B

Type

X

Plans

B-119380

Permit Number

590

Street Number

SANTANA DR

Street Name

CL

Community Code

116-310-012

APN

PRMD County of Sonoma

S.C. Repro 3/10

INSPECTOR COPY

SONOMA COUNTY BUILDING INSPECTION

575 ADMINISTRATION DRIVE
SANTA ROSA, CA 95403-2884
TELEPHONE (707) 527-2221

JOB ADDRESS 570 [illegible]

OWNER
NAME: MICHAEL DELAURA
MAILING ADDRESS: 585 SANTANA DR — TEL NO 707 894-4106
CITY: CLOVERDALE CA — ZIP CODE 95425

PROJECT
ADDRESS: 570 SANTANA DR
CITY: CLOVERDALE CA 95425
SUBDIVISION NAME | UNIT NO. | LOT | BLOCK
ASSESSOR'S PARCEL NO: 116-310-12-9
NEAREST CROSS STREET: CLOVERDALE

CONTRACTOR
NAME
ADDRESS — TEL NO
CITY — ZIP CODE
STATE LIC NO. — LIC CLASS

DESIGNER
NAME
ADDRESS — TEL NO
CITY — ZIP CODE

CERTAIN AREAS WITHIN SONOMA COUNTY MAY BE GEOLOGICALLY HAZARDOUS. YOU ARE INVITED TO REVIEW ANY GEOLOGIC DATA THAT THIS DEPT HAS AVAILABLE TO AID YOU IN MAKING A DETERMINATION AS TO THE SUITABILITY OF A PROPOSED BUILDING SITE

CONDITION OF SOIL AT JOB SITE: ☒ ORIGINAL ☐ ENGINEERED FILL ☐ LOOSE FILL

SITE REVIEW: 0-2% level [illegible]
BY: MLS DATE: 7-22-92

REQUIRED REPORTS: ☐ GEOLOGY ☐ SOILS ☐ COMPACTION
FLOOD ZONE: exempt ☐
☐ YES ☒ NO 100 YR FLOOD ELEV.

SEWER CONNECTION: SANITATION ENGINEER
APPROVED BY — DATE

ROAD ENCROACHMENT: NA
APPROVED BY: — DATE:

SEPTIC TANK INSTALLATION: HEALTH DEPARTMENT
PERMIT NUMBER 93-3723 OR CLEARANCE
DATE REC'D. — DATE ISSUED 6/17/93

WORK AUTHORIZED: STEEL WATER TANK 144,750 GAL.

☐ NEW ☐ ADDITION ☐ ALTERATION ☐ REPAIR ☐ MOVING ☐ OCC CHG

	SIZE IN SQUARE FEET	RATE PER SQUARE FOOT	VALUE
FLOOR AREA			
GARAGE CARPORT			
DECK AWNING			
[illegible] price			

FEES - Per Chapter 7, et seq. Sonoma County Code — TOTAL ▶ 38521

☒ BUILDING		302.50
☐ PLAN CHECK	2656 6-D	
☐ PLUMBING		
☐ ELECTRICAL		
☐ MECHANICAL		
☐ GRADING		
☐ SITE/PROP	2656 6-D	
☒ PLANNING		14.00
☐ FIRE		
☒ SEISMIC		3.90
☐ INVEST. FEES		
☒ PROCESSING FEE		16.00
TOTAL $		336.40

☒ PLANS APPROVED ☐ NO PLANS, SUBJECT TO FIELD INSPECTION
APPROVED BY: VD DATE: 10-20-92

① **LICENSED CONTRACTORS DECLARATION:** I hereby affirm 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.
Contractor's Signature — Lic. #
CLOVERDALE

② **OWNER-BUILDER DECLARATION:** I hereby affirm 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 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 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 through his 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 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

Owner's Signature [signature]

SANTANA — SAWDUST CO — N — NORTH — LP

③ **WORKER'S COMPENSATION DECLARATION:** I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof filed with the Building Inspection Department (Sec. 3800, Lab. C.).
Policy No 101 — Insurance Co
Applicant's Signature — Expiration Date

④ **CERTIFICATE OF EXEMPTION FROM WORKERS' COMPENSATION INSURANCE:** 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 Workers' Compensation Laws of California.
Owner's or Contractor's Signature [signature]

⑤ **CONSTRUCTION LENDING AGENCY:** I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C.).
Lender's Name
Lender's Address

THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK AUTHORIZED IS NOT COMMENCED WITHIN 180 DAYS, AND IS SUBJECT TO EXPIRATION IF WORK THEREUNDER IS SUSPENDED FOR 180 DAYS.

PERMITTEE
NAME: Michael DELAURA
ADDRESS: 585 SANTANA CITY CLOVERDALE ZIP 95425

I certify that I have read this application and state that the above information is correct, and that I am the owner or the duly authorized agent of the owner. I agree to comply with all County 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 from the Worker's Compensation provisions of the Labor Code I should become subject to such provisions, I will forthwith comply. In the event I do not comply with the Workmen's Compensation law, this permit shall be deemed revoked.
SIGNATURE [signature] DATE 7-16-92
☐ CONTRACTOR ☒ OWNER ☐ AGENT FOR CONTRACTOR ☐ AGENT FOR OWNER

PLANNING DEPARTMENT UP
ZONING: M2 — FILE NO. 91-79 — ACRES 6.8
EXISTING USE: Sawdust Product Plant
PROPOSED USE: water tank 150,000 gal.
YARDS FRONT 100' — LEFT SIDE 20' — RIGHT SIDE 100' — REAR 100'

PLANNING APPROVALS
FOR PERMIT ISSUANCE — FOR OCCUPANCY
BY ____ DATE ____ — BY [signature] DATE 2-1-93

REMARKS

SOUND MITIGATION: ☐ REQUIRED ☒ EXEMPT
DEVELOPMENT FEES: ☒ REQUIRED ☐ EXEMPT

DATE RECEIVED 7/17/92 — REC'D BY — PREVIOUS PERMIT NO — DATE CLEARED FOR ISSUANCE 6-21-93 — BY
TYPE OF CONSTRUCTION: Tank — OCCUPANCY
NO OF STORIES — NO OF BEDROOMS
CERTIFICATE OF OCC.
EXPIRED
FINAL DATE 1/6/95
INSPECTOR

MACHINE SPACE FOR PERMIT FEE

```
111147 06/21/93A0
#        0119380
BLDG.    $302.50
PLANIG    $14.00
EQ FGM     $3.90
BLDE.     $16.00
***TTL   $336.40
CHECK    $336.40
CHNG       $0.00
```

NEAREST CROSS STREET: Cloverdale
INCORPORATED CITY ☐ YES ☒ NO
MAP REFERENCE 11 / 2-5
PERMIT NUMBER 119380
INSPECTION AREA 8

Applicant Name and Mailing Address

MICHAEL DELAURA
590 SANTANA DR
CLOVERDALE CA 95425

BUILDING PERMIT CHECK LIST
SONOMA COUNTY BUILDING INSPECTION DEPARTMENT

NAME _____ PLAN CHECK # _____

DATE SUBMITTED _____ PLAN CHECKER _____

You have submitted plans to this department for review. Clearances designated will be required prior to issuance of your building permit. You are advised to contact these agencies early in your process to prevent unnecessary delays in building permit issuance.

