LANDSET ENGINEERS, INC.

October 2, 2015

File No.: 1432-01

City of Hollister
Development Services Department
375 Fifth Street
Hollister, California 95023

Attention: Ms. Mary Paxton, Program Manager

**Subject** **Review of Phase I Fault Rupture Hazard Assessment**
**Geo-Logic Associates dated September 29, 2015**

**Project:** **Downtown Phase I Designated Assessment Area**
City of Hollister, California

Dear Ms. Paxton:

Thank you for providing us a copy of the *"Phase I Fault Rupture Hazard Assessment"* report prepared by Geo-Logic Associates (2015b). The purpose of this letter is to summarize our review findings of the above noted report.

The assessment area being considered for redevelopment is located within the official Earthquake Fault Zone (EFZ) of the East Branch of the Calaveras fault, designated by the State of California as defined by the Alquist-Priolo Act. Based on our research and report review; it is our opinion that *there is sufficient geologic evidence to support the absence of active Holocene age faulting within the sediments underlying the Phase I designated Assessment Area.*

We reviewed the report (Geo-Logic, 2015b) for conformance with State of California, Public Resources Code, Division 2. Geology Mines and Mining, Chapter 7.5 Earthquake Fault Zones, Sections 2621, 2621.5, 2621.6, 2623, 2624, 3600, 3601 & 3603 and City of Hollister Municipal Code, Title 17, Chapter 17.14.040.

It is our opinion that the site geologic conditions are accurately modeled as represented in the referenced report. In general, our findings are congruent with the conclusions and recommendations of the report prepared by Geo-Logic Associates dated September 29, 2015.

It is our opinion that the project engineering geologic constraints have been adequately characterized and the potential for surface fault rupture is low. Appropriate mitigative measures have been included for compliance with the State of California Alquist-Priolo Act.

As required by State Code and local municipal ordinance, the final approved surface fault investigation report (Geo-Logic Associates, 2015b) along with supporting documentation and peer reviews, shall be filed by the City of Hollister with the State Geologist.

Please contact the undersigned at (831) 443-6970 or bpapurello@landseteng.com if you have questions regarding this matter.

Respectfully,
LandSet Engineers, Inc.


Brian Papurello, CEG 2226
Reviewing Geologist

Doc. No. 1510-102.REV

Attachments: Fault Investigation Report Review Form

Distribution: Ms. Mary Paxton, City of Hollister (mary.paxton@hollister.ca.gov)
Mr. John Feltman, PG, CEG, Geo-Logic Associates (jfeltman@geo-logic.com)

