Exhibit A

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DRAFT RESOLUTION

Before the RMA Zoning Administrator
in and for the County of Monterey, State of California

In the matter of the application of:
KHALSA DEVELOPMENT (PLN190428)
RESOLUTION NO.
Resolution by the Monterey Zoning Administrator:

1) Finding the project involves the construction of a single family dwelling in a residential area, which qualifies as a Class 3 Categorical Exemption pursuant to Section 15303(a) of the CEQA Guidelines; and there are no exceptions pursuant to Section 15300.2; and
2) Approving a Design Approval for the construction of a 1,529 square foot two-story house with a 44 square foot porch and an attached 432 square foot two-car garage.

[PLN190428 Khalsa Development, 11434 Del Monte Ave., Castroville, North County Area Plan, Castroville Community Plan (APN: 030-321-030-000)]

The Khalsa Development application (PLN190428) came for a public hearing before the Zoning Administrator on June 25, 2020. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, the Zoning Administrator finds and decides as follows:

FINDINGS AND EVIDENCE

1. **FINDING:** **CONSISTENCY/DESIGN –** The Project is consistent with the applicable plans and policies which designate this area as appropriate for development, and is consistent with design standards for the area.

EVIDENCE:

a) During the course of review of this application, the project has been reviewed for consistency with the text, policies, and regulations in:
   - the 2010 Monterey County General Plan;
   - Castroville Community Plan;
   - Monterey County Zoning Ordinance (Title 21);

   Communications were received from the public during the course of review of the project indicating concerns and potential inconsistency with the Planned Unit Development of which this project is part, but research and communication with the agent relieved those concerns. *See Evidence h below.* No conflicts were found to exist.

b) Allowed Use. The property is located at 11434 Del Monte Avenue, Castroville (Assessor's Parcel Number 030-321-030-000), Castroville Community Plan. The proposed project is located on a 0.08 acre (3,438 square feet) vacant lot that is zoned residential.

c) Lot Legality. The subject parcel is located in a residential subdivision created through the Sat Kirtan Singh/Kaur Khalsa Villa de Castro

Planned Unit Development (Resolution PC-00012). It is identified as Lot 9 on the Final Map, recorded December 19, 2001. Therefore, the subject parcel is a legal lot of record.

d) Design. Pursuant to the Castroville Community Plan, the Project site and surrounding area are designated as a Design Control District (D District), which regulates the location, size, configuration, materials, and colors of structures and fences to assure the protection of the public viewshed and neighborhood character. Therefore, a Design Approval is required for the proposed development and the criteria to grant a Design Approval are met in this case. See Evidences e, f, g, and h below.

e) The applicant proposes a two-story single family dwelling with a small porch and an attached two-car garage that incorporates architectural aesthetics in the Monterey style. The proposed architectural style is one of the preferred styles of the Castroville Community Plan Design Guidelines and is consistent with the surrounding residential neighborhood character.

f) Material and Color Finishes. The applicant proposes exterior colors and materials that are consistent with the residential setting. The primary colors and materials include tan stucco body, light beige fascia and gutter trim, and brown asphalt shingles. The proposed exterior finishes are consistent with the surrounding residential neighborhood character.

g) Visual Resources. Based on the evidence described above, the proposed structures and uses are consistent with the surrounding residential neighborhood character (i.e., structural design features, colors, and material finishes). As proposed, the project is consistent with neighborhood character, and assures visual integrity.

(h) Review of Development Standards. The project meets applicable development standards in the Castroville Community Plan. The parcel is currently a vacant lot, zoned Medium Density Residential-Castroville (MDR-C) and is considered an "infill site." The Castroville Community Plan requires a minimum lot size of 2,500 square feet for small lot single family; the subject parcel is 3,438 square feet in size. Setbacks for small lots are 15 feet front, as low as zero, provided that the standards for minimum distance between buildings on adjacent properties are maintained on the sides, and 10 feet rear. The proposed project is planned to have 22 feet front, 5 feet and 7 feet, 9 inches sides, and 10 feet 4 inches rear setbacks. The minimum distance between buildings on adjacent properties is met. The height limit is 30 feet, and the proposed development is 25 feet in height. The allowable lot coverage for small lots is 35%, and the project is 32%. The project meets Title 21 parking standards by planning two covered parking spaces. The plans include placement and type of lighting that meets the Castroville Community Plan's requirements.

The project was referred to the Castroville Land Use Advisory Committee (LUAC) for review on May 4, 2020. The members present voted to support design approval (3-0), 2 absent. A member of the public who wished to attend the LUAC meeting wrote a letter of concern about its day-of cancellation (due to County Administrator

instructions in response to novel coronavirus concerns) and their difficulty in finding subsequent online LUAC meeting posting. The letter of concern also highlighted two issues that they were going to speak to the LUAC about: the internal road in the PUD is unpaved, and a house on the opposite side of the PUD from the proposed project is perceived to be overcrowded and the occupants parking illegally. RMA-Planning staff and the project agent addressed these concerns with the member of the public.
The application, project plans, letter of concern and follow up email, and related support materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development found in Project File PLN190428.

2. **FINDING:** **SITE SUITABILITY –** The site is physically suitable for the use proposed.

EVIDENCE:

a) In March, 2000, the Planning Commission recommended Board of Supervisors approval on the re-subdivision of five parcels bounded on the west by Geil Street, the south by Koester Street, and the east side by Del Monte Street, resulting in fourteen detached, single-family lots. The project was processed for environmental assessment under CEQA with an Initial Study and Negative Declaration. RMA Planning identified potential impacts to archaeological resources. "Preliminary Cultural Resources Reconnaissance of Assessors Parcel Number 030-227004, 05, 06, 07 and 08, in Castroville, Monterey County, California," November 12, 1986 (LIB040418) by R. Paul Hampson and Gary S. Breschini Registered Professional Archaeologists with SOPA, concluded that there were no archaeological or cultural constraints that would indicate the site was not suitable for development. The subdivision was consistent with the 1982 Monterey County General Plan, which identified Castroville as a priority area for growth (1982 GP Appendix A, No. 4).

b) Specific to the 11434 Del Monte Avenue lot, which is the subject site for this proposed development, a Geotechnical Report was prepared November 12, 2019 by Grice Engineering, Inc., Salinas CA. The report recommended loose near surface soils be taken into account druing design and construcition of the proposed residence. It concluded that there were no physical or environmental constraints that would indicate the site was not suitable for development. The report is attached to this resolution.

c) The project planner conducted a virtual site inspection on January 28, 2020 to verify that the project on the subject parcel conforms to the plans listed above and to verify that the site is suitable for this use.

d) The application, plans, and supporting materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development are found in Project File PLN190428.

3. **FINDING:** **HEALTH AND SAFETY –** Construction of this single family dwelling and garage will not, under the circumstances of this particular case, be detrimental to the health, safety, peace, morals, comfort, and general welfare of persons residing or working in the neighborhood of such proposed use, or be detrimental or injurious to

property and improvements in the neighborhood or to the general welfare of the County.

EVIDENCE:

a) The project was reviewed by the RMA-Planning. The project planner has recommended four conditions to ensure that the project will not have an adverse effect on the health, safety, and welfare of persons either residing or working in the neighborhood.

b) The project has sewer and water lines onsite, with service provided by Castroville Community Service District.

c) The application, project plans, and related support materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development are found in Project File PLN190428.

4. **FINDING:** **NO VIOLATIONS -** The subject property is in compliance with all rules and regulations pertaining to zoning uses, subdivision, and any other applicable provisions of the County's zoning ordinance. No violations exist on the property.

EVIDENCE:

a) Staff reviewed Monterey County RMA-Planning and RMA-Building Services records and is not aware of any violations existing on subject property.

b) See preceding and following findings and evidence.

5. **FINDING** **CEQA (Exempt): -** The project is a single family dwelling, which is categorically exempt from environmental review, and no unusual circumstances were identified to exist for the proposed project.

EVIDENCE:

a) California Environmental Quality Act (CEQA) Guidelines Section 15303(a), categorically exempts the construction of one single family dwelling and accessory structures in a residential area.

b) The proposed project is to construct a 1,529 square foot two-story house with a 44 square foot porch and an attached 432 square foot two-car garage. Therefore, the project qualifies for a Class 3 categorical exemption pursuant to Sections 15303(a) of the CEQA guidelines.

c) None of the exceptions under CEQA Guidelines Section 15300.2 apply to this project. The project does not involve a designated historical resource, a hazardous waste site, development located near or within view of a scenic highway, unusual circumstances that would result in a significant effect or development that would result in a cumulative significant impact. No adverse environmental effects were identified during staff review of the development application.

d) The application, project plans, and related support materials submitted by the project applicant to Monterey County RMA-Planning for the proposed development found in Project File PLN190428.

6. **FINDING:** **APPEALABILITY -** The decision on this project may be appealed to the Planning Commission.

EVIDENCE: Section 21.80.040.A of the Monterey County Zoning Ordinance (Planning Commission).

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Zoning Administrator does hereby:

1) Find the project includes construction of a single family dwelling in a residential area that qualifies for a Class 3 Categorical Exemption pursuant to Section 15303(a) of the CEQA Guidelines; and there are no exceptions pursuant to Section 15300.2; and
2) Approve a Design Approval for the construction of a construction of a 1,529 square foot two-story house with a 44 square foot porch and an attached 432 square foot two-car garage, in general conformance with the attached plans and subject to the attached conditions which are both attached hereto and incorporated herein by reference.

PASSED AND ADOPTED this 25th day of June, 2020.

_____

Mike Novo, Zoning Administrator

COPY OF THIS DECISION MAILED TO APPLICANT ON _____.

THIS APPLICATION IS APPEALABLE TO THE BOARD OF SUPERVISORS.

IF ANYONE WISHES TO APPEAL THIS DECISION, AN APPEAL FORM MUST BE COMPLETED AND SUBMITTED TO THE CLERK TO THE BOARD ALONG WITH THE APPROPRIATE FILING FEE ON OR BEFORE _____.

This decision, if this is the final administrative decision, is subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6. Any Petition for Writ of Mandate must be filed with the Court no later than the 90th day following the date on which this decision becomes final.

This permit expires 3 year after the above date of granting thereof unless construction or use is started
within this period.

Monterey County RMA Planning

DRAFT Conditions of Approval/Implementation Plan/Mitigation Monitoring and Reporting Plan

PLN190428

1. PD001 - SPECIFIC USES ONLY

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: This Design Approval permit (PLN190428) allows the construction of a two-story single family dwelling with a small porch and an attached two-car garage. The property is located at 11434 Del Monte Avenue, Castroville (Assessor's Parcel Number 030-321-030-000), Castroville Community Plan, North County Area Plan. This permit was approved in accordance with County ordinances and land use regulations subject to the terms and conditions described in the project file. Neither the uses nor the construction allowed by this permit shall commence unless and until all of the conditions of this permit are met to the satisfaction of the RMA Chief of Planning. Any use or construction not in substantial conformance with the terms and conditions of this permit is a violation of County regulations and may result in modification or revocation of this permit and subsequent legal action. No use or construction other than that specified by this permit is allowed unless additional permits are approved by the appropriate authorities. To the extent that the County has delegated any condition compliance or mitigation monitoring to the Monterey County Water Resources Agency, the Water Resources Agency shall provide all information requested by the County and the County shall bear ultimate responsibility to ensure that conditions and mitigation measures are properly fulfilled. (RMA - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to conditions and uses specified in the permit on an ongoing basis unless otherwise stated.

2. PD002 - NOTICE PERMIT APPROVAL

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a Permit Approval Notice. This notice shall state:
"A Design Approval (Resolution Number _____) was approved by the Monterey County Zoning Administrator for Assessor's Parcel Number 030-321-030-000 on June 25, 2020. The permit was granted subject to 4 conditions of approval which run with the land. A copy of the permit is on file with Monterey County RMA - Planning."

Proof of recordation of this notice shall be furnished to the RMA Chief of Planning prior to issuance of grading and building permits, Certificates of Compliance, or commencement of use, whichever occurs first and as applicable. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading and building permits, certificates of compliance, or commencement of use, whichever occurs first and as applicable, the Owner/Applicant shall provide proof of recordation of this notice to the RMA - Planning.

3. PD003(A) - CULTURAL RESOURCES NEGATIVE ARCHAEOLOGICAL REPORT

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: If, during the course of construction, cultural, archaeological, historical or paleontological resources are uncovered at the site (surface or subsurface resources) work shall be halted immediately within 50 meters (165 feet) of the find until a qualified professional archaeologist can evaluate it. Monterey County RMA - Planning and a qualified archaeologist (i.e., an archaeologist registered with the Register of Professional Archaeologists) shall be immediately contacted by the responsible individual present on-site. When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for recovery.
(RMA - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to this condition on an on-going basis.

Prior to the issuance of grading or building permits and/or prior to the recordation of the final/parcel map, whichever occurs first, the Owner/Applicant shall include requirements of this condition as a note on all grading and building plans. The note shall state "Stop work within 50 meters (165 feet) of uncovered resource and contact Monterey County RMA - Planning and a qualified archaeologist immediately if cultural, archaeological, historical or paleontological resources are uncovered."

When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for the discovery.

4. PD012(G) - LANDSCAPE PLAN & MAINTENANCE (OTHER)

Responsible Department: RMA-Planning

Condition/Mitigation Monitoring Measure: The site shall be landscaped. Prior to the issuance of building permits, three (3) copies of a landscaping plan shall be submitted to the RMA Chief of Planning. A landscape plan review fee is required for this project. Fees shall be paid at the time of landscape plan submittal. The landscaping plan shall be in sufficient detail to identify the location, species, and size of the proposed landscaping and shall include an irrigation plan. The landscaping shall be installed and inspected prior to occupancy. All landscaped areas and/or fences shall be continuously maintained by the applicant and all plant material shall be continuously maintained in a litter-free, weed-free, healthy, growing condition. (RMA - Planning)

Compliance or Monitoring Action to be Performed: Prior to issuance of building permits, the Owner/Applicant/Licensed Landscape Contractor/Licensed Landscape Architect shall submit landscape plans and contractor's estimate to RMA - Planning for review and approval. Landscaping plans shall include the recommendations from the Forest Management Plan or Biological Survey as applicable. All landscape plans shall be signed and stamped by licensed professional under the following statement, "I certify that this landscaping and irrigation plan complies with all Monterey County landscaping requirements including use of native, drought-tolerant, non-invasive species; limited turf; and low-flow, water conserving irrigation fixtures."

