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STORM WATER MANAGEMENT INVESTIGATION

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STORM WATER MANAGEMENT INVESTIGATION

TORREY CREST
1220-1240 MELBA ROAD AND 1190 ISLAND VIEW LANE ENCINITAS, CALIFORNIA

GEOCON
INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

TORREY PACIFIC CORPORATION
ENCINITAS CALIFORNIA

JANUARY 8, 2021
REVISED MARCH 21, 2021
PROJECT NO. G2438-52-01

Geocon Project No. G2438-52-01
January 8, 2021
Revised March 21, 2022

Torrey Pacific Corporation
171 Saxony Road, Suite 109
Encinitas, California 92024

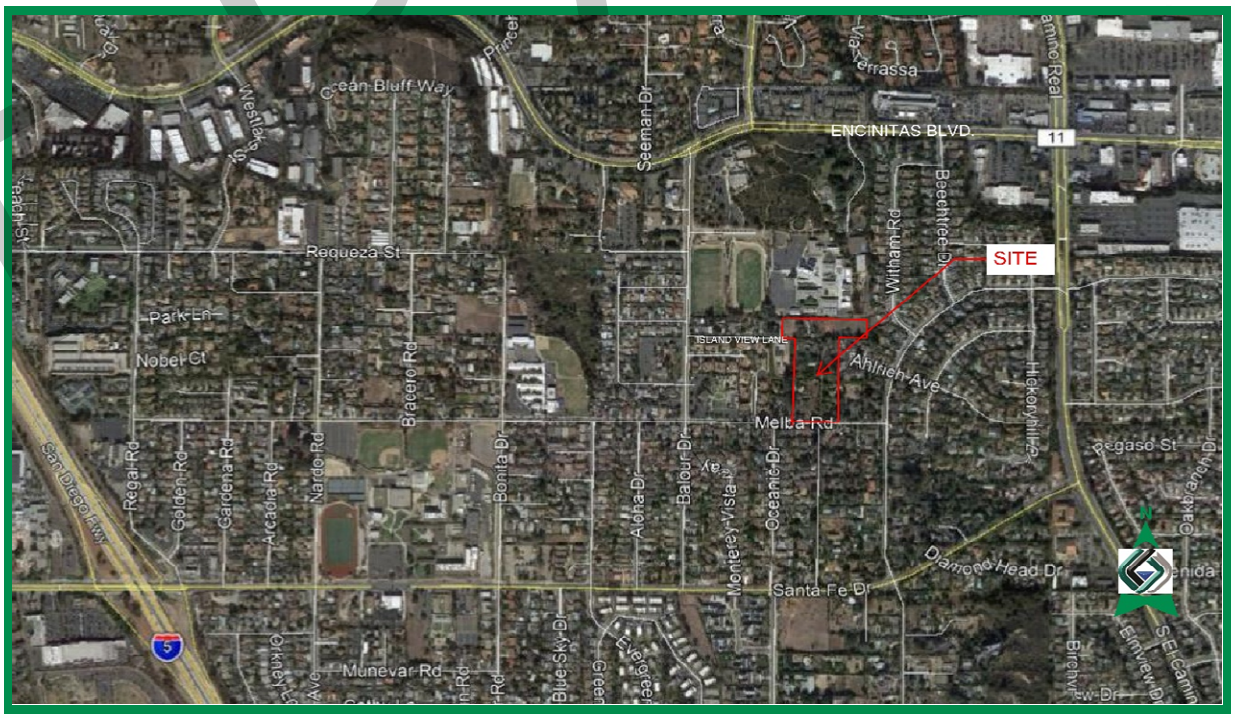
Attention: Mr. Brian Staver

Subject: STORM WATER MANAGEMENT INVESTIGATION
TORREY CREST
1220-1240 MELBA ROAD AND 1190 ISLAND VIEW LANE
ENCINITAS, CALIFORNIA

References:
1. *Geotechnical Investigation, Torrey Crest, Encinitas, California,* prepared by Geocon Incorporated, revised March 21, 2022 (Project No. G2438-52-01).
2. *Preliminary Grading Plan for: Torrey Crest, 1220-1240 Melba Road and 1190 Island View Lane,* prepared by Pasco, Laret, Suiter & Associates, (PLSA 3086-01), dated March 18, 2022.

