



**COUNTY OF SANTA BARBARA
PLANNING AND DEVELOPMENT**

MEMORANDUM

TO: Montecito Planning Commission

FROM: Alice McCurdy, Deputy Director
Development Review South

DATE: Staff Memo: May 13, 2011
Hearing: May 25, 2011

RE: 10APL-00000-00016 Bagdasarian Appeal of P&D Denial of
09LUP-00000-00256

Staff Recommendation and Procedures

Follow the procedures outlined below and deny the applicant's appeal, Case No. 10APL-00000-00016, of the P&D Director's decision to deny Case No. 09LUP-00000-00256, and deny the project, Case No. 09LUP-00000-00256, *de novo* based upon the project's inconsistency with the Comprehensive Plan, including the Montecito Community Plan, and the inability to make the required findings.

Your Commission's motion should include the following:

1. Deny the appeal, Case No. 10APL-00000-00016, thereby upholding the P&D Director's denial of Case No. 09LUP-00000-00256;
2. Make the required findings for denial of the project specified in Attachment A of this staff report, including CEQA findings;
3. Determine the denial of the project is exempt from CEQA pursuant to Section 15270 of CEQA, as specified in Attachment B;
4. Deny, *de novo*, the project Case No. 09LUP-00000-00256.

Alternatively, refer back to staff if the Montecito Planning Commission takes other than the recommended action for appropriate findings, conditions and CEQA review.

Background

On October 27, 2010, at the original hearing before the Montecito Planning Commission regarding the applicant's appeal of Planning and Development's (P&D) denial of 09LUP-00000-00256, staff recommended that the Commission uphold P&D's denial of the Land Use Permit. After receiving testimony from P&D staff, the applicant and his representatives, and the general public, the Commission continued the item to the hearing of December 15, 2010, with direction

to the applicant/appellant to return with a riparian habitat restoration plan, including removal of an unspecified amount of the unpermitted structures.

Since the October 27, 2010, hearing, staff from P&D and the County Flood Control District have met with the applicant's team three times: on November 23, 2010, December 1, 2010, and April 25, 2011. At these meetings two items were discussed:

- 1) A hydrologic study to assess whether any of the unpermitted structures within the tributary (both the bridges and the retaining walls) would be consistent with the Flood Control District Flood Plain Management Ordinance; and
- 2) The applicant's draft revised restoration plans, the first of which included removal of five of the shallower tree wells, six at-grade stone borders, and three segments of the retaining wall totaling approximately 123 linear feet, and the second of which retains all structures.

The scheduled Montecito Planning Commission hearing of December 15, 2010, was continued to February 23, 2010 to allow the applicant the time necessary to perform the hydrologic analysis. The February 23, 2011, hearing was continued to March 23, 2011 for the same reason. The March 23, 2011 hearing was continued to May 25, 2011 to allow the applicant time to revise the study to the satisfaction of the Flood Control District. The final study, prepared by Bengal Engineering, was submitted to Flood Control on April 29, 2011 (see Attachment A). Flood Control District staff has reviewed the study and found it to be adequate. Flood Control staff confirmed the study's conclusions that the walls and bridges do not interfere with the 100-year flood water elevation and that the bridges are consistent with the minimum standards of the County's Floodplain Management Ordinance. Based on Bengal Engineering's conclusions, the second restoration plan, prepared by Rachel Tierney, provided for all structures to remain.

The current draft Tierney restoration plan, dated April 12, 2011, was submitted on April 13, 2011; it does not differ significantly from the plan denied by Planning and Development. Although the applicant/appellant has demonstrated that the unpermitted structures would not cause or contribute to flood hazards, the current draft restoration plan remains inconsistent with policy and ordinance standards as outlined in the staff report to your Commission dated October 8, 2010. The current draft restoration plan proposes to keep all of the unpermitted structures and the fill; none of the unpermitted development would be removed. It provides additional information on the proposed restoration, refines some of the areas proposed for onsite restoration and proposes the use of native plants, including native grasses. However, the current proposal does not meet habitat restoration goals for restoring a riparian environmentally sensitive habitat. Rather, the plan continues to propose a landscape plan using native plant species. The plan proposes to concentrate all replacement trees (oaks and sycamores) within the rock stockpile area east of Hot Springs Creek in the southeast corner of the property. No restoration of the lost oaks and sycamores, which formed the previously existing closed riparian tree canopy, is proposed within the tributary creek or within the upland area between the creeks, where the majority of the trees were removed.

As noted above, the proposal to retain all of the unpermitted structures as built remains inconsistent with the ESH policies cited in your staff report dated October 8, 2010. In particular the proposal would be inconsistent with Montecito Community Plan Policy BIO-M-1.7, which prohibits structures within a riparian corridor. The current proposal does not meet the limited circumstances in which some development might be allowed. In addition, the proposed restoration plan does not restore the previously intact riparian habitat. Therefore, the current restoration plan is not consistent with ESH policies calling for habitat restoration. The analysis within the October 8, 2010 staff report remains relevant to the current proposed restoration plan and is herein incorporated by reference. Please refer to Section 7.2 of the staff report for the ESH and tree protection policy analysis and Section 7.3 for the Montecito Land Use and Development Code ESH Overlay analysis. In summary, since the current proposal is not consistent with the adopted ESH policies, it is not considered an adequate restoration plan.

Subsequent Unpermitted Development Activities

As reported at the October 27, 2011 hearing, construction of additional site retaining walls had been occurring since the original zoning and grading violations were reported. The Grading Inspector issued a revised correction notice on October 14, 2010, directing the applicant to stop all work and added the additional unpermitted grading and construction to the building violation, Case No. 09BDV-00000-00021. In response to a phone call that additional work might be ongoing on the project site, staff visited the site on March 7, 2011 and documented that the additional work first reported in October had been completed. Staff will follow up with additional investigation to determine how much of this work occurred within ESH or ESH buffer and whether the work can be permitted.

Staff Contact: Julie Harris (805) 568-3518

Attachments:

- A. Final Hydrologic Study dated April 28, 2011 (Bengal Engineering)
- B. Draft Restoration Plan dated April 12, 2011 (Rachel Tierney Consulting)



Bengal Engineering, Inc.

Civil, Bridge, Hydraulics, Structural & Highway Engineers

TECHNICAL MEMORANDUM

Date: April 28, 2011

To: Kenneth Mineau
Appleton & Associates, Inc
117 W. Mitcheltorena
Santa Barbara, CA 93101

From: Bengal Engineering, Inc.
250 Big Sur Drive
Goleta, CA 93117

Subject: Hot Springs Creek Hydraulic Analysis

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**S.B. COUNTY
PLANNING & DEVELOPMENT**

Bengal Engineering performed the following Hydraulic Analysis of the Hot Springs Creek for the 1192 E. Mountain Drive, Santa Barbara project.

Data Gathering:

1. Collected - HEC-RAS Model from P&S for the Hot Springs Creek.
2. Collected - HEC-2 Water Surface Profile
 - Duplicate Effective - 27 February, 1995 (pdf copy)
 - Corrected Effective - 28 February, 1995 (pdf copy)

Comments: FEMA could not locate the latest hydraulic model corresponding to the Flood Insurance Rate Map (FIRM), Effective date September 30, 2005.

3. Duplicate & Corrected Effective Models:
 - Bengal performed the Corrected Effective Model (CEM) of the Hot Springs Creek. The CEM found to be consistent with the FIRM, Dated September 30, 2005 within the project reach. The HEC-RAS model x-sections were not updated with the latest surveyed information from the site.

4. Pre/Post-Project Conditions Model:

Bengal reviewed the topographic survey of the site compiled/prepared by P&S showing the original ground contours at 5-ft intervals augmented by spot elevations along the new walls and landscape elements.

P&S subsequently provided additional X-Sections of the creek to assist the hydraulic model within the project reach. The X-sections captured the post project conditions of the creek. P&S used NAVD88 vertical datum for the survey.

The HEC-RAS model X-sections were updated with the latest surveyed information from the site. To be consistent with the FEMA HEC-RAS Model, all the surveyed information were adjusted to NGVD29 vertical datum.

Comments:

- In general, it appears the 100-yr flood plain remains within the pre-project limits of the channel reach. The flood water stays mostly below the toe of the new walls.
- The creek bottom degraded along the upper reach of the FIS study, East and West Branches of the Hot Springs Creek. The creek degradation is more prominent around the junction of the East and West Branches of the Creek.
- The channel walls are not interfering with the FEMA 100-yr flood ($Q_{100} = 289$ ft³/sec) water. The flow depth within the West Branch Reach varies from 3.2' to 5.0'.

The results of the analysis are summarized in Tables A, B & C, to define hydraulics and performances of the bridges on the Western Branch of Hot Springs Creek.

Table A: Hydrology Summary

| | |
|--------------------|--|
| Base Flood, Q100 : | 289 ft ³ /sec (P&S) – West Branch |
|--------------------|--|

Table B: Water Surface Profile Information

| Flood Frequency | Cross Section Location | Corrected Effective HGL (ft) | Existing HGL (ft) | FEMA FIS |
|-----------------|------------------------|------------------------------|-------------------|----------|
| 100-yr | Upper Bridge (U/S) | 647.6 | 641.9 | NA |
| | Lower Bridge (U/S) | 624.2 | 618.8 | NA |

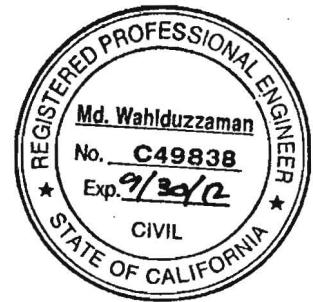
Table C : Bridge Performance Data

| Item | Bridge |
|--------------------------------|------------------------|
| 100-year flood event freeboard | 0.6± ft (Upper Bridge) |
| | 1.2± ft (Lower Bridge) |

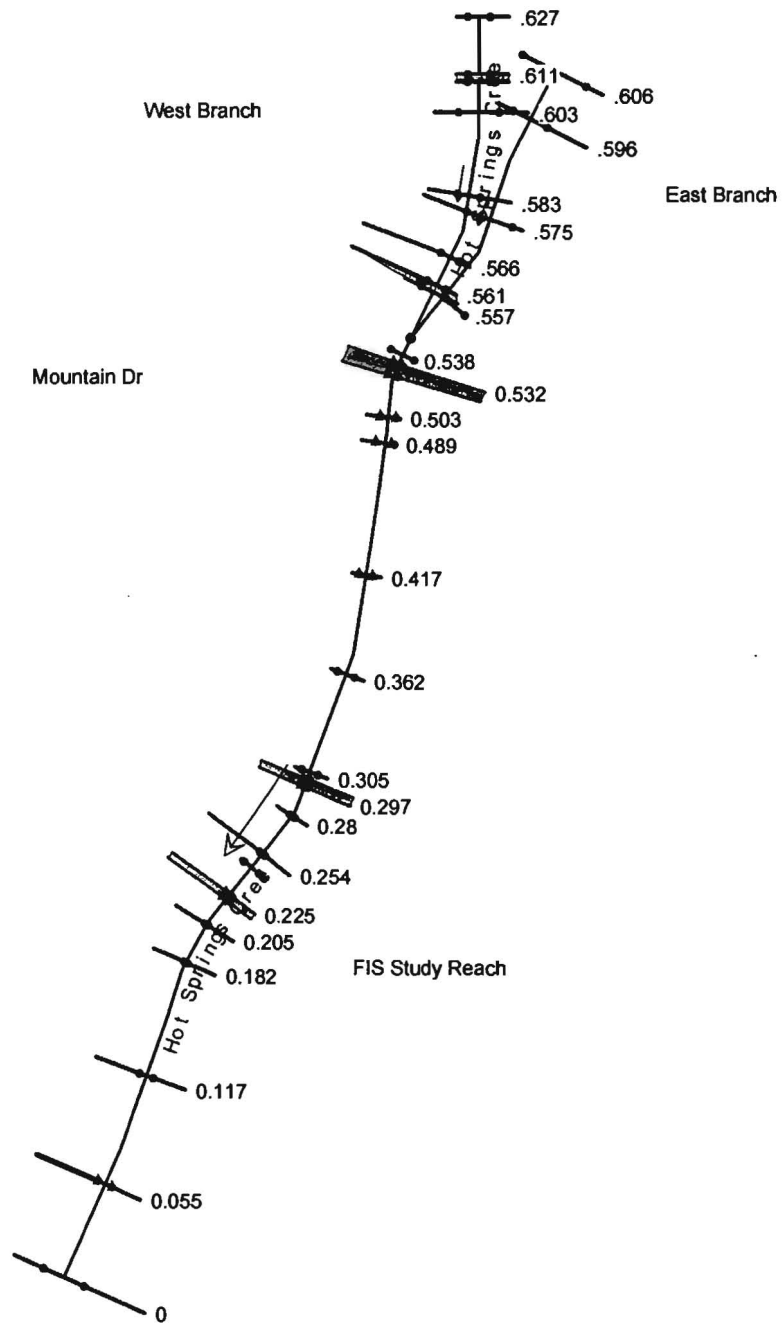
HGL : Hydraulic Grade Line elevation.
 FIS : Flood Insurance Study.
 Datum Shift : NAVD88 – NGVD29 = 2.64 feet

Attachments:

- HEC-RAS Output
- Topographic Survey
- FIRM



Md. Wahiduzzaman



Some schematic data outside default extents (see View/Set Schematic Plot Extents...)

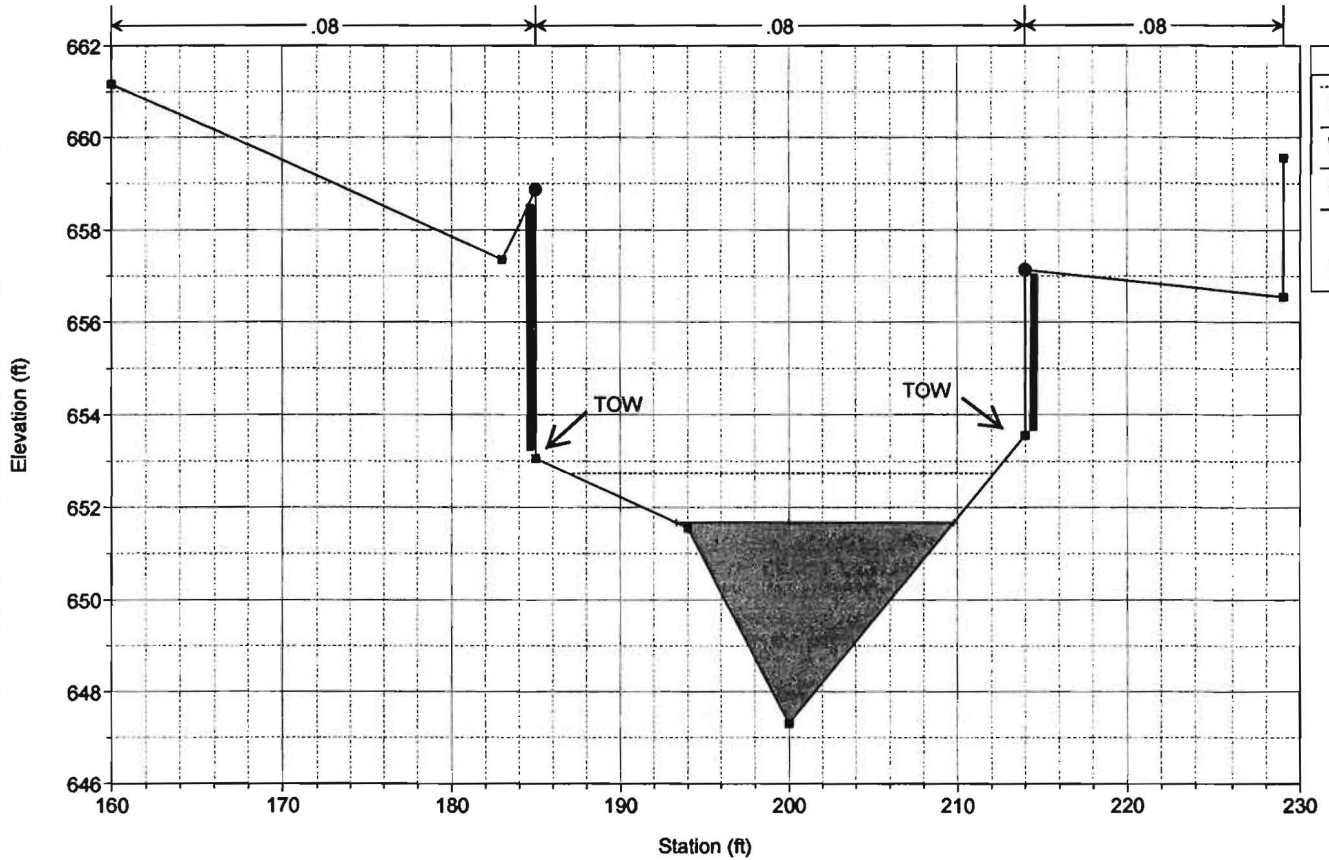
None of the XS's are Geo-Referenced (Geo-Ref user entered XS · Geo-Ref interpolated XS · Non Geo-Ref user entered XS · Non Geo-Ref interpolated XS)