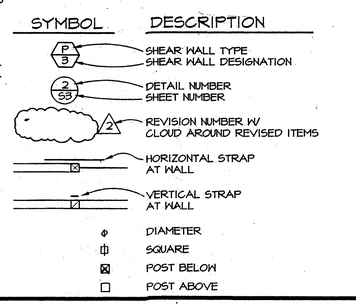
Prior to occupancy, the Owner/Applicant/Licensed Landscape Contractor/Licensed Landscape Architect shall ensure that the landscaping shall be installed and inspected.

On an on-going basis, all landscaped areas and fences shall be continuously maintained by the Owner/Applicant; all plant material shall be continuously maintained in a litter-free, weed-free, healthy, growing condition.

ABBREVIATIONS

GALVANIZED IRON	GI	ACOUSTIC	ACST
GLUE LAMINATED BEAM	GLB	ADAPTER	ADPTR
GLASS	GL	ADDENDUM, ADDITION (AL)	ADD
GRADE	GR	ADJACENT	ADJ
GROUND	GRD	AGGREGATE	AGG
GYPSUM	GYP	AIR CONDITION(ED)	A/C
HEADER	HDR	ALARM	ALM
HEATER	HTR	ALIGNMENT	ALIGN
HEATING, VENTILATING AND AIR CONDITIONING	HVAC	ALTERNATE	ALT
HOLDOWN	HD	ALUMINUM	ALUM
HORIZONTAL	HORIZ	AMERICAN WIRE GAGE	AWG
INCLUDE(D), INCLUSIVE	INCL	AMPERAGE (CURRENT)	A
INSIDE DIAMETER, INTERNAL DIAMETER	ID	ANGLE (STRUCTURAL)	L
JOINT	JNT	APARTMENT	APT
JOIST	JST	APPENDIX	APPX
JUNCTION BOX	JB	APPROXIMATE	APPROX
KILN-DRIED	KD	ARCHITECTURE, ARCHITECTURAL	ARCH
LAVATORY	LAV	ASPHALT	ASPH
LINEAR, LINEAL	LIN	ASSEMBLY	ASSY
LIVE LOAD	LL	ASSISTANT	ASST
MANHOLE	MH	AVENUE	AVE
MAXIMUM	MAX	AVERAGE	AVG
MECHANICAL	MECH	BALCONY	BALC
MEMBER	MBR	BASE PLATE	BP
METAL	MTL	BEAM	BM
MICRO LAM BEAM	M.L.	BEARING	BRG
MINIMUM	MIN	BELOW	BLW
MISCELLANEOUS	MISC	BENCHMARK	BM
MOUNTING	MTG	BETWEEN	BETW
NATIONAL ELECTRICAL CODE	NEC	BIRMINGHAM WIRE GAGE	BWG
NATURAL	NAT	BOARD	BD
NECESSARY	NEC	BOTTOM	BOT
NEW	(N)	BOTTOM CHORD	BC
NOMINAL	NOM	BUILDING	BLDG
NORTH	N	CABINET	CAB
NOT TO SCALE	NTS	CALIFORNIA MECHANICAL CODE	CMC
NOT APPLICABLE	N/A	CALIFORNIA ELECTRICAL CODE	CEC
OBSCURE	OBSC	CALIFORNIA BUILDING CODE	CBC
ON CENTER	OC	CALIFORNIA PLUMBING CODE	CPC
OPENING	OPG	CANTILEVER	CANTIL
OUTSIDE DIAMETER	OD	CAPACITY	CAP
OVERALL	OA	CAST IRON PIPE	CIP
OVERHEAD	OH	CATALOG	CAT
PARALAM	P.S.L.	CAULKING	CLKG
PENNY (NAILS, ETC)	d	CEILING	CLG
PERFORATE(D)	PERF	CEMENT	CEM
PERPENDICULAR	PERP	CENTER	CTR
PHASE	PH	CENTERLINE	CL
PLATE	PL	CHECK VALVE	CV
PLYWOOD	PLY	CIRCLE	CIR
POINT	PT	CIRCUIT	CKT
POLYVINYL CHLORIDE	PVC	CIRCULAR	CIRC
PORCELAIN	PORC	CLEANOUT	CO
POWER	PWR		
PREFABRICATED	PREFAB	CLEAR	CLR
PROPERTY	PROP	COATED	CTD
PROPERTY LINE	PL	COLD WATER	CW
PUBLIC ADDRESS	PA	COLUMN	COL
PUSH BUTTON	PB	COMPOSITION	COMP
QUANTITY	QTY	CONCRETE	CONC
RECESSED	REC	CONNECT, CONNECTOR	CONN
RADIUS	R	CONSTRUCTION	CONST
REFRIGERATE, REFRIGERATOR	REF	CONTINUE, CONTINUOUS	CONT
REGISTER	REG	CONTRACT, CONTRACTOR	CONTR
REINFORCE	REINF	COUNTERSINK	CSK
REMOVE AND REPLACE	R&R	CUBIC	CU
REQUIRED	REQD	DEAD LOAD	DL
RIGHT-OF-WAY	ROW	DEGREE	DEG
ROOM	RM	DESIGN(ED)	DSGN
ROUGH	RGH	DETAIL	DET
ROUND	RND	DIAGONAL	DIAG
SCHEDULE	SCHED	DIAMETER	DIA
SINGLE HUNG (WINDOW)	SH	DIMENSION	DIM
SERVICE	SVC	DISHWASHER	DW
SHEATHING	SHTG	DOOR	DR
SIMILAR	SIM	DOUBLE	DBL
SINGLE	SGL	DOUBLE-HUNG (WINDOW)	DH
SINGLE-PHASE	1PH	DOWN	DN
SOUND-TRANSMISSION CLASS	STC	DOWNSPOUT	DS
SPEAKER	SPKR	EACH	EA
SPECIFICATION	SPEC	ELECTRIC, ELECTRICAL	ELEC
SQUARE	SQ	ELEVATION	EL
STAINLESS STEEL	SS	ENGINEER	ENGR
STANDARD	STD	EQUAL	EQ
STEEL	STL	EQUIPMENT	EQUIP
STRUCTURAL	STR	EXCAVATE	EXC
STRUCTURE	STRUCT	EXHAUST	EXH
SURFACE	SURF	EXISTING	(E)
SURFACED OR DRESSED FOUR SIDES	S4S	EXPANSION JOINT	EXP JT (EJ)
SURFACES OR DRESSED ONE SIDE	S1S	EXPOSED	EXP
SURFACED OR DRESSED ONE SIDE AND ONE EDGE	S1S1E	EXTERIOR	EXT
SURFACED OR DRESSED TWO SIDES	S2S	EXTINGUISHER	EXT
SYSTEM	SYS	EXTRA HEAVY	XHVY
TELEPHONE	TELE	EXTRA STRONG	XSTR
TELEVISION	TV	EXTRUDE(D)	EXTD
TEMPORARY	TEMP	EXHAUST FAN	EF
TEMPERED GLASS	TEMP	FABRICATE	FAB
THERMOSTAT	T-STAT	FIBERGLASS REINFORCED PLASTICS	FRP
THREE-PHASE	3PH	FIGURE	FIG
TOILET PAPER HOLDER	TP	FINISHED FLOOR LEVEL	FF
TONGUE AND GROOVE	T&G	FIREPROOF	FP
TOP AND BOTTOM	T&B	FLOOR	FL
TOP CHORD	TC	FLOOR DRAIN	FD
TOTAL LOAD	TL	FLOORING	FLG (FLRG)
TOWEL BAR	TB	FLUORESCENT	FLUOR
TRIPLE	TPL	FOOTING	FTG
TWO PHASE	2PH	FOUNDATION	FDN
TYPICAL	TYP	FORCED AIR FURNACE	FAU
ULTIMATE	ULT	FURNACE	FURN
UNDERGROUND	UGND		
UNIFORM BUILDING CODE	UBC		
UPPER	UPR		
UPPER AND LOWER	U&L		
VACUUM	VAC		
VENT THROUGH ROOF	VTR		
VENTILATE, VENTILATOR	VENT		
VERTICAL	VERT		
VOLTAGE	V		
VOLUME	VOL		
WASTE PIPE	WP		
WATER CLOSET	WC		
WATER HEATER	WH		
WATERPROOF	WP		
WEIGHT	WT		
WELDED	WLD		
WEST	W		
WET BULB	WB		
WITHOUT	W/O		
WOOD	WD		

PLAN NOTATIONS



FIREBLOCKING REQUIRED

Fireblocking shall be provided to cut off all concealed draft openings (vertical and horizontal) and shall form an effective barrier between stories, between a top story and the roof space. Fireblocking shall be installed in wood framed construction in the following locations:

1. In concealed spaces of stud walls and partitions, including furred spaces and parallels rows of studs or staggered studs, as follows:
   1.1 Vertically at the ceiling and floor levels.
   1.2 Horizontally at intervals not exceeding 10 feet.
2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
3. In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with R302.7
4. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet ASTM E 136 requirements.
5. For the fireblocking of chimneys and fireplaces, see R1003.19
6. N/A

Contractor shall refer to CRC R302.11 for additional information not specified above, and R302.11.1 for fireblocking materials.

GENERAL NOTES

1. This project shall comply with the **2016 CBC, CRC, CMC, CPC, CFC, CEC**, **CAL-Green** (mandatory section), **California Energy Code** based on the 2016 CA Energy Standards & Regulations, and all other governing codes and ordinances. The California Building Standards Code is based on the IBC & IFC, UMC & UPC and the NEC.
2. **Copyrighted plans and documents:** The use of these plans and specifications is restricted to the original site for which they were prepared. Publication of these documents is expressly limited to such use and reuse, and reproduction or publication by any method, in whole or part, is prohibited. Ownership of these documents remains with the designer, and visual contact with them constitutes prima facie evidence of the acceptance of these restrictions.
3. Plans shall be scaled only where figures or other means of ascertaining measurements are not given thereon, and then only where the scale of the drawings in question is plainly marked. Discrepancies shall be called to the attention of the designer for written interpretation before the work affected is executed.
4. All wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches from exposed ground shall be of redwood or preservative treated wood U.O.N. (CRC R317.1.2).
5. **Contractor** shall field verify with owner all finishes including, finish carpentry, casework, and flooring.
6. All roofing, siding, windows, sheetmetal and flashing shall be neatly done, weathertight and substantial.
7. **All roof glass and glass** in hazardous locations shall be of safety glazing materials as per CRC R308. A permanent label per CRC R308.6.1 or R308.6.9 shall identify each light of safety glazing.
8. **Escape & Rescue Window:** Bedrooms, and basements (unless noted in CRC R310) shall have at least one exterior emergency escape and rescue opening in accordance with this section. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.
   Note: Escape and rescue openings shall have a minimum net clear opening of 5.7 s.f. U.O.N.. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20". The opening shall have a sill height of not more than 44" above the floor. Exterior door may substitute for escape and rescue window. See plans for natural light and ventilation compliance.
9. **Roofing:** All roofing shall be installed in accordance with manufacturer's specification and CRC R905. Builder to provide installation guide for inspection. Roofing manufacturer and approval are as follows:
   Comp. Shingles: GAF Timberline – Class "A", ICC #ESR-1475
   or Certainteed – Class "A", ICC #ESR-3537
10. **All metal connectors**, to be Simpson Strong-tie. All connectors to be installed in accordance with manufacturer's specifications.
11. **Central Heating Furnace** shall be installed in accordance with manufacturer's specifications, and CMC 904.
12. **Stucco Specifications**: Exterior stucco (plaster) shall be a minimum of 7/8" thick, have 3-coats when applied over metal lath or wire fabric lath and not less than 2-coats when applied over masonry, concrete, pressure-preservative treated wood, decay resistant wood, or gypsum. Weather resistive barriers shall include 2 layers of grade 'D' paper over wood base sheathing. Install a 3 ½ ", 26 G. galvanized corrosion-resistant weep screed shall be installed at or below the foundation plate line on exterior stud walls. The screed shall be placed a minimum of 4" above earth or 2" above paved areas (CRC 703.6)
    See CBC 2512 for plaster applied over masonry.
13. **Siding Specifications:** Wood, hardboard, wood structural panel siding, wood shake or shingle siding, shall be installed over No. 15 asphalt felt, or ther approved water-resistive barrier such as Tyvek building wrap in accordance with CRC R703.
    Fiber Cement siding and other materials shall be installed in accordance with manufacturer's specifications, and CRC R703.
14. **Existing Utilities call 811:** Existing underground utilities and improvements are shown in their approximate locations and may not have been verified in the field and no guarantee is made as to the accuracy or completeness of the information shown. The contractor shall notify utility companies at least 2 working days in advance of construction to field locate utilities.
    Call Underground Service Alert (U.S.A.) at 1-800-227-2600 or 811.

SPECIAL INSPECTIONS REQUIRED:

STRUCTURAL – Special Inspection See Structural Drawings

1. All Shear Wall nailing 4 inches o.c. or less including:
   P/2 Shear Wall E.N. 4" o.c.
   P/3 Shear Wall E.N. 3" o.c.
   P/4 Shear Wall E.N. 2" o.c.

DEFERRED SUBMITTAL ITEMS:

1. **FIRE SPRINKLERS REQUIRED BY FIRE DEPARTMENT**
   The building(s) and attached garage(s) shall be fully protected with automatic fire sprinkler system(s) installation shall be in accordance with the applicable NFPA standard. A minimum of (4) sets of plans for fire sprinkler systems must be submitted by a California licensed C-16 Contractor and approved prior to installation. This requirement is not intended to delay issuance of a building permit. A rough sprinkler inspection must be scheduled by the installing contractor and completed prior to requesting a framing inspection.

PLAN INDEX

BUILDING CLASSIFICATION

OCCUPANCY GROUP: R-3/U
CONSTRUCTION TYPE: V-B SPRINKLERED
STORIES: 2 **HEIGHT:** 25'
CODES: 2016 CALIFORNIA CODES
SCOPE OF WORK: NEW 1529 S.F. TWO STORY HOUSE W/ 432 S.F. TWO CAR GARAGE, AND 44 S.F. COVERED PORCH.
GROUND DISTURBANCE: 1700 S.F.
FLOOR AREA: HOUSE FIRST STORY 618 SF.
SECOND STORY 911 S.F.
GARAGE 432 S.F.

