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FIG. C-25

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

PAVEMENT IN VICINITY OF C-4

November 2013 51-1-10092-003

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FIG. C-26

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

PAVEMENT IN VICINITY OF C-5

November 2013 51-1-10092-003

SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. C-27

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

PAVEMENT IN VICINITY OF C-6

November 2013 51-1-10092-003

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FIG. C-28

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

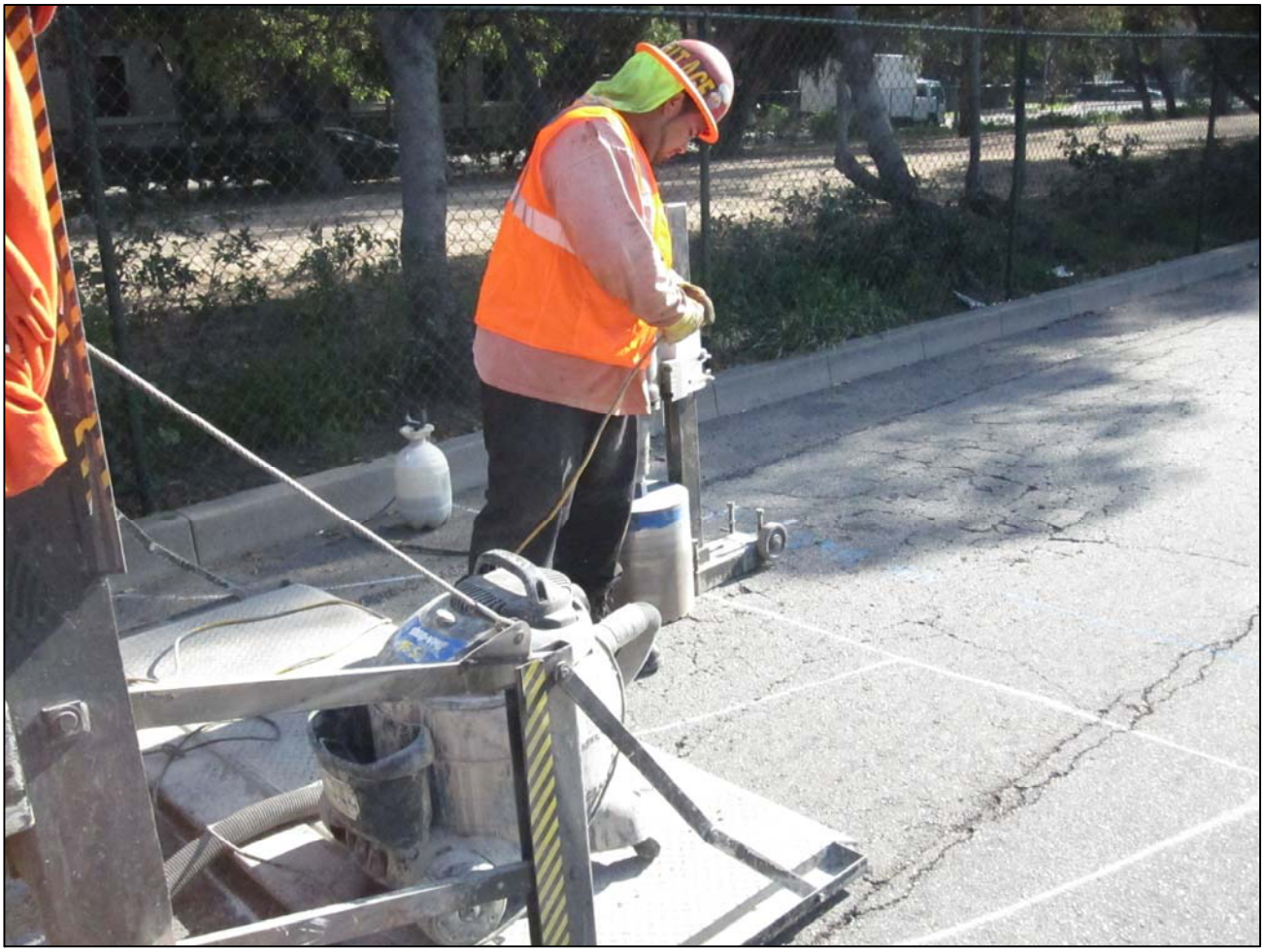
PAVEMENT IN VICINITY OF C-7

November 2013 51-1-10092-003

SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. C-29

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios



North Santa Monica Boulevard Reconstruction
Beverly Hills, California

PAVEMENT IN VICINITY OF C-8

November 2013 51-1-10092-003

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FIG. C-30

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

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Beverly Hills, California

PAVEMENT IN VICINITY OF C-9

November 2013 51-1-10092-003

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FIG. C-31

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG C-23 TO 31 - PAVEMENT IN VICINITY.dwg Date: 11-13-2013 Login: Louis Larios

APPENDIX D

GEOTECHNICAL LABORATORY TESTING PROCEDURES AND RESULTS

APPENDIX D

GEOTECHNICAL LABORATORY TESTING PROCEDURES AND RESULTS

TABLE OF CONTENTS

FIGURES

APPENDIX D

GEOTECHNICAL LABORATORY TESTING PROCEDURES AND RESULTS

D.1. GENERAL

This appendix contains descriptions of the procedures and the results of the geotechnical laboratory tests for the project. Samples recovered from the borings and cores were tested to evaluate the basic index and engineering properties and strength of the subsurface soils. Geotechnical laboratory testing of recovered soils included visual classifications, water content determinations, grain size distribution, and R-value testing. The laboratory testing was performed in general accordance with ASTM International (ASTM) standard test procedures.

