

Change Requested by: Engineer Contractor

CCO No.	Suppl. No.	Contract No.	Contract Name	Federal Number(s)
3		PW 09 - 30446	Durock Road and Business Park Drive, Traffic Signal and Intersection Widening	None

To Doug Veerkamp, Inc.

Contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract.

NOTE: This change order must be approved by the Board of Supervisors. Yes No

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Where the Engineer determines that the subgrade for the work on this contract is unsuitable, the Contractor will be directed to perform the work per the Geotechnical Memorandum dated November 18, 2010, Option 2, by Chris Trumbull (Attachment A). Additionally, the Engineer may direct the Contractor to modify the dig out depth or Geogrid placement based on actual field conditions.

Estimate of Increase in Contract Items at Contract Item Prices

For the work of removing unsuitable soils, the contractor will be paid per Bid Item #26, Roadway Excavation.

Item #26 Roadway Excavation
 318.00 CY (+23%) @ \$41/CY = \$13,038.00 (+23%)

Extra Work at Force Account

For providing and placing Geogrid per the Geotechnical Memorandum, and providing Aggregate Base (AB) delivered with end dumps and placing AB over the dig out area as directed by the Engineer, the Contractor will be paid Extra Work at Force Account in accordance with Section 9-1.03, "Force Account Payment," of the Standard Specifications.

Estimated Increase \$30,962.00

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with the Standard Specifications, Section 8-1.07.

All work is shall be performed in accordance with the Plans, Special Provisions, Standard Specifications, this change order, and as directed by the Engineer.

Estimated Cost: Decrease Increase \$ 44,000.00

By reason of this order the time of completion will be adjusted as follows: Zero (0) Contract Working Days

Submitted by	Signature	(Print name & title)	Date
		Greg P. Zeiss, P.E., Resident Engineer (HDR)	1/27/11
Approved:		Steven K Payne P.E., Supervising Civil Engineer	1/31/2011
Approved:		Robert Slater, P.E., Asst. Director of Transportation	2/1/2011
Approved:		James W. Ware, P.E., Director of Transportation	2/2/11

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefore the prices shown above. The prices and terms of payment shown above comprise full and final compensation for all direct costs, indirect costs, cumulative costs, and all overhead costs incurred as a result of this contract change order. NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specification as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by	Signature	(Print name & title)	Date
		Douglas B. Veerkamp, President	1/24/11

09-09524A 1/20/11

**EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION
CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 1-19-11

TO: James W. Ware, P.E. Director of Transportation		FILE: Project name: Durock Road & Business Park Drive, Traffic Signal & Intersection Widening
FROM: Greg Zeiss, P.E. Resident Engineer		Contract No. PW 09-30446 Caltrans EA. None Federal No. None
CCO NO. 3	SUPPLEMENT NO.	CATEGORY CODE
CONTINGENCY BALANCE (including this change) \$69,000.00		
\$44,000.00 INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>		BOS APPROVAL REQUIRED? (if > \$48,491.00) YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

Change Required: This contract change order provides for the removal of unsuitable sub grade on the exposed contract work on Durock Road from Business Park Drive and east to Sta 475+50 (See Exhibit A). Note that as stage construction progresses, more unsuitable material could be found. The intent of this change order is to pay for the remediation of unsuitable sub grade that we have exposed to date in Stage 1.

During removal of the existing roadway, the Resident Engineer noted pumping over a significant portion of the newly exposed sub grade on eastern Durock Road when proof-rolled by a loader. A Geotechnical Engineer reviewed the area and recommended (See Attachment A) two options for remediation. The first option was to over excavate 18" below sub grade, place stabilization fabric (Mirafi 600x or similar), and backfill to design sub grade with aggregate base. The second option was to over excavate 9" below sub grade, place geogrid (Tensar BX1200 or equivalent), and backfill with aggregate base to design sub grade.

Option 2 was calculated to be the most cost effective because the cost for Roadway Excavation and Aggregate Base (AB) outweighed the cost difference between the geogrid and the fabric. From a technical perspective, Tensar Biaxial (BX) Geogrids use polypropylene or copolymers that resist high, short-term dynamic loads or moderate loads over longer time periods. Their single layer open aperture structures interlock with natural fill materials. Placing the geogrid on top of weak soil and aggregate fill results in reduced dig-out depths, backfilling, and disposal costs. As a value analysis, Tensar BX Geogrids provide thinner reinforced aggregate fill with the same bearing capacity and serviceability as thicker unreinforced fill. Note that we did consider the option of cement or lime of treating the soil. Based on our experience, cement/lime treating is not cost effective until you have an unsuitable material area over 3,500 SY.

The Engineer and the Contractor could not agree on the price of AB, as the Contractor wanted to charge \$70.5/CY, which was a 50% increase over the Bid Item price for AB of \$47/CY. The contractor argued that the cost of end dumping the AB, as opposed to bottom dumping the AB, increases his cost by 50%. While the Engineer agrees that there is an increased cost with end dumping the AB, he does not believe that it is in the magnitude of a 50% increase (\$7.4K net increase) over bid prices. A benefit to have a force account payment mechanism in the CCO provides the Engineer room to modify the subgrade remediation should site conditions vary.

This Roadway Excavation work will be done by increasing the appropriate contract items at contract prices for an increase of \$13,038.00. The remainder of this work will be done under Extra Work at Force Account for an estimated cost of \$30,962.00, which can be financed from the contingency funds.

Adjustment of contract time is deferred pending the completion of the specified work as it may become the controlling operation.

Approval of this contract change order is recommended by the Resident Engineer.

CONCURRED BY:	DATE	ESTIMATE OF COST	
SUPERVISING CIVIL ENGINEER Chuck Pazzi, P.E.	<i>C Pazzi</i> 1/19/11	THIS REQUEST	TOTAL
SUPERVISING CIVIL ENGINEER Steven K. Payne, P.E.	<i>S Payne</i> 1/19/11	CONTRACT ITEMS	13,038.00
ASSISTANT DIRECTOR OF TRANSPORTATION Robert Slater, P.E.	<i>R Slater</i> 1/30/11	AGREED PRICE	
DIRECTOR OF TRANSPORTATION James W. Ware, P.E.	<i>J Ware</i> 2/2/11	EW @ FA	30,962.00
		TOTAL	\$44,000.00
PRIOR APPROVAL BY (DATE)		[] CCO FUNDED PER CONTRACT State 50% - EDC 50%	
		[] CCO FUNDED AS FOLLOWS	
		FEDERAL FUNDING SOURCE None	PERCENT

RESIDENT ENGINEER'S
SIGNATURE:

Greg Zeiss 1/19/2011

09-0952.4A.2

Memorandum

Subject:	Unstable Subgrade	Date:	November 18, 2010
Client:	County of El Dorado		
Project:	Durock Road	Project No:	151097
By:	Christopher D. Trumbull, P.E., G.E.		

A site visit was conducted on November 16, 2010 to observe the reported unstable subgrade along the east end (northern half) of the Durock Road project. Upon arrival, the existing road material had been removed and the roadway was graded to the approximate subgrade level. The southern half of the roadway was occupied by the existing section. The subgrade was proof-rolled with a large CAT rubber-tired loader with the front bucket full of soil. During proof-rolling, the subgrade was unstable and yielding, with deflection on the order of one inch. The subgrade should be stabilized prior to placement of the design roadway section.

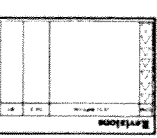
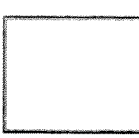
Subgrade stabilization should be performed using one of the two options presented below:

1. Overexcavate at least 18 inches below the design subgrade level. Place stabilization fabric (Mirafi 600x, Amoco 2006, or equivalent). Backfill with aggregate base in 6-inch lifts back to the design subgrade level.
2. Overexcavate at least 9 inches below the design subgrade level. Place geogrid (Tensar BX1200 or equivalent). Backfill with aggregate base in 6-inch lifts back to the design subgrade level.

In the event that stable material is encountered at the depth of excavation, supplemental recommendation will be made in the field regarding modifying these recommendations. The aggregate base should be compacted to at least 90% relative compaction (ASTM D1557) as the lifts are being brought up. Each lift should be proof-rolled prior to the placement of the subsequent lift. The final subgrade level should be compacted to at least 95% RC. An HDR representative should be present during overexcavation, proofrolling, and replacement activities.