ENERGY COMPLIANCE METHOD: ENERGY PRO 7.2, 2016 ENERGY EFFICIENCY STANDARDS

CONSULTANTS

ENGINEER: ALEXANDER OTT
603 PALM AVENUE
SEASIDE, CA 93955
831 394-5936

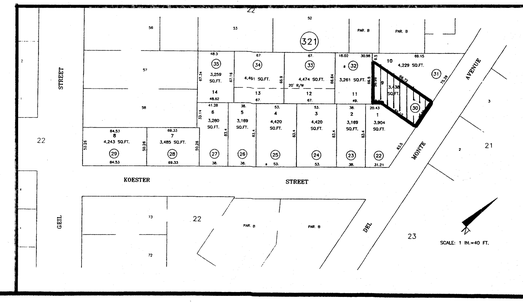
ENERGY CONSULTANT: MONTEREY ENERGY GROUP
26465 CARMEL RANCHO BLVD.
CARMEL, CA 93923
831 250-0314

SOILS ENGINEER: GRICE ENGINEERING, INC
561-A BRUNKEN AVENUE
SALINAS, CA 93901
831 375-1198

ADDRESS IDENTIFICATION

Prior to construction, a legible address identification shall be placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be all Arabic numbers or alphabetic letters. Numbers shall be spelled out. Each character shall not be less than 4 inches in height with a stroke width of not less than 0.5 inch. Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address shall be maintained during construction.

A permanent address shall be posted on final project in accordance with the above specifications.



REVISIONS	BY

BUILDING DESIGN & CONSULTING
draftact
2150 GARDEN RD., SUITE B3 / MONTEREY, CA 93940
(831) 646-8888 FAX 646-8886

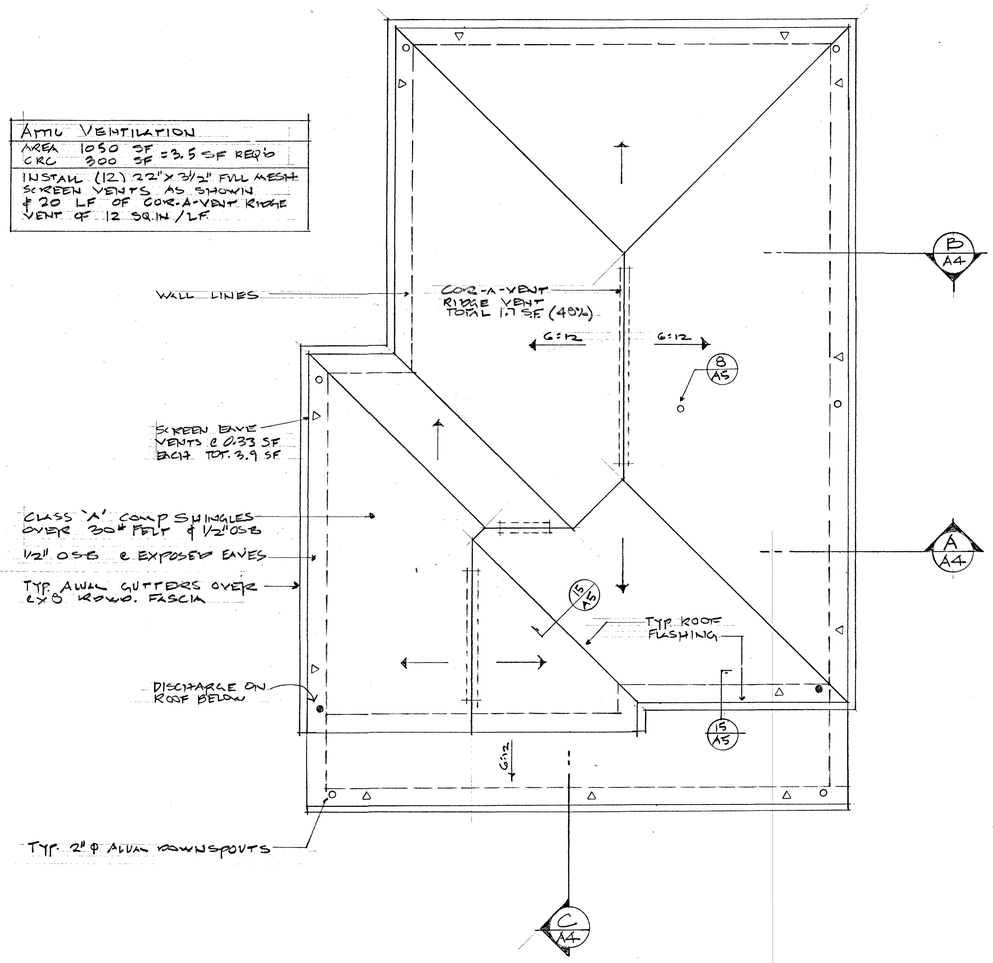
OWNERS: HARI & YOKO KHALSA
4606 CERRILLOS DRIVE
WOODLAND HILLS, CA 91364
(3'10) 292-8994
(310) 955-6342

KHALSA RESIDENCE
11434 DEL MONTE AVENUE
CASTROVILLE, CALIFORNIA
APN: 030-321-030-000

Date	12-13-19
Scale	
Drawn	draftact
Job	46-2019
Sheet	T0
Of	21 Sheets

24 X 36 CLEARPRINTS

ATTIC VENTILATION
AREA 1050 SF = 3.5 SF REQ'D CRC 300 SF
INSTALL (12) 22"x 3½" FULL MESH SCREEN VENTS AS SHOWN & 20 LF OF COR-A-VENT RIDGE VENT @ 12 SQ.IN/LF.



ROOF PLAN 1/4"=1'-0"

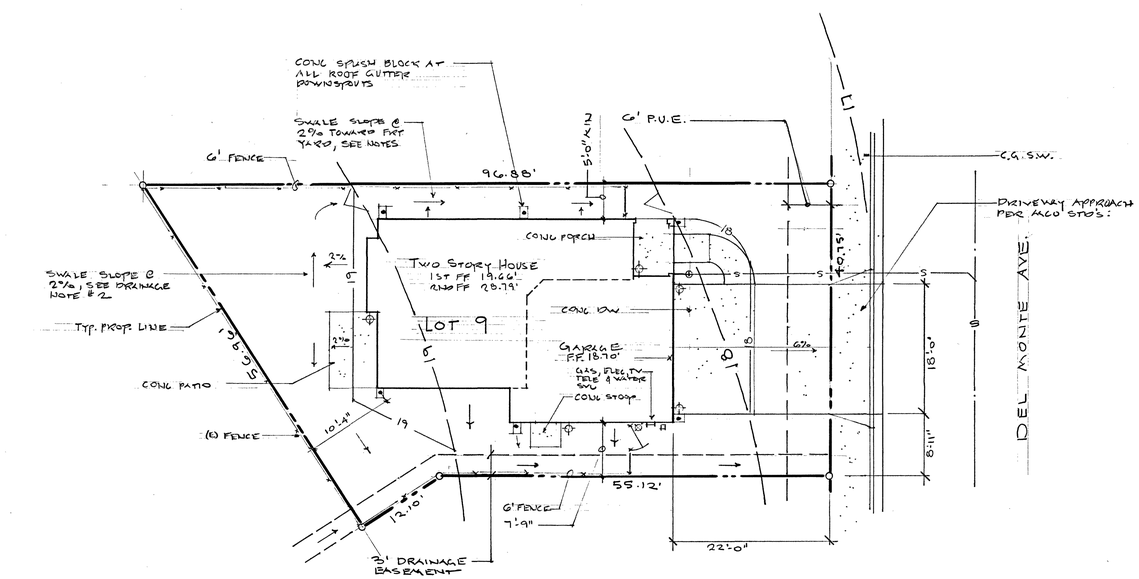
FLOOR AREA		
MAIN FLOOR (1ST)	618 SF	
UPPER FLOOR (2ND)	911	
TOTAL HOUSE	1529	
GARAGE	432	
LOT COVERAGE		
BUILDING FOOTPRINT	1050 SF	
PORCH	44	
TOTAL COV'G	1094	= 32%
LOT AREA	3462	

NOTES

1. —— —— EXISTING CONTOURS
2. —— —— PROPOSED CONTOURS
3. ⊙ DARK SKY LED LIGHTS
4. NO EXCAVATION, NO FILL
5. LAND DISTURBED 1700 SF

DRAINAGE NOTES

1. Roof drain downspouts shall be installed on all roof overhangs, and shall discharge onto concrete splash blocks or pavement, and drain away from structure as noted below.
2. All finish grades including patios, and driveways shall be contoured to slope away from proposed structures:
   Site Grading (CRC 401.3): Surface Drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches within the first 10 feet. **Exception:** Where lot lines, walls, slopes, or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be constructed to ensure drainage away from the structure. Impervious surface (pavers, etc..) within 10 feet of the building foundation shall slope a minimum of 2 percent away from the building.
   All drainage facilities should be checked and maintained periodically to remove obstructions and assure proper function.
3. See sheet #C1 for erosion control and BMP's.



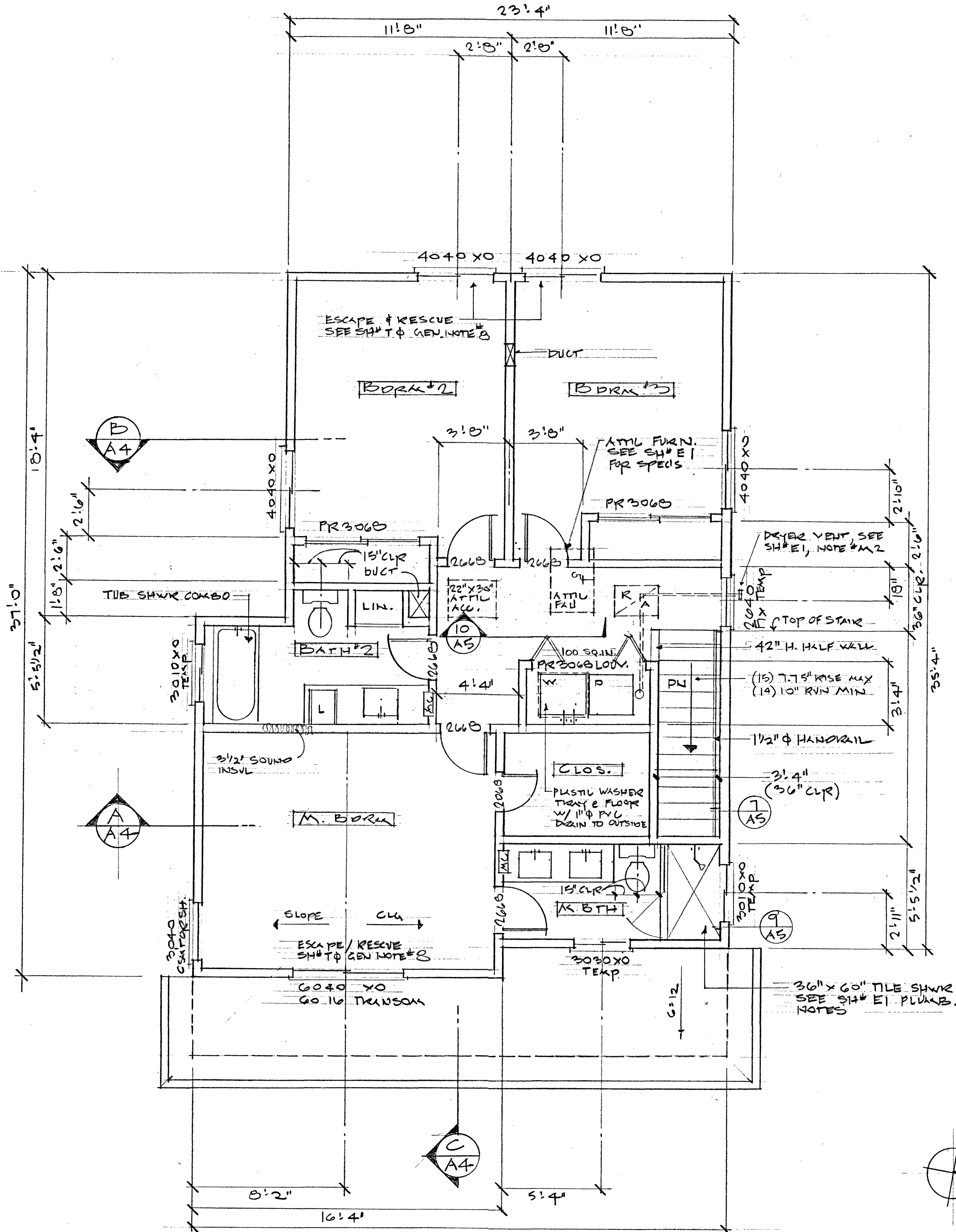
SITE PLAN 1"=10'