# FAULT INVESTIGATION REPORT REVIEW FORM

## Project Information

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| Project: | Downtown Phase I Designated Assessment Area<br>City of Hollister, CA |
| Case number: | N/A |
| Applicant: | City of Hollister<br>Development Services Department<br>375 Fifth Street<br>Hollister, CA 95023<br>Ms. Mary Paxton, Program Manager |
| Consultant: | Geo-Logic Associates<br>16055 Caputo Drive, Unit D<br>Morgan Hill, CA 95023<br>Phone: (408) 778-2818, Fax: (408) 779-6879<br>Responsible geologists: Mr. John Feltman, PG 7760, CEG 2530<br>E-mail: jfeltman@geo-logic.com |
| Reports and Plans Reviewed: | Geo-Logic Associates, 2015b, Phase I Fault Rupture Hazard Assessment, City of Hollister Downtown Area, Hollister, California: unpublished report to Ms. Mary Paxton, City of Hollister, Development Services Department dated September 29, 2015, Project No. 2015.0062, 12 p., 2 fig., 1 appendix, 1 plate. |
| Other information sources: | Applied Soil Mechanics, Inc., 1991a, Fault study. Sites 1, 3-6 and 10, Hollister, California: unpublished report to Mr. Christopher M. Reyes, City of Hollister Redevelopment Agency, File No. A0-2280-S1, dated June 12, 1991, 40 p., 7 fig., 1 appendix, 14 plates, scale 1:60.<br>____, 1991b, Fault study, Poletti Property, 335 San Benito Street, Hollister, California: unpublished report to Mr. Christopher M. Reyes, City of Hollister Redevelopment Agency, dated July 5, 1991, File No. A0-2279-S1, 38 p., 7 fig., 1 appendix, 4 plates, scale 1:60.<br>____,1991c, Fault study, Building site 7 & 8 Bruhn and Peterson Properties 515, 525 and 530 San Benito Street, Hollister, California: unpublished report to Mr. Christopher M. Reyes, City of Hollister Redevelopment Agency, dated July 12, 1991, File No. A0-2281-S1, 38 p., 7 fig., 2 appendices, 6 plates, scale 1:60.<br>____,1991d, Fault study, "600-block properties, SE corner of Sixth and San Benito Streets, Hollister, California: unpublished report to Mr. Christopher M. Reyes, City of Hollister Redevelopment Agency, dated July 17, 1991, File No. A0-2323-S1, 37 p., 7 fig., 1 appendix, 6 plates, scale 1:60.<br>____,1991e, Fault study, Building site 9 Showcase Theatre 705 San Benito Street, Hollister, California: unpublished report to Mr. Christopher M. Reyes, City of Hollister Redevelopment Agency, dated July 22, 1991, File No. A0-2282-S1, 36 p., 7 fig., 1 appendix, 2 plates, scale 1:60. |

## FAULT INVESTIGATION REPORT REVIEW FORM
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| Other information sources: (continued) | ____,1991f, Addendum letter to fault study dated June 12, 1991, Sites 1, 3 and 6-10, Hollister, California: unpublished report to Mr. Hugh Riley, City Manager, dated July 10, 1991, File No. A0-2280-S1, 3 p.<br>Bryant, W.A., 1979, Fault evaluation report, Calaveras (Hollister segment) and "Buena Vista Road" faults: California Division of Mines and Geology Fault Evaluation Report FER-94, 14 p., 4 plates, scale 1:24,000.<br>Bryant, W.A. and Cluett, S.E., compilers, 1999, Fault number 54c, Calaveras fault zone, Southern Calaveras section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, http//earthquakes.usgs.gov/regional/qfaults.<br>California Department of Conservation, California Geological Survey, 2002a,: Guidelines for evaluating the hazard of surface fault rupture, CGS Note 49.<br>____, 2002b, Fault evaluation reports prepared under the Alquist-Priolo Earthquake Fault Zoning Act, region 1 central California, CGS CD 2002-01.<br>____, 2003, Fault investigation reports for development sites within Alquist-Priolo Earthquake Fault Zones in northern California, 1974-2000, CGS CD 2003-01.<br>____, 2008,: Guidelines for evaluating and mitigating seismic hazards in California: California Geological Survey Special Publication 117, 102 p.<br>California Division of Mines and Geology, 1982, Revised Official Special Studies Zone Map of the Hollister quadrangle: State of California Alquist Priolo Earthquake Fault Zoning Act map, scale 1:24,000.<br>____, 1986a, Guidelines for preparing engineering geologic reports: DMG Note 44, 2p.California Division of Mines and Geology<br>____, 1986b, Guidelines to geologic/seismic reports: DMG Note 42, 2p.<br>Dibblee, T.W.., Jr., and Rogers, T.H., 1975, Geologic map of the Hollister quadrangle: U.S. Geological Survey Open-File Report 75-394, scale 1:62,500.<br>Earth Systems Consultants Northern California, 1994, Proposal for engineering geologic services and geologic fault trenching for the City of Hollister, California: unpublished proposal to Mr. Barry Johnson, City of Hollister Redevelopment Agency, Doc. No. 9406-007.PRP, dated July 15, 1994, 20 p., 1 plate.<br>____, 1998, Geologic study, San Benito Foods 60,000 square foot storage building, northwest corner of Sally and South streets, Hollister, California: unpublished report to Mr. Mike Mullen, San Benito Foods, dated July 16, 1998, 22 p., 7 fig., 4 appendices, 4 plates, scale 1:60, 1 plates, scale 1:240. |