Dear Mr. Staver:

In accordance with your authorization, we herein submit the results of our supplemental storm water management investigation for the subject property located at 1220-1240 Melba Road and 1190 Island View Lane, Encinitas, California (see Vicinity Map).



Vicinity Map

SITE AND PROJECT DESCRIPTION

The property is located north of Melba Road and east of the Island View Lane terminus in the City of Encinitas, California. The subject project site is occupied by four single-family residences with accompanied ancillary structures, utilities, landscaping and driveways. The property is accessed by two driveways from Melba Road and a driveway from Island View Lane. The topography is relatively flat to gently sloping at an elevation of about 370 to 400 feet above mean sea level (MSL). The Existing Site Plan shows the current site conditions.

Existing Site Map

We understand the planned development will consist of demolishing the existing structures, removing the existing utilities, and constructing a new residential development. The new development would

consist of 30 single-family residences with associated utilities, landscape and access driveways. The development would be accessed by a private road from Melba Road with one cul-de-sac on the northeast end. A bioretention basin is planned on the southwestern corners of the property. We understand the BMP devices on the southwest corner of the site will consist of dry a well basin.

Based on published geologic maps, the referenced reports and field investigation, the site is underlain by Very Old Paralic Deposits and Torrey Sandstone. We expect some localized fill soil located at the south-central portions of the site near the existing residences. The existing soil possesses a "very low" expansion potential (expansion index of 20 or less) and generally consists of silty to clayey sand.

We prepared the referenced geotechnical investigation report for the site and proposed development. Our storm water and referenced field investigation consisted of 11 exploratory trenches and 4 small-diameter hand-auger borings within the excavations to depths ranging from approximately 3 to 4 feet below existing grades and performing infiltration tests. We performed infiltration tests in the Very Old Paralic Deposits (Qvop). During our most recent supplemental investigation, we performed a supplemental field investigation consisting of 4 small-diameter boring within excavations to depths ranging from approximately 60 to 65 feet below existing grades and performing percolation tests. The Geologic Map, Figure 1, presents the approximate locations of the infiltration tests (P-1 through P-4), and deep percolation tests (B-1 through B-4).

SOIL AND GEOLOGIC CONDITIONS

Based on the referenced geotechnical documents, and our supplemental field investigation, the site is underlain by thin veneer of topsoil overlying Very Old Paralic Deposits and the Torrey Sandstone. The approximate occurrence, distribution, and description of each unit is shown on the Geologic Map, Figure 1. The surficial soil and geologic units are described herein in order of increasing age.

Topsoil (unmapped)

We encountered Holocene-age topsoil present as a relatively thin veneer locally blanketing the geologic unit across the site derived from the underlying deposits. The topsoil is less than a foot to two feet thick across the site and can be characterized as loose, damp to dry, reddish to grayish brown, silty, fine to medium sand. The topsoil is compressible and possess a "very low" expansion potential (expansion index of 20 or less). Remedial grading of the topsoil will be necessary in areas to support proposed fill or structures. The topsoil can be reused for new compacted fills. Water that is allowed to migrate within the topsoil cannot be controlled, would destabilize support for the existing improvements, and would shrink and swell. Therefore, full and partial infiltration should not be allowed within the topsoil.

Very Old Paralic Deposits (Qvop)

Quaternary-age Very Old Paralic Deposits, Unit 10 (formerly called the Terrace Deposits) underlies the topsoil and extended to the maximum depth explored of 7 feet in our exploratory trenches. Based on our supplemental borings, we expect this unit to possess a maximum thickness on the order of 50 to 55 feet at the site (330 MSL to 335). The Very Old Paralic Deposits consists of a sand unit consisting of dense to very dense silty sand. We encountered practical trenching refusal in the very dense portions of this unit in the exploratory trenches. The Very Old Paralic Deposits possess a "very low" expansion potential (expansion index of 20 or less). Excavations within this unit will likely encounter difficult digging conditions in the cemented zones. Based on our field testing, infiltration rates in this unit were an average of 0.003 inches per hour.