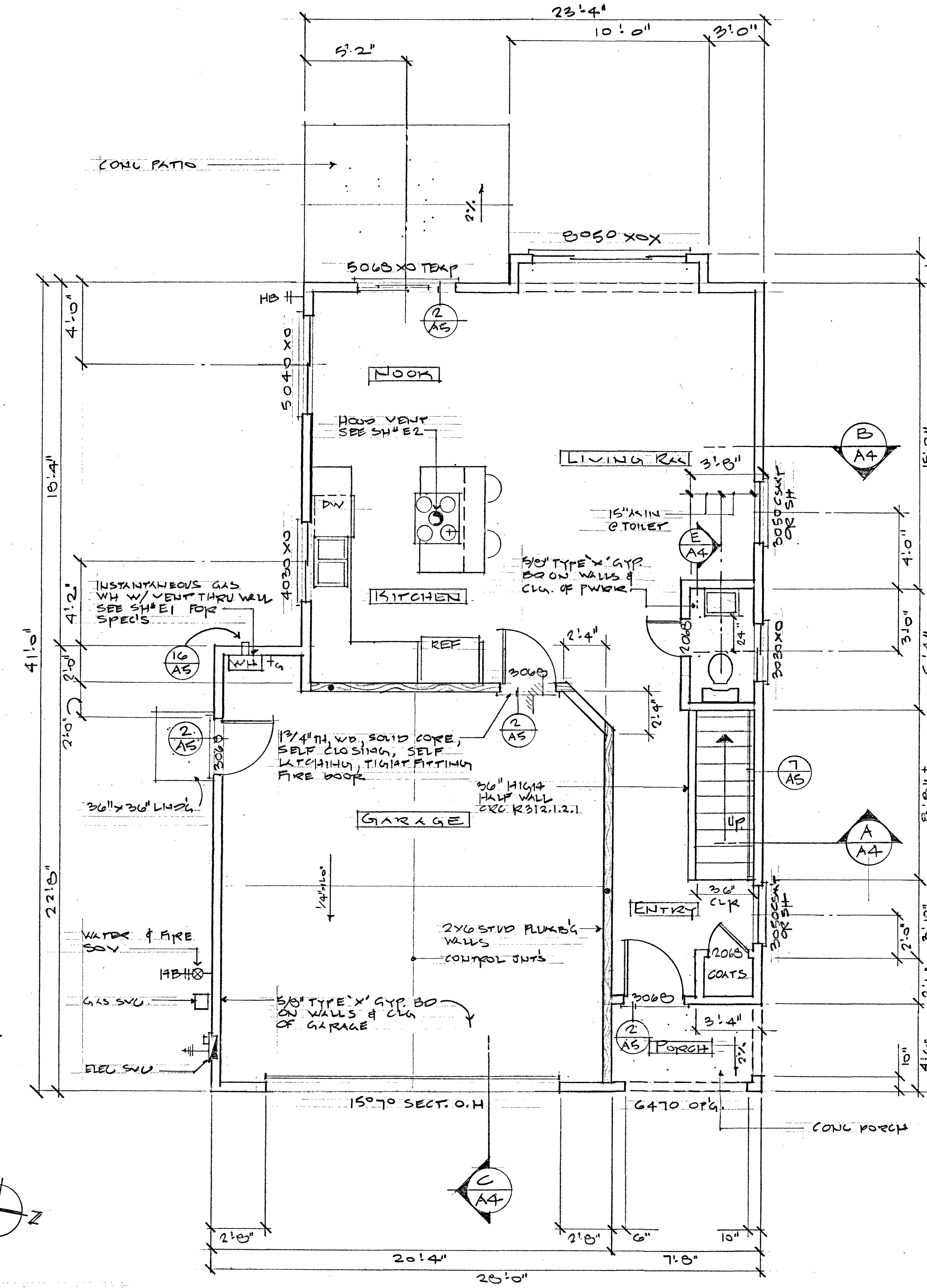
REVISIONS	BY
11.18.19	D
12.13.19	D

BUILDING DESIGN & CONSULTING
draftact
2150 GARDEN RD. SUITE B3 / MONTEREY, CA 93940
(831) 646-3888 FAX 646-3888

KHALSA RESIDENCE
11434 DEL MONTE AVENUE
CASTROVILLE, CALIFORNIA
APN: 030-321-030-000

Date	9.28.19
Scale	
Drawn	
Job	46-2019
Sheet	A1
Of	5 Sheets





WALL LEGEND

2X4 WALLS

2X6 WALLS

SECOND STORY 1/4"=1'0"

FIRST STORY 1/4"=1'0"

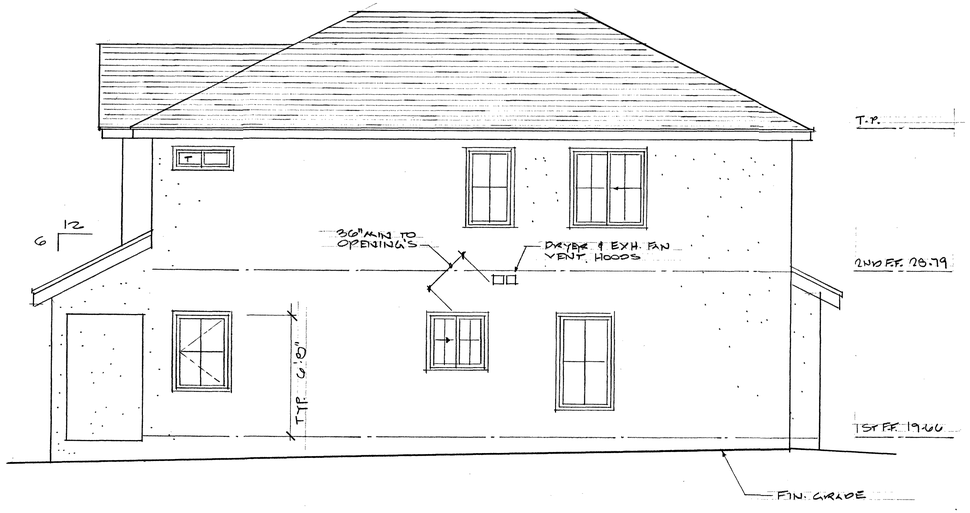
REVISIONS	BY
11·18·19	D
12·13·19	D

BUILDING DESIGN & CONSULTING
draftact
2150 GARDEN RD., SUITE B3 / MONTEREY, CA 93940
(831) 646-5986 FAX 646-5988

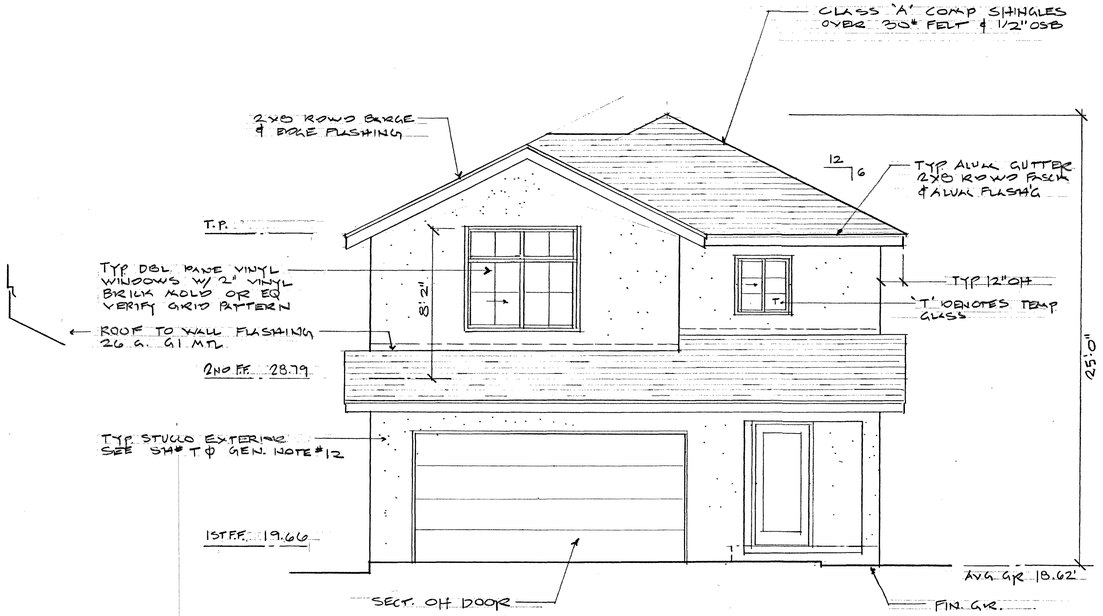
KHALSA RESIDENCE
11434 DEL MONTE AVENUE
CASTROVILLE, CALIFORNIA
APN: 030-321-030-000

Date 9·28·19
Scale
Drawn
Job 46·2019
Sheet A2
Of Sheets

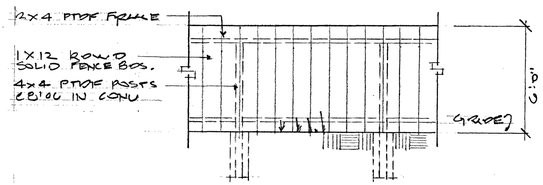
24 X 36 CLEARPRINT



NORTH ELEVATION 1/4"=1'-0"

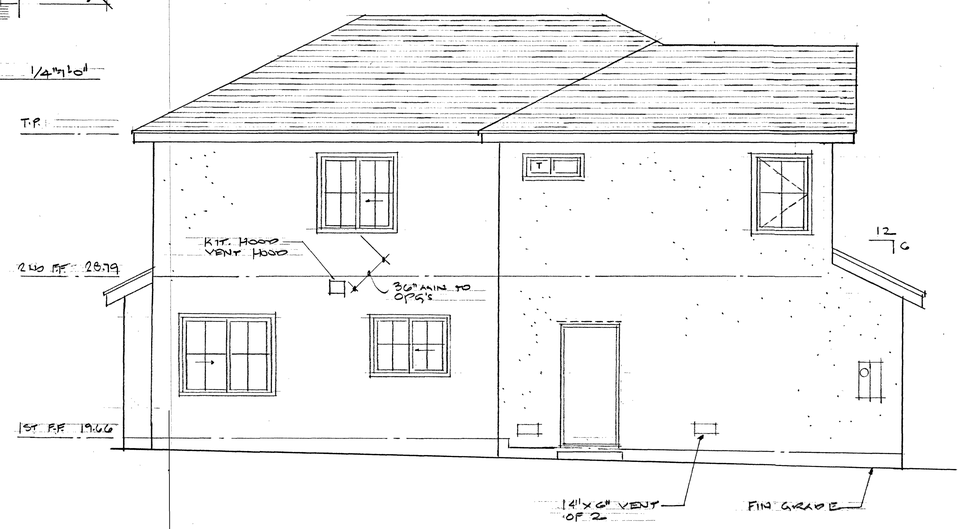


EAST ELEVATION 1/4"=1'-0"



FENCE ELEVATION 1/4"=1'-0"

WEST ELEVATION 1/4"=1'-0"



SOUTH ELEVATION 1/4"=1'-0"

REVISIONS	BY
11.18.19	D
12.13.19	D

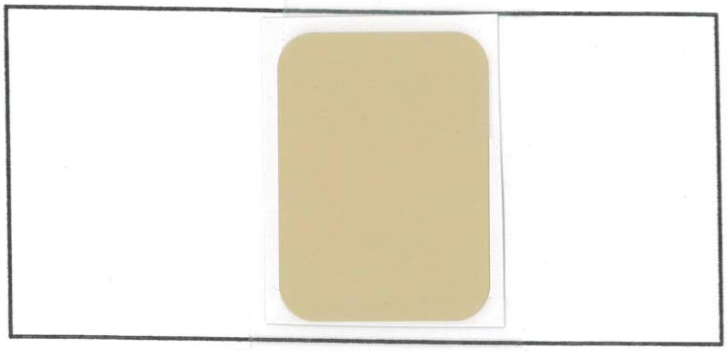
draftact
BUILDING DESIGN & CONSULTING
2150 GARDEN RD., SUITE B3 / MONTEREY, CA 93940
(831) 646-5988 FAX 646-5988

KHALSA RESIDENCE
11434 DEL MONTE AVENUE
CASTROVILLE, CALIFORNIA
APN: 030-321-030-000

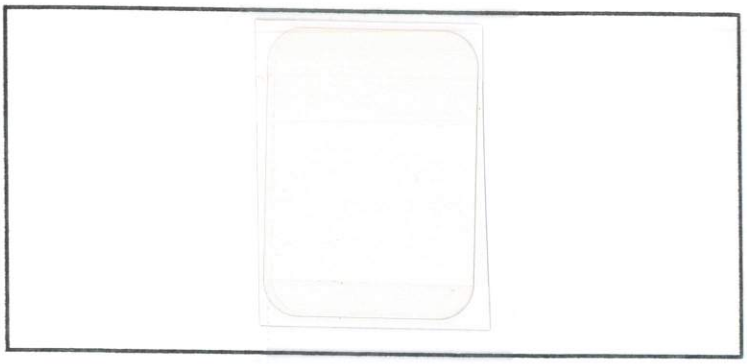
Date	9.26.19
Scale	
Drawn	
Job	46-2019
Sheet	A3
Of	Sheets

COLOR SAMPLES FOR PROJECT FILE NO. PLN190428

HARI - 11434 DEL MONTE AVE.



Materials: STUCCO Colors: KELLY MOORE MISSION TAN 302
Description: BODY



Materials: FASCIA & GUTTER Colors: KELLY MOORE SWISS COFFEE 23
Description:

Materials: ASPHALT COMP. SHINGLES Colors: GAF: BARKWOOD
Description: ROOF

REPORT
to
MR. DARREN A. DAVIS
DRAFTECT
2150 GARDEN ROAD, SUITE B-3
MONTEREY, CALIFORNIA 93940

GEOTECHNICAL REPORT
for the proposed
HARI KHALSA RESIDENCE
11434 DEL MONTE AVENUE
CASTROVILLE, CALIFORNIA
A. P. N. 030-321-030-000

by

GRICE ENGINEERING, INC.
561-A BRUNKEN AVENUE
SALINAS, CALIFORNIA
NOVEMBER 2019

GRICE ENGINEERING INC

ENGINEERING GEOTECHNICS SEPTIC HYDROLOGY
FOUNDATIONS SOILS EARTH STRUCTURES

561A Brunken Avenue
Salinas, California 93901
griceengineering@sbcglobal.net

Salinas: (831) 422-9619
Monterey: (831) 375-1198
FAX: (831) 422-1896

File No. 7151-19.11
November 12, 2019

Mr. Darren A. Davis
2150 Garden Road, Suite B-3
Monterey, California 93940

Project: Hari Khalsa Residence
11434 Del Monte Avenue
Castroville, California
A. P. N. 030-321-030

Subject: Geotechnical Report

Dear Mr. Davis;

Pursuant to your request, we have completed our geotechnical investigation and evaluation of the above named site. It is our opinion that this site is suitable for the proposed development, provided the recommendations made herein are followed.

In general, the near surface soils are loose and will need to be taken into account during design and construction of the proposed residence. Recommendations are given relative to this and other characteristics within the report and especially under Special Recommendations.

The report contained herein is made with our best efforts to evaluate the site, determine the site's geotechnical conditions and provide recommendations for these conditions. We submit this report with the understanding that it is the responsibility of the owner, or his representative, to ensure incorporation of these recommendations into the final plans, and their subsequent implementation in the field.

In addition, we recommend that GRICE ENGINEERING, INC., be retained to review the project plans and provide the construction supervision and testing required to document compliance with these recommendations. Should any site condition not mentioned in this report be observed, this office should be notified so that additional recommendations can be made, if necessary.

This report and the recommendations herein are made expressly for the above referenced project and may not be utilized for any other site without written permission of GRICE ENGINEERING, INC.

Please feel free to call this office should you have any questions regarding this report.

Very truly yours,
GRICE ENGINEERING, INC.