## FAULT INVESTIGATION REPORT REVIEW FORM
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| Other information sources: (continued) | Earth Systems Pacific, 2008a, Geologic fault investigation, Vista Meadows Senior Apartments, East Park Street and Rancho Drive, Hollister, California: unpublished report to Ms. Cynthia Iwanaga, South County Housing Corporation, dated August 12, 2008, 12 p., 5 fig., 3 appendices, 2 plates, scale 1:60.<br>_____2008b, Supplemental geologic fault investigation, Vista Meadows Senior Apartments, East Park Street and Rancho Drive, Hollister, California: unpublished letter to Ms. Cynthia Iwanaga, South County Housing Corporation, dated October 28, 2008, 2 p., 1 map, scale 1:600, 1 trench log, scale 1:60.<br>_____2009, Response to review comments, Vista Meadows Senior Apartments, East Park Street and Rancho Drive, APN 056-290-001, Hollister, California: unpublished letter to Mr. Andy Leif, Sr. Project Manager, South County Housing Corporation, dated June 4, 2009, 3 p., 1 map.<br>____, 2010, Geologic fault investigation, Hollister Fire Station No. 1, 110 5th Street, Hollister, California: unpublished report to Ms. Renee Perales, Hollister Redevelopment Agency, dated December 8, 2010, 14 p., 9 fig., 3 appendices, 2 plates, scale 1:60.<br>____, 2012, Response to Review Comments, Hollister Fire Station No. 1, 110 5th Street, Hollister, California: unpublished report to Ms. Marry Paxton, City of Hollister, dated May 1, 2012, 2010, 4 p., 4 fig., 3 plates, scale 1:60.<br>Geo-Logic Associates, 2015a, Proposal for a fault rupture hazard report, City of Hollister, California: unpublished letter to Ms. Mary Paxton, City of Hollister, Proposal No. P14.469, dated March 30, 2015.<br>Hart, E.W., and Bryant, W.A., 2007, Fault-rupture hazard zones in California: California Geological Survey Special Publication 42, 42 p.<br>Kingsley Associates, 1991, Review letter of fault study, sites 1, 3-6 and 10 (ASMI, 1991a), Hollister, California: unpublished report to Mr. Hugh Riley, City of Hollister, dated July 12, 1991, 1p.<br>Landset Engineers, Inc., 2008, Review of draft fault rupture hazard study, William Lettis & Associates, Inc., dated October 10, 2008, Fremont School site, 335 West Street, Hollister, California: unpublished report to Mr. Bill Avera, City of Hollister, File No. LSG-0631-03, dated November 12, 2012, 9p.<br>____, 2009a, Review of geologic fault investigations, Earth Systems Pacific dated August 12 & October 28, 2008, Vista Meadows Apartments (APN 056-290-001) east Park Street & Rancho Drive, Hollister, California: unpublished report to Ms. Mary Paxton, City of Hollister, File No. LSG-0631-02, dated March 25, 2009, 10p. |