D.2. VISUAL CLASSIFICATION

Each sample recovered was visually classified in our laboratory. The soil samples were classified using a system based on the ASTM Designation: D 2487, Standard Test Method for Classification of Soil for Engineering Purposes, and ASTM Designation: D 2488, Standard Recommended Practice for Description of Soils (Visual-Manual Procedure) (ASTM, 2007). These ASTM standards generally use the Unified Soil Classification System. Sample classifications have been incorporated into the soil and bedrock descriptions on the boring and core logs presented in Appendix C.

D.3. WATER CONTENT

The water content of samples of soil recovered from the borings and cores were determined in general accordance with ASTM D 2216, Standard Method of Laboratory Determination of water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures (ASTM, 2007). Comparison of water content of a soil with its index properties can be useful in characterizing soil unit weight, consistency, compressibility, and strength. Water contents are presented on the boring logs in Appendix C.

D.4. GRAIN SIZE ANALYSIS

The grain size distribution of selected samples was determined using a hydrometer in general accordance with the ASTM D 422, Standard Test Method for Particle-Size Analysis of Soils (ASTM, 2007). This test is useful for classifying soils, for providing correlation with soil properties, and for evaluating liquefaction potential.

Results of these analyses are presented as grain size distribution curves in Figures D-1 through D-3. Each gradation sheet provides the boring number, sample depth, USCS group symbol, and sample description.

We incorporated the results of our grain size analyses into the boring logs (Figures C-2 through C-4, Appendix C) and present the results in Appendix D (Figures D-1 through D-3). The USDA Textural Triangle in Figure D-4 presents the USDA soil textures for selected samples collected from the three borings. The shaded area on Figure D-4 indicates soil textures that we consider as applicable for design of infiltration BMPs, based on research conducted by Rawls et al. (1982) and summarized by the Washington State Department of Ecology Manual (Ecology Manual, 2005).

The fines content of selected samples was determined in general accordance with ASTM D 1140, Standard Test Methods for Amount of Material in Soils Finer than No. 200 (.075mm) Sieve (ASTM, 2007). The percent passing the No. 200 sieve (0.075 mm) is shown on Figures D-1 through D-3 and as points on the exploration logs included in Appendix C.

D.5. R-VALUE

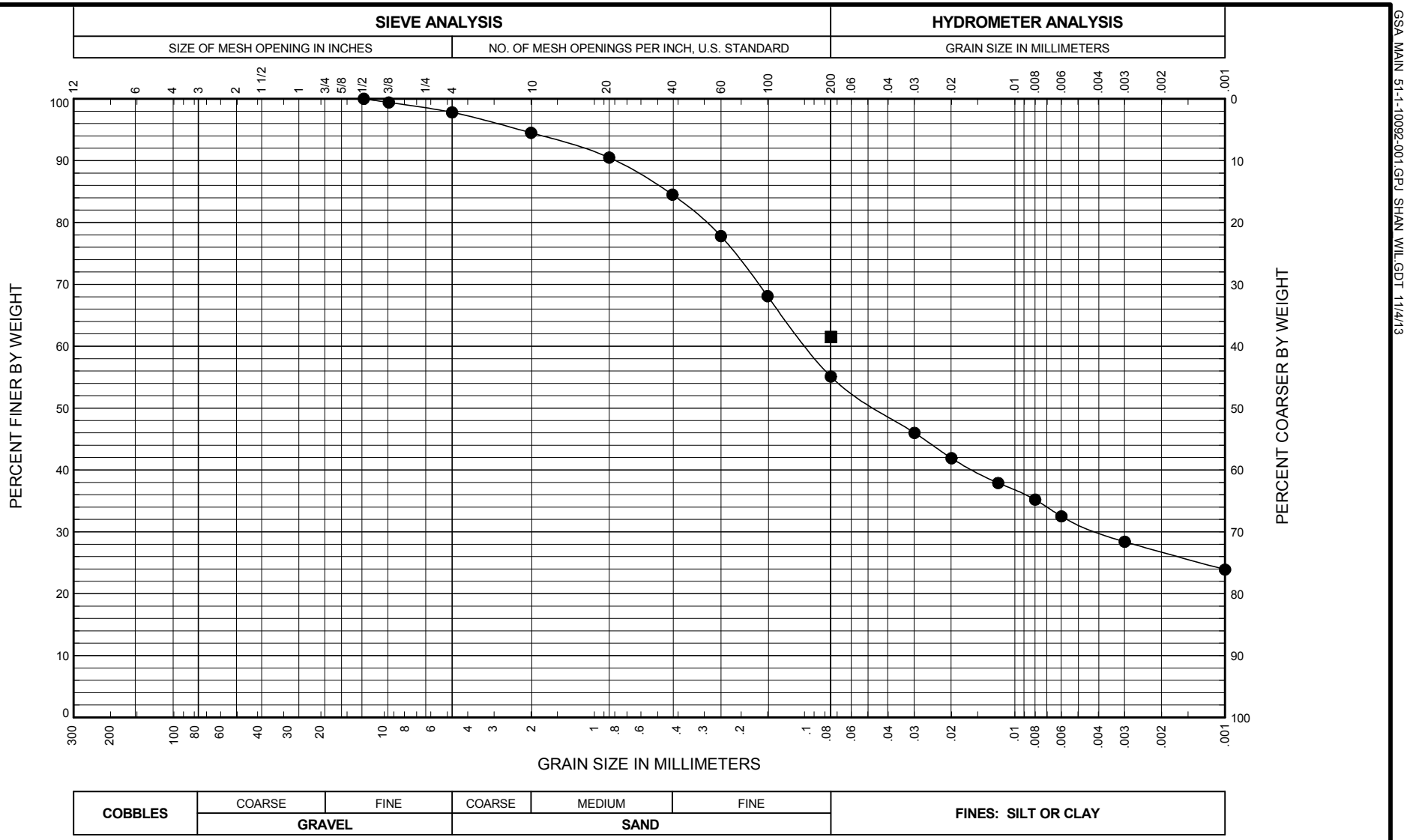
To provide information for pavement design, a stabilometer test ("R" value test) was performed on three samples retrieved during coring of NSMB. The tests were performed by Labelle Marvin Professional Pavement Engineering. The results of the test are presented in Figure D-5 through D-7.