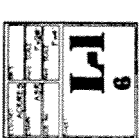


SEE SHEET L-1 OF 2 (MEMORANDUM)

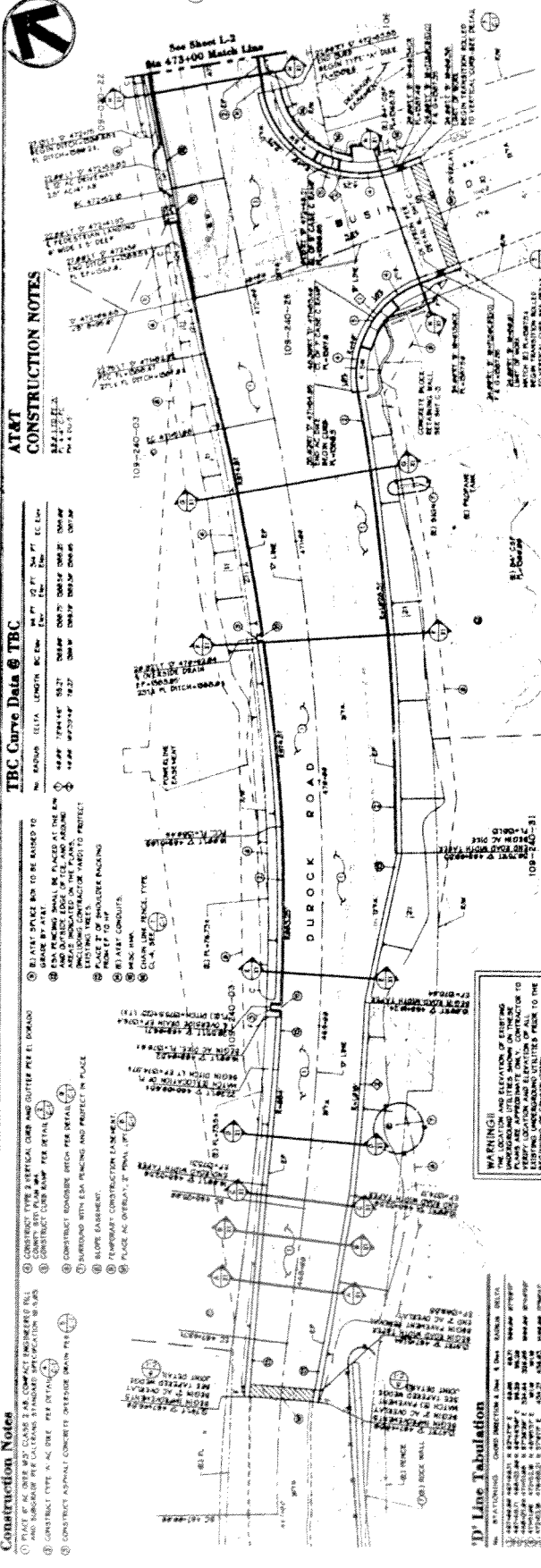


DUROCK ROAD & BUSINESS DRIVE
TRAFFIC SIGNAL & INTERSECTION WIDENING
STA 473+00 IMPROVEMENT PLAN

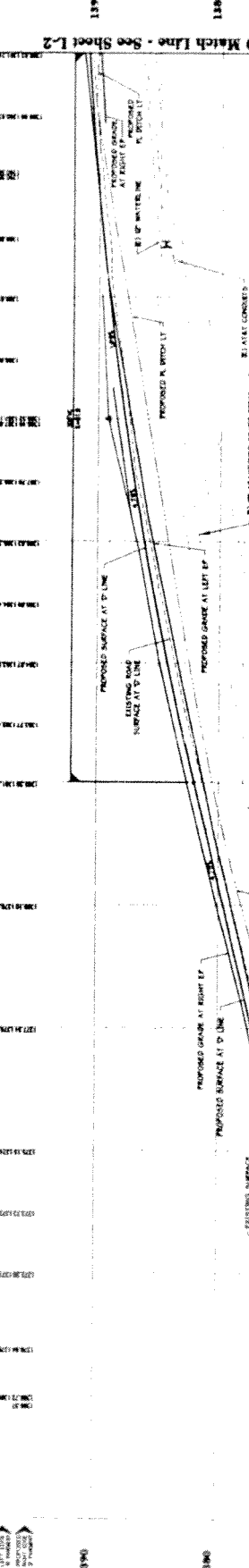
COUNTY OF EL DORADO
DEPARTMENT OF
TRANSPORTATION
Submission Information
SUBMITTAL DATE: 05-14-10



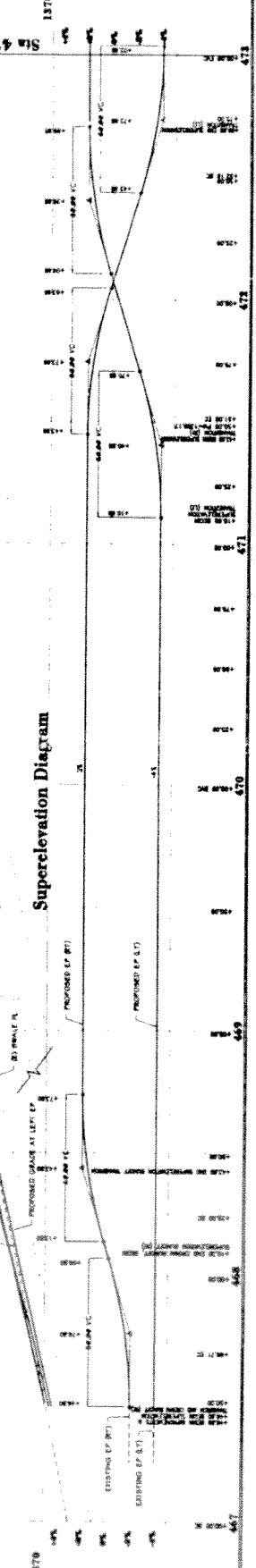
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Durock Road Sta. 467+00 To Sta. 473+00



Superelevation Diagram



09-0952.4A.4

COPIES EXHIBIT A 2062

- Construction Notes**
1. PLACE ALL BRICKWORK TO BE CONSTRUCTED IN PLACE.
 2. ALL BRICKWORK TO BE CONSTRUCTED IN PLACE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR BRICKWORK.
 3. ALL BRICKWORK TO BE CONSTRUCTED IN PLACE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR BRICKWORK.
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 10. ALL BRICKWORK TO BE CONSTRUCTED IN PLACE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR BRICKWORK.

TP' Use Tabulation

STATIONING: 100 FT. INTERVALS
 1. STATIONING TO BE SHOWN AT 100 FT. INTERVALS
 2. STATIONING TO BE SHOWN AT 100 FT. INTERVALS
 3. STATIONING TO BE SHOWN AT 100 FT. INTERVALS

Curve Data at RT

STATIONING: 100 FT. INTERVALS
 1. STATIONING TO BE SHOWN AT 100 FT. INTERVALS
 2. STATIONING TO BE SHOWN AT 100 FT. INTERVALS
 3. STATIONING TO BE SHOWN AT 100 FT. INTERVALS

Curve Data at Top of Dike

STATIONING: 100 FT. INTERVALS
 1. STATIONING TO BE SHOWN AT 100 FT. INTERVALS
 2. STATIONING TO BE SHOWN AT 100 FT. INTERVALS
 3. STATIONING TO BE SHOWN AT 100 FT. INTERVALS



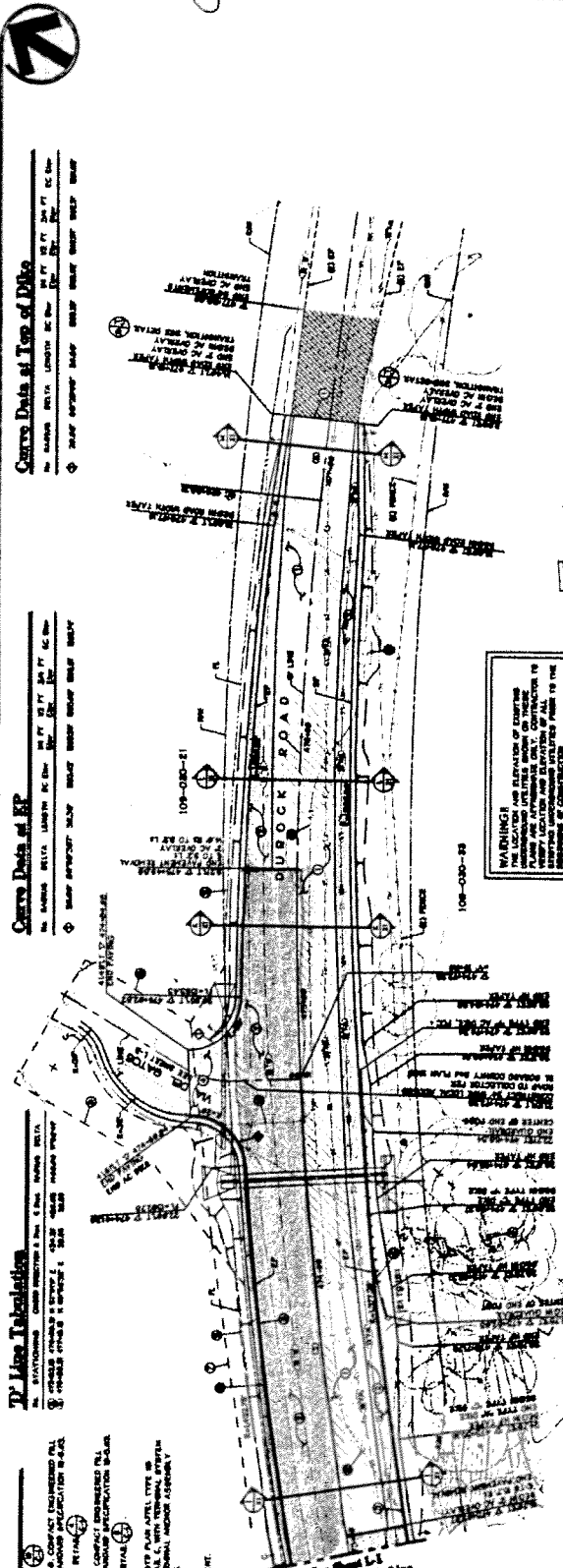
DATE	DESCRIPTION

DUBUCK ROAD STA 473+00 TO STA 478+00 IMPROVEMENT PLAN
 TRAFFIC SIGNAL & INTERSECTION IMPROVEMENTS
 DUBUCK ROAD & KERRIDGE DRIVE