## FAULT INVESTIGATION REPORT REVIEW FORM
## (CONTINUED)

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| Other information sources: (continued) | ____, 2009b, Review of response to review comments, Earth Systems Pacific dated June 4, 2009, Vista Meadows Apartments (APN 056-290-001) east Park Street & Rancho Drive, Hollister, California: unpublished report to Mr. Abraham Prado, City of Hollister, File No. LSG-0631-02, dated June 10, 2009, 7p.<br>____, 2011, Review of geologic fault investigation, Earth Systems Pacific dated December 8, 2010, City of Hollister Fire Station No. 1, 110 Fifth Street, Hollister, California: unpublished report to Ms. Mary Paxton, City of Hollister, File No. 0865-01, dated April 14, 2011, 9p.<br>____, 2012, Review of response to review comments, Earth Systems Pacific dated May 1, 2012, City of Hollister Fire Station No. 1, 110 Fifth Street, Hollister, California: unpublished report to Ms. Mary Paxton, City of Hollister, File No. 0865-01, dated May 21, 2012, 6p.<br>____, 2015a, Proposal for geologic peer review, City of Hollister downtown fault rupture hazard summary, Hollister, California: unpublished letter to Ms. Mary Paxton, City of Hollister, File No. 1432-01, dated April 13, 2015, 4p.<br>Levi, T., Weinberger, R., Aifat., Eyal, Y., and Marco, S., 2006, Injection mechanism of clay-rich sediments into dikes during earthquakes: G3 (Geochemistry, Geophysics, Geosystems), v.7, no. 12.<br>Makdissy Consulting, Inc., 2013a, Geologic assessment of the Brigantino property, Hollister, California: unpublished report, 12 p., 2 appendices, 11 figs.<br>Pacific Rim Geologic, 2002, Fault location and engineering geologic investigation, Grace property , Parcel 1, APN 54-19-09, 341 First Street, Hollister, California, unpublished consultants report, 22p., 1 appendix.<br>Pacific Geotechnical Engineering, 2012, Cumulative assessment of fault hazard data in downtown Hollister, California: unpublished consultants report prepared for the City of Hollister Redevelopment Agency, Project 2010.0177.<br>Rogers, T.H., Nason, R.D., and Cooper, A.K., 1968, Preliminary map showing traces of the Calaveras fault zone in the City of Hollister, California: California Division of Mines and Geology Open-File Report 68-3, 1 sheet, scale 1 in. = 500 ft.<br>Rogers, T.H., 1993, Geology of the Hollister and San Felipe quadrangles, San Benito, Santa Clara, and Monterey Counties, California: California Division of Mines and Geology Open File Report 93-01, 21 p. 3 appendices, 3 sheets, scale 1:24,000.<br>Rosenberg, L.I., 1998, Liquefaction Susceptibility of the Hollister Area, San Benito County, California, U.S. Geological Survey, National Earthquake Hazards Reduction Program Final Technical Report, Award No. 1434-HQ-97-GR-03125, 40 p. |

## FAULT INVESTIGATION REPORT REVIEW FORM
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| Other information sources: (continued) | ___2002, Geologic report review, fault location and engineering geologic investigation, Pacific Rim Geologic, Project 1093, dated March 1, 2002, Grace property, parcel 1, APN 054-19-009, 341 First Street, Hollister, California: unpublished report to City of Hollister, dated September 27, 2002, 6p.<br>___2003, Comments on Pacific Rim Geologic letter dated December 16, 2002, response to 9/27/02 review by City of Hollister consulting geologist, Lew Rosenberg, March 1, 2002 Pacific Rim Geologic report, fault location and engineering geologic investigation, Grace property, parcel 1, APN 054-19-009, 341 First Street, Hollister, California: unpublished report to City of Hollister, dated February 24, 2003.<br>___2009, Response letter to Mr. Bill Avera, regarding peer review letters dated September 27, 2002 and February 24, 2003 of geologic reports prepared by Pacific Rim Geologic for the Grace property, 341 First Street, Hollister, California: dated August 24, 2009, 1p.<br>Terratech Inc., 1978, Geologic/geotechnical investigation, First Street commercial property, Hollister, California: unpublished consultants report, 9 p., 2 appendices.<br>____, 1985, Fault investigation J.C. Penny building, Hollister, California:, unpublished consultants report, 6 p., 1 appendix.<br>____, 1987, Investigation of the east branch of the Calaveras fault, Prune Street school site (Rancho San Justo tandem school site), Hollister, California, unpublished consultants report, 10p., 9 figures.<br>William Lettis & Associates, Inc., 2008, Fault rupture hazard study Fremont School site, Hollister, California, draft report: unpublished report to Mr. Clint Quilter, City Manager, dated October 11, 2008, 54 p., 28 fig., 10 appendices, 4 plates, scale 1:48, 1 CD. |
| Applicable codes & ordinances: | State of California, Public Resources Code, Division 2. Geology Mines and Mining, Chapter 7.5 Earthquake Fault Zones, Sections 2621, 2621.5, 2621.6, 2623, 2624, 3600, 3601 & 3603.<br>City of Hollister, Municipal Code, Title 17, Chapter 17.14.040. |
| Review standards: | California Department of Conservation, California Geological Survey, Guidelines for reviewing geologic reports: CGS Note 41, 4 p.<br>California Department of Conservation, California Geological Survey, 2002: Guidelines for evaluating the hazard of surface fault rupture, CGS Note 49.<br>California State Board for Geologists and Geophysicists, 1998, Geologic guidelines for earthquake and/or fault hazard reports, 7 p.<br>Hart, E.W., and Bryant, W.A., 2007, Fault-rupture hazard zones in California: California Geological Survey Special Publication 42, 42 p. |

