



6RD05-0113

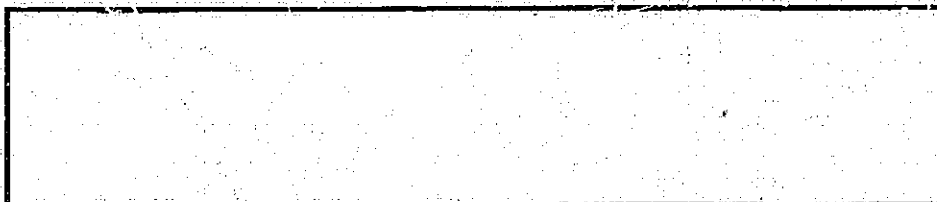
Building Permit Number (List all associated with these documents)

1301

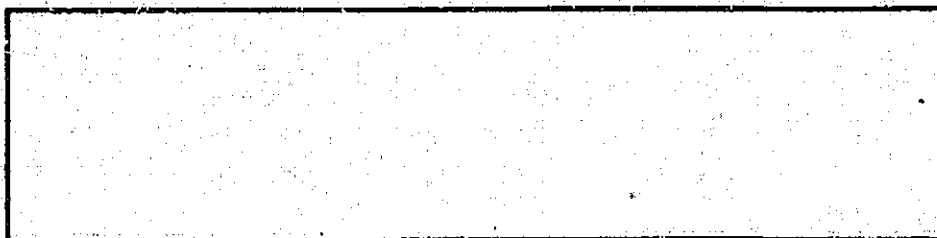
Street Number

Cunningham Rd

Street Name



Community Code



APN

COUNTY OF SONOMA - PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403 (707) 565-1900 FAX (707) 565-1103

Please Print
Your Name:

Grant

Date
Applied:

INFORMATION WITHIN HEAVY LINE TO BE COMPLETED BY APPLICANT

SITE LOCATION INFORMATION (PRINT CLEARLY)	
Site Address: <u>1301 Cunningham Rd</u>	City: <u>Sebastopol</u> ZIP: <u>95472</u>
Cross Street:	APN: <u>063-090-068</u>
Directions:	Subd. Name: _____
Describe Project: <u>Renew expired Plan check</u> <u>Barn grading 60003</u>	Project Unit # _____
	Contract Price: _____
Living Area _____ Garage _____ Decks _____	

OWNER NAME AND ADDRESS		APPLICANT NAME AND ADDRESS	
Name: <u>Grant Smart</u>		Name: <u>Same as Owner</u>	
Mailing Address: <u>1301 Cunningham Rd</u>		Mailing Address: _____	
City: <u>Sebastopol</u>	State: <u>Ca</u>	City: _____	State: _____
Day Ph: () <u>824-8800</u>	Fax: () _____	Day Ph: () _____	Fax: () _____
ZIP: <u>95472</u>		ZIP: _____	

CONTRACTOR INFORMATION		OTHER PERSONS (ARCHITECT, ENGINEER, ETC.)	
Company Name: _____		Name: <u>John Moe (Civil)</u>	
Address: _____		Address: <u>2950 Montecito Ave</u>	
City: _____	State: _____	City: <u>Santa Rosa</u>	State: <u>Ca</u>
Day Ph: () _____	Fax: () _____	Day Ph: () <u>544-6270</u>	Fax: () _____
ZIP: _____		ZIP: _____	

WORKER'S COMPENSATION DECLARATION		CONSTRUCTION LENDING DECLARATION	
I hereby affirm under penalty of perjury one of the following declarations: ☐ I have and will maintain a certificate of consent to self-insure for worker's compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. ☐ I have and will maintain worker's compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My worker's compensation insurance carrier and policy number are:		I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued. (Sec. 3397, Civ. C.) Lenders Name: _____ Lenders Address: _____	

FOR DEPARTMENT USE	
RRB6296	Acres <u>7.47</u>
Use/Structure: <u>new barn</u> Grading: <u>for new barn</u> NOTE: Fire Safe Standards require all parcels greater than 1 Acre to have a min. 30' setback unless mitigated. ☐ Mitigation Required ☐ Address subject to change Approval for Permit Issuance: _____ Approval for Occupancy: _____ Ex. Date: _____ Conditions: <u>NO BR</u> <u>NO SR - Plan check approved for new barn - prior permit</u>	

OWNER-BUILDER DECLARATION	
I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code): Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code); or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500). ☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044 Business and Professions Code). The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale. ☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code). The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law. ☐ I am exempt under Sec. _____ B & P.C. for this reason: _____ Date: <u>11/17/04</u> Owner: <u>[Signature]</u>	
LICENSED CONTRACTOR'S DECLARATION	
I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect. Use Class: _____ Lic. No.: _____ Exp. Date: _____ Contractor: _____	

ASBESTOS DECLARATION	
Written asbestos notification pursuant to Part 61 of Title 40 of the Code of Federal Regulations is required when asbestos exists in buildings, or portions thereof, undergoing demolition. I hereby declare that demolition authorized by this permit is from construction of () does () does not contain asbestos, or that () no demolition is authorized by this permit. I certify that I have read this application and affirm under penalty of perjury that the above information is correct. I agree to comply with all local Ordinances and State laws relating to building construction. I hereby authorize representatives of the County of Sonoma to enter upon the above-mentioned property for inspection purposes. If, after making the Certificate of Exemption for the Worker's Compensation provision of the Labor Code I should become subject to such provisions, I will not comply. In the event I do not comply with the Workman's Compensation law, this permit shall be deemed revoked. PERMITTEE SIGNATURE: <u>[Signature]</u> ADDRESS: _____ CITY: _____ ZIP: _____ ☐ Contractor ☐ Owner ☐ Other Licensed Professional	

