CONTRACTOR QUESTIONS AND RESPONSES		
84	Question(s)	Rock Excavation Questions: • See Bid Item for Rock Excavation (Controlled Blasting) how was this quantity arrived at? Would the County consider making Roadway Excavation that requires blasting a unit price item, i.e. not final pay? • The rock blasting item is final pay. Please revise this item to pay per CY of blasting, as there could be as little as 20,000 CY or more than 70,000 CY. • Since there is not enough information given in the geotechnical report to do an accurate take-off of the rock excavation, please consider changing the roadway and rock excavation bid items from "final pay" to not final pay. • It is unclear how the "rock excavation" will be differentiated from the "roadway excavation". Please clearly define how each will be paid. • We ask that the County reconsider treating rock excavation (Controlled Blasting) as a final pay item. The County is placing the onus on the contractor to absorb any and all risk associated with rock excavation and blasting. This will result in a significant increase in cost to the County, as contractors will have to assume blasting anywhere and everywhere. We suggest that the county consider a provision in the bid items for a seismic evaluation, which all contractors will have to include anyways, and a non final-pay bid item for the assume quantity of blasting to be required. • Is payment for rock or unrippable material encountered in the storm drain trench excavation paid under the unit price for the rock excavation (rock blasting) bid item? • Rock Excavation is assumed in order to construct the Storm Drain lines. Does the Controlled Blasting item (# 41 / # 176) include quantities for excavation of the Storm Drain in addition to the roadway? • Bid Item 41 and 176 Rock Excavation (Control Blasting) is this also an incidental part of work for any or all of the storm drain excavation? If not then the contractor will need to included Control Line Blasting in each storm drain bid Items?
	Response	See Addendum No. 5. Rock excavation special provision has been revised; as well as, final pay (F) requirement associated to this item has also been revised.
85	Question(s)	Preconstruction Survey Questions: • See Section 8-1.04H Pre-Construction Survey. Please define what is meant by .... "and shall be monitored before, during and after roadway excavation operations." Specifically, what is meant by monitoring and what is the purpose of during operations? • The spec requires the contractor to survey the existing topography at 100 foot intervals prior to starting work, and submitting this to County. Is this required? Hasn't the County already done this? • Are we setting Monitoring Monuments and Running Level circuits through them? • Are we to Run Cross-sections at 100' intervals along the Route and the Sections are R/W to R/W for Preconstruction, During Construction 14 Days from Start, and Post Construction • Are we to Run Profile ground shots along the CL Route at 100' Intervals for Preconstruction, During Construction 14 Days from Start, and Post Construction? • Do you have an Example of what you mean by Benchmark Data? • Can this be done from an Aerial survey? • What is your Meaning of monitored ground surface points? • Are we to take a Photo at every 100' station for the Length of the Project? Can that be in a Digital Format or do we have to Provide you with Prints. • Special Provisions section 8-1.04H calls for preconstruction survey to be submitted pre, during, and post roadway excavation. How many times during the roadway excavation activity is the survey required?
	Response	See Addendum No. 5, Section 8-1.01H, Preconstruction Survey, has been deleted and replaced. Also, Preconstruction Survey item of work has been deleted for the bid items list.

CONTRACTOR QUESTIONS AND RESPONSES		
86	Question(s)	Course of Construction Insurance Questions: •County Provision Section 00-1.09 lists the maximum value of the Course of Construction Insurance to be recognized for progress payment purposes as $65,000. In the current insurance market, to cap the Course of Construction premium for a project of this size, in this location, as required in the County provisions – Section 00-1.07, at this dollar amount is unrealistic. Please consider increasing the allowed maximum value, and/or re-evaluating the Course of Construction requirements. Current market analysis indicates the Course of Construction could be up to $125,000. Coupled with the Payment and Performance Bond requirement valued at roughly 1% of the contract, the Contractor will instantly be placed into a negative cash flow situation to the tune of over $350,000. Please consider increasing the maximum payment for Bid Item 10 and 143. In addition, please consider inclusion of the payment and performance bonds within this item. If this is considered, the total maximum payment for this item would be roughly 1.5% of the total Contract Value. •Spec Section 00-1.07 requires all risk builder's risk insurance including earthquake and flood. The cost of insurance is likely to be more than $180,000. The payment allowed for Course of Construction Insurance is only $65,000. Will the owner consider raising the pay item allowed or waive the insurance for earthquake and flood?
	Response	Contractors are reminded that only one of the two design options (2-lane option or 4-lane option) will be selected for award. Therefore, the value of Course of Construction Insurance will be based on the selected Alternate Bid Schedule. Regarding Course of Construction Insurance (COC), based on our estimated total cost for Alternate Schedule No. 2 (4-lane option), it is believed that $65,000 is a reasonable value for the purpose of making progress payments. Contractors are allowed to bid higher than $65,000 for COC, but for the purpose of making progress payments, the maximum amount is $65,000. Any amount in excess of $65,000 will be included for payment on the final progress estimate as stated in Section 00-1.09, Progress Payment Restrictions of the Special Provisions. Progress payment restrictions, for the items listed on Section 00-1.09, have been implemented based on significant unbalanced bid prices received on previous projects.
87	Question	Reference Bid Item 132 and 272, Mobilization. The maximum payment for this line item is only 5% of the contract value. If the County is unable to compensate the Contractor for the up-front cost of Course of Construction Insurance / Payment and Performance Bonds, please consider revising the mobilization Bid Item to be in line with Public Contract Code 10264 with a maximum payment of 10% of Contract Value and payment terms as stated below: *10264. (a) With the exception of projects over water requiring marine access, and which have a contract amount greater than twenty-five million dollars ($25,000,000), in addition to the provisions for partial payment made in Section 10261, the department may make partial payments for the mobilization costs of a contract subject to this chapter, not to exceed the following:* *(1) When 5 percent of the original contract amount is earned, 50 percent of the amount bid for mobilization, or 5 percent of the original contract amount, whichever is lesser, may be paid.* *(2) When 10 percent of the original contract amount is earned, 75 percent of the amount bid for mobilization or 7.5 percent of the original contract amount, whichever is lesser, may be paid.* *(3) When 20 percent of the original contract amount is earned, 95 percent of the amount bid for mobilization, or 9.5 percent of the original contract amount, whichever is lesser, may be paid.* *(4) When 50 percent of the original contract amount is earned, 100 percent of the amount bid for mobilization, or 10 percent of the original contract amount, whichever is lesser, may be paid.* *(5) Upon completion of all work on the project, payment of any amount bid for mobilization in excess of 10 percent of the original contract amount will be paid.*
	Response	Since this project has local funding, this Section of the Code does not apply to this project.

Clinton Keith Road Construction Project – Phase 2
From Whitewood Road to Leon Road
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CONTRACTOR QUESTIONS AND RESPONSES		
88	Question	Contour grading plan sheet number 49 has an error with regard to the wildlife overcrossing MSE. When overlaid with the Overcrossing, the MSE section is offset by several feet from where it should be. Please revise and reissue.
	Response	Plans will not be revised for the offset shown in the grading plans. The offset will not cause a change in quantities.
89	Question	See Addendum No. 1, Demolish Buildings. Are there known wells that require abandonment? We do not see this called out on plans. If so, how deep should we anticipate?
	Response	See Addendum No. 5, Special Provision 15-2.02M, Demolish Buildings has been modified.
90	Question	Bid Item #48 and 183 Concrete Paver has a unit of measure of each. Shouldn't this be measures as square feet (SQFT)?
	Response	See Addendum No. 3, Revised Proposal. The units were revised for items 48 and 183.
91	Question	CIDH Piles Length: "Warm Spring Creek Bridge" plans sheets 2, 4, 13, 14, 15, and 17 calls for total length of CIDH 24" piles equal to 3,628 LF, and total length of CIDH 90" piles equal to 374 LF. Bid items No. 62/196 and 63/197 call for total length of CIDH 24" piles equal to 3,162 LF and total length of CIDH 90" equal to 384 LF. Please clarify this discrepancy.
	Response	See Addendum No. 3, Revised Proposal. CIDH Piles quantities were revised.
92	Question	See Drawing CT 20 of the Wildlife Overcrossing Plans. What is the maximum size allowed for the AASHTO Group A1? Please provide the gradation of Zone B backfill.
	Response	See plans sheets 146 of 191, and 150 of 195 (CT19). Backfill to be free of stones larger than 3" in diameter. Zone B Backfill should meet requirements in the chart on sheet CT20.
93	Question	The plans for the Warm Springs Creek bridge indicate that the bridge is to be done in 2 stages. There is no clear indication on any other plan or specification that justifies a need for the bridge to be built in two stages. Please confirm and explain the need for this requirement.
	Response	Caltrans design memos recommend that structures wider than 80 feet be constructed in stages. This will reduce the shortening and shrinkage effects of concrete and will reduce the potential for cracking in the columns and deck. The bridge has been designed as two "halves" tied together with a closure pour.
94	Question	Addendum #1 added the demolition of existing buildings. Special Provisions section 15-2.02M(1), paragraph 14, calls for the removal and disposal of material containing mold and/or asbestos. At the pre-bid meeting it was mentioned by the Agency that no asbestos or mold reports were available. This unknown makes it difficult for any contractor to price. Please consider doing this as "extra work".
	Response	See Addendum No. 5, Special Provision 15-2.02M, Demolish Buildings has been modified.
95	Question	On page GC 14 "50% Minimum work performance" requires the Contractor to perform work equaling at least 50 percent of the value of the original bid with the Contractor's own forces. Will the County consider reducing the requirement to 30%? If the County does not reduce the 50% requirement, could specialty items be added to the bid to make this requirement more achievable?
	Response	No, at least 50% of the work must be performed by the prime Contractor.

CONTRACTOR QUESTIONS AND RESPONSES		
96	Question	Section 19-4.04 describes measurement and payment for Drill hole (presplitting). Does the County anticipate adding an item for this work as this item is not on either of the current bid schedules?
	Response	See Addendum No. 5. Rock excavation special provision has been revised. Payment for drill hole (presplitting) has been removed; however, it does not limit the Contractor from using this type of method.
97	Question	See Drawing CT 1 Table of Estimated Quantities. Please confirm these quantities will differ depending on the type of Arch and MSE wall system submitted by Contractor's final design.
	Response	Yes, if a different system is proposed and approved, quantities would differ. For the purposes of bidding, Contractors are required to bid as proposed in the Contract Documents.
98	Question	On page 41 the drawing calls out for wire mesh but under Section 80 for fences the spec calls to add a paragraph to 80-3.01 to use 3/8 x 3/8 chain link mesh for fence Type CL-6. Specs also call to add to Section 80-3.01b chain link fence with wire mesh installed vertically as chain link fence fabric. Do we install wire mesh on chain link or only 3/8 mesh chain link fence fabric?
	Response	The fence is 3/8" mesh chain link fence fabric.
99	Question	Specs ask to add paragraph to Section 80-3.02e to be tan. This section refers to fence slats, they don't make a slat for 3/8 mesh. Should this be a 2" mesh with slats?
	Response	The area on the plans that reference slats is for the 2" mesh.
100	Question	I notice there is no typical details drawing for over excavating the bridge footing, retaining wall footing and wildlife overcrossing foundation. In the Geotechnical Design Report under Construction Consideration they give their recommendation on how deep to go for over excavate at retaining walls, bridge footings and wildlife overcrossing. Geotechnical Design Report also give recommendation for 60 day settlement at Warm Spring Creek Bridge. (There is no mention in the plans or in the specifications stating any settlement) So is there settlement at the Warm Spring Creek Bridge? So can you show the contractors the typical detail for the over excavate that needs to be done at the retaining walls, bridge footings, and wildlife overcrossing. Is the over excavate 3' at retaining walls and 5' at bridge footings and wildlife crossing?
	Response	Overexcavation from Geotechnical Design Report (GDR) (section 11.5.2) is for the "French Valley" area and retaining walls No. 236 and 359, which has been completed or is in a future phase of Clinton Keith improvements. Warm Springs Creek and the walls for this project are not affected by overexcavation, therefore no details are required. GDR (section 11.8) mentions settlement monuments for French Valley Creek bridge, which is in phase 3. GDR section (8.3.2), settlement for Warm Springs Creek is expected to occur during construction, no mitigation is recommended.
101	Question	Approved Stabilization Method Reference the Clinton Keith Road, from Whitewood Road to Leon Road, sheet 115 of 191 & Add to section 19-3.03E(1), 2. The use of ground anchors are specified as acceptable, please confirm the acceptance of installing ground anchors or similar method into the archeological monitoring area behind Retaining Wall No. 290.
	Response	Ground anchors would need to be installed at an elevation and/or area that would reduce the possibility of cracking, fissuring, or crumbling of the feature outcrops and would not disturb intact archaeological deposits, which are found on the surface to an approximate depth of 80 cm (32 inches). These deposits are currently protected behind the proposed ESA fence.

