ADDENDUM No. 1
Bid No.: 11-12/22 Merritt College - Electrical Connection to Building - L

10200.1 - Merritt College - Electrical to Building L

SECTION 00 91 11

PARTICULARS
1.01 DATE: JULY 2, 2012
1.02 PROJECT: ELECTRICAL CONNECTION TO BUILDING - L
1.03 PROJECT NUMBER: 10200
1.04 OWNER: MERRITT COLLEGE PERALTA COMMUNITY COLLEGE DISTRICT
1.05 ARCHITECT: SALAS O'BRIEN ENGINEERS INC.

TO: PROSPECTIVE BIDDERS
2.01 THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND MODIFIES THE BIDDING DOCUMENTS DATED 04/10/12, WITH AMENDMENTS AND ADDITIONS NOTED BELOW.
2.02 ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED IN THE BID FORM. FAILURE TO DO SO MAY DISQUALIFY THE BIDDER.
2.03 THIS ADDENDUM CONSISTS OF 20 PAGES AND FOLLOWING CHANGES:
CHANGES TO THE PROJECT MANUAL
3.01 CLARIFICATIONS TO BIDDERS QUESTIONS
A. Q1: What is the engineer's estimate?
   1. A1: The engineer's estimate is $750,000.
B. Q2: What contractor's license classification ("A" (General Engineering), "B" (General Building), C10 (Electrical), etc.) is required for this project? This is not stated anywhere in the specifications.
   1. A2: The contractor's license classification shall be A, B &/or C-10.
C. Q3: Drawing ES-1.1 shows two 5" CO. going from MH-14 to a Christy Pull Box G5T (Note 7). The G05T box that Christy makes has only a 10-3/8" inside diameter, this box appears too small for two 5" conduits to stub up inside. Please see attached, I am assuming the G5T is the same box as the G05T as I cannot find any other box with box should be used in its place if I am correct. If I am incorrect please advise otherwise.
   1. A3: The Pullbox is only to mark the location of (2) 5" spare conduits for future use. Please use Christy B1730 Box with H20 loading cover.
D. Q4: Section 26 05 13, Part 1,1.04, B: Although an Okonite sales office exists within 100 miles of Merritt College, the closest service center is the Okonite, Santa Maria, CA manufacturing facility, approximately 265 miles from the job site. Please advise if Okonite will still be considered a valid manufacturer for this project.
   1. A4: Okonite is an acceptable medium voltage cable manufacturer.
E. Q5: The specifications on the referenced project states the project duration is 90 calendar days. Have you checked with the suppliers of the secondary unit substation and switches? Are they able to supply this equipment within the stated time approval? Typically these are 10 to 12 week lead items. Please confirm this is a 90 calendar day project.
   1. A5: The project duration has been revised to 180 calendar days.
F. Q6: At the pre-con it was mentioned by our facilities mgr. that a geotech report is available. Can you tell me how we can get that?
   1. A6: Preliminary Soil Investigation Report has been included within this addendum. See attached.

G. Q7: What is meant by the arrowed areas on the attached form? Is the "Vendor's Questionnaire and Certification by Compliance" form required to be filled out by prime contractor (only) or must potential subcontractors also fill it out? (This could prove difficult as Blocka Construction might receive quotes from various unknown subcontractors on the day of the bid and there would not be enough time for these subs to fill out the form prior to Blocka's bid runner leaving to deliver the bid).
   1. A7: See below for answers:
      a. A7: Area 1 - Total Workforce
      b. Area 2 - A.) Total Workforce; B.) Whatever you know of subs, information
   2. Note: This information will not be used in determining bid award, and is for the District’s information only you will not be penalized for incomplete information.

3.02 DIVISION 0-INVITATION FOR BID

A. Project Duration: The project duration has been revised to 180 calendar days.

3.03 SPECIFICATIONS SECTION 26 05 13 - MEDIUM VOLTAGE CABLE

A. Part 1 - 1.04 B has been revised to state the following:
   1. "Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience and with service facilities within 300 miles of Project."

CHANGES TO THE DRAWINGS

4.01 DRAWING ES-1.1

A. Reference Sheet Note #5 has been revised to state the following" FURNISH AND INSTALL NEW CONDUIT ONLY AND MARK LOCATION WITHIN PULL BOX CHRISTY B1730 BOX WITH H20 LOADING COVER OR ENGINEER APPROVED EQUAL)."