SUBMITTAL DATE: 05-14-10
 COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION

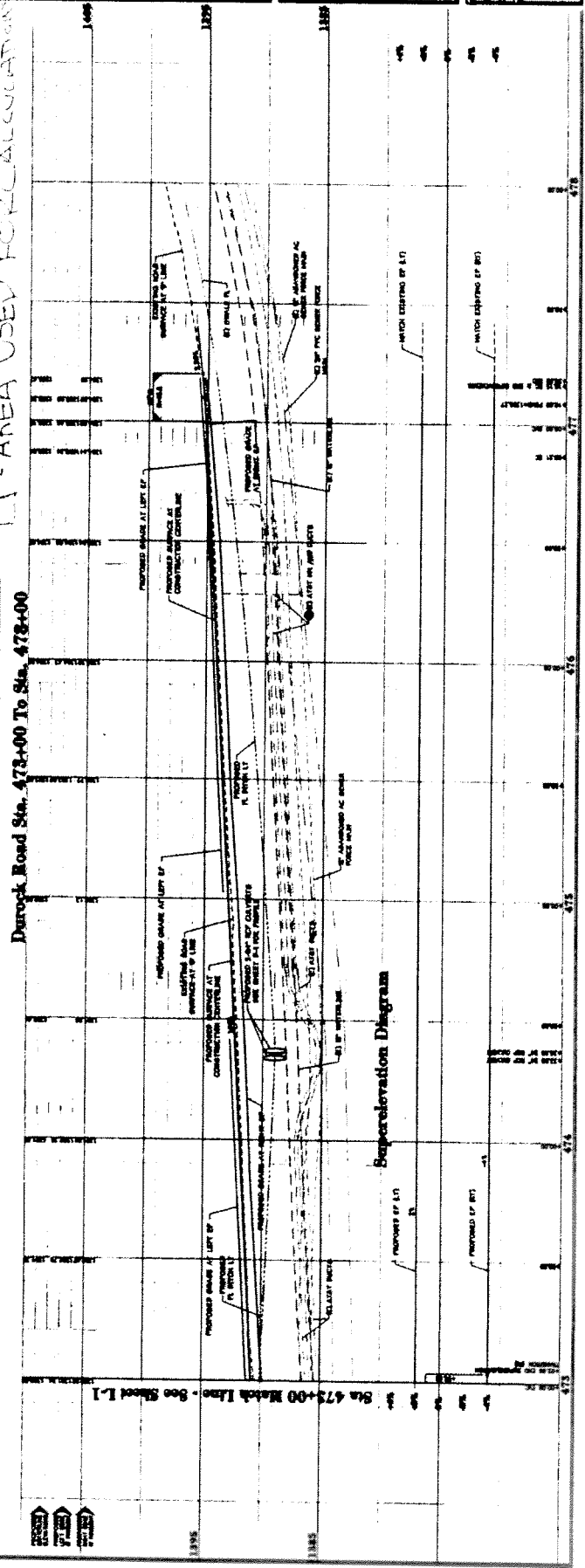
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AREA USED FOR CALCULATIONS

WARNING:
 THE LOCATION AND ELEVATION OF EXISTING UTILITIES SHOWN ON THESE PLANS IS BASED ON RECORD DRAWINGS AND FIELD SURVEY DATA. THE LOCATION AND ELEVATION OF ALL UTILITIES SHOWN ON THESE PLANS IS SUBJECT TO THE RESULTS OF FIELD SURVEY.



09-0952.4A.5

CCO#3, Dig Outs

Using Force Account and Bid Prices

By Greg Zeiss

Check by Chuck Pazzi

RW Excavation for Area + 473+03 to 475+50, 25' wide

Area A	L (FT)	W (FT)	D(ft)	CY	\$/CY	\$Cost
	247	21	0.75	144.08	41	\$ 5,907.42

RW Excavation for Sta 472+06 to Stat 473+03

Area B	L (FT)	W (FT)	D(ft)	CY	\$/CY	\$Cost
	95	53	0.75	139.86	41	\$ 5,734.31

RW Excavation Area from CCO#5

SF	D(FT)	CF	CY	\$/CY	\$Cost
1208	0.75	906.00	33.56	41	\$ 1,375.78

Total Roadway Excavation	317.50	41	\$ 13,017.50
Round the CY to 318 for a round number	318.00	41	\$ 13,038.00

Force Account Costs for AB and Geogrid Placement

Agreed Price Cost (If we paid out at \$35.41/SY)	Less RW Ex Cost	Force Acct Cost	Total Force Account (Rounded down so CCO Total is \$44K)
\$44,969.91	\$ 13,038.00	\$ 31,931.91	\$ 30,962.00

Total CCO Cost	\$ 44,000.00
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Note: Force account gives us the added benefit of flexibility in the field if conditions change.

Contract Change Order

Change Requested by: Engineer Contractor

CCO No.	Suppl. No.	Contract No.	Contract Name	Federal Number(s)
4		PW 09 - 30446	Durock Road and Business Park Drive, Traffic Signal and Intersection Widening	None

To Doug Veerkamp, Inc.

Contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract.

NOTE: This change order must be approved by the Board of Supervisors. Yes No

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Increase in Contract Items at Contract Item Prices

The Contractor is directed to perform additional roadway removal and replacement for the remaining 11-foot section of roadway from D Line Sta 473+23 to Sta 475+50 (See Attachment B for CCO area). The replaced roadway structural section is to conform to the contract document typical roadway section of 10.5-inch Aggregate Base with 6-inch Asphalt Concrete

- Item #18 Remove Concrete Pavement
12.0 CY (+16.0%) @ \$310/CY = \$3,720.00 (+16.0%)
- Item #26 Roadway Excavation
115.0 CY (+8.7%) @ \$41/CY = \$4,715.00 (+8.7%)
- Item #35 Class 2 Aggregate Base
81.0 CY (+6.8%) @ \$47/CY = \$3,807.00 (+6.8%)
- Item #37 Hot Mix Asphalt (Type A, PG 64-16)
100.0 CY (+6.3%) @ \$82/Ton = \$8,200.00 (+6.3%)

Decrease in Contract Items at Contract Item Prices

By removing the above remaining 11' section of roadway from D line Sta 473+23 to Sta 475+50, the below Asphalt Concrete (Leveling) will not be used.

- Item #38 Hot Mix Asphalt (Leveling)
24.0 Tons (-33%) @ \$203/Ton = (\$4,872.00) (-33%)

Estimate of Increase in Contract Items at Contract Item Prices

Where the Engineer determines that the subgrade for the work on this contract is unsuitable, the Contractor will be directed to perform the work per the Geotechnical Memorandum dated November 18, 2010, Option 2, by Chris Trumbull (Attachment A). Additionally, the Engineer may direct the Contractor to modify the dig out depth or Geogrid placement based on actual field conditions.

For the work of removing unsuitable soils, the contractor will be paid per Bid Item #26, Roadway Excavation.

- Item #26 Roadway Excavation (for removing unsuitable soils, if any)
69.0 CY (+5%) @ \$41/CY = \$2,829.00 (+5%)

Contract Change Order #4

Change Requested by: Engineer Contractor

Extra Work at Force Account

For providing and placing Geogrid per the Geotechnical Memorandum, and providing Aggregate Base (AB) delivered with end dumps and placing AB over the dig out area as directed by the Engineer, the Contractor will be paid Extra Work at Force Account in accordance with Section 9-1.03, "Force Account Payment," of the Standard Specifications.

Estimated Increase.....\$3,424.00

All work is shall be performed in accordance with the Plans, Special Provisions, Standard Specifications, this change order, and as directed by the Engineer.