AGENCY OR CLEARANCE REQUIRED	CLEARANCES REQUIRED	CLEARANCES RECEIVED
PLANNING	☑	☑
BUILDING DEPARTMENT		
GRADING PERMIT	☐	☐
GEOTECHNICAL REPORT	☐	☐
ELEVATION CERTIFICATE	☐	☐
ADDITIONAL FEES (PLAN CHECK)(VIOLATION)	☐	☐
WORKER'S COMPENSATION	☑	☐
SCHOOL MITIGATION FEE	☒	☐
DEVELOPMENT FEES	☒	☐
HEALTH DEPARTMENT		
SEPTIC	☑	☐
FOOD HANDLING	☐	☐
PUBLIC WORKS		
SEWER	☐	☐
ROAD ENCROACHMENT	☐	☐
PARCEL MAP IMPROVEMENT CONDITIONS	☐	☐
SPECIAL DISTRICTS		
WATER	☐	☐
SEWER	☐	☐
UTILITY CERTIFICATE		
SANTA ROSA	☐	☐
WINDSOR	☐	☐
BODEGA BAY PUBLIC UTILITIES	☐	☐
SONOMA COUNTY WATER AGENCY		
DRAINAGE	☐	☐
CREEK SETBACK	☐	☐
FIRE MARSHALL	☑	☒
DEMOLITION PERMIT ACCOMMODATE AB2791	☐	☐

NOTE: The PINK COPY is a preliminary determination of clearances required. A complete list will be developed during the plan review process.

COUNTY OF SONOMA
PUBLIC HEALTH DEPARTMENT 93-5723LW
1030 CENTER DR. – SUITE A • SANTA ROSA, CA 95403-2067 • PHONE (707) 525-6500

☐ APPLICATION FOR PRIVATE SEWAGE DISPOSAL PERMIT

☒ APPLICATION FOR PUBLIC HEALTH CLEARANCE FOR: WATER TANK

Application is hereby made to the Sonoma County Health Officer for a permit to construct or repair a sewage disposal system as described below in compliance with the code of Sonoma County or for clearance for other construction.

This permit application must be signed on all 3 signature lines by the **same** person (i.e., contractor or owner/builder). A letter of authorization from owner must accompany this application if agent is signing on owner's behalf.

APPLICANT: PLEASE PRESS HARD (USE BLACK INK). FILL IN BETWEEN HEAVY LINES ONLY AND SEE REVERSE SIDE FOR INSTRUCTIONS.

BLDG. PERMIT NO.	SDS PERMIT NO.	DATE ISSUED	CLEARANCE	NEW	REPAIR
A	S 93-5723LW	6-21-93	2671		

JOB ADDRESS 1590 SANTANA DR

NEAREST CROSS STREET CLOVERDALE Blvd

ASSESSOR'S PARCEL NO.

SUBDIVISION LOT BLK.

CITY CLOVERDALE STATE CA ZIP 95425

SEWAGE DISPOSAL SYSTEM CONTRACTOR

ADDRESS TEL. NO.

GENERAL CONTRACTOR

OWNER'S NAME MICHAEL DE LAURA

MAILING ADDRESS P.O. BOX 546

CITY CLOVER DALE STATE CA ZIP 95425 PHONE NUMBER 707 894 4108

INSTALLATION WILL SERVE:

RESIDENCE ☐ APARTMENT HOUSE ☐ COMMERCIAL ☐ MOBILE HOME ☐

MOTEL ☐ OTHER ☐ BUILDING CONST. NEW ☐ ADDN/ALTER ☐

NO. OF UNITS:	TOTAL NO. OF BEDROOMS:	WATER SUPPLY:	PUBLIC ☐ PRIVATE ☐	LOT SIZE:
				X

TERMS OF PERMIT

APPLICANT AGREES THAT:

1. HEALTH DEPARTMENT ENVIRONMENTAL HEALTH SPECIALIST WILL BE NOTIFIED A MINIMUM OF 24 HOURS PRIOR TO COMMENCING WORK.
2. HEALTH DEPARTMENT ENVIRONMENTAL HEALTH SPECIALIST AND ENGINEER'S OR CONSULTING ENVIRONMENTAL HEALTH SPECIALIST'S INSPECTION, WHEN INDICATED, WILL BE OBTAINED PRIOR TO COVERING THE SYSTEM.
3. THE JOB CARD AND A COPY OF THE APPROVED SEWAGE DISPOSAL SYSTEM DESIGN SHALL BE AVAILABLE AT THE JOB SITE AT ALL TIMES.
4. ANY DEVIATION FROM APPROVED PLAN WITHOUT PRIOR APPROVAL OF THE HEALTH OFFICER WILL BE CAUSE FOR STOPPING WORK UNTIL THE CHANGES ARE FULLY JUSTIFIED AND APPROVED.
5. THE SEPTIC TANK MUST BE I.A.P.M.O. APPROVED.
6. PRIOR TO AUTHORIZING OCCUPANCY OF ANY BUILDING WITH AN ENGINEER OR CONSULTING ENVIRONMENTAL HEALTH SPECIALIST DESIGNED SYSTEM, A SIGNED STATEMENT BY THE DESIGNER CERTIFYING THAT THE SYSTEM WAS INSTALLED IN COMPLIANCE WITH THE APPROVED PLAN MUST BE SUBMITTED TO THE PUBLIC HEALTH OFFICER.
7. THIS PERMIT IS SUBJECT TO REVOCATION IF FOUND TO BE IN NONCONFORMANCE WITH SONOMA COUNTY CODE OR STANDARDS OF THE PUBLIC HEALTH DEPARTMENT.
8. THIS PERMIT IS NOT TRANSFERABLE.