D.6. REFERENCE

ASTM International (ASTM), 2007, Annual book of ASTM standards: soil and rock, building stone; geosynthetics: Philadelphia, Pa., ASTM International, v. 04.08 and 4.09.

Rawls, W.J., Brakensiek, D.L. and Saxton, K.E., 1982, Estimation of soil water properties, Transactions of the American Society of Agricultural Engineers, Vol. 25, No. 5, pp. 1316-1320.

Washington State Department of Ecology (Ecology), 2005, Stormwater management in Western Washington, Volume III, Hydrologic analysis and flow control design/BMPs: Olympia, Wash., Washington State Department of Ecology publication no. 05-10-31, February.



BORING AND SAMPLE NO.	DEPTH (feet)	U.S.C.S. SYMBOL	SAMPLE DESCRIPTION	FINES %	NAT. W.C. %	LL %	PL %	PI %
● B-1, S-2	5.0	CL	Dark Red-Brown, Sandy Lean Clay	55.1	16.6			
■ B-1, S-3	7.5	CL-ML	Red-Brown,Sandy Silty Clay	61.5	15.9			

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Beverly Hills, California

GRAIN SIZE DISTRIBUTION

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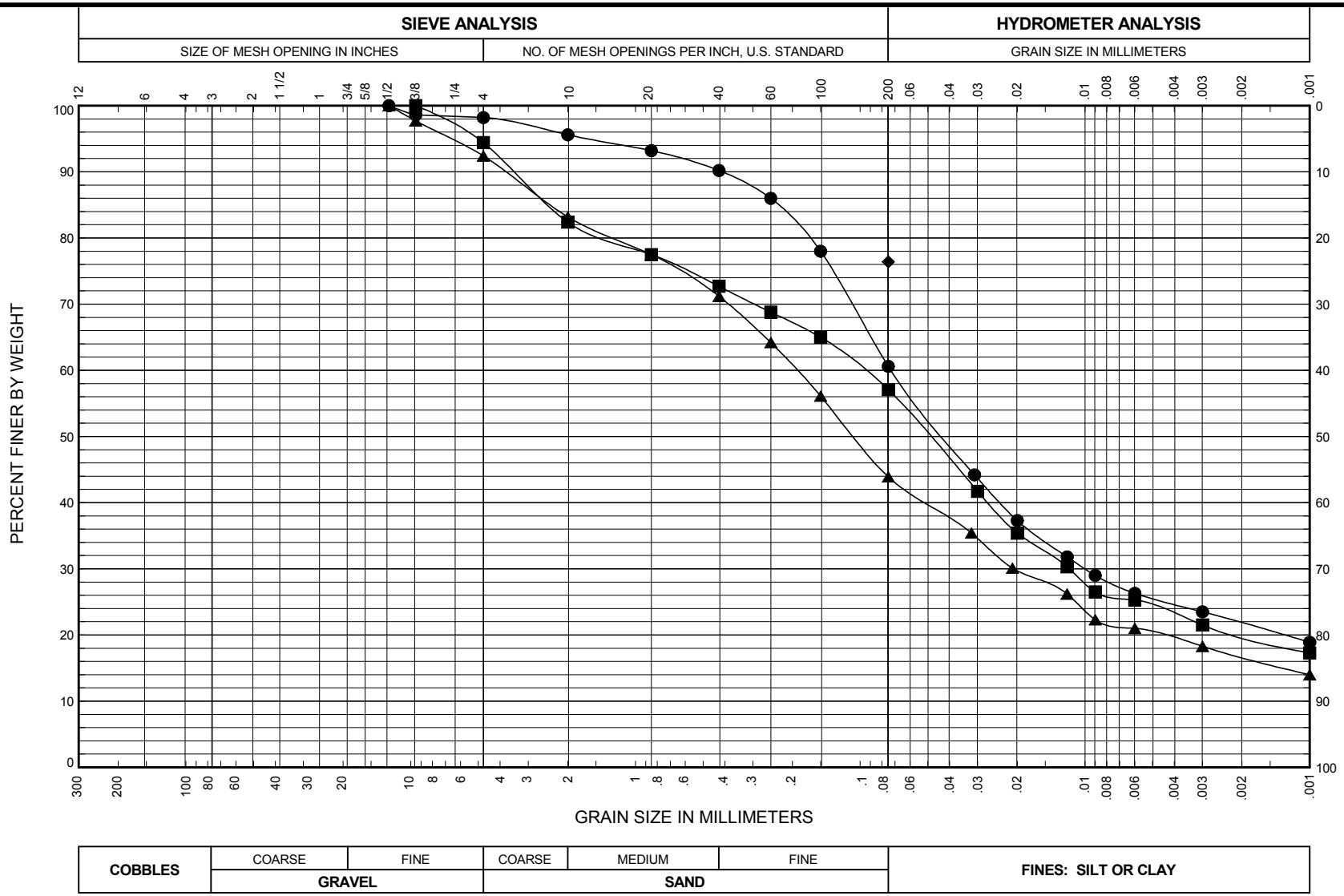
FIG. D-1