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT	
Final Date: <u>June 29, 2007</u> Inspector: <u>John Moore</u>	Disbursement: White - File, Green - Applicant, Pink - Audit Copy, Blue - Assessor, Cardstock - Inspector

JOB ADDRESS:

1301 Cunningham Rd

PERMIT NUMBER: 51005-0113

INSPECTION AREA

9

131)	SPECIAL INSPECTION REQUIRED	☒ YES	☐ NO	IF YES, SEE ADDITIONAL SHEET
	INSPECTION RECORD	DATE	NAME	REMARKS
101)	ROUGH GRADING			<i>CRDL</i> FILL SHALL BE PLACED UNDER THE SUPERVISION AND CONTROL OF A SOILS ENGINEER. THE SOILS ENGINEER SHALL PREPARE A REPORT ON FILL PLACEMENT, INCLUDING COMPACTION TEST RESULTS. THIS REPORT SHALL BE REVIEWED AND APPROVED BY THE BUILDING DEPARTMENT PRIOR TO APPROVAL FOR FOUNDATION CONSTRUCTION.
103)	FOUNDATION			
	FORMS/SETBACK			
	FOOTING			
	WALLS			
106)	UNDER GROUND #			
104)	CAISSONS/PIERS			
105)	SLAB			
107)	UNDERGROUND UTILITIES			
110)	MASONRY			
109)	RETAINING WALLS			
113)	FIREPLACE			
	FOOTING			
	HEARTH/PROTECTION			
	THROAT			
114)	CHIMNEY			
120)	UNDERFLOOR/UNDERSLAB			
115)	HYDRONICS			
116)	U/F ELECTRICAL			
117)	U/F MECHANICAL			
118)	U/F PLUMBING			
119)	U/F FRAMING			
139)	U/F INSULATION			
126)	SHEAR WALLS			
	☐ INTERIOR		☐ EXTERIOR	
127)	DIAPHRAGMS			
	☐ ROOF		☐ FLOOR	
134)	SIDING/SHEATHING			
125)	HOLD DOWNS			
132)	CLOSE-IN			
122)	ROUGH ELECTRICAL			
123)	ROUGH MECHANICAL			
124)	ROUGH PLUMBING			
128)	ROUGH FRAME			
160)	SMOKE DETECTORS			
139)	INSULATION			
142)	WALLBOARD			
143)	FIREWALLS			
135)	STUCCO/PLASTER			
	☐ LATH		☐ SCRATCH	
137)	ROOFING			
130)	TUB/SHOWER PAN			
162)	FIRE DAMPERS/DOORS			
164)	SUSPENDED CEILING			
	☐ ROUGH ELEC.		☐ ROUGH MECH.	
165)	EXITING - RAMPS/STAIRS			
163)	HANDRAILS/GUARDRAILS			
	CORRIDORS/DOORS			
166)	ACCESSIBILITY COMPLIANCE			
144)	WATER TANKS			
	☐ SLAB		☐ WALLS	
170)	TEMPORARY OCCUPANCY			
171)	TEMPORARY ELECTRICAL			
172)	TEMPORARY GAS			
174)	ELECTRIC METER AUTHORIZATION			
152)	PANEL BOARDS/SERVICE			
189)	SEPTIC ELECTRIC FINAL			
175)	GAS METER AUTHORIZATION			
153)	GAS PRESSURE TEST			
	HOUSE		YARD	
190)	MANUF. HOME FOUNDATION			
191)	MANUF. HOME INSTALLATION			
	CONTINUITY			
	STAIRS/SKIRTS			
	RIDGE BOLTING			
193)	MANUF. HOME COND. FINAL			
	SWIMMING POOLS			
194)	PRE-GUNITE			
195)	PRE-DECK			
196)	PRE-PLASTER/FENCE			
197)	VINYL/FIBERGLASS POOL EXCAVATION			
102)	GRADING FINAL			
176)	ELECTRICAL FINAL			
177)	MECHANICAL FINAL			
178)	PLUMBING FINAL			
199)	FINAL			
	OCCUPANCY (OK TO OCCUPY)			
650)	SUSMP INSPECTION			
651)	NPDES EROSION COMPLIANCE			
652)	NPDES SEDIMENT COMPLIANCE			
653)	NPDES DOCS/SWPPP			
	FIRE INSPECTION REQUIRED		DATE	NAME
	☐ Yes ☒ No			
759)	KNOX BOX			
760)	PROPANE TANK HOLD DOWNS			
770)	SPRINKLER FINAL			
771)	ABOVEGROUND HYDROSTATIC			
772)	UNDERGROUND HYDROSTATIC			
773)	UNDERGROUND FLUSH			
774)	THRUST BLOCKS			
775)	PIPE WELD			
776)	HYDRA. TS/APPLIANCES			
777)	PUMP ACCEPTANCE			
778)	WATER SUPPLY/TANK			
779)	ALARM SYSTEM			
780)	HOOD & DUCT SYSTEM			
781)	ABOVEGROUND TANK/DISPENSER			
198)	FIRE FINAL			
	CLEARANCES:			
	FIRE	☐ Local	☐ County	
	HEALTH DEPARTMENT			
	ZONING			
	SANITATION			
	PLAN RETENTION REQUIRED?			
	☐ Yes ☐ No			

PERMIT # 66004-0315

COUNTY OF SONOMA - PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403 (707) 565-1900 FAX (707) 565-1103

Please Print
Your Name:

Date:
Applied:

INFORMATION WITHIN HEAVY LINE TO BE COMPLETED BY APPLICANT

Site Address:		City:		ZIP:	
Cross Streets:	APN:	Project Phone #:	Project Fax #:		
Directions:	Subd. Name:	Unit #:	Lot #:		
Describe Project:	Living Area:	Contract Price:			
	Garage:				
	Decks:				

OWNER NAME AND ADDRESS			APPLICANT NAME AND ADDRESS		
Name:			Name:		
Mailing Address:			Mailing Address:		
City:	State:	ZIP:	City:	State:	ZIP:
Day Ph. ():	Fax ():		Day Ph. ():	Fax ():	

CONTRACTOR INFORMATION			OTHER PERSONS (ARCHITECT, ENGINEER, ETC.)		
Company Name:			Name:		
Address:			Address:		
City:	State:	ZIP:	City:	State:	ZIP:
Day Ph. ():	Fax ():		Day Ph. ():	Fax ():	
License No.:			Exp. Date:		

WORKER'S COMPENSATION DECLARATION

I hereby affirm under penalty of perjury one of the following declarations:
☐ I have and will maintain a certificate of consent to self-insure for worker's compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I have and will maintain worker's compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My worker's compensation insurance carrier and policy number are:

Carrier:
Policy No.:

(This section need not be completed if the permit is for one hundred dollars (\$100) or less).

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the worker's compensation laws of California, and agree that, if I should become subject to the worker's compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Exp. Date: Applicant:

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3700 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEES.

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code): Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9, commencing with Section 7000), of Division 3 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violator of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044 Business and Professions Code). The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself, or herself, or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale.

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code). The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.

☐ I am exempt under Sec. B & P.C. for this reason:

Date: Owner:

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9, commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Lic. Class: Lic. No.:

Exp. Date: Contractor:

ASBESTOS DECLARATION

Written asbestos notification pursuant to Part 61 of Title 40 of the Code of Federal Regulations is required when asbestos exists in buildings, or portions thereof, undergoing demolition. I hereby declare that asbestos notification is not required for construction that () does, () does not contain asbestos, or that () no demolition is authorized by this permit.

I certify that I have read this application and affirm under penalty of perjury that the above information is correct. I agree to comply with all local Ordinances and State laws relating to building construction. I hereby authorize representatives of the County of Sonoma to enter upon the above-mentioned property for inspection purposes. If, after making the Certificate of Exemption for the Worker's Compensation provision of the Labor Code I should become subject to such provisions, I will forthwith comply. In the event I do not comply with the Workman's Compensation law, this permit shall be deemed revoked.

PERMITTEE SIGNATURE:

ADDRESS: CITY: ZIP:

☐ Contractor ☐ Owner ☐ Other Licensed Professional

Final Date: Inspector:

CONSTRUCTION LENDING DECLARATION

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.).

Lenders Name:

Lenders Address:

FOR DEPARTMENT USE

Zoning: File No. Acres:

Existing Use/Structures:

Proposed Use/Structures:

Zoning Min. Yard Requirements: Front: Left: Right: Back:

NOTE: Fire Safe Standards require all parcels greater than 1 Acre to have a min. 30' setback unless mitigated. ☐ Mitigation Required ☐ Address subject to change.

Approval for Permit Issuance: Approval for Occupancy:

By: Date:

Conditions:

Sewer Connection: ☐ Available ☐ Fees Paid

Approved by: Date:

Road Encroachment: ☐ Fees Paid

Approved by: Date:

Septic System Permit/Clearance #

Approved by: Date:

Flood Zone: ☐ Yes ☒ No 100 Year Flood Elevation:

Site Review

Drainage Review

Approved by: Date:

Fire

Approved by: Date:

Code Enforcement Violation ☐ Yes ☐ No Violation #:

This permit is limited to days.

Work Authorized:

☐ Plans Approved ☐ Post FIRM ☐ Asbestos Photo Report Available

☐ No Plans Subject to Field Inspection ☐ Pre FIRM ☐ Geotechnical report Available

Permittee Signature: Date:

Permit Cleared By: Date:

Permit Cleared for Issuance By: Date:

Auto. Fire Suppressants Req'd

No. of Units

Certificate of Occupancy

Machine Space for Permit Fee

Distribution: White - File - Copy - Applicant - Pink - Audit Copy - Blue - Assessor - Cardstock - Inspector

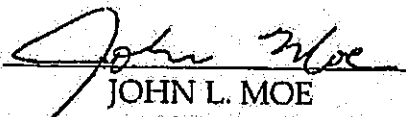
HYDROLOGY and HYDRAULIC CALCULATIONS

Smoot Barn

1301 Cunningham Road

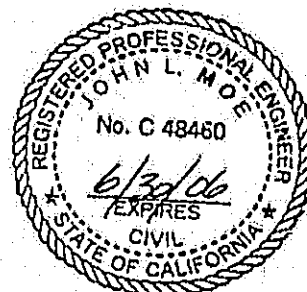
Sebastopol, California

BY:


JOHN L. MOE

R.C.E. 48460

EXPIRES 6/30/2006



The hydrology and hydraulic design herein is based on the Flood Control Design Criteria, Sonoma County Water Agency, Santa Rosa, California. All figures and pages reference that design guide.

HYDROLOGY DESIGN:

This study uses the Rational Method to determine design discharges. The watershed is small (less than 1 square mile) and thus is classified as a Minor Waterway. The design storm is based on a 10-year recurrence interval.