Lawrence E. Grice, P.E.
R.C.E. 66857

NOTICE TO OWNER

Any earthwork and grading performed without direct engineering supervision and materials testing by Grice Engineering Inc., will not be certified as complete and in accordance with the requirements set forth herein.

Foundations placed without observation of bearing conditions will not be certified as being in accordance with the requirements set forth herein.

Inspection of Work

It is recommended that all site work be inspected and tested during performance by this firm to establish compliance with these recommendations.

NOTIFY:	GRICE ENGINEERING INC.	SALINAS	(831) 422-9619
	561-A Brunken Avenue	MONTEREY	(831) 375-1198
	Salinas, California 93901	FAX	(831) 422-1896

A minimum of 48 hours (2 working days) notification is required prior to commencement of work so that scheduling for testing and inspections can be made.

Please be advised that costs incurred during inspection and testing of all site work is separate and not considered part of the fees as charged by Grice Engineering, Inc. for the report contained herein.

TABLE OF CONTENTS

GEOTECHNICAL REPORT
for the proposed
HARI KHALSA RESIDENCE
11434 DEL MONTE AVENUE
CASTROVILLE, CALIFORNIA
A. P. N. 030-321-030-000

Introduction, Method and Scope of Investigation

The purpose of this report is to evaluate the geotechnical properties of the site relative to the construction of a single family residence. From these findings recommendations are given for the design of the development and subsequent construction.

For this purpose, the site was investigated, and prior information concerning construction and subsurface exploration in this area was examined for soils and materials data. The investigation consisted of a detailed site evaluation, which included: a site inspection; a review of literature made available to GRICE ENGINEERING, INC., including Site Plans from Draftect; geotechnical drilling and soil sampling; materials evaluation; and analysis of the geotechnical properties of the site soils. This report concludes the results of the investigation and provides recommendations based on that work.

The findings and recommendations contained in this report are applicable only to the above named site and its proposed development, and may not be utilized for any other site or purpose without written permission of GRICE ENGINEERING, INC.

Site Description

The project site, 11434 Del Monte Avenue, is located to the southwest of Del Monte Avenue, approximately 92 feet northwest of its intersection with Koester Street, in the City of Castroville, an un-incorporated area of westernmost Monterey County, California. Please refer to the Vicinity and Location Maps and the Site Map in Appendix A for details.

The topography of the 3,462 square foot site encompasses a level area at an elevation of approximately 21 feet above mean sea level (msl). The majority of the undeveloped site is covered with grass.

Currently plans are for a two story, single family residence to be placed centrally on the lot. An attached two car garage is to be located on the residence's front facing the street with a short concrete driveway providing access. A concrete pathway will provide access to the front door while a small patio is to be located on the residence's rear.

Due to prior site activity, loose and disturbed soils and foreign objects may be encountered during construction and will have to be taken into account.

The approximately 1,529 square foot residence is to be of conventional wood construction with isolated and/or continuous spread footings. The approximately 432 square foot garage is to have a slab-on-grade floor.

Field Investigation

Our field investigation consisted of a site inspection, along with review of the drilling and sampling performed by Soils Surveys, Inc., Job #3784, February 21, 2003, in preparation of a Geotechnical Report for the overlaying subdivision. That investigation consisted of advancement of 3 exploratory bores to establish the subsurface soil profile, and obtain sufficient soil specimens to determine the soil characteristics. The report discusses exploratory drilling completed by M. Jacobs and Associates in 1987 for a similar purpose.

Drilling was accomplished by continuous flight auger, with the spoil constantly examined, classified, and logged by field method in accordance with the Unified Soil Classification Chart[1] which is the basis of ASTM D2487-10.

Relatively undisturbed soil samples were obtained by the penetration resistance method, (ASTM Method D1586-08), by which a split barrel sampler was driven a minimum of 18 inches into the sampled materials by free dropping a 140 pound weight 30 inches. The number of blows required to drive the sampler were recorded in 6 inch increments after conversion to Standard Penetration Resistance values (presumably). The number of blows required to drive the sampler the last two increments taken as the Standard Penetration Resistance. The split barrel sampler (ASTM D-1586-08), with dimensions of 1.375" I.D. x 2.0" O.D., is provided with 1 inch tall brass ring liners for the purpose of returning the samples to the laboratory in as near *in-situ** condition as possible.

* *In-situ* refers to the in place state of soil. *In-situ* native soils are those which are in-place as deposited by nature and have not been disturbed by man's actions in the historic past.

---

[1] Adopted 1952 by Corps of Engineers and Bureau of Reclamation. ASTM D2487 was developed as based on the Uniform Soils Classification Chart and System. The methods are equivalent.

Site Soil Profile

As found in the exploratory drilling, the site soils are generally consistent between each of the bores and is typical to the area.

The native topsoil was observed to be a black silty clay of medium plasticity. As encountered it was stiff and moist.

The native subsoils are a finely mottled olive-tan (yellowish brown) blend of silts and clay generally observed in lensatic deposition and of friable nature due to low moisture contents. As encountered they were moist and stiff.

The second bore was advanced to an approximate depth. In that bore at a depth of approximately 19 feet medium grained sands were encountered. These materials were observed medium dense to dense and dry to moist.

Complete soil characteristics and comments are reported on the boring logs at the depths observed. The logs completed by Soils Surveys, Inc. are included in Appendix B. Those by M. Jacobs were not available.

Groundwater

Free groundwater was encountered at this site at a depth of 26.0 feet below grade in the bores advanced by M. Jacobs as discussed in their report.

Laboratory Testing

Laboratory testing consisted of establishing the *in-situ* ** moisture content and dry density (ASTM D 2487-10) and unconfined penetration, direct shear testing (ASTM D 3080-04) and expansion index (ASTM D4829-08a). Standard Penetration Resistance values gained during the exploratory drilling are also included.

The following is a tabulation of the field and laboratory test result extremes:

TABLE 1

SUMMARY OF SOIL PROPERTIES

TEST	MAXIMUM	MINIMUM
Standard Penetration Resistance	62 blows/foot	9 blows/foot
Unconfined Compression*	8 kips/ft^2	3 kips/ft^2
In-Situ Density	112.7 lbs/ft^3	80.5 lbs/ft^3
In-Situ Moisture	37.7 %	3.0 %
Atterberg Limits	LL 44; PL 16; PI 28	LL 41; PL 15; PI 26
Passing No. 200	65	47
Compaction Curve	113.0 lbs/ft^3 @ 13.5 % water	

All data obtained is reported in Appendix B including the boring logs, with soil classified described at depth observed.

* Pocket Penetrometer

** *In-situ* refers to the in-place state.

Seismic History

Although no fault traces are thought to directly cross the building site, Monterey County is traversed by a number of faults most of which are relatively minor hazards for the purposes of the site development. As such, this site will experience seismic activity of various magnitudes emanating from one or more of the numerous faults in the region.

Various maps presently exist, allowing observation on the site of distinctive geologic features. Some maps, such as that by Burkland and Associates (Reference No. 10) developed for Monterey County, are compilations from various sources detailing the locations of studied faults. Faults have inherit variances within their zones, and discoveries of new fault segments or entire faults is ongoing. There is also some difference in exact fault line location from source map to map, making precise location of said faults difficult. Therefore, relative to the information contained within this report, the following is considered to be as accurate as is currently possible from information made available to Grice Engineering Inc..

Regional Faults

Of most concern are active faults which have tectonic movement in the last 11,000 years and as such are called Holocene Faults and potentially active faults. The following are those nearest listed (Reference No. 12).

The most active is the San Andreas Rift System (Pajaro), located approximately 11.7 miles to the northeast. It has the greatest potential for seismic activity with estimated intensities of VIII-IX Mercalli in this location.

Other fault zones are the Zayante-Vergeles Fault Zone, the center of which is located approximately 7.8 miles to the northeast, the Rinconada Fault Zone, approximately 6.3 miles to the southwest, the Monterey Bay-Tularcitos Fault Zone, approximately 11.4 miles to the southwest, and the San Gregorio-Palo Colorado (Sur) Fault Zone, approximately 19.4 miles to the southwest. These zones are not as liable to rupture as the San Andreas and a seismic event at any of the above fault zones would likely produce earth movements of a lesser intensity at the site.

Liquefaction

The site soils are considered not susceptible to liquefaction as those portions which are cohesive clays and silts and medium dense to dense sands.

Differential-Total Settlement - Static and Dynamic

The recommendations given in the Geotechnical Report are such that concerns of settlement are negligible. The total settlement is expected to be less than 1/4 inch and the expected differential settlement less than one half that.

Hydro-Collapse and Subsidence

As observed the loose or disturbed soils near surface possess some capacity to settle under hydraulic loading or compress when saturated depending on the overburden pressure. Hydro-collapse in the native soils column is not common in the area. The recommendations given in this report were established to reduce the potential of this occurring.

The area is not within a known Subsidence Zone.

Slope Stability

Inspection of the site indicates that no landslides are located above or below the building area and the area is generally not susceptible to slope failure as it is near level.

Seismic Strength Loss

The site soils are considered resistant to seismic strength loss and the resulting momentary liquefaction. The relatively short duration of earthquake loading will not provide a significant number of high amplitude stress cycles to alter the strain characteristics. Additionally the clay-silt fraction is not considered quick nor sensitive, as such it will not have the associated loss of strength.

Chemical Reactivity

The area is well developed with structures, generally found on Portland Cement products. Additionally these structures date back to the 1940's or earlier. Much of the concrete used in these structures has remained as cast. The area soils are not known for sulfate reaction with Portland cement products and as such chemical reactivity is not considered a problem in this area.

Expansive Soils

In general the site soils are or contain clayey silts and clays of low to moderate plasticity. These soils are typical to the area. Expansivity has not been influential to the local structures and on grade pavements as no significant deformations attributable to expansive soils were observed. As any clay soil has some potential for expansivity, recommendations are given to minimize this potential.

Surface Rupture and Lateral Spreading

The project site is located 6.3 miles to the northeast of the Rinconada Fault (Quaternary). The site inspection did not reveal any surface features indicating a fault rupture has occurred at the site. The existing structure, driveways and roads do not reveal any strains which would be attributable to subsurface lateral or vertical displacements resulting from fault slip. Therefore surface rupture from fault activity across the site is considered improbable.

The project site is underlain by relatively strong soils. These materials are considered resistant to lateral spreading. As such surface rupture from lateral spreading is considered improbable.

Seismicity

It is recommended that all structures be designed and built in accordance with the requirements of the California Building Code's current edition. All buildings should be founded on undisturbed native soils and/or tested and accepted engineering fill to prevent resonance amplification between soils and the structure.

2016 California Building Code Geoseismic Classifications

The California Building Code, 2016 edition (Reference No. 13), provides for seismic design values. These values are to be utilized when evaluating structural elements. The soils profile determination is based on the penetration resistance data developed from advancement of exploratory bores. Using averaged penetration values per depth of soils type gives an overall site value of 26 blows/foot penetration resistance as per Equation 20.4-3, ASCE 7-10. The geoseismic character is as listed in the following table.

2015 I.B.C. - 2016 C.B.C. EARTHQUAKE LOADS: SECTION 1613				
LATITUDE	36.763334	SOIL PROFILE:	Stiff Soils	
LONGITUDE	-121.747012	SITE CLASS	D	
PERIOD	S	F	Sm	Sd
0.2 sec	Ss = 1.500	Fa = 1.000	Sms = 1.500	Sds = 1.000
1.0 sec	S1 = 0.598	Fv = 1.500	Sm1 = 0.897	Sd1 = 0.598
Seismic Design Category to be assigned by structural engineer or designer				

CONCLUSIONS OF INVESTIGATION

In general, the suitable, *in-situ**, native soils and certified engineered fill are acceptable for foundation purposes and display engineering properties adequate for the anticipated soil pressures, providing the recommendations in this report are followed.

Special Recommendations

As observed the surficial soils are imported fill or disturbed native soils to depths ranging from one to three feet. These soils are not considered suitable for support of on grade structures (engineered structures, eg. interior floor slabs, pavement, etc.) and foundations. Therefore it is recommended that such soils and any other unsuitable soils be processed as engineered fill within the building envelopes and extent of on grade structures. The minimum depth of processing is to include all such soils and the native topsoil were encountered. The depth is to be increased, as necessary, to include all unsuitable soils. Actual depth of processing is to be determined by the soils engineer or his representative during grading operations.

The site soils are clay of medium plasticity. Although expansivity is not a great concern in the area, some caution is warranted. As such recommendations are given on page 14 to minimize such expansivity.

The area has been developed and as such underground utilities may be located within the area of proposed construction. In addition, buried objects or deeply disturbed soils may also be encountered. As such all care and practice is to be exercised to observe for and locate any such objects. Where these objects are to be removed or use discontinued, they are to be removed in their entirety and all disturbed soils are to be processed as engineered fill.

The base of all excavations and over-excavations are to be inspected by the Soils Engineer prior to further processing, steel or form placement.

Any further site activity, especially grading and foundation excavations, should be under the direction of a qualified Soils Engineer or their Representative.

Should the spectrum of development change, this office should be notified so that additional recommendations can be made, if necessary.

* Suitable, *in-situ,* native soils are those soils which are in-place as deposited by nature and have characteristics adequate for support of the intended load or application.

Foundations and Footings

Geotechnical evaluation indicates that square, round, and continuous spread footings are satisfactory types of support. The minimum embedment for shallow, spread foundations is 12 inches for single stories and 18 inches for two stories into suitable, *in-situ*,* native soils or certified engineered fill. Embedment depths do not take into account the loose upper top soils, disturbed soils or any other unacceptable soils which exist at the site, e.g., any un-engineered fill, landscaping soils, etc.

VERTICAL SOIL PRESSURES[1]		
FOOTING TYPE	DEAD LOAD, kips/ft^2	DEAD + LL, kips/ft^2
Spread & Isolated	2.5	3.3
LATERAL SOIL PRESSURES[1]		
TYPE	VALUE, lbs/ft^2	
Active Earth Pressure	30 lbs/ft^3 (Equivalent Fluid Pressure)	
Restrained Earth Pressure	50 lbs/ft^3 (Equivalent Fluid Pressure)	
Seismic	2 lbs/ft^{3}xH^2 applied at 0.6H	
Friction at Base	0.30 × Dead Load	
Passive Earth Pressure	300 lbs/ft^3 × H^2 NOTE2	
Uplift Friction	140 lbs/ft^2 × H	

Notes: LL = Live Load; DL = Dead Load; H = Vertical height of material retained. One-third increase to be allowed for wind and seismic forces.
[1] For depths into acceptable native materials or engineered fill.
[2] Excludes near surface 0.5 feet of *in-situ* soils.