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CONTRACTOR QUESTIONS AND RESPONSES		
102	Question	Minor Concrete, Section 73 In regards to the Minor Concrete items, No, 6, 7, 8, 9, 61, 101, 102, and PCC Raised Median (Bridge) on the Bid Schedule, the project specifications refers to Division VIII Miscellaneous Construction, Section 73 Concrete Curbs and Sidewalks. The 2010 Caltrans Standards 77-102A General, page 803, requires the use of 463 lbs cement content for curbs and sidewalks. However, the Riverside County standard plans for curbs and sidewalks state Class B. There is no Class B designation in the newer Caltrans Standards. On other projects, RCTD may state the use of Class 3 505 lbs (in lieu of Class B) cement content or Minor Concrete 550 lbs cement content as stated in 2006 Caltrans Standards. Also, the City of Murrieta requires 560-C-3250 in their standards. What is the correct cement content required for Minor Concrete, per the bid schedule: 463 lbs, 505 lbs, 550 lbs, or 560 lbs?
	Response	See Addendum No. 5 regarding cement content requirements for different concrete items.
103	Question	There is a bid item for plant establishment in the bid form. There are no new planting areas. Can you please clarify this bid item? Is this to be the same as the maintenance for the hydroseeded areas? Please advise.
	Response	The plant establishment in the bid form is for the maintenance of the hydroseeded areas. There are no planting areas other than the hydroseeding.
104	Question	Reference the County's response to question 54 issued under Addendum 3. The response only partially answered the question. Is the Contractor allowed to divert the creek (in the center of Span 2) in culvert pipes and place fill materials in the existing creek location? If yes, what size culvert pipes are required? Are there any fill requirements ie crushed rock, sand, etc.? Does the USACE 404 and WQC 401 allow for diversion of the creek and placement of temporary culverts and clean rock (or sand) within Warm Springs Creek?
	Response	Warm Springs Creek cannot be diverted from its existing location, culverts can be placed in the creek for crossing of equipment and fill material can be placed in the creek during construction as long as it doesn't divert the flow of the creek. Warm Springs Creek must be regraded to existing contours upon completion of the project. Culvert sizes would be determined by contractor.
105	Question	Are there any Tier/CARB requirements for the heavy equipment intended for use on this Project?
	Response	There are CARB requirements per 2010 Caltrans Standard Specs 7-1.02C. No special requirements intended for this project.
106	Question	Reference the County's response to question 50 issues under Addendum 3. Since both the Roadway Excavation and Rock Excavation (controlled blasting) are both Final Pay, how will the County measure and pay for these items? If the Contractor encounters more rock, will the payment be adjusted accordingly? Conversely, if less rock is encountered will the payment be adjusted accordingly? Making these items Final Pay leads the Contractor to believe that this is the final payment amount for these items regardless of the conditions encountered.
	Response	Roadway Excavation remains as a Final Pay item, and Rock Excavation is modified in Addendum No. 5 as a No Final Pay item. The quantity of Rock Excavation, if encountered during construction, will be determined during construction.
107	Question	Per Addendum #3 - Attachment "C" Contractors question: Q/A #43: Please clarify, temporary fence is to be constructed using concrete footing and new materials (i.e. posts and chain link fabric) instead of used steel posts driving into the ground without concrete footing.
	Response	Yes, this is correct, the temporary fence is to be constructed using concrete footing and new materials because of the duration the temporary fence will be in place.

CONTRACTOR QUESTIONS AND RESPONSES		
108	Question	Per Addendum #3 - Attachment "C" Contractors question: Q/A #56: Please confirm, 11 gauge galvanized chain link fabric to be used rather than woven wire mesh.
	Response	The fence is 3/8" mesh chain link fence fabric, 11-gage.
109	Question	How are the RCP riser/skylights and the connections on the 36" RCP wildlife undercrossings to be paid for? There is no item for RCP riser and we are not able to find anything in the special provisions that addresses this.
	Response	Refer to Special Provisions, Section 51-7.03D, Payment, Wildlife undercrossing skylight will be measured and paid for by the unit, determined from actual count of units installed in place, regardless of riser height.
110	Question(s)	R-Values Questions: •See Addendum No. 3, Item 8. If materials with R-value less than 40 are encountered, then how will contractor be paid to over excavate and replace this material? Where in the GDR can the contractor predict location of these areas? If required, please add an item for over excavation. •In reference to Addendum # 3, Modification to Special Provision 19-2.03C, stating that materials between 237+00 and 347+00 would be below the minimum R-Value of 40. After review of the soils reports provided, all borings (B6, B8, B12, B15, B23, B27, and B34) exceed the required minimum R-Value of 40. The low R-Values in the soils reports are outside the project limits.
	Response	The GDR covers a larger area than what the project limits of this project are. Refer to GDR 8.9.2, all R-value tests within the project limits were above 40.
111	Question	Reference Addendum #3 - Attachment "C" Contractors questions: Reference question 33, pre-splitting is a technique used when blasting very steep slopes or in very close proximity to structures but not in this application. Please confirm that it's up to the contractor to determine the means and methods of blasting
	Response	See Addendum No. 5. Rock excavation special provision has been revised. Yes, contractor to determine methods. As stated in SSP 19-4.01A, "you may use hydraulic splitters, pneumatic hammers, controlled blasting, or other roadway excavation techniques authorized to fracture rock and construct stable final rock cut faces".
112	Question	Reference Addendum #3 - Attachment "C" Contractors questions: Reference question 50, will the County be measuring rock excavation quantities? Is item Rock Excavation (controlled Blasting) subject to overrun/underrun?
	Response	See Addendum No. 5. Rock excavation special provision has been revised. Once the roadway excavation is complete, and before rock excavation efforts, the County will survey to measure the additional rock excavation needed.
113	Question	Ref: Retaining Wall 290 Per addendum #3 the structure excavation for this wall will be in rock. Will measurement and payment for the excavation be in the structure excavation or controlled blasting bid item?
	Response	Measurement and payment for the excavation is included in the structure excavation.
114	Question	It is understood that the hanger/support metal for the bridge utilities is paid for in "Miscellaneous Metal". What specification and payment covers the telecommunication, electric and fiber optic lines (conduits/expansion joints) in the bridge?
	Response	Reference Section 5-1.36D of the Special Provisions for the Utility Relocation Table. Verizon, Time Warner and SCE will be installing their own associated casings through Warm Springs Bridge. Per these special provisions, contractor needs to provide time for this to occur. The number of working days designated for each Utility Company are in the Utility Relocation Table.

Clinton Keith Road Construction Project – Phase 2
From Whitewood Road to Leon Road
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CONTRACTOR QUESTIONS AND RESPONSES		
115	Question	ITEM 103 "MISCELLANEOUS IRON & STEEL" Based on the standard weights shown on Caltrans standard plans D77A and D77B for the quantity and type of basins shown on the plans (G1, GD1, GCP inlets), the total weight does not equal the bid item quantity (weight) for either the 2-Lane option or the 4-Lane option. Are special weights being used and/or are the quantities different?
	Response	See Addendum No. 5. The quantities for Miscellaneous Iron and Steel (Item 103 2-Lane Option and Item 237 4-Lane Option) have been revised. Miscellaneous iron and steel for all inlets are based on 326 lbs for single grade and 2 times 326 lbs for GD1 double grade.
116	Question	Corrugated Steel Pipe Riser in the Detention Basin. 1. The Trash Rack debris guard is calling for #5 rebar at 6" o.c. in both directions, can 5/8" round bars (smooth) be used in lieu of the #5 rebar? 2. The Stainless Steel Wire Fabric has 6" c.c. spacing on the wire, is that correct? 3. What size of wire is to be used? 4. When securing the stainless steel wire fabric to the galvanized steel rack, can stainless steel tie wire be used instead of tack welding them together? 5. Per the elevations and notes shown on the plan, the height of this Trash Rack Screen is to be approx. 17'-0", is that correct? 6. What Bid Item number will this be paid under?
	Response	1. No, but the spacing on the #5 is changed to 12" o.c. and the vertical bars need to be embedded 24" into the anchor block. See Addendum 5, plans sheets 82 of 191 and 84 of 195 have been revised. 2. Yes 3. 0.047" diameter. Refer to Addendum No. 5 for revised plan sheets 82 of 191 (2-Lane) and 84 of 195 (4-lane), the steel wire dimension is shown. 4. No, refer to Addendum No. 5 for revised plan sheets 82 of 191 (2-Lane) and 84 of 195 (4-lane), the steel wire fabric is to be tack welded. Tie wire is not acceptable. 5. Yes 6. Refer to Addendum No. 5. Regarding payment of Debris Rack Cage/Trash Rack, it will be considered as included in the contract price paid per pound for Miscellaneous Iron and Steel.
117	Question	There are several curb opening catch basins, Type OL Inlets, what Bid Item number will these be paid under?
	Response	Refer to Section 51-7.01A of the Caltrans Standard Specs, the curb opening catch basins are paid based on cubic yards in Minor Concrete (Minor Structure).
118	Question	I was wondering if the County was going to provide construction staking for this project or will the contractor need their own surveyors?
	Response	Refer to section 00-1.20 "Survey Staking". Contractor to submit form for county construction staking. Contractor will not provide construction staking, but they may use their own for verification at their own expense.

Juan C. Perez, P.E., T.E.
Director of Transportation and Land Management

COUNTY OF RIVERSIDE
TRANSPORTATION AND LAND MANAGEMENT AGENCY

Patricia Romo, P.E.
Assistant Director of Transportation

Transportation Department

ADDENDUM NUMBER 6

Dated August 6, 2015

to the
Specifications and Contract Documents
for the construction of

Clinton Keith Road Construction Project – Phase 2
From Whitewood Road to Leon Road
In the City of Murrieta and French Valley Area
Project No. B2-04722

Bids Due: **Wednesday, August 12 2015; 2:00 p.m.**
14th Street Transportation Annex
3525 14th Street; Riverside, CA 92501
(951) 955-6780

This Addendum is issued pursuant to the Instructions to Bidders, Item No. 8, of the Contract Documents for the reference project. This Addendum is issued as a supplement to the specification and special provisions for the referenced project. The revisions to the specifications shall become a part of the Contract Documents, and each bidder shall acknowledge receipt thereof on the Bid (Proposal). Bidders are directed to sign this addendum as acknowledged, and attach the signed addendum to the contractor's submitted proposal.