| Reach | River Sta | Profile | Plan | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/m) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|-----------------|-----------|---------|----------|------------------|-------------------|-------------------|-------------------|-------------------|----------------------|--------------------|----------------------|-------------------|--------------|
| West Branch | .627 | PF#1 | Corr Eff | 289.00 | 650.00 | 653.51 | 653.51 | 654.40 | 0.084114 | 7.55 | 38.30 | 21.79 | 1.00 |
| West Branch | .627 | PF#1 | Exist | 289.00 | 647.31 | 651.67 | 651.67 | 652.74 | 0.087602 | 8.30 | 34.81 | 18.46 | 1.01 |
| West Branch | .611 | PF#1 | Exist | 289.00 | 638.19 | 642.09 | 641.61 | 642.80 | 0.046605 | 6.74 | 42.86 | 17.68 | 0.76 |
| West Branch | .609 | PF#1 | Exist | 289.00 | 637.40 | 641.09 | 641.07 | 642.21 | 0.082862 | 8.50 | 34.02 | 14.90 | 0.99 |
| West Branch | .603 | PF#1 | Corr Eff | 289.00 | 635.00 | 638.82 | 638.82 | 639.79 | 0.085289 | 7.93 | 36.44 | 19.09 | 1.01 |
| West Branch | .603 | PF#1 | Exist | 289.00 | 633.90 | 637.85 | 637.85 | 638.85 | 0.083508 | 8.00 | 36.13 | 18.21 | 1.00 |
| West Branch | .583 | PF#1 | Corr Eff | 289.00 | 625.00 | 629.28 | 628.89 | 629.95 | 0.050329 | 6.56 | 44.03 | 20.56 | 0.79 |
| West Branch | .583 | PF#1 | Exist | 289.00 | 622.58 | 627.60 | | 628.32 | 0.046689 | 6.83 | 42.38 | 17.13 | 0.75 |
| West Branch | .566 | PF#1 | Corr Eff | 289.00 | 620.00 | 623.61 | 623.61 | 624.52 | 0.082727 | 7.63 | 37.86 | 20.96 | 1.00 |
| West Branch | .566 | PF#1 | Exist | 289.00 | 617.25 | 622.03 | 622.03 | 622.88 | 0.092388 | 7.42 | 38.94 | 23.33 | 1.01 |
| West Branch | .561 | PF#1 | Exist | 289.00 | 615.60 | 619.37 | 618.78 | 619.98 | 0.041773 | 6.29 | 45.94 | 19.46 | 0.72 |
| West Branch | .557 | PF#1 | Corr Eff | 289.00 | 617.50 | 621.33 | 621.33 | 622.12 | 0.021344 | 7.15 | 40.39 | 25.37 | 1.00 |
| West Branch | .557 | PF#1 | Exist | 289.00 | 615.00 | 618.22 | 618.22 | 619.28 | 0.021206 | 8.28 | 35.00 | 16.70 | 1.01 |
| East Branch | .606 | PF#1 | Corr Eff | 1313.00 | 640.00 | 647.59 | 647.52 | 649.25 | 0.065711 | 10.33 | 127.12 | 36.56 | 0.96 |
| East Branch | .606 | PF#1 | Exist | 1313.00 | 639.80 | 647.56 | 647.45 | 649.19 | 0.064329 | 10.27 | 127.85 | 36.33 | 0.96 |
| East Branch | .596 | PF#1 | Corr Eff | 1313.00 | 635.00 | 643.50 | 643.50 | 645.42 | 0.072963 | 11.12 | 118.12 | 31.09 | 1.01 |
| East Branch | .596 | PF#1 | Exist | 1313.00 | 634.90 | 643.47 | 643.47 | 645.39 | 0.073234 | 11.13 | 117.95 | 30.95 | 1.01 |
| East Branch | .575 | PF#1 | Corr Eff | 1313.00 | 625.00 | 630.76 | 630.76 | 632.55 | 0.067809 | 10.73 | 122.37 | 34.35 | 1.00 |
| East Branch | .575 | PF#1 | Exist | 1313.00 | 625.00 | 630.75 | 630.75 | 632.55 | 0.068884 | 10.79 | 121.70 | 34.29 | 1.01 |
| East Branch | .557 | PF#1 | Corr Eff | 1313.00 | 615.20 | 622.60 | 622.60 | 624.72 | 0.018337 | 11.68 | 112.39 | 26.86 | 1.01 |
| East Branch | .557 | PF#1 | Exist | 1313.00 | 613.90 | 620.28 | 620.28 | 622.33 | 0.017190 | 11.49 | 114.23 | 27.91 | 1.00 |
| FIS Study Reach | 0.538 | PF#1 | Corr Eff | 1800.00 | 606.10 | 610.59 | | 611.46 | 0.006586 | 7.49 | 240.33 | 56.97 | 0.64 |
| FIS Study Reach | 0.538 | PF#1 | Exist | 1800.00 | 603.60 | 610.50 | | 611.45 | 0.006346 | 7.84 | 229.53 | 49.50 | 0.64 |
| FIS Study Reach | 0.532 | PF#1 | Corr Eff | 1800.00 | 603.40 | 609.82 | 608.23 | 611.19 | 0.008621 | 9.39 | 191.60 | 29.90 | 0.65 |
| FIS Study Reach | 0.532 | PF#1 | Exist | 1800.00 | 603.40 | 609.82 | 608.23 | 611.19 | 0.008621 | 9.39 | 191.60 | 29.90 | 0.65 |
| FIS Study Reach | 0.529 | | Bridge | | | | | | | | | | |
| FIS Study Reach | 0.526 | PF#1 | Corr Eff | 1800.00 | 603.40 | 608.23 | 608.23 | 610.65 | 0.020111 | 12.49 | 144.06 | 29.87 | 1.00 |
| FIS Study Reach | 0.526 | PF#1 | Exist | 1800.00 | 603.40 | 608.23 | 608.23 | 610.65 | 0.020111 | 12.49 | 144.06 | 29.87 | 1.00 |
| FIS Study Reach | 0.503 | PF#1 | Corr Eff | 1800.00 | 591.20 | 598.84 | 598.84 | 601.24 | 0.017219 | 12.44 | 144.66 | 43.19 | 1.00 |
| FIS Study Reach | 0.503 | PF#1 | Exist | 1800.00 | 591.20 | 598.84 | 598.84 | 601.24 | 0.017219 | 12.44 | 144.66 | 43.19 | 1.00 |
| FIS Study Reach | 0.489 | PF#1 | Corr Eff | 1800.00 | 580.00 | 587.64 | 587.64 | 590.04 | 0.017219 | 12.44 | 144.66 | 43.18 | 1.00 |
| FIS Study Reach | 0.489 | PF#1 | Exist | 1800.00 | 580.40 | 587.00 | 587.00 | 589.39 | 0.016877 | 12.41 | 145.08 | 35.96 | 1.00 |
| FIS Study Reach | 0.417 | PF#1 | Corr Eff | 1800.00 | 552.60 | 560.04 | 560.04 | 562.63 | 0.018534 | 12.91 | 139.47 | 33.00 | 1.00 |
| FIS Study Reach | 0.417 | PF#1 | Exist | 1800.00 | 549.40 | 557.54 | 557.54 | 560.34 | 0.019235 | 13.44 | 133.95 | 23.77 | 1.00 |
| FIS Study Reach | 0.362 | PF#1 | Corr Eff | 1800.00 | 522.60 | 528.69 | 528.69 | 530.80 | 0.016148 | 11.66 | 154.31 | 36.58 | 1.00 |
| FIS Study Reach | 0.362 | PF#1 | Exist | 1800.00 | 522.60 | 528.69 | 528.69 | 530.80 | 0.016148 | 11.66 | 154.31 | 36.58 | 1.00 |
| FIS Study Reach | 0.305 | PF#1 | Corr Eff | 1800.00 | 502.90 | 508.99 | 508.99 | 511.10 | 0.016136 | 11.66 | 154.35 | 36.58 | 1.00 |
| FIS Study Reach | 0.305 | PF#1 | Exist | 1800.00 | 502.90 | 508.99 | 508.99 | 511.10 | 0.016136 | 11.66 | 154.35 | 36.58 | 1.00 |
| FIS Study Reach | 0.301 | PF#1 | Corr Eff | 1800.00 | 500.60 | 508.84 | 507.39 | 510.68 | 0.011632 | 10.87 | 165.53 | 22.93 | 0.71 |
| FIS Study Reach | 0.301 | PF#1 | Exist | 1800.00 | 500.60 | 508.84 | 507.39 | 510.68 | 0.011632 | 10.87 | 165.53 | 22.93 | 0.71 |
| FIS Study Reach | 0.299 | | Bridge | | | | | | | | | | |
| FIS Study Reach | 0.297 | PF#1 | Corr Eff | 1800.00 | 500.60 | 507.38 | 507.38 | 510.26 | 0.022108 | 13.63 | 132.10 | 22.90 | 1.00 |
| FIS Study Reach | 0.297 | PF#1 | Exist | 1800.00 | 500.60 | 507.38 | 507.38 | 510.26 | 0.022108 | 13.63 | 132.10 | 22.90 | 1.00 |
| FIS Study Reach | 0.28 | PF#1 | Corr Eff | 1800.00 | 493.60 | 501.46 | 501.46 | 503.73 | 0.013619 | 12.77 | 191.19 | 55.17 | 0.80 |
| FIS Study Reach | 0.28 | PF#1 | Exist | 1800.00 | 493.60 | 501.46 | 501.46 | 503.73 | 0.013619 | 12.77 | 191.19 | 55.17 | 0.80 |
| FIS Study Reach | 0.254 | PF#1 | Corr Eff | 1800.00 | 480.30 | 487.36 | 487.36 | 490.38 | 0.020337 | 14.04 | 135.99 | 28.98 | 0.93 |
| FIS Study Reach | 0.254 | PF#1 | Exist | 1800.00 | 480.30 | 487.36 | 487.36 | 490.38 | 0.020337 | 14.04 | 135.99 | 28.98 | 0.93 |
| FIS Study Reach | 0.244 | PF#1 | Corr Eff | 1800.00 | 476.10 | 482.96 | 482.96 | 485.01 | 0.016941 | 11.50 | 156.62 | 39.41 | 1.01 |
| FIS Study Reach | 0.244 | PF#1 | Exist | 1800.00 | 476.10 | 482.96 | 482.96 | 485.01 | 0.016941 | 11.50 | 156.62 | 39.41 | 1.01 |
| FIS Study Reach | 0.225 | PF#1 | Corr Eff | 1800.00 | 470.80 | 478.06 | 476.81 | 479.96 | 0.012166 | 11.06 | 162.81 | 23.49 | 0.74 |
| FIS Study Reach | 0.225 | PF#1 | Exist | 1800.00 | 470.80 | 478.06 | 476.81 | 479.96 | 0.012166 | 11.06 | 162.81 | 23.49 | 0.74 |

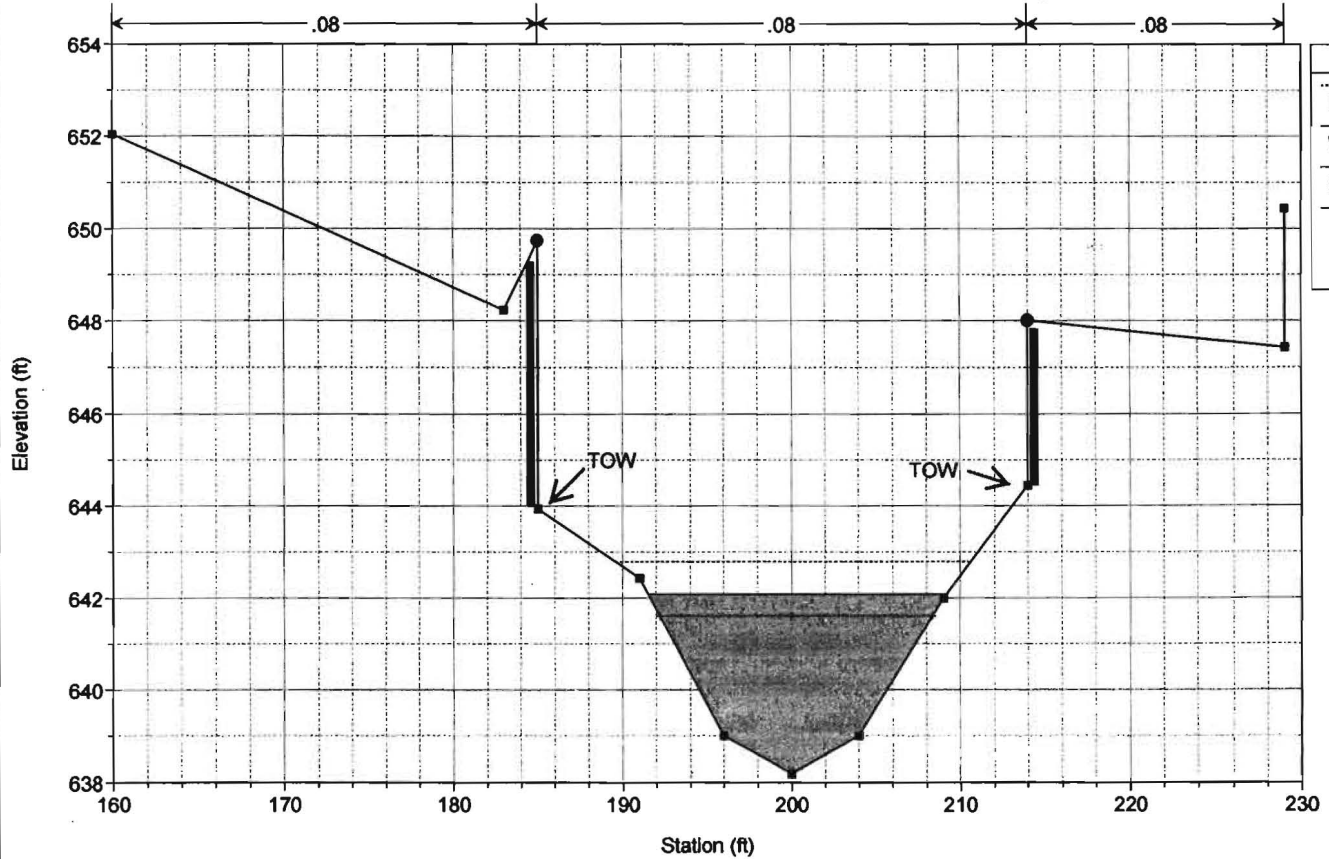
HEC-RAS Profile: PF#1 (Continued)

| Reach | River Sta | Profile | Plan | Q Total (cfs) | Min Ch El (ft) | W.S. Elev (ft) | Crit W.S. (ft) | E.G. Elev (ft) | E.G. Slope (ft/ft) | Vel Chnl (ft/s) | Flow Area (sq ft) | Top Width (ft) | Froude # Chl |
|-----------------|-----------|---------|----------|------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|--------------------|----------------------|-------------------|--------------|
| FIS Study Reach | 0.224 | | | Bridge | | | | | | | | | |
| FIS Study Reach | 0.223 | PF#1 | Corr Eff | 1800.00 | 470.80 | 476.78 | 476.78 | 479.63 | 0.021808 | 13.54 | 132.89 | 23.49 | 1.00 |
| FIS Study Reach | 0.223 | PF#1 | Exdst | 1800.00 | 470.80 | 476.78 | 476.78 | 479.63 | 0.021808 | 13.54 | 132.89 | 23.49 | 1.00 |
| FIS Study Reach | 0.205 | PF#1 | Corr Eff | 1800.00 | 463.60 | 469.90 | 469.90 | 471.81 | 0.014941 | 14.61 | 238.06 | 63.76 | 1.06 |
| FIS Study Reach | 0.205 | PF#1 | Exdst | 1800.00 | 463.60 | 469.90 | 469.90 | 471.81 | 0.014941 | 14.61 | 238.06 | 63.76 | 1.06 |
| FIS Study Reach | 0.182 | PF#1 | Corr Eff | 1800.00 | 451.00 | 458.52 | 458.52 | 460.43 | 0.013622 | 14.24 | 239.92 | 63.00 | 0.99 |
| FIS Study Reach | 0.182 | PF#1 | Exdst | 1800.00 | 451.00 | 458.52 | 458.52 | 460.43 | 0.013622 | 14.24 | 239.92 | 63.00 | 0.99 |
| FIS Study Reach | 0.117 | PF#1 | Corr Eff | 1800.00 | 423.40 | 432.47 | 432.47 | 434.67 | 0.017584 | 12.37 | 171.57 | 43.68 | 0.94 |
| FIS Study Reach | 0.117 | PF#1 | Exdst | 1800.00 | 423.40 | 432.47 | 432.47 | 434.67 | 0.017584 | 12.37 | 171.57 | 43.68 | 0.94 |
| FIS Study Reach | 0.055 | PF#1 | Corr Eff | 1800.00 | 407.80 | 415.91 | 415.91 | 417.71 | 0.014545 | 10.87 | 177.75 | 76.30 | 0.95 |
| FIS Study Reach | 0.055 | PF#1 | Exdst | 1800.00 | 407.80 | 415.91 | 415.91 | 417.71 | 0.014545 | 10.87 | 177.75 | 76.30 | 0.95 |
| FIS Study Reach | 0 | PF#1 | Corr Eff | 1800.00 | 385.00 | 390.90 | 389.88 | 391.62 | 0.006870 | 6.81 | 264.14 | 79.08 | 0.66 |
| FIS Study Reach | 0 | PF#1 | Exdst | 1800.00 | 385.00 | 390.90 | 389.88 | 391.62 | 0.006870 | 6.81 | 264.14 | 79.08 | 0.66 |

Bagdasarian_BE Plan: 1) Exist 4/10/2011
RS = .627

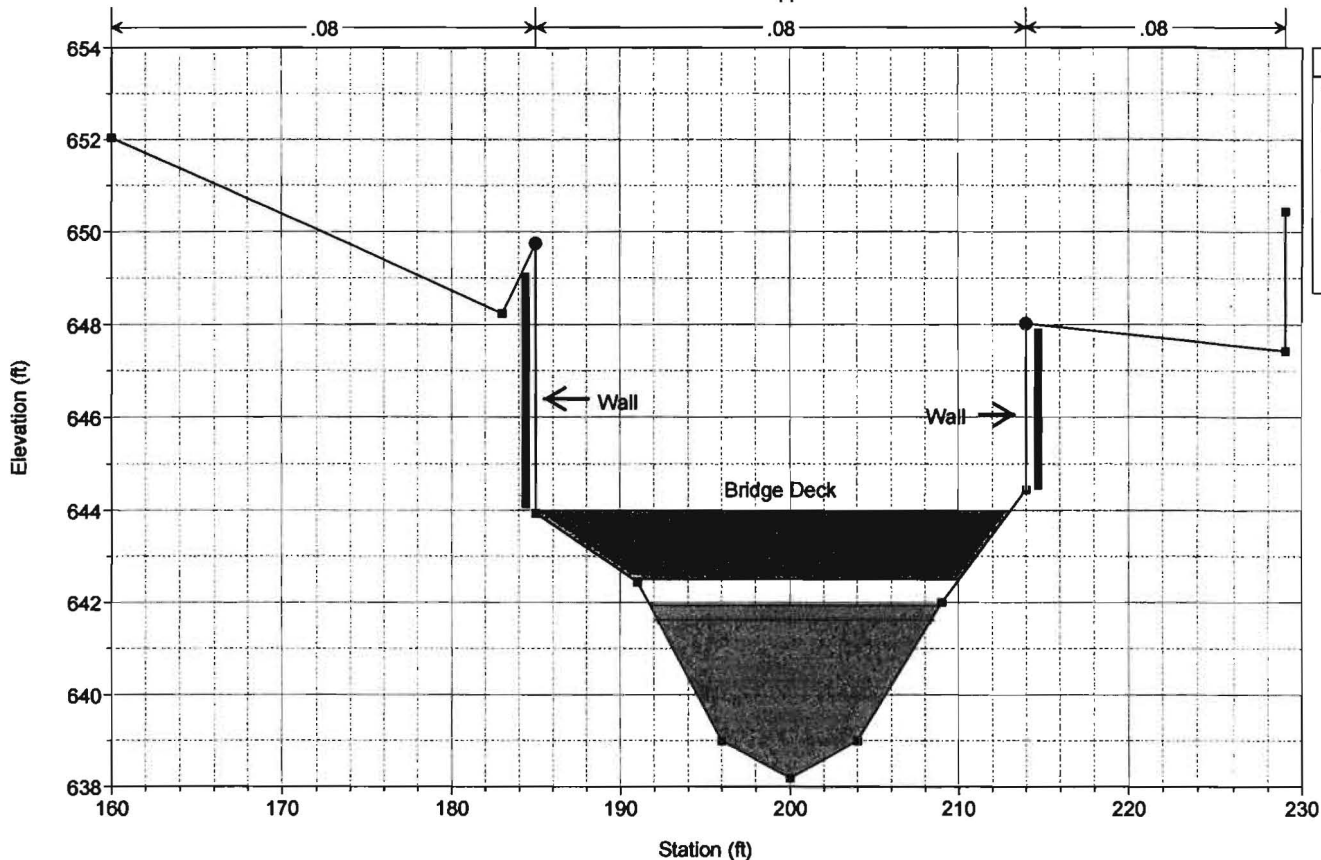


Bagdasarian_BE Plan: 1) Exist 4/10/2011
RS = .611 (Immediate US of Upper Bridge)