B. Reference Sheet Note #7 has been revised to state the following" FURNISH AND INSTALL NEW PULLBOX (CHRISTY B1730 BOX WITH H20 LOADING COVER OR ENGINEER APPROVED EQUAL). MARK CONDUIT STUB-UP LOCATION FOR FUTURE USE."
PRELIMINARY SOIL INVESTIGATION OF A POSSIBLE SITE
PROPOSED OAKLAND CITY COLLEGE
Hillcrest Estates Area
Oakland, California

WOODWARD; CLYDE, SHERARD AND ASSOCIATES
Consulting Civil Engineers
REPORT

to

OAKLAND PUBLIC SCHOOLS
DEPARTMENT OF ARCHITECTURE AND ENGINEERING
1025 Second Avenue
Oakland 6, California

on

PRELIMINARY SOIL INVESTIGATION OF A POSSIBLE SITE
PROPOSED OAKLAND CITY COLLEGE
Hillcrest Estates Area
Oakland, California

by

WOODWARD-CLYDE-SHERARD & ASSOCIATES
Consulting Civil Engineers
Oakland, California
March 2, 1960

Job No. 3826

Oakland Public Schools
Department of Architecture and Engineering
1025 Second Avenue
Oakland 6, California

Gentlemen:

In accordance with your request, we have made a preliminary investigation of the underlying soil conditions at a possible site for the proposed Oakland City College. The site investigated is located in the Hillcrest Area near Redwood Road and Skyline Boulevard in Oakland, California.

The accompanying report describes the geology of the site, its topography and soils, the soil and rock characteristics as determined by surface and subsurface investigations, and the results of laboratory tests on soil samples.

The accumulated data indicates that the site is suitable for the proposed development, but that blasting will probably be required for excavations below depths of 30 to 40 feet.

The geological studies were made by Mr. John Trantina, Chief Engineering Geologist of our firm, and by Mr. Alexander McBirney, Staff Geologist. The Staff Engineer assigned to this project was Mr. John Holman.

Very truly yours,

WOODWARD-CLYDE-SHERARD & ASSOCIATES

By Raymond Lundgren

Raymond Lundgren, R.E. 9394

Lee Reynolds and Chamberlain,
Architects
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REPORT

to

OAKLAND PUBLIC SCHOOLS

DEPARTMENT OF ARCHITECTURE AND ENGINEERING

on

PRELIMINARY SOIL INVESTIGATION OF A POSSIBLE SITE

PROPOSED OAKLAND CITY COLLEGE

Hillcrest Estates Area

Oakland, California

SCOPE

This report covers a preliminary investigation of the soil conditions at a possible site for the proposed Oakland City College. The site is located east of Redwood Road between Mountain Boulevard and Skyline Boulevard in Oakland, California. The purpose of the study is to determine the feasibility of developing the site for the proposed construction, particularly with regard to the excavation properties of the subsoil.

A geological reconnaissance, a geophysical survey, and a series of test borings were made at the site. Soil samples were examined continuously during the drilling operations and undisturbed samples were recovered from some of the holes. The samples were visually inspected and tested in the laboratory to determine the physical and mechanical properties of the soils encountered. These properties were subsequently used, together with the results of the geophysical survey and observations on the site, in reaching the conclusions and recommendations reported.
FIELD INVESTIGATION

The geological reconnaissance was made to determine the general characteristics of the site and the character and sequence of the underlying soil and rock formations. Following this, eight test holes were drilled, using a 6-in. diameter power auger, at the locations indicated in Fig. 1. Undisturbed samples were taken from some of the holes with a 2-in. diameter modified California sampler. The sampler was driven with a 140-lb weight which was given a free fall of 30 in., and resistance to penetration was recorded. The logs of all borings are shown in Figs. 2 through 5. The drilling was done between February 15 and 27, 1950.

In order to obtain information regarding the hardness of the rock formations below the depths reached by the drilling equipment, a geophysical survey, consisting of four seismic traverses was performed. The locations of the traverses are shown in Fig. 1.