Pile and Pier foundation information is not provided as none are required or proposed. All foundation excavations are to be cleaned of debris and loose or otherwise unsuitable soils prior to placement of concrete.

* Suitable, *in-situ,* native soils are those soils which are in-place as deposited by nature and have characteristics adequate for support of the intended load or application.

Slabs-on-Grade

All slabs should be constructed over a prepared sub-grade placed on suitable *in-situ** native material or certified engineered fill. The site exploration observed that the existing surficial soils are loose to depths of approximately 1 foot. These soils should not be relied upon for support of slabs on grade or other surficial structures.

As such where any unsuitable soils remain after excavation to subgrade they are to be processed as engineered fill prior to further fill placement or construction of the on grade structure. At a minimum the upper 6 inches of subgrade below all surficial structures should be processed as engineered fill in areas of on grade structures.

The native topsoil is a silty clay of low-medium to medium plasticity. This soil may change volume from variation in water content. Where new slabs are to be supported by these soils special consideration should be given to providing a properly prepared subgrade and pavement section. Further recommendations are given under Expansive Soils below.

The sub-grade materials should be observed and accepted by a qualified Soils Engineer or their representative prior to placement of forms, reinforcing or concrete.

On-grade slabs should be placed over a moisture vapor barrier consisting of a waterproof membrane (Moist Stop, 10 mil Visqueen, or equal) with a 2 inch protective sand cover. The waterproof membrane should be placed over a capillarity break consisting of 4 inches of open graded rock; round and sub-round rock is recommended to prevent puncture of the membrane. Open graded crushed aggregate may be utilized, provided the vapor barrier is protected from puncture by a cushion of filter fabric (Mirafi 140N or equal) laid over the aggregate prior to placement of the membrane. Where such concerns are not warranted, alternative underlayment may be utilized at the owners discretion.

All care and practice required to prevent puncture of the membrane during placement and pouring of covering slabs should be utilized during construction. Unless otherwise required for structural purposes, all slabs should be reinforced with a minimum of No.4, Grade 40, deformed steel reinforcing bar, 24 inches o.c., each way, to prevent separation and displacement in cases of cracking.

* Suitable, *in-situ,* native soils are those soils which are in-place as deposited by nature and have characteristics acceptable for support of the intended load or application.

Specifications for Rock Under Floor Slabs

Definition: Graded gravel of crushed rock for use under floor slabs shall consist of a minimum thickness of mineral aggregate placed in accordance with these specifications and in conformance with the dimensions shown on the project plans. The minimum thickness is specified under the section Slabs-on-Grade above.

Material: The mineral aggregate for use under floor slabs shall consist of broken stone, crushed or uncrushed gravel, quarry waste, or a combination thereof. The aggregate shall be free from adobe, vegetable matter, loam, volcanic tuff, and other deleterious substances. It shall be of such quality that the absorption of water in a saturated dry condition does not exceed 3 percent of the oven dry weight of the sample.

Grading: The mineral aggregate shall be of such size that the percentage composition by dry weight as determined by the use of laboratory sieves, U.S. Standard, in compliance with ASTM C 136-06, Standard Method for Sieve Analysis of Fine and Coarse Aggregates, will conform to the following grading specification:

SIEVE SIZE	PERCENTAGE PASSING SIEVE
3/4 inch	100 %
No. 4	0 - 10 %
No. 200	0 - 2 %

Placing: Sub-grade upon which gravel or crushed rock is to be placed shall be prepared as outlined in the Recommended Grading Specifications. In addition, the Sub-grade shall be kept moist so that no drying cracks appear prior to pouring slabs. If cracks appear, Sub-grade shall be moistened until cracks close.

Slope Ratio and Drainage

Analysis of site soils indicate that cut and fill slope ratios of 2 horizontal to 1 vertical will be satisfactory provided they are landscaped with soil retaining ground covers and are protected against concentrated over slope drainage.

Surface Drainage and Erosion Control

Design and construction of the project should fit the topographic and hydrologic features of the site. It is important to minimize unnecessary grading of or near steep slopes. Disturbing native vegetation and natural soil structure allows runoff velocity and transport of sediments to increase.

General surface drainage should be retained at low velocity by slope, sod or other energy reducing features sufficient to prevent erosion, with concentrated over-slope drainage carried in lined channels, flumes, pipe or other erosion-preventing installations.

Runoff flows should be directed into pipes or lined ditches and then onto an energy dissipater before discharging into streams or drainage ways. De-silting should be provided as necessary and may take form of stilling basins, gravel berms, forested/vegetated screens, etc.

All concentrated roof and area drainage should be conveyed and released to grade as divided as possible away from structures. If available runoff should be released to existing storm drain structure or patterns.

A sub-surface dispersal system may not be used as the site subsoils are not sufficiently permeable to infiltrate storm runoff.

Recent changes to the drainage requirements has the potential to alter drainage patterns. This has been observed to effect structures which have otherwise not been affected or to alter the way they are affected. As such new drainage modifications on this and adjacent parcels may negatively affect drainage patterns.

During construction, never store cut and fill material where it may wash into streams or drainage ways. Keep all culverts and drainage facilities free of silt and debris. Keep emergency erosion control materials such as straw mulch, plastic sheeting, and sandbags on-site and install these at the end of each day as necessary.

Re-vegetate and protect exposed soils by October 15. Use appropriate grass/legume seed mixes and/or straw mulch for temporary cover. Plan permanent vegetation to include native and drought tolerant plants. Seeding and re-vegetation may require special soil preparation, fertilizing, irrigation, and mulching.

Expansive Soils

As observed, the site soils are clay of moderate plasticity. In general these clays do not act expansively and the local structures are typically not subject to the affects of expansive clays. However improper treatment of these clays will result in unacceptable behavior and some precaution is economically warranted.

A potential for expansivity is in allowing those clayey soils, exposed by excavation and which are to be covered by foundations, slabs or engineered fill, to dry and not be re-saturated prior to placement of overlaying structure. Therefore it is recommended that all exposed clayey soils which are to be covered by engineered fill, foundations or slabs be kept at or above natural moisture or placed moisture content and above 3 percent over optimum moisture content. All native soils used as fill are to be placed at greater than 3 percent optimum moisture and compacted to a Relative Compaction between 88 and 91 percent.

Subsurface Drains

Use of spun filter fabric is not recommended for use in construction subsurface drains as this type of fabric typically becomes clogged. Should filter fabric be necessary it is recommended that a woven fabric be used such as Mirafi Filterweave 300. Otherwise we would recommend omission of the fabric and placement of Caltrans Class 1, Type 'A" or "B" drain rock, and that any fabric only be placed near the top of the trench between the gravel and earth backfill or where the gravel extends to grade, 1 foot below finish grade.

CLASS 1		
SIEVE SIZES	**PERCENTAGE PASSING**	
	TYPE A	TYPE B
50.0-mm/2 inches	----	100
37.5-mm/1.5 inches	----	95-100
19.0-mm/0.75 inches	100	50-100
12.5-mm/0.5 inches	95-100	-----
9.5-mm/0.415 inches	70-100	15-55
4.75-mm/No. 4	0-55	0-25
2.36-mm/No. 8	0-10	0-5
75.0-µm/No.200	0-3	0-3

General Grading Recommendations

For those items not directly addressed, it is recommended that all earthwork be performed in accordance with the following.

General: This item shall consist of all clearing and grubbing; preparation of land to be filled; excavation and fill of the land; spreading, compaction and control of the fill; and all subsidiary work necessary to complete the graded area to conform with the lines, grades and slopes as shown on the approved plans.

The Contractor shall provide all equipment and labor necessary to complete the work as specified herein, as shown on the approved plans as stated in the project specifications.

Preparation: Site preparation will consist of clearing and grubbing any existing structures and deleterious materials from the site, and the earthwork required to shape the site to receive the intended improvements, in accordance with the recommended grading specifications and the recommendations as provided above.

All vegetable matter, irreducible material greater than 4 inches and other deleterious materials shall be removed from the areas in which grading is to be done. Such materials not suitable for reuse shall be disposed of as directed.

After the foundation for fill has been cleared, it shall be brought to the proper moisture content by adding water or aerating and compacting to a Relative Compaction of not less than 90% or as specified. The soils shall be tested to a depth sufficient to determine quality and shall be approved by the Soils Engineer for foundation purposes prior to placing engineered fill.

General Fill: General fill shall be placed only on approved surfaces, as engineered fill, and shall be compacted to 90% Relative Compaction. Native soils accepted for fill or existing aggregate fill may be used for fill purposes provided all aggregate larger than 6 inches are removed. The material for engineered fill shall be approved by the Soils Engineer before commencement of grading operations.

Each layer shall be compacted to a Relative Compaction of not less than 90% or as specified in the soils report and on the accepted plans. Compaction shall be continuous over the entire area of each layer.

The selected fill material shall be placed in layers which, when compacted, shall not exceed 6 inches in thickness. Each layer shall be spread evenly and shall

be thoroughly mixed during the spreading to ensure uniformity of material in each layer. Fill shall be placed such that cross fall does not exceed 1 foot in 20 unless otherwise directed.

When fill material includes rock or concrete rubble, no irreducible material larger than 4 inches in greatest dimension will be allowed except under the direction of the Soils Engineer.

Imported Materials: Materials imported for fill purposes shall be classified as: SAND, group symbol SW, SP, SC or SM, as given in ASTM 2487-10, "The Classification of Soils For Engineering Purposes." In all cases the portion finer than the No. 200 sieve shall not contain any greatly expansive clays and shall be free from vegetable matter and other deleterious materials. The material for engineered fill shall be approved by the Soils Engineer before commencement of grading operations.

Structural Backfill: Trench, wall and structural backfill shall be placed only on approved surfaces, as engineered fill, and shall be compacted to 95% Relative Compaction. Materials imported for backfill purposes shall have a Sand Equivalent of no less than 30 and shall be classified as Clean Sands as designated in "The Classification of Soils For Engineering Purposes" (ASTM 2487-10).

Pavement Grades: All pavement grades shall be of uniform thickness, density and moisture prior to placement of the next grade. Flexure of each or all grades shall not exceed 0.25 inches in 5 feet under an axial load of 18.5 kip.

Aggregate Base Course: All aggregates used for specified base courses, shall be handled in a manner which prevents segregation and non-uniformity of gradation.

Compaction: All re-compacted soils and/or engineered fill should be placed at a minimum 90% Relative Compaction or at the value required for that portion of the work. All pavement sections should be compacted to a minimum of 95% Relative Compaction.

Field density testing shall be completed by the Soils Engineer on each compacted layer or as determined by the Soils Engineer. At least one test shall be made for each 500 cubic yards or fraction thereof, placed with a minimum of two tests per layer in isolated areas. Where a sheeps'-foot roller is used, the soil may be disturbed to a depth of several inches. Density tests shall be taken in compacted materials below the disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof, is below the required density,

that particular layer or portion shall be reworked until the required density has been obtained.

Moisture: During compaction moisture content of native soils should be that consistent with the moisture relative to 95% Relative Compaction and in no case should these materials be placed at less than 3 percent above the specific optimum moisture content for the soil in question. The engineer may elect to accept high moisture compacted soils provided the materials are at 95% Relative Wet Density at that moisture content.

The moisture content of the fill material shall be maintained in a suitable range to permit efficient compaction. The Soils Engineer may require adding moisture, aerating, or blending of wet and dry soils.

All earth moving and work operations shall be controlled to prevent water from running into and pooling in excavated areas. All such water shall be promptly removed and the site kept drained.

Tests: All materials placed should be tested in accordance with the Compaction Control Tests: "Density of Soil In-Place by Sand Cone Method" (ASTM D-1556-07), "Moisture-Density Relationship of Soils" (ASTM D-1557-09), and "Density of Soils In-Place by Nuclear Method" (ASTM D-6938-10).

The standard test used to define maximum densities of all compaction work shall be the A.S.T.M. D-1557-09, Moisture Density of Soils, using a 10-pound ram and 18-inch drop. All densities shall be expressed as a relative density in terms of the maximum density obtained in the laboratory by the foregoing standard procedure.

Deleterious Materials: Materials containing an excess of 5% (by weight) of vegetative or other deleterious matter may be utilized in areas of landscaping or other non-structural fills. Deleterious material includes all vegetative and non-mineral material, and all non-reducible stone, rubble and/or mineral matter of greater than 6 inches.

Over-Excavations: Over-excavations, when required, should include the foundation and pavement envelopes. Such excavations should extend beyond edge of development a minimum of 5 feet and to an imaginary line extending away and downward at a slope of 45 degrees from the edge of development. The process shall include the complete removal of the required soils and subsequent placement of engineered fill. After removal of the soils to the required depth, the base of the excavation shall be inspected and approved by the Soils Engineer or his representative prior to further soils processing or

placement. Based on this inspection other recommendations may be made.

Existing Conditions: In developed areas underground utilities may be located within the area of proposed construction. In addition, buried objects or deeply disturbed soils may also be encountered. As such all care and practice is to be exercised to observe for and locate any such objects. Where these objects are to be removed or use discontinued, they are to be removed in their entirety and all disturbed soils are to be processed as engineered fill.

Key: All fills on slopes greater than 1 vertical to 6 horizontal shall be keyed into the adjacent soil. The toe of all slopes should be supported by a key cut a minimum of 3 feet into undisturbed soils to the inside of the fills toe. This key should be a minimum of 6 feet in width and slope at no less than 10% into the slope. In addition, as the fill advances up slope benches, 3 feet across, should be scarified into the fill/undisturbed soil interface.

Seasonal Limits: When the work is interrupted by rain, fill operations shall not be resumed until field tests by the Soils Engineer indicate that the moisture content and density of the fill is as previously specified and soils to be placed are in suitable condition

Unusual Conditions: In the event that any unusual conditions are encountered during grading operations which are not covered by the soil investigation or the specifications, the Soils Engineer shall be immediately notified such that additional recommendations may be made.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

The recommendations of this report are based on our understanding of the project as represented by the plans, and the assumption that the soil conditions do not deviate from those represented in this site soils investigation. Therefore, should any variations or undesirable conditions be encountered during construction, or if the actual project will differ from that planned at this time, GRICE ENGINEERING INC. should be notified and provided the opportunity to make addendum recommendations if required.