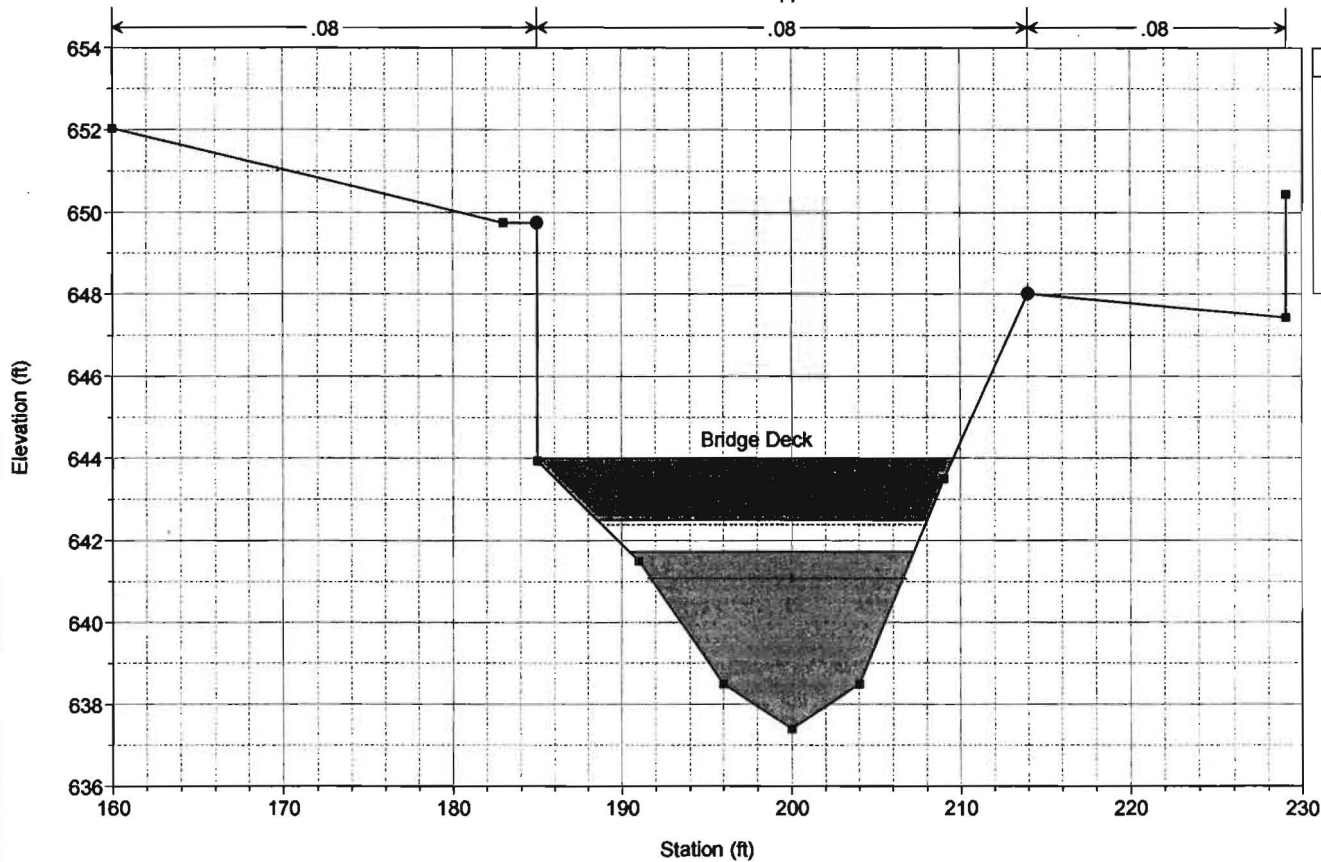
Bagdasarian_BE Plan: 1) Exist 4/10/2011

RS = .61 BR Upper Br

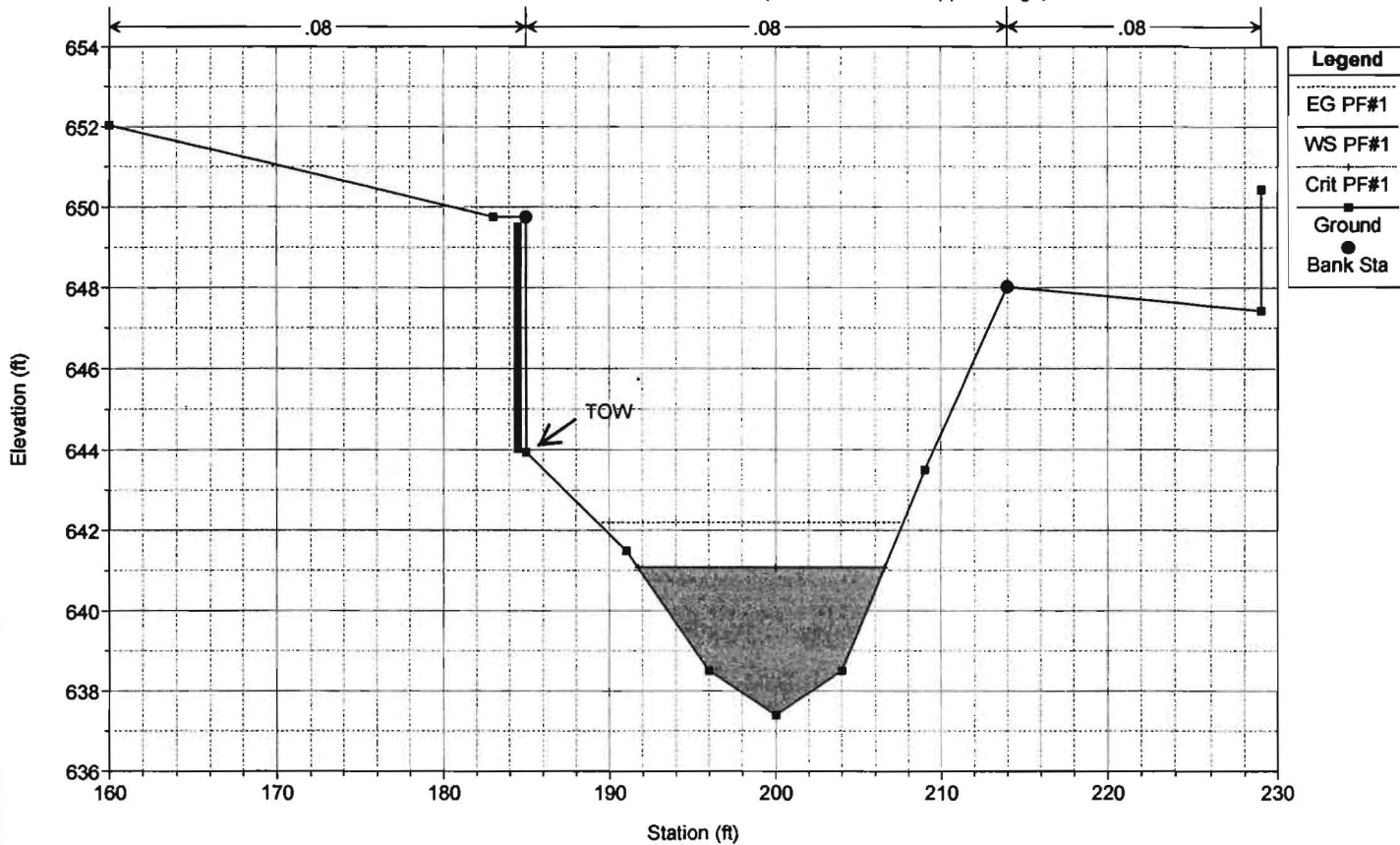


Bagdasarian_BE Plan: 1) Exist 4/10/2011

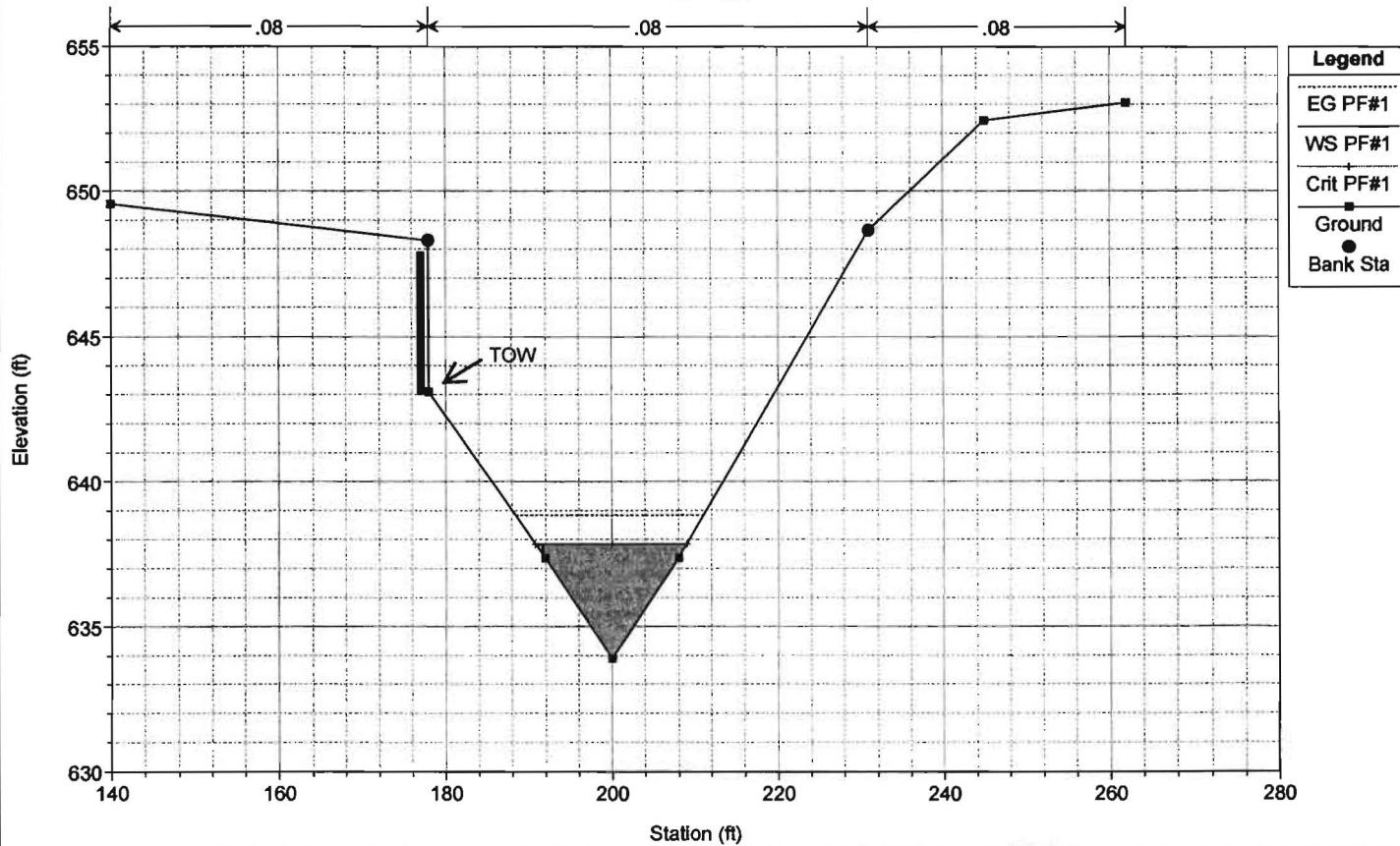
RS = .61 BR Upper Br



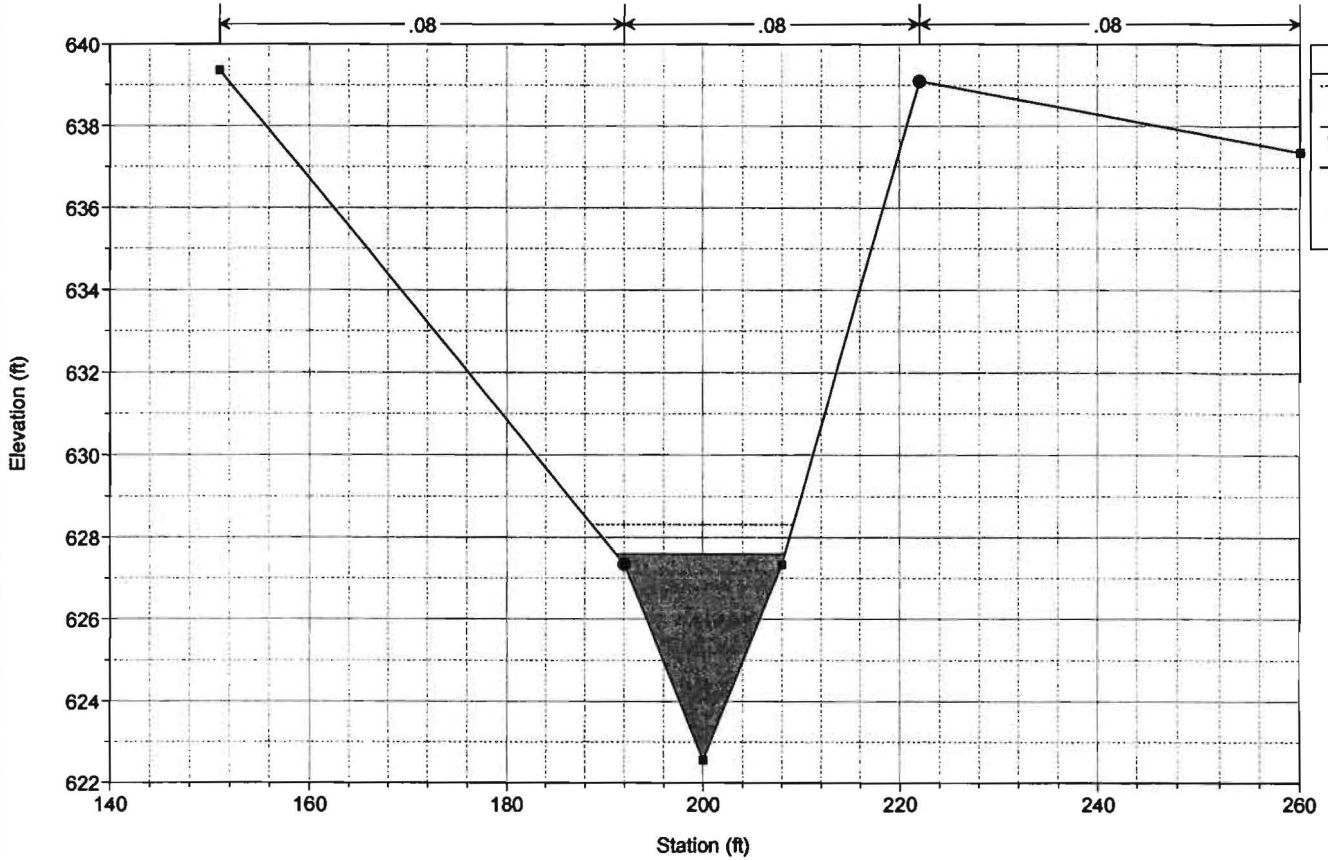
Bagdasarian_BE Plan: 1) Exist 4/10/2011
 RS = .609 (Immediate DS of Upper Bridge)



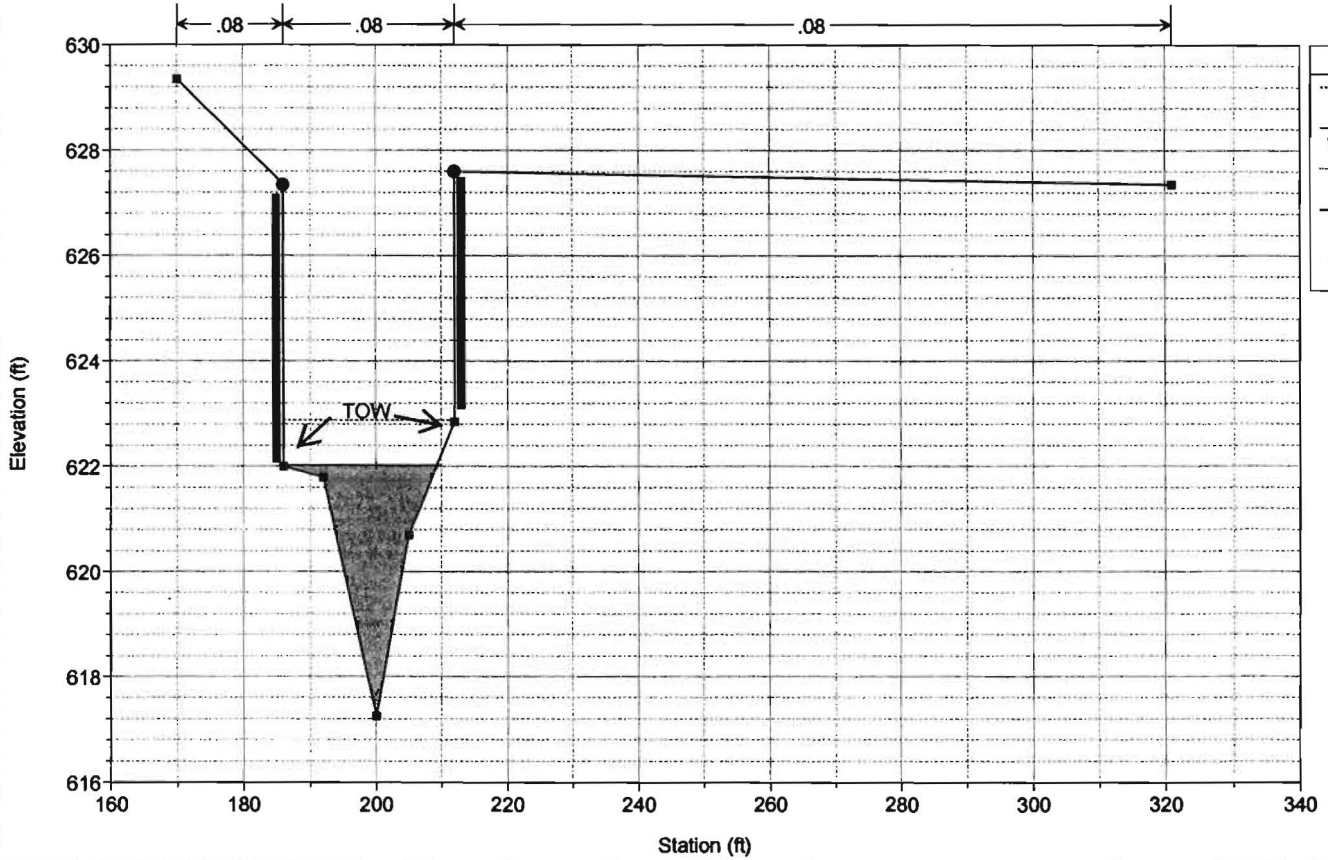
Bagdasarian_BE Plan: 1) Exist 4/10/2011
 RS = .603



Bagdasarian_BE Plan: 1) Exist 4/10/2011
RS = .583

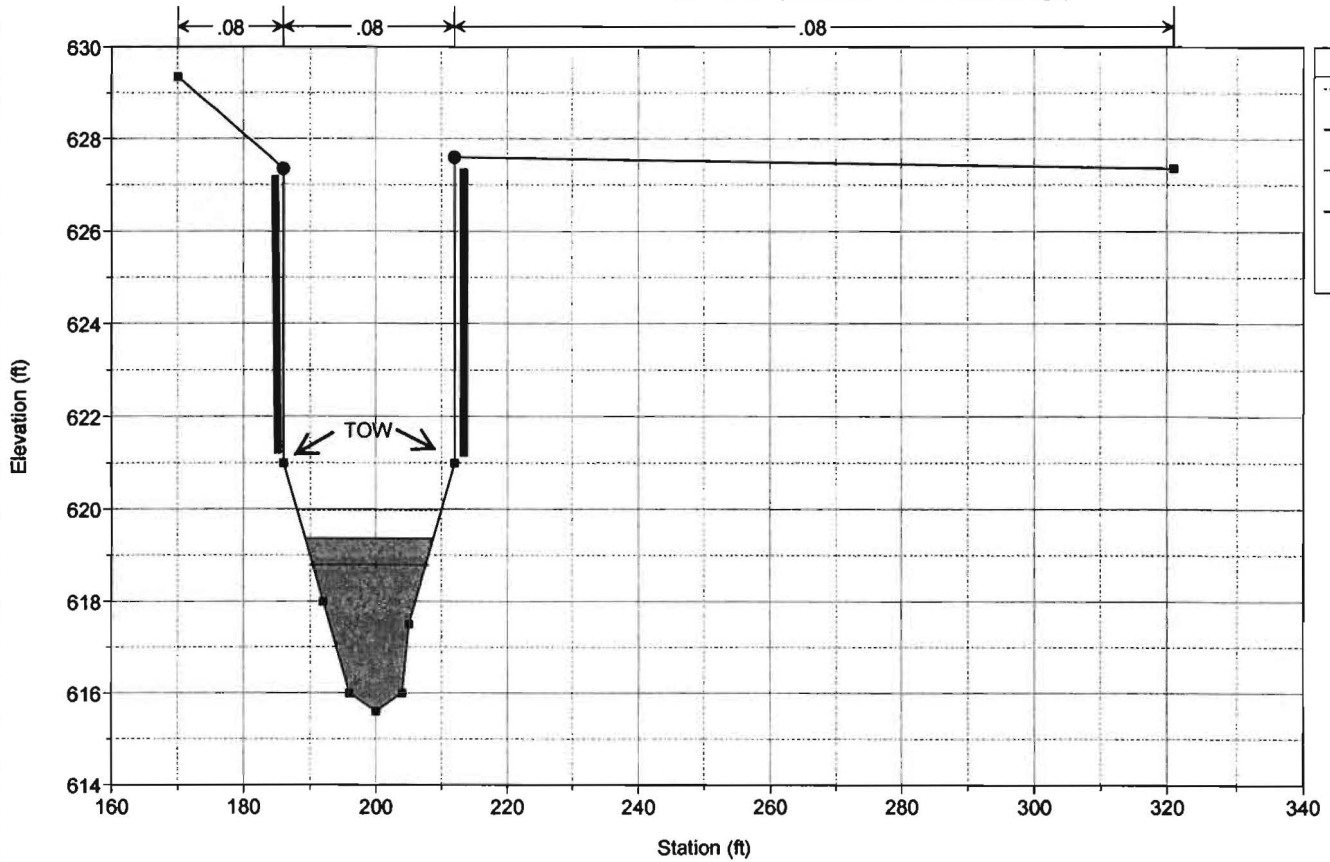


Bagdasarian_BE Plan: 1) Exist 4/10/2011
RS = .566



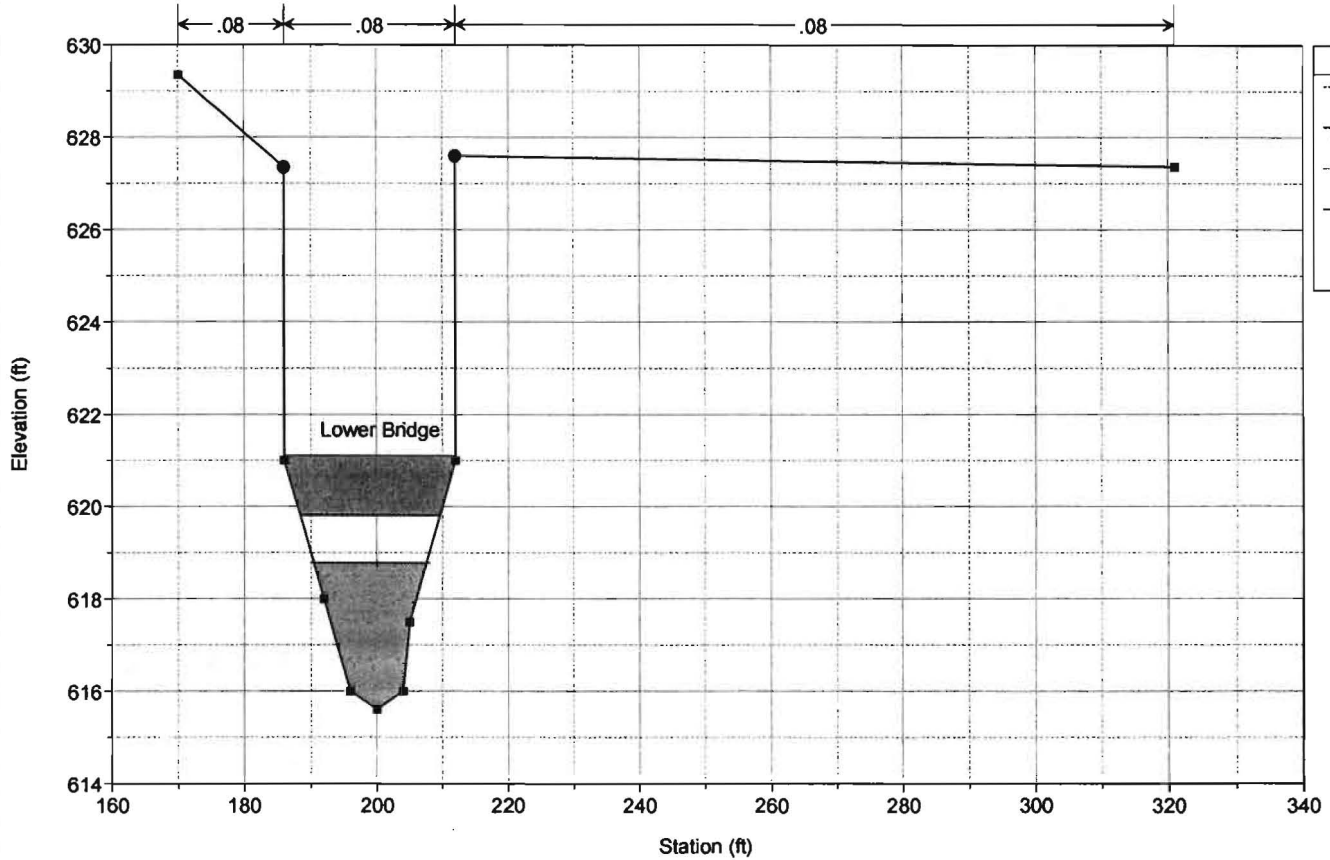
Bagdasarian_BE

Plan: 1) Exist 4/10/2011
RS = .561 (Immediate US of Lower Bridge)