IT IS UNDERSTOOD THAT THE ISSUANCE OF A PERMIT IN NO WAY INDICATES THAT A GUARANTEE OF PERFECT AND INDEFINITE OPERATION OF THIS SYSTEM IS MADE BY THE COUNTY OF SONOMA PUBLIC HEALTH DEPARTMENT AND THAT THE OWNER IS REQUIRED TO MAKE ANY REPAIRS NECESSARY TO CONFINE SEWAGE BELOW THE SURFACE OF THE GROUND. APPROVAL IS BASED UPON INFORMATION SUBMITTED BY THE APPLICANT. FIELD CONDITIONS AT VARIANCE WITH APPLICATION MAY VOID PERMIT.

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND THE INSTRUCTIONS ON THE REVERSE SIDE AND STATE THAT THE ABOVE IS CORRECT AND AGREE TO COMPLY WITH ALL COUNTY ORDINANCES AND STATE LAWS REGULATING CONSTRUCTION OF PRIVATE SEWAGE DISPOSAL SYSTEMS. THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK AUTHORIZED IS NOT COMMENCED WITHIN 180 DAYS.

X Michael DeLaura
SIGNATURE OF APPLICANT

The undersigned applicant for private sewage disposal permit certifies as follows:

CONTRACTOR'S LICENSE LAW CERTIFICATE

☐ (COMPLETE EITHER A OR B)

A. THE APPLICANT IS LICENSED UNDER THE PROVISIONS OF THE CONTRACTORS LICENSE LAW UNDER LICENSE NUMBER _____ WHICH LICENSE IS IN FULL FORCE AND EFFECT.

☐ B. THE APPLICANT IS EXEMPT FROM THE PROVISIONS OF THE CONTRACTORS LICENSE LAW FOR THE FOLLOWING REASONS:

1) OWNER/BUILDER ☐
2) OTHER (EXPLAIN) ☐

X
DATE APPLICANT

WORKMEN'S COMPENSATION CERTIFICATE

(One or Two must be completed)

☐ 1. A currently effective certificate of Workmen's Compensation Insurance coverage is on file with the Sonoma County Public Health Department.

Compensation Insurance _____ Policy # _____ is currently in force.

☐ 2. 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 workmen's compensation laws of California.

X
APPLICANT 06/21/93

001342D
SEP TANK 33.0
TTLAMT 33.0
CHECKS 33.0
CHANGE 0.0
847B #2 11:4

LAYOUT PLAN APPROVED BY B Kearns DATE 6-21-93

CONSTRUCTION APPROVED BY DATE

LU0008 (Rev. 12/91) WHEN APPROVED THIS IS YOUR PERMIT Site ID Number 2671 GTO

DIST: 1) ORIG. - HEALTH DEPT. / 2) HEALTH DEPT. / 3) PERMITTEE / 4) BLDG. INSP. DEPT. / 5) BLDG. INSP. DEPT.

NOT TRANSFERABLE

SONOMA COUNTY BUILDING INSPECTION DEPARTMENT

PERMIT QUESTIONNAIRE

Prior to issuance of a building permit, this department is required to verify that your project is consistent with regulations of other agencies. This questionnaire will assist us in informing you of those agencies you must contact and those approvals you must secure prior to issuance of a building permit.

PROJECT ADDRESS: 590 SANTANA DR

==========

Sewage disposal for the subject building will be provided by:

Connection to public sewer:_____

Septic Disposal System: X

The proposed building contains no plumbing:_____

==========

Water for the subject building will be provided by:

A private well: X

From the following water district:_____

The building contains no plumbing or water systems:_____

==========

The subject building is located in the following School District:

CLOVEDALE

==========

The subject building (___is), (X is not), (___may be) located within the Santa Rosa sphere of influence. These are the areas of anticipated future City annexations. Projects within these areas are subject to City review and approval prior to building permit issuance.

==========

Access to the property:

Exists and will not be altered: X

Will be developed or altered:_____

Access is from a public or private street:_____

==========

Fire protection at this property is provided by the following Fire District: CLOVERDALE. This property (___is), (X is not) in a State Wildfire Responsibility Area.

==========

The following question applies to non-residential buildings:
Will the building occupants need to comply with the applicable requirements of Sections 25505, 25533 and 25534 of the Health and Safety Code and the requirements for a permit for construction or modification from the Air Quality Control District ? YES___ NO X

==========

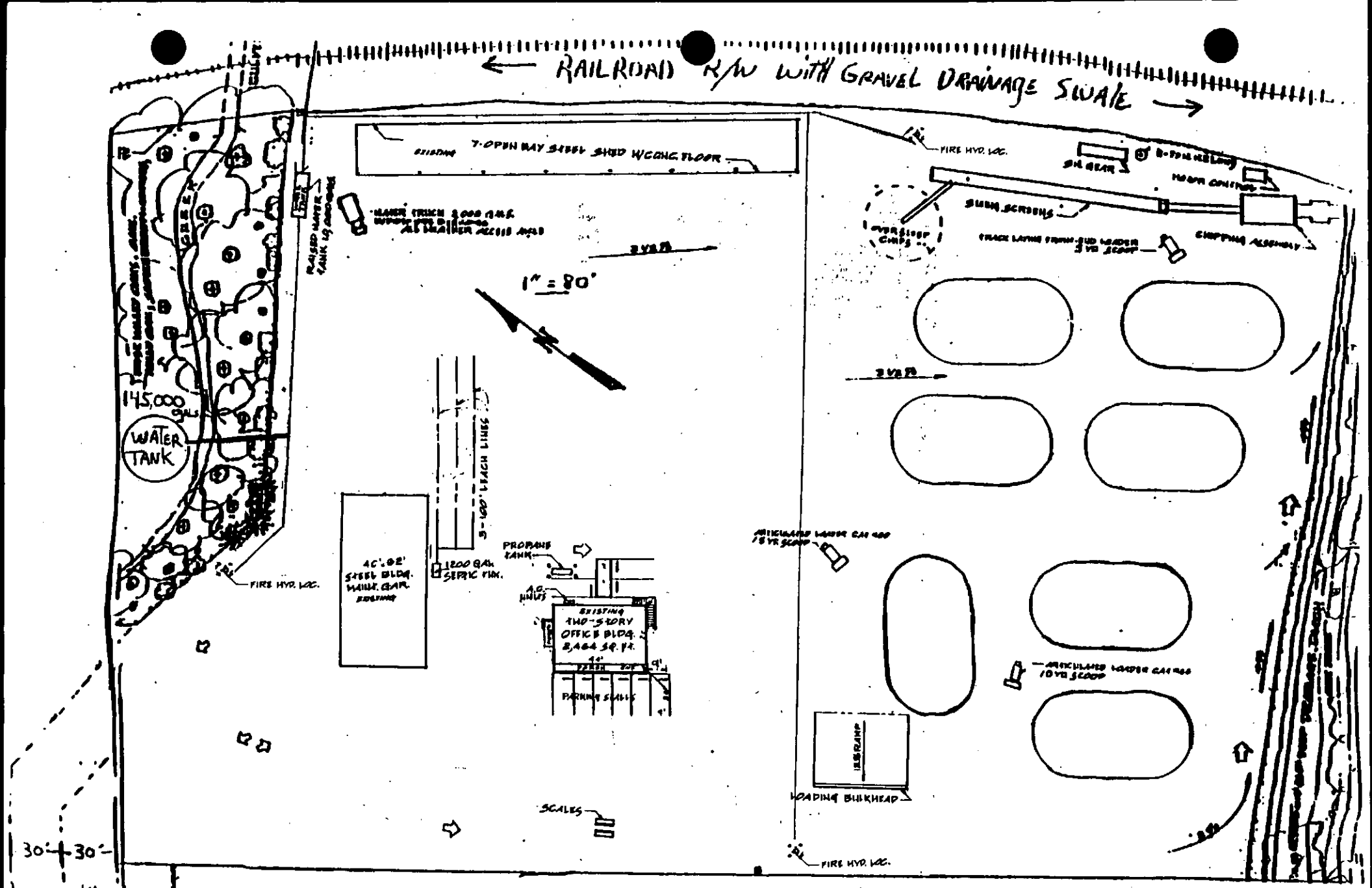
Written asbestos notification pursuant to Part 61 of Title 40 of the Code of Federal Regulations is required when asbestos exists in buildings, or portions thereof, undergoing demolition. I hereby declare that demolition authorized by this permit is for construction that (___does), (X does not) contain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