Torrey Sandstone (Tt)

We encountered Eocene-age Torrey Sandstone beneath the Very Old Paralic Deposits, at depths of approximately 50 to 55 (330 MSL to 335) feet below the existing ground surface. The Torrey Sandstone consists of massively bedded, well sorted, dense to very dense fine-to medium-grained sandstones which possess cohesionless, and friable lenses. Excavations within this unit will likely encounter difficult drilling conditions in the cemented zones. Based on our field testing, infiltration rates in this unit are 3.0 to 13.4 inches per hour, or 1.5 to 6.7 inches per hour, respectively, with a factor of safety of two.

STORM WATER MANAGEMENT INVESTIGATION

We understand storm water management devices are being proposed in accordance with the County of San Diego Storm Water Standards (SWS). If not properly constructed, there is a potential for distress to improvements and properties located hydrologically down gradient or adjacent to these devices. Factors such as the amount of water to be detained, its residence time, and soil permeability have an important effect on seepage transmission and the potential adverse impacts that may occur if the storm water management features are not properly designed and constructed. We have not performed a hydrogeological study at the site. If infiltration of storm water runoff occurs, downstream properties may be subjected to seeps, springs, slope instability, raised groundwater, movement of foundations and slabs, or other undesirable impacts as a result of water infiltration.

Hydrologic Soil Group

The United States Department of Agriculture (USDA), Natural Resources Conservation Services, possesses general information regarding the existing soil conditions for areas within the United States. The USDA website also provides the Hydrologic Soil Group. Table 1 presents the descriptions of the hydrologic soil groups. If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first

letter is for drained areas and the second is for undrained areas. In addition, the USDA website also provides an estimated saturated hydraulic conductivity for the existing soil.

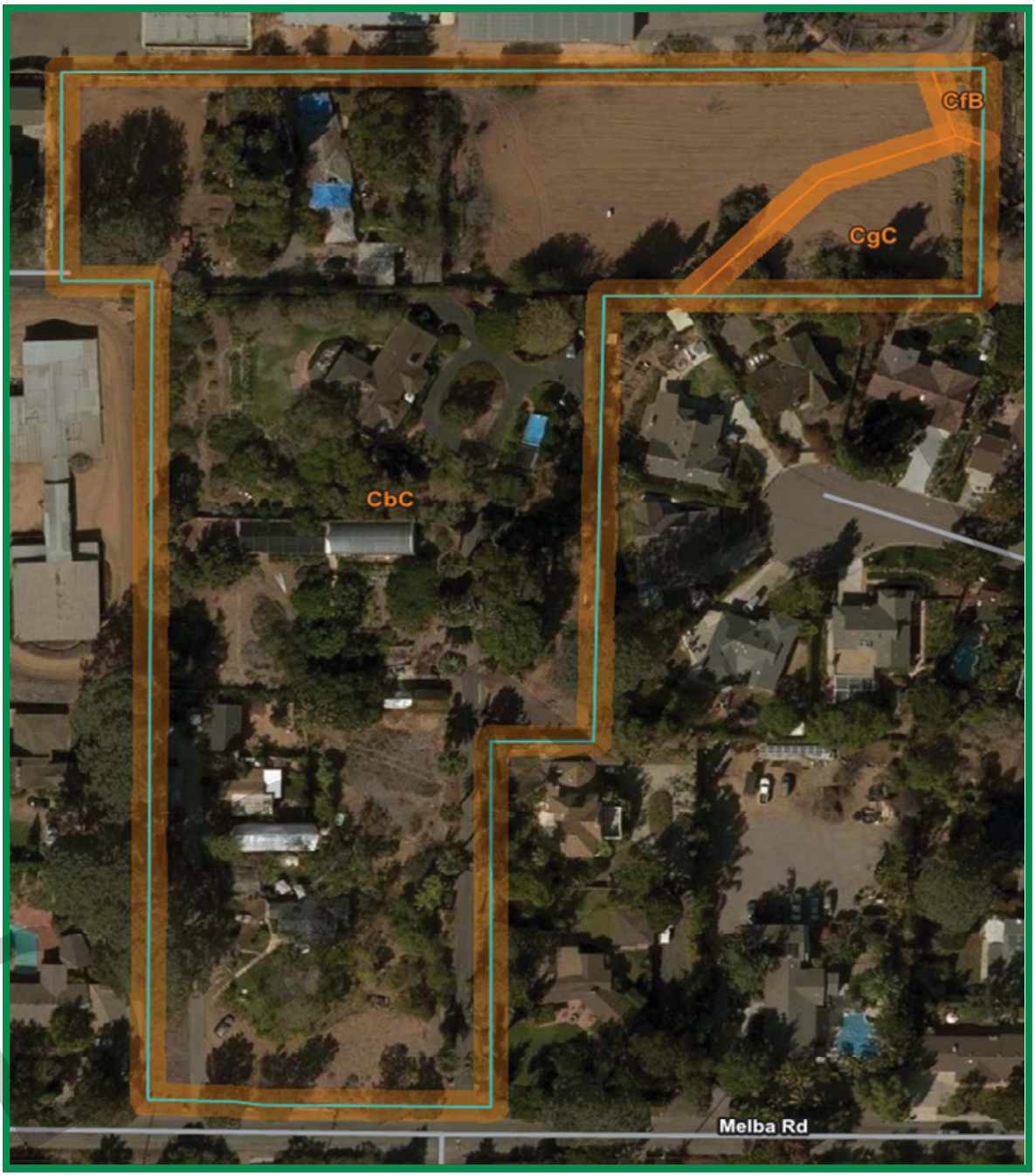
TABLE 1
HYDROLOGIC SOIL GROUP DEFINITIONS