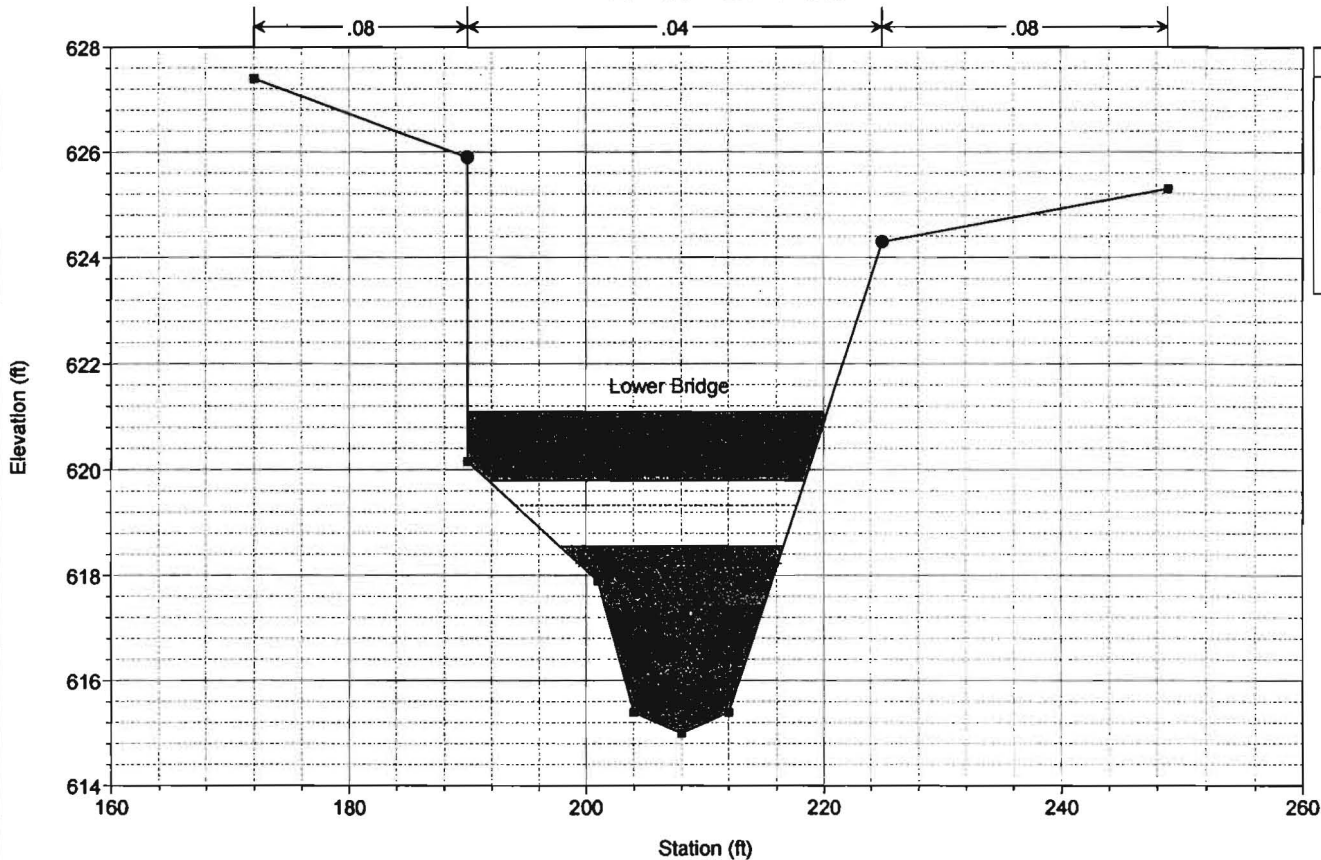
Bagdasarian_BE

Plan: 1) Exist 4/10/2011
RS = .56 BR Lower Br



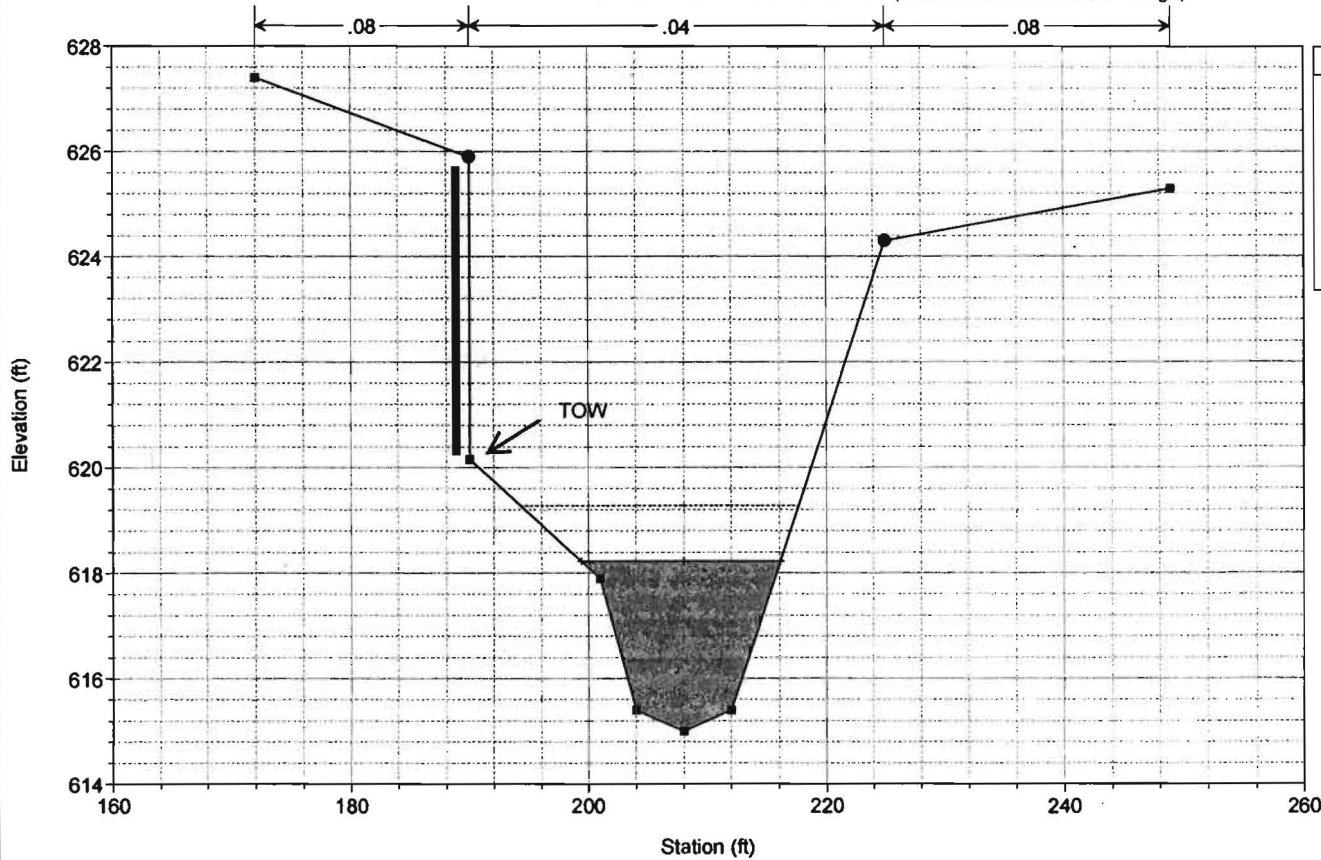
Bagdasarian_BE Plan: 1) Exist 4/10/2011

RS = .56 BR Lower Br



Bagdasarian_BE Plan: 1) Exist 4/10/2011

RS = .557 CROSS SECTION 1 (Immediate DS of Lower Bridge)



Questions concerning the VERTCON process may be mailed to NGS

Latitude: 34.4493

Longitude: 119.6463

NAVD 88 height: 0 ft

Datum shift (NAVD 88 minus NGVD 29): 2.644 feet

Converted to NGVD 29 height: -2.644 feet

CONFERENCE REPORT

APPLETON & ASSOCIATES INC
Architects

PRESENT 4.7.11

DATE

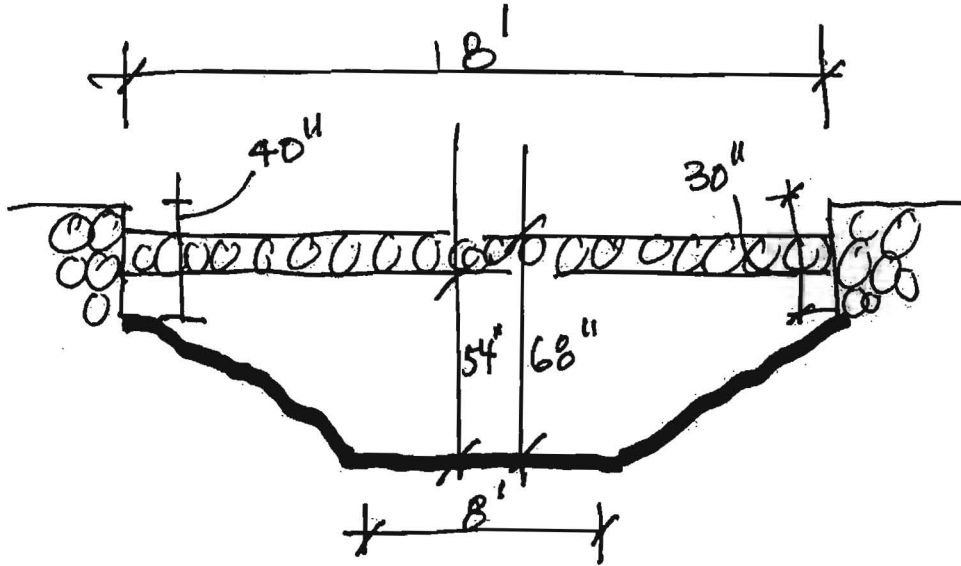
117 W. Micheltorena
Santa Barbara, CA
91303

LOCATION DAGDASARIAN

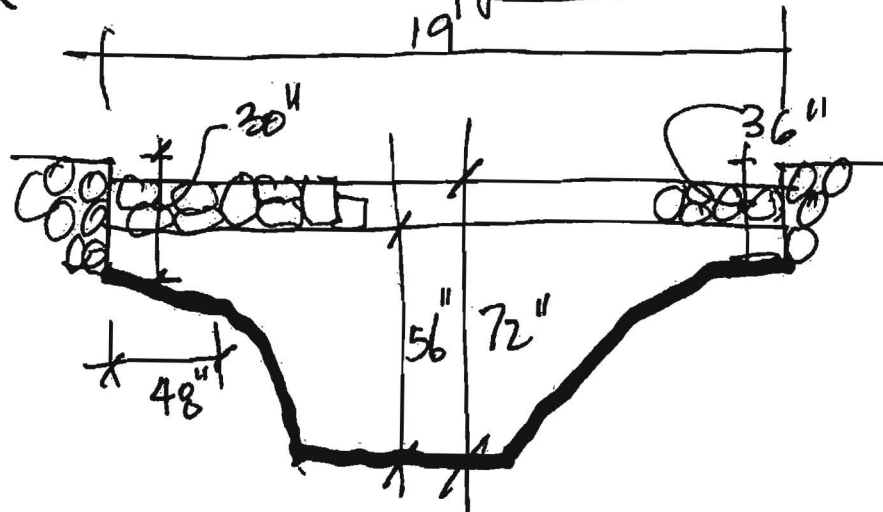
PROJECT

TEL 805 965 0304
FAX 805 560 6815

REMARKS



Lower Bridge



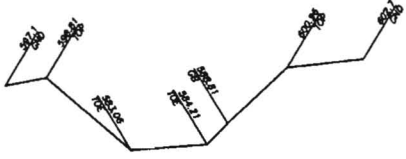
Upper Bridge



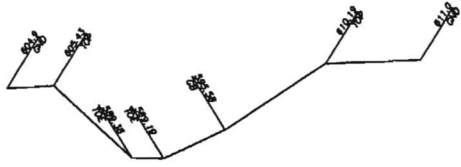
CROSS SECTION 1



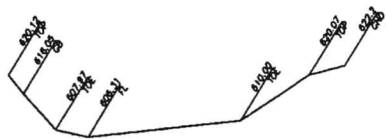
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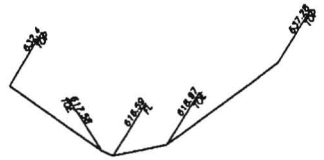
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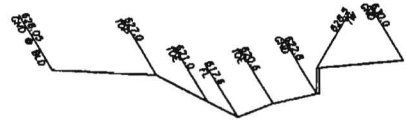
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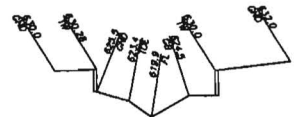
CROSS SECTION 5



CROSS SECTION 6



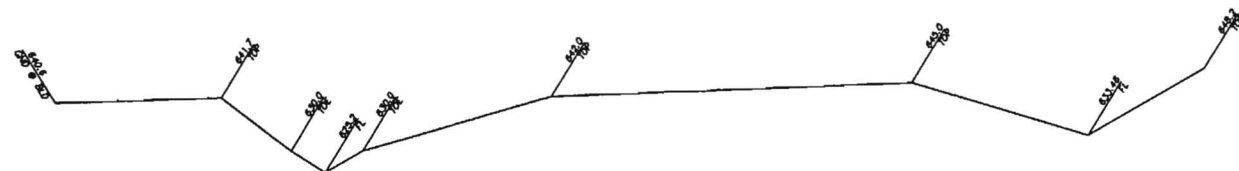
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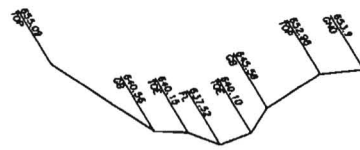
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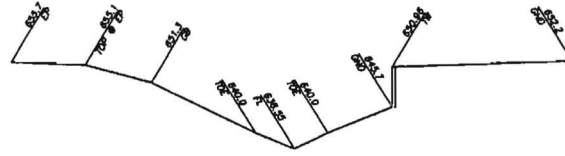
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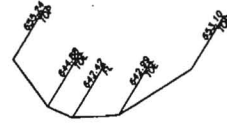
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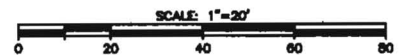
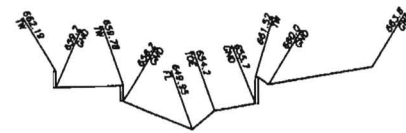
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CROSS SECTION 12



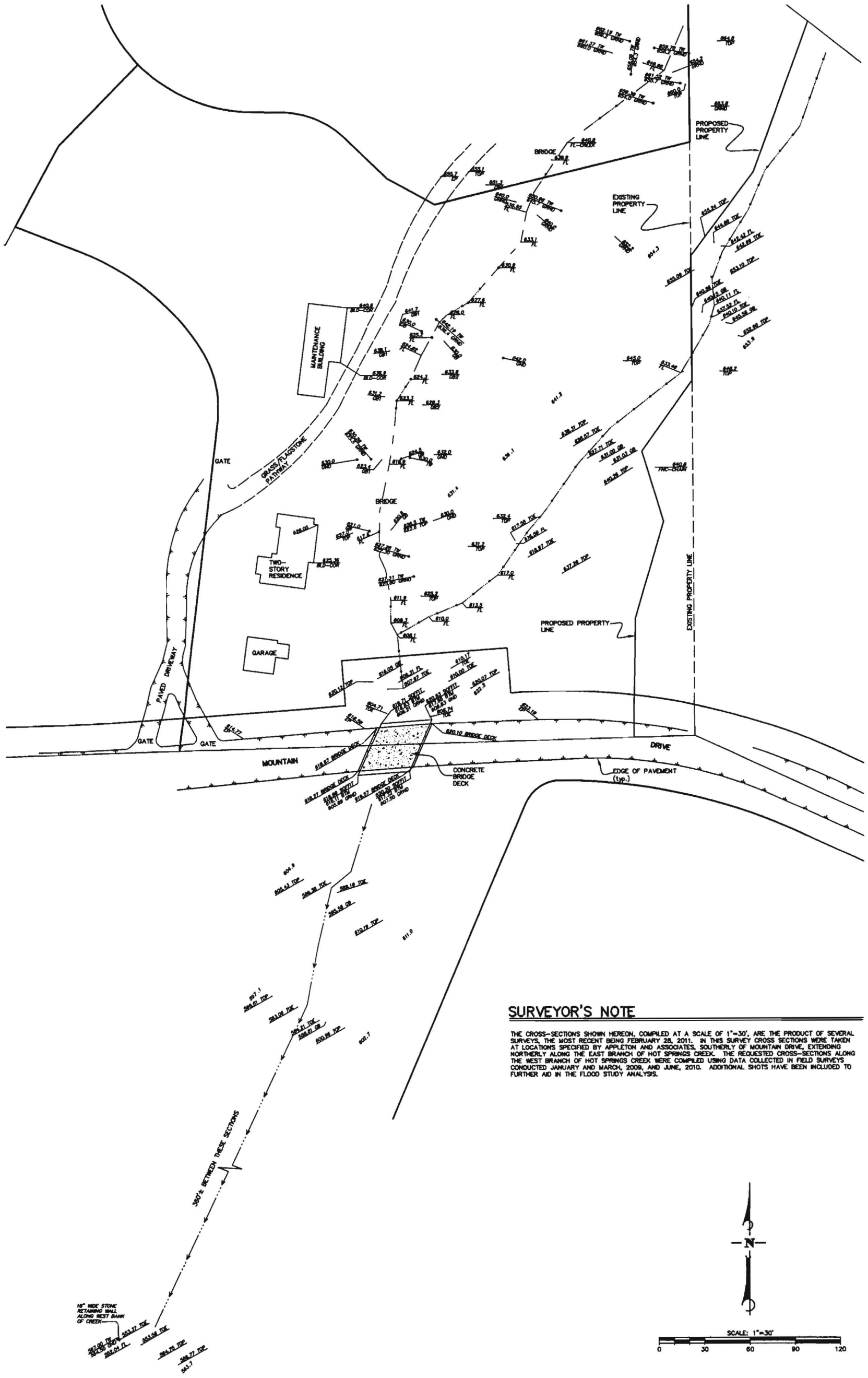
CROSS SECTION 13



HOT SPRINGS CREEK
CROSS-SECTIONS FOR FLOOD STUDY
BAGDASARIAN PROPERTY--APN's 011-020-034 & 042
AND SOUTHERLY OF MOUNTAIN DRIVE

COUNTY OF SANTA BARBARA, CA

MARCH 2011

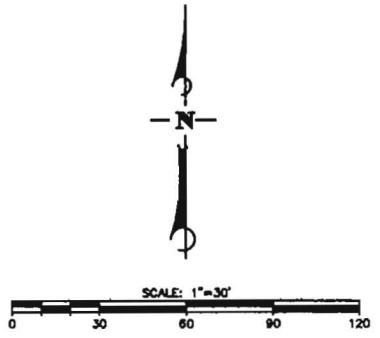


SURVEYOR'S NOTE

THE CROSS-SECTIONS SHOWN HEREON, COMPILED AT A SCALE OF 1"=30', ARE THE PRODUCT OF SEVERAL SURVEYS, THE MOST RECENT BEING FEBRUARY 28, 2011. IN THIS SURVEY CROSS SECTIONS WERE TAKEN AT LOCATIONS SPECIFIED BY APPLETON AND ASSOCIATES, SOUTHERLY OF MOUNTAIN DRIVE, EXTENDING NORTHERLY ALONG THE EAST BRANCH OF HOT SPRINGS CREEK. THE REQUESTED CROSS-SECTIONS ALONG THE WEST BRANCH OF HOT SPRINGS CREEK WERE COMPILED USING DATA COLLECTED IN FIELD SURVEYS CONDUCTED JANUARY AND MARCH, 2009, AND JUNE, 2010. ADDITIONAL SHOTS HAVE BEEN INCLUDED TO FURTHER AID IN THE FLOOD STUDY ANALYSIS.