FIG. D-1

GSA MAIN 51-1-10092-001.GPJ SHAN WIL.GDT 11/4/13



BORING AND SAMPLE NO.	DEPTH (feet)	U.S.C.S. SYMBOL	SAMPLE DESCRIPTION	FINES %	NAT. W.C. %	LL %	PL %	PI %
● B-2, S-2	5.0	ML	Dark Red-Brown, Sandy Silt	60.6	14.1			
■ B-2, S-4	10.0	CL-ML	Red-Brown, Sandy Silty Clay	57.1	15.9			
▲ B-2, S-6	15.0	SC-SM	Red-Yellow, Silty, Clayey Sand	43.9	15.4			
◆ B-2, S-7	17.5	CL	Red-Yellow, Lean Clay	76.4	21.3			

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GRAIN SIZE DISTRIBUTION

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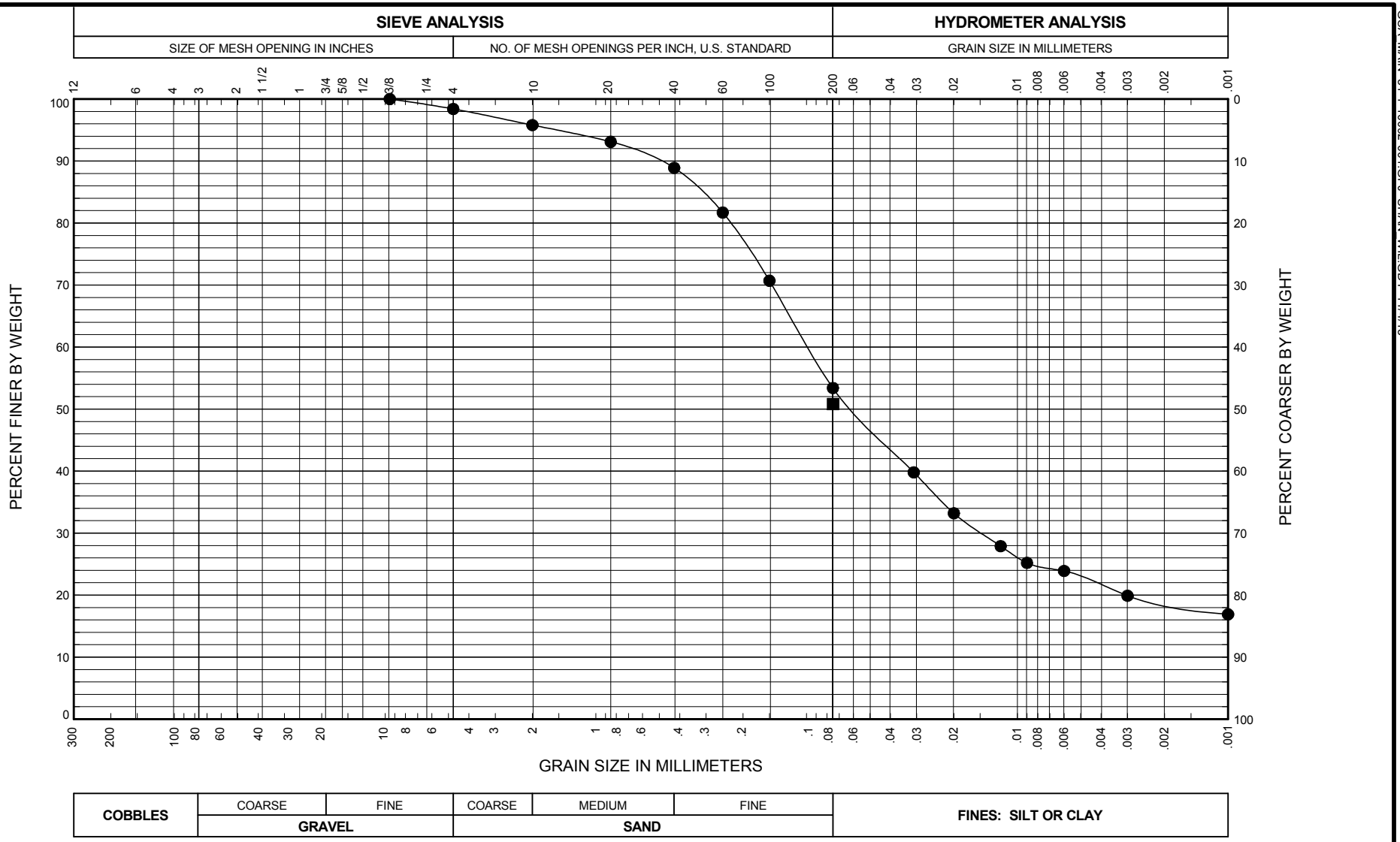
FIG. D-2

FIG. D-2

GSA MAIN 51-1-10092-001.GPJ SHAN WIL.GDT 11/4/13



BORING AND SAMPLE NO.	DEPTH (feet)	U.S.C.S. SYMBOL	SAMPLE DESCRIPTION	FINES %	NAT. W.C. %	LL %	PL %	PI %
● B-3, S-2	5.0	ML	Dark Red-Brown, Sandy Silt	53.4	13.5			
■ B-3, S-3	7.5	CL-ML	Red-Brown, Sandy Silty Clay	50.8	15.9			