Soil Group	Soil Group Definition
A	Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
B	Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
C	Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
D	Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The property is surficially underlain by Very Old Paralic Deposits with very slow infiltration rates and should be classified as Soil Group D. The Hydrologic Soil Group Map presents output from the USDA website showing the limits of the soil units. Table 2 presents the information from the USDA website for the subject property.

TABLE 2
USDA WEB SOIL SURVEY – HYDROLOGIC SOIL GROUP*

Map Unit Name	Map Unit Symbol	Approximate Percentage of Property	Hydrologic Soil Group	k_{SAT} of Most Limiting Layer (Inches/ Hour)
Carlsbad gravelly loamy sand, 5 to 9 percent slopes	CbC	94	D	0.00 to 0.06
Chesterton fine sandy loam, 2 to 5 percent slopes	CfB	0.3	D	0.00 to 0.06
Chesterton-Urban land complex, 2 to 9 percent slopes	CgC	5.7	D	0.00 to 0.06



Hydrologic Soil Group Map

In Situ Testing

We performed constant-head infiltration tests using the Aardvark permeameter at the locations shown on the Geologic Map, Figure 1, near the existing grades within the Very Old Paralic Deposits. Table 3 presents the results of the permeameter infiltration tests. The field data sheets are attached herein. We applied a feasibility factor of safety of 2.0 to our estimated infiltration rates to provide input on Worksheet C.4-1.

TABLE 3
AARDVARK PERMEAMETER INFILTRATION TEST RESULTS

Test No.	Geologic Unit	Test Elevation (feet, MSL)	Field-Saturated Hydraulic Conductivity/Infiltration Rate, k_{sat} (inch/hour)	Worksheet Infiltration Rate[1] (inch/hour)
P-1	Qvop	377	0.010	0.005
P-2	Qvop	377	0.007	0.004
P-3	Qvop	372	0.004	0.002
P-4	Qvop	372	0.004	0.002
Average			0.006	0.003

[1] Using a Factor of Safety of 2.

We performed supplemental falling head in-situ infiltration tests for the purposes of designing a dry well system. We performed the tests within Borings B-1 through B-4 at depths from 50 to 65 feet below the existing ground surface. The test borings were 8 inches in diameter. The results of the tests provide parameters regarding the saturated hydraulic conductivity and infiltration characteristics of on-site soil and geologic units. Table 4 presents the results of the estimated field saturated hydraulic conductivity and estimated infiltration rates obtained from the falling head infiltration tests. The field sheets are also attached herein. Laboratory testing of samples collected within the test borings at the depth of the percolation tests is in progress. The designer of storm water devices should apply an appropriate factor of safety, where necessary. Soil infiltration rates from in-situ tests can vary significantly from one location to another due to the heterogeneous characteristics inherent to most soil.