16" WIDE STONE
RETAINING WALL
ALONG WEST BANK
OF CREEK

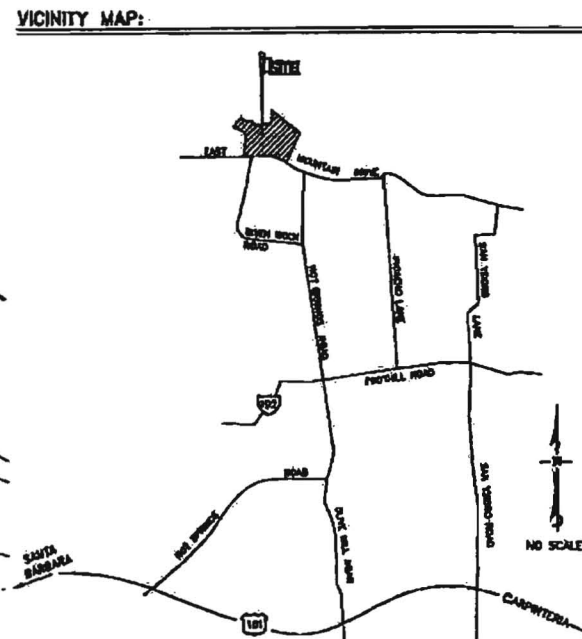
621.7 TOP
622.1 TOP
622.7 TOP
623.1 TOP
623.7 TOP



**HOT SPRINGS CREEK
CROSS-SECTIONS FOR FLOOD STUDY
BAGDASARIAN PROPERTY—APN's 011-020-034 & 042
AND SOUTHERLY OF MOUNTAIN DRIVE**

COUNTY OF SANTA BARBARA, CA

MARCH 2011



SURVEYOR'S NOTES:

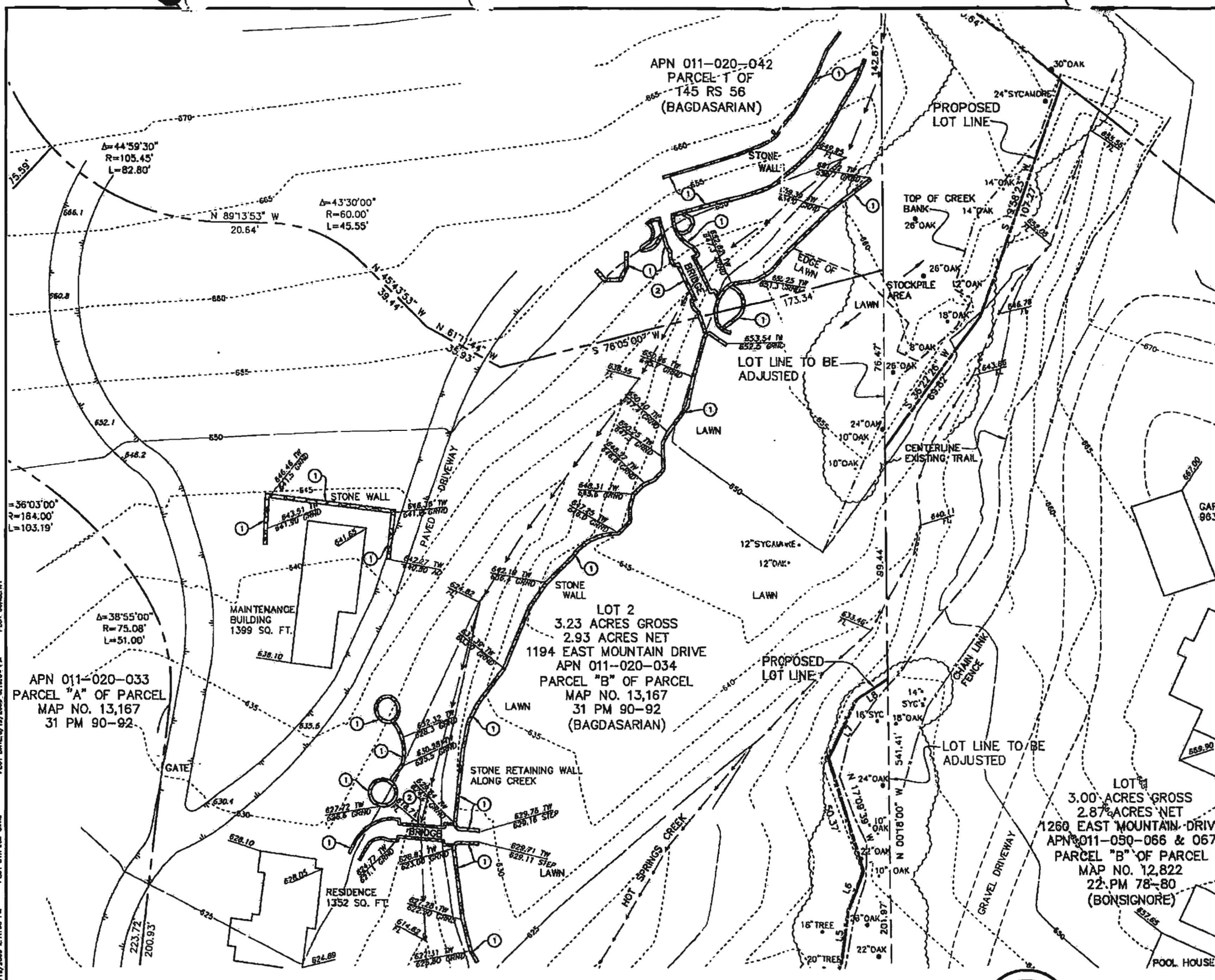
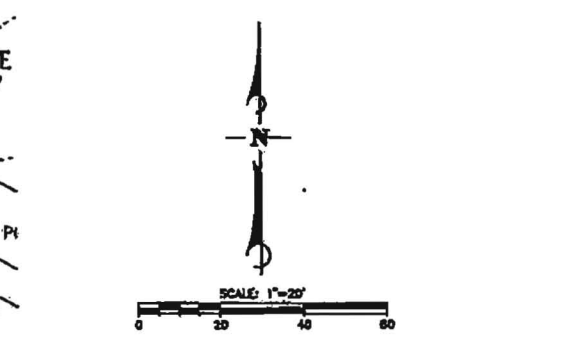
1. TOPOGRAPHIC MAPPING
 THE TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD SURVEYS CONDUCTED BY PENFIELD AND SMITH IN JULY, 2007, AND IN JANUARY, 2008, AND HAS BEEN COMPILED AT A SCALE OF 1 INCH = 30 FEET, WITH A CONTOUR INTERVAL OF 5 FEET. THE VERTICAL DATUM IS NAVD 88, BASED UPON GPS TIES TO STATION "P&S01" PER RECORD OF SURVEY BOOK 170, PAGES 1 AND 2, FILED IN THE OFFICE OF THE SANTA BARBARA COUNTY RECORDER.

2. BOUNDARY INFORMATION
 THE BOUNDARY AND INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM RECORD PER PARCEL MAP NOS. 13,167 AND 12,822, RECORDED IN THE OFFICE OF THE SANTA BARBARA COUNTY RECORDER IN BOOK 31, PAGES 90-93, AND BOOK 22, PAGES 78-80, OF PARCEL MAPS, RESPECTIVELY. THE RECORD BEARINGS PER PARCEL MAP 12,822 HAVE BEEN ROTATED 0°14'41" COUNTER-CLOCKWISE FOR THE PURPOSES OF THIS COMPILATION. THIS MAP DOES NOT REPRESENT A BOUNDARY ESTABLISHMENT SURVEY.

THIS MAP WAS PREPARED IN CONJUNCTION WITH PRELIMINARY TITLE REPORTS ISSUED BY CHICAGO TITLE COMPANY AS ORDER NOS. 08-77501388-AM AND 08-77501388-AM, DATED FEBRUARY 6, 2008. SAID REPORTS ARE PRESUMED TO BE COMPLETE AND ACCURATE. PENFIELD AND SMITH DOES NOT WARRANT THE COMPLETENESS OR ACCURACY OF SAID REPORTS.

WALL CONSTRUCTION NOTES:

① RETAINING WALL CONSTRUCTED PER DETAILS "A", "B", "C", AND "D" ON SHEET 2.
 ② BRIDGE CONSTRUCTED PER DETAILS "E" AND "F" ON SHEET 2.



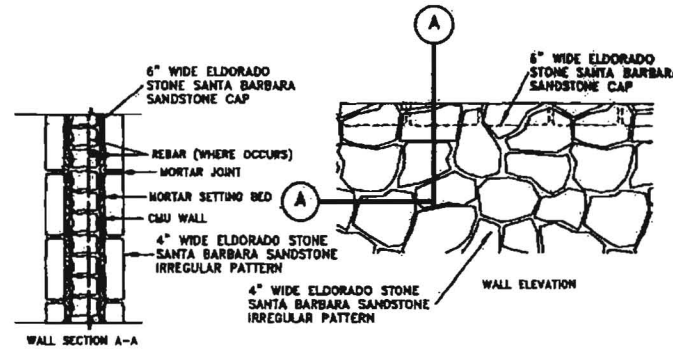
| | | | | | | | |
|--|---|-------------------------------|---|--|---|--|---|
| 38-CHG SAVE DATES 8/11/2008 2:11:50 PM PLOT 811P1W SH46 PLOT DATES 8/19/2008 2:18:24 PM PLOT SCALE 1"=20' | NO. DATE REVISIONS 1 5/20/09 BUILDING AND SAFETY SUBMITTAL REQUEST | APPR. _____ _____ _____ | Penfield & Smith Engineering, Surveying, Planning & Construction Management 111 East Victoria Street, Santa Barbara, CA 93101 Phone: (805) 963-9532 Fax: (805) 968-9801 | DESIGN PAS _____ CHECKED _____ PROJECT ENGINEER DATE: _____ R.C.E. 70,436 (EXP. 8-30-10) | COUNTY OF SANTA BARBARA REVIEWED BY: _____ SIGNATURE _____ DATE _____ | BRIDGES & RETAINING WALL LAYOUT BAGDASARIAN AS-BUILT BRIDGES & RETAINING WALLS 1192 EAST MOUNTAIN DRIVE MONTECITO, CA | P&S PROJECT NO. 17836.02 SHEET 1 of 2 PLAN DATE MAY, 2008 |
| | [Professional Engineer Seal for Peter A. Silva, No. 70436, Expires 8/30/10] | | | | | | |

GENERAL NOTES:

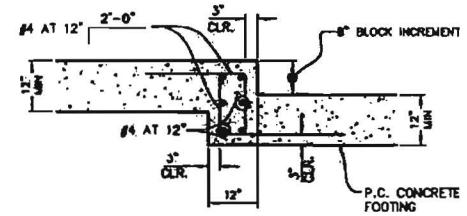
1. THE DETAILS SHOWN HEREIN ARE ASSUMED "AS-BUILT" SECTIONS PER CONVERSATIONS WITH THE OWNER AND PHOTOGRAPHS TAKEN DURING A FIELD VISIT ON APRIL 3, 2009.
2. PENFIELD & SMITH CANNOT WARRANT THE COMPLETENESS OF THE DETAILS SHOWN AND SHALL NOT BE HELD RESPONSIBLE FOR THEIR ACCURACY.

WALL CONSTRUCTION NOTES:

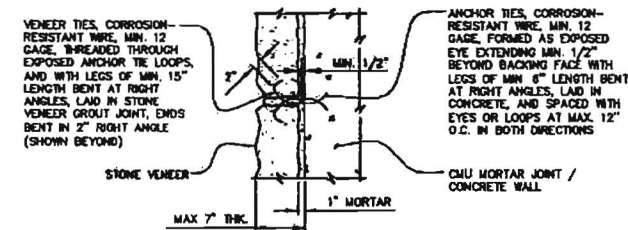
1. CONSTRUCT WATERPROOFING AT BACK OF WALL.
2. CONSTRUCT GRANULAR NON-EXPANSIVE BACKFILL COMPACTED TO A MINIMUM 90% RELATIVE COMPACTION (UNLESS NOTED OTHERWISE) AT A 1:1 SLOPE FROM BOTTOM OF FOOTING TO A HORIZONTAL DISTANCE NO LESS THAN 60% OF RETAINED SOIL HEIGHT.
3. CONSTRUCT 4" WIDE SANTA BARBARA SANDSTONE VENEER WITH IRREGULAR PATTERN PER DETAILS "B" AND "D", THIS SHEET.
4. UNDISTURBED ORIGINAL GROUND OR SUBGRADE COMPACTED TO 90% RELATIVE COMPACTION.
5. CONSTRUCT 2x KEYWAY AT CONCRETE CONSTRUCTION JOINTS.
6. CONSTRUCT CONTINUOUS 4-INCH PERFORATED PIPE AT TOP OF FOOTING AND DRAIN TO DAYLIGHT.
7. CONSTRUCT MINIMUM 12" WIDE FILTER FABRIC WRAPPED GRAVEL COLUMN AT BACK OF WALL TO WITHIN 12" OF FINISH SURFACE BEHIND WALL.



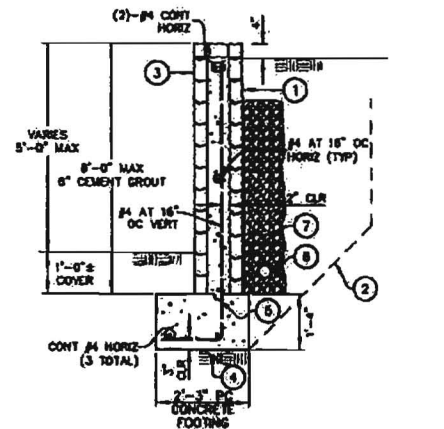
WALL STONE FINISH DETAIL
SCALE: N.T.S.



NOTE: REINFORCEMENT SHOWN IS IN ADDITION TO THAT SHOWN IN THE WALL DETAIL(S).
TYPICAL SPREAD FOOTING STEP DETAIL
SCALE: N.T.S.



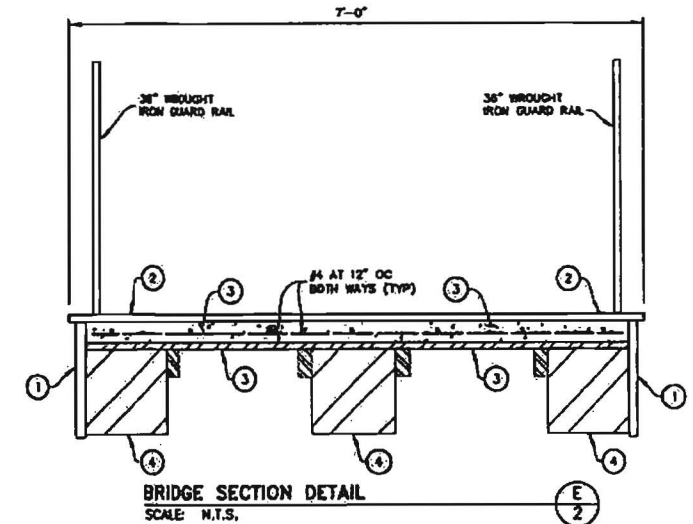
TYPICAL STONE VENEER ATTACHMENT DETAIL
SCALE: N.T.S.



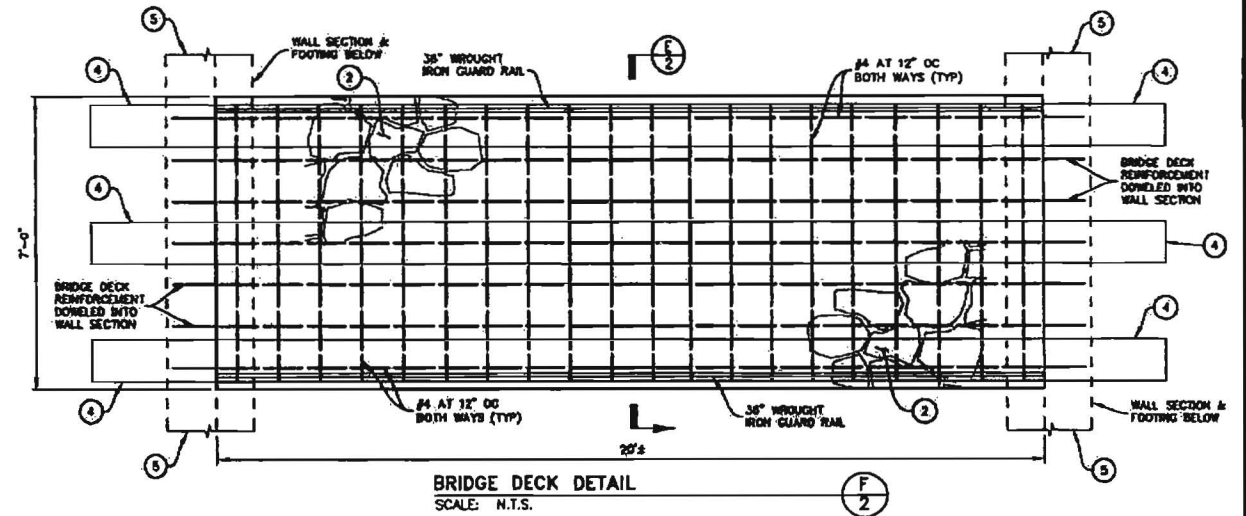
TYPICAL RETAINING WALL SECTION
SCALE: 1" = 2'

BRIDGE CONSTRUCTION NOTES:

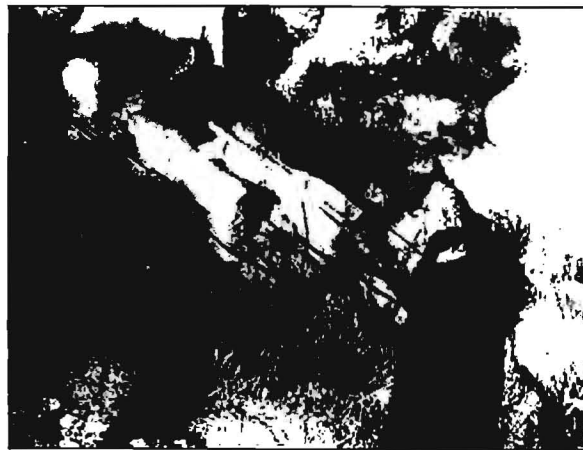
1. CONSTRUCT 2" WIDE SANTA BARBARA SANDSTONE VENEER WITH SAME IRREGULAR PATTERN PER DETAIL "B", THIS SHEET.
2. CONSTRUCT 1" THICK FLAGSTONE WITH SAME IRREGULAR PATTERN PER DETAIL "B", THIS SHEET.
3. CONSTRUCT 3" THICK CEMENT GROUT ABOVE 1" THICK PLYWOOD.
4. CONSTRUCT 12"x12" WOOD BEAMS. EMBED 36" INTO BRIDGE ABUTMENTS.
5. BRIDGE ABUTMENTS PER WALL DETAILS THIS SHEET.



BRIDGE SECTION DETAIL
SCALE: N.T.S.



BRIDGE DECK DETAIL
SCALE: N.T.S.