NOTIFY:	GRICE ENGINEERING INC.	SALINAS	(831) 422-9619
	561-A Brunken Avenue	MONTEREY	(831) 375-1198
	Salinas, California 93901	FAX	(831) 422-1896

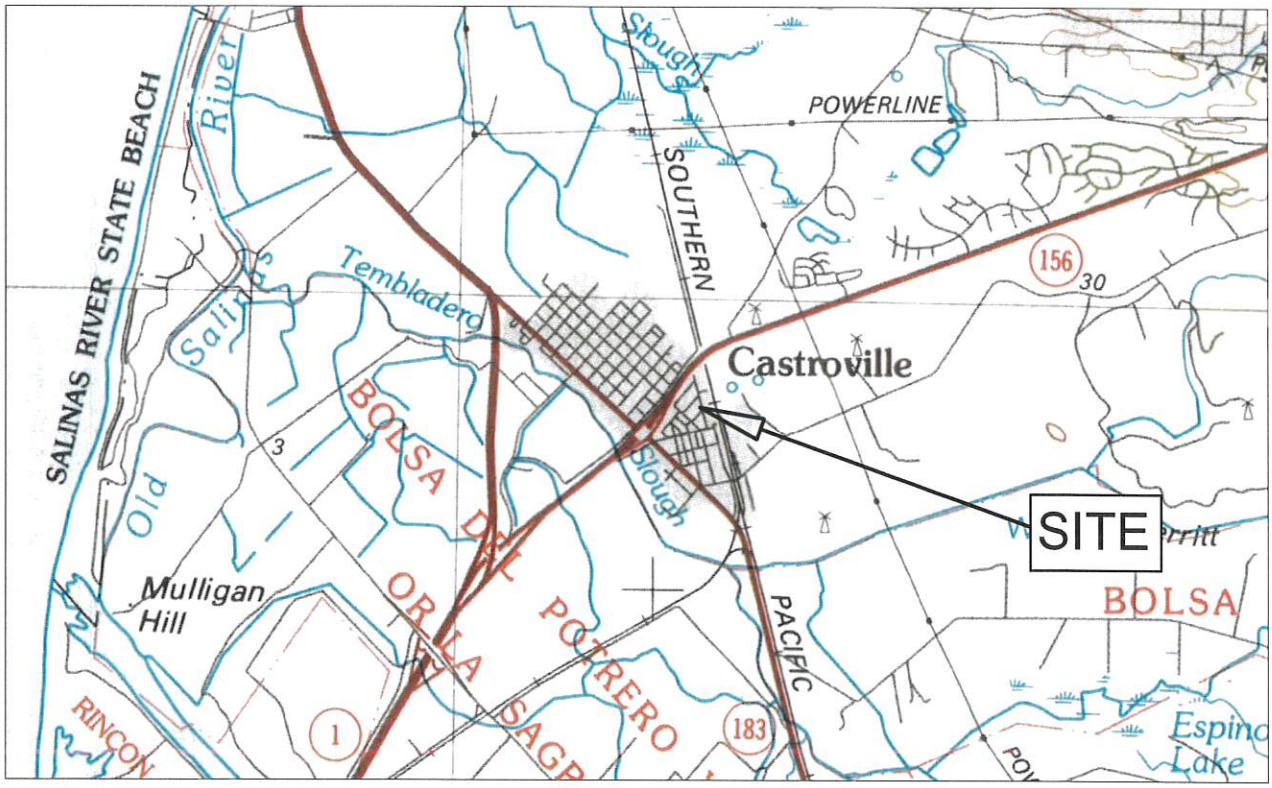
This report is issued with admonishment to the Owner and to his representative(s), that the information contained herein should be made available to the responsible project personnel including the architects, engineers, and contractors for the project. The recommendations contained herein should be incorporated into the plans, the specifications, and the final work.

It is requested that GRICE ENGINEERING INC. be retained to review the project grading and foundation plans to ensure compliance with these recommendations. Further, it is the position of GRICE ENGINEERING INC. that work performed without our knowledge and supervision, or the direction and supervision of a project responsible professional soils engineer renders this report invalid.

It is our opinion the findings of this report are **valid** as of the **present date**, **however**, changes in the **Codes and Requirements** can occur and change the recommendations given within this report concerning the property. In addition changes in the conditions of a property can occur with the passage of time, due either to natural processes or to the works of man and may affect this property. In addition, changes in **standards** may occur as a result of legislation, or the broadening of knowledge, and these changes may require re-evaluation of the conditions stated herein. Accordingly, the findings of this report may be invalidated wholly, or partially, by changes beyond our control. Therefore, this report is subject to review and should not be relied upon after a period of **three years**.

REVISED 01-07-2011

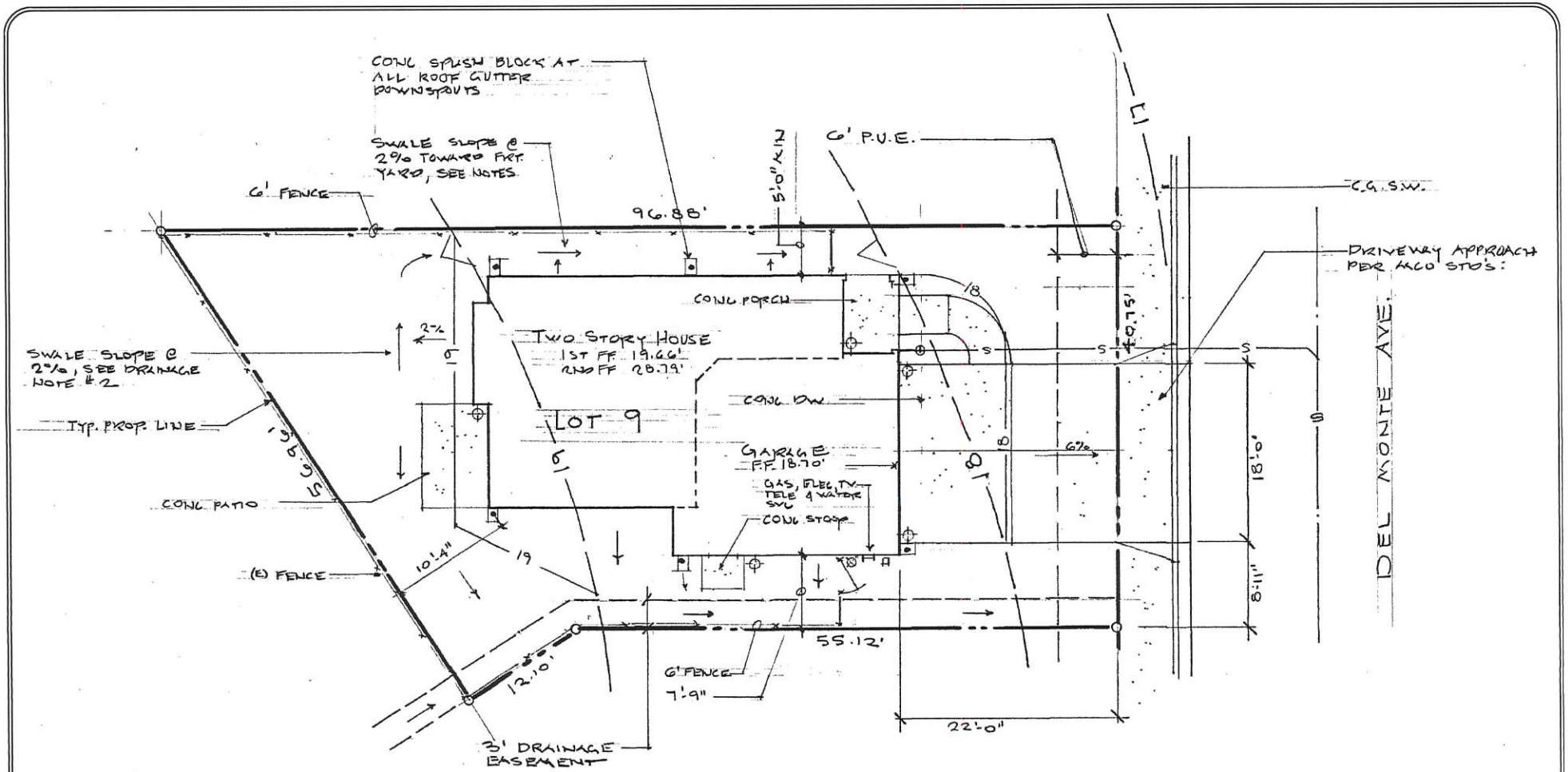
APPENDIX A



Vicinity Map

Location Map

GRICE ENGINEERING INC
561A Brunken Avenue
Salinas, California 93901
Salinas: (831) 422-9619
Monterey: (831) 375-1198 FAX: (831) 422-1896



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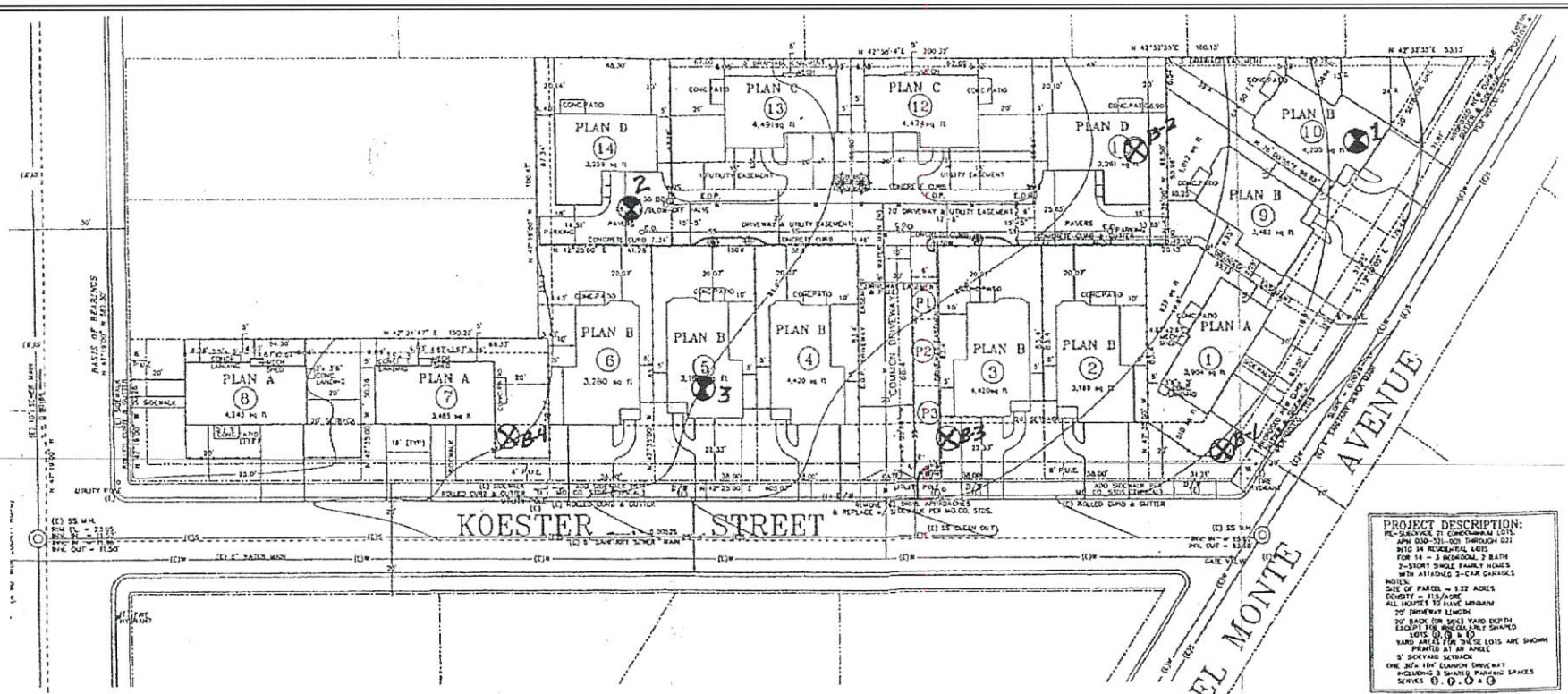
SITE PLAN

SCALE: No Scale



PROJECT DATA TABLE

LOT #	NET LOT AREA*	BUILDING COVERAGE	% COVERAGE	SQ. FT. HOUSE	SQ. FT. GARAGE	SQ. FT. PAVING
1	3,904	948	24.3%	1,379	470	448
2	3,169	1,037	32.7%	1,854	436	493
3	3,169	1,014	32.0%	1,488	436	455
4	3,169	1,037	32.7%	1,536	436	453
5	3,169	1,014	32.0%	1,488	436	493
6	3,280	1,037	31.6%	1,854	436	453
7	3,485	948	27.1%	1,379	470	483
8	4,343	948	21.8%	1,379	470	483
9	3,438	1,037	30.2%	1,854	436	493
10	4,219	1,014	24.0%	1,488	436	453
11	3,241	960	29.6%	1,488	420	755
12	3,334	953	31.4%	1,367	470	548
13	3,431	953	31.2%	1,367	470	548
14	3,259	960	29.5%	1,488	420	733
COMMON DRIVE & EASEMENT	6,016					
TOTAL	53,004	15,989	29.4%			11,721

SITE PLAN

Not to Scale

SCALE 1" = 50'±

FIGURE II

Test Hole Locations by Soil Surveys, Inc. (ap

Test Hole Locations by M. Jacobs (approx.)

By: Soil Surveys, Inc.
103 Church Street
Salinas, CA 93901
ph. 831-757-2172
fax 831-751-7330
email: soilsurveys@redshift.com

APPENDIX B

EXPLORATION DRILL LOG

HOLE NO. 1

PROJECT Khalsa-Villa De Castro Subdivision-Castroville Job # 3784 DATE 1/16/03 LOGGED BY MAR

DRILL RIG Cenozoic B-24 Mobile HOLE DIA. 4" SAMPLER Terzaghi Split Spoon (SPT)

GROUNDWATER DEPTH: INITIAL --- FINAL --- HOLE ELEV. 18'

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER	DRY DENSITY	WATER	LIQUID LIMIT	PLASTIC LIMIT	POCKET PEN.
Black silty clay; stiff, moist	CL/CH	1							
			SPT						
		2							
Same	CL/CH		XXX	10	85.5	24.7	44	15	2.0
		3							
Black silty clay; stiff, moist	CL/CH	4							
Olive-tan clayey silt/silty clay; slightly mottled,	CL	5							
very stiff, moist			SPT						
		6							
Bottom of hole @ 6.5'	CL		XXX	26	86.1	17.0			2.5
		7							
		8							
		9							
		10							
		11							
		12							
		13							
		14							
		15							
		16							
		17							
		18							
		19							
		20							

DEPTH 6.5'

SOIL SURVEYS INC.