Applicant: MICHAEL DELAURA Date: 7-17-92

Received By:_____

PERMQUES.DOC 9/23/91

(RETAIN FOR MICROFICHE)



OWNER: MIKE DELAURA
P.O. BOX 540
CLOVERDALE, CA 95425
LOCATION: 590 SANTANA DRIVE
A.P. NO. 116-31-18

DELAURA SAWDUST PRODUCTS INC.
ORGANIC SOIL AMENDMENTS
590 SANTANA DR. CLOVERDALE, CA.
(707) 894-4108

This form, and any attachments indicated hereon, are required to be attached to all building permit applications prior to permit issuance.

COUNTY OF SONOMA

DEVELOPMENT FEE CHECKLIST

Name: Michael DeLaura File #: UP 91-788
APN(s): 116-310-12
Site Address: 585 Santana Dr
Residential: [ ] Expansion of Existing Residence
[ ] New Residential
Subdivision Name (If Applicable) _____
Lot Number(s) _____
Total Number of Dwelling Units _____

Commercial/Industrial/Institutional:

Total Number Acres 6.8
Total Building Square Feet _____
(If Applicable)

[ ] Exempt from Development Fees

[X] Development Fee Required:

[ ] **Park Development Fee** (Attachment "A")

[ ] Larkfield/Wikiup Specific Plan (Ord. #2531)
[ ] Windsor Specific Plan (Ord. #3625)
[ ] County-Wide Park Fee (Ord. #3622)

[X] **Roadway Improvement Fee** (Attachement "B")

[ ] Airport Industrial Area Specific Plan (Ord. #3412)
[ ] Larkfield/Wikiup Specific Plan (Ord. #3531)
[ ] Moorland Avenue Traffic Impact Zone (Ord. #3841)
[ ] Sonoma Valley Traffic Fee (Ord. #4073)
[ ] Windsor Specific Plan (Ord. #3625)
[X] County-Wide Traffic Fee

[ ] **Fire Protection Improvement Fee** (Attachment "C")

[ ] Airport Industrial Area Specific Plan (Ord. #3412)
(Rincon Valley Fire Protection District)
[ ] Windsor Specific Plan (Ord. #3625)
[ ] Windsor Fire Protection District
[ ] Rincon Valley Fire Protection District

[ ] **Drainage Mitigation Fee**
[ ] Windsor Specific Plan (Ord. #3625) ($1,639.00/Unit)

Total Amount: $_____ Receipt #_____

Planning Staff Signature _____ Date 2-1-93

This form to be completed by the Sonoma County Planning Department.

This form, and any attachments indicated hereon, are required to be attached to all building permit applications prior to permit issuance.

COUNTY OF SONOMA

DEVELOPMENT FEE CHECKLIST

Name: DE LAURA SAWDUST PRODUCTS File #: _____
APN(s): 116-310-12
Site Address: 590 SANTANA DR. CLOVERDALE, CA
Residential: [ ] Expansion of Existing Residence
[ ] New Residential
Subdivision Name (If Applicable) _____
Lot Number(s) _____
Total Number of Dwelling Units _____

Commercial/Industrial/Institutional:

Total Number Acres 6.8
Total Building Square Feet 145,000 GAL. WATER STORAGE TANK
(If Applicable)

[ ] Roadway Improvement Fee Required:

[ ] Airport Industrial Area Specific Plan (Ord. #3412)
[ ] Larkfield/Wikiup Specific Plan (Ord. #3531)
[ ] Moorland Avenue Traffic Impact Zone (Ord. #3841)
[ ] Sonoma Valley Traffic Fee (Ord. #4073)
[ ] Windsor Specific Plan (Ord. #3625)
[X] County-Wide Traffic Fee — NORTH COUNTY
[ ] Other Condition of Approval _____

[ ] Fees previously paid with Subdivision Map _____
Receipt No. _____

Required fees are to be paid at the following address:

County of Sonoma Road Department

575 Administration Drive, Room 117A
Santa Rosa, California 95403 (707) 527-2231

When fees have been paid, this memo, along with a receipt, must be attached to plans prior to building permit issuance.

Total Amount Paid: $ 5,700.00
Receipt Number (Copy Attached) 1565462

Road Department Staff Signature _____ Date 2/17/93

ROADWAY IMPROVEMENT FEE **Attachment "B"**

SONOMA COUNTY

BUILDING INSPECTION

Date 9-3-92

Theodore J. Morrison

CHIEF BUILDING OFFICIAL

MICHAEL DE-LAURA
585 SANTANA
CLOVERDALE, CAL 95425

RE: Plans submitted for: WATER TANK P-26566-D

Owner's Name: SAME

Assessor's Parcel Number: 116-310-12

DRAWINGS DO NOT SHOW ANY FOUNDATION FOR TANK. TANK SHALL BE ANCHORED FOR SEISMIC FORCES / WIND LOADS PER CHAP 23, 1991 UBC.