WALL PHOTOS



BRIDGE PHOTOS

3d-CAD SAVE DATE: 4/18/2009 2:11:58 PM PLOT DATE: 5/19/2009 3:20:19 PM PLOT SCALE: 1:1

| NO. | DATE | REVISIONS | APP. |
|-----|---------|---------------------------------------|------|
| 1 | 5/20/09 | BUILDING AND SAFETY SUBMITTAL REQUEST | |
| | | | |
| | | | |
| | | | |

PENFIELD & SMITH
Engineering - Surveying - Planning
Construction Management
111 East Victoria Street, Santa Barbara, CA 93101
Phone: (805) 963-9532 Fax: (805) 966-9801

DESIGN: PAS CHECKED: _____
PROJECT ENGINEER: PETE A. SILVA DATE: _____
N.C.E. 70,435 (EXP. 8-30-10)



COUNTY OF SANTA BARBARA
REVIEWED BY: _____
SIGNATURE: _____ DATE: _____

BRIDGE & RETAINING WALL DETAILS
BAGDASARIAN AS-BUILT BRIDGES & RETAINING WALLS
1192 EAST MOUNTAIN DRIVE
MONTECITO, CA

P&S PROJECT NO. 17936.02
SHEET 2 of 2
PLAN DATE MAY, 2009



MAP SCALE 1" = 500'



JOINS PANEL 1383

0 FT



NFIP PANEL 1384F

FIRM
FLOOD INSURANCE RATE MAP
 SANTA BARBARA COUNTY,
 CALIFORNIA
 AND INCORPORATED AREAS

PANEL 1384 OF 1835
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|----------------------|--------|-------|--------|
| SANTA BARBARA COUNTY | 06083 | 1384 | F |

Notes to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06083C1384F

EFFECTIVE DATE
SEPTEMBER 30, 2005

Federal Emergency Management Agency

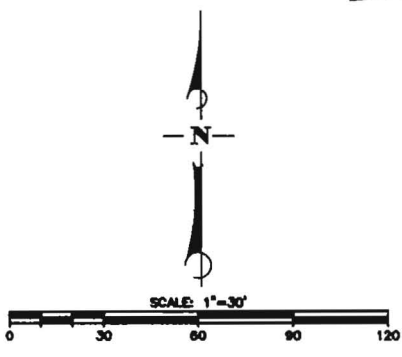
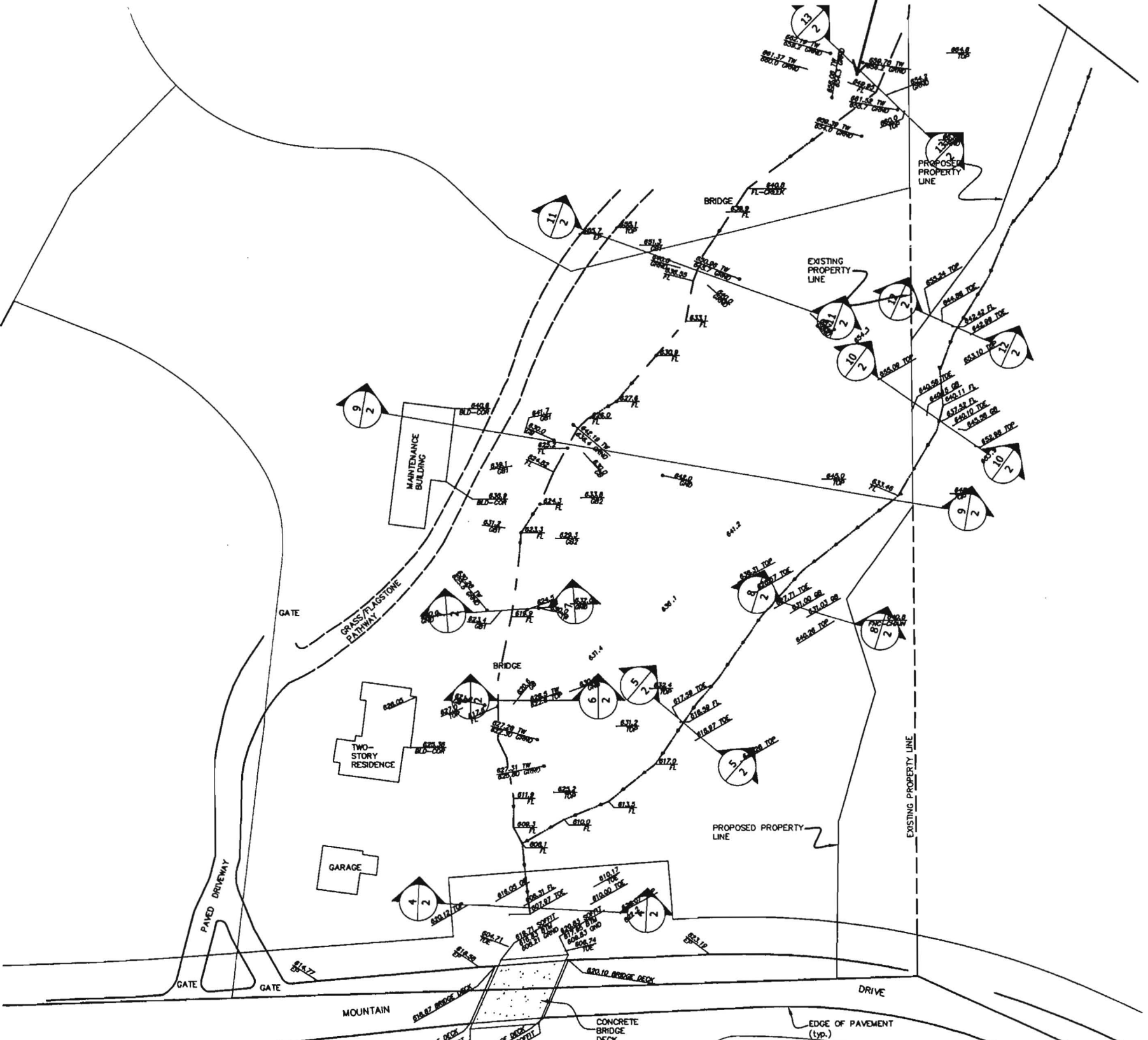
NATIONAL FLOOD INSURANCE PROGRAM

Santa Barbara County
Unincorporated Areas
060331

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Datum Shift = 2.64'

$649.95' - 2.64' = 647.31'$



DATUM: NAVD 88

Datum Shift: NAVD88-NGVD29=2.64'

HOT SPRINGS CREEK
CROSS-SECTIONS FOR FLOOD STUDY
BAGDASARIAN PROPERTY--APN's 011-020-034 & 042
AND SOUTHERLY OF MOUNTAIN DRIVE

COUNTY OF SANTA BARBARA, CA

MARCH 2011

SURVEYOR'S NOTE

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PS Penfield & Smith
Engineering · Surveying · Planning
· Construction Management ·

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W.O. 17936.04 17936102-C3D.dwg

RECEIVED
APR 13 2011
S.B. COUNTY
PLANNING & DEVELOPMENT

RESTORATION PLAN

**1192 East Mountain Drive
Montecito, California**

APRIL 12, 2011

DRAFT

Prepared by:

Rachel Tierney Consulting
P. O. Box 1113
Santa Barbara, CA 93102
(805) 957--1100

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1.0 INTRODUCTION

DRAFT

1.1 SUMMARY

This Restoration Plan provides instructions for native habitat restoration of disturbed riparian and adjacent habitat along Hot Springs Creek, Montecito, California. Habitat disturbance was the result of non-permitted work at 1192 East Mountain Drive, Montecito, California, which creating an irrigated lawn (0.73 acres), and other improvements between the main branch of Hot Spring Creek and a secondary, western fork. The entire site consists of two parcels (APN's 011-020-042 and 011-020-034) totaling 7.9 acres. Ross Bagdasarian and Janice Karman are the responsible parties for implementing the Plan.

The area was apparently grubbed, graded and leveled. Rocks from the site were used to construct vertical walls lining both banks of a secondary fork, two pedestrian bridges across this secondary drainage, and several stone-lined tree-wells and tree retaining walls. Other boulders and rock were relocated to a stockpile area on the east side of the Creek.

Restoration extends beyond the boundaries of these direct impacts, netting a beneficial outcome when compared to baseline conditions. The Plan contains input from local professional horticulturists, biologists and arborists. Included are provisions for exotic species removal, the reintroduction of native trees and understory, and maintenance and monitoring specifications. The proposed mitigation area (restoration area) of 3.31 acres represents three, and in the case of the rock wall, five times the total area disturbed (1.07 acres). There are 1.79 acres available on-site for restoration. The remaining 1.52 acres would be purchased in lieu of on-site restoration. This "in-lieu" fee program solves the problem of not having enough available area on-site to meet the required mitigation acreage. In these circumstances, the permittee provides funds to a single sponsor, generally a public agency or non-profit organization, in-lieu of on-site mitigation. The sponsor is then required to conduct the compensatory mitigation.

For the purpose of this restoration effort, on-site areas are separated into four sections:

1. Secondary Drainage and Western Slope
2. Rock Stockpile Site
3. Hot Springs Creek
4. "Island"

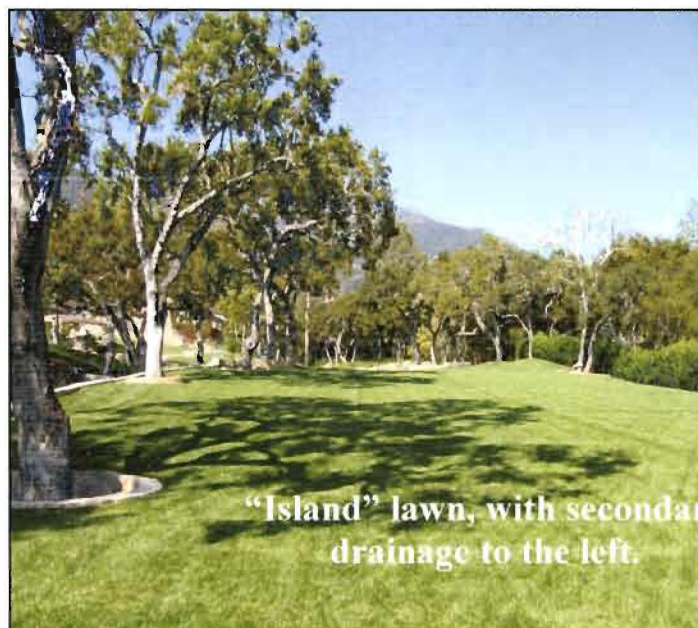
¹ The California Department of Fish and Game often asks for mitigation in the amount of five times the area *permanently* removed. Temporarily disturbed areas are most often mitigated with three times the area disturbed.

1.2 SURROUNDING ENVIRONMENT

DRAFT

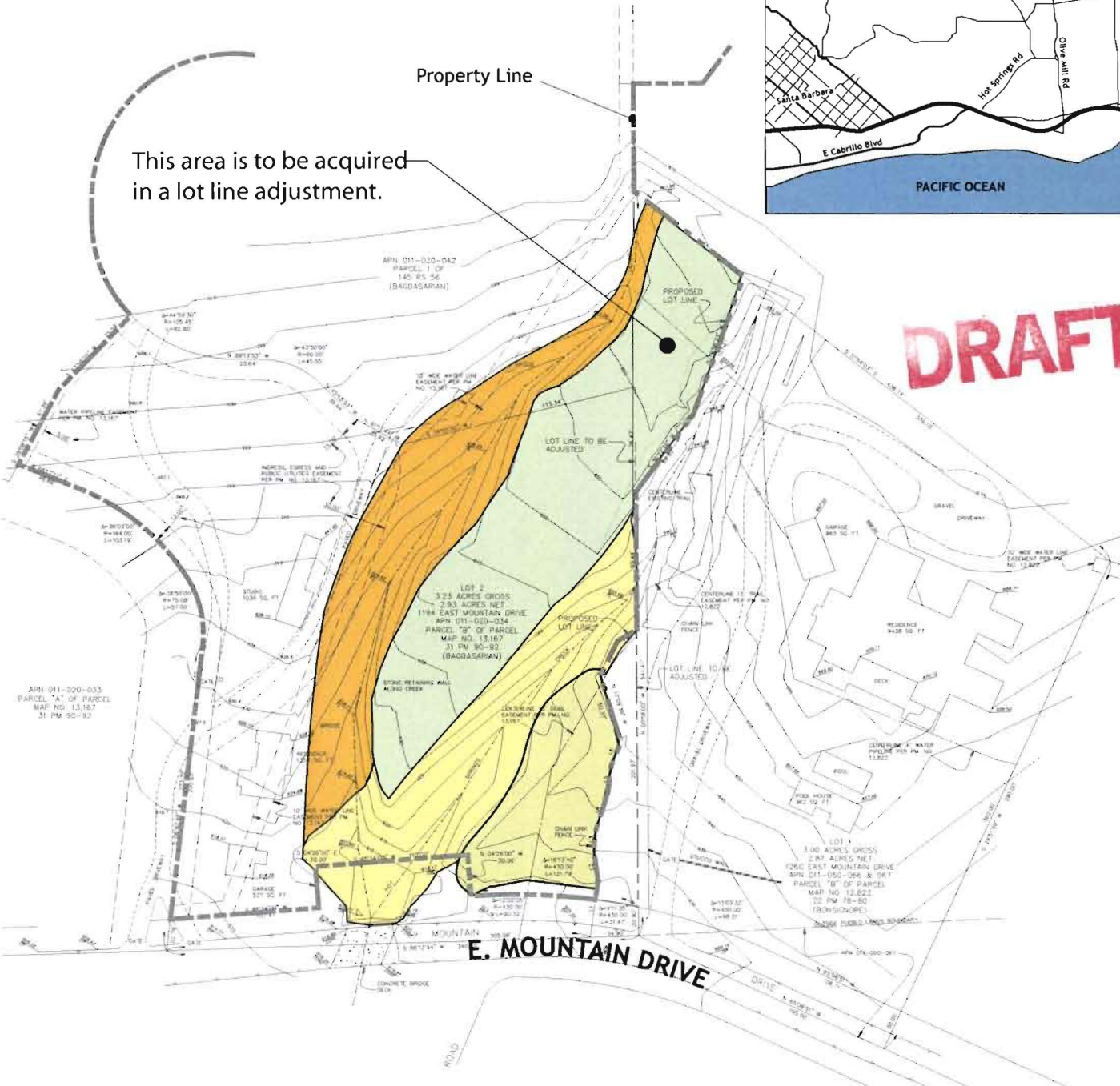
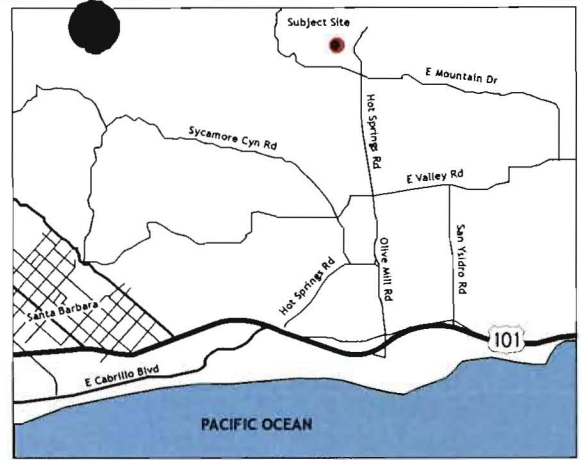
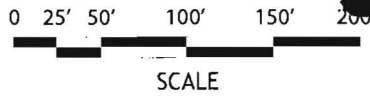
The parcel is located in the lower foothills of Montecito within the urban boundary. The Los Padres National Forest boundary lies north of the site. Hot Springs Creek, (which includes its western fork: Cold Springs Creek, and its lower reach: Montecito Creek) is one of the five main drainages within the planning area, along with Sycamore, Oak, San Ysidro, and Romero Creeks. Elevations range from about 600 feet above sea level to 750 feet above sea level. Hot Springs Creek, running along the eastern boundary, typically contains seasonal flows and pools with an abundance of clear flowing water during winter and spring months.

Soils in the area consist of Milpitas stony fine sandy loam (United States Department of Agriculture, 1981). Unlike many situations along major creeks, this particular soil profile does not flank the stream, following along the meander, but covers a large (about 300 acres) area. Surface and subsurface layers contain water-rounded cobbles, stones and boulders (6 inches to 8 feet in diameter), possibly a remnant of prehistoric floodplains.



1.3 SITE CONDITIONS

With the exception of the area east of the secondary drainage, all parts of the property are fully developed containing a residence, guesthouse, tennis court and extensive landscaping. The main area of disturbance is contained within what is named “the Island” in this report (See Figure 1). The “Secondary Tributary” contains new vertical rock walls and two rock bridges. Vegetation on the slopes (top of bank to top of bank) is weedy. A *Ceanothus* cultivar and other irrigated groundcovers currently landscape the gentle “West Slope” of the tributary. Disturbance at the “Rock Stockpile” area is limited to an opening where the boulders were stored, but otherwise this area is a relatively undisturbed open oak woodland. No damage to Hot Springs Creek occurred. Restoration work on the Creek banks is included for mitigation purposes.



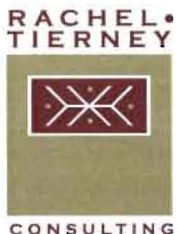
Available On-Site Restoration Areas

| | | |
|--|-----------------------------------|------------|
| | "Island" | 0.73 acres |
| | Disturbed Rock Stockpile Area | 0.22 acres |
| | Secondary Drainage and West Slope | 0.44 acres |
| | Main Fork of Hot Springs Creek | 0.40 acres |
| | | 1.79 |

| | | |
|--|---|---------------|
| | Total Mandatory Mitigation | 3.31 acres |
| | Available For <u>On-Site</u> Restoration | (-)1.79 acres |
| | Required <u>Off-Site</u> Mitigation Area or "In-Lieu Fee" | 1.52 acres |

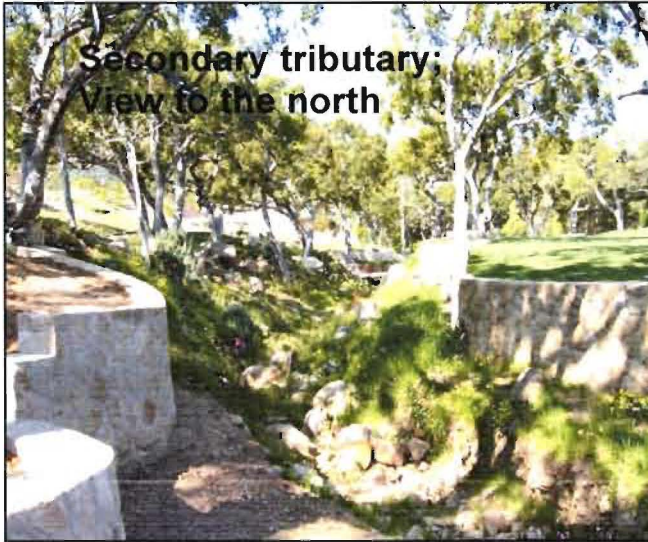
Figure 1: Vicinity Map, Restoration Area and Mitigation Requirements

1192 East Mountain Drive
 Montecito California
 April 12, 2011



2.0 CONDITIONS, IMPACTS, GOALS AND PLAN CONCEPT

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A brief description of each of the four restoration areas follows, along with impacts (if any) due to recent non-permitted activities and a synopsis of the restoration effort. Table 1 lists the impacts and required mitigation. A total of **3.31 acres** of restored riparian or oak habitat is required to mitigate disturbance or loss of ESH, buffer and impacts to the secondary drainage. A combination of on-site restoration (1.79 acres) and off-site (1.52 acres) “in-lieu fee” mitigation is required to meet this amount.

1. Disturbed Rock Stockpile Area (approx. 0.22 acres available for restoration)

Current Condition

Rocks removed from the “Island” and not used to construct the wall along the secondary drainage were stockpiled in an area adjacent to the Hot Springs Creek trail easement, in the southeastern portion of the property. Most of the rock has been removed, leaving a bare opening within an oak and sycamore forest. Little understory is present around the peripheral woodland of the stockpile area and mustards and some thistle are established. The stockpiling did not cause this lack of understory. This area lies outside of the ESH or ESH buffer and is not included in the impact tally.

Non-Permitted work

Boulder stockpile. This area lies outside of the ESH and ESH buffer.

Goals

Replant the stockpile area and enhance the existing woodland with additional trees and shrubs, while leaving openings in the expected grow-out limit.

Conceptual Restoration Plan:

Most of the required replacement trees (28 out of the required 33 coast live oaks and all 18 required California sycamore), would be planted here. Plant material would be grown from locally collected stock. Understory species would be planted within the existing woodland and openings.

2. Secondary Drainage and West Slope (approx. 0.44 acres available for restoration)Current Condition

Vegetation in the secondary drainage is a mixture of planted ornamental, woody groundcover, invasive herbaceous groundcover and common weeds. Invading groundcovers are periwinkle (*Vinca major*), garden nasturtium, ornamental morning glory (*Ipomoea sp.*), bindweed (*Convolvulus arvensis*) and English ivy (*Hedera helix*). Other weedy species noted are fennel (*Foeniculum vulgare*), sweet alyssum (*Lobularia maritima*), umbrella plant (*Cyperus alternifolius*) and yellow clover (*Melilotus officinalis*), with non-native annual grasses (*Bromus, Avena*) common throughout.