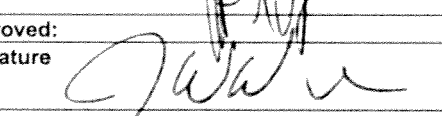
Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with the Standard Specifications, Section 8-1.07.

Summary of Cost for this Change Order


Net Quantity Change 11' Section Removal	= \$15,570.00
Net Change for Geotechnical Memorandum	= \$6,253.00
Total Contract Change Order Cost	= \$21,823.00

Estimated Cost: Decrease Increase \$ 21,823.00

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by Signature 	(Print name & title) Greg P, Zeiss, P.E., Resident Engineer (HDR)	Date 1/27/2011
Approved: Signature 	(Print name & title) Steven K Payne P.E., Supervising Civil Engineer	Date 1/31/2011
Approved: Signature 	(Print name & title) Robert Slater, P.E., Asst. Director of Transportation	Date 2/1/2011
Approved: Signature 	(Print name & title) James W. Ware, P.E., Director of Transportation	Date 2/2/11

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefore the prices shown above. The prices and terms of payment shown above comprise full and final compensation for all direct costs, indirect costs, cumulative costs, and all overhead costs incurred as a result of this contract change order. NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specification as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by		
Signature 	(Print name & title) Douglas B. Veerkamp, President	Date 1/24/11



**EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION
CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 1-19-11

TO: James W. Ware, P.E. Director of Transportation			FILE: Project name: Durock Road & Business Park Drive, Traffic Signal & Intersection Widening W.O. # 73354
FROM: Greg Zeiss, P.E. Resident Engineer			Contract No. PW 09-30446 Caltrans EA. None Federal No. None
CCO NO. 4	SUPPLEMENT NO.	CATEGORY CODE	CONTINGENCY BALANCE (including this change) \$47,177.00
\$21,823.00	INCREASE <input checked="" type="checkbox"/>	DECREASE <input type="checkbox"/>	BOS APPROVAL REQUIRED? (if > \$48,491.00) YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

Change Required: This contract change order is for additional roadway removal and replacement for the remaining 11-foot section of roadway from D Line Sta 473+23 to Sta 475+50 on Durock Road.

This change order was requested by the DOT Design Engineer in order to provide a more uniform roadway structural section. Per the project plans, the cross section on this roadway would have four different structural sections (see Exhibit A) which would make the roadway subject to variable stress cracking and reduced lifespan. Additionally, based on our observation on the CCO#3 dig outs, there is suspected unsuitable "pumping" soil in this section of roadway that, if left in place, could further compromise the life of the roadway and add additional variable stress cracking in the pavement structure.

By removing and replacing the current eastbound roadway in its entirety, and providing the ability to mitigate any unsuitable pumping soils that may be found, the completed roadway will have a uniform structural section and potentially a longer service life.

The work of removing the existing roadway to design subgrade and rebuilding with the new roadway structural section will be done by both increasing and decreasing the appropriate contract items at contract prices for a net increase of \$15,570.00

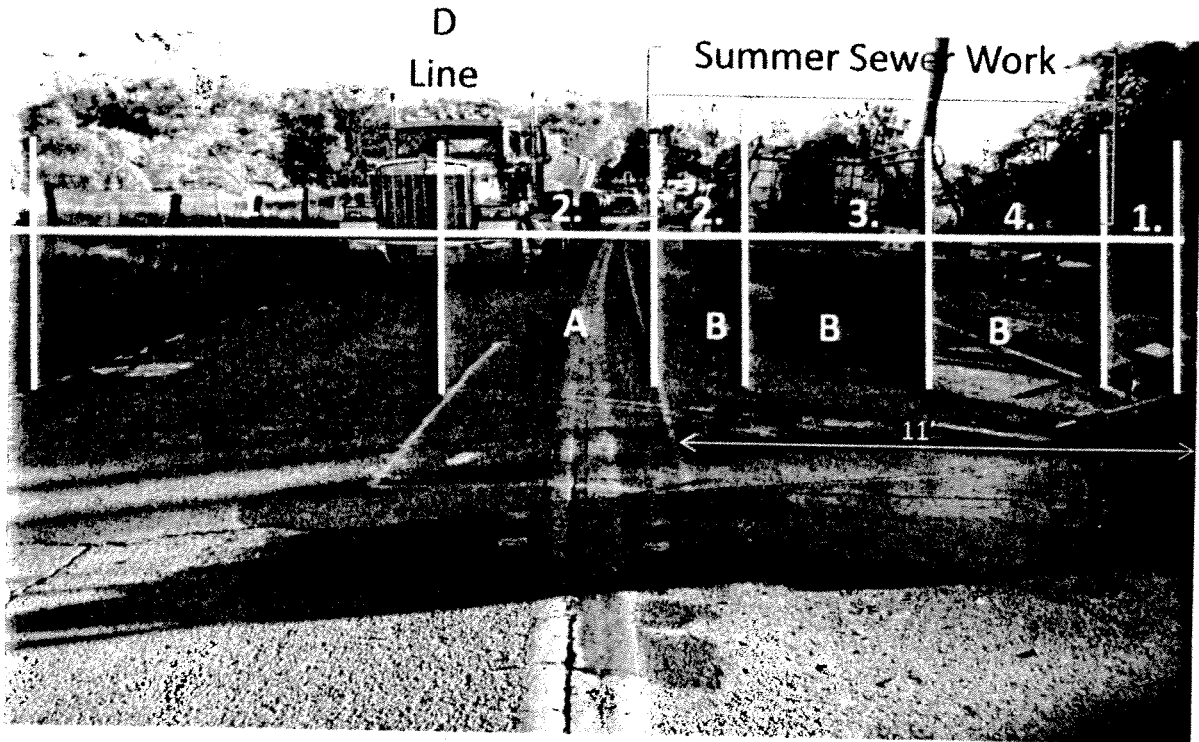
Additionally, the work of removing and replacing the existing sub grade per the Geotechnical Memorandum is not covered by a contract item. The Engineer and the Contractor could not agree on the price of AB, as the Contractor wanted to charge \$70.5/CY, which was a 50% increase over the Bid Item price for AB of \$47/CY. The contractor argued that the cost of end dumping the AB, as opposed to bottom dumping the AB, increases his cost 50%. While the Engineer agrees that there is an increased cost with end dumping the AB, he does not believe that it is in the magnitude of a 50% increase.

For the work per the Geotechnical Memorandum, the Roadway Excavation work will be done by increasing Bid Item #26 for an increase of \$2,829.00. The remainder of this Geotechnical Memorandum work will be done under Extra Work at Force Account for an estimated cost of \$3,424.00 dollars.

The above work can be financed from the contingency funds. Adjustment of contract time is deferred pending the completion of the specified work as it may become the controlling operation. Approval of this contract change order is recommended by the Resident Engineer.

CONCURRED BY:	DATE	ESTIMATE OF COST	
SUPERVISING CIVIL ENGINEER Chuck Pazzi, P.E.	<i>CSPazzi</i> 1/19/11	THIS REQUEST	TOTAL
SUPERVISING CIVIL ENGINEER Steven K. Payne, P.E.	<i>SKPayne</i> 1/19/11	CONTRACT ITEMS	\$18,399.00
ASSISTANT DIRECTOR OF TRANSPORTATION Robert Slater, P.E.	<i>RSlater</i> 1/30/11	AGREED PRICE	
DIRECTOR OF TRANSPORTATION James W. Ware, P.E.	<i>JWare</i> 2/2/11	EW @ FA	\$3,424.00
		TOTAL	\$21,823.00
PRIOR APPROVAL BY, DATE		<input type="checkbox"/> CCO FUNDED PER CONTRACT State 505- EDC 50%	<input type="checkbox"/> CCO FUNDED AS FOLLOWS
		FEDERAL FUNDING SOURCE None	PERCENT
RESIDENT ENGINEER'S SIGNATURE	<i>Greg Zeiss</i> 1/19/2011		

Exhibit A CCO #4 and ~~CCO #5~~



1. Remove and replace per Project Plans
2. Overlay old Lincoln Hwy
3. Overlay trench section from Summer Sewer Work
4. Overlay old Durock (no old Lincoln Hwy here)
- A. Remove and replace per CCO #5
- B. Remove and replace per CCO #4

Old Lincoln Highway Cracking Example
(This photo taken in El Dorado Hills)



CCO#4, Square off to Sta 475+50 (Not Including Digout Portion)

By Greg Zeiss

Check by Chuck Pazzi

Area = Sta 473+23 to Sta 475+50

Sheet 1 of 2

Length (ft)	Width (FT)	Area (ft)	Depth (FT)	Vol (CY)	Note
227	11	2497	1.38	127.2	16.5 " Total
227	3.5	794.5	0.42	12.2	5" PCC
				114.9	RW Ex

	CY (Rounded)	Rate \$/CY	\$ Cost		\$ Cost
RW Ex	115.00	41	\$ 4,715.00		\$ 4,715.00