Note: During the advertisement period of this project, this document and attachments (if any) are available upon request at the office of the Transportation Department, and are available as a free download at the Transportation Department's website:

http://rctlma.org/trans/Contractors-Corner/Notices-Inviting-Bids

MODIFICATIONS / CLARIFICATIONS TO SPECIAL PROVISIONS:

Item 1: **Modification to Special Provision.** Refer to modification to Section 14-2.03A, on pages 38 and 39 of the Special Provisions. Delete the last paragraph on page 38 and the first paragraph on page 39 of the Special Provisions and replace them with following paragraphs:

Contractor is advised that ground-disturbing activities within the entire project limits shall not be undertaken without the presence of an archeological monitor. ~~Ground-disturbing activities within the above identified AMA areas shall not be undertaken without the presence of both an archeological monitor and Native American monitor.~~ The Contractor shall notify the Engineer in writing at least 5 working days prior to the performance of any ground-disturbing activities to facilitate the presence of an archeological monitor and Native American monitor during ground-disturbing activities.

No construction shall occur within an AMA without the presence of an archeological monitor and Native American monitor. The Contractor shall notify the Engineer in writing at least 5 working days prior to the construction activities to facilitate the presence of an archeological monitor during construction activities. When working within an AMA designated for CA-RIV-11572 and CA-RIV-11576, the Contractor, under the direction of the engineer, shall strip away sediments in 2-4" cuts to a maximum depth of 2' or until bedrock is encountered. When working between stations 285+00 and

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286+50, within the AMA designated for CA-RIV-11575, the Contractor, under the direction of the engineer, shall strip away sediments in 2-4" cuts to a depth of 2' or until bedrock is encountered.

Contractor's attention is directed to section 19-3 of these special provisions for additional requirements for Archeological monitoring requirements during structure excavation and backfill of retaining wall no. 290.

Item 2: **Modification to Special Provision.** Refer to Modification to Section 39-6, Compensation Adjustment for Price Index Fluctuations, on pages 81 through 82 of the Special Provisions. Delete Modification to Section 39-6, and replace it with following special provisions:

Add to section 39-6:

COMPENSATION ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS:

The provisions of this section shall apply only to the following contract items:

ITEM CODE	ITEM
390129	Hot Mix Asphalt (Type C)
390132	Hot Mix Asphalt (Type A)

Asphaltic emulsion (paint binder/tack coat) shall be considered as included in the contract price paid for Hot Mix Asphalt.

Section 9-1.07, "Payment Adjustments For Price Index Fluctuations" of the State Standard Specifications is deleted and replaced with the following Special Provisions:

The compensation payable for hot mix asphalt will be increased or decreased in conformance with the provisions of this section for crude oil price fluctuations exceeding 5 percent (Iu/Ib is greater than 1.05 or less than 0.95) which occur during performance of the work.

The adjustment in compensation will be determined in conformance with the following formulae when the item of asphalt concrete hot mix are included in a monthly estimate:

A. Total monthly adjustment = Q x A

B. For an increase in crude oil price index exceeding 5 percent:

$A = [(Iu / Ib) - 1.05] \times Ib \times [1 + (T / 100)]$

C. For a decrease in crude oil price index exceeding 5 percent:

$A = [(Iu / Ib) - 0.95] \times Ib \times [1 + (T / 100)]$

D. Where:

A = Adjustment in dollars per ton of paving asphalt used to produce hot mix asphalt rounded to the nearest $0.01.

Iu = The California Statewide Crude Oil Price Index which is in effect on the first business day of the month within the pay period in which the quantity subject to adjustment was included in the estimate.

Ib = The California Statewide Crude Oil Price Index for the month in which the bid opening for the project occurred.

Q = Sum of all quantity in tons of paving asphalt (Qh + Qrap) that was used in producing the quantity of asphalt concrete shown under "This Estimate" on the monthly estimate using the amount of asphalt determined by the Engineer.

For Hot Mix Asphalt, Qh
The Engineer calculates the quantity of asphalt in HMA using the following formula:

Qh = HMATT x [Xa / (100 + Xa)]

where:
Qh = quantity in tons of asphalt used in HMA
HMATT = HMA, total tons placed
Xa = theoretical asphalt content from the job mix formula expressed as a percentage of the weight of dry aggregate

For Hot Mix Asphalt Containing Reclaimed Asphalt Pavement (RAP), Qrap
The Engineer calculates the quantity of asphalt in HMA containing RAP using the following formula:

Qrap = HMATT x [Xaa / (100 + Xaa)]

where:
Xaa = Xta - [(100 - Xnew) x (Xra / 100)]

and:
Qrap = quantity in tons of asphalt used in HMA containing RAP
HMATT = HMA, total tons placed
Xaa = asphalt content of HMA adjusted to account for the asphalt content in RAP expressed as a percentage of the weight of dry aggregate
Xta = total asphalt content of HMA expressed as a percentage of the weight of dry aggregate
Xnew = theoretical percentage of new aggregate in the HMA containing RAP determined from the RAP percentage in the job mix formula
Xra = asphalt content of RAP expressed as percentage

T = Sales and use tax rate expressed as a percent currently in effect in the tax jurisdiction where the material is placed. If the tax rate information is not submitted timely, the statewide sales and use tax rate is used in the payment adjustment calculations until the tax rate information is submitted.

The adjustment in compensation will also be subject to the following:

A. The compensation adjustments provided herein will be shown separately on payment estimates. The Contractor shall be liable to the County for decreased compensation adjustments and the Department may deduct the amount thereof from moneys due or that may become due the Contractor.
B. Compensation adjustments made under this section will be taken into account in making adjustments in conformance with the provisions in Section 9-1.06, "Changed Quantity Payment Adjustment" of the Standard Specifications.
C. In the event of an overrun of contract time, adjustment in compensation for paving asphalt included in estimates during the overrun period will be determined using the California Statewide Crude Oil Price Index in effect on the first business day of the month within the pay period in which the overrun began.
D. For purposes of progress payments, the County may select to make a progress payment for COMPENSATION ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS by using the HMA contract unit price and an equivalent amount of HMA quantity to equal the determined amount of this compensation per these special provisions. HMA quantity increase/decrease amount to compensate for this index fluctuation shall not be counted as increased/decreased

quantities for standard specification Section 9-1.06, "CHANGED QUANTITY PAYMENT ADJUSTMENTS". i.e. Quantities used for Section 9-1.06 payment adjustments are for actual quantities of HMA placed.

The California Statewide Crude Oil Price Index is determined each month on or about the first business day of the month by the Department using the average of posted prices in effect as posted by Chevron, ExxonMobil, and ConocoPhillips for the Buena Vista, Huntington Beach, and Midway Sunset fields.

In the event that the companies discontinue posting their prices for a field, the Department will determine an index from the remaining posted prices. The Department reserves the right to include in the index determination the posted prices of additional fields.

The California Statewide Crude Oil Price Index is available on the Division of Engineering Services website at: http://www.dot.ca.gov/hq/construc/crudeoilindex/

Item 3: **Modification to Special Provision.** Refer to Section 78, Solar Lighting, on pages 96 through 102 of the Special Provisions. Delete Section 78, and replace it with following special provisions:

Replace Reserved with the following:

78 SOLAR LIGHTING

78 SOLAR LIGHTING
78-1.01A SUMMARY
Section 78-1 includes general specifications for furnishing and installing Solar Lighting Systems, consisting of solar lighting luminaires~~luminaries~~, controllers, conduits, back up systems and associated items as shown on plans and in conformance with these Special Provisions. The primary purpose of the solar lighting system is to provide safety lighting~~s~~ on ~~Clinton Keith Road~~, Warm Springs Creek Bridge and the Wildlife Overcrossing Structure~~s~~. The project conditions are:

1. Ambient temperature: -5° to 45° C.
2. Relative humidity: 0 to 100%.
3. Pole and all coupling components exceed maximum specified EPA ratings required for local wind loading conditions.
4. Photo Voltaic Panel rated to withstand hailstone impact described in ASTM E1038-93 and surface Cut Susceptibility tests (UL 1703-24).

A reference to a specific brand or trade name establishes a quality standard and is not intended to limit competition. You may use a product that is equal to or better than the specified brand or trade name if authorized.

78-1.01B SUBMITTALS
Submit substitutions for specific brand or trade name in compliance with section 6-3.02 of the Standard Specifications.

Submit a certificate of compliance for Solar Lighting.

Certificate of Compliance must be in conformance with the provisions in Section 6-3.05E, "Certificates of Compliance," of the Standard Specifications.

Regulatory Requirements: Solar light system meets ~~of~~ or exceeds NEC 2011 code requirements.

Product Data: Catalog cut sheets with performance specifications demonstrating compliance with specified requirements.

Submit IES electronic files of lamp output or Photometric plots on a surface from a defined lamp height ~~complinat~~ compliant with IES LM-79.

Submit calculations of effective Projected Area (EPA) and weight of the solar lighting system, and EPA rating of the pole.

Submit information for days of the battery back-up be based on an assumption of no sun and battery cycle life taking into account temperature impact on cycle life.

Submit PV sizing based on worst-case average insolation data from an accredited source (e.g. NREL TMY2), with an additional safety factor to account for worst-case conditions. Consideration given for temperature, PV obstruction and other obstructions.

Submit a series of photograph for the lighting systems.

Wiring diagrams.

Installation instructions.

78-1.01C QUALITY CONTROL AND ASSURANCE
Manufacturer of solar lighting system must be registered to ISO 9001:2008 Quality Standards.

Manufacturer shall possess a minimum of 20 years' experience in manufacturing solar powered lighting systems.

78-1.01C(2) Warranty
Provide manufacturer's warranty covering 5 years on solar lighting system from date of purchase.

Solar Voltaic Panel covered for 20 years.

Mounting hardware, arms & brackets covered for a minimum of 20 years.

Pole and associated components covered by original manufacturer's warranties.

LED light engine, lamps and fixtures covered for a minimum of 10 years.

Wire harnessing, connectors and terminals covered for a minimum of 10 years.

Electronics: LED driver, charge controller, communications covered for a minimum of 10 years.

Batteries have a limited warranty with a replacement cost credit for up to 5 years with the following minimum coverage: 100% credit for the first 2 years, 60% credit for year 3, 40% coverage for year 2 and 20% credit for year 5.

78-1.02 MATERIALS
78-1.02A Manufacturer
The solar lighting system must be a solar lighting system manufactured by Sepco Solar Electric Power Co, or approved equal. Sepco Solar Electric Power Co. is located in Stuart, Florida, and must include items detailed for solar lighting system shown on the plans. The Sepco solar lighting system can be obtained from the distributor, OCS Lighting and Control, Inc. 5797 Chesapeake Ct., Suite 200, San Diego, CA 92123, telephone (858) 514-4000

78-1.02B General
Solar Powered Light System consists of eight (8) components and assemblies: (1) Photovoltaic (PV) Module(s) and mounting structure, (2) Charge Controller/LED Driver, (3) LED Luminaire, (4) Battery(ies), (5) Battery Enclosure, (6) Quick Connect Wire Harnessing with Fuse, (7) Pole and (8) Arm.

1. Photovoltaic (PV) Module
   a) Construction:
      1) Crystalline silicon solar cells
      2) Framed in an all-aluminum structure
      3) Sealed behind UV stabilized tempered glass
      4) Covered by a 20 year power warranty
      5) RoHS compliant
      6) Harnessing and cabling is 12 AWG THHN stranded wire with over molded insulation with UV stabilized polymer rated for exterior usage
      7) Photo Voltaic Panel rated to withstand AASHTO ~~150~~ 100 mph wind force ratings.