TABLE 4
FIELD FALLING HEAD INFILTRATION TEST RESULTS (BORINGS)

Test No. – Basin Location	Geologic Unit	Test Depth (Feet)	Approximate Test Elevation at Existing Ground Surface (Feet MSL)	Field-Saturated Infiltration Rate (Inch/Hour)	Factored Infiltration Rate[1] (Inch/Hour)
B-1 – South	Tt	50-60	376	3.8	1.9
B-2 – South	Tt	55-65	380	13.4	6.7
B-3 – North	Tt	50-60	380	3.0	1.5
B-4 – North	Tt	55-65	380	5.5	2.8
			Average:	6.4	3.2

[1] Using a factor of safety of 2.0.

Infiltration categories include full infiltration, partial infiltration and no infiltration. Table 5 presents the commonly accepted definitions of the potential infiltration categories based on the infiltration rates.

TABLE 5
INFILTRATION CATEGORIES

Infiltration Category	Field Infiltration Rate, I (Inches/Hour)	Factored Infiltration Rate[1], I (Inches/Hour)
Full Infiltration	$I > 1.0$	$I > 0.5$
Partial Infiltration	$0.10 < I \leq 1.0$	$0.05 < I \leq 0.5$
No Infiltration (Infeasible)	$I < 0.10$	$I < 0.05$

[1] Using a Factor of Safety of 2.

Based on our observations and test results, the factored infiltration rates for the Very Old Paralic Deposits is less than 0.05 inches per hour. Therefore, full and partial infiltration on the property is considered infeasible based on the calculated infiltrations rates and the site possesses a "No Infiltration" condition. Vertical cutoff walls or liners should be installed on the sides and bottom of planned infiltration devices and a drain should be installed at the base of the basins.

The results of the infiltration rates for the dry wells are 3.0 to 13.4 inches per hour, or 1.5 to 6.7 inches per hour, respectively, with a factor of safety of two. Therefore, based on the results of the field infiltration tests, the laboratory tests and our experience, full infiltration would be considered feasible within the Torrey Sandstone at a depth of 50 to 65 feet below the existing grades.

GEOTECHNICAL CONSIDERATIONS

Groundwater Elevations

We did not encounter groundwater or seepage during our site investigation, and we expect a static groundwater elevation exists greater than 150 feet below existing grades. However, it is not uncommon for shallow seepage conditions to develop where none previously existed when sites are irrigated or infiltration is implemented. Groundwater and seepage are dependent on seasonal precipitation, irrigation, land use, among other factors, and varies as a result. Proper surface drainage will be important to future performance of the project. We do not expect groundwater to be encountered during construction of the proposed development.

New or Existing Utilities

Utilities are located adjacent to the property within the existing parking areas, driveways, and roadways and are proposed for the site's development. Therefore, full and partial infiltration within the areas near these utilities should be considered infeasible. Setbacks for infiltration should be incorporated if infiltration were to be considered. The setback for infiltration devices should be a minimum of 10 feet and a 1:1 plane of 1 foot below the closest edge of the deepest adjacent utility.

Slopes

The existing slope along the northeastern border slopes at inclinations as steep as 2:1 (horizontal to vertical). If infiltration is allowed adjacent to the existing slopes at the site, water migration and the resulting seepage forces can negatively affect the stability of the slopes and cause erosion. The existing fill and formational materials possess limited vertical infiltration characteristics and water allowed to infiltrate on the site would migrate laterally to adjacent improvements. Infiltration devices should not be installed adjacent to slopes unless they are lined, possess a minimum setback distance of 50 feet or 1.5 times the slope height, or extend below the height of the slope.

Soil or Groundwater Contamination

We understand pesticides are present at the 1190 Island View Lane parcels property that are being handled through a soil management plan in coordination with the San Diego County Department of Environmental Health. We understand mitigation will be performed prior to construction. Therefore, infiltration associated with this risk is considered feasible. In addition, groundwater mounding would not be a concern due to the lack of a near surface groundwater table.

CONCLUSIONS AND RECOMMENDATIONS

Storm Water Evaluation Narrative

We used the referenced reports and plans prepared by the civil engineer to evaluate possible locations for infiltration based on the known geologic information on the property. We selected areas on the property where the formational Very Old Paralic Deposits were exposed at near existing grades. The in-place infiltration test locations were also selected in areas likely used for potential infiltration devices. We performed 4 infiltration tests within the Very Old Paralic Deposits and the results indicate an average rate of 0.003 inches per hour (with an applied factor of safety of 2).