	SF	Depth (Ft)	CY (Rounded)	\$/CY	\$Cost
AB	2497	0.88	81.00	47	\$ 3,807.00

	CY(Rounded)	\$/CY	\$Cost		\$Cost
PCC Remove	12.00	310	\$ 3,720.00		\$ 3,720.00

	SF	Depth (FT)	Ton (Rounded)	\$/Ton	\$Cost
AC	2497	0.5	100.0	82	\$ 8,200.00

Reduce Leveling %

Bid Quantity	Bid Area (SF)	CCO Area (SF)	CCO Quantity	\$/ton	\$Cost
75	7757	2497	24.0	203	\$ (4,872.00)

Total Square Off Portion of CCO \$ 15,570.00
 Total Digout Portion CCO (See 2 of 2) \$ 6,253.00
 Total CCO \$ 21,823.00

Leveling Area %

Leveling	(SF)		Tons (Rounded)
4' CCO	1208	16%	12.0
Square	2497	32%	24.0
Remainder	4032	52%	39.0
Total	7737	100%	75.0

Total Items (This is the EWFA work less items) \$ 18,399.00

CCO#4, Dig Out Portion of CCO

By Greg Zeiss

Roadway Excavation, Sta 473+23 to Sta 475+50, 11' wide

Sheet 2 of 2

Area A	L (FT)	W (FT)	D(ft)	CY (Rounded)	\$/CY	\$Cost
	227	11	0.75	69.00	41	\$ 2,829.00

Dig Out Cost with contractor's requested unit rate of \$35.41/cy

	SF	SY	\$/SY	\$Cost
Dig Outs	2497	176.6	35.41	\$ 6,253.41

Force Account Costs for AB and Geogrid Placement

Agreed Price Cost (If we paid out at	Less RW Ex Cost	Force Acct Cost (Rounded)				Total Force Account
\$ 6,253.41	\$ 2,829.00	\$ 3,424.00				\$ 3,424.00

Total Digout Portion of CCO						\$ 6,253.00
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Subject:	Unstable Subgrade	Date:	November 18, 2010
Client:	County of El Dorado		
Project:	Durock Road	Project No:	151097
By:	Christopher D. Trumbull, P.E., G.E.		

A site visit was conducted on November 16, 2010 to observe the reported unstable subgrade along the east end (northern half) of the Durock Road project. Upon arrival, the existing road material had been removed and the roadway was graded to the approximate subgrade level. The southern half of the roadway was occupied by the existing section. The subgrade was proof-rolled with a large CAT rubber-tired loader with the front bucket full of soil. During proof-rolling, the subgrade was unstable and yielding, with deflection on the order of one inch. The subgrade should be stabilized prior to placement of the design roadway section.

Subgrade stabilization should be performed using one of the two options presented below:

1. Overexcavate at least 18 inches below the design subgrade level. Place stabilization fabric (Mirafi 600x, Amoco 2006, or equivalent). Backfill with aggregate base in 6-inch lifts back to the design subgrade level.
2. Overexcavate at least 9 inches below the design subgrade level. Place geogrid (Tensar BX1200 or equivalent). Backfill with aggregate base in 6-inch lifts back to the design subgrade level.

In the event that stable material is encountered at the depth of excavation, supplemental recommendation will be made in the field regarding modifying these recommendations. The aggregate base should be compacted to at least 90% relative compaction (ASTM D1557) as the lifts are being brought up. Each lift should be proof-rolled prior to the placement of the subsequent lift. The final subgrade level should be compacted to at least 95% RC. An HDR representative should be present during overexcavation, proofrolling, and replacement activities.