8) Supplemental PV 1/8" aluminum panel pan backer color matched to solar light system
9) Water-tight wire junction box on PV module

b) Performance:
1) PV generates adequate power to fully recharge system batteries within three (3) days at the installation location given that minimum insolation is available on those days as defined by NREL (National Renewable Energy Laboratories).
2) PV electrical junction box and connectors (MC4 type) are sealed per IP 65.
3) PV is fastened to support system.

2. Charge Controller/LED Driver
a) Construction:
1) Enclosed within the light system with touch-proof covers to prevent damage
2) Fully resin potted design and suitable for wet locations.
3) The device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.
4) Approved by a Nationally Recognized Testing Laboratory - TÜV listed to UL 60950-
5) 1:2007 and CSA C22.2.60950-1:2007.
6) Charge controller/ LED driver is designed without electrolytic capacitors.
7) All other capacitor devices are de-rated by at least 20° C below the capacitor's maximum temperature rating under fully-loaded conditions and ambient temperature of 30° C.
8) LED driver must be integrated with the solar charge controller as one unit.
9) Charge controller/ LED driver must be capable of controlling and dimming one or two outdoor LED light systems.
10) Complies with FCC part 15 noise threshold requirements
11) Ten day/night memory averaging to ensure accurate turn on and turn off lights to prevent false response due to weather variations.
12) Over Voltage Protection.
13) LED Short Circuit Protection.
14) Internal PV Disconnect (no external Diodes required).
15) Test button and diagnostic LEDs.
16) Self Test mode.
17) Reverse battery polarity protection.
18) Self calibrating load, timing, and charging circuitry.
19) Minimum 10 year operational life when operating at minimum or maximum rated system environmental specifications (10° C to 50° C at 0 – 100% relative humidity, non-condensing).
20) Designed and tested to withstand electrostatic discharges up to 15,000 V without impairment per IEC 801-2.
21) Withstand up to a 6,000 Volt surge without impairment of performance as defined by ANSI C62.41 Category A.
22) Manufactured in a facility that employ ESD reduction practices in compliance with ANSI/ESD S20.20.
23) Connects to all system components via a quick-connect – latching connector.

b) Performance
1) Operates in the following mode:
a) Dusk to Dawn
b) Programmed Run – Light operates dawn to dusk
2) Perform Power Management to increase a system's run-time even with inclement weather conditions.
3) Charge Controller operates with temperature compensated limits ensuring battery charging algorithm protects battery (ies) from over and under voltage stress
a) Charge controller adapts maximum (charged) voltage based on temperature (14V maximum at 21° C).

b) Charge controller prevents discharge below temperature compensated battery Low Voltage Disconnect (LVD) limit (11.5V at 21° C)

4) Operate the light for a minimum of at least six (6) nights without adequate insolation during the day to charge the batteries.
5) Charge controller never discharges more than 20% depth of discharge per night.
6) Charge Controller differentiates between actual sunlight and solar panel illumination from the system's own LED light.

3. LED Luminaire

a) Construction:
1) Cobrahead style mounted on pole. Endura fixtures for Wildlife Overcrossing.
2) UV stabilized powder coated.
3) IP 65 sealed and rain-proof LED chamber.
4) Wet location listed.
5) Tilt from 0 to 15 degrees above horizontal for better light dispersion
6) Designed and factory-installed LED light source only.

b) Performance:
1) LED source designed for 65,000 hour performance with over 70% initial lumen maintenance.
2) LED chamber of the luminaire provides IP65 protection.
3) Use of reflectors or lenses to produce high efficacy lighting patterns.
4) Available in Type II, or Type V photometric distribution.
5) Pole spacing as shown on plans
6) Luminaire shall operate at range of 30 to 45VDC (varies with driver).
7) LED junction temperature does not exceed 100 °C in worst-case site temperature conditions
8) High brightness LEDs only rated at a typical minimum of 85 lumens/watt by manufacturer~~).~~ 5 mm type LEDs are not acceptable.
9) Bright white LEDs with a color temperature no greater than 5100K or less than 3,500K.
10) Manufacturer provides relevant .IES files to indicate light dispersion and intensity of LED source.
11) IES file is measured using the IESNA LM-79 testing method for LED luminaires by a laboratory approved by the US DOE's CALiPER program. Scaled photometric testing files are not acceptable.
12) Option to add motion detector to adjust lighting between peak and off peak levels for defined periods of time.
13) Integrated luminaire shield mounting bosses for house, left and right side, and front side shields.
14) <u>Wattage shall meet or exceed requirements shown on the plans.</u>

4. Batteries

a) Construction:
1) Sealed valve regulated Gel cell type.
2) Maintenance free.
3) Air shippable.
4) Battery shall be rated "non-spillable" by ICAO/IATA/DOT.
5) 100% recyclable.
6) Battery must be built to comply with IEC 896-2, DIN 43534, BS 6290 Pt4, and Eurobat.

b) Performance
1) Capable of over 2000 cycles.
2) Deep cycle technology.
3) Maintains over 80% of charge after 2 months if left disconnected.
4) Batteries should provide no less than 6 days of back up in no-sun conditions.

5) Warranted for a minimum of two (2) years, and an additional pro-rated warranty to cover five (5) years.

5. Battery Enclosure

a) Construction:
1) All aluminum vented enclosure.
2) Aluminum doors and body powder coated to match the system color.
3) If Manufacturer designs battery enclosure to be installed below the solar panels on the panel support structure, provide ~~with~~ a minimum 4" of air-barrier to prevent overheating.
4) NEMA 3R rated.
5) Holds up to 4 large-size (250 Ah) batteries or approved equal.
6) All battery wire terminals and harnessing connect via quick-connect type with keyed connections to prevent miswiring.
7) ~~Most feature~~ Hinged front cover and optional additional locking device.

b) Performance:
1) Access provided for battery service via two (2) bolts for hinged covers or four (2) bolts for non-hinged covers.
2) Wire harness is 12AWG THHN wire and finished to prevent accidental shorts.
3) Terminal covers, ring washers, terminals, etc. are non-corrosive non-rusting.

6. Wire Harnessing & Fuse

a) Wire Harnesses Construction
1) All UV stabilized jacketed wiring and connectors.
2) Quick disconnect connector plugs have latch to ensure secure connection.
3) Provided with in-line fuse and holder in water tight enclosures.
4) Provided in variable lengths to eliminate all field wiring.
5) Color coded connectors make circuit purpose identification simple.
6) Individually matched quick disconnect plugs for battery, PV and luminaire to charge controller/LED driver.

b) Wire Harness Performance:
1) Sealed gasketed connectors prevent dust intrusion IP 66.
2) All wire gauges exceed NEC 2009 wire gauge and maximum current draw by 25%.

7. Solar Lighting Pole, PV Structure

a) Pole Type:
Luminaire poles on Warm Springs Creek Bridge shall be Caltrans Type 15 at the locations shown on the plans. Contractor shall furnish the poles in accordance with section 86-2. Poles furnished for the other PV Structure shall comply with the manufacturer specifications and be designed to meet the following requirements. Submit shop drawings and a certificate of compliance for the Engineer's approval prior to furnishing the poles.

b) Pole Construction:
1) All aluminum ~~extruded 8" diameter~~ pole with integrated installation channels with bolt down base.
2) Captured bolt-head pole design eliminates pole through-drilling for luminaire mounting.
3) Stainless steel or zinc plated steel hardware for rust-proof and corrosion resistant mounting equipment.
4) Factory supplied with powder coating to match luminaire and battery enclosure precisely.
~~5) Provided with 3.5" aluminum alloy tenon to support direct mounting of the PV array and battery box.~~
5) Pole meets ANSI C136.36A-2010, for Roadway and Area Lighting Equipment- Aluminum Lighting Poles.

c) Pole Performance AASHTO (~~150~~ 100 mph wind zone):

1) ~~Maximum EPA of 13 square feet (20 foot pole).~~ EPA as required to meet lighting requirements as specified by the manufacturer for the PV structure.
2) ~~Maximum Weight of 190 lbs (incl. base and tenon) and 500 lbs (entire solar light system).~~
3) Independently verified pole strength and base details by licensed Professional Engineer and Test Lab.

d) PV Support Structure Construction
1) Extruded high strength Aluminum alloy body.
2) Powder coated to match the battery box and luminaire color.

e) PV Support Structure Performance:
1) Supports ~~up to 3~~ PV modules as specified by manufacturer for up to ~~150~~ 100 mph wind zone.
2) Top of Pole mount provides selectable tilt options of 5, 15, 30, 45, and 60 degrees.
3) Side of Pole mount provides selectable tilt options of 15 and 45 degrees.

8. Arm Structure
a) Arm Construction:
1) 2" schedule 40 6063-T6 square aluminum tube with extruded aluminum channel.
2) Satin finish.
3) "A" Rated for corrosion resistance.
4) Universal arm manufactured to "ANSI C136.1"
b) Performance:
1) Mounts directly to pole via two (2) thru bolts.

78-1.03 Construction
Foundations for solar lighting equipment shall conform to section 86-2.03 of the Standard Specifications.

Manufacturer offers and provides pre-installation site survey to certify the proposed system locations and/or provide design assistance for locating systems for photometrics and insolation.

Manufacturer offers and provides factory-certified field service engineer to a site visit to ensure proper installation and operation under following parameters:
1. Qualifications for factory-certified field service engineer:
a) Minimum experience of 2 years training in the electrical/electronic field.
b) Certified by the equipment manufacturer on the system installed.
2. Make a visit upon completion of installation to:
a) Verify connection of system components
b) Validate performance
c) Train Department's representative on system operation and support
3. Battery Storage and Shipping
a) Battery(ies) approved for shipping via ground, air, or sea.
b) Battery(ies) retains 80% charge or higher from 2 months of shipment.
c) Battery(ies) ship sufficiently charged to operate the light 2 nights without any solar charging.
d) If storing batteries for future installation: must be stored inside above ground level or covered with tarp or other material to prevent weather damage.

The Contractor shall provide and verify measurements in the field for work fabricated to fit field conditions as required by ~~grating~~ manufacturer to complete the work.

Install equipment in accordance with manufacturer's installation instructions.

Provide complete installation of system in accordance with Contract Documents.

78-1.04 Payment
Full compensation for furnishing and installing Solar Lighting System, including all incidental tools and materials, shipping, handling of poles, lighting equipment, foundation construction, conduit

work, and electrical work shall be considered as included in the lump sum price for Solar Lighting System, and no additional compensation will be allowed therefor.