The design flow has been calculated using the Rational Method as follows:

$$Q = CIAK$$

where:

Q = Design discharge in cubic feet per second

C = Runoff Coefficient (Plate No. B-1)

(Residential, over 1/2 acre lots, ground slope between 5% and 10%)

I = Rainfall intensity in inches per hour, Plate No. B-2

A = Drainage area in acres

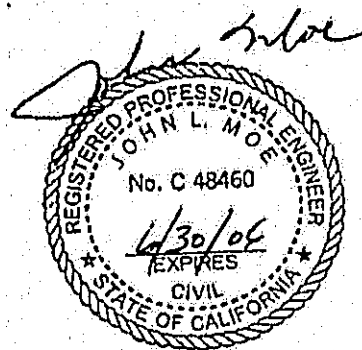
K = K factor (Plate No. B-4) = 1.35

The initial time of concentration of 15 minutes was chosen due to the residential lots being larger than 1/2 acres and the average ground slope between 5% and 10%.

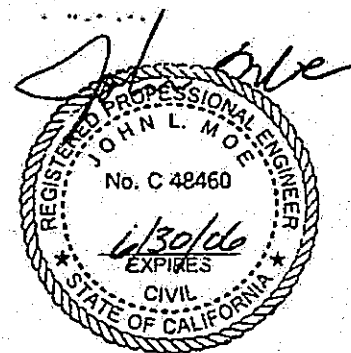
Mean Seasonal Precipitation (MSP) was determined from the isohyetal map, Plate No. B-3. The value of the MSP is 35 for this project and K=1.35.

HYDRAULIC DESIGN:

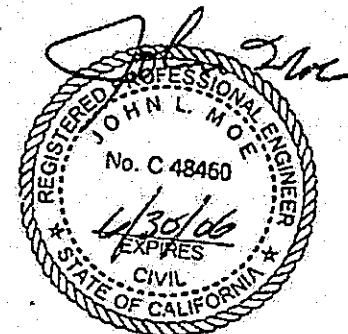
See the following Hydrology and Hydraulic calculations and Hydrology Map for this site.



HYDROLOGY																			
RATIONAL METHOD DRAINAGE STUDY																			
PROJECT: 1301 CUNNINGHAM ROAD, SEBASTOPOL							MSP =		35		Inches		JOB NO.: 2003-013						
DESIGNED BY: JOHN MOE							DURATION =		10		year		DATE: 8/27/2004						
OVERLAND FLOW TIME																			
POINT	ROOF TO			VEL		OVER-	10 YR	10 YR	100 YR	100 YR							sum		
OF AREA	GUTTER	DIST.	SLOPE	10 YR	PIPE	LAND	TRAVEL	TOTAL	TRAVEL	TOTAL	10 YR	K	C	A	sum A	K*CA	K*CA	Q-10	
CONC.	TIME		%	f.p.s.	TIME	TIME	TIME	TIME	TIME	TIME	INTENS.			acres	acres			c.f.s.	
1	A	INITIAL TIME						15.00			1.70	1.35	0.45	0.33	0.33	0.20	0.20	0.34	
2	B	60	1.0%	3.80	0.263			15.26			1.69	1.35	0.45	0.52	0.85	0.32	0.52	0.87	
3	C	92	3.5%	4.50	0.341			15.60			1.67	1.35	0.50	0.15	1.00	0.10	0.62	1.03	
4	D	167	6.6%	9.50	0.293			15.90			1.65	1.35	0.50	1.11	2.11	0.75	1.37	2.26	
5		200	4.7%	8.50	0.392			16.29			1.63								
6	E	INITIAL TIME						15.00			1.70	1.35	0.45	0.17	0.17	0.10	0.10	0.18	
7	F	80	0.8%	3.80	0.351			15.35			1.68	1.35	0.45	0.47	0.64	0.29	0.39	0.65	
8	G	80	0.8%	4.50	0.206			15.65			1.67	1.35	0.50	0.57	1.21	0.38	0.77	1.29	
9	H	55	1.5%	9.50	0.096			15.74			1.66	1.35	0.50	0.07	1.28	0.05	0.82	1.36	
10	I	68	1.5%	8.50	0.133			15.88			1.65	1.35	0.50	0.52	1.80	0.35	1.17	1.94	
11		220	3.2%	8.50	0.431			16.31			1.63								



HYDRAULIC CALCULATIONS																	
UNDERGROUND PIPE DRAINAGE SYSTEM																	
PROJECT: 1301 Cunningham Road, Sebastopol									MANNING'S 'N':		0.024 cpm or		0.012 PVC		DESIGNED BY: JOHN MOE		
JOB NO.: 2003-013									DURATION		10 year				DATE: 8/27/2004		
CATEGORY		PIPE DATA			FLOW DATA				HEAD LOSSES					ELEVATIONS			
ITEM	LNTH	DIA.	AREA	MANN.	FLOW	VEL.	VEL. HD.	SLOPE	FRICTION	CONTR.	ELARG.	BENDS	TOTAL	E GRADE	HYD. GRD.	INLET	INVERT
SYMBOL	L	D	A	n	Q	V	V ² /2g	Sf	Hf	Hc	He	Hb	H	EGL	HGL	FG	INV
UNIT	ft	ft	ft ²		ft ³ /sec	ft/sec	ft	ft/ft	ft	ft	ft	ft	ft	elev. in ft.	elev. in ft.	elev. in ft.	elev. in ft.
(Starting HGL = normal depth at outlet)														68.80			
PT5																69.33	68.50
OUTLET											1.23		1.23	70.03	68.80		
8" SD	200	0.67	0.35	0.012	2.26	8.91	1.23	0.04700	9.40				9.40				
INLET										0.18			0.18	79.43	78.20		
PT4													0.00	79.62		80.80	77.80
OUTLET											0.78		0.78	80.39	79.62		
8" SD	167	0.67	0.35	0.012	1.03	7.07	0.78	0.06600	11.02				11.02				
INLET										0.12			0.12	89.70	88.92		
PT3													0.00	89.81		91.75	88.75
OUTLET											0.63		0.63	89.55	88.92		
6" SD	92	0.50	0.20	0.012	0.87	6.35	0.63	0.03530	3.25				3.25				
INLET										0.09			0.09	92.79	92.17		
PT2												0.94	0.94	93.83		94.50	92.00
OUTLET											0.05		0.05	93.15	93.11		
6" SD	60	0.50	0.20	0.012	0.34	1.74	0.05	0.00314	0.19				0.19				
INLET										0.01			0.01	93.34	93.30		
PT1													0.00	93.35		95.10	92.60