ATTACHMENT B



DUROCK ROAD STA 473+00 TO STA 478+00 DEMOLITION PLAN

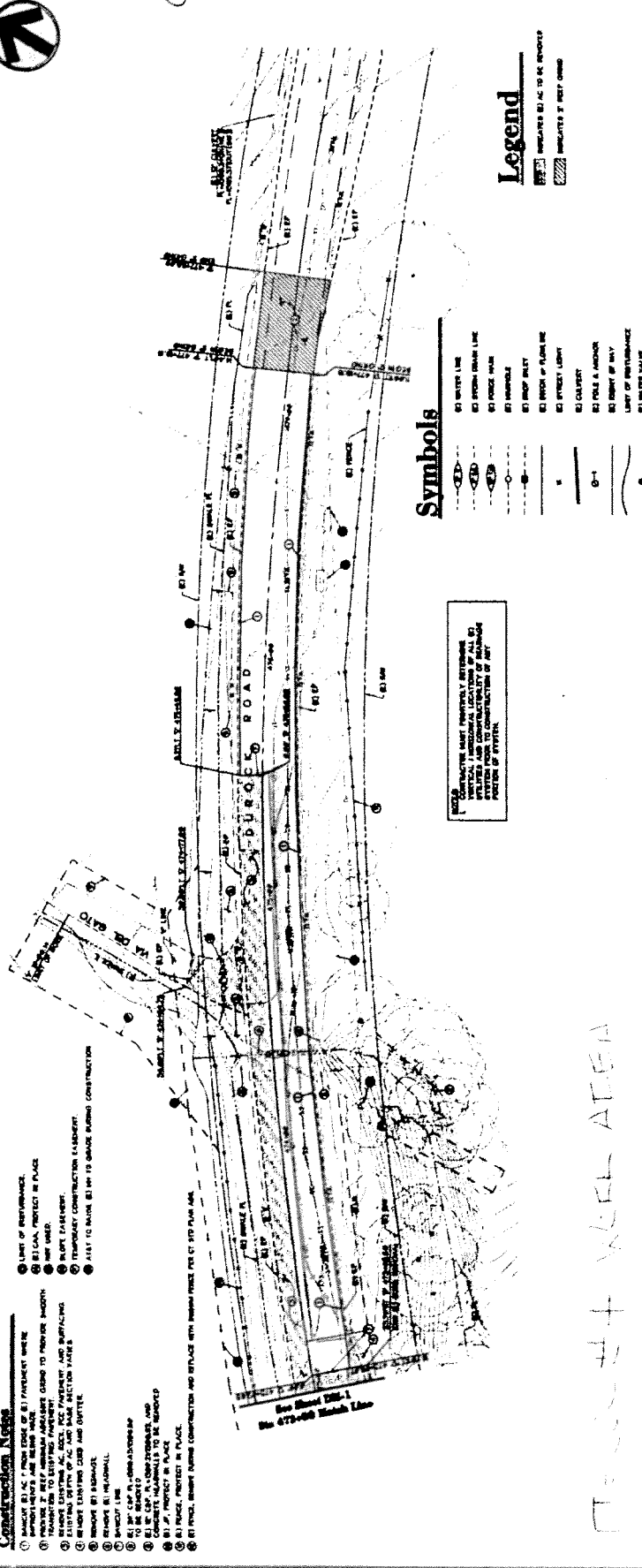
TRAFFIC SIGNAL & INTERSECTION WIDENING

DUROCK ROAD & BUSINESS DRIVE

COUNTY OF B. DONADO
DEPARTMENT OF TRANSPORTATION

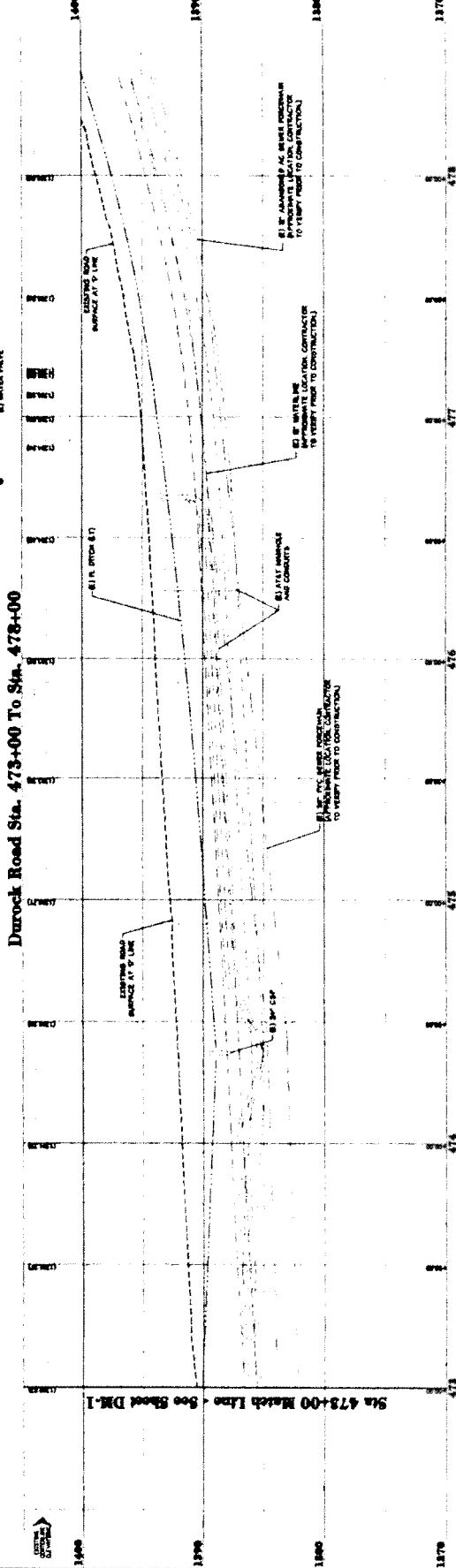
SUBMITAL DATE: 05-14-10

DM-2
5



- Construction Notes**
1. DEMOLISH EXISTING PAVEMENT AND ASPHALT SURFACE TO FINISH GRADE.
 2. REMOVE EXISTING CURBS AND SIDEWALKS TO FINISH GRADE.
 3. REMOVE EXISTING UTILITIES AND RELOCATE AS SHOWN.
 4. RECONSTRUCT PAVEMENT AND ASPHALT SURFACE TO FINISH GRADE.
 5. RECONSTRUCT CURBS AND SIDEWALKS TO FINISH GRADE.
 6. RECONSTRUCT UTILITIES AND RELOCATE AS SHOWN.
 7. RECONSTRUCT TRAFFIC SIGNAL AND INTERSECTION WIDENING AS SHOWN.
 8. RECONSTRUCT DRAINAGE SYSTEM AS SHOWN.
 9. RECONSTRUCT LIGHTING SYSTEM AS SHOWN.
 10. RECONSTRUCT FENCE AS SHOWN.
 11. RECONSTRUCT SIGNAGE AS SHOWN.
 12. RECONSTRUCT LANDSCAPE AS SHOWN.
 13. RECONSTRUCT ALL OTHER UTILITIES AND STRUCTURES AS SHOWN.
 14. RECONSTRUCT ALL OTHER UTILITIES AND STRUCTURES AS SHOWN.
 15. RECONSTRUCT ALL OTHER UTILITIES AND STRUCTURES AS SHOWN.

- Symbols**
- 1. WATER LINE
 - 2. SEWER LINE
 - 3. GAS LINE
 - 4. TELEPHONE LINE
 - 5. CABLE TELEVISION LINE
 - 6. FENCE
 - 7. SIGN
 - 8. LIGHT
 - 9. TREE
 - 10. PLANT
 - 11. LANDSCAPE
 - 12. CONSTRUCTION AREA
 - 13. DEMOLITION AREA
 - 14. EXISTING ROAD
 - 15. PROPOSED ROAD
 - 16. EXISTING SIDEWALK
 - 17. PROPOSED SIDEWALK
 - 18. EXISTING CURB
 - 19. PROPOSED CURB
 - 20. EXISTING TRAFFIC SIGNAL
 - 21. PROPOSED TRAFFIC SIGNAL
 - 22. EXISTING INTERSECTION WIDENING
 - 23. PROPOSED INTERSECTION WIDENING
 - 24. EXISTING DRAINAGE SYSTEM
 - 25. PROPOSED DRAINAGE SYSTEM
 - 26. EXISTING UTILITIES
 - 27. PROPOSED UTILITIES
 - 28. EXISTING STRUCTURES
 - 29. PROPOSED STRUCTURES



09-0952.3B.5

09-0952.4A.16

Contract Change Order

Change Requested by: Engineer Contractor

CCO No.	Suppl. No.	Contract No.	Contract Name	Federal Number(s)
5		PW 09 - 30446	Durock Road and Business Park Drive, Traffic Signal and Intersection Widening	None

To Doug Veerkamp, Inc.

Contractor

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract.

NOTE: This change order must be approved by the Board of Supervisors. Yes No

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. The last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Estimate of Increase in Contract Items at Contract Item Prices

The Contractor is directed to perform additional roadway removal and replacement for a 4' section of roadway from D Line Sta 473+03 to Sta 475+50, and on a 11' x 20' area, as shown on the Attachment A. The replaced roadway structural section is to conform to the contract document typical roadway section of 10.5" Aggregate Base with 6" Asphalt Concrete.

- Item #18 Remove Concrete Pavement
16.0 CY (+21.1%) @ \$310/CY = \$4,960.00 (+21.1%)
- Item #26 Roadway Excavation
47.0 CY (+3.2%) @ \$41/CY = \$1,927.00 (+3.2%)
- Item #35 Class 2 Aggregate Base
39.0 CY (+3.3%) @ \$47/CY = \$1,833.00 (+3.3%)
- Item #37 Hot Mix Asphalt (Type A, PG64-16)
48.0 CY (+3.0%) @ \$82/Ton = \$3,936.00 (+3.0%)

Estimate of Decrease in Contract Items at Contract Item Prices

In removing the above remaining 11' section of roadway from D line Sta 473+23 to Sta 475+50, the below Asphalt Concrete (Leveling) will not be used.

- Item #38 Hot Mix Asphalt (Leveling)
12.0 Tons (-16%) @ \$203/Ton = (\$2,436) (-16%)

All work is shall be performed in accordance with the Plans, Special Provisions, Standard Specifications, this change order, and as directed by the Engineer.

09-0952.4A.17 *[Signature]*
1/20/11

Change Requested by: Engineer Contractor

Estimated Cost:

Decrease Increase \$ 10,220.00

By reason of this order the time of completion will be adjusted as follows: Zero (0) Contract Working Days

Submitted by Signature	(Print name & title) Greg P. Zeiss, Resident Engineer (HDR)	Date 1/27/2011
Approved: Signature	(Print name & title) Steven K Payne P.E., Supervising Civil Engineer	Date 1/31/2011
Approved: Signature	(Print name & title) Robert Slater, P.E., Asst. Director of Transportation	Date 2/1/2011
Approved: Signature	(Print name & title) James W. Ware, P.E., Director of Transportation	Date 2/2/11

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefore the prices shown above. The prices and terms of payment shown above comprise full and final compensation for all direct costs, indirect costs, cumulative costs, and all overhead costs incurred as a result of this contract change order. NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specification as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name & title) Douglas B. Veerkamp, President	Date 1/24/11
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[Handwritten Signature]
09-0952.4A.18

EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION
CONTRACT CHANGE ORDER MEMORANDUM

DATE: 1-19-11

TO James W. Ware, P.E. Director of Transportation			FILE: Project name: Durock Road & Business Park Drive, Traffic Signal & Intersection Widening Contract No. PW 09-30446 Caltrans EA. None Federal No. None
FROM Greg Zeiss, P.E. Resident Engineer			
CCO NO 5	SUPPLEMENT NO	CATEGORY CODE	CONTINGENCY BALANCE (including this change) \$36,957.00
\$10,220.00	INCREASE <input checked="" type="checkbox"/>	DECREASE <input type="checkbox"/>	BOS APPROVAL REQUIRED? (if > \$46,695.00) YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>

Change Required: This contract change order is for additional roadway removal and replacement for a 4-foot section of roadway from "D" Line Sta 473+03 to Sta 475+50 (Refer to "A" on Exhibit A, attached) and an adjacent 11' x 20' area, on Durock Road.

This change order was initiated by the Resident Engineer (RE) based on the reflective cracking of the 4-foot wide existing roadway section ("A" on Exhibit A) that was to remain in place. This 4-foot section ("A" on Exhibit A) was sandwiched between the "D" Line and just south of the existing centerline of Durock Road. The contract documents at the above stations show the existing roadway to the left of the "D" Line to be replaced. To the right of the existing Durock centerline, the roadway was partially improved with the 24-inch sewer line placed by Teichert last summer (Refer to "B" on Exhibit A). Note that Exhibit A photo shows the 4' section with cracking (refer to "A"). Additionally, the 4-foot section also contains a portion of the old Lincoln Highway. This work was completed under written direction to the contractor with a forthcoming CCO as the RE's addressing the roadway removal layout was timely. The removal of the 4-foot section also conforms to DOT Designs' need to replace the entire roadway at this location for a more efficient design and longer roadway service life (refer to CCO#4).

Note the RE made this decision based on the information available at the time, which was that the structural section to the right of the existing Durock CL (Refer to "B" on Exhibit A) was removed and replaced during the 24" sewer line work last summer. It was later discovered that a portion of the old Lincoln Highway had been left in place by the sewer work in the "B" areas Shown on Exhibit A.