Due to the slow rates, we were asked to perform infiltration tests for the potential design of a dry well system. We performed 4 falling head infiltration tests within the Torrey Sandstone at depths of 50 to 65 feet and the results indicate an average rate of 0.55 to 1.8 inches per hour (with an applied factor of safety of 2).

Storm Water Evaluation Conclusion

Based on the results of our infiltration tests performed within the Very Old Paralic Deposits near the existing surface, we opine full and partial infiltration on the property is considered infeasible and the property possesses a “No Infiltration” condition for a basin or surficial infiltration device.

Based on the results of our infiltration tests performed within the Torrey Sandstone, we opine full infiltration is feasible and can be performed at a depth of about 50 to 65 feet using a dry well system.

Storm Water Management Devices

Liners and subdrains should be incorporated into the design and construction of the planned storm water management devices near the surface. The liners should be impermeable (e.g. High-density polyethylene, HDPE, with a thickness of about 30 mil or equivalent Polyvinyl Chloride, PVC) to prevent water migration. The subdrains should be perforated within the liner area, installed at the base and above the liner, be at least 3 inches in diameter and consist of Schedule 40 PVC pipe. The subdrains outside of the liner should consist of solid pipe. The penetration of the liners at the subdrains should be properly waterproofed. The subdrains should be connected to a proper outlet. The devices should also be installed in accordance with the manufacturer's recommendations.

Storm Water Standard Worksheets

The SWS requests the geotechnical engineer complete the Categorization of Infiltration Feasibility Condition (Worksheet C.4-1 or I-8) worksheet information to help evaluate the potential for infiltration on the property. Worksheet C.4-1 presents the completed information for the submittal process and is attached herein.

The regional storm water standards also have a worksheet (Worksheet D.5-1 or Form I-9) that helps the project civil engineer estimate the factor of safety based on several factors. Table 6 describes the suitability assessment input parameters related to the geotechnical engineering aspects for the factor of safety determination.

TABLE 6
SUITABILITY ASSESSMENT RELATED CONSIDERATIONS FOR INFILTRATION FACILITY SAFETY FACTORS

Consideration	High Concern – 3 Points	Medium Concern – 2 Points	Low Concern – 1 Point
Assessment Methods	Use of soil survey maps or simple texture analysis to estimate short-term infiltration rates. Use of well permeameter or borehole methods without accompanying continuous boring log. Relatively sparse testing with direct infiltration methods	Use of well permeameter or borehole methods with accompanying continuous boring log. Direct measurement of infiltration area with localized infiltration measurement methods (e.g., Infiltrometer). Moderate spatial resolution	Direct measurement with localized (i.e. small-scale) infiltration testing methods at relatively high resolution or use of extensive test pit infiltration measurement methods.
Predominant Soil Texture	Silty and clayey soils with significant fines	Loamy soils	Granular to slightly loamy soils
Site Soil Variability	Highly variable soils indicated from site assessment or unknown variability	Soil boring/test pits indicate moderately homogenous soils	Soil boring/test pits indicate relatively homogenous soils
Depth to Groundwater/ Impervious Layer	<5 feet below facility bottom	5-15 feet below facility bottom	>15 feet below facility bottom

Based on our geotechnical investigation and the previous table, Table 7 presents the estimated factor values for the evaluation of the factor of safety for the surface improvement design. This table only presents the suitability assessment safety factor (Part A) of the worksheet. The project civil engineer should evaluate the safety factor for design (Part B) and use the combined safety factor for the design infiltration rate.

TABLE 7
SURFACE IMPROVEMENT FACTOR OF SAFETY WORKSHEET DESIGN VALUES – PART A1

Suitability Assessment Factor Category	Assigned Weight (w)	Factor Value (v)	Product (p = w x v)
Assessment Methods	0.25	2	0.50
Predominant Soil Texture	0.25	2	0.50
Site Soil Variability	0.25	2	0.50
Depth to Groundwater/ Impervious Layer	0.25	1	0.25
Suitability Assessment Safety Factor, $S_A = \sum p$			1.75

*The project civil engineer should complete Worksheet D.5-1 or Form I-9 using the data on this table. Additional information is required to evaluate the design factor of safety.