HYDRAULIC CALCULATIONS **UNDERGROUND PIPE DRAINAGE SYSTEM**

PROJECT: 1301 Cunningham Road, Sebastopol	MANNING'S 'N': 0.024	cmp or 0.012	PVC	DESIGNED BY: JOHN MOE
JOB NO.: 2003-013	DURATION: 10	year		DATE: 8/27/2004

CATEGORY	PIPE DATA			FLOW DATA					HEAD LOSSES					ELEVATIONS			
ITEM	LNQTH	DIA.	AREA	MANN.	FLOW	VEL.	VEL. HD.	SLOPE	FRIC. ION	CONTR.	ELARG.	BENDS	TOTAL	E GRADE	HYD. GRD.	INLET	INVERT
SYMBOL	L	D	A	n	Q	V	V ² /2g	Sf	Hf	Hc	He	Hb	H	EGL	HGL	FG	INV
UNIT	ft	ft	ft ²		ft ³ /sec	ft/sec	ft	ft/ft	ft	ft	ft	ft	ft	elev. in ft.	elev. in ft.	elev. in ft.	elev. in ft.
														(Starting HGL = normal depth at cullet)		74.90	
PT11																75.50	74.50
OUTLET											0.84		0.84	75.74	74.90		
8" SD	220	0.67	0.35	0.012	1.94	7.35	0.84	0.03200	7.04				7.04				
INLET										0.13			0.13	82.78	81.94		
PT10													0.00	82.91		86.40	81.53
OUTLET											0.23		0.23	83.14	82.91		
8" SD	68	0.67	0.35	0.012	1.36	3.87	0.23	0.01052	0.72				0.72				
INLET										0.03			0.03	83.85	83.62		
PT 9													0.00	83.89		85.90	82.55
OUTLET											0.21		0.21	83.83	83.62		
8" SD	55	0.67	0.35	0.012	1.29	3.66	0.21	0.00940	0.52				0.52				
INLET										0.03			0.03	84.35	84.14		
PT 8												0.31	0.31	84.69		85.90	83.38
OUTLET											0.05		0.05	84.50	84.45		
8" SD	80	0.67	0.35	0.012	0.65	1.85	0.05	0.00242	0.19				0.19				
INLET										0.01			0.01	84.70	84.64		
PT 7													0.00	84.70		85.90	84.02
OUTLET											0.01		0.01	84.66	84.64		
6" SD	80	0.50	0.20	0.012	0.18	0.90	0.01	0.00083	0.07				0.07				
INLET										0.00			0.00	84.72	84.71		
PT 6													0.00	84.72		85.90	84.65



Open Channel Flow Calculations

- Earth Swale -

1301 Cunningham Road
Sebastopol, California

CAPACITY OF EARTH SWALE - POINT OF CONCENTRATION #2:

Check flow - contain flow within swale

The swale is 4 feet wide at the top and 12 inches deep.

Design Flow: Tributary Area "B"

$$Q = K \cdot C \cdot I \cdot A$$

K = 1.35

C = 0.45

I = 1.7 in/hr (at point of concentration #2)

Area = 0.55 acres

Q = 0.56 c.f.s.

CHEZY-MANNING EQUATION:

$$Q = (1.49/N) \cdot A \cdot R_h^{2/3} \cdot S^{1/2}$$

where,

n = Manning's n

A = Area (s.f.)

Wp = Wetted Perimeter

Rh = A/Wp = Hydraulic Radius

S = Slope

n = 0.030

(Swale - good condition)

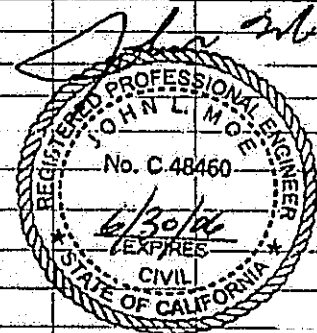
A = 2.00 s.f.

Wp = 4.47 ft.

Rh = A/Wp = 0.447

S = 0.02 (minimum swale slope)