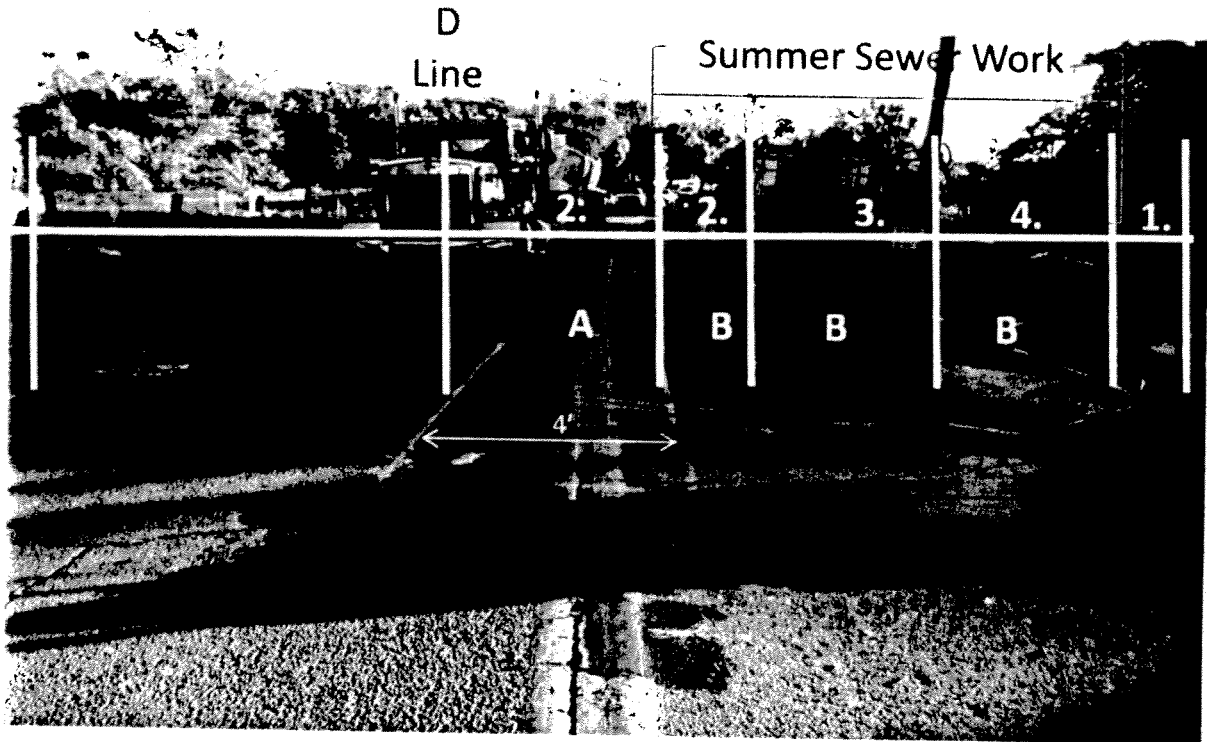
By removing and replacing the 4-foot section of roadway, the completed roadway will have a uniform structural cross section across the entire roadway and a longer service life.

This work will be done by both increasing and decreasing the appropriate contract items at contract prices for a net increase of \$10,220.00. A cost analysis is on file. The above work can be financed from the contingency fund.

No adjustment of contract time is warranted as this change does not affect the controlling operation. Approval of this contract change order is recommended by the Resident Engineer.

CONCURRED BY:	DATE	ESTIMATE OF COST	
		THIS REQUEST	TOTAL
SUPERVISING CIVIL ENGINEER Chuck Pazzi, P.E. <i>[Signature]</i>	1/19/11		
SUPERVISING CIVIL ENGINEER Steven K. Payne, P.E. <i>[Signature]</i>	1/19/11	CONTRACT ITEMS \$10,220.00	\$10,220.00
ASSISTANT DIRECTOR OF TRANSPORTATION Robert Slater, P.E. <i>[Signature]</i>	1/20/11	AGREED PRICE	
DIRECTOR OF TRANSPORTATION James W. Ware, P.E. <i>[Signature]</i>	2/2/11	EW @ FA	
		TOTAL	\$10,220.00 \$10,220.00
PRIOR APPROVAL BY, DATE		<input type="checkbox"/> CCO FUNDED PER CONTRACT State 50% - EDC 50%	<input type="checkbox"/> CCO FUNDED AS FOLLOWS
		FEDERAL FUNDING SOURCE None	PERCENT
RESIDENT ENGINEER'S SIGNATURE <i>[Signature]</i>			

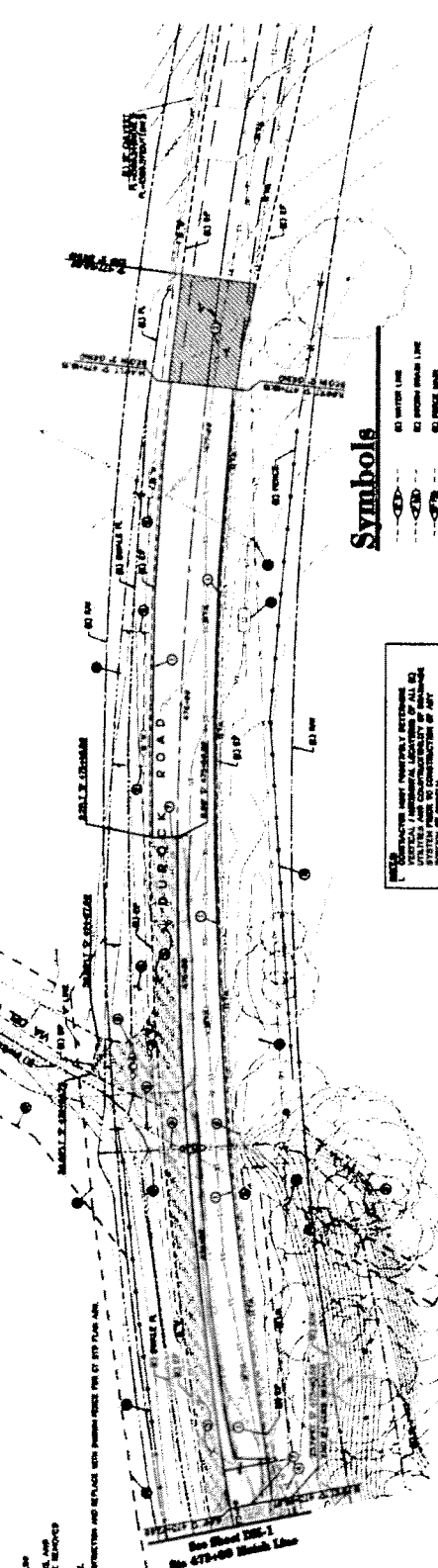
Exhibit A ~~CCO #4 and CCO #5~~



1. Remove and replace per Project Plans
2. Overlay old Lincoln Hwy
3. Overlay trench section from Summer Sewer Work
4. Overlay old Durock (no old Lincoln Hwy here)
- A. Remove and replace per CCO #5
- B. Remove and replace per CCO #4

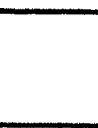
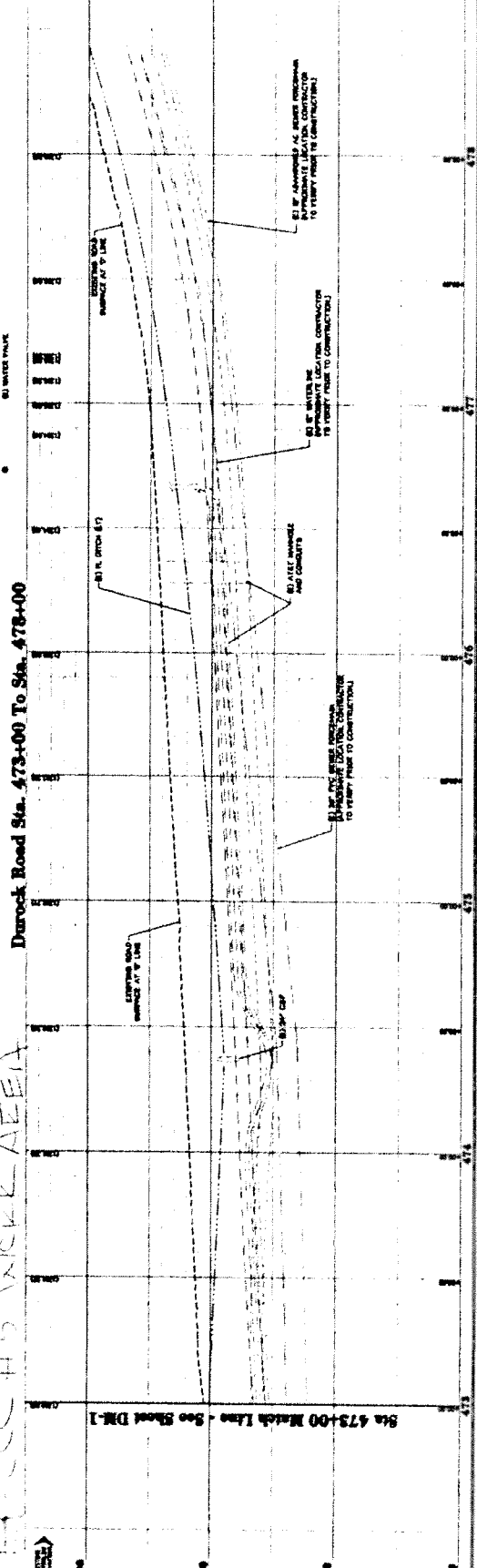
SOUTH ALIGNMENT A

- Construction Notes**
- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION, AS APPLICABLE.
 - 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
 - 3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.
 - 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND STRUCTURES TO REMAIN.
 - 5. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE THROUGHOUT THE PROJECT.
 - 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.
 - 7. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE THROUGHOUT THE PROJECT.
 - 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.
 - 9. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE THROUGHOUT THE PROJECT.
 - 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.