A few native tree saplings and occasional native shrubs from various natural plant communities were also noted [California blackberry, coyotebrush (*Baccharis pilularis*), mugwort (*Artemisia douglasiana*) and hummingbird sage (*Salvia spathacea*)]. Mature, heavily pruned coast live oaks overhang from upper slopes. Planted species along the mid and upper banks include a low *Ceanothus* cultivar and possibly *Dimorphotheca sp.*; The general appearance of this feature is a half landscaped, weedy dry creek bed.

Non-permitted work

Improvements to the upper bank include a vertical rock wall on sections of both side of the drainage and two pedestrian bridges. The short slopes of the tributary top of bank to top of bank are included in the calculations of disturbance, as is the gentle western slope above the top of bank, now planted in non-native and native *Ceanothus* cultivar groundcover.

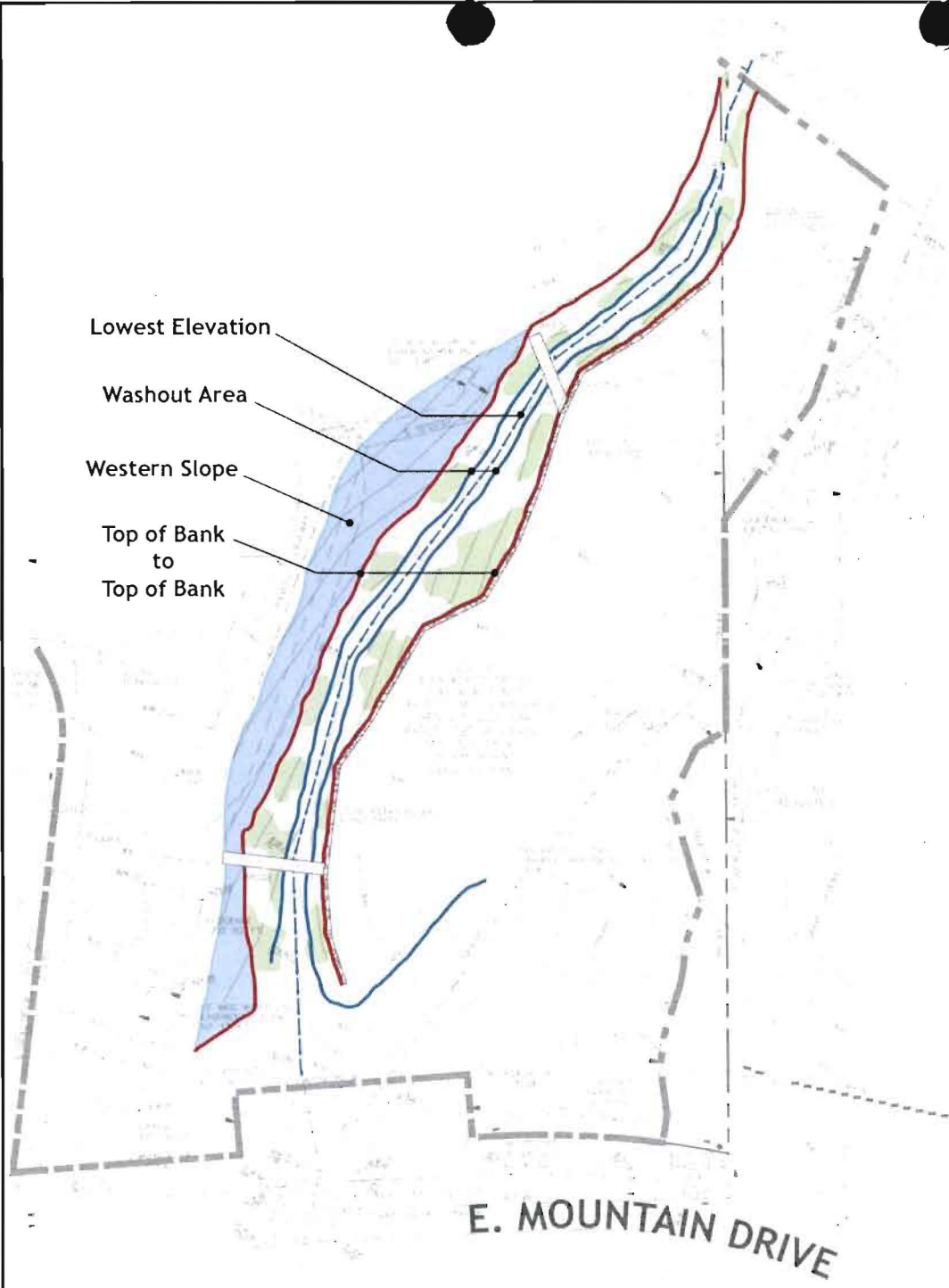
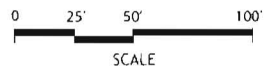
Goals

Greatly increase habitat value of area. Replace native cultivar and non-native groundcover on an extensive, gentle slope above the drainage. Add native shrubs along the tributary banks, staying above the apparent bank full, or washout line.

Conceptual Restoration Plan

Restoration of the drainage and western slope would begin with removing invasive weeds and ornamentals. This would included both planted and naturalized species. Shorter native

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Lowest Elevation

Washout Area

Western Slope

Top of Bank to Top of Bank

E. MOUNTAIN DRIVE

Plant Material

Top of bank to top of bank Goal: Create a natural, shrub dominated habitat placing material in loose clusters fitting into openings of the steep, short slopes.

| | Approximate No. (1 gal containers unless stated) |
|---|--|
| California encelia (<i>Encelia californica</i>) | 200 3-4 ft centers |
| California Fuchsia (<i>Epilobium canum</i>) | 50 3 ft centers |
| Purple Sage (<i>Salvia leucophylla</i>) | 150 3-4 ft centers |
| Wild Ryegrass (<i>Leymus condensatus</i>) | 30 3-4 ft centers |

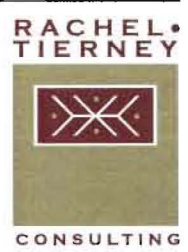
West Slope Goal: Maintain a formal appearance using native species. Blanket entire slope with groundcover (blackberry).

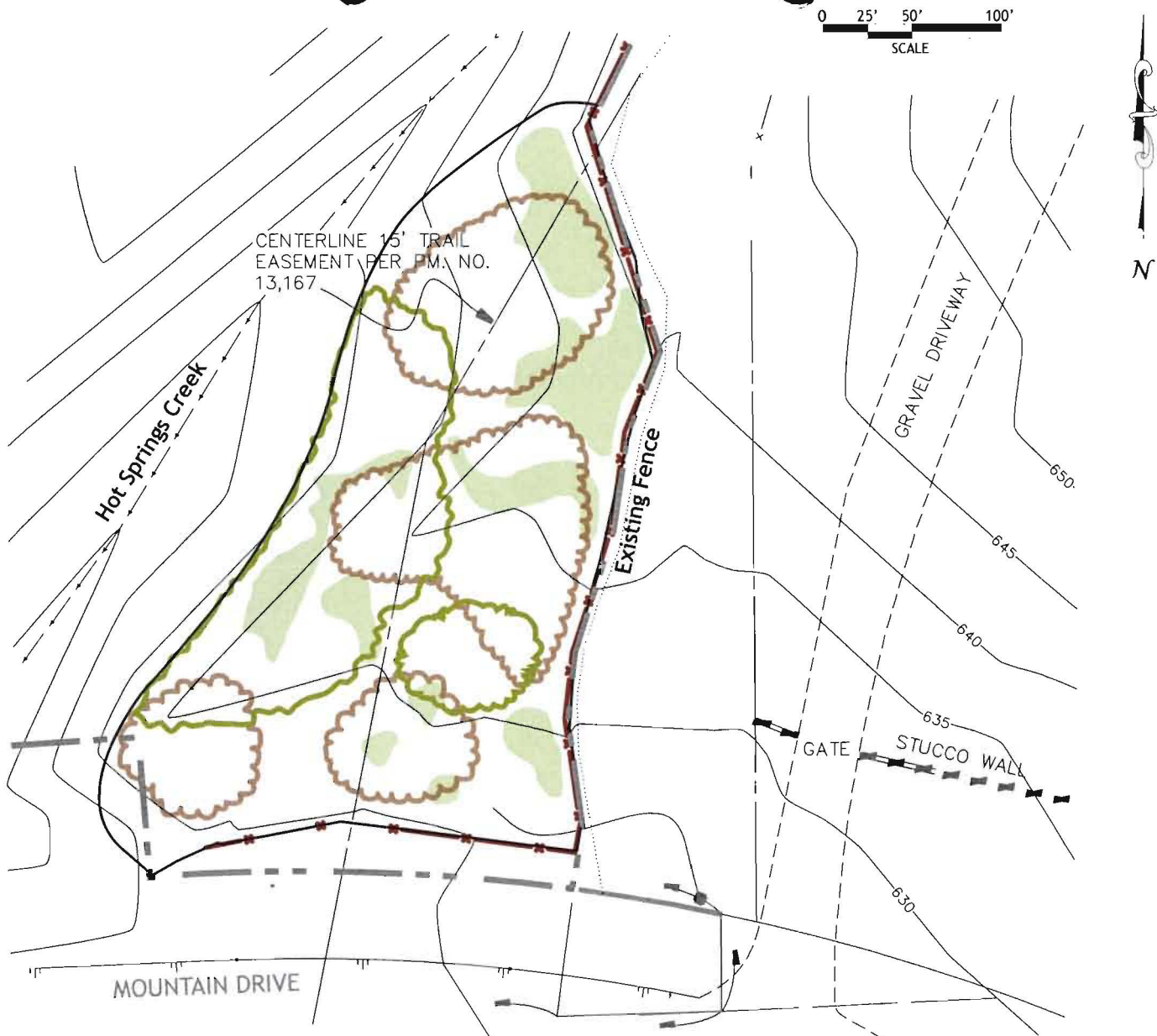
| | |
|---|--------------------------|
| Western blackberry (<i>Rubus ursinus</i>) | 1500 (liners at 2' ctrs) |
|---|--------------------------|

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Figure 2: Secondary Tributary & West Slope

1192 East Mountain Drive
Montecito California
April 12, 2011








Goal: Remove boulders brought to site; add oaks and sycamores to fulfill replacement requirements; fill in native shrubs under existing and expected canopy allowing for openings at maturity.

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Plant Material

Approximate No. (1 gal containers unless stated)

Trees Eventually increase screening from Hot Springs Trail

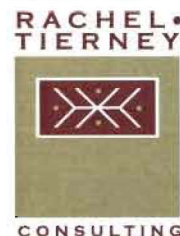
-  Coast live oak (*Quercus agrifolia*) 26
-  California sycamore (*Platanus racemosa*) 18
-  Existing Tree Canopy

Shrubs Set out in natural appearance with clusters & openings.

-  California Rose (*Rosa californica*) 200 (liners @ 3' ctrs)
-  Coffeeberry (*Rhamnus californica*) 25
-  Fuchsia Flowered Gooseberry (*Ribes speciosum*) 6
-  Mexican elderberry (*Sambucus mexicana*) 15
- Laurel sumac (*Rhus laurina*) 20

Figure 3: Rock Storage Area

1192 East Mountain Drive
Montecito California
April 12, 2011



shrubs would be planted on the short banks of the secondary tributary, above the expected washout zone, which is visible in the field. The west slope, now planted with cultivars and non-natives, would be replanted with native groundcovers.

The rock walls would remain. Removing the walls would cause more disturbance than leaving them intact and implementing the Restoration Plan on the degraded slopes of the secondary drainage. The project Arborist concluded that “removing the completed rock features of the project could result in greater damage to the trees and is not recommended (Gress, 2010).

3. Main Fork of Hot Springs Creek (approx. 0.40 acres available for restoration)

Current Condition

The stretch of Hot Springs Creek above East Mountain Drive is a well-preserved perennial stream with a healthy multi-layered vegetation structure.

Non-Permitted work

None.

Goals

Eradicate *Arundo donax* and prevent, or reduce, its spread.

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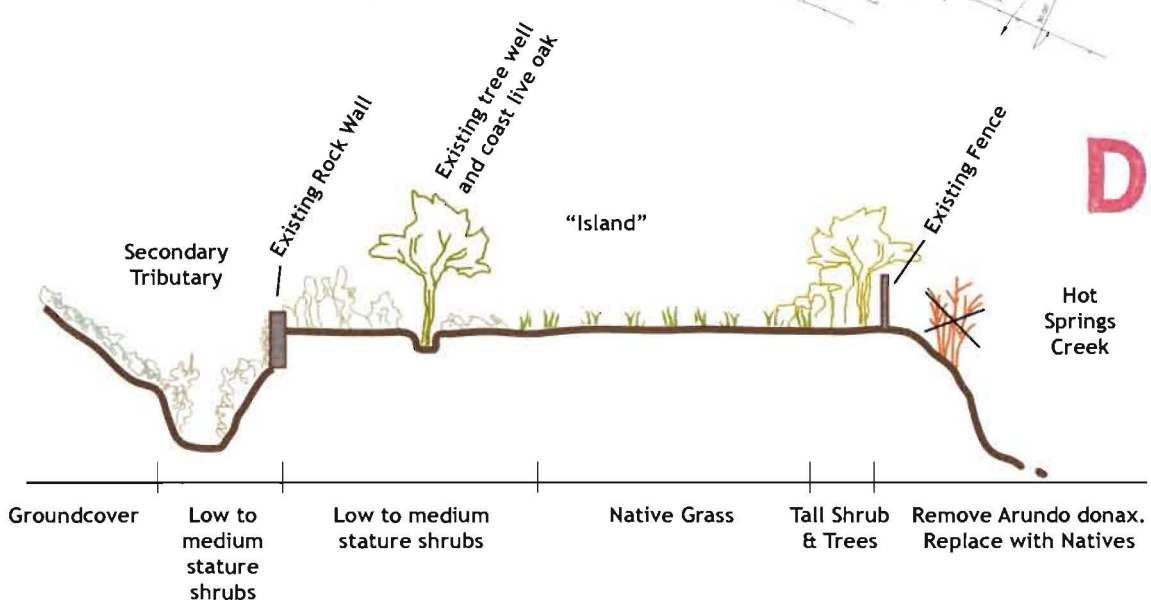
Conceptual Restoration Plan

Restoration opportunities are limited to removal of *Arundo donax*, a highly invasive large grass that increases flood and fire hazards. Openings created by this eradication would be filled in with native species.

4. “Island” (approx. 0.73 acres available for restoration)

Current Condition

This is the primary disturbance site. The area is now open and park-like, from the secondary drainage east to the top of bank of Hot Springs Creek. Coast live oak (*Quercus agrifolia*) trees are studded along the edge of the installed lawn as well as on the mid to top of bank of the secondary drainage. These trees are heavily pruned and healthy. Wells (for surrounding grade increases) or retaining walls (for surrounding grade reductions) protect a number of these oaks. Understory planting is absent.

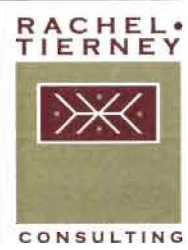


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REFER TO PLANT LIST IN TEXT

Figure 4: Island Cross-Section

1192 East Mountain Drive
 Montecito California
 April 12, 2011



Non-permitted work

Grading and installation of irrigated lawn within an ESH or ESH buffer; construction of stone walls within a natural water channel (secondary tributary).

Goals

Completely alter the vegetation by replacing the lawn with native trees, shrubs and native grasses. The area will retain the look of a deliberately designed landscape, but will contain only native species.

Conceptual Restoration Plan: The addition of native container plants and seed is expected to increase habitat values **beyond pre-project levels**. Riparian trees and large shrubs would be placed along the top of bank at Hot Springs Creek. Smaller shrubs would be positioned on the western side of the area, tumbling down into the secondary tributary. Various sized shrubs would be scattered in a naturalized format, mimicking the natural transition from woodland to scrubland. An open meadow or grassland would be restored in the center of the now irrigated lawn. Plant species would include grasses, shrubs and trees commonly found in the area.

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TABLE 1: IMPACTS AND MITIGATION REQUIREMENTS

| AREA | IMPACT ² | REQUIRED MITIGATION ³ | AVAILABLE FOR ON-SITE MITIGATION |
|--------------------------|---|--|--|
| Rock Stockpile | None | None | 0.22 ac. |
| 2° Drainage / West Slope | 0.51 ac. | 1.63 ac. | 0.44 ac. |
| Hot Springs Creek | None | None | 0.40 ac. |
| “Island” | 0.56 acre | 1.68 ac. | 0.73 ac. |
| Totals | 1.07 acres Impacts to ESH or buffer | 3.31 acres Required for mitigation | 1.79 acres Available on-site Off-site shortfall 1.52 ac. |

² Impacts noted are those within an ESH or ESH buffer.

³ Calculations follow Santa Barbara County and California Department of Fish and Game requirements. See Tierney, 2010 (Table 4) for calculation details.

3.0 OFF-SITE OR “IN-LIEU FEE” MITIGATION

The proposed mitigation of area of 3.31 acres represents three, and in the case of the rock wall, five ⁴times the total area disturbed (1.07 acres). There are 1.79 acres available on site for restoration. The remainder of the 3.31 required mitigation area (1.52 acres) would be purchased in lieu of on-site restoration.

The amount charged per acre would be based upon the compensation costs that would otherwise be necessary to restore, enhance, create or preserve habitat with similar functions or values to the one affected. The fee would be banked in an account to be managed by the agency that will be overseeing the project.

Discussions with two agencies regarding the potential use of funding for sites are in the preliminary stages: The Land Trust for Santa Barbara and The Carpinteria Creek Watershed Coalition. Both organizations have experience with this form of funding and both have upcoming restoration projects within riparian woodland habitats.

The Land Trust for Santa Barbara acquires and protects land with natural, agricultural, scenic, recreational and/or historical significance through fair market transactions. Locally, the Land Trust accepted a conservation easement in 1997 on the San Ysidro Oak Woodland, a 44-acre Open Space Preserve created when the Ennisbrook subdivision was proposed in Montecito. It contains an extensive oak woodland and Monarch butterfly eucalyptus grove along San Ysidro Creek. A potential project for the “in-lieu fee” mitigation could be slated to fund additional restoration (planting and weed control) within this Open Space.

The Carpinteria Creek Watershed Coalition was founded in 2001 to improve conditions that will allow healthy steelhead stocks to recover in the creek. Projects completed to date include *Arundo* treatment, wire revetment and bank repair and removal of four steelhead barriers. The area surrounding the removed fish barriers has not yet been restored. A potential project for funding with an “in-lieu fee” mitigation would be soil stabilization, revegetation and monitoring in these four areas.

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⁴ The California Department of Fish and Game often asks for mitigation in the amount of five times the area *permanently* removed. Temporarily disturbed areas are most often mitigated with three times the area disturbed.

4.0 PLANTING PLANS

4.1 ROCK STOCKPILE AREA

1. Remove non-native mustards and thistles. (See *Weed Removal Specifications* for details).
2. Install a drip irrigation system giving 1 gallon per minute to each plant and manage for weeds throughout monitoring period. (See *Irrigation Specifications* for details).
3. Plant Material: Species shall be planted from one-gallon containers. The layout shall be determined in the field just before planting.
4. Seed bare ground (with no duff now present) with native mix (Table 3)

TABLE 2: PLANT MATERIAL FOR THE ROCK STOCKPILE AREA

| SPECIES | NUMBER (1-gallon) | APPROXIMATE SPACING |
|--|----------------------|------------------------|
| Trees | | |
| Coast live Oak (<i>Quercus agrifolia</i>) | 26 | 10-20 feet |
| Western Sycamore (<i>Platanus racemosa</i>) | 18 | 10-20 feet |
| Vines / Groundcovers | | |
| California Rose (<i>Rosa californica</i>) | 30 | 3 ft centers |
| Western blackberry (<i>Rubus ursinus</i>) | 40 | 2-3 ft centers |
| Low to Medium Shrubs/Grasses | | |
| Fuchsia Flowered Gooseberry (<i>Ribes speciosum</i>) | 8 | 4-6 feet |
| Wild Ryegrass (<i>Leymus condensatus</i>) | 20 | 3 feet |
| Canyon Sunflower (<i>Venegasia carpesioides</i>) | 5 | 2-4 feet |
| Tall Shrubs | | |
| Mexican elderberry (<i>Sambucus mexicana</i>) | 8 | 8-10 feet |
| Laurel sumac (<i>Rhus laurina</i>) | 8 | 8-10 feet |
| Toyon (<i>Heteromeles arbutifolia</i>) | 10 | 8-10 feet |
| Coffeeberry (<i>Rhamnus californica</i>) | 8 | 8-10 feet |

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TABLE 3: SEED MIX FOR THE ROCK STOCKPILE AREA

| Minimum Purity/Germ. | Lbs/Acre | Species |
|----------------------|------------------|---|
| 30/60 | 2 | Yarrow (<i>Eriophyllum confertiflorum</i>) |
| 75/75 | 2 | California Poppy (<i>Eschscholzia californica</i>) |
| 95/85 | 4 | Succulent Lupine (<i>Lupinus succulentus</i>) |
| NA. | 4 | Mugwort (<i>Artemisia douglasiana</i>) |
| 85/30 | 30 | Plantain (<i>Plantago insularis</i>) |
| 95/85 | 2 | Purple needlegrass (<i>Nassella pulchra</i>) |
| 95/80 | 10 | California Brome (<i>Bromus carinatus</i>) |
| 95/85 | 8 | Nuttall's Fescue (<i>Vulpia microstachys</i>) |
| 50/70 | 3 | Sawtooth Goldenbush (<i>Hazardia squarrosus</i>) |
| 15/50 | 3 | California Sagebrush (<i>Artemisia californica</i>) |
| 50/70 | 3 | Coast Goldenbush (<i>Haplopappus venetus</i>) |
| 90/60 | 3 | Deerweed (<i>Lotus scoparius</i>) |
| 70/50 | 3 | Black Sage (<i>Salvia mellifera</i>) |
| TOTAL | 77 LBS/AC | |

Figure 2 illustrates the basic planting design for the rock stockpile site.