## FAULT INVESTIGATION REPORT REVIEW FORM
## (CONTINUED)

### Report Requirements

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| Plan, phase, project or report under consideration: | Fault rupture hazard assessment for 60 commercial/residential parcels located within the official Earthquake Fault Zone (EFZ) of the East Branch of the Calaveras fault, designated by the State of California as defined by the Alquist-Priolo Act. Subject parcels are being considered for future re-development in the downtown area of the City of Hollister, California. Establishment of Phase I Designated Assessment Area for clearance of surface fault rupture hazard. |
| Field observations & meetings: | *ASMI (1991a-e)*<br>Reviewing geologist Brian E. Papurello present in the field during trenching and logging of exploratory trenches for Applied Soil Mechanics, Inc. (1991a through 1991e). Mr. Papurello performing in the capacity of assistant staff geologist to project geologist Mr. Lewis I. Rosenberg and responsible geologist in charge Mr. Richard T. Gorman. Observed conformable deposits of upper Holocene over-bank deposits. No warping or bedding offsets observed within exploratory trenches. Common sub-vertical clay dikes observed at several localities within exploratory trenches with no bedding offsets or warping.<br><br>*(ESP 2008a & 2008b)*<br>06/03/08: Site review and observations of exposures in trench T-1. Trench T-1 is approximately 220 feet long by 15 feet deep exposing conformable deposits of upper Holocene over-bank deposits. Sub-vertical clay dike parting and graben structure noted at ~Sta. 0+57 with about 4 in. vertical separation at 14.0 feet. Vertical separation is less pronounced at shallower depths becoming less than 1-inch at 10 feet with associated warping of overlying sediments. No warping or bedding offset noted above at depth of 5 feet. No discernable deformation or warping of strata beyond the zone of parting. Sub-vertical clay dikes observed at several other localities within the trench with no bedding offsets or warping. Recommended to Rick Gorman & Brett Faust of ESP that additional trenching should be excavated to the north and south of T-1 on-strike of the feature exposed at Sta. 0+57 to aid in the determination if the observed structure is fault related.<br>06/05/08: Site review and observations of exposures in trenches T-2 and T-3. Trench T-2 is approximately 35 feet long by 15 feet deep. Observed trench T-3 from Station 0+00 to ~Sta. 0+50. Both trenches exposing conformable deposits of upper Holocene over-bank deposits. Sub-vertical clay dikes observed at several other localities within both trenches with no discernable bedding offsets or warping. |