LABORATORY TESTS

The water content, dry density and unconfined compressive strength were determined for each undisturbed soil sample where possible. The results of these tests are given in Table 1. The resistance to penetration of the sampler, water content, dry density, and unconfined compressive strength are also shown on the logs of borings, Figs. 2 through 5.
LOCATION AND DESCRIPTION OF SITE

The site is near the crest of the ridge line between Skyline Boulevard and Mountain Boulevard, in an area of high relief and broken topography known as Hillcrest Estates. A straight valley containing a small intermittent stream drains the area to the northwest and coincides generally with the long axis of the site. It is flanked on both sides by a group of rounded knobs that are aligned parallel to the valley. Three tributary draws enter the valley from the northeast, but the steep, straight slopes along the southwest side are broken only by shallow indentations. Most of the low areas are covered with a dense undergrowth, and scattered oak and bay trees. Broad, grass-covered fields are common at higher elevations. A deep quarry is located near the northwest corner of the site.

Drainage of most of the site is excellent, due to steep slopes and a well-developed stream pattern. However, small low areas lying between knobs on the northeast side form basins with restricted drainage, in which water accumulates in marshy pockets.

GEOLGY

The topographic form of the site is a result of the contrasting properties of its bedrock. A thick series of steeply-dipping shales of the Knoxville formation is capped with a massive bed of Leona rhyolite. The volcanic rhyolite was erupted upon an irregular surface formed by deep erosion of the upturned shales, and blanketed them to a depth of several hundred feet. Subsequently, the area was faulted and
tilted toward the southwest, and erosion has removed much of
the rhyolite cover until shales are again exposed in the deep
valley and in low areas on the northeast side of the site.
Being more resistant to erosion than the underlying shales,
the rhyolite forms prominent knobs and steep slopes. Due to
the faulting and tilting, the thickness of the rhyolite is
much greater on the southwest side of the valley, while to the
northeast only a relatively thin veneer, ranging up to about
100 feet in thickness, is preserved at higher elevations. Due
to the complexity of faulting and other factors, the depth of
rhyolite is highly variable.

The fresh rhyolite is bluish-gray and contains consider-
able pyrite, which was mined from a number of pits and
tunnels that can still be seen around the site. Near the sur-
face the pyrite has weathered to a reddish-brown iron oxide
which gives the rock its distinctive surface color. The
weathered rock contains numerous joints and fractures.

Situated as it is within the fault zone associated
with the historically active Hayward fault, the site is in an
area that is likely to be affected by seismic shocks. Although
the principal trace of the Hayward fault follows the general
line of Mountain Boulevard, parallel subsidiary faults are
known to traverse the site.

If properly designed, buildings capable of with-
standing major shocks can be safely constructed on the site.
Numerous buildings and institutions such as the University of
California, Mills College, the Fairmont Hospital, and Clare-
mont Hotel are located astride or near the Hayward fault, and
have suffered no significant damage from earthquakes within
the last half century.

SOIL CONDITIONS

As previously discussed under "Geology", the knolls at the site are composed of rhyolite. Near the surface this rock has weathered to medium dense to dense silt or clayey sand, and very stiff silty clay. With increasing depth the rhyolite becomes less weathered and denser; unweathered, very dense to hard rhyolite was found at depths of 20 to 36 ft. An exception existed at Hole 1-A where the weathering was more severe and the depth of weathering extended to at least 37 ft. Between the knolls, at Holes 3-A and 4-A, the rhyolite was overlain by a bed of dense shale which commenced at a depth of about 4 ft and had a thickness of 5 to 14 ft.

In the valley, hard fractured shale was found at depths of 9 to 15 ft. The overlying alluvial soils consist principally of sandy clay, ranging in strength from soft near the surface to stiff below a depth of several feet, and containing organic matter in the lower portions of the deposits. Several feet of clayey gravel overlie the shale at one location.

In the valley, ground water was encountered at depths of 2 to 6 ft at the time of drilling. No ground water was found in the holes drilled in the higher portions of the site.

DESCRIPTION OF PROJECT

The proposed development entails substantial amounts of grading. Fills up to about 100 ft in height and cuts to about 85 ft will be required. The existing quarry will be filled to form a stadium site; a maximum of about 100 ft of fill will be required for this.
DISCUSSION AND CONCLUSIONS

Excavation Characteristics of Rock Formations - Most of the cuts required to grade the site will be made in the Leona rhyolite which occurs at the higher elevations throughout the site. The numerous joints and fractures in the zone of weathering will facilitate excavation, and no difficulty should be encountered in ripping the rhyolite within this zone. Below the level of weathering, the rock will be more massive, and excavation will become increasingly difficult. The nature of the rock is well shown in the deep quarry near the northwest corner of the site. Moderate blasting has been necessary in quarrying the Leona rhyolite in most places where excavations have reached depths of 40 feet or more.