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Beverly Hills, California

GRAIN SIZE DISTRIBUTION

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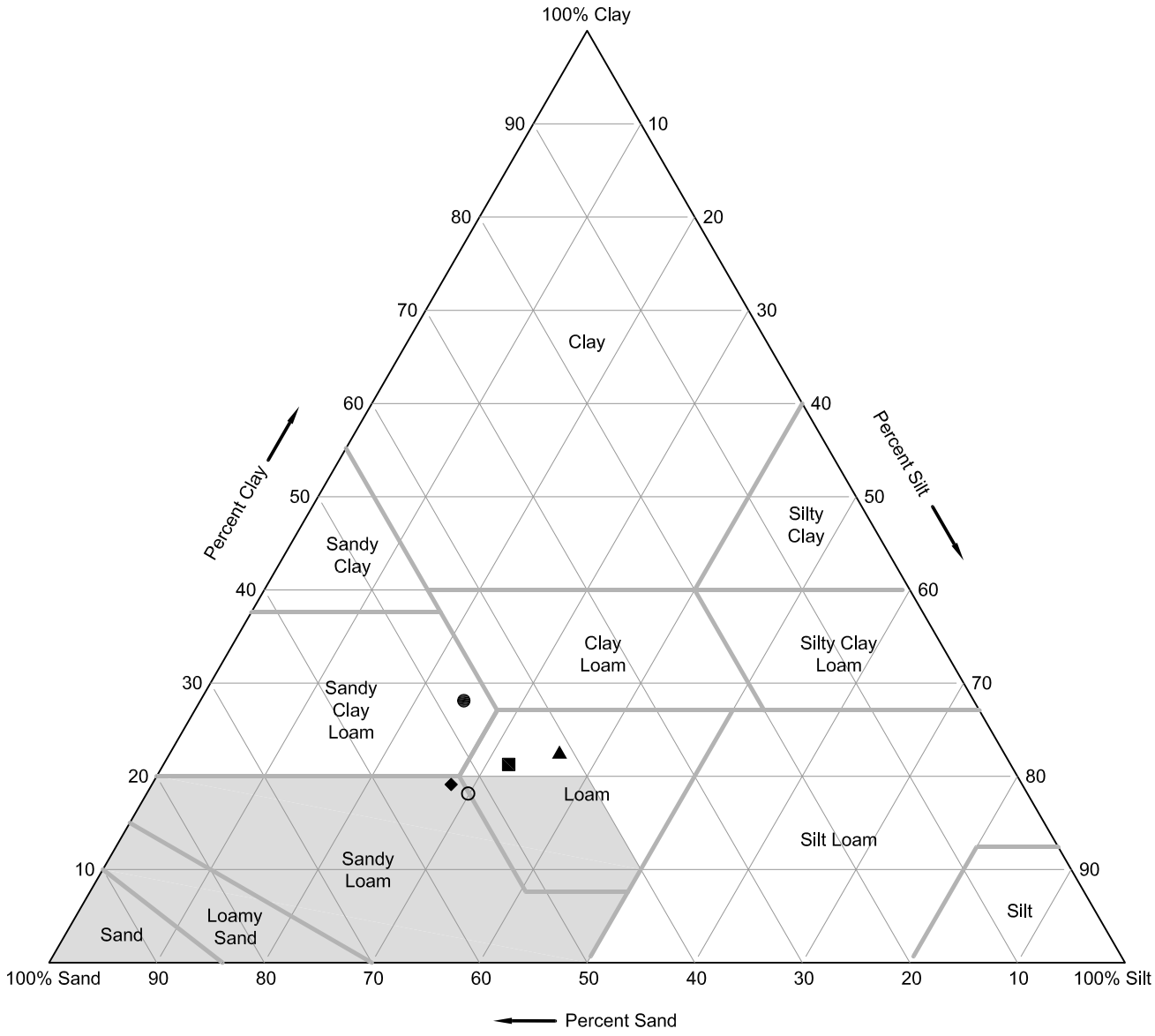
FIG. D-3

FIG. D-3

GSA MAIN 51-1-10092-001.GPJ SHAN WIL.GDT 11/4/13



Shaded area is applicable for design of infiltration BMPs.

LEGEND

- B-1, S-2, 5.0 Ft. Below Ground Surface
- B-2, S-2, 5.0 Ft. Below Ground Surface
- B-2, S-4, 10.0 Ft. Below Ground Surface
- B-2, S-6, 15.0 Ft. Below Ground Surface
- B-3, S-2, 5.0 Ft. Below Ground Surface

NOTE

Adapted from U.S. Department of Agriculture, Figure 3.27 of 2005 Stormwater Management Manual for Western Washington: Volume III - Hydrologic Analysis and Flow Control BMPs.

North Santa Monica Boulevard Reconstruction
Beverly Hills, California

USDA TEXTURAL TRIANGLE

November 2013 51-1-10092-003

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FIG. D-4

Filename: I:\PROJECTS\10092 North Santa Monica Blvd Reconstruction\003 Report\GRAPHICS\FIG D-3 - USDA Textural Triangle.dwg Date: 11-04-2013 Login: lol

R - VALUE DATA SHEET

P.N. 51-1-10092-001
NSMB

PROJECT NUMBER 39034 BORING NUMBER: C-2 @ 2'-5'

SAMPLE DESCRIPTION: Brown Sandy Clay

Item	SPECIMEN		
	a	b	c
Mold Number	10	11	12
Water added, grams	90	156	72
Initial Test Water, %	15.6	21.5	14.0
Compact Gage Pressure,psi	65	30	120
Exudation Pressure, psi	337	208	573
Height Sample, Inches	2.50	2.50	2.43
Gross Weight Mold, grams	3032	2965	3032
Tare Weight Mold, grams	1959	1965	1963
Sample Wet Weight, grams	1073	1000	1069
Expansion, Inches x 10exp-4	34	0	71
Stability 2,000 lbs (160psi)	35 / 93	63 / 144	27 / 68
Turns Displacement	3.73	5.05	3.43
R-Value Uncorrected	33	5	50
R-Value Corrected	33	5	48
Dry Density, pcf	112.5	99.7	116.9
	DESIGN	CALCULATION	DATA
Traffic Index Given:	10.5	10.5	10.5
G.E. by Stability	1.80	2.55	1.40
G. E. by Expansion	1.13	0.00	2.37

Equilibrium R-Value **30** by EXUDATION

Examined & Checked: 10 /24/ 13

REMARKS: Gf = 1.25
0.5% Retained on the 3/4" Sieve.