SOIL BEARING PRESSURE ALLOWED (WITHOUT A SOIL REPORT) IS 1,000 PSF (CHAP 29, TABLE 29B, CLASS 5 SOIL).

HAVE ENGINEER FOR TANK COMPANY ADDRESS THE TOP 2 ISSUES. PROVIDE 2 COPIES, STAMPED / SIGNED PER STATE LAW OF ANY MORE DRAWINGS.

If you have any questions, please call me after 1:30 p.m., Monday through Friday.

WELDING REQUIRES SPECIAL INSPECTION PER SEC 306 UBC '91.

rev 8/83

TED THOMAS
Planchecker

BUILDING INSPECTION DEPARTMENT
COUNTY OF SONOMA
575 ADMINISTRATION DR., ROOM 114 A
SANTA ROSA, CALIFORNIA 95403
TELEPHONE 527-2221

THEODORE J. MORRISON
DIRECTOR OF BUILDING
INSPECTION SERVICES

CHIEF BUILDING INSPECTOR
E. TED THORHAUG
SENIOR CIVIL ENGINEER

Date 9-3-92

- MICHAEL DE LAURA
585 SAN JANA
CLOVERDALE, CAL 95425

RE: OWNER"S NAME DELAURA PLANCHECK NUMBER P-26566-D

The following marked clearances / items are required prior to:

-PLANCHECK APPROVAL-

- [x] Sonoma County Water Agency
- [x] Fire Marshall
- [ ] _____

-BUILDING PERMIT ISSUANCE-

- [x] Planning
- [ ] Worker Comp
- [ ] School Fees
- [ ] _____

- [x] Septic/Sewer
- [x] Owner-Builder form
- [ ] Road Encroachment
- [ ] Development Fees
- [ ] _____

Compliance with the following marked items are required for Plancheck approval:

- [x] 1. Plans require corrections. Please revise original drawings per enclosed check prints/letter and submit two revised sets of plans.
- [ ] 2. Energy Calculations per California State Law must be submitted. Provide two sets, signed by designer, author and owner.
- [x] 3. Engineer's calculations are required per enclosed check prints/letter.
- [ ] 4. Geologist/Soils Engineer must review and approve foundation plans, in writing, in accordance with the requirements of the geology/soils report.
- [x] 5. Complete, sign, with registration number and return special inspection form.
- [x] 6. All sheets of drawings must be signed per California State Law by:
  - [x] The Architect or Engineer of record
  - [ ] The responsible party
- [ ] 7. Please return marked drawings with resubmittal.
- [x] 8. See attached memo.
- [ ] 9. _____

If you have any questions, please call me after 1:30 p.m., Monday through Friday.

TED THORHAUG
Plancheckker

Rev. 3/11/92

DEPARTMENT OF FIRE SERVICES

COUNTY OF SONOMA

TIMOTHY J. EXLINE
DIRECTOR

MEMO

TO: Ted Thorhaug, Senior Civil Engineer
Sonoma County Building Inspection

FROM: Bill Lellis, Fire Inspector

DATE: July 20, 1992

SUBJECT: File - 26566-D
Applicant - Michael DeLaura
Location - 590 Santana Drive, Cloverdale

NOTICE: A building permit may now be issued, but prior to final approval, all Fire Safe Standards conditions listed below must be verified by field inspection by a member of the **Sonoma County Department of Fire Services at (707) 527-1152.**

Hydrants - All hydrants shall provide 500 GPM at 20 psi residual. If the above flow cannot be provided the emergency water supply tank shall be increased in size by a 1.5 minimum. All hydrants shall be 18 inches above ground. Vegetation shall be cleared from hydrant for a radius of 8 feet. It shall be no closer than 4 feet, nor further than 12 feet from the roadway. Hydrants shall be 50 to 150 feet from all buildings requiring 2000 gallon systems and a maximum of 800 feet from buildings requiring a 4000 gallon or greater system. All hydrants shall be protected with suitable crash protection and their access shall not be blocked. Hydrants along driveways shall have a 3 inch reflectorized blue marker on a pressure treated post 3 to 5 feet above ground. Based on a fire flow additional hydrants may be required.

cc: File
Applicant

Tim - For your Review and Comments
TO

BH TANK

To: Ted Thorhaug
SONOMA CO. BLG. INSP.

Date: Oct. 12, 1992

The Following:

Brochures	( )
Price List	( )
Warranty	( )
Shop Drawings	(X)
Specifications	( )
Engineering	(X)
Proposal	( )
Calculations	(X)

For:

As Requested	(X)
You Files	( )
Your Approval	(X)
Review	( )
Corrections	( )
Verifying	( )
For Bid	( )
Checking	(X)

Remarks: Ted;

Enclosed are the corrections you requested and a "request for waiver" to be directed to Ted Morrison. Please put it in his box.

We are scheduled to start erection in two weeks, so please advise if there are any problems or questions regarding this submittal as soon as possible.

Sincerely,

B.H. TANK WORKS, INC.

Robert Harasta
President

"Serving the water storage needs of the West since 1935"

B.H. TANK WORKS, INC. ■ 1919 SAN FERNANDO ROAD ■ LOS ANGELES, CALIFORNIA 90065 ■ 213-221-1579 ■ FAX: 213-221-6559

BH TANK

10.19.92

Request for waiver of special inspection approved based on low stress and low hazard level.

October 12, 1992

Mr. Theodore J. Morrison
SONOMA COUNTY BUILDING INSPECTION
Chief Building Official
575 Administration Drive, Room 114A
Santa Rosa, CA 95401

Ref: Plans submitted for water storage tank, P-26566-D
Owner's Name: Michael DeLaura
Assessor's Parcel Number 116-310-12

Re: Request for Waiver of Special Inspection

Dear Mr. Morrison:

This request is persuant to my conversation with Ted Thorhaug and his letter dated 9-3-92, and discussion with my structural engineer John Schock.

The only welding on our water tanks is on the center roof support column. We are requesting exemption from special inspection for the following reasons:

1. This is for a non-occupied structure and the welding is of minor nature.

2. The weld stress is only 35% of allowable (see page 8 of calculations).

3. Since welding is incidental to our fabrication process, B.H. Tank has not registered for approval, nor have we been requested or required to in our past experience.

B.H. Tank Works has been manufacturing water storage tanks in California for over 50 years. All welding is done by qualified and experienced personel only. The request for special inspection would only add additional cost and time to complete this project and would not provide any needed assurance for protection of life or property.

I hope this information is sufficient and meets your criteria for "Waiver of Special Inspection".and that the enclosed wetstamped tank calculations and drawings are approved so we can begin construction of this proposed water storage tank for fire protection.