Experience indicates that in rock formations similar to those of this area, ripping is possible with heavy equipment when the ground velocities measured in seismic traverses do not exceed about 5000 fps, while blasting is required in material having higher velocities. Experience also indicates that whenever rock strata cannot be penetrated with a power-driven earth auger, ripping is almost always impossible.

The seismic readings along the ridge above the quarry, Traverse 1, gave velocities that increased steadily with depth to approximately 4000 fps at 51 ft. Below this, the velocities increased to nearly 10,000 fps. In the vicinity of Hole 1, it was impossible to penetrate with the power auger below a depth of 30 ft, and this was verified by the seismic readings, Traverse 2. On the northeast side of the valley Traverse 3 was run along the slopes of a rhyolite-capped knob in the vicinity of Holes 3 and 3-A. Somewhat
higher velocities were found, suggesting a shallower depth of weathering; an average value of 7400 fps occurred below 25 ft. This corresponds well with the evidence of the drill holes, which, due to rock hardness, could not be advanced below a comparable elevation.

Traverse 4 was run along an area of Knoxville shale on the northeast side of the valley. Velocities increased to a maximum value of only 3400 fps below 14 ft, indicating that no difficulty will be encountered in excavation of the shale.

In summary, based on the available information, it is expected that the rhyolite will become increasingly difficult to excavate below 20 to 30 ft, which is the limit of weathering and strong jointing. In deeper cuts, marginal conditions which will require either heavy ripping or light blasting will be found between depths of about 30 and 40 ft, and blasting will probably be necessary at greater depths. No difficulty is expected in excavating the shale on the northeast side of the site.

General Grading Requirements - Pending further field investigations and studies, it should be assumed that cut slopes of 1\(\frac{1}{2}\) to 1 (1\(\frac{1}{2}\) horizontal to 1 vertical), and fill slopes of 2 to 1 will be required. Benches would be necessary on the slopes to intercept surface runoff water and minimize erosion.

Prior to placing fill, all soft or loose material should be removed; in the central valley, this would amount to about 5 to 10 ft of material. Subdrainage would be required below the toes of all filled slopes in draws.
Except for the organic topsoils, the material obtained from the cuts would be suitable for use as engineered fill.

Foundations: In general, the filled areas would be suitable for supporting school buildings of relatively light construction. Bearing pressures of the order of 3000 psf for combined dead and live loads could probably be used. Heavier buildings would be well-suited for location in the cut areas where higher bearing pressures could be sustained. Locations in which buildings would be partially in fill and partially in cut would require special foundation treatment, probably using drilled piers, to avoid undesirable differential settlement.

This report is preliminary in nature and is issued in order to aid the general feasibility studies for the project. The Soil Engineer should be consulted if it is decided to proceed with the development of this site, or if special problems not covered in this report arise. The recommendations given are based on a limited investigation within a large area. It is suggested, therefore, that before the final plans are formulated, a more detailed investigation, including additional borings, be made at the site.
<table>
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<th>SAMPLE NUMBER</th>
<th>APPROXIMATE SURFACE ELEVATION</th>
<th>SAMPLE DEPTH, FT</th>
<th>WATER CONTENT, % DRY WT</th>
<th>DRY DENSITY, PCF</th>
<th>UNCONFINED COMpressive STRENGTH, PSF</th>
<th>STANDARD PENETRATION BLOWS/FT</th>
<th>CLASSIFICATION</th>
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<td>--</td>
<td>870</td>
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* Not representative for sample
HOLE 1
ELEV 1010

MEDIUM DENSE, WET, MEDIUM BROWN CLAYEY SAND WITH RHYOLITE FRAGMENTS

MEDIUM DENSE TO DENSE, DRY, MEDIUM WHITE-ORANGE AND BROWN WEATHERED RHYOLITE, HIGHLY FRACTURED

VERY DENSE, DRY, GREY-WHITE AND MEDIUM RED-BROWN FRACTURED RHYOLITE

DRILLING HARD

10

DRILLS SLIGHTLY EASIER

15

DRILLS VERY HARD

VERY DENSE, DRY, MEDIUM BLUE-GREEN QUARTZ VEIN

VERY DENSE, DRY, WHITE AND RED-BROWN RHYOLITE

DRILLS EXTREMELY HARD

(CHANGE TO ROCK BIT)