REGISTERED PROFESSIONAL ENGINEER STEVEN R. MARVIN C 30659 CIVIL STATE OF CALIFORNIA

Steven R. Marvin, RCE 30659

The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.

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R-VALUE TEST RESULTS, CORE C-2

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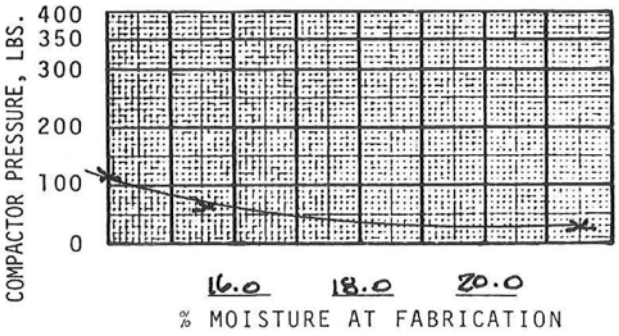
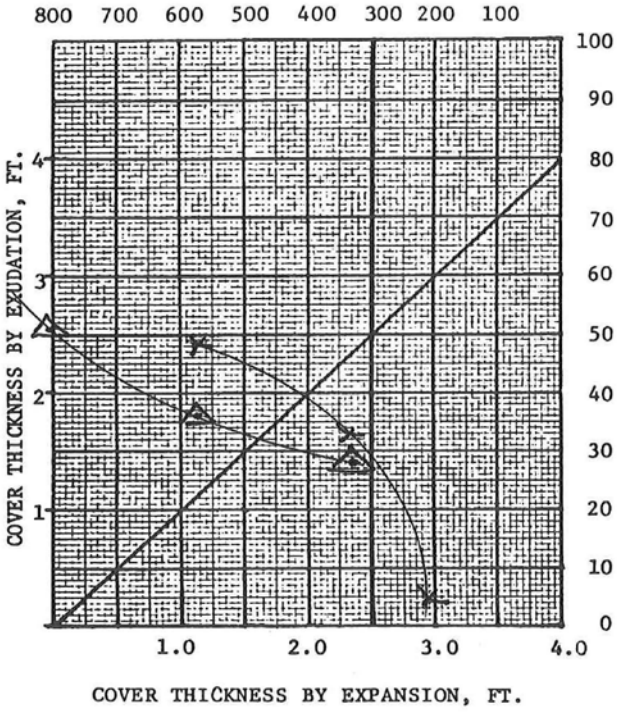
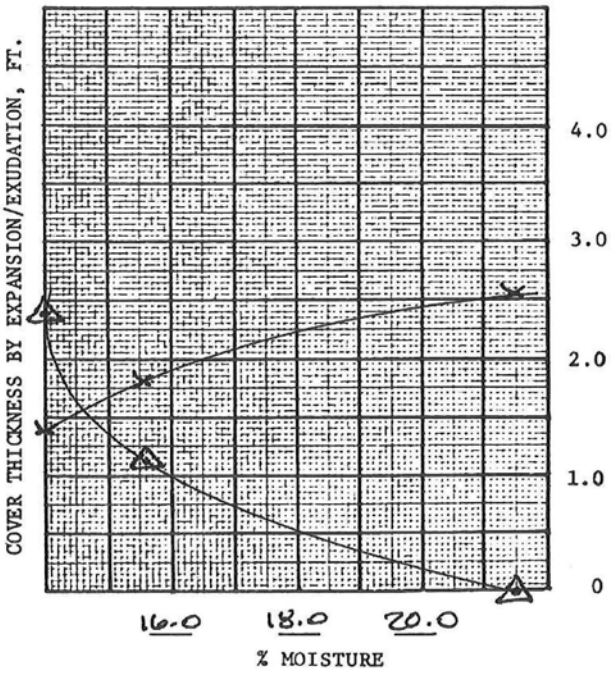
FIG. D-5
Sheet 1 of 2

R-VALUE GRAPHICAL PRESENTATION

PROJECT NO. 39034
P.N. 51-1-10092-001
BORING NO. C-2 @ 2'-5'
NSMB
DATE 10/24/13
TRAFFIC INDEX Given 10.5
R-VALUE BY EXUDATION 30
R-VALUE BY EXPANSION N







R-VALUE vs. EXUD. PRES.
T by EXUDATION
EXUD. T vs. EXPAN. T
T by EXPANSION

REMARKS GF=1.25

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R-VALUE TEST RESULTS, CORE C-2

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

FIG. D-5
Sheet 2 of 2

R - VALUE DATA SHEET

P.N. 51-1-10092-001
NSMB

PROJECT NUMBER 39034 BORING NUMBER: C-6 @ 3'-5'

SAMPLE DESCRIPTION: Brown Sandy Silt

Item	SPECIMEN		
	a	b	c
Mold Number	7	8	9
Water added, grams	77	98	61
Initial Test Water, %	10.7	12.5	9.3
Compact Gage Pressure,psi	60	40	120
Exudation Pressure, psi	283	142	485
Height Sample, Inches	2.62	2.65	2.61
Gross Weight Mold, grams	3157	3150	3006
Tare Weight Mold, grams	1968	1964	1789
Sample Wet Weight, grams	1189	1186	1217
Expansion, Inches x 10exp-4	0	0	10
Stability 2,000 lbs (160psi)	44 / 103	61 / 136	26 / 54
Turns Displacement	4.21	4.26	4.00
R-Value Uncorrected	25	9	55
R-Value Corrected	27	9	58
Dry Density, pcf	124.3	120.6	129.3
	DESIGN	CALCULATION	DATA
Traffic Index Given:	10.5	10.5	10.5
G.E. by Stability	1.96	2.45	1.13
G. E. by Expansion	0.00	0.00	0.33

Equilibrium R-Value **28** by EXUDATION

Examined & Checked: 10 /24/ 13

REMARKS:
Gf = 1.25
4.2% Retained on the 3/4" Sieve.