MODIFICATIONS / CLARIFICATIONS TO THE PLANS

Item 3: **Plan sheet revisions.** The following Plan sheets are revised by **Attachment "A"** and made a part hereof:

a. Delete and replace the following five *(5)* plan sheets from the 2-lane option set:

1. Plan sheet 13 of 191
2. Plan sheet 96 of 191
3. Plan sheet 120 of 191
4. Plan sheet 121 of 191
5. Plan sheet 122 of 191

b. Delete and replace the following five *(5)* plan sheets from the 4-lane option set:

1. Plan sheet 13 of 195
2. Plan sheet 98 of 195
3. Plan sheet 123 of 195
4. Plan sheet 124 of 195
5. Plan sheet 125 of 195

Note: All revised plan sheets are posted on the County website and are available for download during the advertisement period.

http://rctlma.org/trans/Contractors-Corner/Notices-Inviting-Bids

ATTACHMENTS

A – Revised Clinton Keith Road Plan Sheets
(5) Plan sheets from the 2-lane option set
(5) Plan sheets from the 4-lane option set

This addendum has been prepared under the direction of the following registered Civil Engineer(s):

Cat Vu Quach, PE

Recommended By:

John Marcinek, PE
County Project Manager

Concurrence:

for

Khalid Nasim, PE
Engineering Division Manager

Acknowledged: _____ Date: _____
(Contractor)

JRJ:jrj:rr

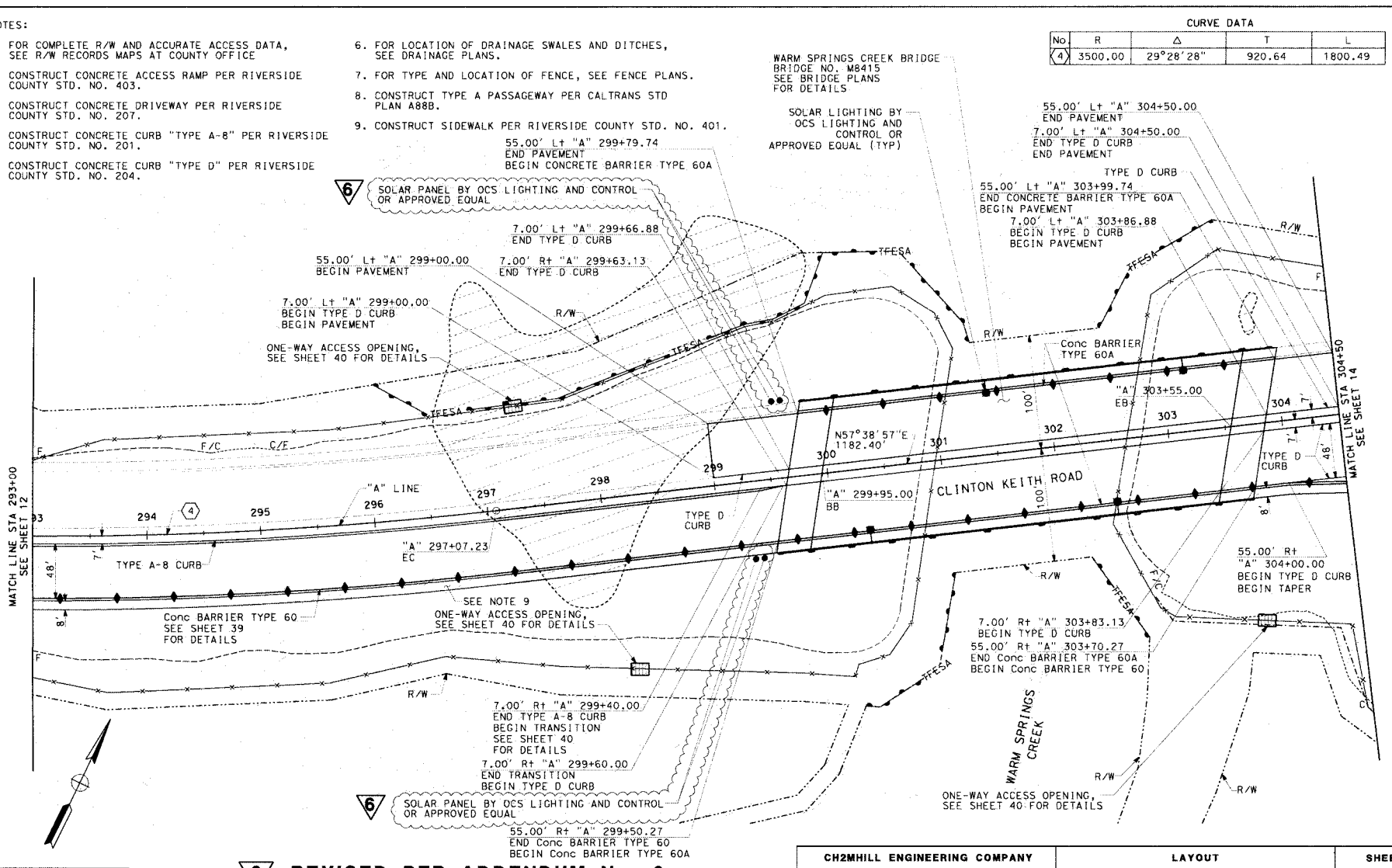
Note: Refer to Instruction to Bidders Item No. 8, "Addenda". Submission of all addendum pages and non-bidding document attachments of addendum are not necessary for Bid submittal. Submittal of this acknowledgement page is adequate for Bid reception. Bidders are reminded to list addendum number(s) received on the first page of the Bid form (Proposal).

NOTES:

1. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORDS MAPS AT COUNTY OFFICE
2. CONSTRUCT CONCRETE ACCESS RAMP PER RIVERSIDE COUNTY STD. NO. 403.
3. CONSTRUCT CONCRETE DRIVEWAY PER RIVERSIDE COUNTY STD. NO. 207.
4. CONSTRUCT CONCRETE CURB "TYPE A-8" PER RIVERSIDE COUNTY STD. NO. 201.
5. CONSTRUCT CONCRETE CURB "TYPE D" PER RIVERSIDE COUNTY STD. NO. 204.
6. FOR LOCATION OF DRAINAGE SWALES AND DITCHES, SEE DRAINAGE PLANS.
7. FOR TYPE AND LOCATION OF FENCE, SEE FENCE PLANS.
8. CONSTRUCT TYPE A PASSAGEWAY PER CALTRANS STD PLAN A88B.
9. CONSTRUCT SIDEWALK PER RIVERSIDE COUNTY STD. NO. 401.

CURVE DATA

No	R	Δ	T	L
4	3500.00	29°28'28"	920.64	1800.49



6 **REVISED PER ADDENDUM No. 6**

SCALE: 1" = 40' HOR

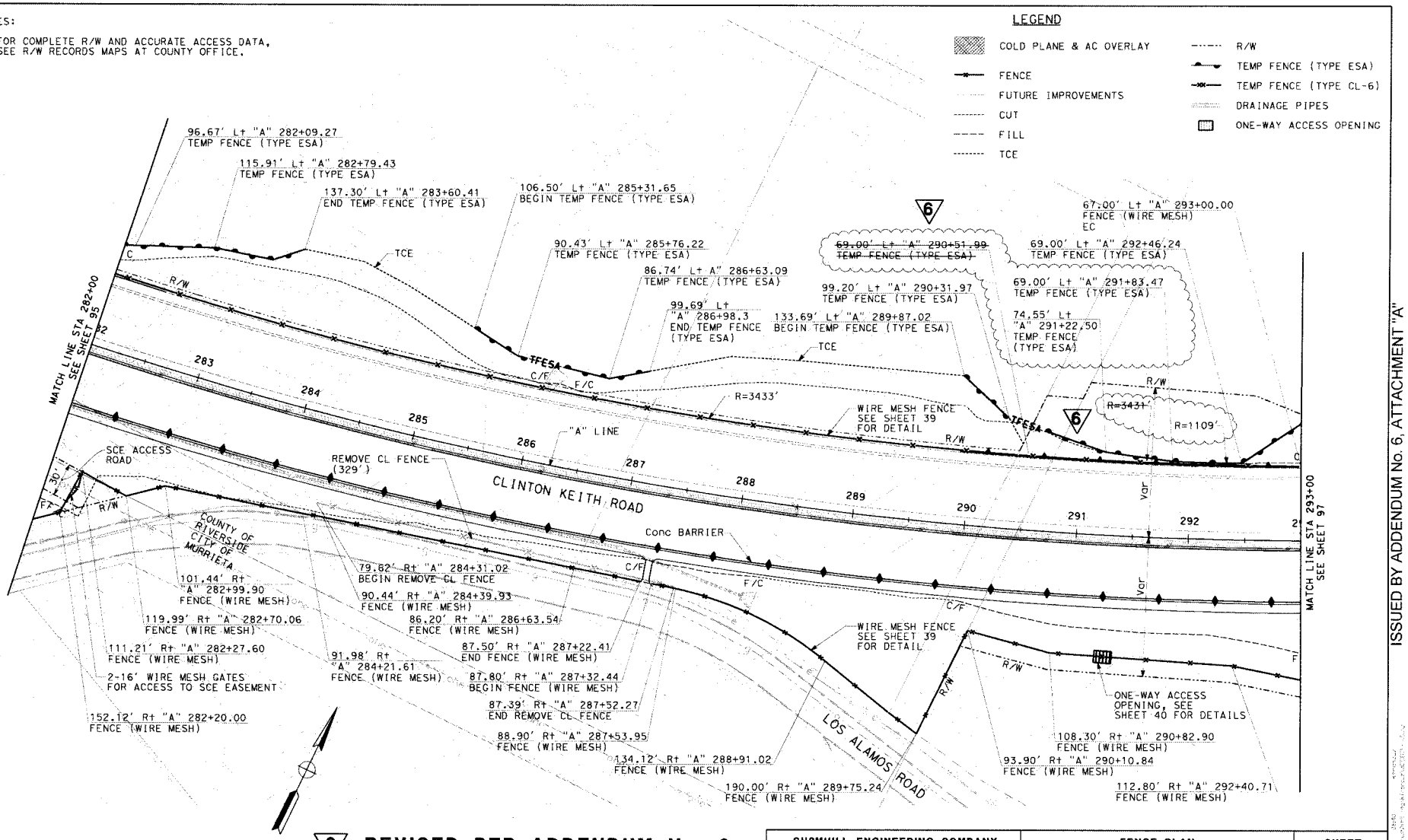
Don't Dig... Until You Call U.S.A. Toll Free 800-227-2600 for the location of buried utility lines. Don't disrupt vital services. TWO WORKING DAYS BEFORE YOU DIG

CH2MHILL ENGINEERING COMPANY	LAYOUT	SHEET
APPROVED BY: Alicia L Cannon APRIL 14, 2015 ALICIA L CANNON PROJECT MANAGER DATE	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	13 of 191
DESIGNED BY CQ / DRAWN BY KF / CHECKED BY AC	PROJECT No. B2-0472 ARCHIVE No. 962-W	

ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"

NOTES:

1. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORDS MAPS AT COUNTY OFFICE.



6 REVISED PER ADDENDUM No. 6

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Don't Dig... Until You Call U.S.A. Toll Free 800-227-2600 for the location of buried utility lines. Don't disrupt vital services. TWO WORKING DAYS BEFORE YOU DIG

CH2MHILL ENGINEERING COMPANY	FENCE PLAN	SHEET
APPROVED BY: ALICIA L CANNON C 69168 06/30/16 — ALICIA L CANNON PROJECT MANAGER — APRIL 14, 2015 DATE	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	96 of 191
DESIGNED BY CQ — DRAWN BY KF — CHECKED BY AC	PROJECT No. B2-0472 — ARCHIVE No. 962-W	

ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"

Z = Luminaire Mounting Height

Expanded Luminaire Location Summary

LumNo	Label	Z
1	Fixture C	29
2	Fixture C	29
3	Fixture C	29
4	Fixture C	29

Total Quantity: 4

Luminaire Schedule

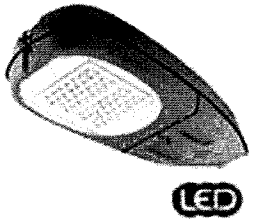
Symbol	Qty	Label	Description	Lum. Watts	Arm
	4	Fixture C	RL-60LU-5K-4 - 109 lm per watt	120	8

1521 SE Palm Court, Stuart, FL 34994
p (772) 220-6615 f (772) 220-8616

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Roadway	Illuminance	Fc	0.72	1.8	0.2	3.60	9.00
Lane 1	Illuminance	Fc	0.74	1.6	0.2	3.70	8.00
Lane 2	Illuminance	Fc	0.71	1.7	0.2	3.55	8.50

Project Fixtures



Fixture C

The calculations provided in this report are predicted lighting levels based on the above described input data and characteristics. All information should be reviewed for accuracy, understanding and agreement with all information. Any discrepancies should be noted and the preparer of this report immediately advised to clarify or change as required.
Actual lighting levels may vary from this report due to a variety of circumstances, such as: reflectances, voltage variations, objects blocking or redirecting light, different mounting heights, installation, lamp and ballast tolerances, etc. Room is considered completely empty unless noted otherwise above. Unless specifically stated otherwise, predicted foot candles are not a recommendation of lighting levels.
Solar Electric Power Company (SEPCO) assumes no responsibility for any such variances and will not be held responsible for lighting levels different from predicted levels in this report. Recipient of this report, or someone designated by recipient, must verify that lighting fixtures physically fit within the specified location(s). Catalog numbers of lighting fixtures may not be complete as all conditions may not be known.