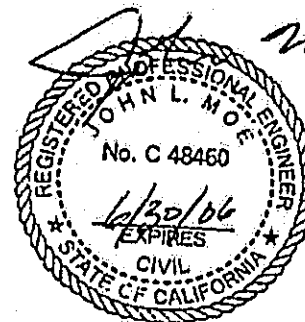
	MAX	DESIGN	
SLOPE	Q	Q	
2%	8.2	0.56	OK



Inlet Capacity Calculations

1301 Cunningham Road
Sebastopol, California

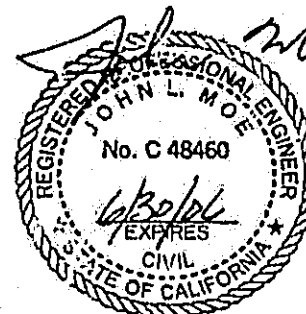
INLET CAPACITY :			
Check largest tributary area to an inlet: Tributary Area "G", point of concentration #8.			
Check design flow for 10-year frequency:			
Area	0.57	acres	
K	1.35		
C	0.5		
i	1.7	in/hour	
Q=	0.65	c.f.s.	
Check drop inlet capacity - using 16" x 16" grate opening.			
$Q = C \cdot P \cdot (H)^{3/2}$			
where,	C= Inlet coefficient, use 3.0		
	P= Perimeter of the inlet - Use 50% of actual perimeter length due to grate		
	H= Height of water (0.25' max)		
C=	3.0		
P=	2.68	ft. (4 x 0.67 = 2.68)	
H=	0.25	ft.	
Q=	1.01	c.f.s.	(Max.)
Q=	0.65	c.f.s.	(Design, tributary area G, largest tributary area, point of concentration #8)
Qmax > Qdesign O.K.			



Catch Basin Inlet Capacity Calculations

1301 Cunningham Road
Sebastopol, California

Point of Concentration #10			
FOR SIDE OPENING CATCH BASIN INLET CAPACITY, USE WEIR DISCHARGE FORMULA TO CALCULATE THE FLOW RATE AND CHECK HYDROLOGY FOR THE ANTICIPATED FLOW:			
$Q = C \cdot L \cdot H^{3/2}$			
where,	C= 1.5	Broad crested weir	
	L= 1.5	Length of opening	
	H=	Depth of water above grate	
For 1.5 foot wide by 9" high side opening inlet, check weir discharge:			
	C= 1.5		
	L= 1.5		
	H= 0.75	(design depth)	
	Q= 1.46 cfs	(max.)	
CHECK ANTICIPATED DESIGN FLOW (10 year event) FOR TRIBUTARY AREA "I":			
$Q = K \cdot C \cdot I \cdot A$			
where,	K= 1.35		
	C= 0.5		
	I= 1.7 in./hr.		
	A= 0.52 acres		
	Q= 0.60 cfs	(design)	
O.K.	Qmax = 1.46 cfs > Qdesign = 0.60 cfs		