- Symbols**
- 1. CENTER LINE
 - 2. RIGHT SHOULDER LINE
 - 3. LEFT SHOULDER LINE
 - 4. RIGHT SIDEWALK
 - 5. LEFT SIDEWALK
 - 6. RIGHT CURB
 - 7. LEFT CURB
 - 8. RIGHT SIDEWALK
 - 9. LEFT SIDEWALK
 - 10. RIGHT SIDEWALK
 - 11. LEFT SIDEWALK
 - 12. RIGHT SIDEWALK
 - 13. LEFT SIDEWALK
 - 14. RIGHT SIDEWALK
 - 15. LEFT SIDEWALK
 - 16. RIGHT SIDEWALK
 - 17. LEFT SIDEWALK
 - 18. RIGHT SIDEWALK
 - 19. LEFT SIDEWALK
 - 20. RIGHT SIDEWALK

- Legend**
- 1. EXISTING UTILITIES TO BE REMOVED
 - 2. EXISTING UTILITIES TO REMAIN
 - 3. EXISTING UTILITIES TO BE RELOCATED
 - 4. EXISTING UTILITIES TO BE PROTECTED
 - 5. EXISTING UTILITIES TO BE RECONSTRUCTED
 - 6. EXISTING UTILITIES TO BE REPLACED
 - 7. EXISTING UTILITIES TO BE MAINTAINED
 - 8. EXISTING UTILITIES TO BE IMPROVED
 - 9. EXISTING UTILITIES TO BE RESTORED
 - 10. EXISTING UTILITIES TO BE PRESERVED
 - 11. EXISTING UTILITIES TO BE ENHANCED
 - 12. EXISTING UTILITIES TO BE MONITORED
 - 13. EXISTING UTILITIES TO BE REPAIRED
 - 14. EXISTING UTILITIES TO BE REPLACED
 - 15. EXISTING UTILITIES TO BE MAINTAINED
 - 16. EXISTING UTILITIES TO BE IMPROVED
 - 17. EXISTING UTILITIES TO BE RESTORED
 - 18. EXISTING UTILITIES TO BE PRESERVED
 - 19. EXISTING UTILITIES TO BE ENHANCED
 - 20. EXISTING UTILITIES TO BE MONITORED



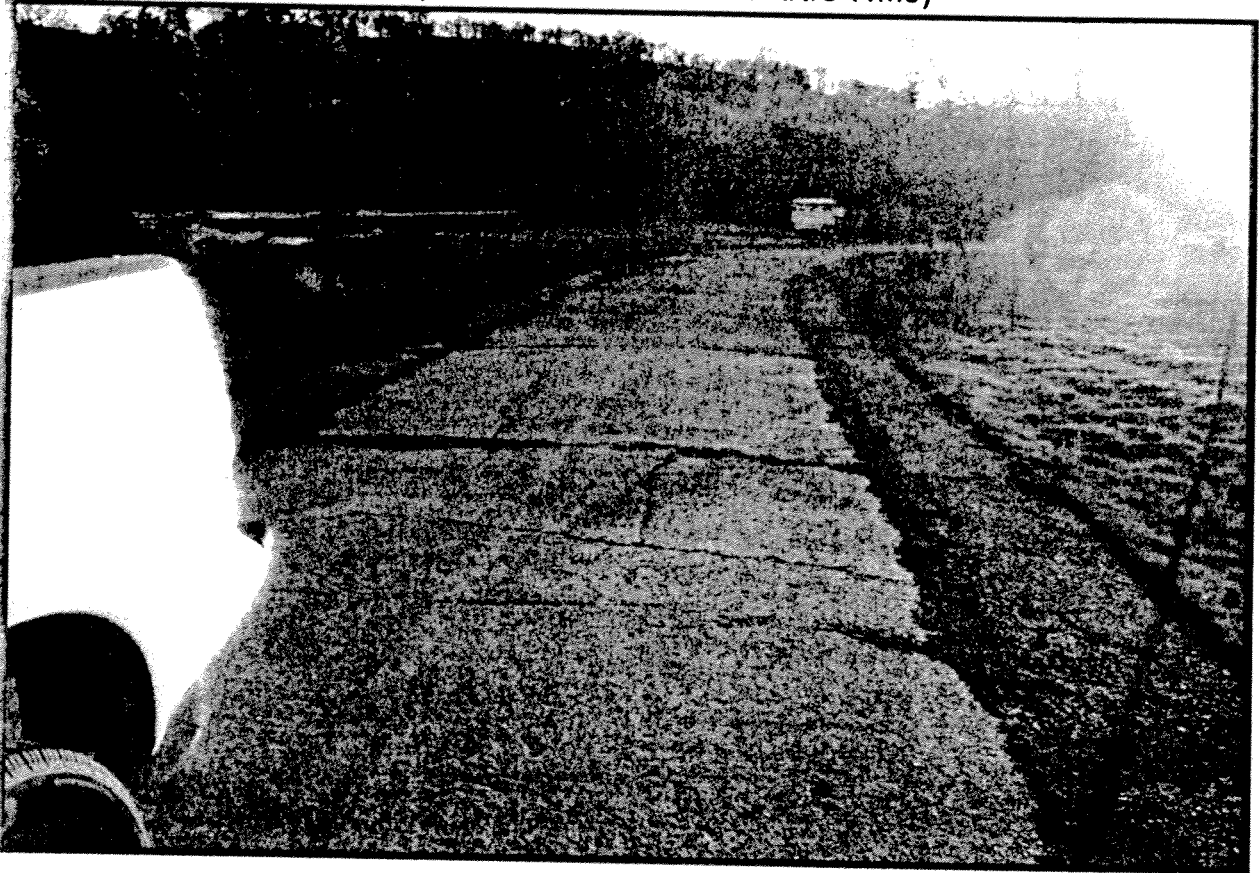
Project Name	STA 478+00 DEMOLITION PLAN
Project No.	
Scale	
Author	
Check	
Date	

**DUROCK ROAD & BUSINESS DRIVE
TRAFFIC SIGNAL & INTERSECTION WIDENING
DUROCK ROAD STA 473+00 TO
STA 478+00 DEMOLITION PLAN**

DEPARTMENT OF TRANSPORTATION
COUNTY OF ST. DORADO
SUBMITTAL DATE: 05-14-10



Old Lincoln Highway Cracking Example
(This photo taken in El Dorado Hills)



CCO#5, Remove 4' Section

By Greg Zeiss

Check By Chuck Pazzi

12.22.2010

4' Strip		Sta 473+03 to Sta 475+50			
Length (ft)	Width (FT)	Area (ft)	Depth (FT)	Vol (CY)	Note
247	4.00	988	1.4	51.2	16.5" Total
247	4.00	988	0.416	15.2	5" PCC
				36.0	RW Ex

20ft x 11 ft					
Length (ft)	Width (FT)	Area (ft)	Depth (FT)	Vol (CY)	Note
20	11.00	220	1.4	11.4	16.5" Total
20	2.00	40	0.416	0.6	5" PCC
				10.8	RW Ex

	CY(Rounded)	Rate \$/CY)	\$ Cost		\$ Cost
RW Ex	47.00	41	\$ 1,927.00		\$ 1,927.00

	SF	Depth (Ft)	CY (Rounded)	\$/CY	\$Cost
AB	1208.00	0.88	39.0	47	\$ 1,833.00

	CY (Rounded)	\$/CY	\$Cost		\$Cost
PCC Remove	16.00	310	\$ 4,960.00		\$ 4,960.00

	SF	Depth (Ft)	Ton (Rounded)	\$/ton	\$Cost
AC	1208.00	0.5	48.0	82	\$ 3,936.00

Digs used on CCO#3 (not in total below)

	SF	SY	\$/SY	\$Cost	
Dig Outs	1208.00	134.2	35.41	\$4,752.81	

Reduce Leveling

Bid Quantity	Bid Area (SF)	CCO Area (SF)	CCO Quantity	\$/ton	\$Cost
75.00	7757	1208	12.00	203	\$ (2,436.00)

Area

Leveling	(SF)		Tons(rounded)
4' CCO	1208	16%	12
Square	2497	32%	24
Remainder	4032	52%	39
	7737	100%	75

Total CCO Cost (Add all red)

\$ 10,220.00