REGISTERED PROFESSIONAL ENGINEER STEVEN R. MARVIN C 30659 CIVIL STATE OF CALIFORNIA

Steven R. Marvin, RCE 30659

The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.

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R-VALUE TEST RESULTS, CORE C-6

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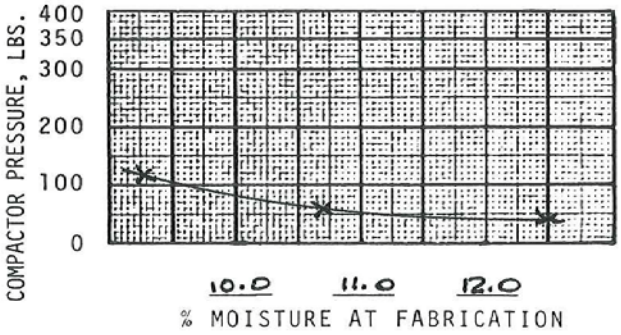
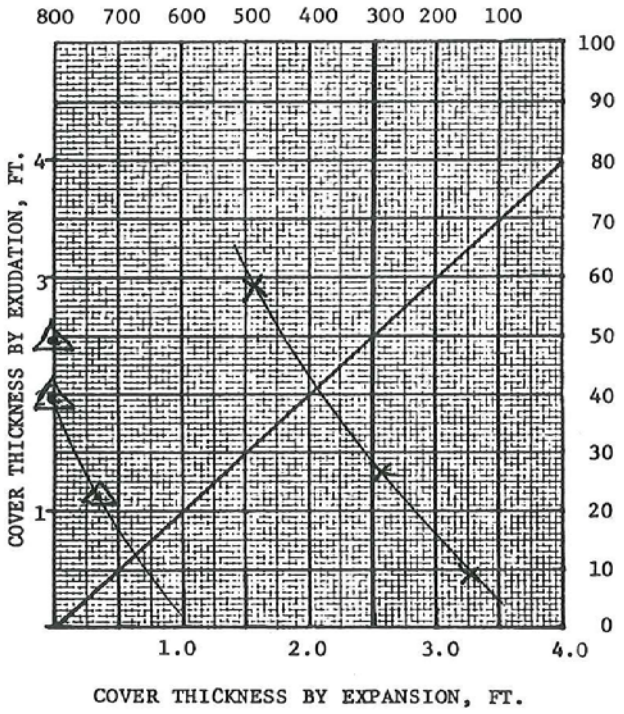
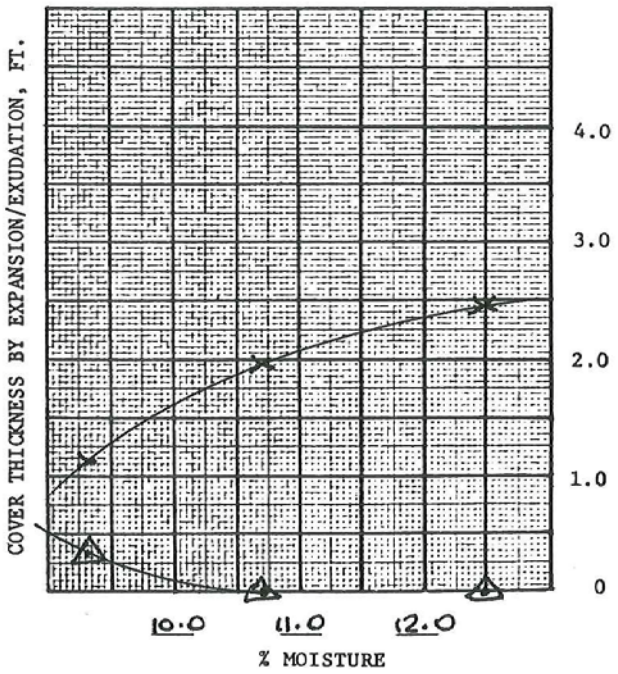
FIG. D-6
Sheet 1 of 2

R-VALUE GRAPHICAL PRESENTATION

PROJECT NO. 39034
P.N. 51-1-10092-001
BORING NO. C-6 @ 3'-5'
NS NB
DATE 10/24/13
TRAFFIC INDEX Given 10.5
R-VALUE BY EXUDATION 28
R-VALUE BY EXPANSION ~







R-VALUE vs. EXUD. PRES.
T by EXUDATION
EXUD. T vs. EXPAN. T
T by EXPANSION

REMARKS

GF=1.25

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R-VALUE TEST RESULTS, CORE C-6

R - VALUE DATA SHEET

P.N. 51-1-10092-001
NSMB

PROJECT NUMBER 39054 BORING NUMBER: C-7 @ 1.6'-5.0'

SAMPLE DESCRIPTION: Brown Silty Sand

Item	SPECIMEN		
	a	b	c
Mold Number	4	5	6
Water added, grams	52	33	25
Initial Test Water, %	10.6	8.9	8.2
Compact Gage Pressure,psi	45	145	200
Exudation Pressure, psi	176	442	762
Height Sample, Inches	2.68	2.59	2.57
Gross Weight Mold, grams	3200	3167	3168
Tare Weight Mold, grams	1977	1975	1976
Sample Wet Weight, grams	1223	1192	1192
Expansion, Inches x 10exp-4	0	4	10
Stability 2,000 lbs (160psi)	44 / 105	22 / 46	16 / 30
Turns Displacement	4.25	3.93	3.83
R-Value Uncorrected	24	61	74
R-Value Corrected	27	63	75
Dry Density, pcf	125.0	128.0	129.9
	DESIGN	CALCULATION	DATA
Traffic Index Given:	10.5	10.5	10.5
G.E. by Stability	1.96	0.99	0.67
G. E. by Expansion	0.00	0.13	0.33

Equilibrium R-Value **51** by EXUDATION

Examined & Checked: 10 /31/ 13

REMARKS:
Gf = 1.25
2.1% Retained on the 3/4" Sieve.