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4.2 SECONDARY TRIBUTARY

1. Remove non-native vines, perennials and annual mustards and thistles. Manage for weeds throughout monitoring period. (See *Weed Removal Specifications* for details).
2. Install a drip irrigation system, supplying 1 gallon per minute to each plant. (See *Irrigation Specifications* for details).
3. Container Material: The following species shall be planted from one-gallon containers. The layout shall be determined in the field just before planting.

FIGURE 4: PLANT MATERIAL FOR THE SECONDARY TRIBUTARY

| SPECIES | NUMBER (1-gallon) | APPROXIMATE SPACING |
|---|------------------------------|--------------------------------|
| Vines / Groundcovers (West Slope) | | |
| California Rose (<i>Rosa californica</i>) | 30 | 3 ft centers |
| Western blackberry (<i>Rubus ursinus</i>) | 100 | 2-3 ft centers |
| Low to Medium Shrubs/Grasses | | |
| California Encelia (<i>Encelia californica</i>) | 70 | 5 - 6 feet |
| Wild Ryegrass (<i>Leymus condensatus</i>) | 20 | 3 - 4 feet |
| Purple Sage (<i>Salvia leucophylla</i>) | 60 | 5 - 6 feet |

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4.3 HOT SPRINGS CREEK

Arundo donax shall be removed from the creek banks following the procedures outlined in Section 2.4, below. Of utmost importance is painting the stumps immediately after they are cut.

The following species shall be used to fill in the openings created by the removal:

| FIGURE 5: PLANT MATERIAL FOR HOT SPRINGS CREEK | |
|---|-----------------------------------|
| | Approximate Number (1-gal) |
| Mexican elderberry (<i>Sambucus mexicana</i>) | 5 |
| Laurel sumac (<i>Rhus laurina</i>) | 4 |
| Toyon (<i>Heteromeles arbutifolia</i>) | 5 |

4.4 THE “ISLAND”

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Unlike the other areas, a formal Landscape Plan will illustrate the planting locations for all species. This Plan is currently in development and consists of native trees, shrubs, groundcovers and native grasses (See Figure 4). A conceptual list of species follows. All maintenance and monitoring requirements apply to this area, as well as all other areas.

TABLE 6: CONCEPTUAL PLANT LIST FOR THE “ISLAND”

A. Hedges - The list encompasses plants that are useful as an informal hedge or screen. Those marked with an * can be sheared into a formal hedge if desired. A mixture of several species would lend a naturalistic effect to the planting.

| | |
|--|---------------------------------------|
| Baccharis pilularis, coyote brush* | Malosma laurina, laurel sumac |
| Ceanothus megacarpus, bigpod ceanothus | Prunus ilicifolia, holly leaf cherry* |
| Ceanothus spinosus, greenbark ceanothus | Rhamnus californica, coffeeberry* |
| Cercocarpus betuloides, mountain mahogany* | Rhus integrifolia, lemonadeberry* |
| Heteromeles arbutifolia, toyon* | Sambucus mexicana, western elderberry |

B. Plants with colorful flowers – This list includes shrubs, vines, and annual[*] and perennials.

| | |
|--|--|
| Achillea millefolium, common yarrow | Mimulus aurantiacus, sticky monkeyflowers |
| Clematis lasiantha, chaparral clematis | Ribes malvaceum, chaparral currant |
| Clematis ligusticifolia, creek clematis | Ribes speciosum, fuchsia-flowered gooseberry |
| Eriophyllum confertiflorum, golden yarrow | Rosa californica, California wild rose |
| Eschscholzia californica, California poppy* | Salvia spathacea, hummingbird sage |
| Isocoma menziesii, coast goldenbush | Sidalcea malviflora, checkerbloom |
| Keckiella cordifolia, climbing penstemon | Sisyrinchium bellum, blue-eyed grass |
| Lonicera hispidula var. vacillans, Ca. honeysuckle | Solanum xanti, Chaparral nightshade |
| Lotus scoparius, deerweed | Venegasia carpesioides, canyon sunflower |
| Lupinus succulentus, succulent lupine* | Zauschneria californica, California fuchsia |

C. Groundcovers – The growth form and height of these plants varies considerably but all are typically less than 2 feet tall, including the flower stalks. All spread by rhizomes, whereas the Dryopteris is clump forming and would need to be planted *en masse* to create a groundcover effect. None are suitable as walk-on groundcovers.

| | |
|--------------------------------------|--|
| Dryopteris arguta, coastal wood fern | Solidago californica, California goldenrod |
| Rubus ursinus, wild blackberry | Stachys bullata, wood mint |
| Salvia spathacea, hummingbird sage | Symphoricarpos mollis, creeping snowberry |
| Satureja douglasii, yerba buena | |

5.0 RESTORATION SPECIFICATIONS

5.1 PLANTING LOCATIONS AND PROCEDURES

With the exception of the “Island,” the actual placing of the plants will be done in the field. Spacing given is for guidance only. Within the “Rock Stockpile” and “Secondary Tributary” areas, plants will be grouped in irregular clusters leaving openings. The groundcover for the West Slope of the tributary will be set out to produce full cover. The “Island” shall be arranged in the pattern illustrated in the Planting Plan for this area (in progress).

Specific planting sites will be identified with colored pin flags just prior to planting. Material can be successfully set out at any time of year as long as irrigation is immediately provided and increased if needed (see below). Plants shall be inspected for proper root development before planting. Container material and planting holes shall be well watered just prior to planting. Planting holes shall be twice the diameter and at least 6 inches deeper than the container. Holes shall be backfilled with native soil and 4 slow release Gro-power fertilizer tablets (or equivalent) per seedling. Fertilizer shall not come in contact with seedlings. Mulch (wood chips or other organic material) shall be applied around the planting areas to help retain soil moisture. Mulch should be 3-4 inches deep when first applied and extend in a 3-foot diameter around the tree or shrub.

5.2 WEED REMOVAL SPECIFICATIONS

Weed management will be an ongoing process during the monitoring period and **must be conducted before seed is set** on a regular basis to reduce the infestation. Perennial plants (herbs, shrubs, vines and trees) require total removal either by manually uprooting plants or herbicide use. Annual plants do not require removal if the flowering stalk is removed just before seed is set.

Any ground disturbance brought about by pulling up a plant and stirring up even a few inches of soil will enable buried seeds that may have been produced years before to reach light and successfully germinate. Also, the removal of any plant creates openings on the ground that space-hogging invasives occupy so readily. **Therefore the best tactic in weed removal is to disturb as little ground as possible.**

In the case of herbaceous perennials or woody species, digging up the plant is unavoidable unless a herbicide is used and the material is allowed to decompose in place. When dealing with annuals or biennials, removing immature flowers (before seed is set) is preferred to removing the entire plant.

TIMING

Since most annual weeds will produce copious seed, the trick is to remove the source before the seed is released into the soil. For annual species, or biennial plants (those plants that complete their vegetative life cycle in two seasons, usually flowering in the second year), there is no need to remove the plant itself because it will die at the end of the season. The focus is on eliminating the season's crop of seed. This can be accomplished by cutting the plant back to remove all flowering stalks as they approach maturity. Timing is crucial. If the reproductive parts are removed too early, the plant may send up a second recruitment. If the stalks are cut too late, seed may have already matured and the weeding effort will only facilitate dispersal. Any opportunity of *not* disturbing the soil should be taken.

Chemical and manual weed removal will be employed. Manual removal can be used where infestation is light, or when annual plants can be cut down just before seed matures. A weed whacker does the job quickly for annuals.

REMOVAL METHODS FOR PERENNIAL AND WOODY PLANTS

Chemical treatment will be necessary with extensive stands of perennial weeds. If seeds have matured, hand removal, bagging and disposal of seed heads will be the first operation required. Full foliar coverage is required for an effective kill. A second herbicide treatment is often required. All maintenance personnel who will be applying herbicide in natural areas must be trained specifically in the use of these chemicals.

REMOVAL METHODS FOR *ARUNDO DONAX*

This is a large perennial grass, visually similar to bamboo, which forms clonal clumps to 20' in height. The primary means of spread is by uprooted rhizomes taking root in new locations during storms. During spring and early summer cut stems to 6" in height, immediately treat stumps with 30 % Roundup and remove stems from site. Best results seem to coincide with early spring cutting/spraying. Check for regrowth from rhizomes in 8 - 12 weeks. Cut regrowth when two feet tall or taller and immediately treat stumps with 30% solution. If regrowth occurs again, then wait until following spring to cut and treat. **The first cutting should occur in spring and second cutting should occur before mid summer.**

EXOTIC VINE REMOVAL

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German Ivy, Periwinkle, Nasturtium and any other exotic vine invading the site shall be removed during the initial restoration effort and during the 5-year monitoring period. *Small patches can be removed by hand.* **Begin weed removal in spring before seed is set.** The only chemicals approved for use in the riparian buffer are glyphosate-based chemicals (trade name Rodeo or Roundup Pro). The surfactant can be harmful to fish, so only aquatic-approved additives are used with Rodeo, which is approved for use around aquatic environments. The contractor shall **spot spray target exotic vegetation** with a spray formulation of Rodeo or Roundup Pro following manufacturer's instructions. All native vegetation shall be avoided. Treat when vines are flowering, typically from February into spring.

1. Hand pull vines, or completely cut vines growing up native trees from rooted portions.
2. Spray rooted portions (leaves) with a 2% solution of Roundup Pro (or 1.5% solution of Rodeo), 0.5% surfactant by volume (0.66 ounce surfactant per gallon water) and a brightly colored dye. Full foliar coverage is required for the most effective kill. Spot spray any ivy entangled with blackberry and other small native shrubs.
3. Allow treated vines to turn brown and remove from site, pulling out as much rooted material as possible. Wait several weeks (depending on the season) until missed plants can be identified. Treat aboveground plants and pull live roots. German ivy roots are bright purple. The roots are easily identified. *Systematically* move through infested areas spot spraying. Do not rush this stage. Repeat three to four times during the first season until eradication is completed. The use of herbicide should not be required after this initial effort.

HERBACEOUS WEED REMOVAL

Restoration and long-term habitat value within the restoration area will directly depend on an aggressively executed weed eradication program. Increased ground disturbance could initiate an influx of weeds. Since weed populations can increase exponentially, beginning slowly, then doubling and redoubling, an aggressive attack during the early stages of infestation is mandatory. **Exotics must be removed before seed matures.** Exact dates for removal cannot be given because plants will develop at slightly different times each year, depending on rainfall and temperatures. However, in most years species will be at the right stage for removal in April or early May.

TABLE 7: GENERAL WEEDING SCHEDULE**DRAFT**

| | |
|--------------------|---|
| March | Begin to monitor for annual weed production in late March. |
| April | Continue monitoring for annual weeds in early April. Note the appearance of flower heads. Cut back when most flowers have opened and some fruits have just begun to form. Fruits mature very quickly. Cut early so the seeds do not become viable. |
| May - June | Cut and paint nonnative trees. Continue to cut late-blooming annual plants. Check for regrowth of plants cut earlier in the year. |
| July - September | Look for emergence of sweet fennel (perennial) and cut off the flowering stalk to prevent seed production and treat with herbicide. Check for other late-blooming, annual flowers. Cut all annual plants low to ground to prevent regrowth of flowering stalks. |
| October - November | Check for scattered late-blooming weeds and treat either by removing or cutting plant. Manually remove small sapling myoporum, tobacco tree, and fennel. The species may also be removed at other times of the year. |
| October - December | Seed any large patch of disturbed ground with prescribed seed mix for the area to prevent new weed introduction. Seed just before or during the early part of the rainy season (November - December), rather than the end of the wet season or in the dry season. This will reduce the loss of seed by rodent and bird predation and wind. Rake seed in lightly. A thin layer of straw mulch (allowing about 1/3 of bare ground to remain uncovered) will help retain moisture as seed germinates. |

HERBICIDE RESTRICTIONS

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The only chemicals approved for use are glyphosate-based chemicals (trade name Rodeo or Roundup Pro). The active ingredient, glyphosate, in Roundup Pro is identical to Rodeo. However Roundup Pro contains a surfactant to aid in penetration of leaves or waxy plant cuticles. This may be applied by several types of application equipment under the following conditions: 1) A backpack sprayer for medium to large sized areas; 2) For cut stumps -- hand held spray bottle (spritzer); 3) In wetland plants -- a backpack sprayer with nozzle adjusted to low volume directed spray under low pressure, or hand held spray bottle; and 4) For live trees prior to falling - stump injector. The concentration of the Rodeo or Roundup Pro in the spray formulation will vary by species and is contained in the specifications. All of the formulations of Rodeo or Roundup Pro shall contain a brightly colored blue or purple dye. Additional surfactant shall be added to the Roundup Pro mixture at 0.5% surfactant (0.66 ounces surfactant per gallon of formulation). Surfactant used with Rodeo must be 50% active and aquatic approved.

The following restrictions shall apply:

- No spraying other than with a hand held spray bottle shall be allowed when wind speed exceeds 5 m.p.h.
- No spraying shall be allowed within 24 hours after rainfall or when rainfall is expected within the following 24 hours.
- No non-target plants shall be contaminated by spray drift.
- No spray drift shall be allowed outside the natural area.
- Target plants shall not be disturbed until the Rodeo or Roundup Pro has taken effect (approximately 3-8 weeks depending on the time of year). Consult the project monitor if there is any question as to the timing of clearing following spraying.
- All non-native and native trees scheduled for removal shall be flagged or otherwise identified prior to removal.
- Non-native woody material shall be chipped on site and used as mulch around any plantings.

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5.3 INITIAL IRRIGATION REQUIREMENTS

All planted material, including acorns, container material and cuttings, shall be drip irrigated. The system shall be in place **immediately** following planting. Each container plant shall receive one, 1-gallon emitter. Plants shall be watered during planting by filling the planting basin twice. Irrigation should be delivered about once a week for at least one year. Depending on the season's rainfall, irrigation can then be reduced to once every two weeks after this initial establishment period, or tapered off slowly after two years. Plants cannot be released from monitoring until irrigation has ceased for at least one full year.

Although all of the species used in the restoration program will eventually be able to grow and reproduce without supplemental water, all container material and cuttings must be irrigated for a number of years to establish healthy root systems. All irrigation will be installed above ground. Regular irrigation will continue for at least 2 years, and then slowly taper off over a year's period. Water needs will change throughout the year. Higher winds and temperature (and the resulting increased evapo-transpiration rate) will necessitate increases in irrigation. Cool temperatures and natural precipitation will reduce irrigation needs. Watering shall be performed in the early morning or late afternoon. The watering schedule is best determined by on-site maintenance staff, via observation of plant response and in consideration of seasonal climatic conditions.

6.0 MAINTENANCE

6.1 IRRIGATION

Since the frequency and duration of rains in the Santa Barbara area is not reliable, it is recommended that water received from precipitation be augmented by irrigation. This is especially important if transplants are set out early in the fall. Without a backup-irrigation system, an unseasonably warm, dry spell during the first few months after transplanting can very easily kill the plants. The rainfall will determine the frequency of supplemental watering for that year. The irrigation system shall be checked once a month for breaks and clogs.

6.2 WEED CONTROL

Irrigation will, unfortunately, increase the growth of weeds. Full site weeding should be conducted at least four times a year. However, weeding should occur as dictated by the specific species that are infesting the site. Additional weeding at other times during the year may be necessary.

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It is important to destroy undesirable species before they have set seed. This interruption of the reproductive cycle will sharply reduce the need for future weed control. Careful attention to the ripening periods of each species is necessary for this method to be effective. Weed whacking, or removing undeveloped flowering stalks before seed is set, is recommended, as this method will least disturb the soil. Turning (or disturbing) the soil will increase weed growth by bringing up buried seed to within the first few inches below ground level.

7.0 MONITORING AND REPORTING

An independent monitor, knowledgeable in planting and maintenance methods, shall be contracted by the applicant to monitor the restoration effort and subsequent maintenance period. The monitor shall also report to Santa Barbara County Planning and Development until plants are self-sustaining. Monitoring guidelines (performance criteria), scheduling and reporting information are outlined below.

COMPONENTS OF MONITORING

To evaluate the success of the Plan and to weigh the need for weeding, changes to the irrigation timetable or replanting, a monitoring schedule, performance criteria and contingency actions are presented in Table 8. Monitoring will continue for at least three years, or until all performance criteria have been met. Success rates falling under the stated minimum may signal the need for a second or third revegetation effort. Performance values and the schedule may be modified based upon the actual responses of the particular site and with approval from regulatory agencies.

The purpose of the monitoring is to:

1. Assure, through periodic visits, that plants are thriving and determine if changes to the irrigation regimen or site protection are needed.
2. Ascertain when weeding should occur and notify appropriate parties. (Weeding shall be conducted throughout the entire year.)
3. Perform annual survey and quantify survival. Determine if additional planting will be required to meet the minimum success standards (performance criteria). Data, gathered to determine vegetation establishment, will be collected annually in the spring, when flowering is evident and the maximum number of weed species are likely to be present.

Monitoring methods need not be elaborate. A simple tally and general health index of container materials and evidence of reproduction (flowering) will provide adequate information to determine if replanting is required or if restoration standards have been met. Testing procedures will be described and standardized in the first annual report and specified in each subsequent report. Follow-up monitoring may be needed to ensure that recommendations have been carried out. If revegetation standards are not met or closely approached during the initial three-year monitoring period, remediation through further revegetation efforts and extended monitoring may be required.

ANNUAL REPORTS

The monitoring biologist will produce a report each year after completion of the spring field data collection. Collation of data production of the report will be completed by August 1 of each year following the spring comprehensive survey. The report will be submitted to the County of Santa Barbara, CDFG and the property owner.

The annual reports will present the summation of vegetation monitoring data and general notes to describe the current state of each restoration area in terms of plant survival, reinvasion by exotic species, the presence of disease and insect pests, the development of habitat potential and the summation of maintenance activities performed during the previous year.

Performance standards will be compared against the vegetation field data, and the areas will be rated as to their performance. Remedial action required for the coming year will be detailed. A set of photographs taken at set points within each area will be included.

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| | |
|---------------------------|--|
| FEATURE | PLANTED SHRUBS AND TREES |
| Goals | <ul style="list-style-type: none"> • A survival rate of no less than 75% after three to five years. |
| Frequency | <ul style="list-style-type: none"> - 1st year following planting: Monthly. (11 reconnaissance surveys; one comprehensive survey in late spring/early summer, data collection and annual report.) - 2nd year following planting: Every three months. (Reconnaissance survey 3 times per year; comprehensive survey, data collection and annual report in the spring.) - 3rd to 5th year following planting: Every four months. (Reconnaissance survey 2 times per year; comprehensive survey, data collection and spring annual report.) |
| Criteria | <ul style="list-style-type: none"> - End of 1st growing season, survival is at least 85% of original planting. - End of 2nd - 5th growing season, survival is no less than 75% of the original planting with evidence of flowering. |
| Contingency Action | <ul style="list-style-type: none"> • <i>Replant</i> if values fall below expectations. Replant and monitor until material is established and weaned from irrigation for at least one full year. |
| FEATURE | WEED CONTROL |
| Goals | <p><i>Short-Term:</i> Boost establishment of native species by reducing competition.</p> <p><i>Long-Term:</i> Reduce the abundance of undesirable plant species within the site.</p> |
| Frequency | During reconnaissance and comprehensive surveys, as described above. Weeding to occur throughout the year, before fruit is set. Cut and paint <i>Arundo</i> , exotic vines and trees as needed. |
| Criteria | Zero tolerance of broad-leaved weeds after each eradication treatment. Naturalized grasses will be tolerated. Weed growth will ultimately not interfere with native plant establishment or reproduction. |
| Contingency Action | Continue to monitor and weed (with little or no ground disturbance) as necessary. |

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8.0 REFERENCES

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