30

DRILLED SLIGHTLY EASIER

HARD RHYOLITE

DRILLS VERY HARD

35

HOLE 1A
ELEV 955

STIFF, MOIST, DARK GREY-BROWN SANDY CLAY

DENSE, MOIST, LIGHT BROWN WEATHERED RHYOLITE

WEATHERED RHYOLITE (VERY STIFF, MOIST, BROWN SILTY CLAY AND ROCK FRAGMENTS)

GRADING STIFF AND MOIST TO WET

VERY DENSE BROWN RHYOLITE

WEATHERED RHYOLITE (VERY STIFF, WET, BROWN SILTY CLAY WITH TRACES OF ROCK FRAGMENTS)

FIG. 2 - LOGS OF BORINGS
GROUND SURFACE

HOLE 2
ELEV 780'

- HARD, DRY, BROWN-BLACK ROCK FRAGMENTS WITH SAND AND CLAY
- HARD, BLACK, DRY, FRACUTURED SHALE

SOFT TO FIRM, MOIST, BROWN BANDY CLAY WITH FINE GRAVEL
GRADING WET

SAMPLE 2-1
FIRM TO STIFF, WET, BLUE BANDY CLAY WITH SOME GRAVEL & ORGANIC MATTER
WC - 23
DD - 103
UN - 1000
HARD, BLACK FRACUTURED SHALE, WET IN FRACTURES

HOLE 3
ELEV 900'

- DENSE, DAMP, DARK BROWN SILT AND RHYOLITE ROCK FRAGMENTS

DENSE, DAMP, YELLOW-BROWN DECOMPOSED TO WEATHERED RHYOLITE

SAMPLE 3-1
36 BLOWS/FT
WC - 17
DD - 100

SAMPLE 3-2
160 BLOWS/FT
WC - 23
DD - 103

SAMPLE 3-3
144 BLOWS/FT
WC - 11
DD - 96

SAMPLE 3-4
420 BLOWS/FT
WC - 6

HARD, BROWN TO GREY RHYOLITE
GRADING VERY HARD

FIG. 3 - LOGS OF BORINGS
HOLE 3A
ELEV 875
STIFF, MOIST, DARK GREY-BROWN SANDY CLAY
STIFF, MOIST TO WET, BROWN SILTY CLAY (WEATHERED SHALE)
VERY STIFF, DAMP, GREY-BROWN SILTY CLAY (WEATHERED SHALE)
DENSE, DAMP, GREY SHALE

HOLE 4
ELEV 930
STIFF, MOIST, DARK GREY-BROWN SANDY CLAY WITH OCCASIONAL ROCK FRAGMENTS
MEDIUM DENSE, DAMP, DARK BROWN SILT AND ROCK FRAGMENTS
DENSE, DAMP, BROWN WEATHERED RHYOLITE
DENSE TO VERY DENSE, DRY TO DAMP, YELLOW-BROWN WEATHERED RHYOLITE
DENSE TO VERY DENSE, DRY TO DAMP, YELLOW-BROWN WEATHERED RHYOLITE

5
10
15
20
25
30
35

DEEP BELOW SURFACE, IN FEET

FIG. 4 - LOGS OF BORINGS
**GROUND SURFACE**

**HOLE 4A**  
ELEV 890.5

- MEDIUM DENSE, DAMP, DARK BROWN SILT
- DENSE, DAMP, BROWN WATER WEATHERED RHYOLITE
- DENSE, DAMP, GREY SHALE

**SAMPLE 4A-1**  
72 BLOWS/FT  
WC - 30  
DD - 95  
VERY DENSE, DRY, GREY SHALE

**HOLE 5**  
ELEV 155.5

- FIRM, DAMP TO WET, BROWN SANDY CLAY
- GRADING WET

**SAMPLE 5-1**  
4 BLOWS/FT  
WC - 19  
DD - 105  
UN - 1120

**SAMPLE 5-2**  
15 BLOWS/FT  
WC - 24  
DD - 99  
UN - 2300

**SAMPLE 5-3**  
50 BLOWS/FT  
WC - 22  
DD - 108  
UN - 158

**SAMPLE 5-4**  
115 BLOWS/FT  
WC - 7  
DD - 137  
UN - 870

**KEY**

- SAMPLE NUMBER
- NUMBER OF BLOWS TO DRIVE SAMPLER
- WC - WATER CONTENT, PERCENT OF DRY WEIGHT
- DD - DRY DENSITY, PCE
- UN - UNCONFINED COMpressive STRENGTH, PSF

**FIG. 5 - LOGS OF BORINGS**