Table 8 presents the estimated factor values for the evaluation of the factor of safety for the proposed drywell design using the falling head infiltration test results from the borings.

TABLE 8
DRYWELL FACTOR OF SAFETY WORKSHEET DESIGN VALUES – PART A1

Suitability Assessment Factor Category	Assigned Weight (w)	Factor Value (v)	Product (p = w x v)
Assessment Methods	0.25	1	0.25
Predominant Soil Texture	0.25	2	0.50
Site Soil Variability	0.25	2	0.50
Depth to Groundwater/ Impervious Layer	0.25	1	0.25
Suitability Assessment Safety Factor, $S_A = \sum p$			1.5

*The project civil engineer should complete Worksheet D.5-1 or Form I-9 using the data on this table. Additional information is required to evaluate the design factor of safety.

Should you have any questions regarding this correspondence, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

Shawn Foy Weedon
GE 2714

Michael C. Ertwine
CEG 2659

SFW:MCE:arm

(e-mail) Addressee

Categorization of Infiltration Feasibility Condition	Worksheet C.4-1

Part 1 - Full Infiltration Feasibility Screening Criteria

Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
1	**Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	x	

Provide basis:

Based on the USGS Soil Survey, the property possesses Hydrologic Soil Group D classifications and an infiltration rate of less than 0.5 inches per hour for near surface devices (no infiltration condition).

We performed 4 infiltration tests in two areas of the site within the underlying Torrey Sandstone for a dry well system. The results indicate an average rate of 6.4 inches per hour (3.2 inches per hour with an applied factor of safety of 2). Therefore, full infiltration is considered feasible at the site using a dry well system.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

2	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of	X	

Provide basis:

Infiltration should not be allowed in areas of the site near the surface which would negatively affect the adjacent properties and improvements or the existing sloping conditions on the site. Infiltration would cause seepage and erosion on the existing slopes if it were allowed near surface.

Infiltration can be performed using a dry well system at depths of about 50 to 65 feet below existing grade.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

Worksheet C.4-1 Page 2 of 4			
Criteria	Screening Question	**Yes**	**No**
3	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: We anticipate that groundwater is present at depths of greater than 150 feet. Therefore, infiltration due to groundwater elevations would be considered feasible. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
4	**Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: We are unaware of potential water balance issues if the dry wells are to be installed. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
Part 1 Result*	If all answers to rows 1 - 4 are "**Yes**" a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration** If any answer from row 1-4 is "**No**", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2	Full Infiltration (Dry Wells)	

***To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City to substantiate findings.**

Worksheet C.4-1 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	**Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	X	

Provide basis:

Based on the USGS Soil Survey, the property possesses Hydrologic Soil Group D classifications and an infiltration rate of less than 0.5 inches per hour for near surface devices.

We performed 4 infiltration tests in two areas of the site within the underlying Torrey Sandstone for a dry well system. The results indicate an average rate of 6.4 inches per hour (3.2 inches per hour with an applied factor of safety of 2). Therefore, full infiltration is considered feasible at the site for dry well systems.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

Criteria	Screening Question	Yes	No
6	**Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	X	

Provide basis:

Infiltration should not be allowed in areas of the site near the surface which would negatively affect the adjacent properties and improvements or the existing sloping conditions on the site. Infiltration would cause seepage and erosion on the existing slopes if it were allowed.

Infiltration can be performed using a dry well system at depths of about 50 to 65 feet below existing grade.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.

Worksheet C.4-1 Page 4 of 4			
Criteria	Screening Question	**Yes**	**No**
7	**Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: We anticipate that groundwater is present at depths of greater than 150 feet. Therefore, infiltration due to groundwater elevations would be considered feasible. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
8	**Can infiltration be allowed without violating downstream water rights**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: We did not provide a study regarding water rights. However, these rights are not typical in the San Diego County area. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
Part 2 Result*	If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration.** If any answer from row 5-8 is no, then infiltration of any volume is considered to be **infeasible** within the drainage area. The feasibility screening category is **No Infiltration.**		Full Infiltration

***To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City to substantiate findings.**

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