Drawn By: Bud Straszewski
Checked By:
Date: 8/6/2015
Scale:

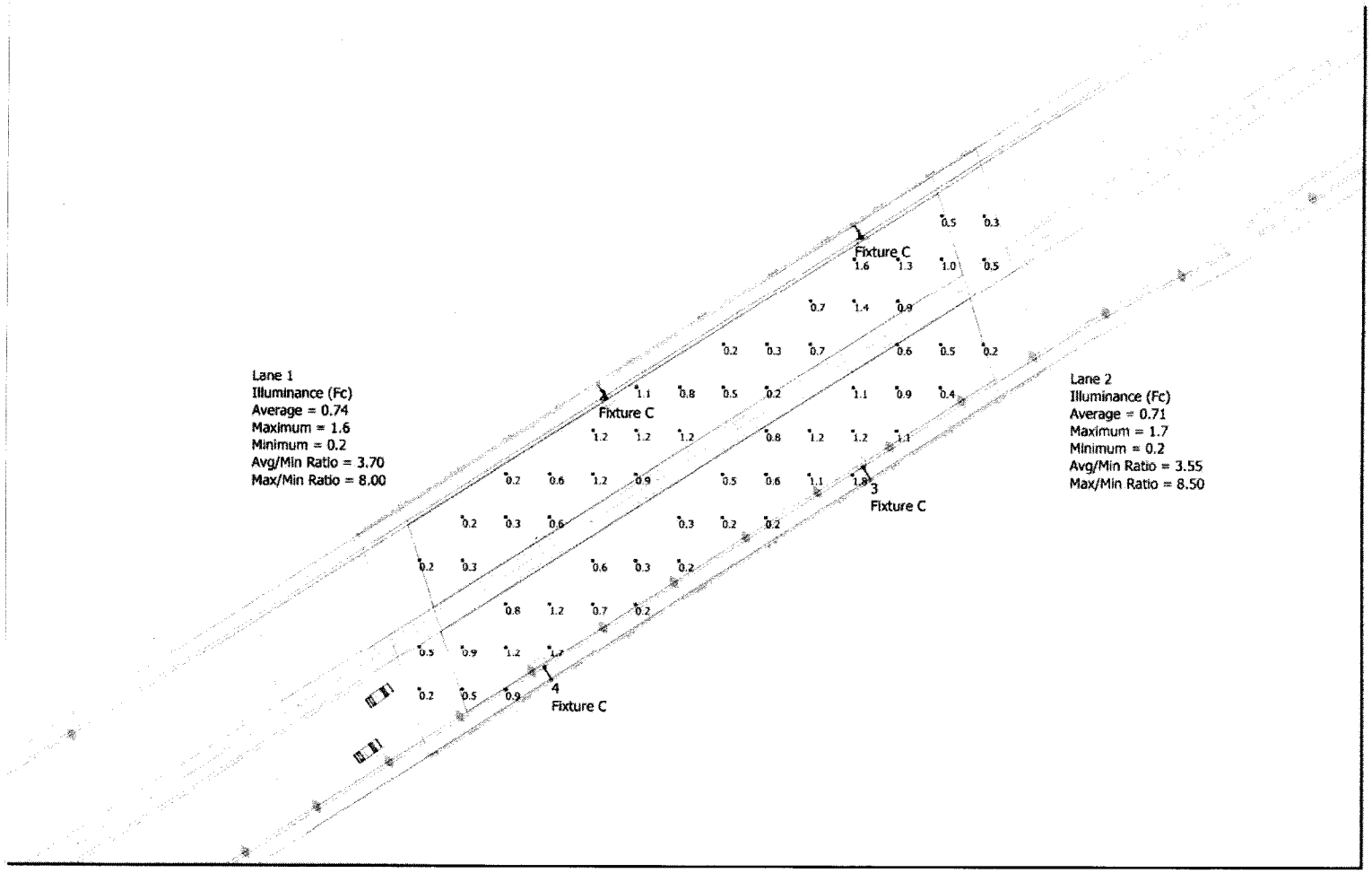
Warm Springs Creek Bridge

Page 1 of 3

ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"

6 REVISED PER ADDENDUM No. 6

CH2MHILL ENGINEERING COMPANY	SOLAR LIGHTING	SHEET
APPROVED BY: Alicia L Cannon APRIL 14, 2015 ALICIA L CANNON DATE PROJECT MANAGER ALICIA L CANNON C 69168 06/30/16 DESIGNED BY | DRAWN BY | CHECKED BY	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	120 OF 191
PROJECT No. B2-0472 ARCHIVE No.		962-W



Model Layout with 25 X 25 Calculation Grid

1521 SE Palm Court, Stuart, FL 34994
P (772) 220-6615 F (772) 220-8616

Drawn By: Bud Straszewski
Checked By:
Date: 8/6/2015
Scale:

Warm Springs
Creek Bridge

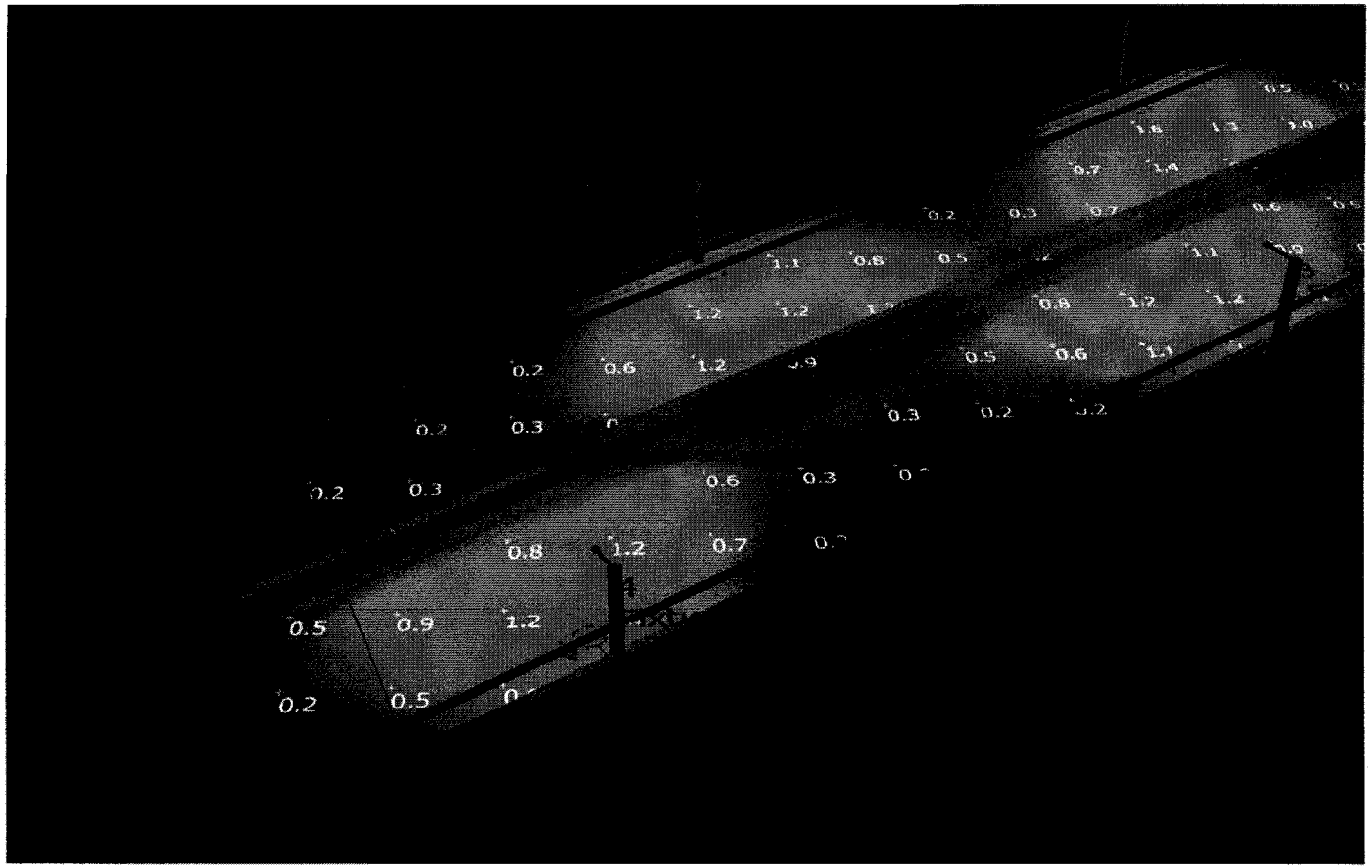
ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"

Don't Dig... Until You Call U.S.A. Toll Free
800-227-2600
for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

6 REVISED PER ADDENDUM No. 6

CH2MHILL ENGINEERING COMPANY	SOLAR LIGHTING	SHEET
APPROVED BY: ALICIA L CANNON PROJECT MANAGER — APRIL 14, 2015 DATE DESIGNED BY | DRAWN BY | CHECKED BY	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	121 of 191
PROJECT No. B2-0472	ARCHIVE No. 962-W	

Renderings



1521 SE Palm Court, Stuart, FL 34994
p (772) 220-6615 f (772) 220-6616

Revisions

Drawn By: Brad Straszewski
Checked By:
Date: 8/6/2015

Scale:

Warm Springs Creek Bridge

ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"

Don't Dig... Until You Call U.S.A. Toll Free 800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

6 REVISED PER ADDENDUM No. 6

CH2MHILL ENGINEERING COMPANY	SOLAR LIGHTING	SHEET
ALICIA L CANNON C 69158 06/30/15 — APPROVED BY: Alicia L Cannon — APRIL 14, 2015 DATE — ALICIA L CANNON PROJECT MANAGER — DESIGNED BY | DRAWN BY | CHECKED BY	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	122 of 191

PROJECT No. B2-0472 ARCHIVE No. 962-W

NOTES:

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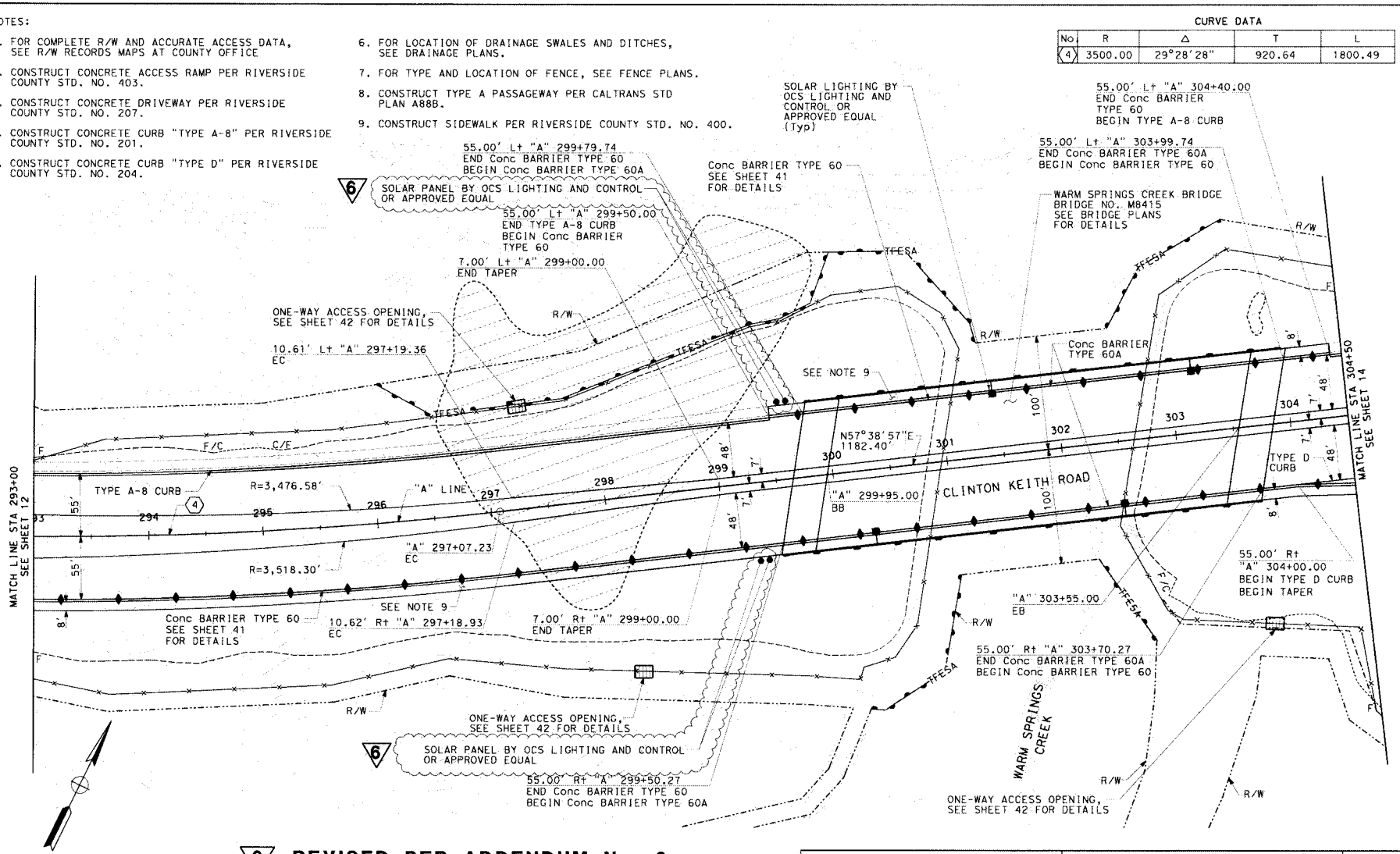
6. FOR LOCATION OF DRAINAGE SWALES AND DITCHES, SEE DRAINAGE PLANS.
7. FOR TYPE AND LOCATION OF FENCE, SEE FENCE PLANS.
8. CONSTRUCT TYPE A PASSAGEWAY PER CALTRANS STD PLAN A88B.
9. CONSTRUCT SIDEWALK PER RIVERSIDE COUNTY STD. NO. 400.

CURVE DATA

No.	R	Δ	T	L
(4)	3500.00	29°28'28"	920.64	1800.49



6 **REVISED PER ADDENDUM No. 6**

SCALE: 1" = 40' HOR

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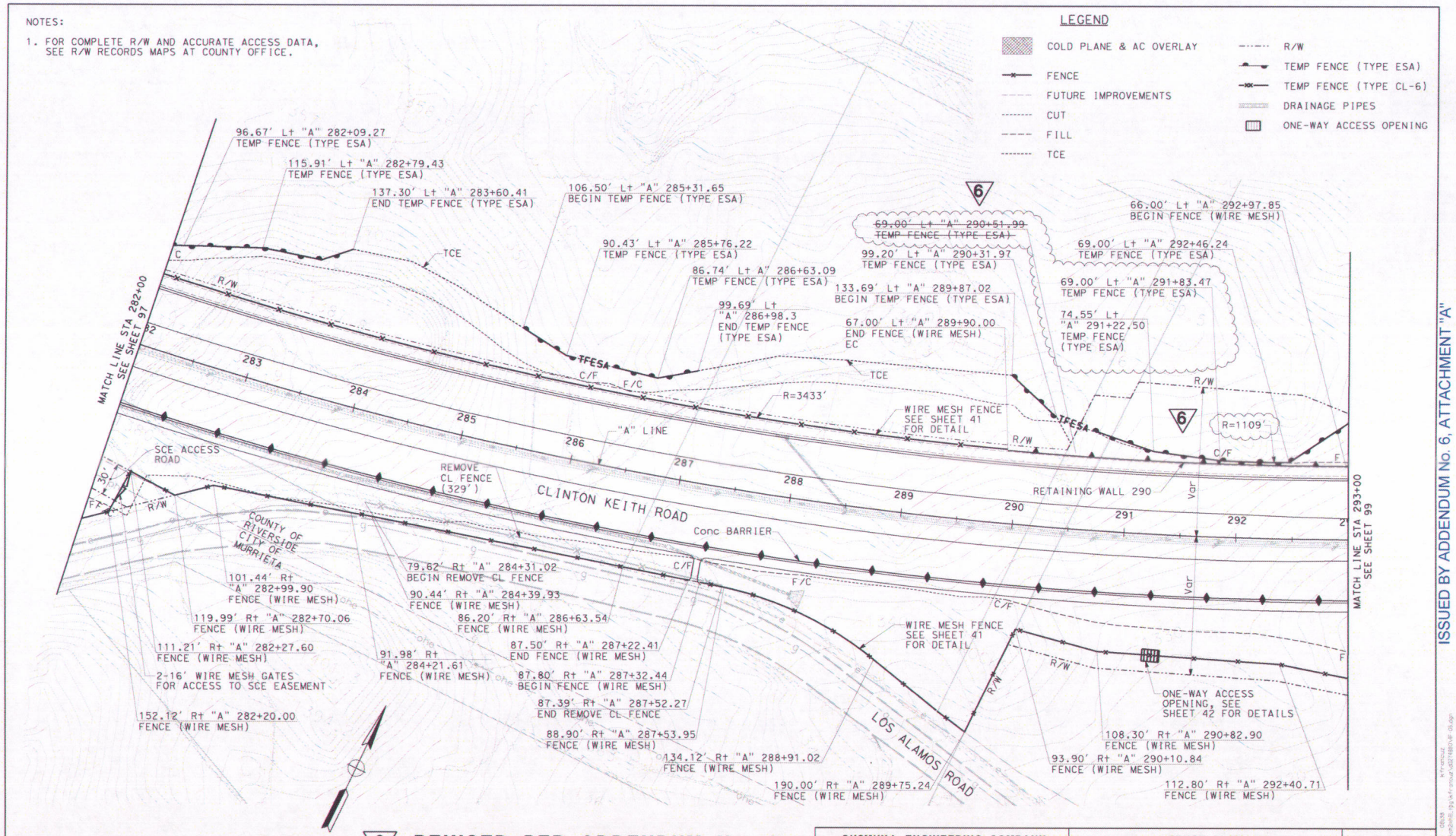
CH2MHILL ENGINEERING COMPANY	LAYOUT	SHEET
APPROVED BY: Alicia L Cannon APRIL 14, 2015 ALICIA L CANNON PROJECT MANAGER DATE	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	13 of 195
DESIGNED BY CO · DRAWN BY KF · CHECKED BY AC	PROJECT No. B2-0472 · ARCHIVE No. 962-W	

ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"


NOTES:
1. FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORDS MAPS AT COUNTY OFFICE.
LEGEND
COLD PLANE & AC OVERLAY
FENCE
FUTURE IMPROVEMENTS
CUT
FILL
TCE
R/W
TEMP FENCE (TYPE ESA)
TEMP FENCE (TYPE CL-6)
DRAINAGE PIPES
ONE-WAY ACCESS OPENING
96.67' Lt "A" 282+09.27 TEMP FENCE (TYPE ESA)
115.91' Lt "A" 282+79.43 TEMP FENCE (TYPE ESA)
137.30' Lt "A" 283+60.41 END TEMP FENCE (TYPE ESA)
106.50' Lt "A" 285+31.65 BEGIN TEMP FENCE (TYPE ESA)
90.43' Lt "A" 285+76.22 TEMP FENCE (TYPE ESA)
86.74' Lt A" 286+63.09 TEMP FENCE (TYPE ESA)
99.69' Lt "A" 286+98.3 END TEMP FENCE (TYPE ESA)
69.00' Lt "A" 290+51.99 TEMP FENCE (TYPE ESA)
99.20' Lt "A" 290+31.97 TEMP FENCE (TYPE ESA)
133.69' Lt "A" 289+87.02 BEGIN TEMP FENCE (TYPE ESA)
67.00' Lt "A" 289+90.00 END FENCE (WIRE MESH) EC
66.00' Lt "A" 292+97.85 BEGIN FENCE (WIRE MESH)
69.00' Lt "A" 292+46.24 TEMP FENCE (TYPE ESA)
69.00' Lt "A" 291+83.47 TEMP FENCE (TYPE ESA)
74.55' Lt "A" 291+22.50 TEMP FENCE (TYPE ESA)
MATCH LINE STA 282+00 SEE SHEET 97
MATCH LINE STA 293+00 SEE SHEET 99
"A" LINE
R=3433'
R=1109'
WIRE MESH FENCE SEE SHEET 41 FOR DETAIL
SCE ACCESS ROAD
REMOVE CL FENCE (329')
CLINTON KEITH ROAD
Conc BARRIER
RETAINING WALL 290
COUNTY OF RIVERSIDE
CITY OF MURRIETA
79.62' Rt "A" 284+31.02 BEGIN REMOVE CL FENCE
101.44' Rt "A" 282+99.90 FENCE (WIRE MESH)
90.44' Rt "A" 284+39.93 FENCE (WIRE MESH)
119.99' Rt "A" 282+70.06 FENCE (WIRE MESH)
86.20' Rt "A" 286+63.54 FENCE (WIRE MESH)
111.21' Rt "A" 282+27.60 FENCE (WIRE MESH)
91.98' Rt "A" 284+21.61 FENCE (WIRE MESH)
87.50' Rt "A" 287+22.41 END FENCE (WIRE MESH)
87.80' Rt "A" 287+32.44 BEGIN FENCE (WIRE MESH)
2-16' WIRE MESH GATES FOR ACCESS TO SCE EASEMENT
87.39' Rt "A" 287+52.27 END REMOVE CL FENCE
152.12' Rt "A" 282+20.00 FENCE (WIRE MESH)
88.90' Rt "A" 287+53.95 FENCE (WIRE MESH)
134.12' Rt "A" 288+91.02 FENCE (WIRE MESH)
190.00' Rt "A" 289+75.24 FENCE (WIRE MESH)
LOS ALAMOS ROAD
ONE-WAY ACCESS OPENING, SEE SHEET 42 FOR DETAILS
108.30' Rt "A" 290+82.90 FENCE (WIRE MESH)
93.90' Rt "A" 290+10.84 FENCE (WIRE MESH)
112.80' Rt "A" 292+40.71 FENCE (WIRE MESH)
6 REVISED PER ADDENDUM No. 6
SCALE: 1" = 40' HOR
Don't Dig... Until You Call U.S.A. Toll Free 800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG
CH2MHILL ENGINEERING COMPANY
APPROVED BY: Alicia L Cannon APRIL 14, 2015
ALICIA L CANNON PROJECT MANAGER
DESIGNED BY CQ DRAWN BY KP CHECKED BY AC
FENCE PLAN
CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD
SHEET 98 OF 195
PROJECT No. B2-0472 ARCHIVE No. 962-W
ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"

Z = Luminaire Mounting Height

Expanded Luminaire Location Summary		
LumNo	Label	Z
1	Fixture C	29
2	Fixture C	29
3	Fixture C	29
4	Fixture C	29
Total Quantity: 4		

Luminaire Schedule					
Symbol	Qty	Label	Description	Lum. Watts	Arm
	4	Fixture C	RL-60LU-5K-4 - 109 lm per watt	120	8

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Roadway	Illuminance	Fc	0.72	1.8	0.2	3.60	9.00
Lane 1	Illuminance	Fc	0.74	1.6	0.2	3.70	8.00
Lane 2	Illuminance	Fc	0.71	1.7	0.2	3.55	8.50

Project Fixtures

Fixture C

The calculations provided in this report are predicted lighting levels based on the above described input data and characteristics. All information should be reviewed for accuracy, understanding and agreement with all information. Any discrepancies should be noted and the preparer of this report immediately advised to clarify or change as required.
Actual lighting levels may vary from this report due to a variety of circumstances, such as: reflectances, voltage variations, objects blocking or redirecting light, different mounting heights, installation, lamp and ballast tolerances, etc. Room is considered completely empty unless noted otherwise above. Unless specifically stated otherwise, predicted foot candles are not a recommendation of lighting levels.
Solar Electric Power Company (SEPCO) assumes no responsibility for any such variances and will not be held responsible for lighting levels different from predicted levels in this report. Recipient of this report, or someone designated by recipient, must verify that lighting fixtures physically fit within the specified location(s). Catalog numbers of lighting fixtures may not be complete as all conditions may not be known.