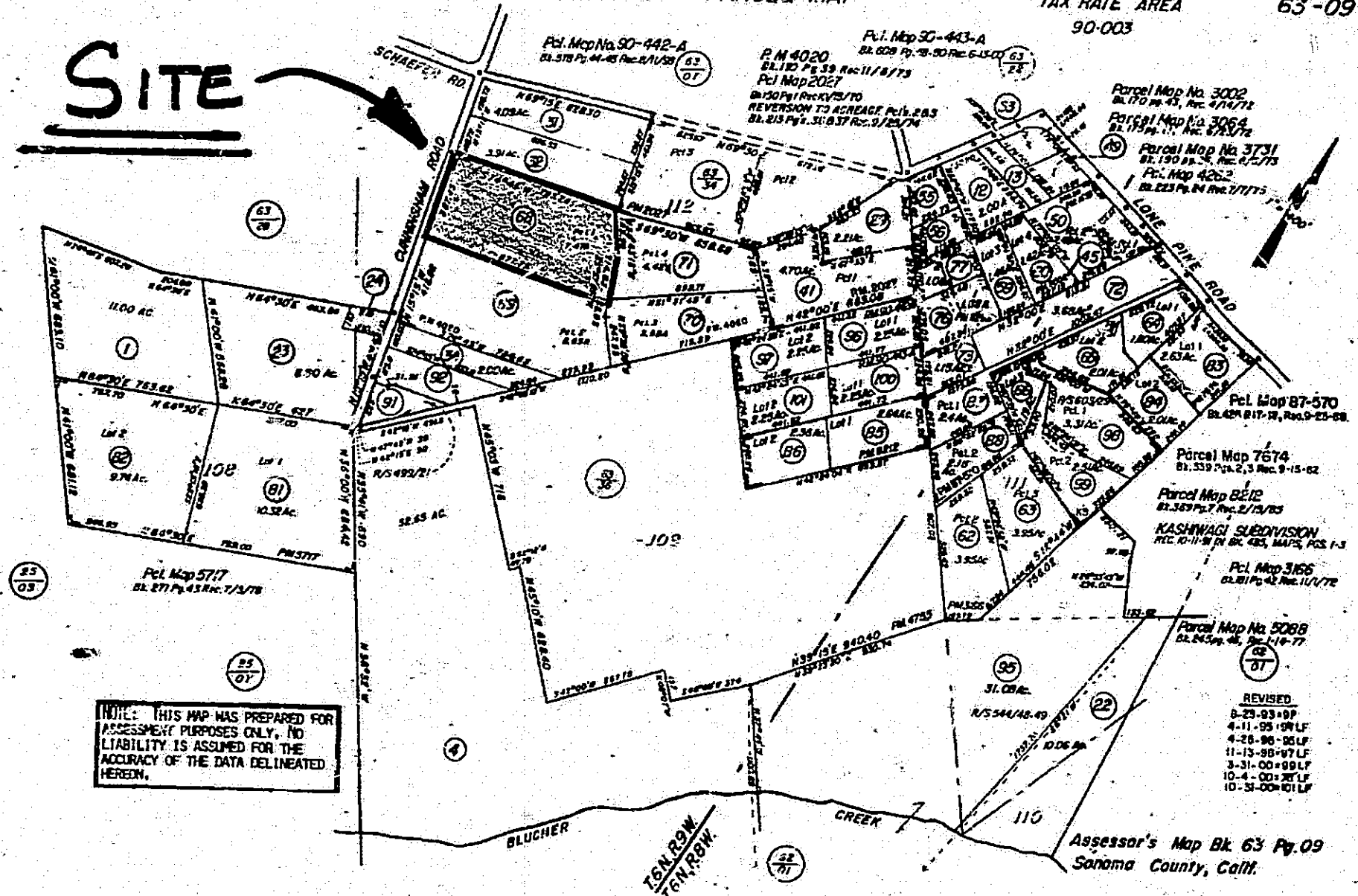


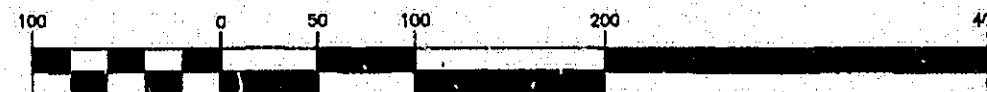
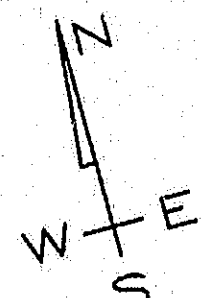
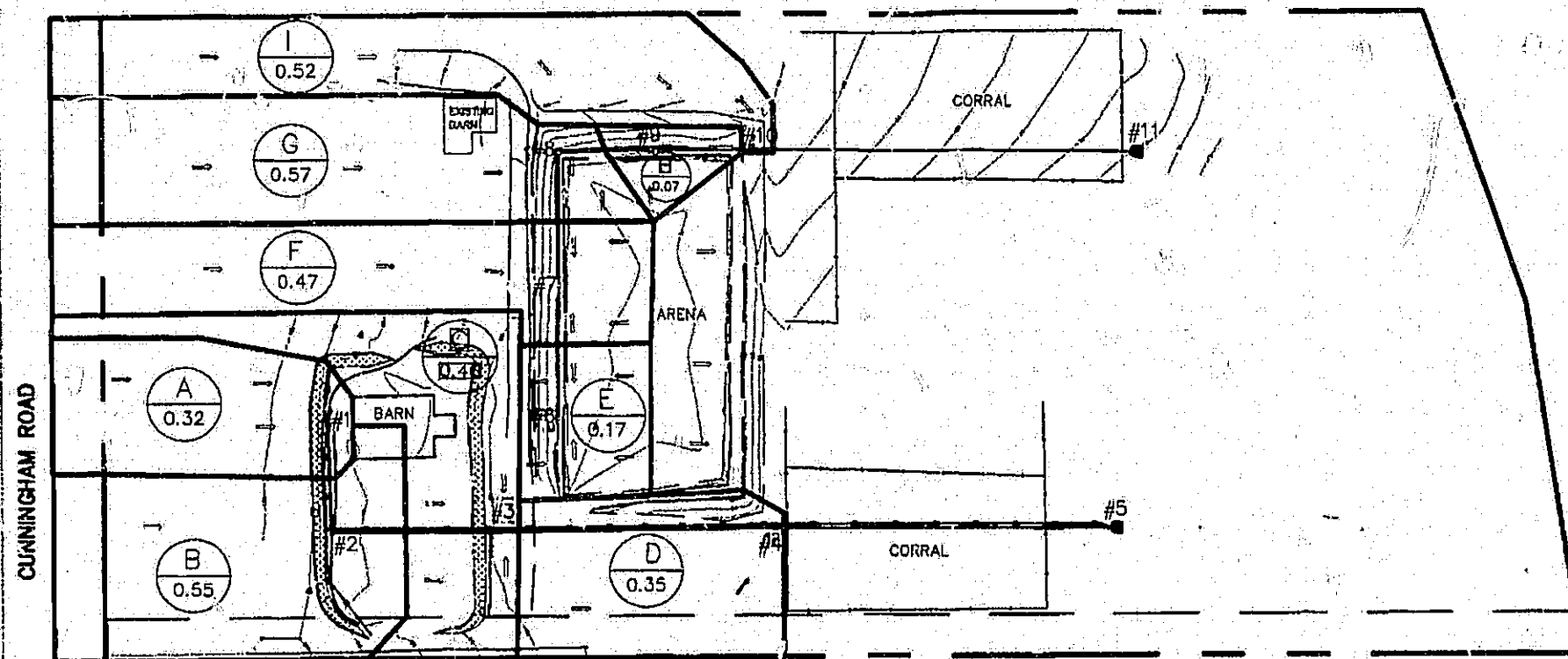
COUNTY ASSESSOR'S PARCEL MAP

TAX RATE AREA
90-003

63-09

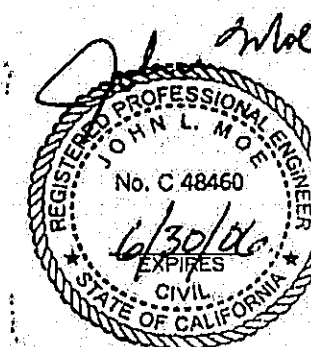
SITE





GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.



JOHN L. MOE
CIVIL ENGINEERING

2960 MONTECITO AVE., SANTA ROSA, CALIFORNIA 95404 (707) 544-0274

SCALE

1" = 100'

DRW BY

RNI

DATE

AUGUST 2004

JLB

2003-013

DRAWING NAME

HYDROLOGY.dwg

SMOOT BARN

1301 CUNNINGHAM ROAD, SEBASTOPOL, CA

Moe Engineering, Inc.