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| Field observations & meetings:<br><br>(Continued) | *(ESP 2008a & 2008b Cont'd)*<br>06/11/08: Site review and observations of exposures in trenches T-3. Trench T-3 is approximately 220 feet long by 15 feet deep, exposing conformable deposits of upper Holocene over-bank deposits. Sub-vertical clay dikes observed at several other localities within with no discernable bedding offsets or warping.<br>06/12/08: Site review and observations of exposures in trench T-4, Trench T-4 is approximately 22 feet long by 15 feet deep, exposing conformable deposits of upper Holocene over-bank deposits. One sub-vertical clay dike with no discernable bedding offsets or warping.<br>07/08/08: Site review and observations of exposures in trench T-5, Trench T-5 is approximately 52 feet long by 20 feet deep exposing conformable deposits of upper Holocene over-bank deposits. The trench was located to the north of Trench T-1, on-strike with the fault feature identified at Sta. 0+57. Within trench T-5 between Sta. 0+30 to 0+35 a zone of slickensided, brecciated soil was observed, interpreted as fault gouge. No discernable vertical separation of soil strata was observed below a depth of 10 feet. Above a depth of 10-feet soil strata was locally warped. From a depth of five feet this feature manifested itself as a dark soil chimney extending to with 1.5 feet of the ground surface.<br>10/14/08: Meeting attendance at the City of Hollister to discuss preliminary review findings of the initial consultants report ESP. Attendees included Ms. Mary Paxton of the City Hollister, Mr. Abraham Prado of the City of Hollister, Ms. Cynthia Iwanaga of South County Housing, Mr. Brett Faust, CEG 2386 of Earth Systems Pacific and reviewing Geologist Brian Papurello, CEG 2226 of Landset Engineers, Inc. Purpose of the meeting was to discuss the reviewing geologists request to perform supplemental exploratory trenching in northeastern portion of the site.<br>10/21/08: Site review and observations of exposures in trench T-6 located in the northeastern portion of the site as recommended by the reviewing geologist. Trench T-6 is approximately 137 feet long by 15 feet deep, exposing conformable deposits of upper Holocene over-bank deposits. Two sub-vertical clay dikes observed with no discernable bedding offsets.<br><br>*(WLA, 2008)*<br>06/25/08: Site review and observations of exposures in trench T-1. Trench depth approximately 16.0 feet deep, exposing conformable deposits of Holocene to latest Pleistocene(?) age over-bank deposits. Sub-vertical clay dike parting and graben structure noted at ~Sta. 1+27 with 4 to 5 in. of vertical separation within strata below a depth of 10 feet. No discernable deformation or warping of strata beyond the zone of parting. No bedding offset observed above a depth of 8 feet. Recommended to Stephen Thompson of WLA that additional trenching should be excavated to the north of T-1 on-strike of the feature exposed at Sta. 1+27 to aid in the |

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| Field observations & meetings:<br><br>(Continued) | *(WLA, 2008 Cont'd)*<br>06/25/08 (Cont'd): determination if observed graben structure is fault related.<br>07/24/08: Site review and observations of exposures in trenches T-2 and T-3. Trench T-2 approximately 250 feet long by 15 to 19 feet deep exposing conformable deposits of Holocene to latest Pleistocene(?) age over-bank deposits. Three sub-vertical clay dikes observed at Sta. 2+64, 3+59 & 4+40. Local maximum vertical separation of about one-inch at Sta. 3+59. No vertical displacement at other localities. No discernable deformation or warping of strata beyond the zone of parting at all localities. No evidence of faulting observed in TP-2. Trench TP-3 approximately 200 feet long by 8 to 19 feet deep exposing south dipping Pleistocene age San Benito gravels forming an angular unconformity with younger overlying Holocene age deposits as identified in T-1 & T-2. Two sub-vertical clay dikes observed at Sta. 0+31 & 0+80 with no vertical displacement. No discernable deformation or warping of strata beyond the zone of parting at both localities. No evidence of faulting observed in T-3.<br>07/28/08: Meeting attendance on-site with stakeholders and invited guests. Re-examined exposures within trenches T-2 & T-3. Discussed potential origins and mechanisms of clay dike emplacement with Mr. William Bryant of the California Geological Survey and Mr. John Tinsley of the U.S. Geological Survey.<br>09/02/08: Site review and observations of exposures in trenches T-4, TP-1 & T-5. Trench T-4 approximately 50 feet long by 15 feet deep exposing conformable deposits of Holocene to latest Pleistocene(?) age over-bank deposits. One sub-vertical clay dike observed at Sta. 0+29. Maximum vertical separation of about one-inch forming about a 5 foot wide graben. Upward termination at about 8 feet below the ground surface with no observed vertical separation across the graben structure. No observed vertical separation of bedding on either side of graben structure. Clay dike aligns on-strike with feature identified in trench T-1 at Sta. 1+27. Trench TP-1 approximately 24 feet long by 8 feet deep exposing conformable deposits of Holocene to latest Pleistocene(?) age over-bank deposits. One sub-vertical clay dike observed at Sta. 0+18 with no vertical displacement. No discernable deformation or warping of strata. No evidence of faulting observed in TP-1. Trench T-5 approximately 50 feet long by 13 feet deep exposing conformable deposits of Holocene to latest Pleistocene(?) age over-bank deposits. One sub-vertical clay dike observed at Sta. 0+24 with no vertical displacement. No discernable deformation or warping of strata. No evidence of faulting observed in T-5.<br><br>*(ESP, 2010)*<br>03/17/10: Site review and observations of exposures in trench T-1 from Sta. 0+00 to Sta. 0+50. Severe caving of non-cohesive sands was observed from Sta. 0+00 to Sta. 0+20. This portion of trench |