REGISTERED PROFESSIONAL ENGINEER STEVEN R. MARVIN C 30659 CIVIL STATE OF CALIFORNIA

Steven R. Marvin, RCE 30659

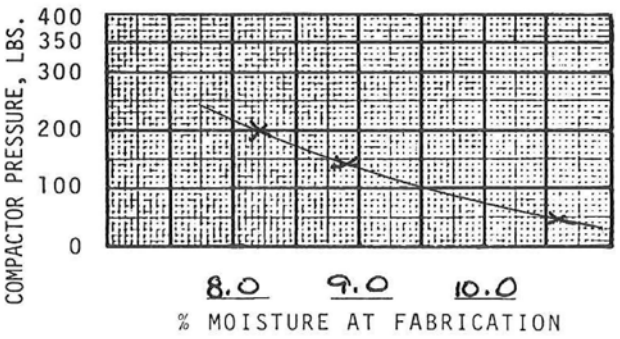
The data above is based upon processing and testing samples as received from the field. Test procedures in accordance with latest revisions to Department of Transportation, State of California, Materials & Research Test Method No. 301.

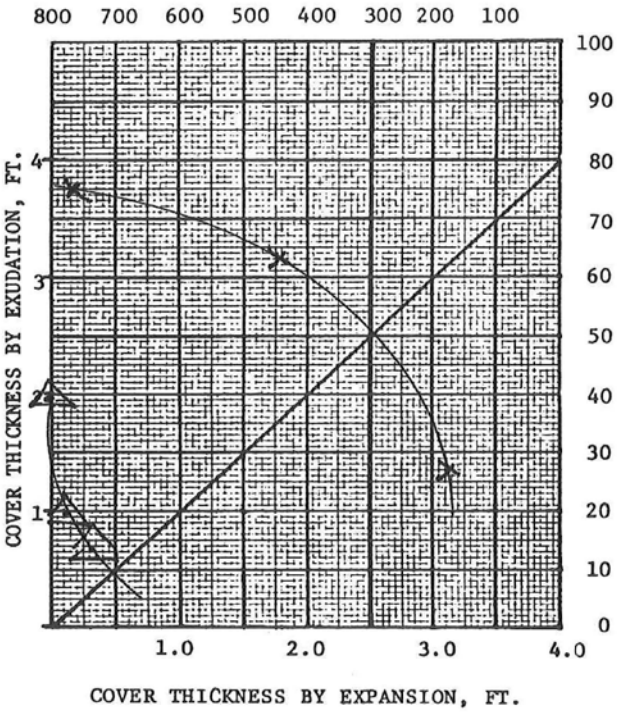
LaBelle • Marvin

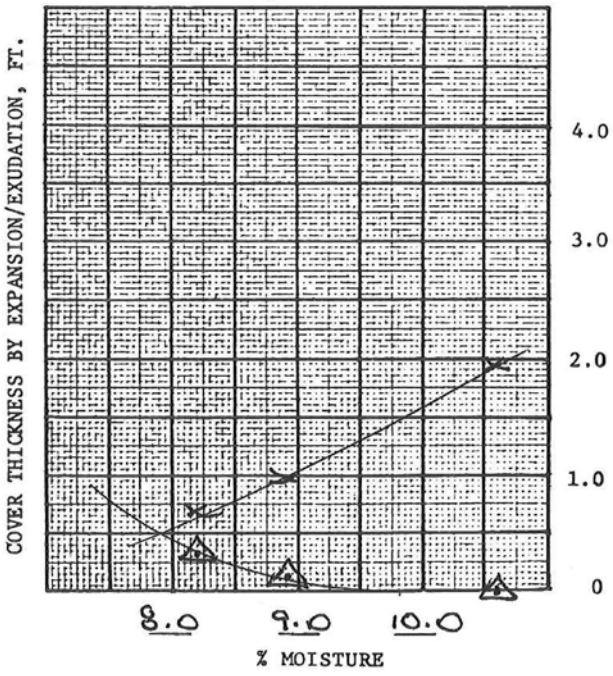
R-VALUE TEST RESULTS, CORE C-7

R-VALUE GRAPHICAL PRESENTATION

PROJECT NO. 39054
F.N. 51-1-10092-001
BORING NO. C-7 @ 1.6'-5.0'
NSMB
DATE 11/1/13
TRAFFIC INDEX Given 10.5
R-VALUE BY EXUDATION 51
R-VALUE BY EXPANSION ~2







R-VALUE vs. EXUD. PRES.
T by EXUDATION
EXUD. T vs. EXPAN. T
T by EXPANSION

REMARKS
GF=1.25

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R-VALUE TEST RESULTS, CORE C-7

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FIG. D-7
Sheet 2 of 2

APPENDIX E

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

Attachment to and part of Report 51-1-10092-003

Date: November 27, 2013
To: Psomas
Attn: Mr. Sean P. Vargas

Important Information About Your Geotechnical/Environmental Report

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors, which were considered in the development of the report, have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based on interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland