COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

NOTICE OF ENVIRONMENTAL REVIEW PERIOD

SANTA CRUZ COUNTY

APPLICANT: **The Streeter Group for Storemore America Aptos**

APPLICATION NO.: **131046**

PARCEL NUMBERS (APNs): **041-233-23**

The Environmental Coordinator has reviewed the Initial Study for your application and made the following preliminary determination:

__X__ Negative Declaration
(Your project will not have a significant impact on the environment.)

__X__ Mitigations will be attached to the Negative Declaration.

_____ No mitigations will be attached.

_____ Environmental Impact Report
(Your project may have a significant effect on the environment. An EIR must be prepared to address the potential impacts.)

As part of the environmental review process required by the California Environmental Quality Act (CEQA), this is your opportunity to respond to the preliminary determination before it is finalized. Please contact Todd Sexauer, Environmental Coordinator at (831) 454-3511, if you wish to comment on the preliminary determination. Written comments will be received until 5:00 p.m. on the last day of the review period.

Review Period Ends: 02/10/14

Staff Planner: **Nate MacBeth**

Phone: **(831) 454-3201**

Date: **January 20, 2014**

County of Santa Cruz

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NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION

NOTICE OF PUBLIC REVIEW AND COMMENT PERIOD

Pursuant to the California Environmental Quality Act, the following project has been reviewed by the County Environmental Coordinator to determine if it has a potential to create significant impacts to the environment and, if so, how such impacts could be solved. A Negative Declaration is prepared in cases where the project is determined not to have any significant environmental impacts. Either a Mitigated Negative Declaration or Environmental Impact Report (EIR) is prepared for projects that may result in a significant impact to the environment.

Public review periods are provided for these Environmental Determinations according to the requirements of the County Environmental Review Guidelines. The environmental document is available for review at the County Planning Department located at 701 Ocean Street, in Santa Cruz. You may also view the environmental document on the web at www.sccoplanning.com under the Planning Department menu. If you have questions or comments about this Notice of Intent, please contact Matt Johnston of the Environmental Review staff at (831) 454-3201

The County of Santa Cruz does not discriminate on the basis of disability, and no person shall, by reason of a disability, be denied the benefits of its services, programs or activities. If you require special assistance in order to review this information, please contact Bernice Romero at (831) 454-3137 (TDD number (831) 454-2123 or (831) 763-8123) to make arrangements.

PROJECT: STOREMORE STORAGE FACILITY

APP #: 131046

APN(S): 041-233-23

PROJECT DESCRIPTION: The proposed project is a proposal to construct a 3-story 19,930 square foot self storage facility and grade approximately 4,000 cubic yards on site with an existing 33,000 square foot self storage facility (Storemore). Requires an amendment to Commercial Development Permit 99-0581, Preliminary Grading Review (131047) for grading 1,000-8,000 cubic yards and Soils Report Review (REV131015).

PROJECT LOCATION: Project is located at 9687 Soquel Drive, Soquel.

EXISTING ZONE DISTRICT: Commercial Services (C-4)
APPLICANT: The Streeter Group
OWNER: Storemore America Aptos
PROJECT PLANNER: Nathan MacBeth, (831) 454-3118
EMAIL: pln099@co.santa-cruz.ca.us
ACTION: Negative Declaration
REVIEW PERIOD: January 20, 2014 through February 10, 2014
This project will be considered at a public hearing by the Zoning Administrator. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

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NEGATIVE DECLARATION

Project: Storemore Storage Facility **APN(S): 041-233-23**

Project Description: This is a proposal to construct a 3-story 19,930 square foot self storage facility and grade approximately 4,000 cubic yards on site with an existing 33,000 square foot self storage facility (Storemore). Requires an amendment to Commercial Development Permit 99-0581, Preliminary Grading Review (131047) for grading 1,000 – 8,000 cubic yards and Soils Report Review (REV131015).

Project Location: 9687 Soquel Drive, Soquel

Applicant: The Streeter Group

Staff Planner: Nathan MacBeth

This project will be heard at a public hearing by the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

California Environmental Quality Act Negative Declaration Findings:

Find, that this Negative Declaration reflects the decision-making body's independent judgment and analysis, and; that the decision-making body has reviewed and considered the information contained in this Negative Declaration and the comments received during the public review period; and, that revisions in the project plans or proposals made by or agreed to by the project applicant would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and, on the basis of the whole record before the decision-making body (including this Negative Declaration) that there is no substantial evidence that the project as revised will have a significant effect on the environment. The expected environmental impacts of the project are documented in the attached Initial Study on file with the County of Santa Cruz Planning Department located at 701 Ocean Street, 4th Floor, Santa Cruz, California. A digital copy of the document can be reviewed at the following web address:

http://www.sccoplanning.com/

Required Mitigation Measures or Conditions:

☐ None

☐ Are Attached

Review Period Ends: February 10, 2014

Note: This Document is considered Draft until it is Adopted by the Appropriate County of Santa Cruz Decision-Making Body

Date:_____

_____

TODD SEXAUER, Environmental Coordinator
(831) 454-3511

County of Santa Cruz

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CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ENVIRONMENTAL REVIEW INITIAL STUDY

Date: January 13, 2014 **Application Number:** 131046

Staff Planner: Nathan MacBeth

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: The Streeter Group **APN(s)**: 041-233-23

OWNER: Storemore America Aptos **SUPERVISORAL DISTRICT**: 2

PROJECT LOCATION: 9687 Soquel Drive, Soquel, CA 95003 (Attachment 1 - Location Map)

SUMMARY PROJECT DESCRIPTION:

Proposal to construct a 3-story 19,930 square foot self storage facility and grade approximately 4,000 cubic yards on site with an existing 33,000 square foot self storage facility (Storemore). (Attachment 1 – Site Plan)

Requires an Amendment to Commercial Development Permit 99-0581, Preliminary Grading Review (131047) for grading 1,000-8,000 cubic yards and Soils Report Review (REV131015).

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.

- ☒ Geology/Soils
- ☐ Hydrology/Water Supply/Water Quality
- ☐ Biological Resources
- ☐ Agriculture and Forestry Resources
- ☐ Mineral Resources
- ☒ Visual Resources & Aesthetics
- ☐ Cultural Resources
- ☐ Hazards & Hazardous Materials
- ☐ Noise
- ☐ Air Quality
- ☐ Greenhouse Gas Emissions
- ☐ Public Services
- ☐ Recreation
- ☐ Utilities & Service Systems
- ☐ Land Use and Planning
- ☐ Population and Housing

☐ Transportation/Traffic

☐ Mandatory Findings of Significance

DISCRETIONARY APPROVAL(S) BEING CONSIDERED:

☐ General Plan Amendment

☐ Land Division

☐ Rezoning

☒ Development Permit

☐ Coastal Development Permit

☒ Grading Permit

☐ Riparian Exception

☐ Other:

NON-LOCAL APPROVALS

Other agencies that must issue permits or authorizations:

DETERMINATION: (To be completed by the lead agency)
On the basis of this initial evaluation:

☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Todd Sexauer
Environmental Coordinator

Date 1/16/14

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS

Parcel Size: 1.25 acres
Existing Land Use: Commercial
Vegetation: Mix of mature tree, shrubbery and approved landscape improvements.
Slope in area affected by project: ☒ 0 - 30% ☒ 31 – 100%
Nearby Watercourse: Valencia Creek
Distance To: ½ mile

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Water Supply Watershed: Not mapped
Groundwater Recharge: Not mapped
Timber or Mineral: No evidence on site
Agricultural Resource: Not mapped
Biologically Sensitive Habitat: Not mapped
Fire Hazard: SRA-Moderate
Floodplain: Outside Flood plain
Erosion: None mapped
Landslide: No evidence on site
Liquefaction: Low potential

Fault Zone: Not mapped
Scenic Corridor: Yes
Historic: Not mapped
Archaeology: Not mapped
Noise Constraint: None
Electric Power Lines: None
Solar Access: Adequate
Solar Orientation: Adequate
Hazardous Materials: None
Other: N/A

SERVICES

Fire Protection: Aptos/La Selva Fire
School District: Pajaro Valley Unified
Sewage Disposal: SC Sanitation District

Drainage District: Zone 5
Project Access: Soquel Drive
Water Supply: Soquel Creek Water District

PLANNING POLICIES

Zone District: C-4 (Commercial Services)
General Plan: Service Commercial

Special Designation: None

Urban Services Line:	☒ Inside	☐ Outside
Coastal Zone:	☐ Inside	☒ Outside

ENVIRONMENTAL SETTING AND SURROUNDING LAND USES:

Application 131046 is a proposal to construct a new 19,000 square foot self storage facility on site with an existing 35,000 square foot self storage facility.

The subject parcel is 54,000 square feet is area and located on the east side of Soquel Drive between Freedom Boulevard and Rio Del Mar Boulevard.

The site is gentle sloping immediately adjacent to Soquel Drive and slopes steeply at the northern end where the proposed building is to be located.

The front of the proposed building would be located adjacent to an existing 10-foot-high retaining wall at the upper portion of the parcel. The hill behind the wall is sparsely vegetated with several mature trees and non-native grasses.

The subject parcel is zoned C-4 (Commercial Services) with a General Plan Designation of Service Commercial (C-S). Surrounding development includes apartments to the west, an existing storage facility to the east, a large residential development to the north and scenic Highway 1 to the south. The entire parcel lies within a mapped scenic corridor.

PROJECT BACKGROUND:

The subject parcel is developed with an existing 35,000 square foot self storage building which was approved under Commercial Development Permit 99-0581 along with miscellaneous roadside improvements. At the time application 99-0581 was approved, the parcel had a split zoning of C-4 and R-1-20 and a split General Plan Designations of C-S (Service Commercial and Light Industrial) and R-UL (Urban Low Density Residential). As supported by County Ordinance Amendment 5129, the parcel has been recently rezoned to C-4 and reclassified as C-S in the County General Plan.

DETAILED PROJECT DESCRIPTION:

This is a proposal to construct a 3-story 19,930 square foot self storage facility and grade approximately 4,000 cubic yards of cut and export. This proposal is located on a parcel with an existing 35,000 square foot self storage facility.

This project requires an Amendment to Commercial Development Permit 99-0581 and Environmental Review. Review of the Soils Report and preliminary grading were also completed for this project.

III. ENVIRONMENTAL REVIEW CHECKLIST

A. GEOLOGY AND SOILS

Would the project:

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	A. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
	B. Strong seismic ground shaking?	☐	☐	☐	☒
	C. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	D. Landslides?	☐	☐	☒	☐

***Discussion (A through D)*:** The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone (County of Santa Cruz GIS Mapping, California Division of Mines and Geology, 2001). However, the project site is located approximately 6 mile(s) southwest of the San Andreas fault zone, and approximately 3 mile(s) southwest of the County fault zone. While the San Andreas fault is larger and considered more active, each fault is capable of generating moderate to severe ground shaking from a major earthquake. Consequently, large earthquakes can be expected in the future. The October 17, 1989 Loma Prieta earthquake (magnitude 7.1) was the second largest earthquake in central California history.

A geologic investigation for the project was prepared by Craig Harwood, dated August 2013 (Attachment 2), and a geotechnical investigation was prepared by Redwood Geotechnical Engineering Inc, dated May 2, 2013 (Attachment 3). These reports have been reviewed and accepted by the Environmental Planning Section of the Planning Department (Attachment 4). The reports conclude that fault rupture would not be a potential threat to the proposed development, and that seismic shaking can be managed by constructing with conventional spread footings or pier and grade beam foundation systems and by following the recommendations in the geologic and

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

geotechnical reports referenced above.

Implementation of the additional requirements included in the review letter prepared by Environmental Planning staff (Attachment 3) will serve to further reduce the potential risk of seismic shaking.

As shown on the County of Santa Cruz GIS Mapping, a portion of the parcel lies within a mapped Cooper Clark landslide. Geologic Hazard Assessment prepared by Craig Harwood (Attachment 2) determined that the existing site conditions do not pose a threat of landsliding or debris flow.

2.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐

Discussion:

The report cited above (Attachment 2) concluded that there is a potential risk of increased erosion and seepage can be reduced with the implementation of shoring and submission of an engineered erosion control and drainage plan. These recommendations will be required as part of the building permit to reduce this potential hazard to a less than significant level.

3.	Develop land with a slope exceeding 30%?	☐	☐	☒	☐

Discussion: There are slopes that exceed 30% on the property. However, much of the proposed development is located on slopes less than 30%. The proposed development has been designed to eliminate potential impacts of development on slopes exceeding 30% by construction of a 25 foot high retaining wall that has been engineered to provide proper shoring design during construction and resist both lateral backfill pressures and any additional surcharge loads.

4.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Discussion: Some potential for erosion exists during the construction phase of the project, however, prior to approval of a grading or building permit, the project must have an approved Engineered Erosion Control and Drainage Plan as recommended in the geotechnical report (Attachment 3).

As required by County Code, implementation of a detailed erosion control plan and sedimentation control measures will be required. The plan will include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?	☐	☐	☐	☒

Discussion: The geotechnical report for the project did not identify any elevated risk associated with expansive soils.

6. Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems where sewers are not available?	☐	☐	☐	☒

Discussion: No septic systems are proposed. The existing commercial building is connected to the Santa Cruz County Sanitation District, and no new restroom facilities are proposed.

7. Result in coastal cliff erosion?	☐	☐	☐	☒

Discussion: The proposed project is not located in the vicinity of a coastal cliff or bluff; and therefore, would not contribute to coastal cliff erosion.

B. HYDROLOGY, WATER SUPPLY, AND WATER QUALITY
Would the project:

1. Place development within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated March 2, 2006, no portion of the project site lies within a 100-year flood hazard area.

2. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, updated in 2012, no portion of the project site lies within a 100-year flood hazard area.

3. Be inundated by a seiche, tsunami, or mudflow?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: The project location is not located within an area identified as prone to seiche, tsunami, or mudflow therefore no impact is anticipated.

4.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

Discussion: The site currently obtains water from Soquel Creek Water District and would not rely on private well water. No additional plumbing fixtures other than those necessary for fire protection are to be installed as part of the proposed expansion. The project is not located in a mapped groundwater recharge area.

5.	Substantially degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).	☐	☐	☐	☒

Discussion: The project would not discharge runoff either directly or indirectly into a public or private water supply. However, no commercial or industrial activities are proposed that would generate a substantial amount of contaminants. No changes to the existing parking and driveway are proposed and the post-development runoff is expected to be less than pre-development conditions. Potential siltation from the proposed project will be addressed through implementation of erosion control measures.

6.	Degrade septic system functioning?	☐	☐	☐	☒

Discussion: There is no indication that existing septic systems in the vicinity would be affected by the project.

7.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

which would result in flooding, on- or off-site?

Discussion: The proposed project is not located near any watercourses, and would not alter the existing overall drainage pattern of the site. Department of Public Works Drainage Section staff has reviewed and approved the proposed drainage plan.

8.	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

Discussion: Drainage Calculations prepared by C2G/Civil Consultants Group, Inc., dated May 9, 2013, have been reviewed for potential drainage impacts and accepted by the Department of Public Works (DPW) Drainage Section staff. The calculations show that the proposed design complies with County Design Requirements. The runoff rate from the property would be controlled by a system designed to detain a 10-year storm event and retain a 2-year storm event. DPW staff have determined that existing storm water facilities are adequate to handle the increase in drainage associated with the project. Refer to response B-5 for discussion of urban contaminants and/or other polluting runoff.

9.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒

Discussion: The proposed development is more than a mile from any known levee or dam therefore no impact is anticipated.

10.	Otherwise substantially degrade water quality?	☐	☐	☐	☒

Discussion: A silt and grease trap, and a plan for maintenance, will be required to minimize the effects of urban pollutants.

C. BIOLOGICAL RESOURCES

Would the project:

1.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

and Game, or U.S. Fish and Wildlife Service?

Discussion: According to the California Natural Diversity Data Base (CNDDB), maintained by the California Department of Fish and Game, there are no known special status plant or animal species in the site vicinity, and there were no special status species observed in the project area.

2. Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ☐ ☐ ☐ ☒

Discussion: There are no mapped or designated sensitive biotic communities on or adjacent to the project site.

3. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native or migratory wildlife nursery sites? ☐ ☐ ☐ ☒

Discussion: The proposed project does not involve any activities that would interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site.

4. Produce nighttime lighting that would substantially illuminate wildlife habitats? ☐ ☐ ☒ ☐

Discussion: The subject property is located in an urbanized area and is surrounded by a mix of existing commercial and residential development that currently generates nighttime lighting. There are no sensitive animal habitats within or adjacent to the project site.

5. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) ☐ ☐ ☐ ☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

through direct removal, filling, hydrological interruption, or other means?

Discussion: There are no wetlands within or adjacent to the project site.

6. Conflict with any local policies or ordinances protecting biological resources (such as the Sensitive Habitat Ordinance, Riparian and Wetland Protection Ordinance, and the Significant Tree Protection Ordinance)? ☐ ☐ ☐ ☒

Discussion: The project would not conflict with any local policies or ordinances.

7. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ☐ ☐ ☐ ☒

Discussion: The proposed project would not conflict with the provisions of any adopted Habitat Conservation Plan Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

D. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? ☐ ☐ ☐ ☒

Discussion: The project site does not contain any lands designated as Prime

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. In addition, the project does not contain Farmland of Local Importance. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide or Farmland of Local Importance would be converted to a non-agricultural use. No impact would occur from project implementation.

2.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

Discussion: The project site is zoned C-4 (Commercial Services) which is not considered to be an agricultural zone. Additionally, the project site's land is not under a Williamson Act Contract. Therefore, the project does not conflict with existing zoning for agricultural use, or a Williamson Act Contract. No impact is anticipated.

3.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒

Discussion: The project is not adjacent to land designated as Timber Resource and would not affect access to resource in the future.

4.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion: No forest land occurs on the project site or in the immediate vicinity. No impact is anticipated.

5.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion: The project site and surrounding area within radius of 0.5 mile(s) does not contain any lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance or Farmland of Local Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, no Prime Farmland, Unique Farmland, Farmland of

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Statewide, or Farmland of Local Importance would be converted to a non-agricultural use. In addition, the project site contains no forest land, and no forest land occurs within 1.25 mile(s) of the proposed project site. Therefore, no impacts are anticipated.

E. MINERAL RESOURCES

Would the project:

1.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

Discussion: The site does not contain any known mineral resources that would be of value to the region and the residents of the state. Therefore, no impact is anticipated from project implementation.

2.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion: The project site is zoned C-4 (Commercial Services), which is not considered to be an Extractive Use Zone (M-3) nor does it have a Land Use Designation with a Quarry Designation Overlay (Q) (County of Santa Cruz 1994). Therefore, no potentially significant loss of availability of a known mineral resource of locally important mineral resource recovery (extraction) site delineated on a local general plan, specific plan or other land use plan would occur as a result of this project.

F. VISUAL RESOURCES AND AESTHETICS

Would the project:

1.	Have an adverse effect on a scenic vista?	☐	☐	☒	☐

Discussion: The project would not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these

Although Highway 1 is a designated scenic resource, the project is not visible from a public vista and is located on the east side of Highway 1 therefore a less than significant impact is anticipated on any ocean vista. Only views affected by the project are those from private property. County visual resource protection regulations only apply to public viewsheds.

2.	Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock outcroppings, and historic buildings	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

within a state scenic highway?

Discussion: The project site is located along a County designated scenic road (Highway 1). The anticipated impact as a result of this project is less than significant in that the proposal will be partially screened from public view behind an existing commercial structure. The design of the building is such that it blends with the natural contour of the adjacent natural terrain (Attachment 9). Additionally, the proposal to plant native vegetation along the south property line would soften the visual impact of the building as seen from the highway (Attachment 8).

The visual impact of the project is to be further reduced by the conditions of approval requiring use of natural colors painted to match the existing building on site as seen in Attachment 9.

3. Substantially degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, and/or development on a ridgeline?	☐	☐	☒	☐

Discussion: The existing visual setting is a mix of commercial and rural residential properties along this stretch of highway 1. The proposed project is designed and landscaped so as to fit into this setting.

4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion: The project would create an incremental increase in night lighting. However, this increase would be small, and would be similar in character to the lighting associated with the surrounding existing uses.

G. CULTURAL RESOURCES

Would the project:

1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☐	☐	☐	☒

Discussion: The existing structure(s) on the property is/are not designated as a historic resource on any federal, state or local inventory.

2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: No archeological resources are expected to occur in the project area. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of excavating or otherwise disturbing the ground, any human remains of any age, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

3.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Discussion: Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Discussion: No unique paleontological resources, sites or other unique geologic features are known to exist on the subject or adjacent parcels.

H. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

1.	Create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials?	☐	☐	☐	☒

Discussion: The proposal would not result in the routine transportation, use or disposal of hazardous materials.

2.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: Hazardous materials are not known to exist on the subject property.

3.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

Discussion: The project location is not within one-quarter mile of an existing or proposed school.

4.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

Discussion: The project site is not included on the 10/25/13 list of hazardous sites in Santa Cruz County compiled pursuant to the specified code.

5.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Discussion: The project site is not located within an airport land use plan area.

6.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Discussion: The project site is not located within the vicinity of a private airstrip.

7.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

Discussion: The proposed development is not expected to interfere with an adopted emergency response or evacuation plan. The project has been conditioned to meet all requirements of the Fire Protection District.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
8. Expose people to electro-magnetic fields associated with electrical transmission lines?	☐	☐	☐	☒

Discussion: The proposed development would not involve the construction of electrical transmission lines and no lines are known to exist on the subject property.

9. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion: The project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency.

I. TRANSPORTATION/TRAFFIC

Would the project:

1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

Discussion: The project would create a small incremental increase in traffic on nearby roads and intersections. Approximately 400 truck loads will be required to remove the approximate 4,000 cubic yards of exported material from the site. This number of temporary new trips created by the project would be less than significant. Further, the increase would not cause the Level of Service at any nearby intersection to drop below Level of Service D.

2. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

Discussion: The project location is not within an existing airport land use clear zone

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

therefore no change to air traffic patterns is expected.

3.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

Discussion: The proposed design and use is consistent with designs and uses that have already been approved on subject parcel therefore no substantially increase hazards is anticipated.

4.	Result in inadequate emergency access?	☐	☐	☐	☒

Discussion: The project's road access meets County standards and has been approved by the local fire agency or California Department of Forestry, as appropriate.

5.	Cause an increase in parking demand which cannot be accommodated by existing parking facilities?	☐	☐	☐	☒

Discussion: A parking study prepared by Hatch Mott MacDonald dated May 10, 2013 has been submitted indicating that the existing parking (17 spaces) is adequate and therefore new parking demand would be accommodated on site.

6.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Discussion: The proposed project would comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians.

7.	Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the County General Plan for designated intersections, roads or highways?	☐	☐	☐	☒

Discussion: See response I-1 above.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

J. NOISE

Would the project result in:

1. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☐ ☒ ☐

Discussion: The project would create an incremental increase in the existing noise environment. However, this increase would be small, and would be similar in character to noise generated by the surrounding existing uses.

2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ☐ ☐ ☒ ☐

Discussion: The project is located adjacent to Highway 1 and the majority of the activity onsite will take place indoors. The noise levels generated by the project are not expected to exceed existing levels therefore a less than significant impact is anticipated.

3. Exposure of persons to or generation of noise levels in excess of standards established in the General Plan or noise ordinance, or applicable standards of other agencies? ☐ ☐ ☒ ☐

Discussion: Per County policy, average hourly noise levels shall not exceed the General Plan threshold of 50 L_{eq} during the day and 45 L_{eq} during the nighttime. Impulsive noise levels shall not exceed 65 db during the day or 60 db at night. The project site is located adjacent to Highway 1. Acoustic studies for nearby projects have shown that traffic noise along Highway 1 can exceed these standards.

4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ☐ ☐ ☒ ☐

Discussion: Noise generated during construction would increase the ambient noise levels for adjoining areas. Construction would be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area ☐ ☐ ☐ ☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

to excessive noise levels?

Discussion: The project is located outside of any airport land use plan and approximately 5 miles from Watsonville Municipal airport, therefore no impact is anticipated.

6.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Discussion: The project site is approximately 5 miles from the nearest airstrip. The project would not result in an excessive exposure to noise as a result of aircraft.

K. AIR QUALITY

Where available, the significance criteria established by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) may be relied upon to make the following determinations. Would the project:

1.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Discussion: The North Central Coast Air Basin does not meet state standards for ozone and particulate matter (PM_{10}). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors (Volatile Organic Compounds [VOCs] and nitrogen oxides [NO_x]), and dust.

Given the modest amount of new traffic that would be generated by the project there is no indication that new emissions of VOCs or NO_x would exceed MBUAPCD thresholds for these pollutants and therefore there would not be a significant contribution to an existing air quality violation.

Project construction may result in a short-term, localized decrease in air quality due to generation of dust. However, standard dust control best management practices, such as periodic watering, will be implemented during construction to reduce impacts to an acceptable level.

2.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒

Discussion: The project would not conflict with or obstruct implementation of the regional air quality plan. See K-1 above.

3.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				

Discussion: The proposal would result in an expansion of an existing self storage facility, a use that is not expected to result in an cumulative increase in air pollutants, pollutant concentrations or objectionable odors, therefore no impact is anticipated.

4.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒

Discussion: See discussion K-3 above.

5.	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Discussion: See discussion K-3 above.

L. GREENHOUSE GAS EMISSIONS

Would the project:

1.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Discussion: The proposed project, like all development, would be responsible for an incremental increase in green house gas emissions by usage of fossil fuels during the site grading and construction. Santa Cruz County has recently adopted a Climate Action Strategy (CAS) intended to establish specific emission reduction goals and necessary actions to reduce greenhouse gas levels to pre-1990 levels as required under AB 32 legislation. The strategy intends to reduce greenhouse gas emissions and energy consumption by implementing measures such as reducing vehicle miles traveled through the County and regional long range planning efforts and increasing energy efficiency in new and existing buildings and facilities. All project construction equipment would be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment. As a result, impacts associated with the temporary increase in green house gas emissions are expected to be less than significant.

2.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Discussion: See the discussion under L-1 above. No impacts are anticipated.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

M. PUBLIC SERVICES

Would the project:

1.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
	a. Fire protection?	☐	☐	☐	☒
	b. Police protection?	☐	☐	☐	☒
	c. Schools?	☐	☐	☐	☒
	d. Parks or other recreational activities?	☐	☐	☐	☒
	e. Other public facilities; including the maintenance of roads?	☐	☐	☐	☒

***Discussion (a through e)*:** While the project represents an incremental contribution to the need for services, the increase would be minimal. Moreover, the project meets all of the standards and requirements identified by the local fire agency or California Department of Forestry, as applicable, and school, park, and transportation fees to be paid by the applicant would be used to offset the incremental increase in demand for school and recreational facilities and public roads.

N. RECREATION

Would the project:

1.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

***Discussion*:** The project is not expected to generate an increase in the use of existing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

parks and recreational facilities in the vicinity. No impact is anticipated.

2.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion: The project does not include recreational facilities. No impact is anticipated.

O. UTILITIES AND SERVICE SYSTEMS

Would the project:

1.	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Discussion: Drainage analysis of the project C2G/Civil Consultants Group dated May 9, 2013, concluded that the calculations meet County requirements. Department of Public Works Drainage staff has reviewed the drainage information and have determined that downstream storm facilities are adequate to handle the increase in drainage associated with the project (Attachment 6). With the implementation of underground storage chambers, the project has been designed to detain a 10-year storm event while retaining a 2-year storm event. As a result, the post development runoff would be less than pre-development runoff.

2.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

Discussion: The project would connect to an existing municipal water supply served by Soquel Creek Water District. The proposed development is a self storage facility and the only additional water required for this development is to serve the emergency fire sprinkler system. Additionally, the existing landscape area is to be reduced as a result of the proposed building therefore, a less than significant impact is anticipated.

Municipal sewer service already serves this site as served by Santa Cruz Sanitation District. No additional restroom facilities are proposed therefore a less than significant impact is anticipated.

3.	Exceed wastewater treatment requirements of the applicable	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Regional Water Quality Control Board?				

Discussion: The project's wastewater flows would not violate any wastewater treatment standards.

4.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

Discussion: See the discussion under O-1 above. Less than significant impact is anticipated.

5.	Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Discussion: The project would not result in an increase in wastewater above existing levels. No new restrooms are proposed therefore a less than significant impact is anticipated.

6.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Discussion: The project is served by the Buena Vista Landfill which is a likely location for the proposed 4,000 cubic yards of exported cut material from the site. The landfill has sufficient capacity to accommodate this material and the project would not result in a substantial increase in solid waste beyond that of the construction phase, therefore a less than significant impact is anticipated.

7.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion: The project would comply with federal, state, and local statutes and regulations related to solid waste therefore no impact is anticipated.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

P. LAND USE AND PLANNING

Would the project:

1.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Discussion: The proposed project does not conflict with any regulations or policies adopted for the purpose of avoiding or mitigating an environmental effect.

2.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion: No habitat or community conservation plan exists on site or on adjacent parcels. No impact is anticipated.

3.	Physically divide an established community?	☐	☐	☐	☒

Discussion: The project would not include any element that would physically divide an established community.

Q. POPULATION AND HOUSING

Would the project:

1.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Discussion: The proposed project is designed at the density and intensity of development allowed by the General Plan and zoning designations for the parcel. Additionally, the project does not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. Consequently, it is not expected to have a significant growth-inducing effect.

2.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: The proposed project would not displace any existing housing since the location of the proposed development is currently undeveloped.

3.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion: The proposed project would not displace substantial number of people since the location of the proposed development is currently developed vacant.

R. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

Discussion: The potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory were considered in the response to each question in Section III of this Initial Study. No resources that have been evaluated as significant would be potentially impacted by the project, particularly plant and animal community resources. As a result of this evaluation, there is no substantial evidence that, after mitigation, significant effects associated with this project would result. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
2. Does the project have impacts that are individually limited, but cumulatively considerable? ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

Discussion: In addition to project specific impacts, this evaluation considered the projects potential for incremental effects that are cumulatively considerable. As a result of this evaluation, no potentially significant cumulative impacts related to geology or aesthetics were identified. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
3. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion: In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to specific questions in Section III. Aesthetics, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Population and Housing, and Transportation and Traffic. As a result of this evaluation, there were no potentially significant effects to human beings related to the following: Aesthetics and soil hazards. The project has been designed and conditioned to reduce effects to a level below significance. Conditions include review and approval of a final landscape plan to reduce the visual impact of the proposed development as seen from the nearby scenic highway and implementation of an engineered erosion and drainage plan to ensure the project meets the recommendations of the Geotechnical Report (Attachment 3). Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

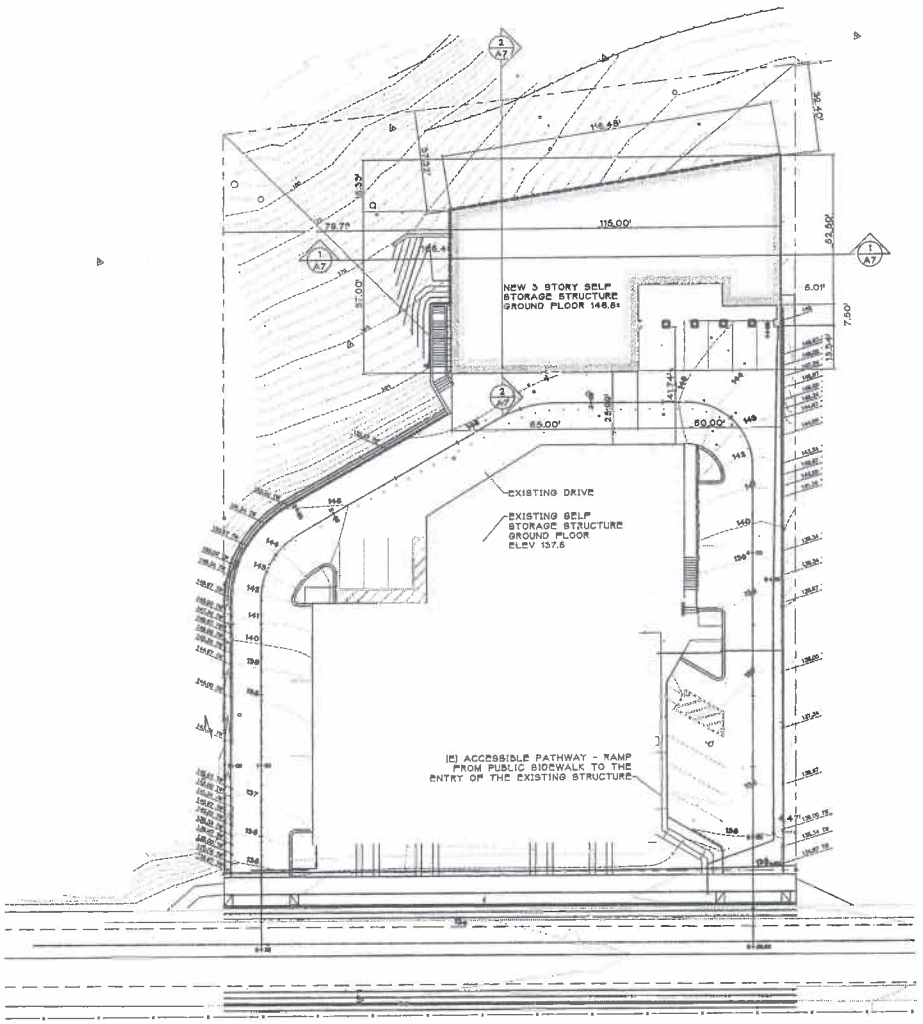
IV. REFERENCES USED IN THE COMPLETION OF THIS ENVIRONMENTAL REVIEW INITIAL STUDY

County of Santa Cruz 1994.
1994 General Plan and Local Coastal Program for the County of Santa Cruz, California. Adopted by the Board of Supervisors on May 24, 1994, and certified by the California Coastal Commission on December 15, 1994.

V. ATTACHMENTS

1. *Site Plan, Location Map, Map of Zoning Districts; Map of General Plan Designations; and Assessors Parcel Map.*
2. *Geologic Investigation (Report Summary, Conclusions, Recommendations, Map & Cross Sections)*, prepared by Craig Harwood, CEG, dated August 2013
3. *Geotechnical Investigation (Conclusions and Recommendations)*, prepared by Steve Rass & Associates, dated May 12, 1999
4. Geologic and Geotechnical Review Letter, prepared by Joe Hanna County Geologist dated August 21, 2013
5. *Discretionary Application Comments*, dated June 10, 2013
6. *Drainage Calculations*, prepared by C2G/ Civil Consultants Group, dated May 9, 2013
7. *Parking Study(Conclusions and Recommendations), prepared by Hatch Mott MacDonald, dated 5/10/2013*

8. *Landscape Plan*, prepared by Gregory Lewis, dated 5/1/2013, & Architectural Plans prepared by Streeter Group INC, dated 2/5/2013
9. *Exterior Color Schedule and Photo Simulations prepared by Streeter Group*



FIRST FLOOR AREA = 6236 SF
SECOND FLOOR AREA = 6843 SF
THIRD FLOOR AREA = 6843 SF

TOTAL GROSS FLOOR AREA = 18921 SF

SITE PLAN

SCALE: 1"=20'

REVISIONS	BY
1	
2	
3	
4	
5	
6	

Streeter Group, Inc.
2371 Main Street, Suite C, Soquel, CA 95073
Phone (831) 477-0781 www.streetergroup.com

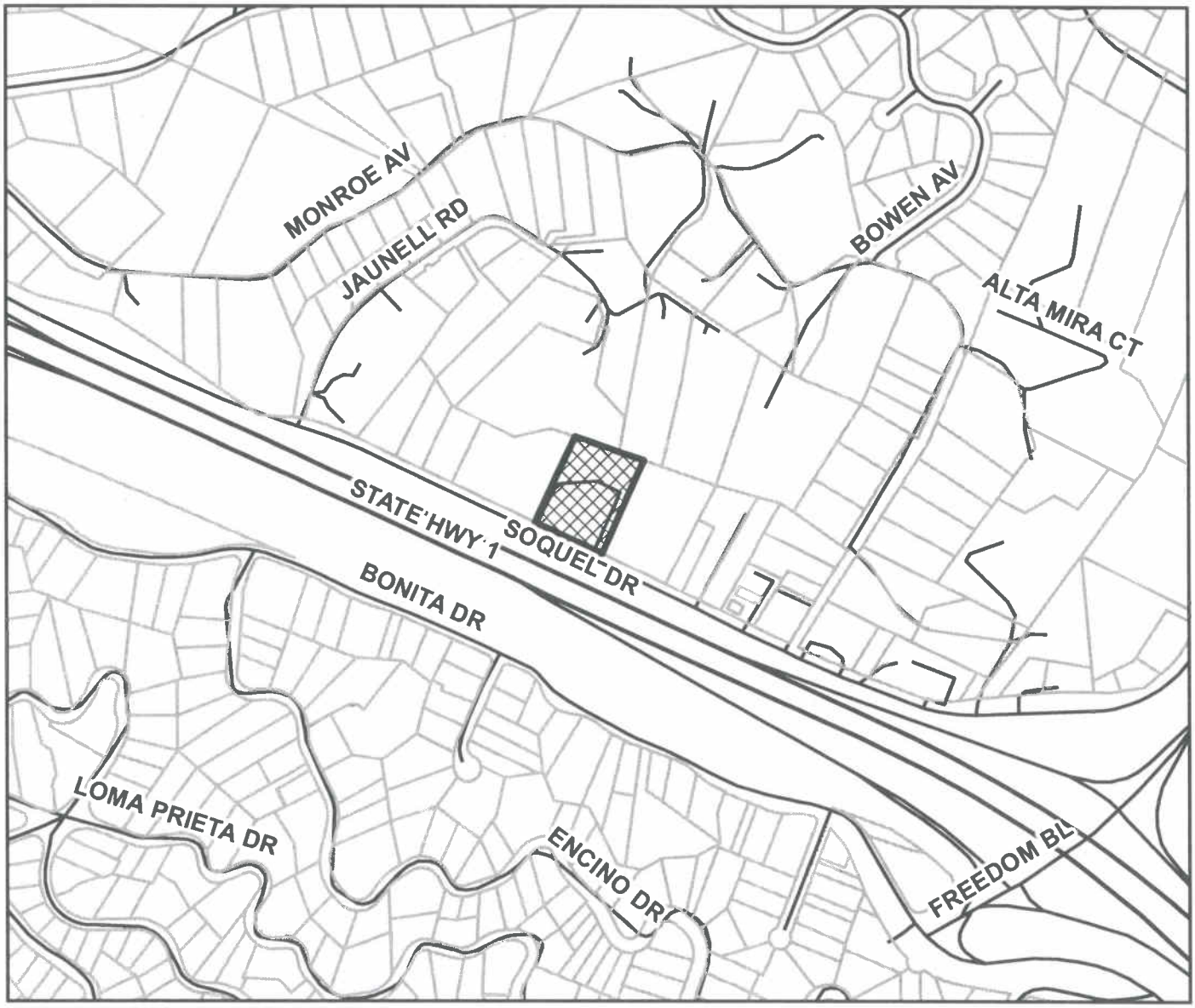
Store More America Aptos Addition
9687 Soquel Drive, Aptos, CA
OWNERS: Aptos Self Storage LLC A.P.N. 041-233-23

PRELIMINARY SITE PLAN

DATE: 02-08-13
SCALE: AS NOTED
DRAWN BY: HZ
CHECK BY: BSS
CAD FILE: A1
JOB NO: 08010
SHEET A1
OF XX SHEETS

ATTACHMENT 1

Location Map



625 312.5 0 625 1,250 1,875 2,500

Feet

LEGEND

- APN: 041-233-23
- Assessors Parcels
- Streets
- State Highways

N
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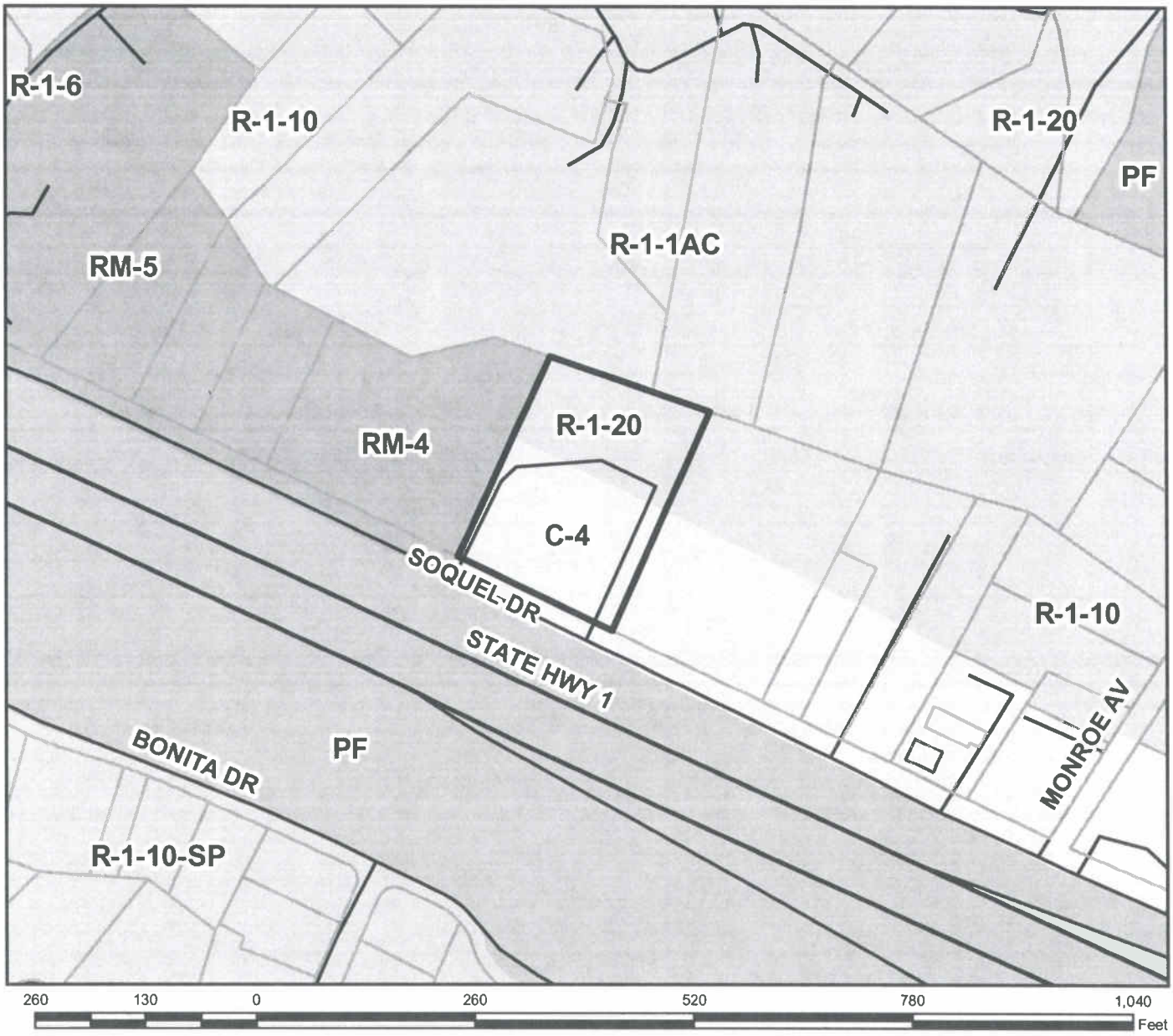
Map Created by
County of Santa Cruz
Planning Department
March 2013

Zoning Map



260 130 0 260 520 780 1,040 Feet

LEGEND

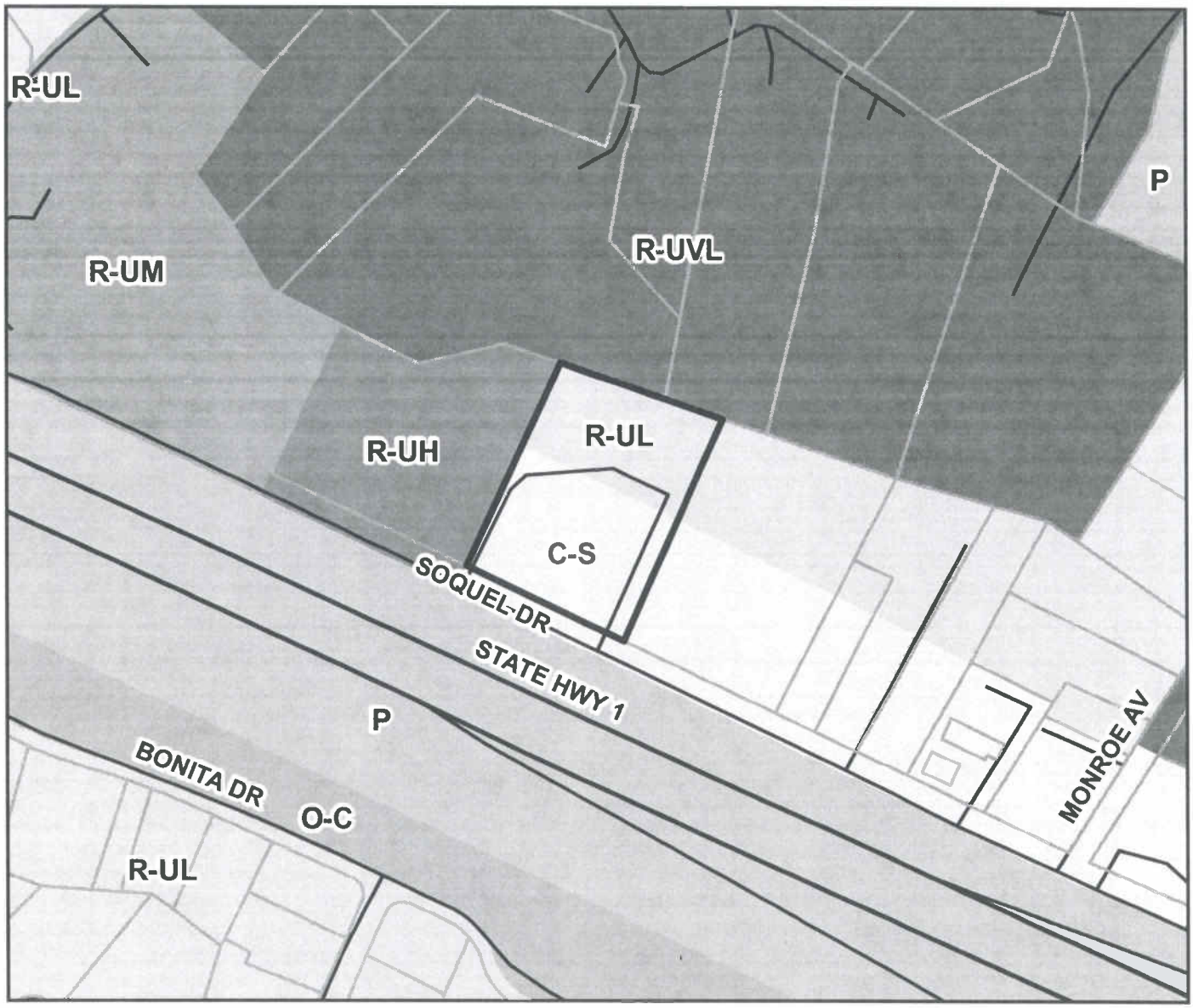
- APN: 041-233-23
- Assessors Parcels
- Streets
- State Highways
- COMMERCIAL-SERVICE
- RESIDENTIAL-SINGLE FAMILY
- PUBLIC FACILITY
- RESIDENTIAL-MULTI FAMILY

N W E S

Map Created by
County of Santa Cruz
Planning Department
March 2013

plm028

General Plan Designation Map



LEGEND

- APN: 041-233-23
- Assessors Parcels
- Streets
- State Highways
- Commercial-Service
- Residential - Urban Low Density
- Public Facilities
- Resource Conservation
- Residential - Urban Medium Density
- Residential - Urban High Density
- Residential - Urban Very Low Density

N
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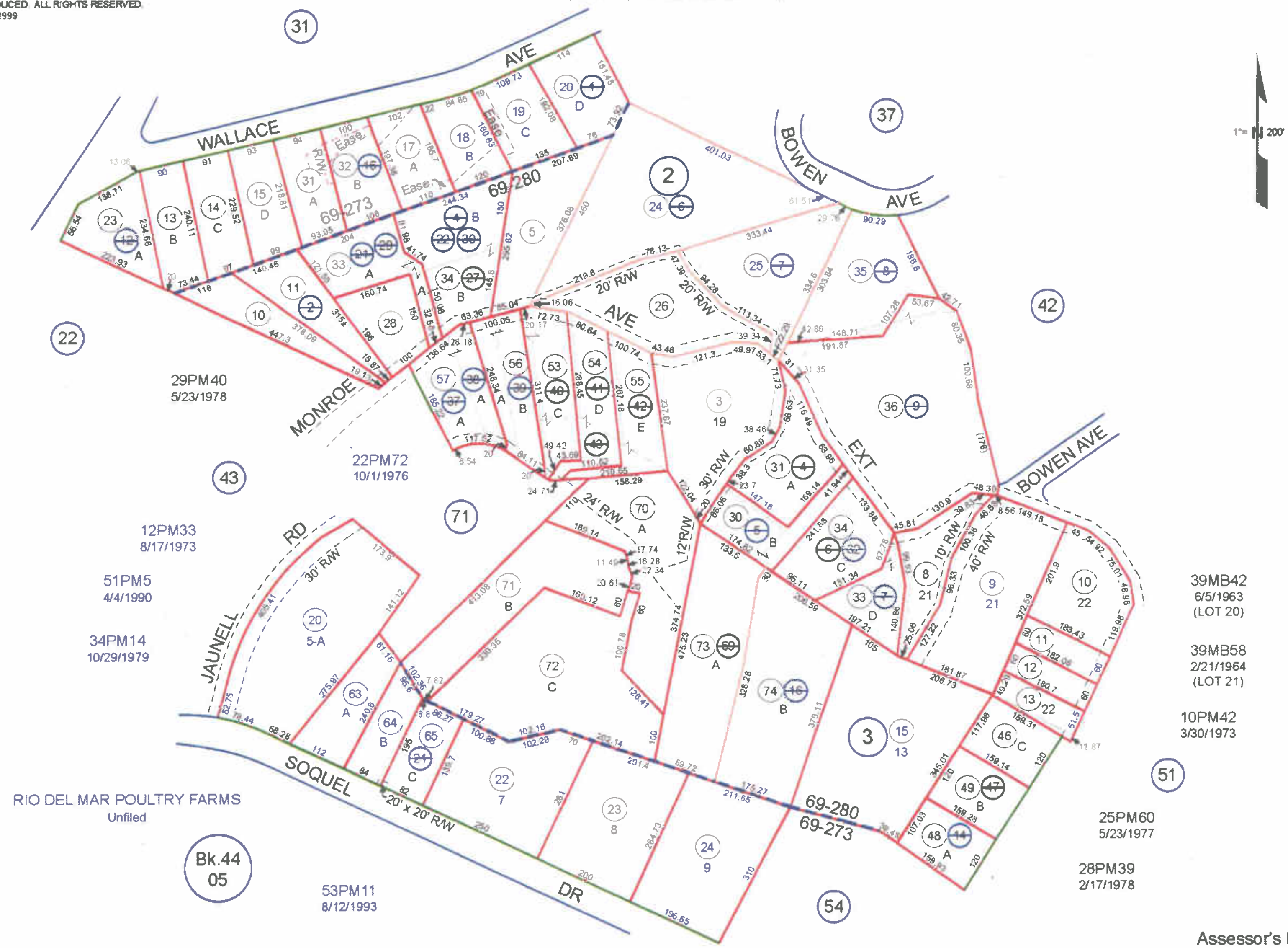
Map Created by
County of Santa Cruz
Planning Department
March 2013

FOR TAX PURPOSES ONLY

POR. APTOS RANCHO
SEC. 17, T.11S., R.1E., M.D.B. & M.

Tax Area Code
69-273 69-280

41-23



Note - Assessor's Parcel & Block Numbers Shown in Circles.

Electronically Redrawn 1/6/99 rw
Rev. 5/6/99 CB (TCA)
Rev. 8/27/02 DD (por to pg 71)
Rev. 7/23/08 mc (cor. to dims, 2-35)
Rev. 7/18/12 mc (cor. to parcel config., 2-24 to 26)

Assessor's Map No. 41-23
County of Santa Cruz, Calif.
Jan. 1999

pln028

GEOLOGIC HAZARDS EVALUATION
STORE MORE AMERICA
APN 041-233-23
9687 SOQUEL DRIVE
APTOS, CALIFORNIA

August, 2103

Prepared for

Meritage Development Group

Prepared by

Craig S. Harwood, C.E.G.
Ben Lomond, California

ATTACHMENT 2

Craig S. Harwood
Certified Engineering Geologist
239 Park Drive
Ben Lomond, CA 95005
tel 831 325-9327
email kirnig@cruzio.com

Robert Marani
c/o Meritage Development Group
213 Pacifica Boulevard
Watsonville, California 95076

August 8, 2013
File No. G-501.1

Project: **Proposed Commercial Building**
APN 041-233-23
9687 Soquel Drive
Aptos, California

Subject: Geologic Hazards Evaluation and

Dear Mr. Marani;

As you authorized, presented herein is the geologic hazards evaluation for the proposed commercial building and associated improvements located at 9687 Soquel Drive, Aptos, California. This report has been prepared for your use in developing the property for the proposed improvements. The report describes the general site geologic characteristics, identifies potential geologic hazards affecting the project and provides recommendations for site development. We should be allowed the opportunity to review the final development plans when they become available. Two copies of this report are submitted to you for your use and additional two copies have been provided to the Streeter Group for distribution to others. This concludes our work for the current phase of the project.

We appreciate the opportunity to have provided geologic services for this project and look forward to working with you again in the future. If there are questions concerning this report, please contact me at your earliest convenience.

Sincerely,

Craig S. Harwood
PG #6831, CEG #2275

REGISTERED GEOLOGIST
CRAIG S. HARWOOD
exp 3/31/14
C.E.G. No. 2275
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Distribution: Client (2)
Streeter Group (2), and 1 digital copy

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1.0 INTRODUCTION

Our understanding of the project is based upon our review of the improvement plans by C2G dated May 9, 2013). We understand that the proposed project will consist of construction of a three story, wood frame, commercial building supported on a concrete slab-on-grade with a thickened edge. A 15 foot to 25 foot high concrete retaining wall will be constructed along the northeastern and northwestern edge of the building.

2.0 PURPOSE AND SCOPE OF SERVICES

This geologic hazards evaluation report has been prepared to characterize and evaluate the geologic conditions and potential geologic hazards associated with the proposed development at the site.

The scope of work for this geologic hazards evaluation included; review of available geologic and geotechnical reports and maps, a review of stereo aerial photo pairs covering the site area, geologic mapping of the site, excavation and logging of exploration test borings and evaluation of the collected data. The scope of this work is intended to comply generally with comments offered by the county geologist, Mr. Joe Hanna during a phone conversation on July 12, 2013. It is our intent that this report be used exclusively by the client and the client's architect/engineer to form the geologic basis of the design of the project as described herein, and in the preparation of plans and specifications. Analysis of the soil and rock for radioisotopes, asbestos, hydrocarbons, or chemical properties are beyond the scope of this geologic hazards evaluation.

3.0 SITE SETTING

The site is located in a rural portion of Santa Cruz County about 1 mile southeast of the community of Aptos, California. The Vicinity Map (Appendix A) gives the general location of the site and the topographic characteristics of the vicinity. The Site Geologic Map (Appendix A) presents a more detailed depiction of the physical features of the site and the proposed improvements. The site is located in an area characterized as southwesterly trending ridges and valleys in the. The area is incised by drainages.

Our review of the topographic base map by C2G Civil Consultants Group (May 9, 2013) indicates there is approximately 52 feet of topographic relief across the entire site and approximately 20 feet of topographic relief across the proposed building pad. The overall site encompasses the lower flank of a southwesterly facing, moderately inclined slope. The new building will be created by excavating into the existing slope which was previously cut in its lower portion in order to create a parking area. Slopes located northeast (upslope) become steep within about 30 feet of the property line. The steepest portion of the slope within the building envelope area exists in its northerly border where the slopes are inclined 23% toward the southwest. Cuts on the order to 19 feet to as much as 25 feet will need to be made into the natural hillside in order to achieve the desired finished grades for the retaining wall that borders the northeast and northwest of the proposed building.

Drainage patterns at the site are a function of the site physiography. During peak storm events natural drainage originating from the developed areas upslope and northeast of the site generally sheets downslope toward the natural swale in the southeast property corner. The vegetation at the site is typical of the mixed coastal forest community. The majority of the area around the proposed building has a moderate to thick canopy of coniferous and other trees, including pines, madrones, oaks, willows, as well as an understory ground cover of shrubs.

4.0 GEOLOGY

Regional Geology

The site is located within the coast range geomorphic province of central California. Throughout the Cenozoic Era central California has been affected by tectonic forces associated with lateral or transform plate motion between the North American and Pacific crustal plates, producing a complex system of northwest-trending faults - the San Andreas Fault system (Page, 1998). Uplift, erosion and subsequent re-deposition of sedimentary rocks within this province have been driven primarily by the northwest directed, strike-slip movement of the tectonic plates and the associated northeast oriented compressional stress. The northwest-trending coastal mountain ranges are the result of an orogeny (formation of mountains by the process of tectonic uplift) believed to have been occurring since the Pleistocene epoch (approximately 2-3 million years before present). The portion of the coastal region where the site exists is within the Salinian Block, which is bound by the San Andreas fault on the east, and by the San Gregorio - Palo Colorado fault to the west. The Salinian block is composed of an elongate prism of granitic and metamorphic rock types. The Salinian basement complex is overlain primarily by marine sedimentary rocks of tertiary age and terrestrial rocks of Pliocene to Pleistocene age. The sedimentary cover has been folded and faulted due to tectonic activity. The regional geologic map by Brabb (1987, 1989 and 1997) indicates the area of the site is underlain by the Aromas Sand formation. The Aromas Sand is described by Dupre (1975) as; "Heterogeneous sequence of mainly eolian and fluvial sand, silt, clay and gravel. There are slight angular unconformities present throughout the unit, with older deposits more complexly jointed, folded and faulted than younger deposits." The total thickness many be more than 800 feet. The Regional Geologic Map (Appendix A) is a partial reproduction of the map by Dupre (1975).

Previous and Current Field Investigations

Two geotechnical investigations have been conducted on the overall property. In 1998 Steven Rass & Associates (RA) performed a Geotechnical Investigation for the Existing storage facility that occupies the southwestern two-thirds of the property. Their investigation included drilling and logging four exploratory borings which encountered loose to medium dense sandy soils of the Aromas Sand.

Earlier this year, Redwood Geotechnical Engineering ("RGE") conducted a subsurface investigation (two borings) in the area of the proposed building. More recently we shadowed these two borings with two additional borings (designated by us as B-3, and B-4). Our field investigation included the drilling of two exploratory borings utilizing a tractor mounted drill rig (Simco 2400 equivalent) in and immediately adjacent to the proposed building envelope area, collected soil samples and performed laboratory analyses on samples collected at the boring locations. Soils encountered in the test borings were categorized and logged in general accordance with the Unified Soil Classification System, graphic logs of which are presented in Appendix B. As the test borings were advanced, soil samples were obtained using a ring-lined barrel sampler, driven by a 140-lb hammer into the soil profile.

The borings advanced to depths ranging from 19.5 feet (B-3) to 25.5 feet (B-4) below the nearest adjacent ground surface. Due to the sloping nature of the site, total penetration into the geologic formation was dependant on location. RGE's B-2 and our B-3 were located in a locally low, trough shaped area at the lower end of a drainage swale. At this location B-2 (RGI) and our B-3 encountered loose clayey sand and poorly graded sand to a depth of 14.5 feet. This material is interpreted as colluvium deposited by sheet flow and gravity. Beneath the colluvium was medium dense to dense sand to the maximum depth explored (19.5 feet). This underlying material was interpreted as Aromas Sand RGE encountered ground water at a depth of

15 feet at their B-3. They conducted their subsurface exploration in the late spring verses the mid-summer timing of our exploration. At the location of RGE's B-1 and our B-4 were encountered a thin surficial soil overlying medium dense to very dense Aromas Sand to the maximum depth explored (41.0 feet; RGE and 25.5 feet, our B-4).

Based on the subsurface investigation, review of subsurface data collected by others, and observations of natural and man-made exposures at and near the site indicate that the building envelope is underlain at relatively shallow depths by loose to medium dense and dense, weakly cemented sand with clay and silt. Contacts between the earth materials are gradational indicating that the upper residual soil has been forming in-situ from the underlying bedrock.

Geologic Reconnaissance

A geologic reconnaissance of the site was performed on July 19, 2013 to observe in the field, features depicted on published maps, to observe exposures of earth materials and to identify existing or potential geological hazards. The results of the reconnaissance are shown on the Site Geologic Map and Geologic Cross Sections A-A' and B-B' (Appendix A). These cross sections were extended through critical areas when considering the proposed construction.

Exposures of subsurface materials at and near the site are rare due to the vegetative cover. Colluvium of varying thickness overlies geologic formational materials on the sloping portions of the site (see Previous and Current Field Investigations). Our reconnaissance extended to well above the northeast property line where steep slopes exist. Other observations pertinent to the field reconnaissance are discussed in subsequent sections of this report.

Groundwater

Groundwater was not encountered in any of our recent borings but was encountered in the borings of RGE earlier this year. They encountered free groundwater at depth of 15 feet (B-2) which is located within the drainage swale area. We noted hydrophllic vegetation on the slope located just northeast of the northeast property line as well as in the drainage swale area. No evidence of springing activity was observed in the aerial photos, or during the site reconnaissance. In general, groundwater conditions and fluctuations in the level of subsurface water are possible due to variations in rainfall, temperature, irrigation and other factors.

Landsliding

Several published geologic maps covering the general area of the site including those of; Akers and Hinkley (1967), Dupre (1975), and Brabb (1987, 1989 and 1997). Of those published maps, the following are themed on landsliding; Cooper, Clark & Associates (1975); Ellen and Weiczorek, 1988; Baum et al., 1999;Wentworth et al., (1997) Ellen et al., (1997) shows an inferred landslide located in the topographic hollow that exists upslope of the southeast property corner (Cooper, Clark & Associates, 1975). This is based on interpretation of features seen in aerial photographs. The map by Wentworth et al., 1997 does not show this landslide. Our review of historical aerial photo extending back to 1935 indicates the area of the site contained significantly less tree and brush growth and these photos were particularly helpful in interpreting the landforms. We noted no unusual features suggesting landsliding as mapped at that time. Over time, due to fire suppression practices since the 1940's trees and understory vegetation has become established on these slopes. By the 1970's moderately significant grading has occurred on the sloping ground northeast of

the site including the grading of an access road extending in a southeasterly direction along the slope located just northeast of the site and terminating in the swale area. This road was never improved with pavements and is currently overgrown with understory brush and pine trees. Our reconnaissance of this road and the termination at the swale indicates that grading spoils from the road were pushed beyond the end of the road into the swale area resulting in a series of hummochs and berms placed on gently inclined slopes. Relative topography suggests these fill accumulations are probably less that five feet thick. These deposits of soil are deeply eroded and appear youthful in geomorphic terms. Despite the hummochy topography however the slopes located further to the northeast do not show evidence of scarps or hollowed out slope forms that would serve as source areas for a historically recent slide. The slopes located just northeast of the site do not appear to be unstable in terms of gross stability and the accumulations of loose sandy fill are located on relatively gently sloping ground (average inclination of 23% but with road fill prisms on ground that are sloping up to 35%), these soil accumulations. Our site evaluation suggests there is a low potential for landsliding to impact the site.

Debris flows, or mudslides, can originate during periods of heavy rainfall on steep slopes such as occurred in 1982 where hundreds of damaging debris flows and other slope failures occurred throughout the San Francisco and Monterey Bay areas (Ellen and Weiczorek, 1988; Baum et al., 1999). There are no mapped slides near the site resulting from this extreme weather event. An interpretive map by Ellen et al., 1997 shows potential debris flow source areas in the region. Ellen et al., show a small area located somewhere upslope of the northeast property corner as a potential debris flow source area. Due to the scale of the map it is it is not clear on what basis this is based. We noted no potential debris flow source area in the general area of the neighborhood during our reconnaissance.

5.0 SEISMICITY

While the U.S. Geological Survey has abandoned attempts to predict the occurrence and magnitude of future earthquakes, the Working Group on California Earthquake Probabilities (2007) estimated that there is a 63% probability that one or more major earthquakes (Mw 6.7+) will occur in the region by the year 2030 (UCERF, 2008). There is a high probability that, during the design life of the proposed commercial structure, the site will experience a large earthquake from at least one of the active faults in the region.

Ground Shaking

Ground shaking from a seismic event is considered the primary hazard that will impact the proposed commercial building within its design life span. The severity of ground shaking during an earthquake depends upon a number of factors such as earthquake magnitude, epicentral distance to site, local geologic conditions, colluvium thickness and wave-propagation properties of earth materials, groundwater conditions, and topographic setting. There are a number of potential sources of large magnitude earthquakes in the region. The site is not located within a near source zone (as defined by the UBC). Near-source factors do not apply. Refer to the soils engineering section of this report for recommended California Building Code seismic design parameters.

Ground shaking can trigger other secondary seismic hazards that are discussed in following sections.

Surface-Fault Rupture

The results of our review of geologic maps and literature, aerial photos and our site reconnaissance indicate no evidence suggestive of faulting at or immediately adjacent to the site. This conclusion is consistent with

published mapping of the general area of the site. The potential for surface-fault rupture at the site is considered to be low.

Other Seismic Hazards

Ridge top shattering occurs most commonly along the crests of sharp ridges, oriented roughly parallel with active faults where seismic energy is concentrated (Sutch and Dirth, 2003) as was observed in the 1971 San Fernando earthquake and later, during the 1989 Loma Prieta earthquake (Galloway and Plafker, 1989; Ponti & Wells, 1990; Mason et al., 1991; Nolan, 1992). There was no occurrence of ridge top shattering documented in the vicinity of the site during the 1989 Loma Prieta Earthquake. The topographic characteristics of the site are such that the site would be expected to be impacted by this phenomenon. The site is in an area that has been designated by the county planning department as having a low potential for liquefaction..

6.0 DISCUSSION

Living in or developing property in the rugged, seismically active coastal region of central California carries with it a somewhat elevated level of risk from geologic hazards when compared to areas of the state where the geologic hazards are generally lessened by the lack of topographic relief, seismicity and proximity to active faults. Persons living in or developing land in this region must be cognizant of this fact, and willing to accept this somewhat elevated level of risk. This level of risk can be reduced to an acceptably low level by implementing mitigative measures (for example, building setbacks from potential hazards, engineered structures, or adherence to building codes). It should be noted that this risk cannot be totally eliminated. Modern building codes are intended to prevent collapse of structures but not to preclude the need for significant repairs or even rebuilding after a major earthquake.

Changes to the natural conditions at or adjacent to the site can directly affect the risk levels from geologic hazards to the proposed development. For example, grading activities (cutting or filling), altering natural drainage characteristics, removing vegetative ground cover or excessive landscape irrigation activity can upset the natural equilibrium of forces and conditions present in a slope therefore, increasing the risk from geologic hazards at a site. Conclusions are drawn considering the current site conditions and recommendations offered considering the current proposed development concept.

7.0 CONCLUSIONS AND RECOMMENDATIONS

General

Based on the information obtained during this study, we judge that there are no geologic conditions or hazards that would preclude development of the property for commercial purposes as currently planned, provided the recommendations presented herein are adhered to. This statement pertains to the current development concept. The recommendations are presented as guidelines to be used by project planners and designers, and have been prepared assuming we will be commissioned to review any subsequent version of the project plans prior to construction to verify conformance with the recommendations presented in this report, and to inspect during site grading. We should be notified in writing of any changes to the development concept so that we might review and, if necessary, to modify the recommendations.

Seismic Hazards

The physiographic and geologic conditions of the site indicate there is a low potential for ridge top shattering. Due to the presence of medium dense to dense granular soils underlying the foundation zone in the building pad area, and the planned site preparation and foundation design, it is unlikely the building pad would experience seismically-induced settlement sufficient to pose a threat to the proposed structure.

The geologic hazard that poses the greatest impact to the site is seismic shaking. The San Andreas Fault zone or the Palo Colorado fault zone are likely to produce the highest level of seismic shaking at the site due to their proximity to the site, the maximum earthquake that they are capable of, their slip rate and other factors. There are a number of active faults in the region that are capable of producing very strong to severe levels of seismic shaking during the design life of the proposed building and improvements. Selection of seismic design parameters should be made after careful consideration of the site profile, analytical procedures, and past performance of similar structures during magnitudes of shaking similar to those expected for the site. The proposed commercial and other site improvements should be designed to resist damage associated with very strong to severe ground shaking in accordance with current building codes and design standards (see Geotechnical Engineering Report for the project).

No evidence of fault surface traces was encountered during the research or field reconnaissance for this study. Therefore, the potential for fault surface rupture occurring at the site is considered to be low. The hydrologic setting and the subsurface conditions indicate that the potentials for liquefaction lateral spreading and lurching occurring at the site are low.

Landsliding

Although the map by Cooper Clark & Associates show a landslide mapped within the swale located just above the southeast property corner, we believe this is due to the general convex upward, slope shape above the swale and the hummochy ground (fill piles and berms) in the lower reaches of the swale. Just northwest of the swale local accumulations of fill exist along the outboard edge of an old access road that was graded along the hillside just northeast of the northeast property line. These fill accumulations are located near the base of the hillside and due to the gentle slope gradients (swale area) and short slope ruins (outboard edge of access road) do not pose a threat of landsliding or debris flows. Due to the presence of loose soils in the upper approximately 14 feet of the soil profile in the southeasterly portion of the building envelope, we recommend that temporary shoring be utilized during construction of the retaining wall. Furthermore, it is

critical that the retaining wall receive a drainage layer behind it. Severe erosion of these loose fill accumulations and the attendant sedimentation of sandy soil onto the lower reaches of the swale area at the site can be expected in the future (see below).

We noted that the loose berms and piles of fill above the site have experienced severe erosion since their placement over the last 5 decades or so since their placement. Runoff coming down the swale in peak storms has resulted in sedimentation in the lower reaches of the drainage swale at the site and has in-filled a former drainage channel. We discussed this matter with the project Geotechnical Engineer (Joe Rafferty) and came to the mutual conclusion that a catchment basin should be constructed upslope of the building retaining wall (within the lower reaches of the swale) that is designed to collect sediment-laden sheet flow during peak storm events and an access easement should be planned along the southwest edge of the building such that periodic cleaning (maintenance) can be performed through use of a small end loader or Bobcat dozer. Periodic inspection and maintenance of this catchment basin should be incorporated into the long term development plan.

Finished slope configurations and drainage provisions should be implemented in accordance with the recommendations offered in the soils engineering portion of this report.

Seismic Related Water Hazards

Due to the inland location of the site and the lack or stored or otherwise confined bodies of water in the area, the potential for the site to be affected by tsunamis and seiches is nil.

8.0 LIMITATIONS

1. The conclusions of this report are based on data acquired and evaluated from this study and are intended to apply only to the development concept that is currently being proposed. The conclusions of this report are based upon the assumption that the site geologic and soil conditions do not deviate substantially from those disclosed in the research and our observations of a limited number of natural and man-made exposures and exploratory borings at and immediately adjacent to the site. If any variations or unforeseen conditions are encountered during construction, or if the proposed construction will differ substantially from that planned at the present time, the geologic/geotechnical consultant should be notified so that reevaluation of the conditions and supplemental recommendations can be given. In the event that we were not notified of such changes, the conclusions and recommendations presented in this report would be invalidated.

2. This report is issued with the understanding that it is the responsibility of the owner or the owner's representative to ensure that the information presented herein is called to the attention of the project architect and engineer.

3. The findings of this report are valid as of the present date. Changes in the conditions of a property can occur with the passage of time. In addition, changes in applicable or appropriate standards occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside of the control of the consulting geologist. Therefore, this report should not be relied upon after a period of one year without being reviewed by a qualified engineering geologist.

4. This report was prepared in general accordance with currently accepted standards of professional geologic/ geotechnical engineering practice in this area at this time. No warranty is intended, and none shall be inferred from the statements or opinions expressed.

5. All earthwork and associated construction should be observed by our field representative to compare the generalized site conditions assumed in this report with those found at the site at the time of construction, and to verify that construction complies with the intent of our recommendations.

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Aerial Photos Reviewed:

Date	Scale	Type	Source	Flight/Frames
Jan, 1935	1:19,512	B&W	Fairchild Aerial Surveys	3300-96, 97, 98
5-14-1948	1:10,000	B&W	C.D.F.	CDF-5-3-50, 51
6-17-1956	1:13,000	B&W	U.S.D.A	CJA 75R-5, 6, and 7
6-24-1963	1:12,000	B&W	U.S.D.A.	CJA 1DD-141, 142
10-14-1975	1:12,000	B&W	American Aerial Surveys	SCCZO 1-115, 116
10-18-1989	1:31,680	B&W	Western Aerial Corp.	WAC-89CA-35, 3

APPENDIX A

Vicinity Map

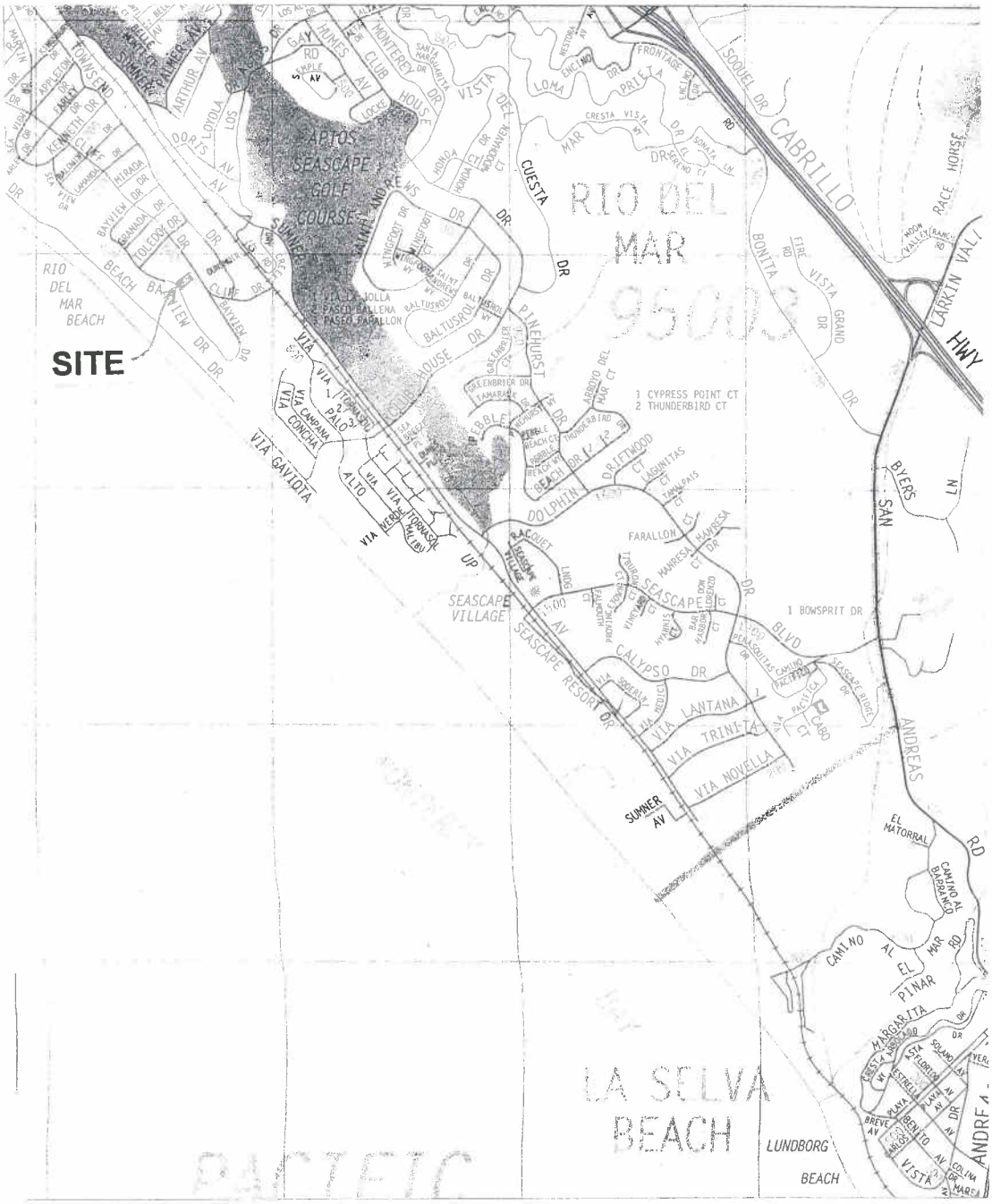
Regional Geologic Map

County Landslide Map (Cooper, Clark & Associates, 1975)

Site Geologic Map

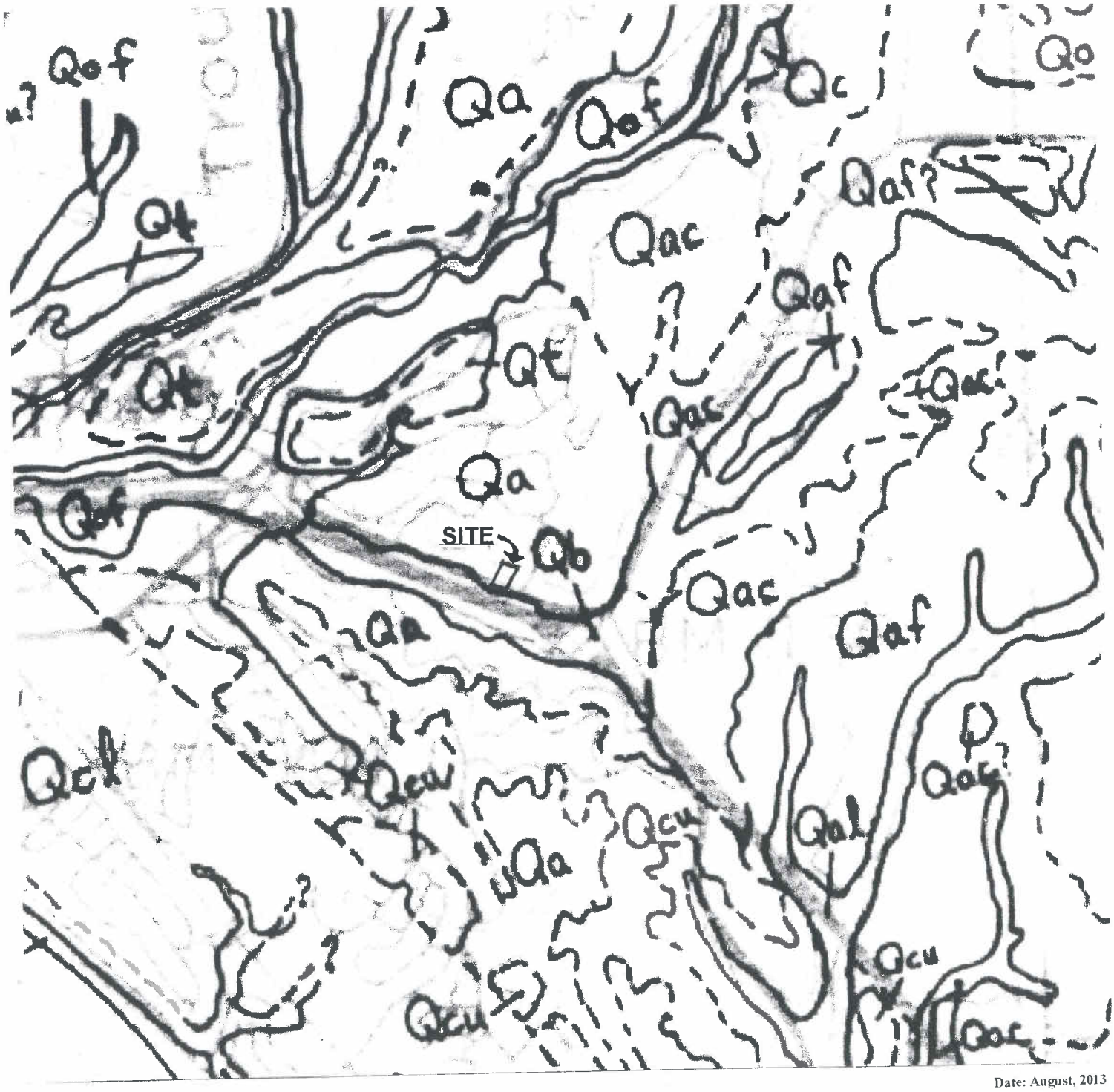
Geologic Cross Sections A - A', and B - B'

Vicinity Map



Craig S. Harwood
Engineering Geologist

APN 043-152-72
Bayview Drive, Aptos, CA



Date: August, 2013

File No. G-501.1

Explanation*

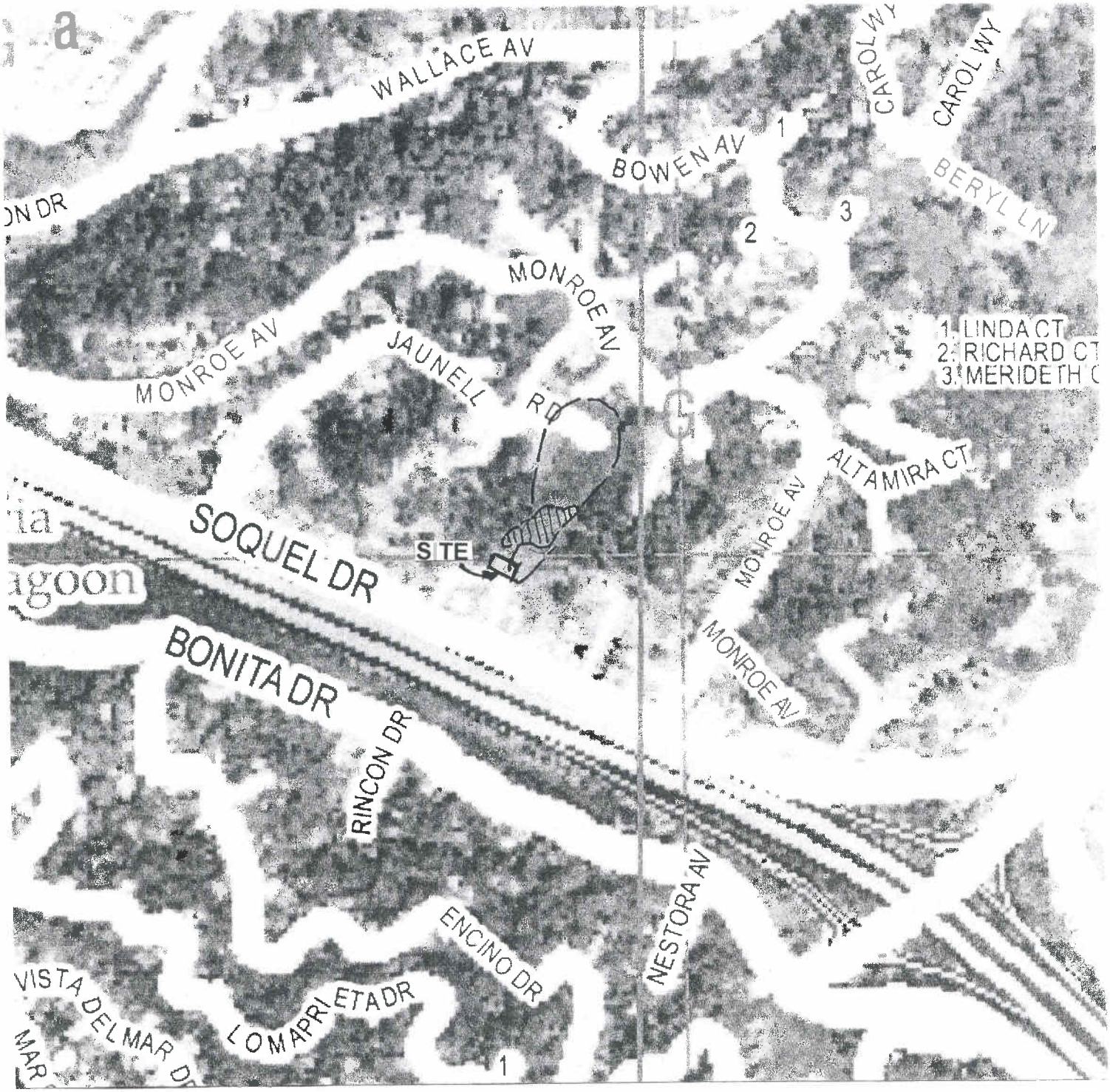
Selected Earth Materials

Qal	Alluvium (Holocene)
Qb	Basin deposits (Holocene)
Qa	Aromas Sand (Pleistocene)

*Select unit descriptions from Dupre (1975).

Regional Geologic Map

Craig S. Harwood
Engineering Geologist



File No. G-501.1

Date: August, 2013

Explanation

Possible landslide (based on aerial interpretation: CC&A, 1975)

Area fill stockpiles and berms

Base: Santa Cruz Co. Planning Department, 2009 (Based on Cooper Clark & Associates, 1975)

Craig S. Harwood
Engineering Geologist

County Landslide Map

Source: Cooper, Clark & Associates, 1975

20 0

Explanation - Map and Cross Sections

Af	Fill (placed as berms)
Col	Colluvium
Qb	Basin deposits (Holocene)
Qa	Aromas Sand (Pleistocene)

Symbols

Geologic contact

A A′ Approximate trend of geologic cross section

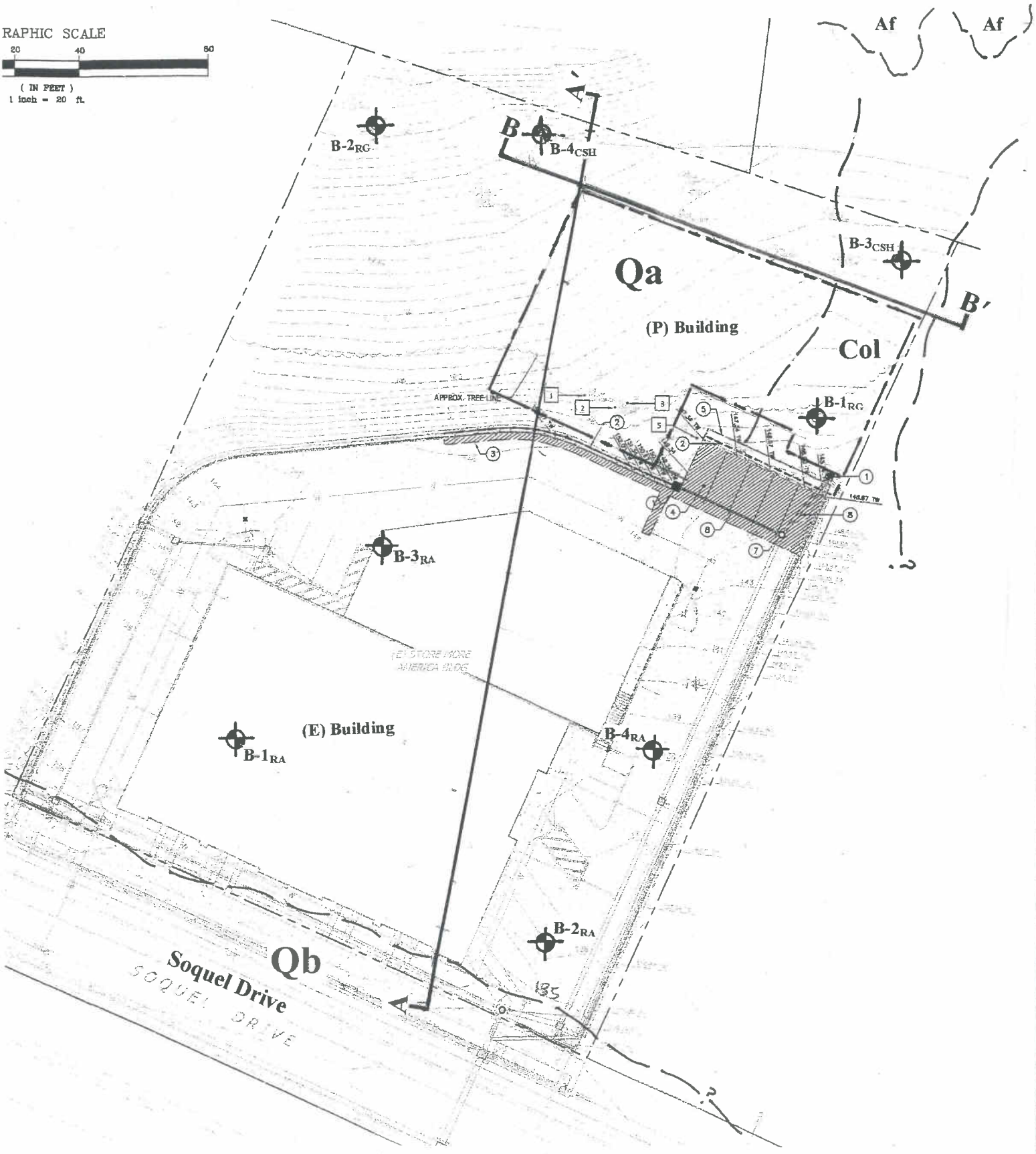
Exploratory boring (RA = Raas & Associates, 1999; RG = Redwood Geotechnical, 2013; CSH = the current study)

CRAIG S. HARWOOD
CONSULTING ENGINEERING GEOLOGIST

File No. G-501.1

Store More America
9687 Soquel Drive
Aptos, CA

Date

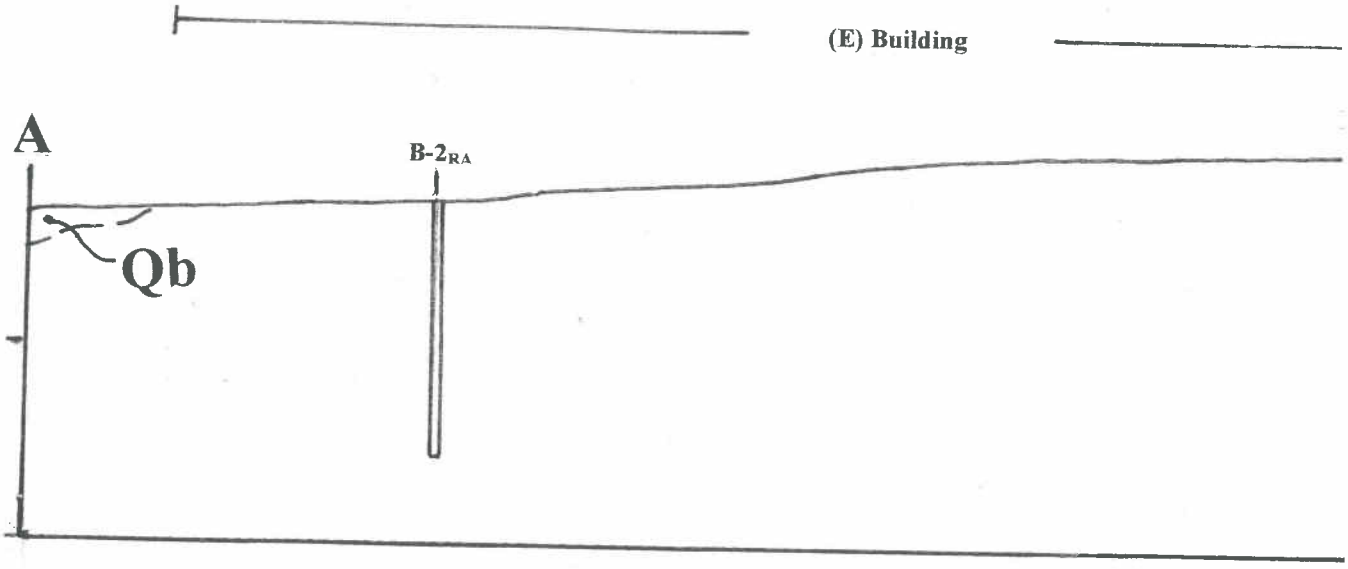


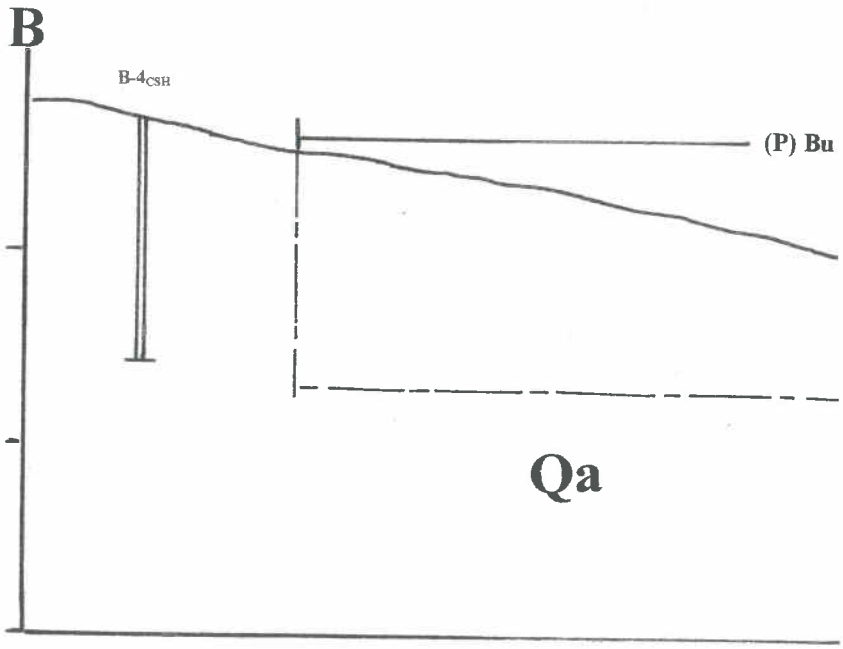
Approximate scale: 1" = 40'

base from: C2G, 2013

ıst, 2013

Site Geologic Map

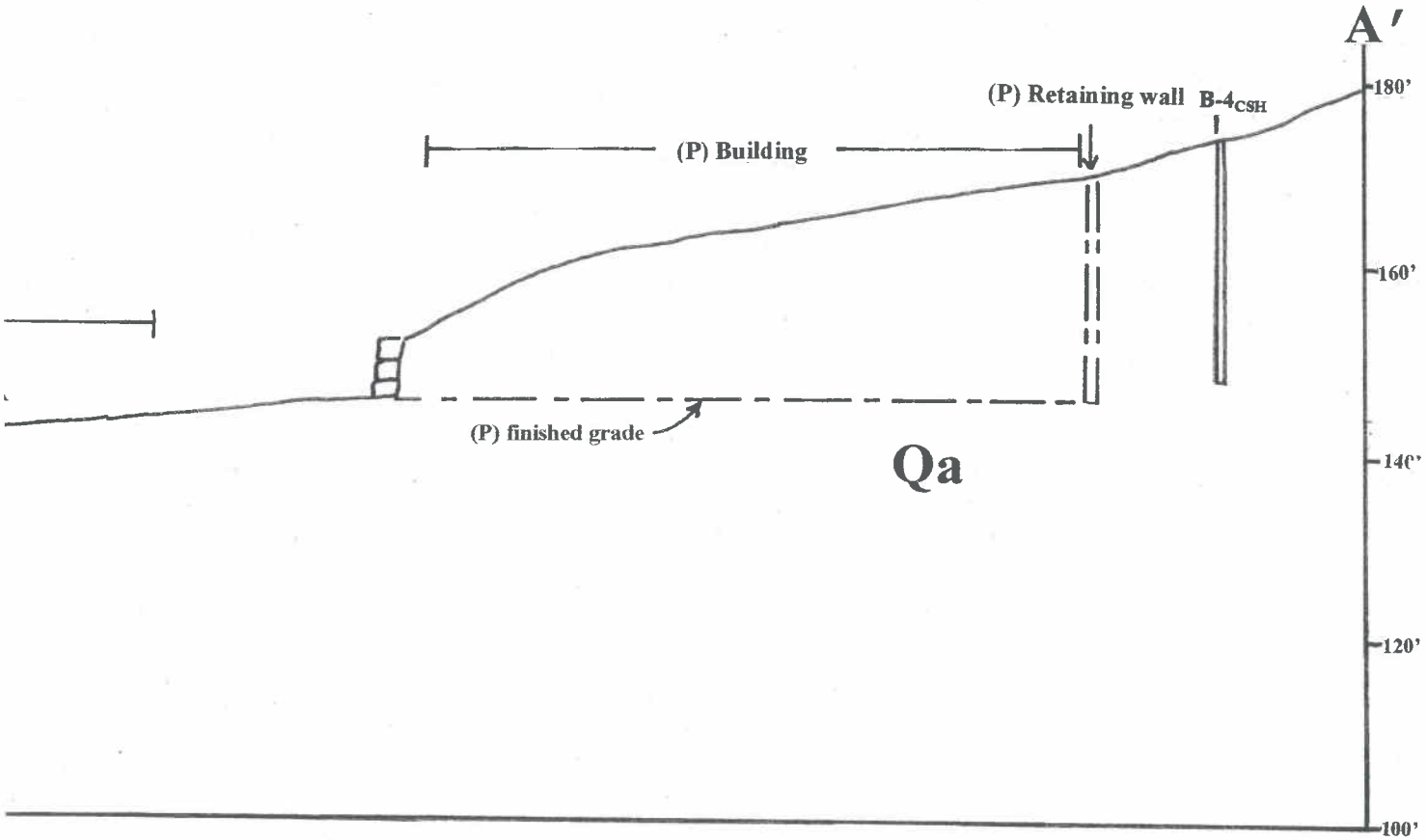


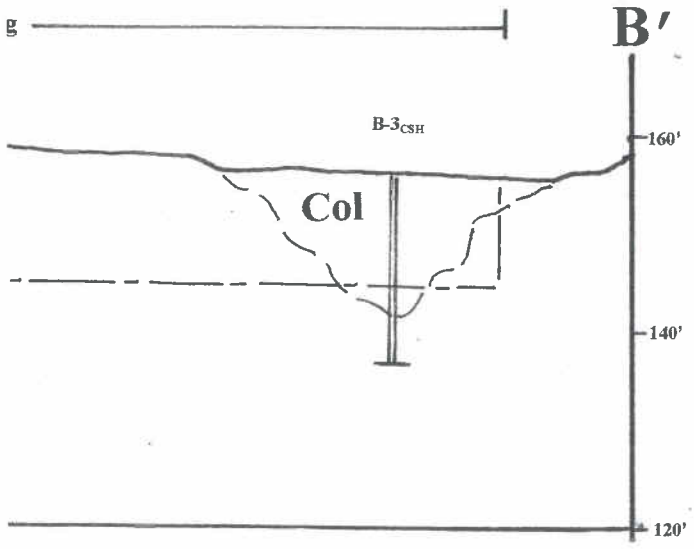


CRAIG S. HARWOOD
CONSULTING ENGINEERING GEOLOGIST

Date: August, 2013

Store More America
9687 Soquel Drive
Aptos, CA





Approximate scale: 1" = 20'

o. G-501.1

Geologic Cross Sections

APPENDIX B

Logs of Previous and Current Exploratory Test Borings

Logs of Raas & Associates, Inc. (1999)
Logs of Redwood Geotechnical Inc. (2013)
Logs of Current Field Investigation

LOGGED BY CS DATE DRILLED 4/21/99 BORING DIAMETER 6" SS BORING NO. 1

Depth, ft.	Sample No. and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	SPT "N" Value	Plasticity Index	Dry Density, p.c.f.	Moisture % of Dry Wt.	MISC. LAB RESULTS
1			Brown Silty SAND, fine to very coarse grained sand, moist	SM-SC					
2	1-1 L		Brown Silty SAND, fine to very coarse grained sand, moist, very loose		3			10.3	
5	1-2 L		Orangish brown Clayey Silty SAND, fine to very coarse grained sand, very moist, loose		9		120.3	13.5	
10	1-3 L		Orangish brown Clayey Silty SAND, fine to coarse grained sand, very moist, loose		10		114.0	13.7	
15	1-4 M		Orangish brown Clayey Silty SAND, fine to coarse grained sand, very moist, medium dense		19			11.7	
20	1-5 M		Orangish brown Clayey Silty SAND, fine to very coarse grained sand, very moist, medium dense		21		113.2	14.4	
22			Boring Terminated at 21 1/2'						

STEVEN RAAS & ASSOCIATES, INC.

FIGURE NO. 4 Log of Test Borings

LOGGED BY CS DATE DRILLED 4/21/99 BORING DIAMETER 6" SS BORING NO. 2

Depth, ft.	Sample No. and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	SPT "N" Value	Plasticity Index	Dry Density, p.c.f.	Moisture % of Dry Wt.	MISC. LAB RESULTS
1			Yellowish brown Silty SAND, damp	SM-SC					
2	2-1 M		Yellowish brown Silty Clayey SAND, fine to coarse grained sand, damp, medium dense						
3					16			6.9	
4									
5	2-2 M		Brown Silty SAND, fine to very coarse grained sand, damp, very loose						
6					3		104.2	7.1	
7									
8									
9									
10	2-3 M		Orangish brown Clayey Silty SAND, fine to very coarse grained sand, very moist, medium dense						
11					17		115.9	11.7	
12									
13									
14									
15	2-4 M		Orangish brown Clayey Silty SAND, fine to coarse grained sand, very moist, medium dense						
16					24		111.3	17.1	
17									
18									
19									
20	2-5 M		Orangish brown Silty SAND, fine to very coarse grained sand, wet, medium dense						
21					17		111.5	15.9	
22									
23									
24									

STEVEN RAAS & ASSOCIATES, INC.

FIGURE NO. 5 Log of Test Borings

LOGGED BY CS DATE DRILLED 4/21/99 BORING DIAMETER 6" SS BORING NO. 2

Depth, ft.	Sample No. and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	SPT "N" Value	Plasticity Index	Dry Density, p.c.f.	Moisture % of Dry Wt.	MISC. LAB RESULTS
25	2-6 M		Yellowish brown Silty SAND, fine to very coarse grained sand, saturated, medium dense	SM	16		112.7	16.0	
26			Boring Terminated at 26 1/2'						
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									

STEVEN RAAS & ASSOCIATES, INC.

FIGURE NO. 6 Log of Test Borings

LOGGED BY CS DATE DRILLED 4/21/99 BORING DIAMETER 6" SS BORING NO. 3

Depth, ft.	Sample No. and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	SPT "N" Value	Plasticity Index	Dry Density, p.c.f.	Moisture % of Dry Wt.	MISC. LAB RESULTS
1				SM-SC					
2	3-1 M		Orangish brown Clayey Silty SAND, fine to coarse grained sand, moist, loose						
3					9			16.2	
4									
5	3-2 M		Orangish brown Clayey Silty SAND, fine to medium grained sand with some coarse grains, wet, loose						
6					6		107.5	18.0	
7									
8									
9									
10	3-3 M		Orangish brown Silty SAND, fine to medium grained sand with some coarse grains, very moist, medium dense						
11					28		102.1	15.8	
12									
13									
14									
15	3-4 M		Yellowish brown SAND with silt, fine to medium grained sand, moist, dense						
16					33			10.0	
17									
18									
19									
20	3-5 M		Yellowish brown Silty SAND, fine to coarse grained sand, moist, dense						
21					49			13.2	
22			Boring Terminated at 21 1/2'						
23									
24									

STEVEN RAAS & ASSOCIATES, INC.

FIGURE NO. 7 Log of Test Borings

LOGGED BY CS DATE DRILLED 4/21/99 BORING DIAMETER 6" SS BORING NO. 4

Depth, ft.	Sample No. and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	SPT "N" Value	Plasticity Index	Dry Density, p.c.f.	Moisture % of Dry Wt.	MISC. LAB RESULTS
1				SM-SC					
2	4-1 M		Brown Silty Clayey SAND, fine to coarse grained sand, moist, loose						
3					7			10.1	
4									
5	4-2 M		Brown Silty SAND, fine to coarse grained sand with some very coarse grains, wet, loose						
6					8		111.2	14.6	
7									
8									
9									
10	4-3 M		Brown Silty Clayey SAND, fine to medium grained sand with some coarse grains, wet, medium dense						
11					17		112.0	15.7	
12									
13									
14									
15	4-4 M		Yellowish brown Silty Clayey SAND, fine to coarse grained sand, wet, medium dense						
16					15			16.5	
17			Boring Terminated at 16 1/2'						
18									
19									
20									
21									
22									
23									
24									

STEVEN RAAS & ASSOCIATES, INC.

FIGURE NO. 8 Log of Test Borings

LOGGED BY NJR DATE DRILLED 2/12/13 BORING DIAMETER 4 inches BORING NUMBER B1

Depth (ft)	Sample Number and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 350 ft-lb	Pocket Pen. Qu (tsf)	Dry Density (pcf)	Moisture Content (%)	MISC. LAB RESULTS
1			Grey brown silty SAND moist, loose, organics	SM					
			Numerous roots						
2	1-1 L	B A					103	11.9	1-1A Atterberg Limits: Non-plastic
					3	—	104	10.6	
3			Very loose to 3'						
	1-2 SL		Grey brown silty SAND w/some clay moist, loose, some roots	SM	6	0.8	109	15.3	
4									
5	1-3 T		Yellow brown silty SAND wet, loose	SM	8	0.8		10.1	
6									
7			More dense, color change to yellow brown						
8			Yellow brown silty SAND moist, dense, medium- to coarse-grained sand, more clay	SM					
	1-4 L	B A	Some dark brown mottling				114	5.0	
9			Minor horizontal banding (alluvial banding)		51	3.0	116	4.4	
10	1-5 SL		Trace mica						
					67	3.0	107	5.6	
11	1-6 T								
12					48	2.5		7.3	
13									
14			Uniform drilling in yellow brown silty sand						
15									
16									
17									
18									
19									
20	1-7 L								
21					50/5"		106	11.1	
			12" lens of grey brown silty fine- to medium-grained SAND, moist, very dense	SM					
22	1-8 T								
			Yellow brown silty medium- to coarse-grained SAND, moist, dense	SM	50/4"			13.8	
23									
			(Continued on Next Page)						

PROJECT NUMBER 2153SCR
May 2013

BORING LOG
Store More America
Aptos, California

Figure 3a

LOGGED BY NJR DATE DRILLED 2/12/13 BORING DIAMETER 4 inches BORING NUMBER B1 Cont.

Depth (ft)	Sample Number and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 350 ft-lb	Pocket Pen. Qu (tsf)	Dry Density (pcf)	Moisture Content (%)	MISC. LAB RESULTS
25			(Continued from Previous Page) Yellow brown silty medium- to coarse-grained SAND	SM					
26			moist, dense						
27			Trace mica						
28									
29	1-9 L								
30	1-10 T				50/5"	4.5+	111	7.0	
31					50/6"	4.5+		7.6	
32									
33			Grading to grey brown						
34			Light grey brown silty SAND	SM					
35			moist, very dense						
36			Trace mica						
37									
38									
39	1-11 L				50/6"	4.5+	106	7.8	
40	1-12 T				50/5"			9.3	
41									
42			Terminated @ 41'0"						
43			No groundwater encountered						
44									
45									
46									
47									

PROJECT NUMBER 2153SCR
May 2013

BORING LOG
Store More America
Aptos, California

Figure 3b

LOGGED BY NJR DATE DRILLED 2/12/13 BORING DIAMETER 4 inches BORING NUMBER B2

Depth (ft)	Sample Number and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 350 ft-lb	Pocket Pen. Qu (tsf)	Dry Density (pcf)	Moisture Content (%)	MISC. LAB RESULTS
1	2-1 L	B A	Dark grey brown silty SAND very moist, very loose Some clay	SM			100	10.8	
2					4		101	11.0	2-1A Atterberg Limits:
3	2-2 SL		Brown sandy CLAY moist, hard		4	1.0 1.0	95 105	11.4 11.1	Non-plastic
4	2-3 T					1.0			
5					5	1.0		10.1	
6			Dark brown @ 6'						
7	2-4 L		Dark brown silty SAND very moist, medium dense, minor clay Minor clay Trace small rounded pebbles	SM	15	0.5 0.5	117	10.7	
8	2-5 SL	B A	Dark brown clayey SAND	SC			113	13.6	
9			very moist, medium dense, medium- to coarse-grained sand		13	2.0	110	12.1	
10	2-6 T				12			15.3	
11									
12									
13									
14									▼ 14' @ 2pm
15	2-7 L	B A	▼ Saturated @ 15'				111	17.3	14' @ 2:30 pm
16					23		119	15.3	▼ 15' @ 1:30 pm
17	2-8 SL	B A	High dry strength		25		108 111	19.2 18.4	
18								18.9	
19	2-9 T	tip	Yellow brown silty medium- to coarse-grained SAND very moist, very dense	SM	36			14.9	
20	2-10 L	B A					111	18.7	
21					55	4.0	115	18.6	
22	2-11 T				63			16.4	
23			Terminated @ 22'6"						

PROJECT NUMBER 2153SCR
May 2013

BORING LOG
Store More America
Aptos, California

Figure 4

No. B-3

PROJECT Store More America | DATE 7/19/13 | LOGGED BY CSH

DRILL RIG Simco 2400 equivalent | HOLE DIA. 6.0" | SAMPLER MC - California Modified, S - SPT, C - California

GROUND WATER DEPTH INITIAL N/A | FINAL N/A | HOLE ELEVATION

DESCRIPTION	SOIL TYPE (USCS)	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	% recovery
Silty SAND: light yellow brown, dry, loose (Colluvium)	SM											
		1										
		2										
Poorly graded SAND: light yellow brown, damp, loose, trace coarse subrounded gravel (Colluvium)	SP											
		3										
		4										
		5										
			MC									
medium dense		6	MC	15								
			MC	12								90
		7	C									
			C	6								
		8	C	7								90
			S									
		9	S	6								
loose			S	5								90
		10										
			MC									
		11	MC	6								
			MC	8								90
		12	C									
			C	6								
		13	C	7								80
			S									
		14	S	6								
			S	7								90
Poorly graded SAND: orange brown, damp, medium dense, fine bedding (moderate dip) (Aromas Sand)	SP	15										
			MC									
		16	MC	10								
			MC	13								90
		17	C									
			C	10								
		18	C	12								85
			S									
		19	S	9								
			S	11								90
Boring terminated at 19.5 feet		20										

													No.	**B-4**	
PROJECT	Store More America						DATE	7/19/13				LOGGED BY	CSH		
DRILL RIG	Simco 2400 equivalent			HOLE DIA.	6"		SAMPLER	CM - California Modified, S - SPT, C - California 2 0"							
GROUND WATER DEPTH INITIAL	N/A			FINAL	N/A			HOLE ELEVATION							

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
silty SAND: light yellow brown, damp, loose (Colluvium)	SM	1										
		2										
			MC									
Poorly graded SAND: medium yellowish brown, damp, medium dense, trace silt and clay (Aromas Sand)	SP	3	MC	17								
			MC	22								85
		4	C									
			C	19								
		5	C	14								90
			S									
		6	S	7								
loose			S	9								90
		7										
		8										
			MC									
		9	MC	15								
sand becoming very uniform in grain size (fine)			MC	21								90
		10	C									
			C	16								
becoming very dense		11	C	27								90
			S									
		12	S	18								
moderate dip of bedding			S	23								90
		13										
		14										
		15	MC									
			MC	37								
color change to orange brown, slightly moist		16	MC	50-4"								90
			S									
horizontal bedding		17	S	26								
			S	27								90
		18										
		19										
(see page 2 or 2)		20										

				No.	**B-4**
PROJECT	Store More America		DATE 7/19/13	LOGGED BY	CSH
DRILL RIG	Simco 2400 equivalent	HOLE DIA. 6"	SAMPLER	CM - California Modified, S - SPT, C - California 2.0"	
GROUND WATER DEPTH INITIAL	N/A	FINAL N/A	HOLE ELEVATION		

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	TORVANE (tsf)	LIQUID LIMIT (%)	WATER CONTENT (%)	PLASTIC LIMIT (%)	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Poorly graded SAND: medium yellowish brown, damp, very dense, trace silt	SP		S									
		21	S	24								
			S	31								90
		22										
		23										
		24	S									
			S	41								
		25	S	50								90
Boring terminated at 25.5 feet		26										
		27										
		28						▽				
		29										
		30										
		31										
		32										
		33										
		34										
		35										
		36										
		37										
		38										
		39										
		40										

Geotechnical Investigation
for
Proposed Commercial Building
Aptos, California

for
Meritage Development Group
Watsonville, California

By
REDWOOD GEOTECHNICAL ENGINEERING, INC.
Geotechnical & Forensic Engineers
Project No. 2153SCR
May 2013

ATTACHMENT

REDWOOD GEOTECHNICAL ENGINEERING, INC.

CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS

Project No. 2153SCR
May 2, 2013

Mr. Robert Marani
c/o Meritage Development Group
213 Pacifica Blvd.
Watsonville, CA 95076

Subject: Proposal for Geotechnical Investigation

Reference: Proposed New Commercial Building
Store More America Facility - Phase II
9987 Soquel Drive
APN 041 233 23
Aptos, California

Dear Mr. Marani:

As requested, we completed a geotechnical investigation for the referenced site. The proposed building envelope for a new commercial building would be situated in a currently vacant portion of the site to the northeast of the existing commercial storage facility. We anticipate that the proposed construction would incorporate an excavation for a flat graded pad cut into the natural slope. The excavation would most likely include staged retaining wall construction to accommodate cuts on the order of 15 to 25 feet high. We understand that the new construction would incorporate conventional spread footing foundations, lightweight frame construction, and concrete slab-on-grade floors in the lower level.

Our subsurface exploration encountered loose surfical topsoil and fill up to 8 feet deep, an intermediate layer of medium dense sandy native soil, and then medium dense to dense, predominantly granular sandy native soil to the depths explored, up to 41 feet. Static groundwater was found at the time of our investigation in the eastern portion of the site; in the second test boring at a depth of about 14 feet below the ground surface. Based on our subsurface investigation and a review of the preliminary project plans, we anticipate that most of the pad excavation for the new lower level would extend below the surficial topsoil and loose fill materials into medium dense, predominantly sandy native soil. Conventional spread footing foundations appear feasible for the proposed new commercial building. The alluvial soil typically includes permeable layers that can transmit significant amounts of seepage during and following winter storms. However, the vertical permeability of the alluvial native soil is typically much lower due to interbedded layers with significant amounts of fine-grained soil.

Primary geotechnical considerations will include embedding new structural foundations into firm native soil (or compacted engineered fill) and providing uniform subgrade support for new concrete slabs-on-grade and pavements. The proposed building site is crossed by a natural swale. Shallow groundwater was also found in the eastern portion of the site. Measures to intercept seasonal runoff and seepage will also be critical aspects of the project during design and construction.

Our report presents our geotechnical recommendations for design and construction of the project, as well as the findings of our investigation upon which they are based. We request an opportunity to work closely with your project designers as the building design is completed and to review the final project plans prior to construction. We also request an opportunity to observe and test geotechnical aspects of the project during construction. If you have additional questions regarding this report, please call our office.

Very truly yours,
REDWOOD GEOTECHNICAL ENGINEERING, INC.

N. Joseph Rafferty
G.E. 2115

Copies: 3 to Addressee
3 to Streeter Group, Attn: Mr. Hugh Zykes
1 to C2G, Attn: Mr. Todd Creamer

TABLE OF CONTENTS

GEOTECHNICAL INVESTIGATION

Introduction

This report presents the results of our geotechnical investigation for a proposed new commercial building behind the existing commercial building at 9987 Soquel Dr., in Aptos, California, as shown on our Site Vicinity Map (Figure 1). A preliminary site plan for the proposed new commercial building was completed by the Streeter Group. Our Site Plan Schematic (Figure 2) is based on a reduced copy of the preliminary site plan.

Purpose & Scope

The purpose of our geotechnical investigation was to characterize the subsurface conditions below the site and to develop geotechnical recommendations with respect to the proposed project. Our scope of work included the following:

1. A visual reconnaissance of the site.

2. A review of available data in our files including published geologic maps, provided plans and reports, and previous work completed by our firm in the site vicinity.

3. Two exploratory borings at the site 41 and 22½ feet deep.

4. This written report including geotechnical recommendations with respect to site grading, structural foundations, retaining walls and lateral pressures, concrete slabs-on-grade, and site drainage.

Site Location and Project Description

The proposed building envelope is a vacant portion of the site to the northwest of an existing commercial storage building in Aptos, California. As shown on the attached Site Vicinity map, Figure 1, the existing commercial storage building occupies an essentially level graded pad between Soquel Drive and the base of the adjacent southwest facing slope. Along the northern margin of the existing graded pad the toe of the slope is supported with a retaining wall composed of large precast concrete blocks("Ultra-Block"). Along the base of this block retaining wall are the paved access road and parking areas.

A small natural drainage swale crosses the southwestern portion of the proposed building site. Several mature willow trees line the banks of this natural swale.

The preliminary project configuration for the new commercial building is shown on the attached Site Plan schematic, Figure 2. The proposed building envelope and the adjacent slopes had been recently cleared of brush at the time of our field investigation. Based on the preliminary project plans, the new commercial building would be a three-story structure providing additional new storage units, consistent with the existing commercial storage building. Based on our preliminary discussions, we anticipate that the structural design of the new building would incorporate conventional spread footing foundations and a lower level concrete slab-on-grade floor. The structural design of the three-story frame building may incorporate a lightweight frame, reinforced concrete, or a combination of both. The lower level of the proposed new commercial building would be about the same elevation as the existing building. The anticipated site grading would include excavations on the order of 15 to 25 feet deep for the new building pad. We anticipate that new retaining walls would support the vertical cuts along the perimeter of the proposed new building envelope. The shored retaining wall construction may involve staged tie-back walls excavated in

depth increments of about 5 vertical feet per stage. We anticipate that the proposed excavation for the new building pad would remove the loose fills and topsoil from the building envelope, exposing medium dense to dense, predominantly sandy native soil at the finish pad grade. The excavated soil would be cleared from the site.

Field Exploration and Laboratory Testing

Two exploratory borings were drilled on the site on February 12, 2013. The tractor-mounted drill rig was driven to the site by removing the fence along the southeastern margin of the sloping property and riving to the site across the neighboring property to the southeast. The borings were drilled to depths of about 41 feet in the northwestern portion of the proposed building envelope and about 22½ feet in the southeastern portion of the proposed building envelope. The approximate locations of the borings are shown on our Site Plan Schematic (Figure 2). The subsurface conditions were logged in accordance with the Unified Soil Classification System (ASTM D2487). The boring logs are presented as Figures 3 and 4. The logs denote the subsurface conditions encountered at the locations and dates indicated. This does not warrant that they are representative of subsurface conditions at other locations or times.

Drive samples were taken by driving split-spoon tube samplers with a 140 pound hammer dropping 30 inches per blow. The drive samplers utilized either a standard 2" O.D. Terzaghi sampler (T), or a 3.0" O.D. (L) modified liner sampler. The blow counts recorded on the boring logs indicate the number of hammer blows required to drive the final 12 inches or the depth indicated on the logs. The strength characteristics of the underlying earth materials were estimated from standard penetration tests of in situ materials and penetrometer measurements of recovered soil samples.

The focus of our laboratory testing program was to evaluate pertinent engineering index properties. Samples were collected at selected depths for testing. Selected samples were tested for natural moisture content, density, and Atterberg Limits. The laboratory tests provide rough indicators of soil compressibility, strength, and potential expansion characteristics. The results of the field and laboratory testing appear on the logs at the depths where sampling or testing were completed.

Subsurface Conditions

Our subsurface exploration encountered three distinct soil profiles, a loose sandy soil profile near the surface, and intermediate zone on medium dense sandy soil, and then dense sandy soil to the depths explored. Near the ground surface, both borings encountered an upper layer of loose surfical topsoil and artificial fill. The loose soil profile was about 3 feet deep on Boring 1 within the western portion of the site; and about 8 feet deep in Boring 2 within the eastern portion of the site. The transition to an intermediate layer of medium dense sandy native soil was a fairly distinct contact in both of the borings. The intermediate layer of medium dense sandy soil extended to a depth of 7 feet on Boring 1 and a depth of about 19 feet in Boring 2. Below this intermediate sandy native soil profile, both borings encountered dense predominantly granular sandy native soil to the depths explored, up to 41 feet.

Published geologic maps indicate that the topographically higher portions of the proposed building envelope are underlain by geologically older alluvial soil of the Aromas formation. More recent alluvial soil is mapped within the souther portion of the site. These mapped deposits appear consistent with the sandy native materials found within the two lower soil profiles encountered in the test borings. The medium dense sandy soil found at

intermediate depths in the test borings appears consistent with more recent alluvial soil deposits. The dense sandy native soil found at depth in both borings appears to be more consistent with geologically older sandy soil of the Aromas formation. A subsurface investigation for the existing commercial building was completed in May of 1999 by Steven Raas & Associates. This earlier subsurface investigation included four test borings on the order of 16½ to 26½ feet deep. The approximate location of these test borings are also shown on the attached Site Plan Schematic, Figure 2. One of these test borings, near the northwestern corner of the existing commercial building, encountered dense sandy native soil at a depth of about 12 to 15 feet. The remaining three borings (at roughly the other three building corners) did not find dense sandy soil to the depths explored, about 16½ to 26 ½ feet.

The transition from medium dense recent sandy alluvium to more dense, geologically older sandy alluvium appears to be a continuously sloping surface that descends to the south across the building site. Based on our two test borings, and the four test borings previously drilled at the site in 1999, we anticipate that most of the proposed pad excavation for the new commercial building would expose the intermediate zone of medium dense sandy alluvial soil. Within the northern corner of the proposed pad excavation, we anticipate that the excavation would extend below the medium dense sandy soil into the underlying layer of dense sandy alluvial soil. Most of the anticipated shoring excavations are also considered likely to expose the intermediate, medium dense sandy soil profile. Within the northern portion of the site, the shoring excavations are likely to extend below the intermediate soil profile into the dense sandy native soil profile.

Static groundwater stabilized in Boring 2 at a depth of about 14 feet at the time of our investigation (February 12, 2013). Based on the preliminary site plan, the approximate elevation at Boring 2 is about 152 feet and the elevation of the measured groundwater was

about 138 feet. The currently proposed lower floor elevation would be 146½ feet, about 8½ feet above the groundwater found at this location. We note that the borings were drilled following a below-normal rainfall season and that seasonal groundwater levels are likely to be significantly higher when normal to above normal storm seasons occur. Static groundwater was not found within Boring 1, even though the boring extended to about elevation 126; about 20 feet below the anticipated pad grade. As noted above, it appears likely that seasonal groundwater is perched above a sloping contact between geologically older dense sandy materials at depth and more recent medium dense sandy alluvial soil. We note that shallow localized seepage and seasonal perched groundwater is also commonly encountered within the stratified alluvial soil in the site vicinity, particularly during or after heavy rain storms. Groundwater levels may also fluctuate due to variations in rainfall, stratification, construction activity or other factors not evident during our investigation.

Seismicity

A general discussion of seismicity is presented below. A detailed discussion of faulting, seismicity, and geologic hazards is beyond the scope of this report. Major active fault traces in the site vicinity include the San Andreas fault, mapped about 7 miles to the northeast and the Zayante fault mapped about 4 miles northeast of the site. These major fault systems have generated very strong ground shaking in the past two centuries of recorded history. Smaller fault systems in the site vicinity may also generate strong ground shaking at this site.

The site is located within the seismically active Central Coast Region at a latitude and longitude of **36.97° N** and **-121.88° W**. Based on the 2010 California Building Code and

the firm native soil encountered in our investigation, the site was characterized as a stiff soil profile, **Site Class D** (Table 1613.5.2). Based on the site coordinates and site class, seismic design parameters for this site are summarized below:

SD_S	SD1	F_A	F_V
1.032	0.674	1.0	1.5

The primary seismic hazard at this site appears to be from strong ground shaking. No mapped fault traces were found to cross the site. The potential for fault rupture at this site is considered very low. The potential for seismically induced ground failure or liquefaction also appears very low the well-consolidated native soil found beneath the site. Properties in the site vicinity are considered likely to experience strong to severe ground shaking due to their proximity to the major fault systems in the Central Coast region. These seismic risk levels are shared by all of the developed properties in the site vicinity.

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

Based on the results of our investigation, the site appears compatible with the proposed project, provided the following recommendations are incorporated into the design and construction of the site improvements.

Our subsurface exploration encountered three distinct soil profiles, a loose soil profile up to 8 feet thick near the ground surface, an intermediate zone on medium dense sandy soil, and then dense sandy soil to the depths explored. The transitions between each soil profile appear to be continuous sloping surfaces. The sandy native alluvial soil found at the site contained a significant amount of silt and clay fines. The sandy native soil does not appear to have a significant expansion potential. The alluvial character of the native soil typically includes horizontal layers with high permeability that can transmit significant amounts of seasonal seepage. However, the vertical permeability of the alluvial native soil is typically much lower and the soil may not accommodate significant amounts of water from recharge areas.

We anticipate that the proposed excavation for the new commercial building would remove the loose surficial profile from the building envelope and that most of the excavation would expose the intermediate profile of medium dense sandy native soil. Near the northern portion of the proposed building envelope, we anticipate that the excavation would extend below the intermediate soil profile into dense sandy native soil. The existing retaining walls on the site currently limit equipment access to the proposed building site. The two recent test borings in the sloped portion of the site were drilled by driving a tractor-mounted drill rig across the slope from the adjacent property to the southeast. We understand that the existing retaining walls would be removed or relocated during construction of the proposed new commercial building.

A small natural drainage swale crosses the southeastern portion of the proposed building site. Static groundwater was found the eastern portion of the site when test boring 2 was drilled on February 12, 2013. The approximate elevation of the groundwater was about 138 feet at that time, about 8 feet below the proposed finish pad elevation. No groundwater was found in the western portion of the site where test boring 1 was drilled down to an elevation of about 126 feet. The groundwater found at the site appears to be perched within the intermediate sandy soil profile in the vicinity of the swale that crosses the proposed building site. We anticipate that the grading plans for this project would incorporate drainage measures to divert seasonal flows in the swale and divert shallow seasonal seepage both during and after construction. The design of the new commercial building would also need to incorporate backdrains behind new retaining walls and a blanket drain below new floor slabs to intercept and divert seasonal subsurface seepage.

Conventional spread footings, temporary shored excavation, and conventional retaining wall construction appear feasible for a new commercial building at this site. We anticipate that the new building pad and the new building foundation excavations would extend well below the loose surfical soil into firm sandy native soil. In the event that the soil within the foundation zone is disturbed by grading or other activity, the disturbed soil may be replaced with compacted engineered fill as outlined below. Temporary shored retaining walls are anticipated to support braced construction excavations on the order 15 to 25 feet high. We anticipate that these shoring excavations would be constructed in sequential stages using tieback supported retaining walls about five feet high to advance the shoring excavations down to the finish pad depth.

Critical geotechnical aspects of this project will include site grading, shoring the proposed excavation, extending the foundations into firm native soil, and providing firm subgrades below new slab and pavement sections. The site drainage will need to intercept intruding

runoff and seepage both during and after construction. The finish grading and landscaping will also need to provide positive drainage.

The following recommendations should be used as guidelines for preparing project plans and specifications:

Site Grading

1. Structural fills supporting new foundations, slabs, or pavements should be placed in compacted lifts as engineered fill. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557-02. The soil engineer should be notified **at least four (4) working days** prior to any site clearing or grading so that the work in the field can be coordinated with the grading contractor, and arrangements for testing and observation can be made. The recommendations of this report are based on the assumption that the soil engineer will perform required testing and observation during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

2. Areas to be graded should be cleared of all obstructions including loose fill, and other debris or unsuitable material. Depressions or voids created during site clearing should be backfilled with engineered fill. Where site clearing or grading disturbs the subgrade or the foundation zone soils, the disturbed soil should be replaced as compacted engineered fill. Engineered fills should bear on firm native materials. Areas to receive engineered fill should be scarified to a depth of 6 inches, moisture conditioned, and compacted. These areas may then be brought to design grade with engineered fill. Engineered fill should be placed in thin lifts not exceeding 8 inches in loose thickness,

moisture conditioned, and compacted to at least 90 percent relative compaction. Moisture content should be about 2 to 6 percent above the optimum moisture content. Portions of the site may need to be moisture conditioned to achieve a moisture content suitable for effective compaction. The upper 6 inches of pavement subgrades should be compacted to at least 95 percent relative compaction. The aggregate base below pavements should likewise be compacted to at least 95 percent relative compaction.

3. If grading is performed during or shortly after the rainy season, the grading contractor may encounter compaction difficulty, due to excessive moisture in the subgrade soil. If compaction cannot be achieved by adjusting the soil moisture content, it may be necessary to over excavate the subgrade soil and replace it with select import angular crushed rock to stabilize the subgrade. The depth of over excavation is typically about 12 to 24 inches under these adverse conditions. Specialized grading procedures will require observation by the soil engineer or his representative.

4. Proposed fill materials should be evaluated by the soil engineer prior to placement. The predominantly sandy on-site soils generally appear suitable for use as engineered fill. Organic material or debris, where encountered, should be removed from subexcavated soil prior to use in compacted engineered fill. Import materials used for engineered fill should be non-expansive, free of organic material, and contain no rocks or clods greater than 4 inches in diameter. Larger cobbles should be broken down or removed from engineered fills. We estimate shrinkage factors of about 20 percent for the on-site materials when used in engineered fills.

5. Following grading, all disturbed areas should be planted as soon as possible with erosion-resistant vegetation. After the earthwork operations have been completed and the

soil engineer has finished his observation of the work, no further earthwork operations shall be performed except with the approval of and under the observation of the soil engineer.

Foundations

6. Conventional spread footings may be used to support to support new structural building loads and permanent retaining walls. Footings should be embedded into firm native soil or compacted engineered fill. Footings should extend at least 12 inches below the lowest adjacent grade into firm native soil or compacted engineered fill. Footings should be at least 12 inches wide. Actual footing depths should be determined in accordance with anticipated use and applicable design standards. The footings should be reinforced as required by the structural designer based on the actual loads transmitted to the foundation.

7. The foundation trenches should be kept moist and be thoroughly cleaned of all slough or loose materials prior to pouring concrete. All footings located adjacent to other footings or utility trenches should have their bearing surfaces founded below an imaginary 1.5:1 plane projected upward from the bottom edge of the adjacent footings or utility trenches.

8. Foundations designed in accordance with the above may be designed for an allowable soil bearing pressure of 1,500 psf for dead plus live loads. This value may be increased by one-third to include short-term seismic and wind loads. In areas where dense sandy native soil is exposed, the allowable bearing capacity may be locally increased to 2,000 psf.

9. For lateral loads, a friction coefficient of 0.35 may be assumed at the base of the footing. Additional passive resistance may be assumed where footings are poured neat against firm native soil. An equivalent passive fluid pressure of 500 pcf may be applied to the sidewalls of the footings when poured against firm native soil.

10. Total and differential settlements under the proposed light to moderate building loads are anticipated to be less than ½ inch and 1 inch respectively.

Retaining Walls and Lateral Pressures

11. We anticipate that new retaining walls up to 25 feet high would be incorporated into the shoring design during grading and also into the construction of the proposed new multi-level structure. Proposed retaining wall designs should be reviewed by the soil engineer prior to submittal for permit review. Retaining walls should be designed to resist both lateral backfill pressures and any additional surcharge loads from wheel loads or equipment loads. Retaining wall backfills should consist of free-draining filtered drain rock or compacted engineered fill. Surcharge loads from compaction equipment should be minimized by using light-weight tamping or vibrating compaction equipment. Active soil pressures may be assumed for free standing retaining walls backfilled with granular native soil. Structurally restrained walls should be designed to resist a uniformly applied wall pressure of **35H psf** for level backfills and **50H psf** for 2:1 backslopes. Free-standing retaining walls should be designed to resist an active equivalent fluid pressure of at least **45 pcf** for level backfills and **65 pcf** for sloping backfills no steeper than 2:1. Retaining walls should also be designed to resist one half of any surcharge loads imposed on the backfill behind the walls. These lateral pressures are based on granular backfills behind

retaining walls. The clayey materials encountered at this site may be used within the upper two feet of landscaping behind retaining walls but are not recommended for retaining wall backfill material at greater depths.

12. The above lateral pressures assume that all retaining walls are fully drained to prevent hydrostatic pressure behind the walls. Drainage materials in wall backdrains should consist of filtered drain rock - Class 2 permeable material, Caltrans Specification 68-2.02F(3), [formerly 68-1.025]; or an approved equivalent. Retaining wall backdrain sections should be at least 12 inches wide. The drain section should extend from the base of the walls to within 12 inches of the top of the backfill. A rigid perforated pipe should be placed, holes down, about 4 inches above the bottom of the wall and tied to a suitable drain outlet. Wall backdrains should be sealed at the surface with concrete slabs, clayey soil, or other impermeable material to minimize infiltration of surface runoff into the backdrains. Surface runoff should be diverted away from backdrains and collected in separate drain lines or channels.

13. A high quality waterproofing membrane should be used for retaining walls adjacent to areas where moisture would be undesirable. The membrane should be continuous and extend from the top of the wall to the outer margin of the foundation. The floors of the garage should also be waterproofed to prevent seasonal seepage.

14. Where lateral tiebacks are incorporated into temporary shoring walls, we anticipate that the shoring contractor would provide a design for the shoring walls. Based on the medium dense sandy native soil found at intermediate depths, a preliminary design friction angle of 30 degrees may be used for preliminary tieback design. In areas where tiebacks would extend into the more dense native soil found at depth, a significant increase in

friction angle may be warranted based on the proposed tieback configuration. Vertical and lateral helix anchor tiebacks are also considered feasible. For preliminary design, the axial helix anchor capacity in pounds may be assumed to be 10 times the installation torque in foot-pounds.

Concrete Slabs-on-Grade

15. Concrete slabs-on-grade are anticipated for the lower level floors and for exterior pavements and walkways. Prior to construction of new slabs, the subgrade surface should be cleared of loose soil and debris. The subgrade should be thoroughly moisture conditioned and compacted to provide a firm, uniform surface for slab support. Concrete slabs-on-grade should be supported on at least 4 inches of non-expansive granular material bearing on uniformly compacted subgrades. Exterior slabs should be relieved with control joints or headers to divide slabs into smaller, approximately square sections to minimize random cracks. Control joint spacing should in exterior slabs-on-grade not exceed 10 feet. Slab reinforcing should be provided in accordance with the anticipated use and loading of the slab.

16. In areas where floor wetness would be undesirable, a blanket of 4 inches of free-draining gravel should be placed beneath the floor slab to act as a capillary break. The drain rock layer below the new floor slab should also be tied into an outlet pipe to allow drainage of any accumulated seepage. In order to minimize vapor transmission, an impermeable membrane should be placed over the gravel. The membrane should be covered with 2 inches of sand or rounded gravel to protect it during construction. The sand or gravel should be lightly moistened just prior to placing the concrete to aid in curing the concrete.

17. Exterior concrete slab-on-grade sections should be founded on firm, uniformly moisture conditioned and compacted subgrades. Reinforcing steel should be provided in accordance with the anticipated use and loading of the slab. The reinforcement should not be tied to the building foundations. These exterior slabs can be expected to suffer some cracking and movement. However, thickened exterior edges, a well-prepared subgrade including premoistening prior to pouring concrete, adequately spaced expansion joints, and good workmanship should minimize cracking and movement.

Site Drainage

18. Positive drainage will be critical both during and after construction. The permanent drainage improvements will need to intercept and divert both the seasonal surface runoff and seasonal seepage along the perimeter of the proposed commercial building. This will include runoff from the existing swale and seasonal shallow seepage in the vicinity of the swale. Diligent maintenance of completed drainage improvements is required for the life of the improvements. The drainage improvements should be both durable and easily accessible to promote frequent routine maintenance by the owner. Collected water should be discharged in a controlled fashion. It will be the owner's responsibility to maintain the site drainage system in good working condition for the life of the improvements.

19. Surface drainage must include provisions for positive slope gradients so that surface runoff flows away from the foundations, driveways, and other improvements. Finish landscaping and hardscaping along the building perimeter must be designed and constructed to promote positive drainage. Minimum positive slope gradients of two percent

are recommended for all concrete and landscape surfaces in the vicinity of the site improvements. Surface drainage must be directed away from the building foundations and concrete slabs. Collected water should be dispersed in a controlled fashion.

20. Full roof gutters should be placed around all eaves. Discharge from the roof gutters should be conveyed away from the downspouts by splash blocks, lined gutters, pipes or other positive drainage. Collected runoff should be discharged away from the building foundations and other improvements.

21. The migration of water or spread of extensive root systems below foundations, slabs, or pavements may cause undesirable differential movements and subsequent damage to these structures. Landscaping should be planned accordingly.

Plan Review, Construction Observation, and Testing

22. Our firm must be provided the opportunity for a general review of the final project plans and specifications prior to construction so that our geotechnical recommendations may be properly interpreted and implemented. If our firm is not accorded the opportunity of making the recommended review, we can assume no responsibility for misinterpretation of our recommendations. We recommend that our office review the project plans prior to submittal to public agencies, to expedite project review. The recommendations presented in this report also require our observation and, where necessary, testing of the earthwork and foundation excavations. Observation of grading and foundation excavations allows anticipated soil conditions to be correlated to those actually encountered in the field during construction.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the exploratory excavations. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at the time, our firm should be notified so that supplemental recommendations can be given.

2. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information and recommendations contained herein are called to the attention of the Architects and Engineers for the project and incorporated into the plans, and that the necessary steps are taken to ensure that the Contractors and Subcontractors carry out such recommendations in the field. The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. No other warranty expressed or implied is made.

3. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or to the works of man, on this or adjacent properties. In addition, changes in applicable or appropriate standards occur whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside our control. Therefore, this report should not be relied upon after a period of three years without being reviewed by a soil engineer.

REFERENCES

Barclay Maps, 1999, Santa Cruz County Street Guide and Directory, California, 92 p.

Brabb, E. E., et al 1997, Geologic Map of Santa Cruz County, California: California Division of Mines and Geology Open-File Report 97-489, scale 1:62,500.

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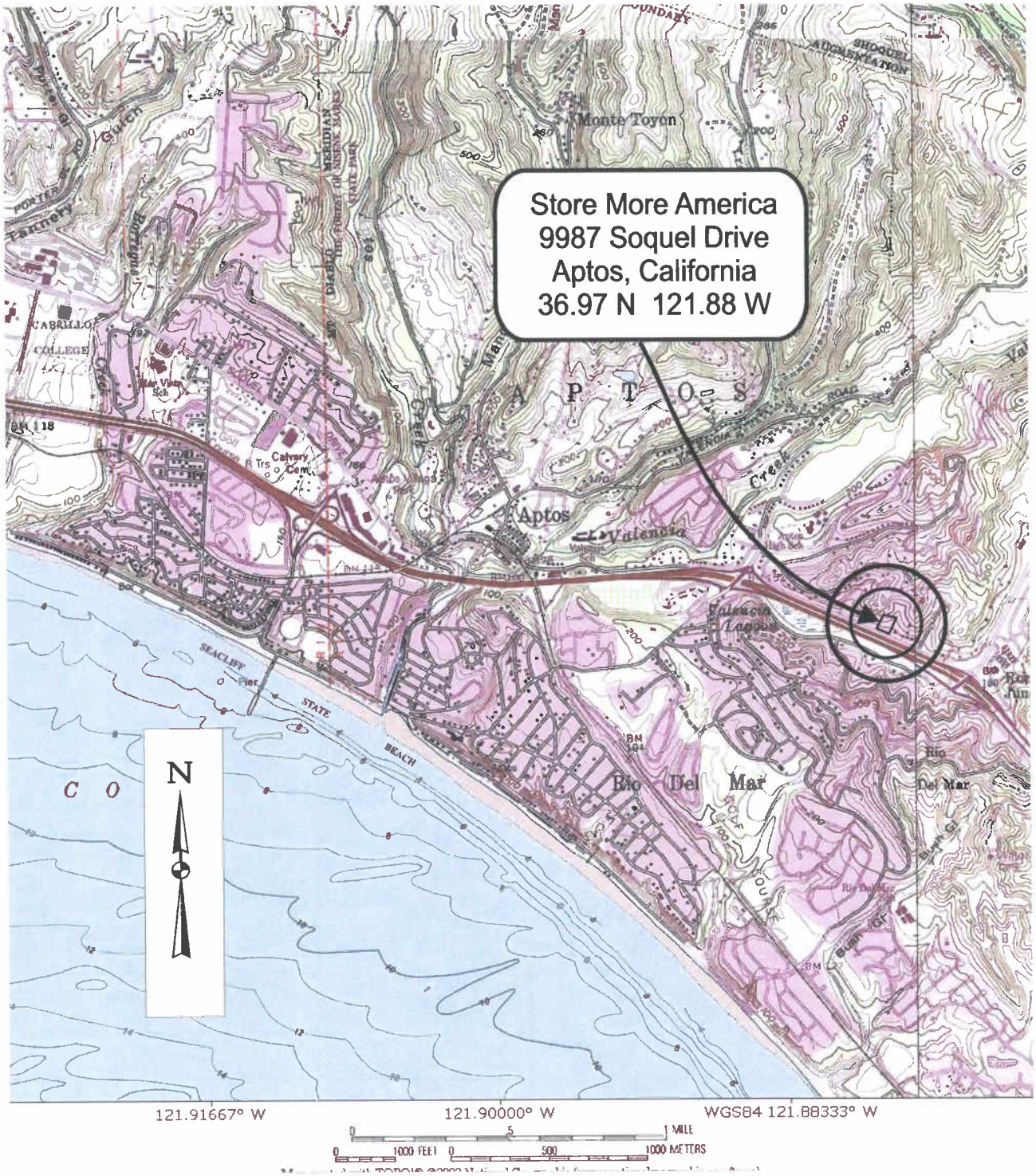
Working Group on California Earthquake Probabilities, 2007, Earthquake Probabilities in the San Francisco Bay Region: 2000 to 2030–A Summary of Findings: U.S. Geological Survey Open File Report 99-517, 43 p.

LIST OF FIGURES

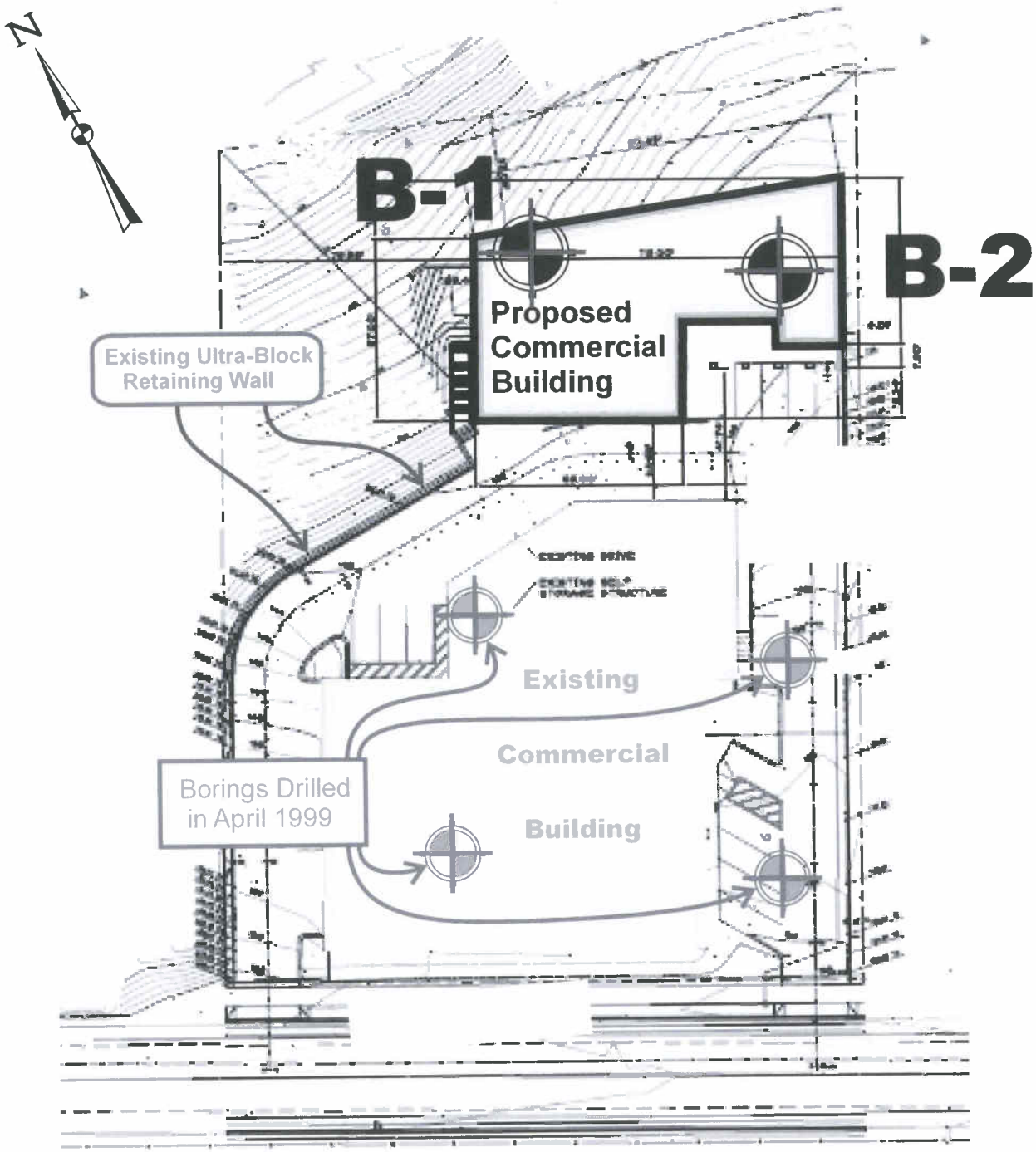


REDWOOD GEOTECHNICAL ENGINEERING, INC.

CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS

SITE VICINITY MAP
Store More America
9987 Soquel Drive
Aptos, California

PROJECT NUMBER: 2153SCR	BASE MAP: Soquel Quadrangle	
May 2013	Scale: As Shown	Figure 1



REDWOOD GEOTECHNICAL ENGINEERING, INC. CONSULTING SOIL, FOUNDATION & FORENSIC ENGINEERS	SITE PLAN SCHEMATIC 9987 Soquel Drive Store More America Aptos, California
PROJECT NUMBER: 2153SCR	BASE: Preliminary Site Plan by Streeter Group
May 2013	Approximate Scale: 1 in ~ 50 ft — Figure 2

LOGGED BY NJR DATE DRILLED 2/12/13 BORING DIAMETER 4 inches BORING NUMBER B1

Depth (ft)	Sample Number and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 350 ft-lb	Pocket Pen. Qu (tsf)	Dry Density (pcf)	Moisture Content (%)	MISC. LAB RESULTS
1			Grey brown silty SAND	SM					
			moist, loose, organics						
			Numerous roots						
2	1-1 L	B A					103	11.9	1-1A Atterberg Limits: Non-plastic
					3	—	104	10.6	
3			Very loose to 3'						
	1-2 SL		Grey brown silty SAND w/some clay	SM					
4			moist, loose, some roots		6	0.8	109	15.3	
	1-3 T		Yellow brown silty SAND	SM					
5			wet, loose		8	0.8		10.1	
6									
7			More dense, color change to yellow brown						
			Yellow brown silty SAND	SM					
8			moist, dense, medium- to coarse-grained sand, more clay						
	1-4 L	B A	Some dark brown mottling				114	5.0	
9			Minor horizontal banding (alluvial banding)		51	3.0	116	4.4	
10	1-5 SL		Trace mica						
					67	3.0	107	5.6	
11	1-6 T								
12					48	2.5		7.3	
13									
14			Uniform drilling in yellow brown silty sand						
15									
16									
17									
18									
19									
20	1-7 L								
21					50/5"		106	11.1	
			12" lens of grey brown silty fine- to medium-grained SAND, moist, very dense	SM					
22	1-8 T		Yellow brown silty medium- to coarse-grained SAND, moist, dense	SM	50/4"			13.8	
23									

(Continued on Next Page)

PROJECT NUMBER 2153SCR
May 2013

BORING LOG
Store More America
Aptos, California

Figure 3a

LOGGED BY NJR **DATE DRILLED** 2/12/13 **BORING DIAMETER** 4 inches **BORING NUMBER** B2

Depth (ft)	Sample Number and Type	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 350 ft-lb	Pocket Pen. Qu (tsf)	Dry Density (pcf)	Moisture Content (%)	MISC. LAB RESULTS
1	2-1 L	B A	Dark grey brown silty SAND very moist, very loose Some clay	SM			100	10.8	
2					4		101	11.0	2-1A Atterberg Limits:
3	2-2 SL					1.0	95	11.4	Non-plastic
4	2-3 T		Brown sandy CLAY moist, hard		4	1.0	105	11.1	
5					5	1.0		10.1	
6			Dark brown @ 6'						
7	2-4 L		Dark brown silty SAND very moist, medium dense, minor clay Minor clay Trace small rounded pebbles	SM	15	0.5	117	10.7	
8	2-5 SL	B A	Dark brown clayey SAND	SC			113	13.6	
9	2-6 T		very moist, medium dense, medium- to coarse-grained sand		13	2.0	110	12.1	
10					12			15.3	
11									
12									
13									
14									
15	2-7 L	B A	▼ Saturated @ 15'				111	17.3	▼ 14' @ 2pm 14' @ 2:30 pm
16					23		119	15.3	▼ 15' @ 1:30 pm
17	2-8 SL	B A	High dry strength		25		108 111	19.2 18.4	
18	2-9							18.9	
19	T	tip	Yellow brown silty medium- to coarse-grained SAND very moist, very dense	SM	36			14.9	
20	2-10 L	B A					111	18.7	
21					55	4.0	115	18.6	
22	2-11 T				63			16.4	
23			Terminated @ 22'6"						

PROJECT NUMBER 2153SCR
May 2013

BORING LOG
Store More America
Aptos, California

Figure 4

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

August 21, 2013

Meritage Development Group
213 Oacifica Blvd.
Watsonville, CA 95076

Subject: Review of Geotechnical Report by Redwood Geotechnical Engineering, Inc. Dated May 2, 2013: Project: 2153SCR;
And,
Review of the Geoloigc Hazards Evalaution by Craig Harwood, CEG
Dated August 2013;
APN 041-233-23, Application #: REV131089

Dear Meritage Development Group:

The purpose of this letter is to inform you that the Planning Department has accepted the subject reports and the following items shall be required:

1. All construction shall comply with the recommendations of the reports.

2. Final plans shall reference the reports and include a statement that the project shall conform to the reports' recommendations.

3. Prior to building permit issuance a *plan review letter* from the geotechnical engineer shall be submitted to Environmental Planning. After plans are prepared that are acceptable to all reviewing agencies, please submit a geotechnical plan review letter that states the project plans conform to the recommendations of the geotechnical report. *Please note that the plan review letter must reference the final plan set by last revision date.* The author of the report shall write the *plan review letter.*

4. Shoring must be a component of the Building Plans.

5. An engineered erosion control and drainage plan must be submitted by the project civil engineer after it has been reviewed and approved in writing by the engineering geologist and geotechnical engineer.

6. Please submit an electronic copy of the soils report in .pdf format via compact disk or email to: pln829@co.santa-cruz.ca.us. Please note that the report must be generated and/or sent directly from the soils engineer of record.

(over)

ATTACHMENT 4

NOTICE TO PERMIT HOLDERS WHEN A SOILS REPORT HAS BEEN PREPARED, REVIEWED AND ACCEPTED FOR THE PROJECT

After issuance of the building permit, the County requires your soils engineer to be involved during construction. Several letters or reports are required to be submitted to the County at various times during construction. They are as follows:

1. **When a project has engineered fills and / or grading**, a letter from your soils engineer must be submitted to the Environmental Planning section of the Planning Department prior to foundations being excavated. This letter must state that the grading has been completed in conformance with the recommendations of the soils report. Compaction reports or a summary thereof must be submitted.

2. **Prior to placing concrete for foundations**, a letter from the soils engineer must be submitted to the building inspector and to Environmental Planning stating that the soils engineer has observed the foundation excavation and that it meets the recommendations of the soils report.

3. **At the completion of construction,** a *final letter* from your soils engineer is required to be submitted to Environmental Planning that summarizes the observations and the tests the soils engineer has made during construction. The final letter must also state the following: "Based upon our observations and tests, the project has been completed in conformance with our geotechnical recommendations."

   If the *final soils letter* identifies any items of work remaining to be completed or that any portions of the project were not observed by the soils engineer, you will be required to complete the remaining items of work and may be required to perform destructive testing in order for your permit to obtain a final inspection.

(over)

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 131046

APN 041-233-23

Your plans have been sent to several agencies for review. The comments that were received are printed below. Please read each comment, noting who the reviewer is and which of the three categories (Completeness, Policy Considerations/Compliance, and Permit Conditions/Additional Information) the comment is in.

Completeness: A comment in this section indicates that your application is lacking certain information that is necessary for your plans to be reviewed and your project to proceed.

Policy Considerations/Compliance: Comments in this section indicate that there are conflicts or possible conflicts between your project and the County General Plan, County Code, and/or Design Criteria. We recommend that you address these issues with the project planner and the reviewer before investing in revising your plans in any particular direction.

Permit Conditions/Additional Information: These comments are for your information. No action is required at this time. You may contact the project planner or the reviewer for clarification if needed.

Accessibility Review

Routing No: 1 | Review Date: 03/04/2013

JAMES HEANEY (JHEANEY) : Incomplete

Development Review # 131046 First Review 3/4/13

Completeness Comments: **Application Complete? - __ Yes X No**

Please confirm that all of the facilities proposed in the new building are available and accessible in the existing facility. Specifically, storage lockers of equivalent size and cost.

Please confirm that public spaces in the existing building such as the office and restrooms are fully accessible. Please detail the accessible route.

Policy Considerations and Compliance Issues:

A-3: Please confirm elevator access at the second floor.

Permit Conditions and Additional Information:

Please confirm with the Fire Agency having jurisdiction the proposed elevator size is acceptable.

Provide path of travel details for the proposed building.

If you have any questions regarding these comments, please call Jim Heaney between the hours of 8:00 am - 4:00 pm at (831) 454-3166 or email pln645@co.santa-cruz.ca.us.

Routing No: 2 | Review Date: 06/03/2013

JAMES HEANEY (JHEANEY) : Complete

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 131046

APN 041-233-23

Drainage Review

Routing No: 1 | Review Date: 03/05/2013

TRAVIS RIEBER (TRIEBER) : Incomplete

Completeness Comments: Application Complete? _ Yes X No

1. The submitted plans show all new impervious areas being hard piped to a closed pipe detention system with no proposed BMPs or LID measures. Per part 3 Section C #1c of the Design Criteria this is a "large project". Per Section C #3a large projects are required to maintain pre-development discharge rates for a range of storms while maintaining pre-development groundwater recharge rates. Quantification demonstrating maintenance of the pre-development 2 year, 2-hour as well as the 10 year, 15-minute discharge rates is required. Please reference the Santa Cruz County Design Criteria for design requirements. The design criteria can be found on the internet at: http://www.dpw.co.santa-cruz.ca.us/DESIGNCRITERIA.pdf
Please note that mitigations will be required for both added and replaced impervious areas.

The applicant is encouraged to discuss the above comments with the reviewer to avoid unnecessary additional routings. Please call the Dept. of Public Works, Storm Water Management Section, from 8:00 am to 12:00 noon if you have questions.

Policy Considerations and Compliance Issues:

Permit Conditions and Additional Information:

1. Please provide a tributary drainage area map and quantify the amount of runoff being received onsite from upslope properties. Provide calculations demonstrating that the proposed storm drain facilities have adequate capacity.

2. Per part 3 section G3 of the design criteria if the parcel being developed receives existing runoff from an adjacent drainage area, the recordation of a drainage easement, maintenance agreement, deed restriction, or other document recorded on the parcel deed will be required. The recorded document shall acknowledge that the parcel does and will continue to receive upstream runoff, that the property owner is responsible for maintenance of the drainage pathway through the parcel, and that the County and Flood Control Districts are not responsible for the upstream runoff or for maintenance of the drainage pathway.

3. Please verify the condition of the existing Stormceptor water quality treatment unit onsite. Propose any needed repairs or maintenance. Please include on the plans maintenance requirements for the water quality treatment unit.

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 131046

APN 041-233-23

Drainage Review

Routing No: 1 | Review Date: 03/05/2013

TRAVIS RIEBER (TRIEBER) : Incomplete

4. Please provide construction details for all proposed drainage facilities onsite.

5. All catch basins shall be marked with the legend "NO DUMPING DRAINS TO OCEAN. NO TIRE DESECHO CORRE AL MAR."

6. Site plans shall specify maintenance requirements such as; what needs to be maintained, how often each drainage improvement needs to be maintained, what to look for indicating maintenance is required, and what the maintenance procedures are for each specific drainage improvement. A recorded maintenance agreement is required for the proposed drainage system. Please contact the Countyof Santa Cruz Recorder's office for appropriate recording procedure. The maintenance agreement form can be picked up from the Public Works office or can be found online at:

http://www.dpw.co.santa-cruz.ca.us/Storm_Water/FigureSWM25B.pdf

7. A drainage fee will be assessed on the net increase in impervious area. Reduced fees are assessed for semi-pervious surfacing (50%) to offset costs and encourage more extensive use of these materials.

8. Public Works staff will inspect the installation of the drainage related items. Once all other reviewing agencies have approved the building permit plans, please submit a copy of wet signed civil plans with the DPW signature block and a vicinity map on the first sheet. Please submit a construction estimate for all drainage related items. Please deposit 2% of the construction cost or a minimum of $640.00, directly to Public Works.

Routing No: 2 | Review Date: 06/04/2013

TRAVIS RIEBER (TRIEBER) : Complete

2nd Review Comments

Completeness Comments: Application Complete? X Yes _ No

The revised civil plans, drainage calculations and response letter dated 5/9/2013 have been received and are approved for the planning application stage. Please see the permit conditions below for additional information to be provided at the building application stage.

Policy Considerations and Compliance Issues:

Permit Conditions and Additional Information:

Drainage Review

Routing No: 2 | Review Date: 06/04/2013
TRAVIS RIEBER (TRIEBER) : Complete

1. Please provide a tributary drainage area map and quantify the amount of runoff being received onsite from upslope properties. Provide calculations demonstrating that the proposed storm drain facilities have adequate capacity.

2. Per part 3 section G3 of the design criteria if the parcel being developed receives existing runoff from an adjacent drainage area, the recordation of a drainage easement, maintenance agreement, deed restriction, or other document recorded on the parcel deed will be required. The recorded document shall acknowledge that the parcel does and will continue to receive upstream runoff, that the property owner is responsible for maintenance of the drainage pathway through the parcel, and that the County and Flood Control Districts are not responsible for the upstream runoff or for maintenance of the drainage pathway.

3. Site plans shall specify maintenance requirements such as; what needs to be maintained, how often each drainage improvement needs to be maintained, what to look for indicating maintenance is required, and what the maintenance procedures are for each specific drainage improvement. A recorded maintenance agreement is required for the proposed drainage system. Please contact the County of Santa Cruz Recorder's office for appropriate recording procedure. The maintenance agreement form can be picked up from the Public Works office or can be found online at: http://www.dpw.co.santa-cruz.ca.us/Storm_Water/FigureSWM25B.pdf

4. A drainage fee will be assessed on the net increase in impervious area. Reduced fees are assessed for semi-pervious surfacing (50%) to offset costs and encourage more extensive use of these materials.

5. Public Works staff will inspect the installation of the drainage related items. Once all other reviewing agencies have approved the building permit plans, please submit a copy of wet signed civil plans with the DPW signature block and a vicinity map on the first sheet. Please submit a construction estimate for all drainage related items. Please deposit 2% of the construction cost or a minimum of $640.00, directly to Public Works.

Environmental Planning

Routing No: 1 | Review Date: 03/06/2013
ROBERT LOVELAND (RLOVELAND) : Incomplete

Incompleteness Item:
1. A Geological Hazards Assessment (GHA) needs to be completed for the proposed project.
2. Identify all trees (species, size) that will be removed or possibly impacted as part of this project on the site plan.
NOTE TO PLANNER: Grading and soils report comments have not been entered yet.

Environmental Planning

Routing No: 1 | Review Date: 03/06/2013
ROBERT LOVELAND (RLOVELAND) : Incomplete

Preliminary Grading Review
CAROLYN BURKE (CBURKE)
3. The plan notes refer to Redwood Geotechnical Engineering, Inc. as the geotechnical engineering consultant, while the only soils report submitted for review is by Steven Raas & Associates, Inc. dated May 1999 (Project 9937-SZ70-F31). Please resolve.

4. The submitted soils report is greater than three years old and must be updated to reflect current codes and the current project scope. The soils report and update will be reviewed after the Geologic Hazards Assessment is complete and any additional information/studies required by the assessment have been submitted for review.

5. Update the grading plans to include top-of-wall/bottom-of-wall elevations at the beginning, end and transition points of all retaining walls.

6. Provide a building section through the building in the East-West direction. Clearly label the property line on this cross section.

7. Update the grading plan to include a "limits of grading/disturbance" line that includes areas required for construction access, utility installation, staging/storage, etc.

8. It appears the building will require a retaining wall up to 10-feet in height approximately 5-feet from the eastern property line. Construction of this wall may require grading beyond the property line. (a) Show the temporary grading required during construction on the building section requested in Comment 6, (b) Include the temporary grading limits in the "limits of grading/disturbance" requested in Comment 7, (c) If grading will occur on the adjacent property, please submit an "Owner/Agent Approval Form" which provides authorization from your neighbor to perform this work on their property. This form may be found on our website: www.sccoplanning.com à "Building and Safety" tab à "Forms" à "Owner/Agent Approval Form".

NOTE: The preceding comments are preliminary. Additional comments may follow pending review of requested information.

Routing No: 2 | Review Date: 06/06/2013
CAROLYN BURKE (CBURKE) : Incomplete

The first review requested a Geologic Hazards Assessment; none was applied for or submitted for review by the applicant.

A Geologic Hazards Assessment (GHA) is required to determine if a full engineering geology report

Environmental Planning

Routing No: 2 | Review Date: 06/06/2013
CAROLYN BURKE (CBURKE) : Incomplete

will be required. Alternatively, you may elect to not perform a GHA and submit an engineering geology report for review by the County Geologist. You may apply for a GHA at the Zoning Counter between 8:00-11:30 am and 1:00-2:30 pm M-Th.

Please note: The soils report will not be formally reviewed until after the GHA is complete. Additional comments may follow.

Routing No: 3 | Review Date: 09/17/2013
CAROLYN BURKE (CBURKE) : Complete

Fire Review

Routing No: 1 | Review Date: 03/12/2013
ERIN COLLINS (ECOLLINS) : Complete

Aptos/La Selva Fire Department has reviewed the plans for the above cited project and has no objections as presented.

A plan review fee of **$50.00** is due and payable to the Aptos/La Selva Fire Department **PRIOR TO APPROVAL** of building application. **Reminder:** the enclosed Permit/Service Fees form must be submitted to the Aptos/La Selva Fire Department at time of payment.

These plans are in compliance with California Building and Fire Codes (**2010 edition**) and Aptos/La Selva Fire District Amendments.

FIRE FLOW requirements for this project is **3,000 gallons per minute**. The AVAILABLE FIRE FLOW information can be obtained from the water company. Fire-flow and flow duration shall not be less than that specified in Appendix Table B105.1 of the California Fire Code.

Fire hydrant location requirements to meet Appendix Table C105.1 of the California Fire Code.

Elevator shall be sized appropriately to accommodate a medical gurney.

Fire extinguishers to be placed in approved locations.

All buildings shall be protected by an approved automatic fire sprinkler system complying with the currently adopted edition of NFPA 13, and adopted standards of the

Fire Review

Routing No: 1 | Review Date: 03/12/2013
ERIN COLLINS (ECOLLINS) : Complete

Aptos/La Selva Fire Protection District."

The designer/installer shall submit three (3) sets of plans and calculations for the underground and overhead Residential Automatic Fire Sprinkler System to this agency for approval.

An UNDERGROUND FIRE PROTECTION SYSTEM WORKING DRAWING must be prepared by the designer/installer. The plans shall comply with the UNDERGROUND FIRE PROTECTION SYSTEM INSTALLATION POLICY HANDOUT. Underground plan submittal and permit, will be issued to a Class B, Class C-16, Class C-36 or owner/builder. No exceptions."

The building shall be protected by an approved fire alarm system complying with the currently adopted edition of NFPA 72, and adopted standards of the Aptos/La Selva Fire Protection District."

The designer/installer shall submit three (3) sets of plans and calculations for the Fire Alarm System to this agency for approval."

Building numbers shall be provided. Numbers shall be a minimum of six inches in height on a contrasting background and visible from the street. Where numbers are not visible from the street, additional numbers shall be installed on a directional sign at the property driveway and the street."

Misc Review

Routing No: 1 | Review Date: 06/10/2013
NATHAN MACBETH (NMACBETH) : Not Required

Project Review

Routing No: 1 | Review Date: 03/12/2013
NATHAN MACBETH (NMACBETH) : Incomplete

Incomplete Items:

1. Please provide a preliminary Landscape Plan. If removal of existing trees (conditioned as part of application 99-0581) is necessary to accommodate the proposed development, replacement or

Project Review

Routing No: 1 | Review Date: 03/12/2013
NATHAN MACBETH (NMACBETH) : Incomplete

relocation of these trees shall be at a rate of 1:1. Please indicate the location of the replacement or relocated trees on the Landscape Plan. The landscape plan shall be consistent with County Code Section 13.11.075 and a set of plans will be routed to the Soquel Creek Water District for review, additional comments may be forthcoming.

Please note that additional screening may be required as this project is within the view shed of the Highway 1 scenic corridor. Determination of whether additional screening is necessary shall be based on analysis of the photos simulations.

2. The project location is along scenic corridor Highway 1. Please provide photo simulations (renderings) of what the proposed development will look like as seen from Highway 1. Appropriate locations for the renderings would be north bound Hwy 1 near the Freedom Blvd overpass, southbound Hwy 1 near the Rio del Mar Blvd overpass and northbound Hwy 1 essentially right in front of the project location.

3. Please specify approximately how many rental units will be contained in the proposed development. Additionally, the proposed development is shown as 19,921 square feet in size. If the proposed development exceeds 20,000 square feet, review and approval by the Planning Commission is required.

Compliance:

1. It appears that no additional parking is proposed though this project will add approximately 19,000 square feet of commercial space. Please clarify what standard was used to determine the number of parking spaces necessary to accommodate the addition.
Please note that the method for calculating parking requirements for the existing structure appears to have been based on the number of units (200 units X .09 spaces/unit = 18 spaces). Unfortunately, the approximate number of proposed units has not been provided so I am unable to use the same methodology.

However, by figuring the number of parking spaces per 1,000 square feet, the existing 35,000 square foot structure provided parking at a rate of .51 spaces per 1,000 square feet. When applying this standard to the proposed 19,000 square foot addition, 10 additional parking spaces should be provided.

Alternatively, you may submit a Parking Study prepared by a licensed Traffic Engineer indicating the existing parking will meet the demand for both existing and proposed structures.

Routing No: 2 | Review Date: 06/10/2013

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 131046

APN 041-233-23

Project Review

NATHAN MACBETH (NMACBETH) : Incomplete

Completeness:

Though all comments for this agency have been addressed, comments from all agencies must be satisfied prior to this application being deemed complete.

Please address comments from Environmental Planning.

Miscellaneous:

This project is subject to Environmental Review. Environmental Review will begin once all agency comments have been addressed and this application is deemed complete for further processing.

Conditions of Approval:

1. Colors and materials shall be consistent with the existing structure.
2. A Final Lanscape plan shall be submitted with the Building Permit subject to approval.
3. Hours of operation shall be consistent with prior use approval (7am - 7pm).
4. Maximum height 35 feet with the exception of cupola.

Routing No: 3 | Review Date: 09/17/2013

NATHAN MACBETH (NMACBETH) : Complete

September 17, 2013

Streeter Group,
attn Hugh Zike
2571 Main Street, Suite C
Santa Cruz, CA 95073

Subject: **Complete Application Submittal**
Application #: **131046**; Assessor's Parcel #: **041-233-23**
Owner: **Storemore America**

Dear Hugh Zike:

On 2/12/13, you submitted an application for a development permit with the County of Santa Cruz. The determination of "completeness" is made based on the preliminary review of the materials that you have submitted, by all of the reviewing agencies, and site visits by Planning Department staff. As of this time, the reviewing agencies and Planning Department staff have made comments on the materials that you have submitted. This letter is to inform you of the status of your application.

As of 9/17/13, this application has been considered **complete** for further processing. The next phase in the processing of your application will be the preparation of a staff report with recommendations to the Zoning Administrator. If additional materials or information are necessary to prepare the staff report, Planning Department staff will contact you. You will receive notice of the public hearing and a copy of the staff report prior to the hearing date. At the public hearing you will have the opportunity to discuss your project with the decision-making body, and a decision will be made. Possible outcomes of the public hearing include: approval (with conditions), denial, or continuance (with specific reasons for continuance; or requests for additional information) of your proposed project. Decisions of the Zoning Administrator can be appealed to the Planning Commission.

Project Review

Routing No: 3 | Review Date: 09/17/2013
NATHAN MACBETH (NMACBETH) : Complete

It is important to understand that although your application has been found to be complete for further processing, the Planning Department may, in the course of processing the application, request that you clarify, amplify, correct, or otherwise supplement the information required for this application, or to submit additional information to comply with the provisions of Division 13 (California Environmental Quality Act) of the Public Resources Code. Please note that the environmental determination for this project has not been made at this time and the environmental determination for this project, required by the California Environmental Quality Act, shall be made at the time the final action is taken on this project by the appropriate decision-making body.
Should you have further questions concerning this application, please contact me at:
(831) 454-3118 or e-mail: **nathan.macbeth@co.santa-cruz.ca.us**
Sincerely,

Nathan MacBeth
Project Planner
Development Review

Road Engineering Review

Routing No: 1 | Review Date: 03/06/2013
RODOLFO RIVAS (RRIVAS) : Complete

Completeness Comments:

Permit Conditions and Additional Information:

1) The project will be subject to Aptos Transportation Improvement Area (TIA) fees at a rate of $600 ($300 for roadside improvement fees + $300 for transportation improvement fees) per daily trip-end generated by the proposed commercial development. Payment of TIA fees is required prior to issuance of building permit. As per the County of Santa Cruz trip generation rate table, the trip-end generation rate for a public storage such as the proposed self storage facility is 3 trip-ends per 1,000 SF. For fee purposes is estimated that this project will generate 60 trip-ends (3 trip-ends/1,000 SF X 19,930 SF ~ 60 trip-ends). Therefore, the TIA fee for the proposed storage facility is = $36,000 (60 trip-ends X $ 600 per trip-end = $36,000).

Applicant has the option of submitting to the approving body a lower trip generation rate (trips per day), provided that the proposed trip generation rate is based on a traffic engineering study.

Note: The above TIA fee estimate was calculated using the current fee rate. The rate in

Road Engineering Review

Routing No: 1 | Review Date: 03/06/2013
RODOLFO RIVAS (RRIVAS) : Complete

effect at the time of obtaining a building permit will be used to determine the actual TIA fees.

C2G CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners

May 9, 2013

Travis Rieber
Santa Cruz County Public Works Department
701 Ocean Street
Santa Cruz, Ca 95060

Dear Travis,

Enclosed, C2G has submitted drainage calculations for the Storemore America – Aptos Addition Project. Our calculations meet the requirements specified in the comments received from your department on March 5, 2013.

Due site constraints limiting proposed treatment areas, we have implemented underground storage chambers. This approach allows for the 2-year, 2-hour retention and 10-year, 15-minute discharge. From our original submittal, we have revised these from solid HDPE pipe to Open-bottom Chambers to provide infiltration.

Tributary Areas of Pre and Post Development have been provided (see Figures 1 & 2). From the post development Tributary Are Exhibit (Figure 2), two sub-areas have been identified. Tributary Area "A" collects a portion of the new building and Tributary "B" collects the remaining majority. Both areas are collected into the existing onsite storm system and pass through an existing Stormcepter prior to exiting the site.

As a result of the enclosed calculations, both systems have been adequately sized to allow for detaining a 10-year storm event while retaining a 2-year storm event. Post-development runoff is shown to be less than pre-development conditions.

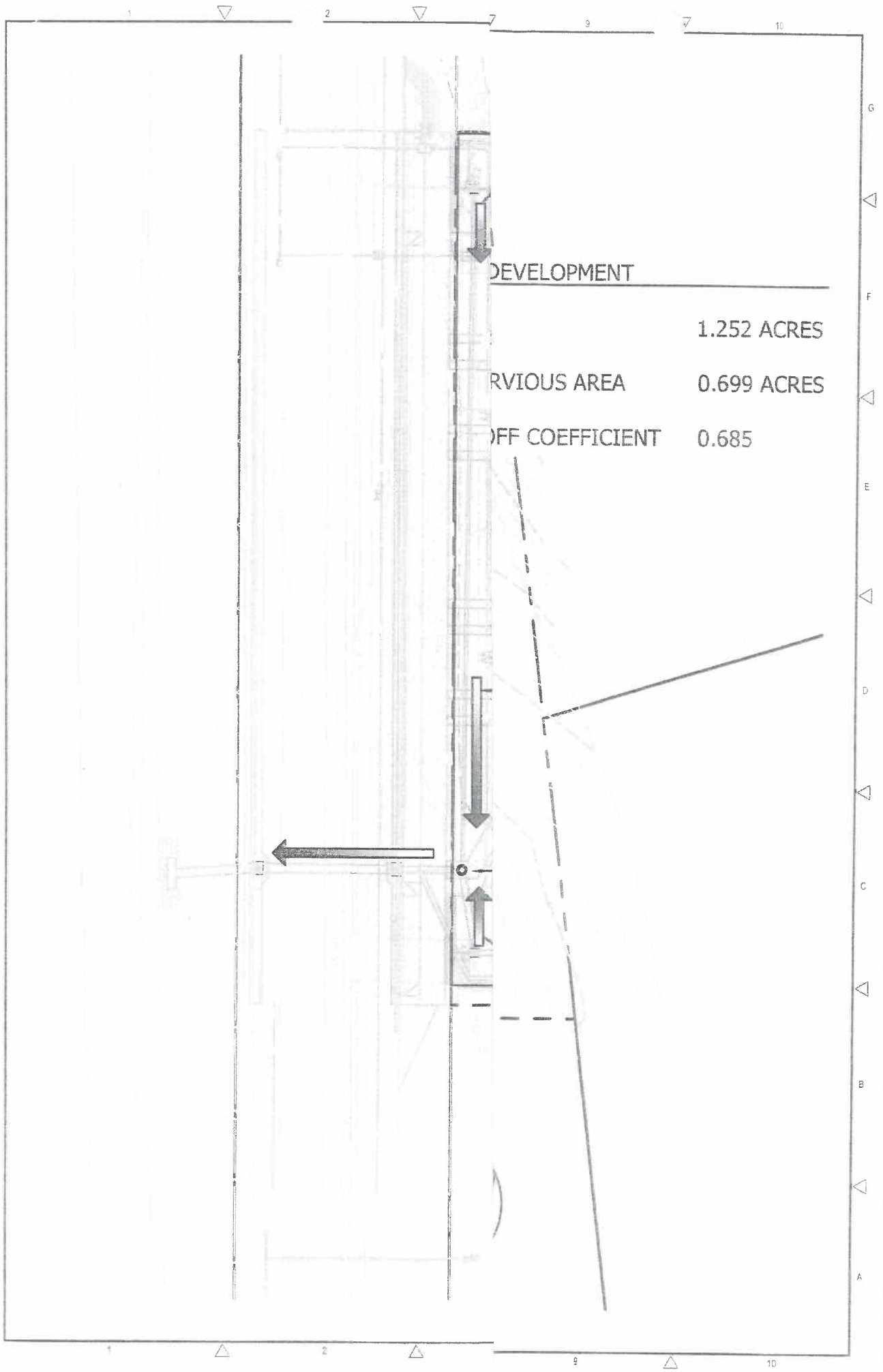
If there are any questions or concerns regarding the information provided in the enclosed calculations, please contact our office.

Very Truly Yours,

C2G/ Civil Consultants Group, Inc.

David Dauphin
Associate Engineer

C2G 4444 Scotts Valley Drive, Suite 6, Scotts Valley, CA 95066-4529
831/438-4420 • Fax 831/438-5829 • [name]@c2gengrs.com • www.civilconsultantsgroup.com



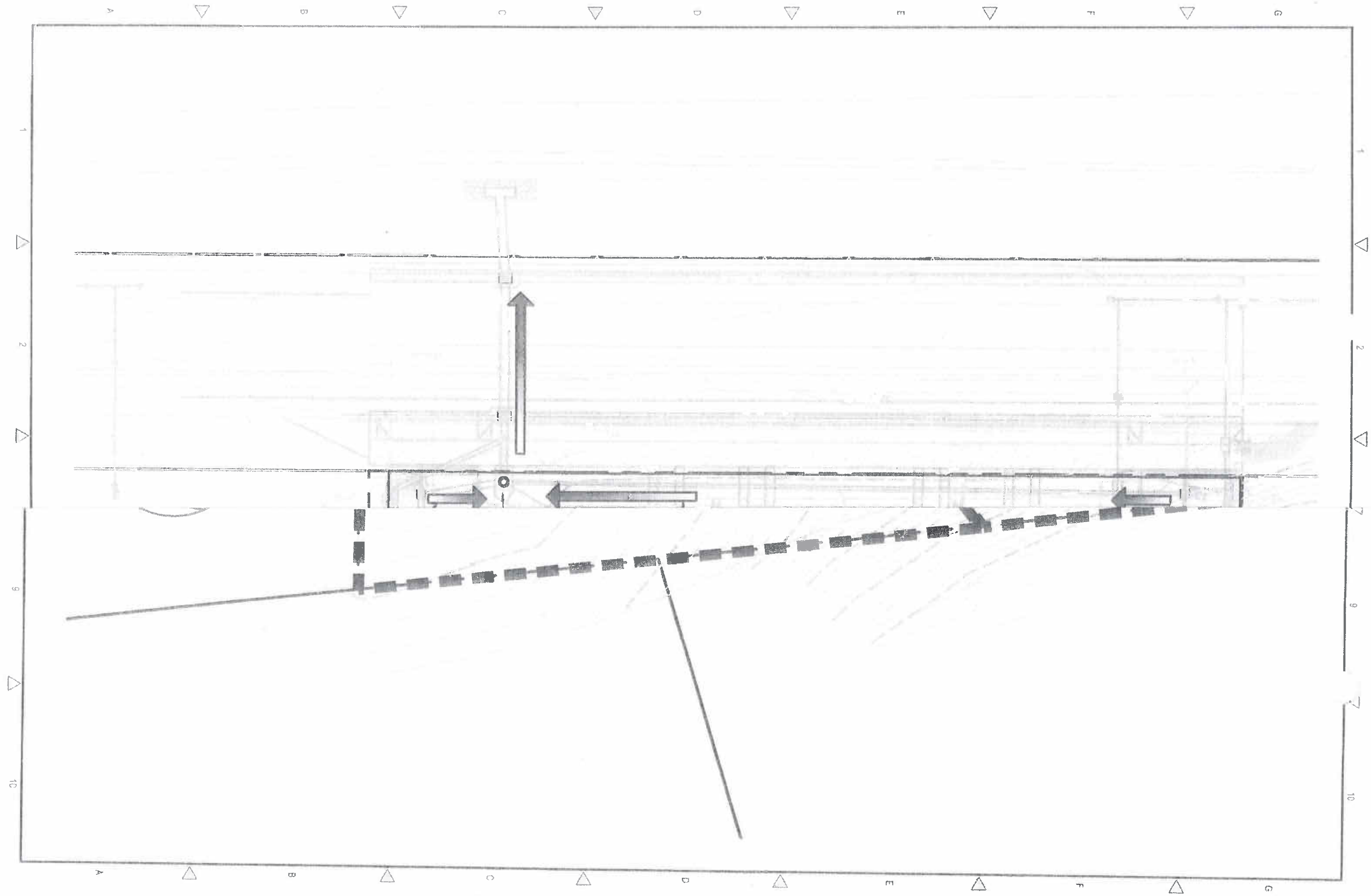
REVISIONS	BY

TRIBUTARY AREA
DRAINAGE MAP
PRE DEVELOPMENT

C2G /CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners
4444 Scotts Valley Drive / Suite 6
Scotts Valley, CA 95066
T (831) 438-4420
F (831) 438-4420

STOREMORE AMERICA APTOS ADD.
9687 SOQUEL DRIVE, APTOS, CA
APN 041-233-23 APP. 131046

Date	05.09.13
Scale	1": 30'
Drawn	DD
Job	338-20
Sheet	FIG. 1
Of	Sheets



Date 05.09.13	STOREMORE AMERICA APTOS ADD. 9687 SOQUEL DRIVE, APTOS, CA APN 041-233-23 APP. 131046	TRIBUTARY AREA DRAINAGE MAP POST DEVELOPMENT
Scale 1":30'		
Drawn: DD		
Job 338-20		
Sheet FIG 2		
Of Sheets		

C2G /CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners
4444 Scotts Valley Drive / Suite 6
Scotts Valley, CA 95066
T (831) 438-4420
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REVISIONS	BY

TRIBUTARY AREA "A"

10-year / 15-minute discharge calculation
2-year / 2-hour retention calculation
Restrictor sizing calculation
Figure 3 – Underground Chamber Cross Section
Figure 4 – Restrictor Detail
Incremental Storage Volume – by StormTech

PROJECT: SMA APTOS - APN: 041-233-23 App: 131046 TRIB. AREA A **Calc by:** DD **Date:** 5/6/2013

RUNOFF DETENTION BY THE MODIFIED RATIONAL METHOD

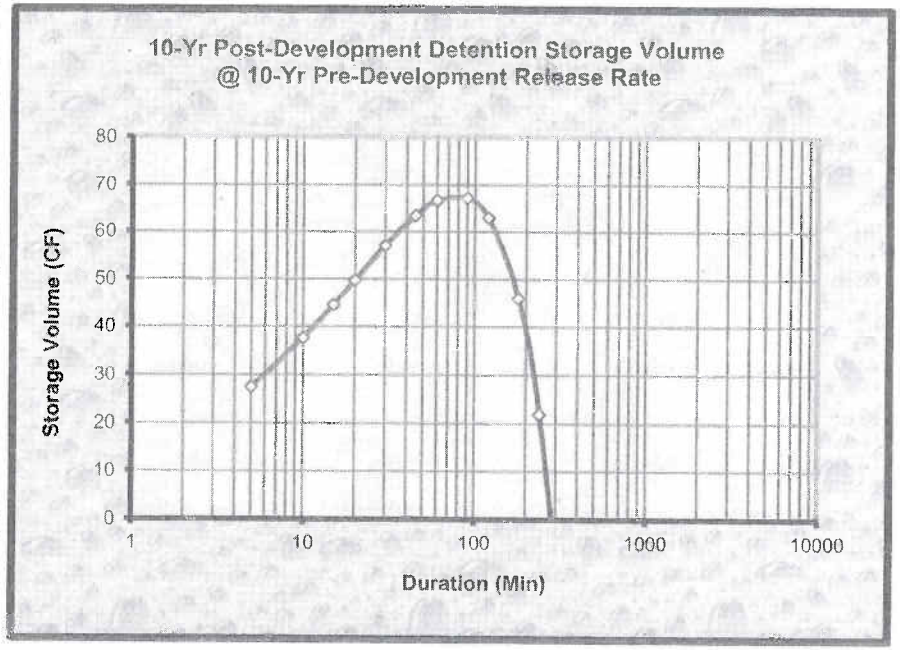
Data Entry: PRESS TAB & ENTER DESIGN VALUES SS Ver: 1.0

Site Location P60 Isopleth:	1.40		Fig. SWM-2 in County Design Criteria
Rational Coefficients Cpre:	0.25		See note # 2
Cpost:	0.90		See note # 2
Impervious Area:	1550	ft^2	See note # 2 and # 4

STRUCTURE DIMENSIONS FOR DETENTION

67	ft^3 storage volume calculated			
100	% void space assumed			
67	ft^3 excavated volume needed			
Structure	Length	Width*	Depth*	*For pipe, use the square
Ratios	15.00	6.00	1.25	root of the sectional area
Dimen. (ft)	**12.63**	**5.05**	**1.05**	

10 - YEAR DESIGN STORM				DETENTION @ 15 MIN.	
Storm Duration (min)	10 - Year Intensity (in/hr)	10 - Yr. Release Qpre (cfs)	10 - Year Qpost (cfs)	Detention Rate To Storage (cfs)	Specified Storage Volume (cf)
1440	0.23	0.002	0.008	-0.008	-830
1200	0.25	0.002	0.008	-0.007	-635
960	0.28	0.003	0.009	-0.006	-448
720	0.32	0.003	0.010	-0.005	-271
480	0.38	0.003	0.012	-0.003	-110
360	0.43	0.004	0.014	-0.001	-39
240	0.51	0.005	0.016	0.001	22
180	0.58	0.005	0.019	0.003	46
120	0.69	0.006	0.022	0.007	63
90	0.78	0.007	0.025	0.010	67
60	0.93	0.008	0.030	0.015	67
45	1.05	0.009	0.034	0.019	63
30	1.26	0.011	0.041	0.025	57
20	1.50	0.013	0.048	0.033	50
15	1.70	**0.015**	0.055	0.040	45
10	2.03	0.018	0.065	0.050	38
5	2.74	0.025	0.088	0.073	27



Notes & Limitations on Use:

1) The modified rational method, and therefore the standard calculations are applicable in watersheds up to 20 acres in size.
2) Required detention volume determinations shall be based on all net new impervious area both on and off-site, resulting from the proposed project. Pervious areas shall not be included in detention volume sizing; an exception may be made for incidental pervious areas less than 10% of the total area.
3) Gravel packed detention chambers shall specify on the plans, aggregate that is washed, angular, and uniformly graded (of single size), assuring void space not less than 35%.
4) A map showing boundaries of both regulated impervious areas and actual drainage areas routed to the hydraulic control structure of the detention facility is to be provided, clearly distinguishing between the two areas, and noting the square footage.
5) The EPA defines a class V injection well as any bored, drilled, or driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system. Such storm water drainage wells are "authorized by rule". For more information on these rules, contact the EPA. A web site link is provided from the County DPW Stormwater Management web page.
6) Refer to the County of Santa Cruz Design Criteria, for complete method criteria.

PROJECT: Storemore America - APN: 041-233-23 Application: 131046 - TRIBUTARY AREA A Calc by: DD Date: 5/6/2013

RUNOFF RETENTION BY THE STORAGE PERCOLATION METHOD

Data Entry: PRESS TAB KEY & ENTER DESIGN VALUES

Site Location P60 Isopleth:	1.40	Fig. SWM-2
Rational Coefficients Cpre:	0.25	
Cpost:	0.90	
Impervious Area:	1550	ft^2
Saturated Soil Permeability:	0.50	in/hr

Notes & Limitations on Use:

SS Ver:1.0

Saturated soil permeability values may be used conservatively from the USDA-NRCS soil survey, or use actual test values.
Site selection and design shall give proper consideration to the path for excess flows downstream of the designated retention area.
Retention site location on, or immediately above, slopes exceeding 15% will require consulting a geotechnical engineer.
Gravel packed structures shall use washed, angular, uniformly graded aggregate providing not less than 35% void space.
Refer to the County of Santa Cruz Design Criteria, Stormwater Management - Section H, for complete method criteria.

2 - YEAR DESIGN STORM

Storm Duration (min)	2 - Year Intensity (in/hr)	Qpre (cfs)	Qpost (cfs)
1440	0.15	0.001	0.005
1200	0.16	0.001	0.005
960	0.18	0.002	0.006
720	0.20	0.002	0.007
480	0.24	0.002	0.008
360	0.27	0.002	0.009
240	0.33	0.003	0.011
180	0.37	0.003	0.012
120	0.44	0.004	0.014
90	0.50	0.004	0.016
60	0.60	0.005	0.019
45	0.67	0.006	0.022
30	0.80	0.007	0.026
20	0.96	0.009	0.031
15	1.09	0.010	0.035
10	1.30	0.012	0.042
5	1.75	0.016	0.057

RETENTION @ 120 MIN.

Retention Rate To Storage (cfs)	Specified Retained Volume (cf)
0.001	-37
0.001	0
0.002	33
0.003	60
0.004	78
0.005	83
0.007	81
0.008	77
0.010	69
0.012	63
0.015	54
0.018	48
0.022	40
0.027	33
0.031	29
0.038	23
0.053	16

STRUCTURE DIMENSIONS FOR RETENTION

83	ft^3 storage volume calculated
35	% void space assumed
236	ft^3 excavated volume needed

Structure Ratios	Length	Width*	Depth* #
	15.00	6.00	2.70
Dimen. (ft)	**14.85**	**5.94**	**2.67**

199	ft^2 internal surface area
140	ft^2 effective surface area
14.2	hrs estimated structure drainage time

* For pipe, use the square root of the sectional area.
\# If cell values displayed are corrupted, enter zero for depth, then re-enter a positive numeric value within allowed range.

STRUCTURE DIMENSIONS FOR DETENTION

75	ft^3 storage volume calculated
100	% void space assumed
75	ft^3 excavated volume needed

Structure Ratios	Length	Width*	Depth*
	52.00	2.66	2.66
Dimen. (ft)	**30.66**	**1.57**	**1.57**

DETENTION @ 60 MIN.

Detention Rate To Storage (cfs)	Specified Detained Volume (cf)
-0.001	-44
0.000	-8
0.000	25
0.001	52
0.002	71
0.003	75
0.005	75
0.007	71
0.009	64
0.011	58
0.014	50
0.016	44
0.021	37
0.026	31
0.030	27
0.037	22
0.051	15

C2G CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners

Project Name: **Storemore America - Aptos Addition** (Tributary Area A)
Job Number: 338-20
Date: May 9, 2013

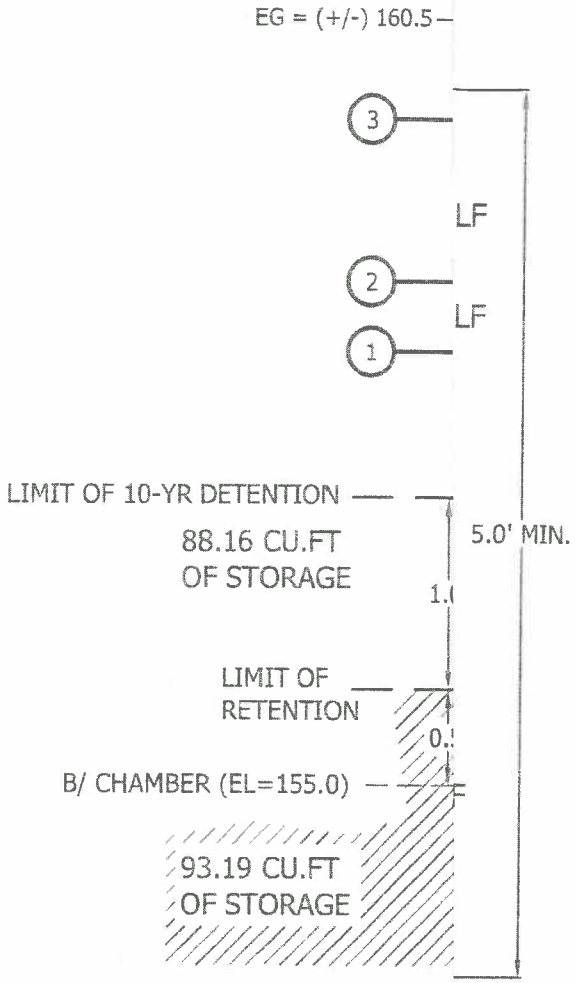
RESTRICTOR SIZE, ORIFICE METHOD (Circular Opening)

1. HIGHWATER ELEVATION	156.5
2. INVERT ELEVATION	155.5
3. DIAMETER OF RESTRICTOR IN INCHES	0.8125
4. CROSS SECTIONAL AREA, SQ. FT.	0.0036
5. HEAD, FT.	0.97
6. DISCHARGE COEFFICIENT	0.5

SQUARE EDGE 0.79 - 0.82
ROUND EDGE 0.93 - 0.98
SHARP EDGE 0.58 - 0.64
PROJECTING 0.50

7. DISCHARGE, Q, CFS	***0.014***
8. ALLOWABLE RELEASE RATE, Q, CFS	0.015

C2G 4444 Scotts Valley Drive, Suite 6, Scotts Valley, CA 95066-4529
831/438-4420 • Fax 831/438-5829 • [name]@c2gengrs.com • www.civilconsultantsgroup.com



NOTES:

1. NEW S
SUBST
2. INSTA
ROCK
3. INSTA
EQUAI

REVISIONS | BY

TRIBUTARY AREA "A"
UNDERGROUND CHAMBER
CROSS SECTION

C2G /CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners
4444 Scotts Valley Drive / Suite 6
Scotts Valley, CA 95066
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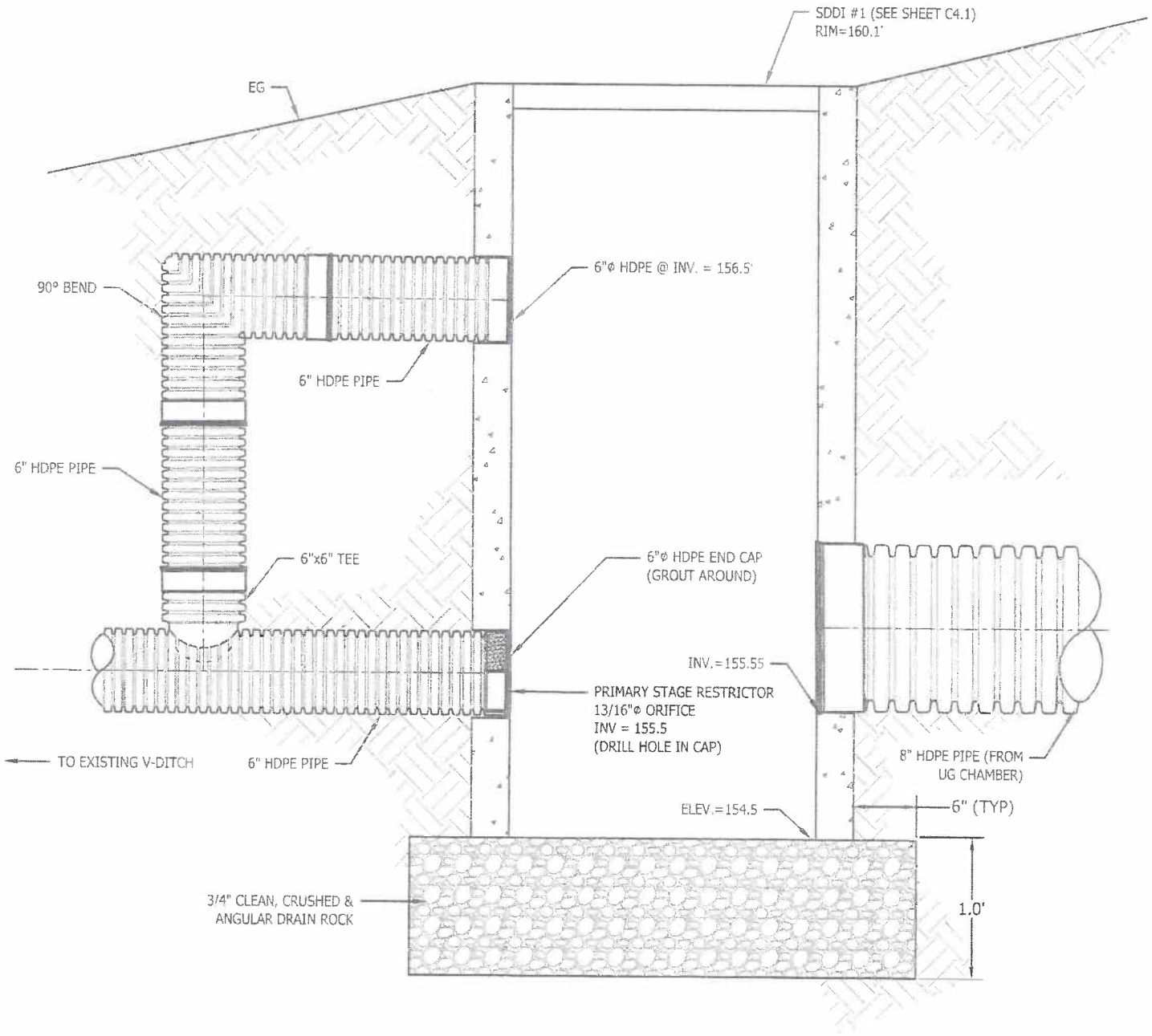
STOREMORE AMERICA APTOS ADD.
9687 SOQUEL DRIVE, APTOS, CA
APN 041-233-23 APP. 131046

Date: 05.09.13
Scale: NTS
Drawn: DD
Job: 338-20
Sheet:
FIG 3
Of Sheets



W:\338-20 STOREMORE APTOS\CAD\MODELS\SMA - APTOS BASE_.DWG

TRIBUTARY AREA A - RESTRICTOR DETAIL

STOREMORE AMERICA - APTOS ADDITION

9687 SOQUEL DRIVE, APTOS, CA

DATE: 05.9.13

DRAWN: DD

SCALE: NTS

SHEET: FIG 4

Project: STOREMORE - APTOS (A)

Chamber Model -	SC-740	
Units -	Imperial	Click Here for Metric
Number of chambers -	1	
Voids in the stone (porosity) -	35	%
Base of Stone Elevation -	154.50	ft
Amount of Stone Above Chambers -	6	in
Amount of Stone Below Chambers -	12	in
Area of system -	34	sf Min. Area - 34 sf min. area

☑ Include Perimeter Stone in Calculations

Height of System (inches)	Incremental Single Chamber (cubic feet)	Incremental Total Chamber (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch & St (cubic feet)	Cumulative Chamber (cubic feet)	Elevation (feet)
48	0.00	0.00	0.99	0.99	77.47	158.50
47	0.00	0.00	0.99	0.99	76.48	158.42
46	0.00	0.00	0.99	0.99	75.48	158.33
45	0.00	0.00	0.99	0.99	74.49	158.25
44	0.00	0.00	0.99	0.99	73.50	158.17
43	0.00	0.00	0.99	0.99	72.51	158.08
42	0.05	0.05	0.97	1.03	71.52	158.00
41	0.16	0.16	0.93	1.10	70.49	157.92
40	0.28	0.28	0.89	1.17	69.39	157.83
39	0.60	0.60	0.78	1.38	68.22	157.75
38	0.80	0.80	0.71	1.51	66.83	157.67
37	0.95	0.95	0.66	1.61	65.32	157.58
36	1.07	1.07	0.62	1.69	63.71	157.50
35	1.18	1.18	0.58	1.76	62.02	157.42
34	1.27	1.27	0.55	1.81	60.26	157.33
33	1.36	1.36	0.52	1.87	58.45	157.25
32	1.45	1.45	0.48	1.94	56.58	157.17
31	1.52	1.52	0.46	1.98	54.64	157.08
30	1.58	1.58	0.44	2.02	52.66	157.00
29	1.64	1.64	0.42	2.06	50.64	156.92
28	1.70	1.70	0.40	2.10	48.58	156.83
27	1.75	1.75	0.38	2.13	46.48	156.75
26	1.80	1.80	0.36	2.16	44.35	156.67
25	1.85	1.85	0.34	2.20	42.19	156.58
24	1.89	1.89	0.33	2.22	39.99	156.50
23	1.93	1.93	0.31	2.25	37.77	156.42
22	1.97	1.97	0.30	2.28	35.52	156.33
21	2.01	2.01	0.29	2.30	33.24	156.25
20	2.04	2.04	0.28	2.32	30.94	156.17
19	2.07	2.07	0.27	2.34	28.62	156.08
18	2.10	2.10	0.25	2.36	26.28	156.00
17	2.13	2.13	0.25	2.38	23.92	155.92
16	2.15	2.15	0.24	2.39	21.55	155.83
15	2.18	2.18	0.23	2.41	19.15	155.75
14	2.20	2.20	0.22	2.42	16.75	155.67
13	2.21	2.21	0.22	2.43	14.33	155.58
12	0.00	0.00	0.99	0.99	11.90	155.50
11	0.00	0.00	0.99	0.99	10.91	155.42
10	0.00	0.00	0.99	0.99	9.92	155.33
9	0.00	0.00	0.99	0.99	8.93	155.25
8	0.00	0.00	0.99	0.99	7.93	155.17
7	0.00	0.00	0.99	0.99	6.94	155.08
6	0.00	0.00	0.99	0.99	5.95	155.00
5	0.00	0.00	0.99	0.99	4.96	154.92
4	0.00	0.00	0.99	0.99	3.97	154.83
3	0.00	0.00	0.99	0.99	2.98	154.75
2	0.00	0.00	0.99	0.99	1.98	154.67
1	0.00	0.00	0.99	0.99	0.99	154.58

TRIBUTARY AREA "B"

10-year / 15-minute discharge calculation
2-year / 2-hour retention calculation
Restrictor sizing calculation
Figure 5 – Underground Chamber Cross Section
Figure 6 – Restrictor Detail
Incremental Storage Volume – by StormTech

PROJECT: SMA APTOS - APN: 041-233-23 App: 131046 TRIB. AREA B **Calc by:** DD **Date:** 5/6/2013

RUNOFF DETENTION BY THE MODIFIED RATIONAL METHOD

Data Entry: PRESS TAB & ENTER DESIGN VALUES SS Ver: 1.0

Site Location P60 Isopleth:	1.40		Fig. SWM-2 in County Design Criteria
Rational Coefficients Cpre:	0.25		See note # 2
Cpost:	0.90		See note # 2
Impervious Area:	7185	ft^2	See note # 2 and # 4

STRUCTURE DIMENSIONS FOR DETENTION

312 ft^3 storage volume calculated

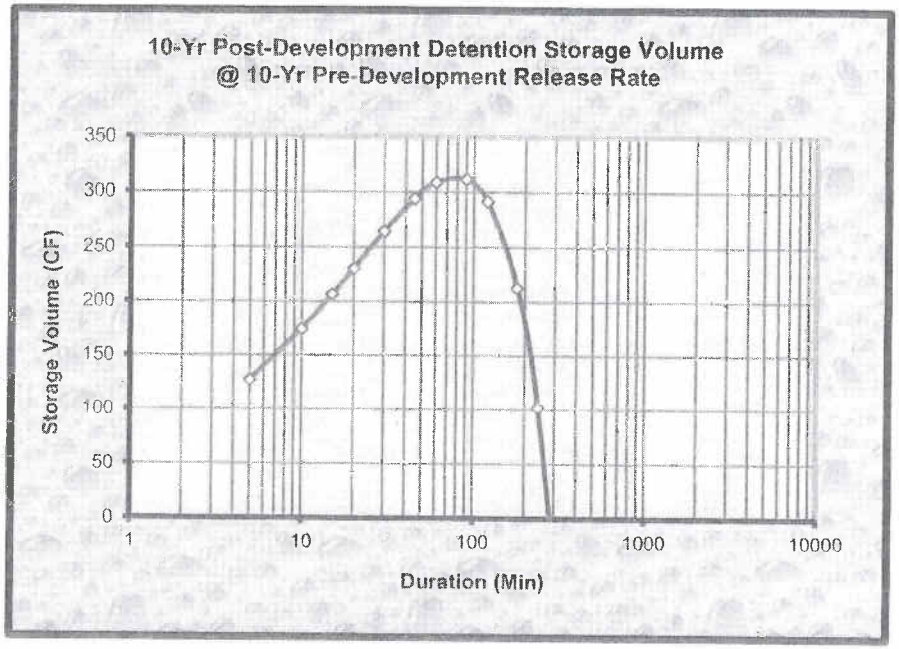
100 % void space assumed

312 ft^3 excavated volume needed

Structure	Length	Width*	Depth*
Ratios	50.00	2.66	2.66
Dimen. (ft)	**47.93**	**2.55**	**2.55**

*For pipe, use the square root of the sectional area

10 - YEAR DESIGN STORM				DETENTION @ 15 MIN.	
Storm Duration (min)	10 - Year Intensity (in/hr)	10 - Yr. Release Qpre (cfs)	10 - Year Qpost (cfs)	Detention Rate To Storage (cfs)	Specified Storage Volume (cf)
1440	0.23	0.010	0.035	-0.036	-3846
1200	0.25	0.011	0.038	-0.033	-2945
960	0.28	0.012	0.042	-0.029	-2078
720	0.32	0.013	0.047	-0.023	-1258
480	0.38	0.016	0.056	-0.014	-511
360	0.43	0.018	0.064	-0.007	-180
240	0.51	0.021	0.076	0.006	102
180	0.58	0.024	0.086	0.016	213
120	0.69	0.029	0.103	0.032	292
90	0.78	0.032	0.117	0.046	312
60	0.93	0.039	0.139	0.069	309
45	1.05	0.044	0.158	0.087	294
30	1.26	0.052	0.188	0.118	265
20	1.50	0.062	0.224	0.154	231
15	1.70	**0.071**	0.254	0.184	207
10	2.03	0.084	0.303	0.233	174
5	2.74	0.114	0.410	0.339	127



Notes & Limitations on Use:

1) The modified rational method, and therefore the standard calculations are applicable in watersheds up to 20 acres in size.
2) Required detention volume determinations shall be based on all net new impervious area both on and off-site, resulting from the proposed project. Pervious areas shall not be included in detention volume sizing; an exception may be made for incidental pervious areas less than 10% of the total area.
3) Gravel packed detention chambers shall specify on the plans, aggregate that is washed, angular, and uniformly graded (of single size), assuring void space not less than 35%.
4) A map showing boundaries of both regulated impervious areas and actual drainage areas routed to the hydraulic control structure of the detention facility is to be provided, clearly distinguishing between the two areas, and noting the square footage.
5) The EPA defines a class V injection well as any bored, drilled, or driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system. Such storm water drainage wells are "authorized by rule". For more information on these rules, contact the EPA. A web site link is provided from the County DPW Stormwater Management web page.
6) Refer to the County of Santa Cruz Design Criteria, for complete method criteria.

PROJECT: Storemore America - APN: 041-233-23 Application: 131046 - TRIBUTARY AREA B **Calc by:** DD **Date:** 5/6/2013

RUNOFF RETENTION BY THE STORAGE PERCOLATION METHOD

Data Entry: PRESS TAB KEY & ENTER DESIGN VALUES

Site Location P60 Isopleth:	1.40	Fig. SWM-2
Rational Coefficients Cpre:	0.25	
Cpost:	0.90	
Impervious Area:	7185	ft^2
Saturated Soil Permeability:	0.50	in/hr

Notes & Limitations on Use:

SS Ver:1.0

Saturated soil permeability values may be used conservatively from the USDA-NRCS soil survey, or use actual test values.

Site selection and design shall give proper consideration to the path for excess flows downstream of the designated retention area.

Retention site location on, or immediately above, slopes exceeding 15% will require consulting a geotechnical engineer.

Gravel packed structures shall use washed, angular, uniformly graded aggregate providing not less than 35% void space.

Refer to the County of Santa Cruz Design Criteria, Stormwater Management - Section H, for complete method criteria.

2 - YEAR DESIGN STORM

Storm Duration (min)	2 - Year Intensity (in/hr)	Qpre (cfs)	Qpost (cfs)
1440	0.15	0.006	0.022
1200	0.16	0.007	0.024
960	0.18	0.007	0.027
720	0.20	0.008	0.030
480	0.24	0.010	0.036
360	0.27	0.011	0.041
240	0.33	0.014	0.049
180	0.37	0.015	0.055
120	0.44	0.018	0.066
90	0.50	0.021	0.075
60	0.60	0.025	0.089
45	0.67	0.028	0.101
30	0.80	0.033	0.120
20	0.96	0.040	0.144
15	1.09	0.045	0.163
10	1.30	0.054	0.194
5	1.75	0.073	0.262

RETENTION @ 120 MIN.

Retention Rate To Storage (cfs)	Specified Retained Volume (cf)
0.004	-106
0.006	54
0.008	195
0.012	310
0.018	386
0.023	400
0.030	388
0.037	365
0.048	325
0.056	295
0.071	252
0.083	223
0.102	186
0.125	154
0.144	134
0.176	109
0.244	76

STRUCTURE DIMENSIONS FOR RETENTION

400	ft^3 storage volume calculated
35	% void space assumed
1142	ft^3 excavated volume needed

Structure Ratios	Length	Width*	Depth* #
	71.00	6.00	2.70
Dimen. (ft)	**70.84**	**5.99**	**2.69**

838	ft^2 internal surface area
587	ft^2 effective surface area
16.4	hrs estimated structure drainage time

* For pipe, use the square root of the sectional area.

\# If cell values displayed are corrupted, enter zero for depth, then re-enter a positive numeric value within allowed range.

STRUCTURE DIMENSIONS FOR DETENTION

349	ft^3 storage volume calculated
100	% void space assumed
349	ft^3 excavated volume needed

Structure Ratios	Length	Width*	Depth*
	52.00	2.66	2.66
Dimen. (ft)	**51.12**	**2.61**	**2.61**

DETENTION @ 60 MIN.

Detention Rate To Storage (cfs)	Specified Detained Volume (cf)
-0.002	-202
0.000	-35
0.002	114
0.006	239
0.011	327
0.016	349
0.024	347
0.031	330
0.041	297
0.050	270
0.064	232
0.076	206
0.096	172
0.119	143
0.138	124
0.169	102
0.238	71

C2G CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners

Project Name: **Storemore America - Aptos Addition (Tributary Area B)**
Job Number: 338-20
Date: May 9, 2013

RESTRICTOR SIZE, ORIFICE METHOD (Circular Opening)

1. HIGHWATER ELEVATION	142.7
2. INVERT ELEVATION	141.62
3. DIAMETER OF RESTRICTOR IN INCHES	1.75
4. CROSS SECTIONAL AREA, SQ. FT.	0.0167
5. HEAD, FT.	1.01
6. DISCHARGE COEFFICIENT	0.5
SQUARE EDGE 0.79 - 0.82	
ROUND EDGE 0.93 - 0.98	
SHARP EDGE 0.58 - 0.64	
PROJECTING 0.50	
7. DISCHARGE, Q, CFS	***0.067***
8. ALLOWABLE RELEASE RATE, Q, CFS	0.071

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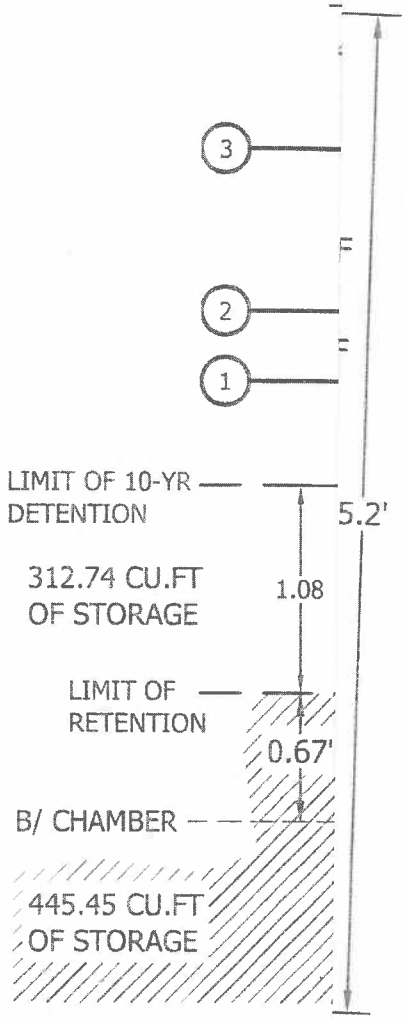

NOTES:

1. NEW STORM T
APPROVED BY
2. INSTALL 3/4" ACE
AGE IS 35%
3. INSTALL ADS
4. INSTALL IMPE

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TRIBUTARY AREA "B"
UNDERGROUND CHAMBER
CROSS SECTION

C2G /CIVIL CONSULTANTS GROUP, INC.
Engineers/Planners
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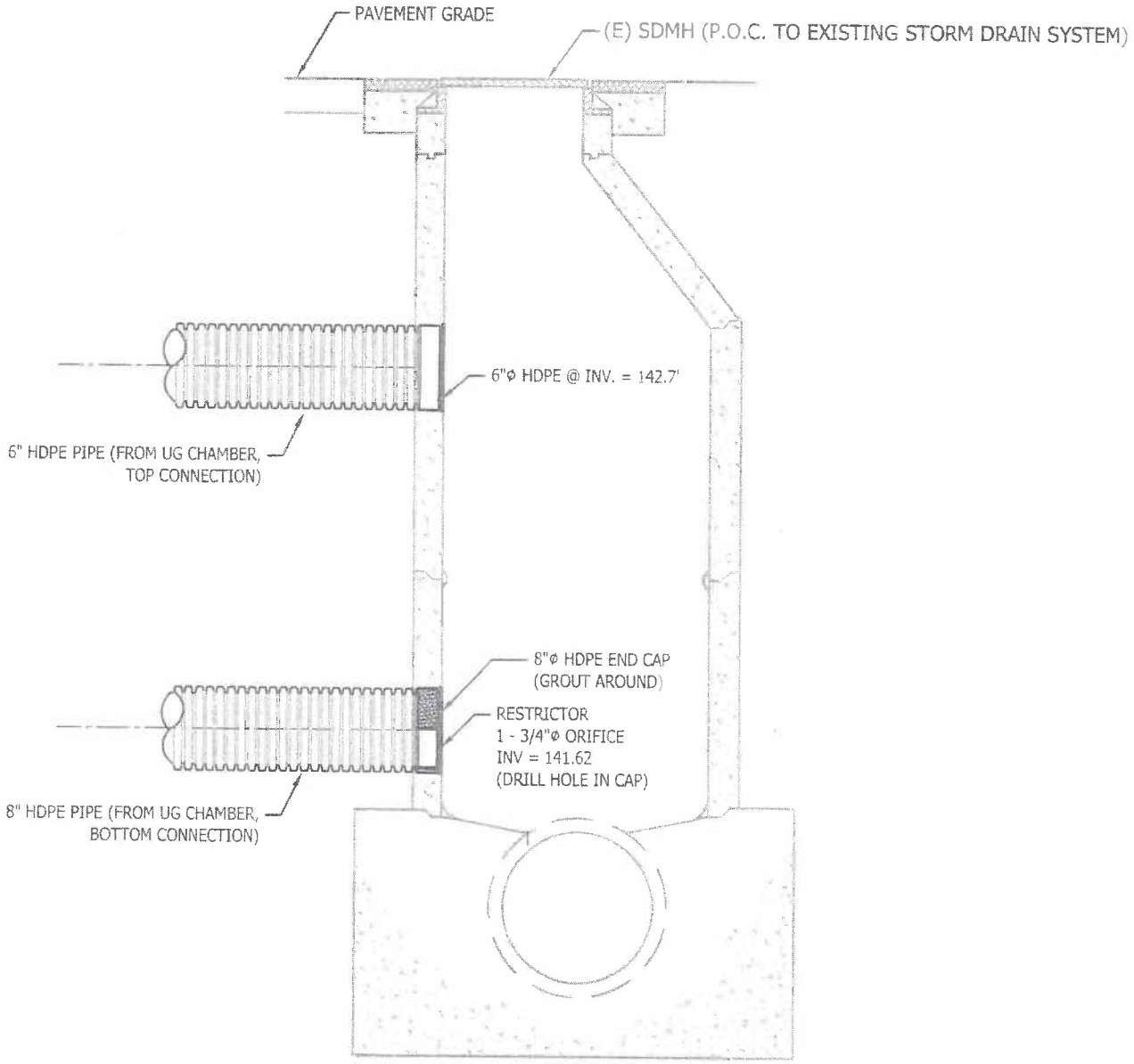
STOREMORE AMERICA APTOS ADD.
9687 SOQUEL DRIVE, APTOS, CA
APN 041-233-23 APP. 131046

Date: 05.09.13
Scale: NTS
Drawn: DD
Job: 338-20
Sheet
FIG 5
Of Sheets



W:\336-20 STOREMORE APTOS\CAD\MODELS\SMA - APTOS BASE_.DWG

C2G

TRIBUTARY AREA B - RESTRICTOR DETAIL

STOREMORE AMERICA - APTOS ADDITION

9687 SOQUEL DRIVE, APTOS, CA

DATE:	05.9.13
DRAWN:	DD
SCALE:	NTS
SHEET:	FIG 6

Project: STOREMORE - APTOS (B1)

Chamber Model -	SC-740	
Units -	Imperial	Click Here for Metric
Number of chambers -	1	
Voids in the stone (porosity) -	35	%
Base of Stone Elevation -	139.95	ft
Amount of Stone Above Chambers -	6	in
Amount of Stone Below Chambers -	18	in
Area of system -	34	sf Min. Area - 34 sf min area

☑ Include Perimeter Stone in Calculations

Height of System (inches)	Incremental Single Chamber (cubic feet)	Incremental Total Chamber (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch & St (cubic feet)	Cumulative Chamber (cubic feet)	Elevation (feet)
54	0.00	0.00	0.99	0.99	83.42	144.45
53	0.00	0.00	0.99	0.99	82.43	144.37
52	0.00	0.00	0.99	0.99	81.43	144.28
51	0.00	0.00	0.99	0.99	80.44	144.20
50	0.00	0.00	0.99	0.99	79.45	144.12
49	0.00	0.00	0.99	0.99	78.46	144.03
48	0.05	0.05	0.97	1.03	77.47	143.95
47	0.16	0.16	0.93	1.10	76.44	143.87
46	0.28	0.28	0.89	1.17	75.34	143.78
45	0.60	0.60	0.78	1.38	74.17	143.70
44	0.80	0.80	0.71	1.51	72.78	143.62
43	0.95	0.95	0.66	1.61	71.27	143.53
42	1.07	1.07	0.62	1.69	69.66	143.45
41	1.18	1.18	0.58	1.76	67.97	143.37
40	1.27	1.27	0.55	1.81	66.21	143.28
39	1.36	1.36	0.52	1.87	64.40	143.20
38	1.45	1.45	0.48	1.94	62.53	143.12
37	1.52	1.52	0.46	1.98	60.59	143.03
36	1.58	1.58	0.44	2.02	58.61	142.95
35	1.64	1.64	0.42	2.06	56.59	142.87
34	1.70	1.70	0.40	2.10	54.53	142.78
33	1.75	1.75	0.38	2.13	52.43	142.70
32	1.80	1.80	0.36	2.16	50.30	142.62
31	1.85	1.85	0.34	2.20	48.14	142.53
30	1.89	1.89	0.33	2.22	45.94	142.45
29	1.93	1.93	0.31	2.25	43.72	142.37
28	1.97	1.97	0.30	2.28	41.47	142.28
27	2.01	2.01	0.29	2.30	39.19	142.20
26	2.04	2.04	0.28	2.32	36.89	142.12
25	2.07	2.07	0.27	2.34	34.57	142.03
24	2.10	2.10	0.25	2.36	32.23	141.95
23	2.13	2.13	0.25	2.38	29.87	141.87
22	2.15	2.15	0.24	2.39	27.50	141.78
21	2.18	2.18	0.23	2.41	25.10	141.70
20	2.20	2.20	0.22	2.42	22.70	141.62
19	2.21	2.21	0.22	2.43	20.28	141.53
18	0.00	0.00	0.99	0.99	17.85	141.45
17	0.00	0.00	0.99	0.99	16.86	141.37
16	0.00	0.00	0.99	0.99	15.87	141.28
15	0.00	0.00	0.99	0.99	14.88	141.20
14	0.00	0.00	0.99	0.99	13.88	141.12
13	0.00	0.00	0.99	0.99	12.89	141.03
12	0.00	0.00	0.99	0.99	11.90	140.95
11	0.00	0.00	0.99	0.99	10.91	140.87
10	0.00	0.00	0.99	0.99	9.92	140.78
9	0.00	0.00	0.99	0.99	8.93	140.70
8	0.00	0.00	0.99	0.99	7.93	140.62
7	0.00	0.00	0.99	0.99	6.94	140.53
6	0.00	0.00	0.99	0.99	5.95	140.45
5	0.00	0.00	0.99	0.99	4.96	140.37
4	0.00	0.00	0.99	0.99	3.97	140.28
3	0.00	0.00	0.99	0.99	2.98	140.20
2	0.00	0.00	0.99	0.99	1.98	140.12
1	0.00	0.00	0.99	0.99	0.99	140.03

Project: STOREMORE - APTOS (B2)

StormTech
A division of DS

Chamber Model -	SC-740	
Units -	Imperial	Click Here for Metric
Number of chambers -	1	
Voids in the stone (porosity) -	35	%
Base of Stone Elevation -	139.65	ft
Amount of Stone Above Chambers -	6	in
Amount of Stone Below Chambers -	18	in
Area of system -	34	sf Min. Area - 34 sf min. area

☑ Include Perimeter Stone in Calculations

Height of System (inches)	Incremental Single Chamber (cubic feet)	Incremental Total Chamber (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch & St (cubic feet)	Cumulative Chamber (cubic feet)	Elevation (feet)
54	0.00	0.00	0.99	0.99	83.42	144.15
53	0.00	0.00	0.99	0.99	82.43	144.07
52	0.00	0.00	0.99	0.99	81.43	143.98
51	0.00	0.00	0.99	0.99	80.44	143.90
50	0.00	0.00	0.99	0.99	79.45	143.82
49	0.00	0.00	0.99	0.99	78.46	143.73
48	0.05	0.05	0.97	1.03	77.47	143.65
47	0.16	0.16	0.93	1.10	76.44	143.57
46	0.28	0.28	0.89	1.17	75.34	143.48
45	0.60	0.60	0.78	1.38	74.17	143.40
44	0.80	0.80	0.71	1.51	72.78	143.32
43	0.95	0.95	0.66	1.61	71.27	143.23
42	1.07	1.07	0.62	1.69	69.66	143.15
41	1.18	1.18	0.58	1.76	67.97	143.07
40	1.27	1.27	0.55	1.81	66.21	142.98
39	1.36	1.36	0.52	1.87	64.40	142.90
38	1.45	1.45	0.48	1.94	62.53	142.82
37	1.52	1.52	0.46	1.98	60.59	142.73
36	1.58	1.58	0.44	2.02	58.61	142.65
35	1.64	1.64	0.42	2.06	56.59	142.57
34	1.70	1.70	0.40	2.10	54.53	142.48
33	1.75	1.75	0.38	2.13	52.43	142.40
32	1.80	1.80	0.36	2.16	50.30	142.32
31	1.85	1.85	0.34	2.20	48.14	142.23
30	1.89	1.89	0.33	2.22	45.94	142.15
29	1.93	1.93	0.31	2.25	43.72	142.07
28	1.97	1.97	0.30	2.28	41.47	141.98
27	2.01	2.01	0.29	2.30	39.19	141.90
26	2.04	2.04	0.28	2.32	36.89	141.82
25	2.07	2.07	0.27	2.34	34.57	141.73
24	2.10	2.10	0.25	2.36	32.23	141.65
23	2.13	2.13	0.25	2.38	29.87	141.57
22	2.15	2.15	0.24	2.39	27.50	141.48
21	2.18	2.18	0.23	2.41	25.10	141.40
20	2.20	2.20	0.22	2.42	22.70	141.32
19	2.21	2.21	0.22	2.43	20.28	141.23
18	0.00	0.00	0.99	0.99	17.85	141.15
17	0.00	0.00	0.99	0.99	16.86	141.07
16	0.00	0.00	0.99	0.99	15.87	140.98
15	0.00	0.00	0.99	0.99	14.88	140.90
14	0.00	0.00	0.99	0.99	13.88	140.82
13	0.00	0.00	0.99	0.99	12.89	140.73
12	0.00	0.00	0.99	0.99	11.90	140.65
11	0.00	0.00	0.99	0.99	10.91	140.57
10	0.00	0.00	0.99	0.99	9.92	140.48
9	0.00	0.00	0.99	0.99	8.93	140.40
8	0.00	0.00	0.99	0.99	7.93	140.32
7	0.00	0.00	0.99	0.99	6.94	140.23
6	0.00	0.00	0.99	0.99	5.95	140.15
5	0.00	0.00	0.99	0.99	4.96	140.07
4	0.00	0.00	0.99	0.99	3.97	139.98
3	0.00	0.00	0.99	0.99	2.98	139.90
2	0.00	0.00	0.99	0.99	1.98	139.82
1	0.00	0.00	0.99	0.99	0.99	139.73

Hatch Mott MacDonald

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Gilroy, CA 95020
T 408-848-3122 www.hatchmott.com

May 10, 2013

SMA Aptos, LLC
c/o Meritage Real Estate Development Group, Inc.
213 Pacifica Boulevard #101
Watsonville, CA 95076

RE: Store More America Aptos Expansion – Parking Demand Analysis

Hatch Mott MacDonald (HMM) has prepared a parking demand analysis for the proposed expansion of the Store More America facility on Soquel Drive in Aptos, Santa Cruz County, California. The proposed project would add an additional 20,000 square feet of building space, over and above the approximately 32,000 square feet already in use.

A study of the existing and future parking demand at the project site found that the existing parking supply will be more than adequate to accommodate future parking demand from the proposed expansion. The following letter summarizes this study.

A. Project Background

The project site is located on Soquel Drive between Freedom Boulevard and Rio Del Mar Boulevard, as shown within **Exhibit 1**. The site currently houses approximately 32,000 gross square feet (27,500 net rentable square feet) of self-storage units, all contained within a single building. The site currently houses approximately 250 individual storage units of various sizes, ranging from 5 feet-by-10 feet to 10 feet-by-30 feet in dimension; the average unit size is approximately 110 square feet. Most units are only accessible from within the building, although eight units do have roll-up doors accessible from the outside of the building.

Exhibit 2 depicts the project site plan, including both the existing and future storage buildings. The proposed project would add an additional 20,000 gross square foot (16,000 net rentable square feet) of building space on the study property in a new building to be located north of the existing building. This new building would contain 150 new storage units of similar sizes to those in the current building.

Access to the site is via two driveways on Soquel Drive, which are connected by an internal roadway that surrounds the existing storage building on three sides. The roadway functions as a one-way loop – traffic enters the eastern driveway and traverses the site in a counter-clockwise direction. A total of 17 parking spaces are present on the site. Five of these spaces (four standard and one ADA[1] are located at the southeastern corner of the site, adjacent to the site office. The remaining parking spaces are in small clusters throughout the remainder of the project site. These spaces are only accessible to people renting storage spaces within the facility, who are given a code to open two gates that control access to the internal roadway. These gates are located just north of the office and at the western project driveway.

Note: No on-street parking spaces are present on Soquel Drive near the project site.

[1] "ADA" refers to Americans With Disabilities Act spaces, which are reserved for disables visitors.

B. Parking Occupancy Analysis

A parking occupancy study was conducted at the existing on-site parking spaces at the project site, in order to assess existing parking demand and for use in projecting future demand with implementation of the new storage unit building. The study was performed on Saturday, March 9, 2013 (between 3:00 – 6:15 PM) and Thursday, March 14, 2013 (between 9:00 AM – 1:00 PM and 3:00 – 6:15 PM). During the survey, the number of parked vehicles were tallied every fifteen minutes. **Appendix A** contains the results of the survey, which are summarized in **Table 1**.

Table 1 – Summary of Parking Occupancy Survey Results

Parking Demand			
Thursday, March 14, 2013		Saturday, March 9, 2013	
Maximum Demand	Average Demand	Maximum Demand	Average Demand
3 vehicles	1 vehicle	3 vehicles	1 vehicle

In summary, the highest parking demand was three vehicles, which was achieved at three different times during the survey – Thursday at 11:00 AM, Thursday at 5:00 PM, and Saturday at 4:30 PM. In each case, that level of demand only lasted for one count interval (i.e. 15 minutes). On average, the vehicle demand was approximately one vehicle for both the weekday and weekend surveys.

The results from the above parking survey were used to estimate the total site parking demand with implementation of the proposed new building. The calculation of this demand is summarized in **Table 2**.

Table 2 – Calculation of Site Parking Demand with Proposed Project

Total Existing Parking Spaces:	17 spaces
Existing Building Size:	27,500 net square feet
Existing Unit Occupancy:	94%
Proposed Building Size:	16,000 net square feet
Existing Maximum Parking Occupancy:	3 spaces (Weekday and Saturday)
Existing Parking Demand Rate:	0.109 spaces/1,000 net sq. ft.
Adjusted for Unit Occupancy:	0.116 spaces/1,000 net sq. ft.
Future Site Parking Demand:	6
Below Existing Parking Supply?	Yes

The projected parking demand for the site, including the proposed new self-storage building, is six spaces. This is well below the 17 existing spaces provided. Therefore, it is concluded that the existing site parking supply can fully accommodate the parking demand of the proposed building.

As a check upon the projected parking demand for the site, the calculated existing trip rates were compared to those included within the publication *Parking Generation*, 3rd Edition, published by the Institute of Transportation Engineers in 2004. This publication contains parking demand rates for various land uses that were derived from parking occupancy surveys conducted across the United States and Canada in the 1980s through early 2000s. The parking demand rate for a "mini-warehouse" (i.e. self-storage facility) – which represents the closest land use to the study project that is within *Parking Generation* – is 0.16 parked vehicles per 1,000 square feet of gross floor area (GFA)[2]. Using this rate, the total existing and proposed future site peak parking demand would be approximately nine spaces – again less than the 17 spaces currently provided on the project site. This further confirms the earlier conclusion that the existing parking supply can fully accommodate the parking demand of the proposed building.

C. CONCLUSION

In summary, a parking occupancy study found that the peak parking demand of the existing Store More America Aptos facility is three vehicles. With the addition of the proposed second self-storage building, peak parking demand would increase to six vehicles. This is less than the 17 parking spaces currently provided on site. Therefore, the current on-site parking supply is more than adequate for the projected future parking demand. This conclusion is confirmed by a published parking demand rate for this land use.

If you have any questions regarding the contents of this letter or need additional information, please do not hesitate to contact Jeff Waller. Thank you for the opportunity to assist you with this project.

Very truly yours,

Hatch Mott MacDonald

Keith B. Higgins, PE, TE
Vice President
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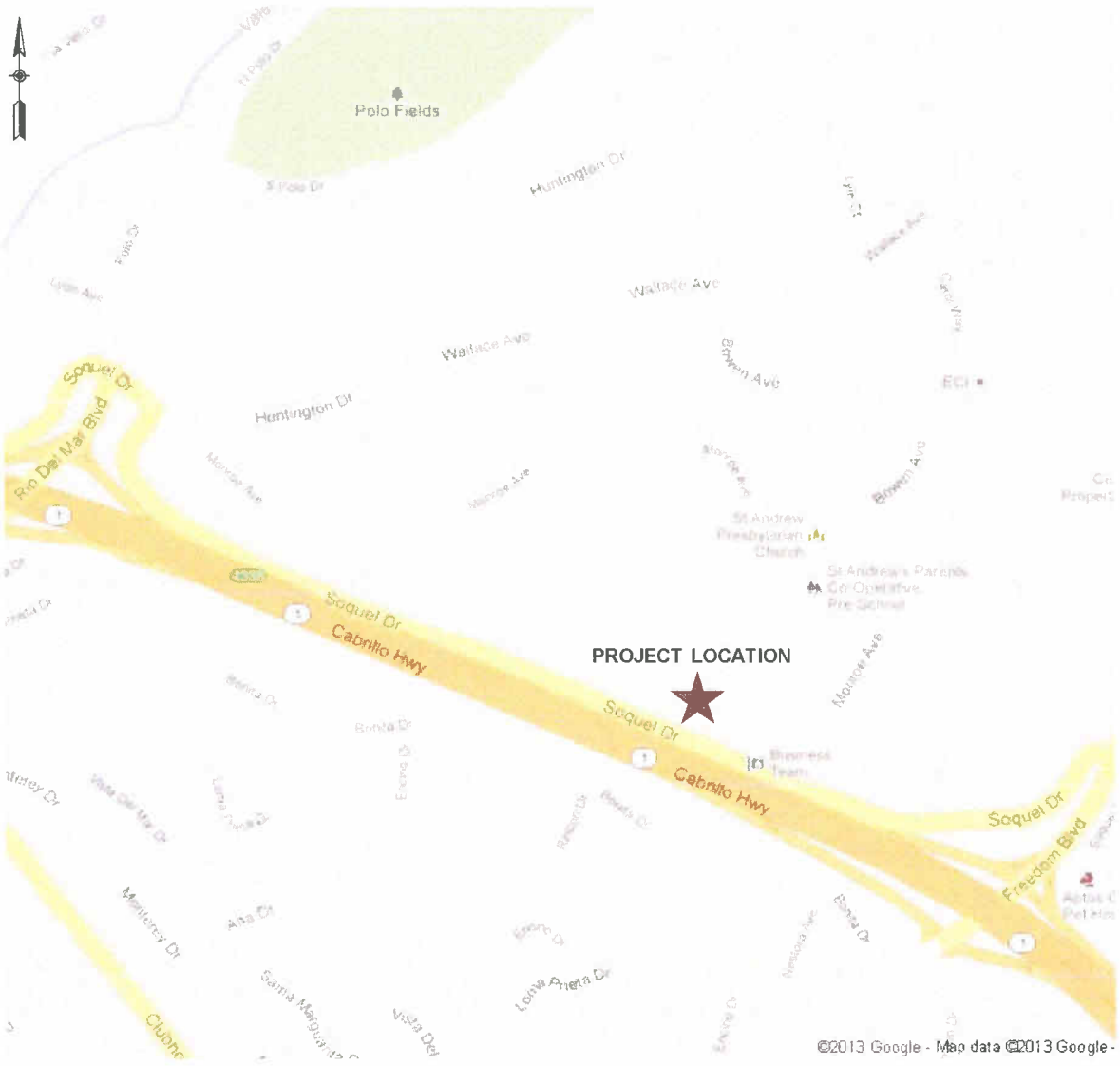
kbh:jmw

Enclosures

CC: Hugh Zike, Streeter Group

[2] See **Appendix B** for the source of this rate.

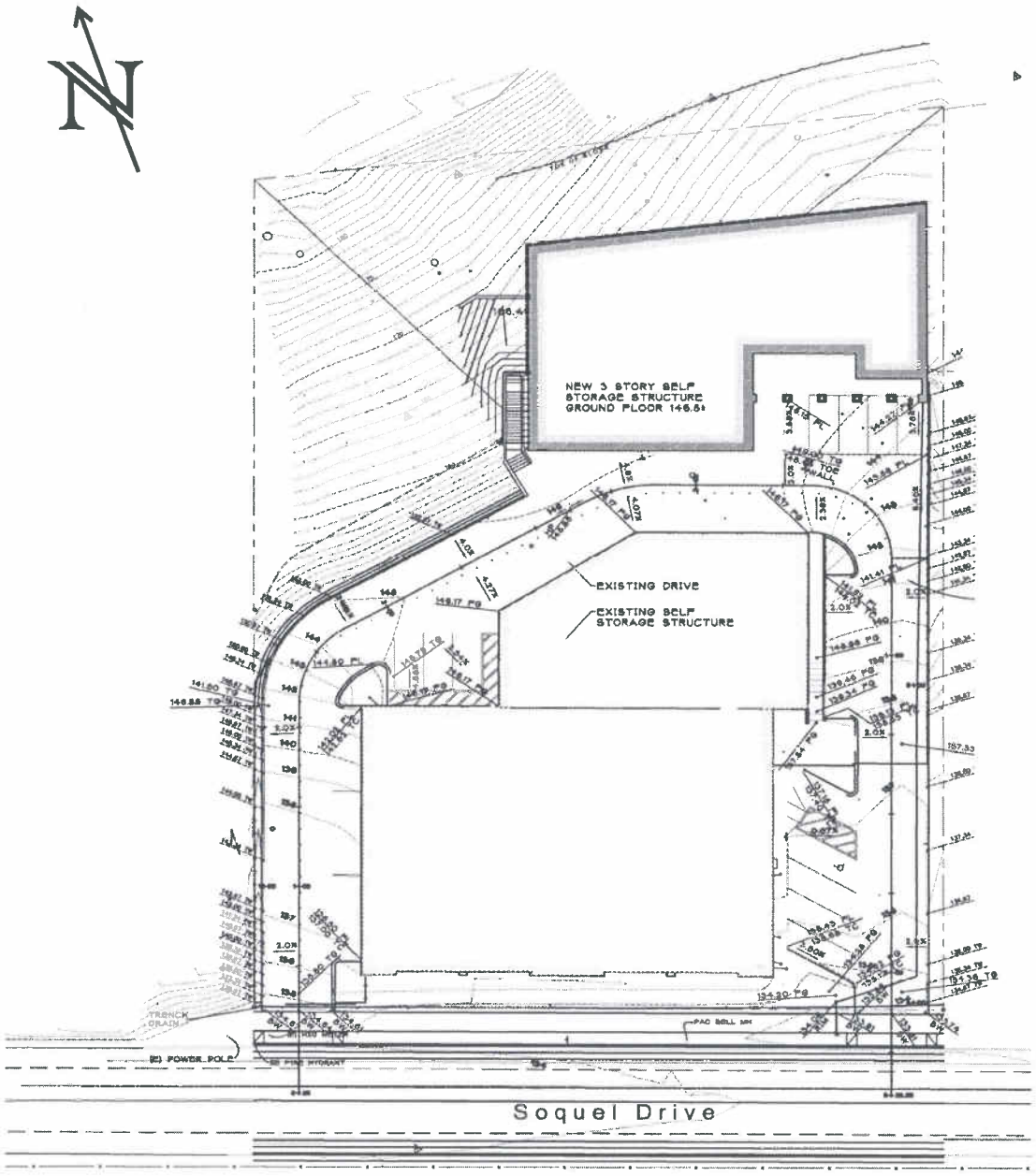


Map Source: Google Maps, 2013

Hatch Mott MacDonald

321157 Exhibits1.xlsx
Vicinity Map

EXHIBIT 1
Project Location Map



Source: Streeter Group, November 2012

EXHIBIT 2
Project Site Plan

Hatch Mott MacDonald

321157 Exhibits1.xlsx
Site Plan

APPENDIX A

PARKING OCCUPANCY SURVEY DATA

Parking Occupancy Study

Store More Americal Aptos Expansion
321157

Date: 3/14/2013

Time	Occupied Spaces
9:00 AM	0
9:15 AM	0
9:30 AM	1
9:45 AM	1
10:00 AM	1
10:15 AM	1
10:30 AM	1
10:45 AM	1
11:00 AM	**3**
11:15 AM	2
11:30 AM	1
11:45 AM	0
12:00 PM	0
12:15 PM	1
12:30 PM	1
12:45 PM	0
3:00 PM	1
3:15 PM	0
3:30 PM	0
3:45 PM	0
4:00 PM	0
4:15 PM	1
4:30 PM	0
4:45 PM	1
5:00 PM	**3**
5:15 PM	0
5:30 PM	2
5:45 PM	0
6:00 PM	0

Maximum Demand: 3 vehicles
Average Demand: 1 vehicle

Parking Occupancy Study

Store More Americal Aptos Expansion
321157

Date: 3/9/2013

Time	Occupied Spaces
3:00 PM	1
3:15 PM	0
3:30 PM	1
3:45 PM	0
4:00 PM	0
4:15 PM	1
4:30 PM	**3**
4:45 PM	1
5:00 PM	1
5:15 PM	1
5:30 PM	1
5:45 PM	0
6:00 PM	0

Maximum Demand: 3 vehicles
Average Demand: 1 vehicle

APPENDIX B

EXCERPTS FROM
PARKING GENERATION, 3RD EDITION,
INSTITUTE OF TRANSPORTATION
ENGINEERS, 2004

3rd Edition

Parking Generation

Author: Ransford S. McCourt, P.E., PTOE
Technical Editor: Kevin G. Hooper, P.E.

Institute of Transportation Engineers

Land Use: 151
Mini-Warehouse

Land Use Description

Mini-warehouses are buildings in which a number of units or vaults are rented for the storage of goods. Mini-warehouses are typically referred to as "self-storage" facilities. Each unit is physically separated from other units and access is usually provided through an overhead door or other common access point.

Database Description

Saturday parking demand was only provided for one site. The site was 172,300 sq. ft. GFA and the peak parking demand ratios were 0.06 vehicles per 1,000 sq. ft. GFA and 0.77 for vehicles per 100 storage units. The peak period of demand occurred between 4:00 and 5:00 p.m.

The following table presents a time-of-day distribution of parking demand for three study sites.

Based on Vehicles per 1,000 sq. ft. GFA	*Weekday Data*	
Hour Beginning	Percent of Peak Period	Number of Data Points*
12:00–4:00 a.m.	–	0
5:00 a.m.	–	0
6:00 a.m.	–	0
7:00 a.m.	31	3
8:00 a.m.	24	3
9:00 a.m.	59	3
10:00 a.m.	91	3
11:00 a.m.	100	3
12:00 p.m.	55	3
1:00 p.m.	45	3
2:00 p.m.	46	3
3:00 p.m.	40	2
4:00 p.m.	88	1
5:00 p.m.	27	1
6:00 p.m.	35	1
7:00 p.m.	27	1
8:00 p.m.	–	0
9:00 p.m.	–	0
10:00 p.m.	–	0
11:00 p.m.	–	0

* Subset of database

Study Sites/Years

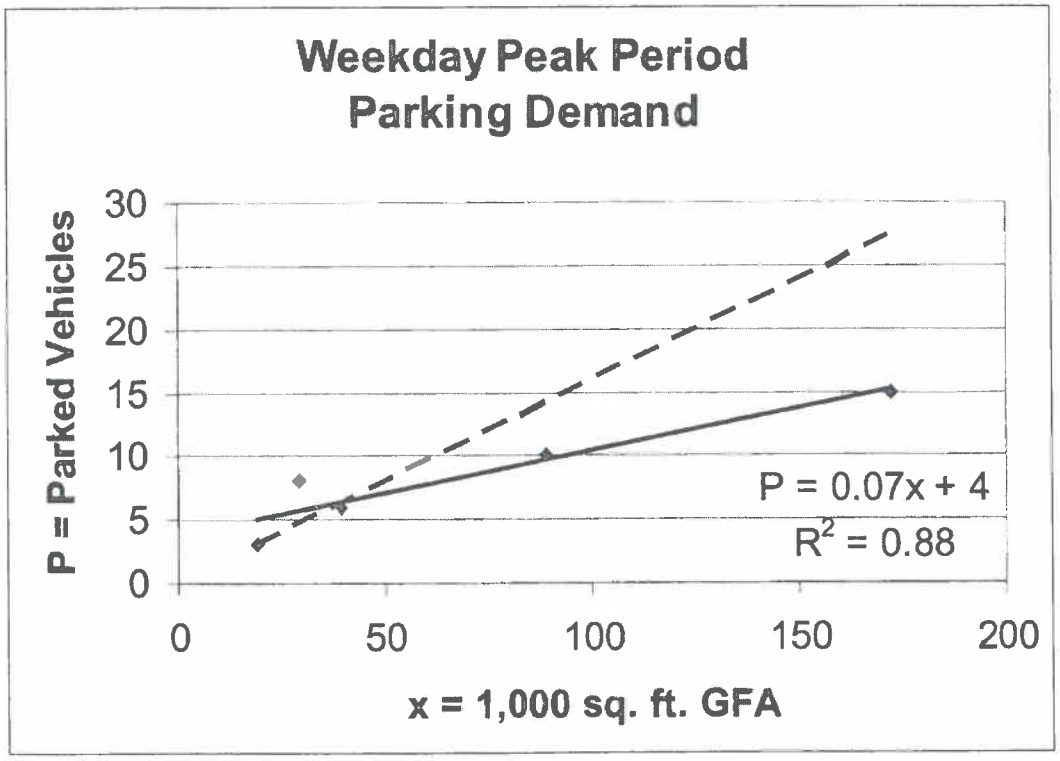
Canada:
Burnaby, BC (1991); Coquitlam, BC (1991); Richmond, BC (1991)

United States:
Santa Barbara, CA (1998)

Land Use: 151
Mini-Warehouse

Average Peak Period Parking Demand vs: 1,000 sq. ft. GFA
On a: Weekday

Statistic	Peak Period Demand
Peak Period	10:00 a.m.–12:00 p.m.; 4:00–5:00 p.m.
Number of Study Sites	5
Average Size of Study Sites	70,000 sq. ft. GFA
Average Peak Period Parking Demand	0.16 vehicles per 1,000 sq. ft. GFA
Standard Deviation	0.07
Coefficient of Variation	46%
Range	0.09–0.27 vehicles per 1,000 sq. ft. GFA
85th Percentile	0.20 vehicles per 1,000 sq. ft. GFA
33rd Percentile	0.13 vehicles per 1,000 sq. ft. GFA



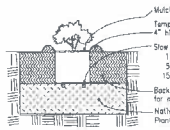
ATTACHMENT

Plant List

KEY	SIZE	BOTANICAL NAME	COMMON NAME
TALL SHRUBS			
RI	5	Rhus integrifolia	Lemonade Berry
EL	5	Elaeagnus pungens Fruitlandi	Silverberry
MEDIUM SHRUBS			
PY	5	Phormium Yellow Wave	Medium Flax
EP	5	Euryops pectinatus	Euryops Daisy
CC	5	Correa Carmine Bells	Australian Fuchsia

Plant Notes

1) Final construction plans to include irrigation plan that meets the requirements of the County and Soquel Creek Water District Landscape Water Conservation Rules.
2) Install a 3 inch layer of top dress mulch in all planting areas. Bid dark brown mahogany colored Mender Mulch from Vision Recycling in Watsonville. Pull mulch 3' from shrub and tree stems and trunks.

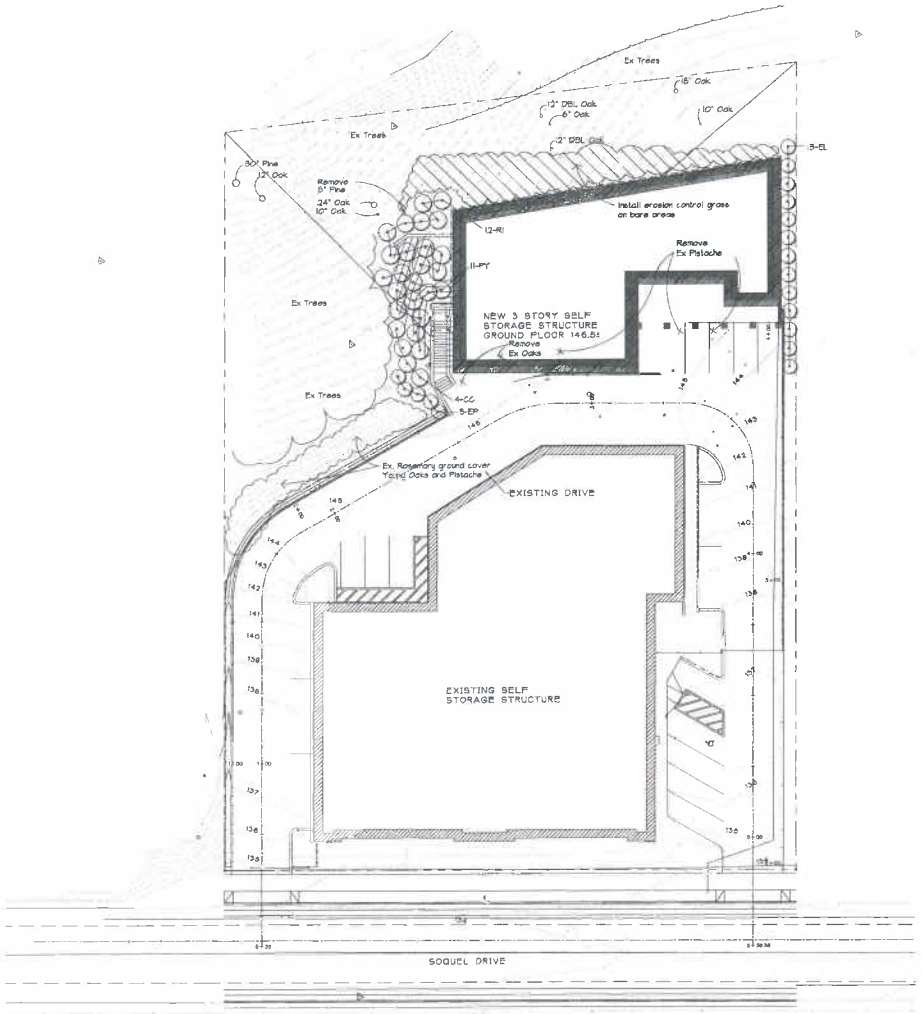


1) 8 – 12 hours before installation, water all plants while still in containers sufficiently to thoroughly wet root balls
2) Dig the plant hole at least 3 times the dia. and 2 times the depth of the plant container.
3) Replace the mixture in bottom half of hole and walk on it. The level of it should be such that when the plant is installed and settled it will be slightly above grade of existing soil. Fill hole with water.
4) Remove rootball carefully from container by tapping out, not pulling out by the stem. Scarify rootball walls in 3 vertical cuts and bottom in 1/2" deep, or by cutting roots of 1/2" or larger with shears. Do not pull roots apart.
5) Install fertilizer packets under rootball of plant. Set rootball on prepared surface and fill hole to 1/2 the depth, tamping soil around rootball. Fill hole with water.
6) Fill the remainder of the hole with backfill and pack it but do not tamp rootball.
7) Make the water basin.
8) Water shrub thoroughly within 1 hour of planting by filling the basin and allowing the water to percolate in, doing this 3 times or more until root ball and backfill is wet
9) Install mulch

Shrub Planting

No Scale

Don't use fertilizer with phosphorus on Phormiums or Correas



Planting Plan

1"=20'-0"

0' 20' 40'

NORTH

Revision

GREGORY LEWIS LANDSCAPE ARCHITECT #2178
738 Park Way Santa Cruz, CA 95060 (831) 426-4747
lewislandscape@sbcglobal.net

Store More America Aptos

9687 Soquel Dr., Aptos, CA APN 041-233-23

Date 5/1/13
Scale As Noted
Drawn Greg
Job
Sheet L1

1

Streeter Group, Inc.
Architecture, Structural Engineering

EXTERIOR COLOR SCHEDULE

METAL ROOF, FASCIA, SOFFIT, and GUTTERS
AEP Span DuraTech
Denali Green

METAL WALL PANELS and CUPOLAS
AEP Span DuraTech
Light Stone

METAL ROLL UP DOORS, DOOR TRIM, and WINDOW TRIM
Roll Right Industries
Desert Tan

MASONRY Ground Face
Calstone #100 Gray

MASONRY Split Face
Calstone #100 Gray

WINDOWS and LIGHT FIXTURES
Factory Finish White

STORE MORE AMERICA

2571 Main Street, Suite C, Soquel, CA 95073 Phone: (831) 477-1781 Fax: (831) 477-1751 WWW.STREETERGROUP.COM


TOOL
CRIB