If you have any questions or need additional information, please feel free to call.

Sincerely,

B.H. TANK WORKS, INC.

Robert A. Harasta
President

c.c. Ted Thorhaug
Mike DeLaura

JOHN SCHOCK, P.E.
STRUCTURAL DESIGN AND ENGINEERING
DATE: 10/3/92 PAGE: 1 JOB NO: 019224

STRUCTURAL DESIGN OF 144,750 GALLON WATER TANK

LOCATION: SONOMA COUNTY, CA
MANUFACTURER: B & H TANK WORKS, INC., LOS ANGELES, CA

I. MATERIAL SPECIFICATIONS:
STEEL - 2.5 x .5 NOMINAL CORRUGATED SHEETS, PER ASTM A525 or ASTM A446, Fy = 33 KSI.
RIVETS - STEEL PER ASTM A525 or ASTM A446, Fy = 33 KSI.
BOLTS - ASTM A307 ZINCED PER ASTM A384 or A385.

II. TANK DIMENSIONS: 36'0" DIAMETER x 18'9" HIGH

III. DESIGN OF 13 GA. BOTTOM COURSE USING 6 - 12# RIVETS/PITCH:

HEIGHT = H1 := 18.75 - 2.75 NO. OF RIVETS = n1 := 6

THICKNESS = t1 := .0897 AREA OF RIVET = a1 := .0527

RADIUS = r := 30.83 .5 12 DIA. OF RIVET = d1 := .259

JOINT EFFICIENCY = E := 1.0

STATIC HEAD: P1 := .433 H1 P1 = 6.93 PSI

MAXIMUM HOOP STRESS: $S1 := \frac{P1 \cdot r}{E \cdot t1}$ S1 = 14286.97 PSI

LBS/PITCH: F1 := S1 t1 2.66 F1 = 3408.9 LBS

SHEAR CAPACITY OF RIVETS/PITCH: n1 .4 33000 a1 = 4173.84 LBS
> F1 OK!

NET SECTION CAPACITY OF 1ST ROW: (2.66 - 2 d1) t1 .6 33000 = 3804.32 LBS
> F1 OK!

BEARING STRESS CAPACITY: n1 t1 d1 .9 33000 = 4140 LBS
> F1 OK!

SHEAR TEAR-OUT EDGE SPACING: $\frac{F1 \cdot .5}{2 \cdot t1 \cdot .4 \cdot 33000} = 0.72$ INCHES

Use 7/8 inch

IV. DESIGN OF 13 GA. SECOND COURSE USING 6 - 8# RIVETS/PITCH:

HEIGHT = H2 := 18.75 - 3.75 - 2.75 NO. OF RIVETS = n2 := 6

THICKNESS = t2 := .0897 AREA OF RIVET = a2 := .0394

RADIUS = r = 184.98 INCHES DIA. OF RIVET = d2 := .224

JOINT EFFICIENCY = E := 1.0

STATIC HEAD: P2 := .433·H2 P2 = 5.3 PSI

MAXIMUM HOOP STRESS: $S2 := \frac{P2 \cdot r}{E \cdot t2}$ S2 = 10938.46 PSI

LBS/PITCH: F2 := S2·t2·2.66 F2 = 2609.94 LBS

SHEAR CAPACITY IN RIVETS/PITCH: n2·.4·33000·a2 = 3120.48 LBS

> F2 OK!

NET SECTION CAPACITY OF 1ST ROW: (2.66 - 2·d2)·t2·.6·33000 = 3928.64 LBS

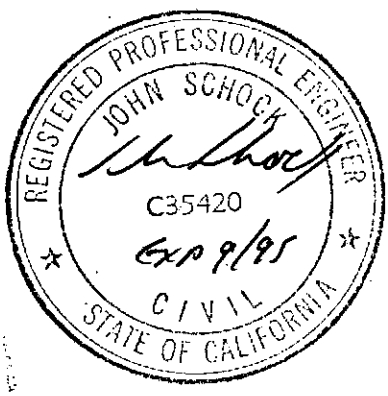
> F2 OK!

BEARING STRESS CAPACITY: n2·t2·d2·.9·33000 = 3580.54 LBS

> F2 OK!

SHEAR TEAR-OUT EDGE SPACING: $\frac{F2 \cdot .5}{2 \cdot t2 \cdot .4 \cdot 33000} = 0.55$ INCHES

Use 7/8 inch



V. DESIGN OF 14 GA. THIRD COURSE USING 6 - 6# RIVETS/PITCH:

HEIGHT = H3 := 18.75 - 7.5 - 2.75 NO. OF RIVETS = n3 := 6

THICKNESS = t3 := .0747 AREA OF RIVET = a3 := .0324

RADIUS = r = 184.98 INCHES DIA. OF RIVET = d3 := .203

JOINT EFFICIENCY = E := 1.0

STATIC HEAD: P3 := .433·H3 P3 = 3.68 PSI

MAXIMUM HOOP STRESS: $S3 := \frac{P3 \cdot r}{E \cdot t3}$ S3 = 9114.04 PSI

LBS/PITCH: F3 := S3·t3·2.66 F3 = 1810.98 LBS

SHEAR CAPACITY OF RIVETS/PITCH: n3·.4·33000·a3 = 2566.08 LBS

> F3 OK!

NET SECTION CAPACITY OF 1ST ROW: (2.66 - 2·d3)·t3·.6·33000 = 3333.8 LBS

> F3 OK!

BEARING STRESS CAPACITY: n3·t3·d3·.9·33000 = 2702.24 LBS

> F3 OK!

SHEAR TEAR-OUT EDGE SPACING: $\frac{F3 \cdot .5}{2 \cdot t3 \cdot .4 \cdot 33000} = 0.46$ INCHES

Use 7/8 inch

VI. DESIGN OF 14 GA. FOURTH COURSE USING 4 - 6# RIVETS/PITCH:

HEIGHT = H3 := 18.75 - 11.25 - 2.75 NO. OF RIVETS = n3 := 4

THICKNESS = t3 := .0747 AREA OF RIVET = a3 := .0324

RADIUS = r = 184.98 INCHES DIA. OF RIVET = d3 := .203

JOINT EFFICIENCY = E := 1.0

STATIC HEAD: P3 := .433·H3 P3 = 2.06 PSI

MAXIMUM HOOP STRESS: $S3 := \frac{P3 \cdot r}{E \cdot t3}$ S3 = 5093.14 PSI

LBS/PITCH: F3 := S3·t3·2.66 F3 = 1012.02 LBS

SHEAR CAPACITY OF RIVETS/PITCH: n3·.4·33000·a3 = 1710.72 LBS

> F3 OK!