SEPCO
1521 SE Palm Court, Stuart, FL 34994
p (772) 220-6615 f (772) 220-8616

Revisions

Date	Comments

Drawn By: Bud Strasiewski
Checked By:
Date: 8/6/2015
Scale:

Warm Springs Creek Bridge

Page 1 of 3

ISSUED BY ADDENDUM No. 6, ATTACHMENT "A"

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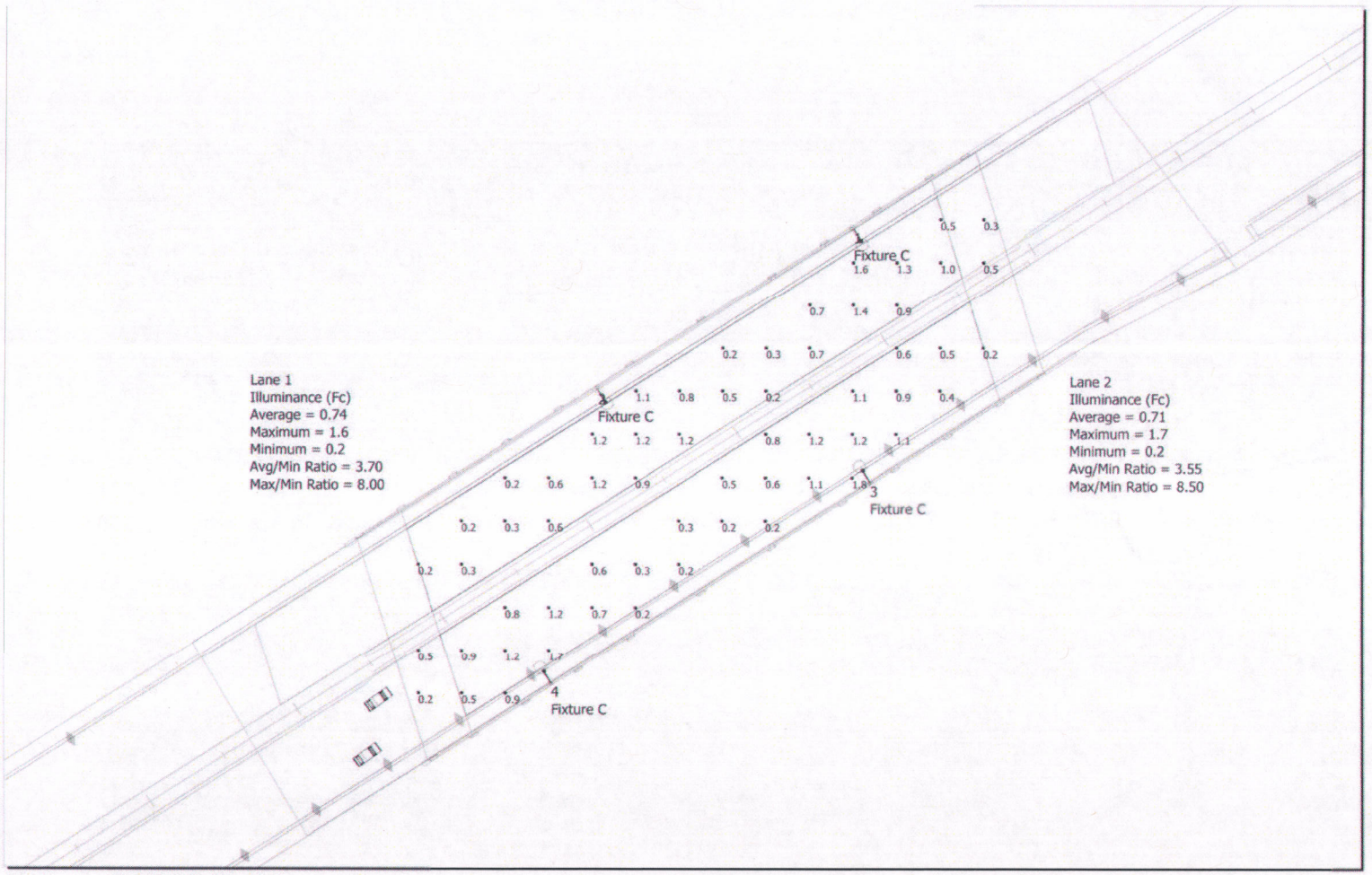
TWO WORKING DAYS BEFORE YOU DIG

6 REVISED PER ADDENDUM No. 6

CH2MHILL ENGINEERING COMPANY	SOLAR LIGHTING	SHEET
APPROVED BY: ALICIA L CANNON, No. C 69168, 06/30/16, STATE OF FLORIDA ALICIA L CANNON, PROJECT MANAGER — APRIL 14, 2015 DATE DESIGNED BY | DRAWN BY | CHECKED BY	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	123 OF 195

PROJECT No. B2-0472 ARCHIVE No. 962-W



Model Layout with 25 X 25 Calculation Grid

SERCO
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p (772) 220-6615 f (772) 220-6616

Revisions

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Page 2 of 3

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6 REVISED PER ADDENDUM No. 6

CH2MHILL ENGINEERING COMPANY

ALICIA L CANNON No. C 69168 06/30/16

APPROVED BY: Alicia L Cannon APRIL 14, 2015
ALICIA L CANNON DATE
PROJECT MANAGER

DESIGNED BY	DRAWN BY	CHECKED BY

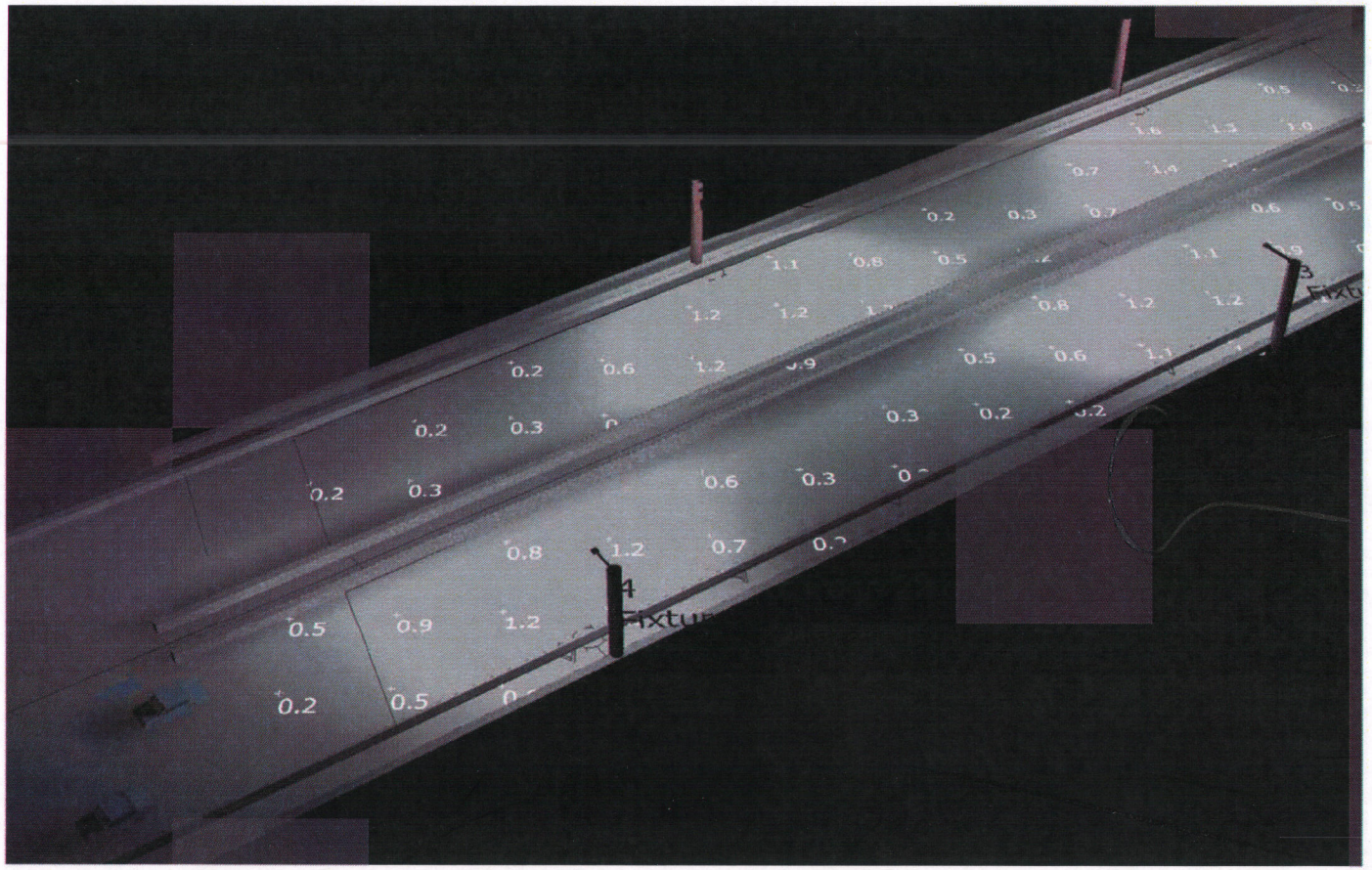
SOLAR LIGHTING

CLINTON KEITH ROAD
FROM
WHITEWOOD ROAD TO LEON ROAD

SHEET 124 OF 195

PROJECT No. B2-0472 ARCHIVE No. 962-W

Renderings



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Revisions

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Page 3 of 3

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6 REVISED PER ADDENDUM No. 6

CH2MHILL ENGINEERING COMPANY	SOLAR LIGHTING	SHEET
APPROVED BY: ALICIA L CANNON, C 69168, 06/30/16 — ALICIA L CANNON PROJECT MANAGER — APRIL 14, 2015 DATE	CLINTON KEITH ROAD FROM WHITEWOOD ROAD TO LEON ROAD	125 OF 195
DESIGNED BY / DRAWN BY / CHECKED BY	PROJECT No. B2-0472 ARCHIVE No. 962-W	