2550 Montecito Avenue
Santa Rosa, CA 95404
(707) 544-6274 FAX (707) 544-9088

June 29, 2007

County of Sonoma
Permit and Resource Management Department
2550 Ventura Avenue
Santa Rosa, CA 95403

Re: Statement - Completion of Final Grading
1301 Cunningham Road
Sebastopol, CA

To Whom It May Concern:

Pursuant to my field observation on June 22, 2007 and to the best of my knowledge, the Smoot Barn - Site Improvement Plans prepared by Moe Engineering, Inc. dated August 2004 reflect the final grading and site conditions which are in accordance with Chapter 33 of the California Building Code (CBC).

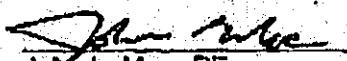
In addition, Giblin Associates, Consulting Geotechnical Engineers, prepared a final report dated June 12, 2007 that summarized the results of their soil engineering consultation and review of the above noted plans.

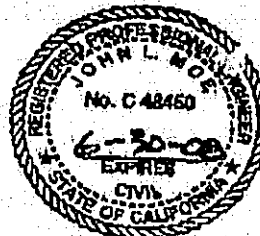
We trust that this letter satisfies the requirements of Appendix Chapter 33, Section 3318 - Completion of Work, 3318.1 Final Reports, of the California Building Code.

Please contact our office if you have any questions regarding the content of this letter.

Sincerely,

Moe Engineering, Inc.


John L. Moe, PE
Registered Civil Engineer
Certificate No. C 48460



cc: Grant Smoot, Owner
Jeffrey Reese, Giblin Associates

Statement - final grading completion per Chit 33 of CBC 6-22-07, etc.

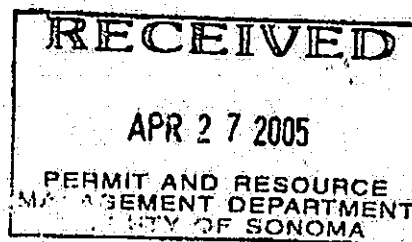


GIBLIN
ASSOCIATES
POST OFFICE BOX 6172 SANIA ROSA, CA 95408
TELEPHONE (707) 528-3078 CONSULTING FACSIMILE (707) 528-2837
GEOTECHNICAL
ENGINEERS

April 18, 2005

Job No. 3202.1.3

Grant and Christy Smoot
1301 Cunningham Road
Sebastopol, CA 95472



Report
Soil Engineering Consultation
and Review of Grading Plans
Smoot Arena
Sebastopol, California

At your request, this report summarizes the results of our soil engineering consultation and review of grading plans for your new arena located at 1301 Cunningham Road in Sebastopol, California. The arena site is located east of your recently constructed barn. A brief summary of the site grading and foundation installation work for the barn was presented in our report dated August 20, 2003.

Review of Plans

Grading plans for the arena, prepared John L. Moc, Civil Engineering, are dated August 2004, and indicate cuts within the northwestern portion of the arena varying up to about 6 feet, and fills in the southeast portion varying up to about 4 feet in depth. The plans also indicate the installation of surface drainage improvements, including a storm drain system with several drop inlets along the south, west and north sides of the arena that discharge on the natural slope approximately 200 feet to the west. Based on our plan review, general knowledge of subsurface soil conditions in the site vicinity, and previous work at the site, we judge that the materials and methods indicated on the plans would be suitable for the arena.

Grant and Christy Smoot
April 18, 2005
Page Two

Summary of Arena Grading

Rough grading of the arena has been completed, and we understand that soil engineering observation and testing services were not provided during the work while in progress. Accordingly, we recently met with you and Mr. John Moe, Civil Engineer, at the site to observe the conditions exposed in the arena area, discuss the preparation of the original ground surface within the arena area and to discuss placement and compaction of the existing fills. In addition, we reviewed photographs taken during the grading work. We understand that the areas to be graded were initially stripped of surface vegetation, and the materials generated during the stripping operations were reused as fill outside of the arena improvement areas. We also understand based on our conversations and as observed in the photographs that prior to placement of the planned fills in the southeast portion of the arena, weak, upper compressible natural soils were overexcavated to a depth of about 24 to 30 inches along the toe of the planned fill slope to create a level bench. The surface exposed at the bottom of the bench excavation is understood then to have been scarified, moisture conditioned as needed, and compacted with a segmented, self-propelled, vibratory tamping-foot drum compactor. We understand that on-site excavated soils then were placed as fill in relatively thin layers and similarly moisture conditioned and compacted.

Summary

Based on the results of our site observations, discussions with you, and review of photographs, we judge that the evidence indicates the site preparation, placement and compaction of the planned fills was performed in general accordance with the minimum criteria outlined in the current edition of the Uniform Building Code (UBC).

Periodic land maintenance will be required by the landowner. We recommend that positive surface drainage around the arena be maintained. Drains should be checked regularly and cleaned and maintained as necessary. Our experience indicates that some minor sloughing and/or erosion is common on newly graded slopes. Any such sloughing or erosion that occurs should be repaired promptly before it can enlarge. We could be consulted to provide additional consultation for repair of such slope instabilities, if requested.

GIBLIN ASSOCIATES

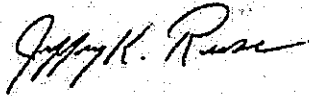
CONSULTING
GEOTECHNICAL
ENGINEERS

Grant and Christy Smoot
April 18, 2005
Page Three

We trust this provides the information needed at this time. If you have questions or wish to discuss this in further detail, please do not hesitate to contact us.

Yours very truly,

GIBLIN ASSOCIATES



Jeffrey K. Reese
Civil Engineer No. 47753



JKR:nay/NN/HD/sec/jkr/Job No. 3202.1.3
Copies Submitted: 3

cc: 1 John L. Moe, Civil Engineer
5550 Skylane Boulevard, Suite G
Santa Rosa, CA 95403