NET SECTION CAPACITY OF 1ST ROW: (2.66 - 2·d3)·t3·.6·33000 = 3333.8 LBS

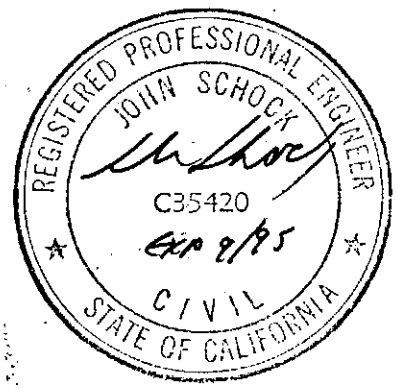
> F3 OK!

BEARING STRESS CAPACITY: n3·t3·d3·.9·33000 = 1801.5 LBS

> F3 OK!

SHEAR TEAR-OUT EDGE SPACING: $\frac{F3 \cdot .5}{2 \cdot t3 \cdot .4 \cdot 33000} = 0.26$ INCHES

Use 7/8 inch



VII. DESIGN OF 14 GA. FIFTH COURSE USING 2 - 5# RIVETS/PITCH:

HEIGHT = H3 := 18.75 - 15 - 2.75 NO. OF RIVETS = n3 := 2

THICKNESS = t3 := .0747 AREA OF RIVET = a3 := .0272

RADIUS = r = 184.98 INCHES DIA. OF RIVET = d3 := .186

JOINT EFFICIENCY = E := 1.0

STATIC HEAD: P3 := .433·H3 P3 = 0.43 PSI

MAXIMUM HOOP STRESS: $S3 := \frac{P3 \cdot r}{E \cdot t3}$ S3 = 1072.24 PSI

LBS/PITCH: F3 := S3·t3·2.66 F3 = 213.06 LBS

SHEAR CAPACITY OF RIVETS/PITCH: n3·.4·33000·a3 = 718.08 LB

> F3 OK!

NET SECTION CAPACITY OF 1ST ROW: (2.66 - 2·d3)·t3·.6·33000 = 3384.09 LB

> F3 OK!

BEARING STRESS CAPACITY: n3·t3·d3·.9·33000 = 825.32 LB

> F3 OK!

SHEAR TEAR-OUT EDGE SPACING: $\frac{F3 \cdot .5}{2 \cdot t3 \cdot .4 \cdot 33000} = 0.05$ INCHES

Use 7/8 inch

VIII. DESIGN OF ROOF

THICKNESS OF ROOF = tr := .0359

YIELD STRESS = Fy := 33000 DIAMETER = D := 36

MAXIMUM PERMITTED SPACING BETWEEN RAFTERS AT MIDSPAN:

$$L := \sqrt{\frac{300 \cdot Fy \cdot tr^2}{25 + (41 \cdot tr)}} \qquad L = 21.95 \quad <= 75 \text{ INCHES}$$

NUMBER OF RAFTERS REQUIRED:

$$Nr := \frac{\pi \cdot D \cdot 12}{2 \cdot L} \qquad Nr = 30.91 \qquad \text{USE} \quad Nr := 32$$

RADIAL SPACING OF RAFTERS AT EDGE OF 5' DIA. SUPPORT DISK:

d1 := 5.0 FEET

$$s1 := \frac{\pi \cdot d1 \cdot 12}{Nr} \qquad s1 = 5.89 \text{ INCHES}$$

RADIAL SPACING OF RAFTERS AT TANK WALL:

$$s2 := \frac{\pi \cdot D \cdot 12}{Nr} \qquad s2 = 42.41 \text{ INCHES}$$

ROOF LOADS:

20 GAGE SHEETING	1.50 PSF
C4 x 5.4	5.40 PSF
LIVE LOAD	20.00 PSF
total	26.90 PSF

FOR A C4 x 5.4 LB CHANNEL
Sx := 1.93 A := .736
l = spacing of fasteners
l := 12 inches
d := 4 inches
Af := .296 sq inches
Aweb := .736 sq inches

TOTAL LOAD = $W := \frac{D - d1}{2} \cdot 26.90 \cdot \frac{s2}{12}$ W = 1473.62 LBS

MAXIMUM MOMENT = $M := .1283 \cdot W \cdot \frac{D - d1}{2}$ M = 2930.52 FT-LBS

BENDING STRESS, lesser of:

$$Fb1 := \frac{12000 \cdot 1 \cdot 1000}{\frac{1 \cdot d}{Af}} \quad \text{"or"} \quad Fb2 := .6 \cdot 40000$$

$$fb := \frac{M \cdot 12}{Sx} \qquad fb = 18221 \qquad < \qquad \begin{matrix} Fb1 = 74000 & PSI \\ Fb2 = 24000 & PSI \end{matrix}$$

SHEAR STRESS:

$$Fv := .4 \cdot 40000$$

$$fv := \frac{.67 \cdot W}{Aweb} \qquad fv = 1341 \qquad Fv = 16000 \quad PSI \quad OK!$$

IX. DESIGN OF CENTER SUPPORT COLUMN, 3" DIAMETER, SCH 40 PIPE:

TRIBUTARY AREA = $\pi \cdot D^2 \cdot .25 = 1017.88$ THUS LIVE LOAD = 12 PSF

$$P := \frac{\pi \cdot D^2 \cdot 18.90}{4 \cdot 2} \qquad P = 9618.93 \quad LBS$$

r := 1.16 INCHES

A2 := 2.25 SQ INCHES

h := 18.25 FEET

$$\text{SLENDERNESS} = \frac{1 \cdot h \cdot 12}{r} = 188.79 \quad < 200 \quad OK!$$

$$fa := \frac{P}{A2} \qquad fa = 4275.08 \quad <= 6380 \text{ PSI PER TABLE 3-36 AISC MANUAL}$$

X. UNIT STRESSES IN QUARTER SECTIONS BETWEEN GUSSETS OF 5' DIA PLATE
(FROM ROARK 2ND EDITION "STRESS & STRAIN" LOADING CASE 67)

$$A3 := \frac{\pi \cdot (d1 \cdot 12)^2}{4} \cdot .25 \qquad A3 = 706.86 \quad SQ\ INCHES$$

$$a := \frac{(d1 \cdot 12) - 3.5}{2} \qquad a = 28.25 \quad INCHES$$

$w := \frac{P}{A3'}$ $w = 13.61$ PSI

$\beta := .24$ $t := .375$ INCHES

MAX UNIT STRESS = $\sigma := \frac{\beta \cdot w \cdot a^2}{t^2}$ $\sigma = 18534.46$ < .6*36000 = 21600