EXPLORATION DRILL LOG

HOLE NO. 2

PROJECT Khalsa-Villa De Castro Subdivision-Castroville Job # 3784 DATE 1/16/03 LOGGED BY MAR

DRILL RIG Cenozoic B-24 Mobile HOLE DIA. 4" SAMPLER Terzaghi Split Spoon (SPT)

GROUNDWATER DEPTH: INITIAL --- FINAL --- HOLE ELEV. 21.5'

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER	DRY DENSITY	WATER	LIQUID LIMIT	PLASTIC LIMIT	POCKET PEN.
Black silty clay; stiff, moist	CL/CH	1							
			SPT						
		2							
Same	CL/CH		XXX	9	86.7	24.1			1.5
		3							
	CL/CH	4							
Olive-tan clayey silty/silty clay; very stiff, moist	CL								
		5							
			SPT						
		6							
			XXX	28	85.7	24.5			2.0
		7							
		8							
		9							
Olive-brown silty lean clay; stiff	CL	10							
		11							
		12							
Olive-brown silty clay; very stiff, moist	CL		SPT						
		13							
			XXX	17	85.2	37.7			3.0
		14							
		15							
		16							
Olive-brown silty clay; very stiff	CL	17							
		18							
			SPT						
Grey-brown medium grained sand;	SP	19							
very dense, dry			XXX	58	106.3	3.6			--
		20							

DEPTH 24.5'

SOIL SURVEYS INC.

EXPLORATION DRILL LOG

HOLE NO. 2 CONTINUED

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER	DRY DENSITY	WATER	LIQUID LIMIT	PLASTIC LIMIT	POCKET PEN.
Grey-brown medium grained sand: very dense	SP								
		21							
	SP								
Gravelly @ 22'	SP/SW	22							
		23							
Grey-tan brown medium sand	SP		SPT						
		24							
Bottom of hole @ 24.5'	SP		XXX	62	112.7	3.0			---
		25							
		26							
		27							
		28							
		29							
		30							
		31							
		32							
		33							
		34							
		35							
		36							
		37							
		38							
		39							
		40							
		41							
		42							

DEPTH 24.5' Job #3784

SOIL SURVEYS INC.

EXPLORATION DRILL LOG

HOLE NO. 3

PROJECT Khalsa-Villa De Castro Subdivision-Castroville Job # 3784 DATE 1/16/03 LOGGED BY MAR

DRILL RIG Cenozoic B-24 Mobile HOLE DIA. 4" SAMPLER Terzaghi Split Spoon (SPT)

GROUNDWATER DEPTH: INITIAL --- FINAL --- HOLE ELEV. 21'

DESCRIPTION	SOIL TYPE	DEPTH	SAMPLE	BLOWS PER	DRY DENSITY	WATER	LIQUID LIMIT	PLASTIC LIMIT	POCKET PEN.
Grey-brown silty clay; dry	CL/CH								
		1							
Black silty lean clay; moist, stiff	CL								
		2	SPT						
	CL	3	XXX	10	89.9	23.8	41	15	2.0
	CL	4							
Olive-tan silty lean clay; stiff	CL								
		5							
		6							
		7							
		8							
		9							
		10							
Olive-tan silty lean clay; moist, stiff, slightly	CL		SPT						
mottled		11							
Bottom of hole @ 11.5'	CL		XXX	12	80.5	35.3			4.0
		12							
		13							
		14							
		15							
		16							
		17							
		18							
		19							
		20							

DEPTH 11.5' SOIL SURVEYS INC.

MOISTURE DENSITY TESTS

Test Hole No.	Depth Ft.	Moisture Content %	Dry Density p.c.f.	Standard Penetration Blows/Foot	Pocket Penetrometer Tons/Sq.Ft.
1	2-2.5	24.7	85.5	10	2.0
1	6-6.5	17.0	86.1	26	2.5
2	2-2.5	24.1	86.7	9	1.5
2	6-6.5	24.5	85.7	28	2.0
2	13-13.5	37.7	85.2	17	3.0
2	19-19.5	3.6	106.3	58	--
2	24-24.5	3.0	112.7	62	--
3	2.5-3	23.8	89.9	10	2.0
3	11-11.5	35.3	80.5	12	4.0

Two Plasticity Index (Atterberg Limits) tests were made from the driven core samples; results of these tests are tabulated as follows:

PLASTICITY INDEX TESTS

Test Hole No.	Depth Feet	% Passing Sieve No. 4	% Passing Sieve No. 40	Liquid Limit	Plastic Limit	Plasticity Index
1	2-2.5	100	47	44	16	28
3	2-2.5	100	65	41	15	26

One Compaction Curve was made based on A.S.T.M. D1557-91. Results of that test are as follows:

Compaction Curve A.S.T.M. D 1557-91

Curve No.	Material Description	Maximum Density p.c.f.	Optimum Moisture %
1	Black silty clay (Native)	113.0	13.5

The test hole logs and these tests indicate that the surface and near surface native soil consists of moderately expansive, stiff silty clay to depths ranging from 13 to 18.5 feet below surface; dense sand and gravelly sand was found below the clayey soil to a depth of 46 feet, and stiff silty clay was found from 46 to 50 feet. No free ground water was found in any of our recent test holes to a depth of 24.5 feet on the day of drilling; however free ground water was observed at 26 feet below surface in a Jacobs test hole on January 6, 1987.

GRICE ENGINEERING INC
561A Brunken Avenue
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Monterey: (831) 375-1198 FAX: (831) 422-1896

SOIL CLASSIFICATION CHART
conforms to Unified Soils Classification
and ASTM D2487

UNIFIED SOIL CLASSIFICATION & ASTM D2487: INCLUDING IDENTIFICATION AND DESCRIPTION

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 3 inches and basing fractions on estimated weights)						GROUP SYMBOLS N.	TYPICAL NAMES	INFORMATION REQUIRED FOR DESCRIBING SOILS
COARSE GRAINED SOILS More than half of material is **larger** than No. 200 sieve size is the smallest particle visible to the naked eye)	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size (For visual classifications, the 1/4" size may be used as equivalent to the No. 4 sieve size.)	CLEAN GRAVELS (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes.			GW	Well graded gravels, gravel-sand mixtures, little or no fines.	Give typical name, indicate approximate percentages of sand and gravel, max. size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information, and symbol in parentheses. For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics. EXAMPLE: **Silty Sand,** gravelly; about 20% hard, angular gravel particles ¼ inch maximum size; rounded and subangular sand grains coarse to fine, about 15 % non-plastic fines with low dry strength, well compacted and moist in place, alluvial sand; (SM).
			Predominatly one size or a range of sizes with some intermediate sizes missing.			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines.	
		GRAVELS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML below).			GM	Silty gravels, poorly graded gravel-sand-silt mixtures.	
			Plastic fines (for identification procedures see CL below).			GC	Clayey gravels, poorly graded gravel-sand-clay mixtures.	
	SANDS More than half of coarse fraction is smaller than No. 4 sieve size	CLEAN SANDS (Little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate particle sizes.			SW	Well graded sands, gravelly sands, little or no fines.	
			Predominatly one size or a range of sizes with some intermediate sizes missing.			SP	Poorly graded sands, gravelly sands, little or no fines.	
		SANDS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for idendification procedures see ML below).			SM	Silty sands, poorly graded sand-silt mixtures.	
			Plastic fines (for identification procedures see CL below).			SC	Clayey sands, poorly graded sand-clay mixtures.	
FINE GRAINED SOILS More than half of material is **smaller** than No. 200 sieve size (The No. 200 sieve size is about the smallest particle visible to the naked eye)	IDENTIFICATION PROCEDURES ON FRACTION SMALLER THAN No. 40 SIEVE SIZE		DRY STRENGTH (CRUSHING CHARACTERISTICS)	DILATANCY (REACTION TO SHAKING)	TOUGHNESS (CONSISTENCY NEAR PLASTIC LIMIT)			
	SILTS AND CLAYS Liquid limit less than 50		None to slight	Quick to slow	None	ML	Inorganic silts and very vine sands, rock flour, silty or clayey fine sands withg slight plasticity.	Give typical name, indicate degree and character of plasticity, amount and maximum size of coarse grains, color in wet conditions, odor if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses. For undisturbed soils add information or structure, stratification, consistency in undisturbed and remolded states, moisture and drainage conditions. EXAMPLE: **Clayey silt**, brown, slightly plastic, small percentage of fine sand, numerous vertical root holes, firm and dry in place, loess; (ML).
			Medium to high	None to very slow	Medium	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	
			Slight to medium	Slow	Slight	OL	Organic silts and organic silt-clays of low plasticity.	
	SILTS AND CLAYS Liquid limit greater than 50		Slight to medium	Slow to none	Slight to medium	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
			High to very high	None	High	CH	Inorganic clays of high plasticity, fat clays.	
			Medium to high	None to very slow	Slight to medium	OH	Organic clays of medium to high plasticity.	
HIGHLY ORGANIC SOILS			Readily identified by color, odor, spongy feel and frequently by fibrous texture.			Pt	Peat and other highly organic soils.	

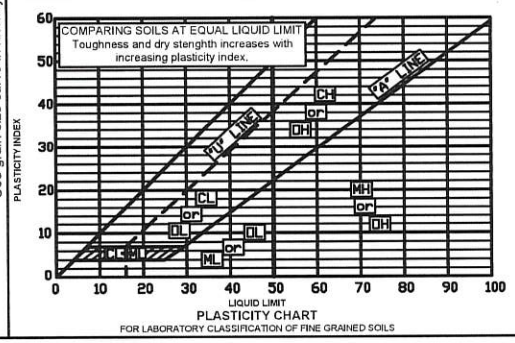
LABORATORY CLASSIFICATION CRITERIA

Use grain size curve in identifying the fractions as given under field identification.

Determine percetages of gravel and sand from grain size curve. Depending on percentage of fines (fractin smaller than No. 200 sieve size) coarse grained soils are classified as follows:

Less than 5% GW, GP, SW, SP
More than 12 % GM, GC, SW, SC
5% to 12% **Borderline** cases requiring use of dual symbols.

$C_u = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_c = \frac{(D_{30})^2}{(D_{10} \times D_{60})}$ Between one and 3	
Not meeting all gradation requirements for GW	
Atterberg limits below "A" line or PI less than 4	Above "A" line with PI between 4 and 7 are **borderline** cases requiring use of dual symbols
Atterberg limits above "A" line or PI greater than 7	
$C_u = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_c = \frac{(D_{30})^2}{(D_{10} \times D_{60})}$ Between one and 3	
Not meeting all gradation requirements for SW	
Atterberg limits below "A" line or PI less than 4	Above "A" line with PI between 4 and 7 are **borderline** cases requiring use of dual symbols
Atterberg limits above "A" line or PI greater than 7	



PLASTICITY CHART
FOR LABORATORY CLASSIFICATION OF FINE GRAINED SOILS

N. **Boundary** classifications: Soils possessing characteristics of two groups are designated by combinations of group symbols. For examle GW-GC, well graded gravel-sand mixture with clay binder.
N. All sieve sizes on this chart are U.S. Standard.

FIELD IDENTIFICATION PROCEDURES FOR FINE GRAINED SOILS OR FRACTIONS

These procedures are to be performed on the minus No. 40 sieve size particles, approximately $\frac{1}{30}$ inches. For field classification purposes, screening is not intended; simply remove by hands the coarse particles that interfere with the test.

DILATANCY (Reaction to shaking)

After removing portions larger than No. 40 sieve size, prepare a pot of moist soil with a volume of about one-half cubic inch. Add enough water if necessary to make the soil soft but not sticky.

Place the pot in the open palm of one hand and shake horizontally, stricking vigorously against the other hand several times. A positive reaction consists of the appearance of water on the surface of the pot which changes to a livery consistancy and becomes glossy. When the sample is squeezed between the fingers, the water and gloss disappear from the surface, the pot stiffens and finnally it crackes or crumbles. The rapidity of appearance of water during shaking and of its diappearance during squeezing assist in identifying the character of the fines in a soil.

Very fine clean sands give the quickes and most distinct reactoin whereas a plastic clay has no reaction. Inorganic silts, such as a typical rock flour, show a moderately quick reaction.

DRY STRENGTH (Crushing characteristics)

After removing particles larger than No. 40 sieve size, mold a pat of soil to the consistency of putty, adding water if necessary. Allow the pat to dry completely by oven, sun, or air drying, and then test its strength by breaking and crumbling between the fingers. This strength is a measure of the character and quality of the colloidal fraction contained in the soil. The dry strength increases with increasing plasticity.

High dry strength is characteristic for clays of the CH group. A typical inorganic silt possesses only very slight dry strength. Silty fine sand and silts have about the same slight dry strength, but can be distinguished by the feel when powdering the dried specimen. Fine sand feels gritty whereas a typical silt has the smooth feel of flour.

TOUGHNESS (Consistency near plastic limit)

After removing particles larger that the No. 40 sieve size, a specimen of soil about one-half inch cube in size is molded to the consistency of putty. If too dry, water must be added and if sticky, the specimen should be spread out in a thin layer and allowed to lose some moisture by evaporation. Then the specimen is rolled out by hand on a smooth surface of between the palms into a thread about one-eight inch in diameter . The thread is then folded and rerolled repeatedly. Durning this manipulation the moisture content is gradually reduced and the specimen stiffens, finally loses its plasticitiy, and crumbles when the plastic limit is reached.

After the thread crumbles, the pieces should be lumped together and a slight kneading action continued until the lump crumbles.

The tougher the thread near the plastic limit and the stiffer the lump when it finally crumbles, the more potent is the colloidal clay fraction in the soil. Weakness of the thread at the plastic limit and quick loss of coherence of the lump below the plastic limit indicate either inorganic clay of low plasticity, or materials such as kaolin-type clays and organic clays which occure below the A-line.

Highly organic clays have a very weak and spongy feel at the plastic limit.

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