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| Field observations & meetings:<br><br>(Continued) | *(ESP, 2010 Cont'd)*<br>03/17/10 (Cont'd): was unsafe to enter, which limited observations from ground surface only. Trench sidewalls expose ~8 feet of clay & silt soils underlain by ~4 feet of interbedded poorly graded sand, silty sand and well graded sand. Observed <½" thick organic burn layers within lower portion of clay. Trench depth varies from 12.0' to 12.5' deep. No warping or bedding offset noted.<br>03/22/10: Site review and observations of exposures in trench T-1 from Sta. 0+50 to Sta. 1+08. Observed conformable deposits of upper Holocene over-bank deposits. Continuous sand marker bed @ 8.0'. No discernable bedding offsets or warping. Trench depth varies from 12.0' to 12.5' deep.<br>03/26/10: Site review and observations of exposures in trench T-1 from Sta. 1+55 to Sta. 1+89. Observed conformable deposits of upper Holocene over-bank deposits. No discernable bedding offsets or warping. Trench depth varies from 13.0' to 14.5' deep.<br>03/30/10: Site review and observations of exposures in trench T-1 from Sta. 1+55 to Sta. 1+89. Observed conformable deposits of upper Holocene over-bank deposits. No discernable bedding offsets or warping.<br><br>*(Geo-Logic Associates, 2015b – This Study)*<br>03/11/15: Meeting attendance at the City of Hollister to discuss technical scoping for downtown fault rupture hazard assessment. Attendees included Ms. Mary Paxton, responsible geologist Mr. John Feltman, CEG 2350 and reviewing geologist Brian Papurello, CEG 2226.<br>08/03/15: Meeting attendance at the offices of Geo-Logic Associates to discuss technical aspects of first draft of Geo-Logic 2015b, dated July 2015. Attendees included responsible geologist Mr. John Feltman, CEG 2350 and reviewing geologist Brian Papurello, CEG 2226 |

## FAULT INVESTIGATION REPORT REVIEW FORM
**(CONTINUED)**

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| Disposition: | 04/15/03: Received copy of Geo-Logic Assoc. 2015a from City of Hollister Development Services Program Manager, Ms. Mary M. Paxton.<br>07/28/15: Received first draft copy of Geo-Logic Assoc. 2015b, dated July 2015 from City of Hollister Development Services Program Manager, Ms. Mary M. Paxton.<br>08/28/15: Received second draft copy of Geo-Logic Assoc. 2015b, dated August 28, 2015 from City of Hollister Development Services Program Manager, Ms. Mary M. Paxton.<br>09/29/15: Received final copy of Geo-Logic Assoc., 2015b, dated September 29, 2015 from City of Hollister Development Services Program Manager, Ms. Mary M. Paxton.<br>10/02/15: Issued review letter (Landset Engineers Inc., 2015b) for Geo-Logic phase I fault rupture hazard assessment report dated September 29, 2015 (Geo-Logic 2015b) |
| Attachments: | None |