DESIGN OF VERTICAL WELDS ON GUSSETS USING E70XX ELECTRODE
FOR 1/4" FILLET X 4" LONG ON EACH SIDE OF GUSSET:

Pallow = $2 \cdot (4 - 2 \cdot .125) \cdot .25 \cdot .7074 \cdot 21000 = 27854$ > P = 9619 LBS

XI. SIZING OF BOTTOM PLATE:

ALLOWABLE SOIL BEARING PRESSURE

$Fc := 1000$

SQUARE WIDTH OF PLATE REQUIRED = $\sqrt{\frac{P}{Fc}} = 3.1$ FEET --USE 36" SQ PLATE WITH 16" SQ PLATE ON TOP --

THICKNESS REQUIRED FOR PLATES:

$w := 36$ INCHES $fc := \frac{P}{w^2}$ $fc = 7.42$ PSI

$d1 := 10$ INCHES

$t := \sqrt{\frac{fc \cdot d1^2 \cdot 3}{.6 \cdot 36000}}$ $t = 0.32$ INCHES -- USE 3/8" PLATE ON BOTTOM AND TOP --

XII. CHECK OF OVERTURNING FROM 100 MPH WIND LOADS

WIND FORCE = Ce * Cq * qs * I

P := 1.2 · .8 · 26 · 1

P = 24.96 PSF

HEIGHT := 18.75 DIAMETER := 36

$$OTM := DIAMETER \cdot \frac{HEIGHT^2}{2} \cdot P$$

OTM = 157950 FT-LBS

WATER DEPTH REQUIRED IN TANK TO PREVENT OVERTURNING WITH A 1.5 FACTOR OF SAFETY

$$h := \frac{1.5 \cdot OTM}{8.3356 \cdot 7.48 \cdot \pi \cdot .125 \cdot D^3}$$

h = 0.21 FEET

XIII. UNRESTRAINED TANK SEISMIC DESIGN UTILIZING EFFECTIVE MASS METHOD PER APPENDIX A AWWA D103-87

LOCATION	SONOMA COUNTY			
ALLOW SOIL BEARING	1,000 PSF			
ESSENTIAL FACILITY	NO			
SNOW LOAD	0 PSF			
YIELD STRENGTH "Fy"	33,000 PSI			
SPECIFIC GRAVITY "G"	1			
TANK DIAMETER "D"	36.00 FEET			
TANK HEIGHT	18.75 FEET			
OVERFLOW HGHT "H"	16.00 FEET			
TANK ROOF W/ RAFTERS	20 GAGE		Wr =	4386.9 LBS
MISC. WGHT (ie,BOLTS)				150 LBS
FIFTH COURSE	14 GAGE			1518.3 LBS
FOURTH COURSE	14 GAGE			1518.3 LBS
THIRD COURSE	14 GAGE			1518.3 LBS
SECOND COURSE	13 GAGE			1794.0 LBS
BOTTOM COURSE	13 GAGE			1794.0 LBS
			Ws =	8,292.8 LBS
TANK BOTTOM	13 GAGE		tb =	0.0934 IN
Zone COEFFICIENT	1			
Soil PROFILE COEF	1.50			
K STRUCTURE COEF	1.67	(K=1.67 FOR UNANCH & K=1.33 FOR ANCHORED)		
D/H	2.250			
Kp	0.610	from Figure A4		
Tw = Kp*sqrt*D =	3.660	seconds; first mode sloshing wave		
C1 = 0.75/(Tw*Tw) =	0.000	if Tw >= 4.5 seconds		
C1 = 1/6*Tw =	0.046	if Tw < 4.5 seconds		

$$Wt = \frac{3.14*D*D}{4} * H * \frac{62.4}{1/SP} = 1016247 \text{ LBS}$$

W1/Wt =	0.505	coef from table	W1 =	513,205 LBS
W2/Wt =	0.463	coef from table	W2 =	470,523 LBS
X1/H =	0.366	coef from table	X1 =	5.86 FT
X2/H =	0.584	coef from table	X2 =	9.34 FT

MOMENT AT BASE OF TANK

M = Z*K*(0.14(Ws*Xs + Wr*Ht + W1*X1) + C1*S*W2*X2)

M = 1241574 FT LBS

$$wt = \frac{Ws+.5*WR}{3.14*D} = 92.7 \text{ PLF}$$

wl = 7.9*tb*sqrt(Fy*H*G)

= 536.2 PLF

CHECK FOR UPLIFT

wl = 1.28*H*G*D

= 737.3 PLF

LESSER OF

$$\frac{M}{D*D(wt + wl)} = 1.523$$

if <= 0.785 then no uplift

if > 0.785 & < 1.54 check shell compression

if > 1.54 anchor tank

REGISTERED PROFESSIONAL ENGINEER
JOHN SCHOCK
C35420
Exp 9/95
CIVIL
STATE OF CALIFORNIA

SOIL BEARING STRESS UNDER UNANCHORED TANK FROM LATERAL FORCE

$$\text{ECCENTRICITY} = \frac{M}{(Wt + Ws)}$$

e = 1.21 feet

EFFECTIVE AREA = 3.14*R*R-2*[(e*SQRT(R*R-e*e)+R*R*ASIN(e/R)]

Ae = 930.17 sq ft Per NAVFAC DM-7.1 (Pages 7.2-134)

$$\text{SOIL BEARING} = \frac{(Wt + Ws)}{Ae}$$

f'c = 1101.5 psf < F'c * 1.33 = 1,330 psf

CALCULATION OF CRITICAL BUCKLING STRESS

$$\frac{P}{E} * \frac{R*R}{t*t} = 1.2777$$ used to find DELTA"Cc"

DELTA"Cc" = 0.398 DELTA"Cc" coef from Figure A7

$$\text{CRITICAL BUCKLING STRESS} = \frac{\text{DELTA"Cc"}*E*t}{R}$$

SIGMA"Cr" = 4,995 psi

SIGMA"Allow" = 853 psi from Table 8

EARTHQUAKE ALLOWABLE COMPRESSIVE STRESS = 1.333(SIGMA"Allow" + SIGMA"Cr"/2)

SIGMA"Ce" = 4,466 psi

COMPRESSIVE STRESS ON BOTTOM COURSE WITH UPLIFT ON UNANCHORED TANK

$$\text{SIGMA "Comp"} = \left(\frac{wt + wl}{0.6070 + 0.18677\left[\frac{M}{D*D(wt + wl)}\right]^{2.3}} - wl\right) * \frac{1}{12ts}$$

SIGMA "Comp" = 4,390 psi < 4,466 psi