## FAULT INVESTIGATION REPORT REVIEW FORM
## (CONTINUED)

The following checklist (modified after CGS Special Publication 42, Appendix C and CGS Note 49) is used as part of reviewing fault investigation reports. Explanatory notes are appended and keyed to each numbered item.

| Checklist item within consulting report | Adequately described: satisfactory | Additional data needed: unsatisfactory |
|---|---|---|
| 1. Purpose and scope of investigation | X | |
| 2. Description of proposed development | X | |
| 3. Geologic and tectonic setting | X | |
| 4. Seismicity and earthquake history | X* | |
| 5. Site description and conditions | X | |
| 6. Review of published and unpublished literature | X | |
| 7. Stereoscopic interpretation of aerial photographs & remote sensing | X* | |
| 8. Surface observations | X | |
| 9. Subsurface investigation; trenches, borings, CPT testing | X* | |
| 10. Geophysical investigation | N/A | |
| 11. Age dating techniques | X | |
| 12. Location or existence (or absence) of hazardous faults | X | |
| 13. Ages of past rupture events | X | |
| 14. Type of faults and nature of anticipated offset | X | |
| 15. Distribution of primary and secondary faulting and related deformation | X | |
| 16. Probability of relative potential for future surface displacement | X | |
| 17. Degree of confidence and limitations of data and conclusions | X | |
| 18. Setback distance determinations | X | |
| 19. Additional mitigative measures to accommodate fault related deformation | N/A | |
| 20. Risk evaluation relative to the proposed development | X | |
| 21. Limitations of the investigation; need for additional studies | X | |
| 22. References for published & unpublished literature and aerial photographs | X | |
| 23. Location map | X | |
| 24. Regional geology map | X* | |
| 25. Fault and seismic epicenter map | X* | |
| 26. Site location on Official Earthquake Fault Zone Map | X | |
| 27. Site development map | X | |
| 28. Original site geologic map | X* | |
| 29. Logs of exploratory trenches & borings, scale 1:60 | X* | |
| 30. Appendix with supporting data (e.g. water well, geophysical, aerial photographs | X | |
| 31. Authentication, report signed and stamped by PG/CEG with expiration date | X | |

X* denotes acceptable item with comment

## EXPLANATORY NOTES KEYED TO CHECKLIST

**4. Seismicity and earthquake history**
Adequately described in Appendix A. Please refer to ASMI (1991a-e), ESNC (1998) & ESP (2008a & b).

**7. Stereoscopic interpretation of aerial photographs & remote sensing**
Adequately described in Appendix A. Please refer to ASMI (1991a-e), ESNC (1998) & ESP (2008a & b).

**9. Subsurface investigation; trenches borings, CPT testing**
Extensive subsurface investigation and exploratory trenching has been performed within the Downtown Fault Hazard Assessment Area by Terratech (1985), ASMI (1991a-e), ESNC (1998). See Appendix A.

**24. Regional geology map**
Adequately described in Appendix A. Please refer to ASMI (1991a-e), ESNC (1998) & ESP (2008a & b).

**25. Fault and seismic epicenter map**
Adequately described in Appendix A. Please refer to ASMI (1991a-e), ESNC (1998) & ESP (2008a & b).

**28. Original site geologic map**
Adequately described in Appendix A. Please refer to ASMI (1991a-e), ESNC (1998) & ESP (2008a & b).

**29. Logs of exploratory trenches & borings, scale 1:60**
Included in Appendix A. Please refer to Terratech (1985), ASMI (1991a-e) & ESNC (1998).

## RECOMMENDATIONS

1. Legal Description & Disclosure. The findings of the referenced report (Geo-Logic Associates, 2015b) and this review letter should be recorded as a document of conveyance within the title reports for the subject parcels located within the designated *Phase I Fault Rupture Hazard Assessment Area* which have been cleared for the hazard of surface fault rupture, as defined by the State of California Alquist-Priolo Act. The City's reviewing geologist should review the recommended document of conveyance for accuracy prior to recordation.

Brian Papurello, CEG 2226
Reviewing Geologist