#### OKLAHOMA DEPARTMENT OF TRANSPORTATION

DATE:

November 8, 1999

TO:

Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM:

Byron Poynter, Construction Division

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO. 991108.

#### FINAL PAYMENTS ON THE OLD ESTIMATE SYSTEM

There are several projects which have been completed under the old estimate system but have not been issued a final estimate, mainly due to the final audit not being complete. As you know the old system will soon be terminated. The purpose of this Directive is to provide a method of using the old system to write the final estimate (even though it may not reflect the exact, as-built quantities), before the system is terminated. If this process is not used, the entire contract will have to be transferred to the new system, consuming a great deal of time and effort.

The system is very simple. Write the final estimate based on the current information. After the audit is complete, add an addendum spread sheet (provided, example No.1 enclosed) to make the necessary changes (plus or minus) to each line item needing correction. The spread sheet will be sent to you by E-mail. The following instructions have been prepared by the Construction Division. If you have any questions please advise.

- 1. The "Addendum" is designed to be filled in with the correction quantity required (added or subtracted as required) to produce a "Total of Corrected Dollar Amount".
- A. This amount will then be added (algebraically) to the "Amount Approved for Payment" (shown on the last page of the Final Estimate) to obtain a "New Amount Approved for Payment" which will have the "Less Previous Payment" (shown on the last page of the Final Estimate) deducted (algebraically) to obtain a "Revised Amount Due on Final Estimate".
- B. Notice the column titled "Deducted Quantity to Final Estimate" only requires the number to be input and the "Corrected Dollar Amount" automatically shows as a negativemount.
- C. Be sure to use the same line number on the Addendum that was used on the Final Estimate for each item you need to correct. This will coordinate the addendum with the Final. If the items you are correcting are on lines 001-989 then show that specific line

number. If the item is one of lines 991-998 then use that specific line number on the Addendum( ie: line 993 is for Liquidated Damages). If 4 days were charged on the Final Estimate but the final L.D. days charged needs to be changed to only 1 day, then the L.D. should be shown on the Addendum as line 993 and the quantity should be shown in the "Added Quantity to Final Estimate Column" as 3 days. This will give a net effect of only charging 1 day overall for L.D. Of course, if you need to charge more days L.D. you put the additional days to be charged in the column titled "Deducted Quantity to Final Estimate" (ie: if you had charged 4 days on the Final Estimate but the final L.D. days charged needs to be changed to 6 days charged then you would input the difference of 2 days into that column). The column titled "New Final Quantity" should be filled out for every item to be corrected, but it should be very beneficial for the items like Liquidated Damages since it will show the total quantity of days the Contractor is ultimately being charged for Liquidated Damages.

- D. Any changes required to be made for Special Deductions(lines 991-992), Liquidated Damages(line 993) and Deviation Adjustments(lines 994-998) will need to be made in the body of the Addendum Spreadsheet after all of the other corrections have been input. By including these items in the calculations the "Total of Corrected Dollar Amount" will be obtained. (If your Residency is creating a Statement of Overruns and Underruns, other than the host program; remember, do not include these items in your Statement of Overruns and Underruns.)
- 2. Make one extra copy of the Final Estimate, for each project that requires an Addendum, to be used as the "Master Copy". Mark the "Master Copy" claim sheet in red with the words "Master Copy" in the description box so that it does not cover up any printing or lines. Do not make any other marks or corrections of any kind on this "Master Copy". Keep this copy so if the need arises you can make copies from it to make corrections on. (The words "Master Copy" can be covered up to make copies.) Do not send this "Master Copy" to the Contractor. This "Master Copy" should be given to the Division Auditor along with the Finals and the Division Auditor should forward to the Construction Division along with the Finals at the appropriate times (see example No.2).
- 3. On all other copies of the Final Estimate, that require an Addendum, also do the following (See the Example Included):
- A. Mark a large "X" on the last page of the Final Estimate through the items that start with "Total Work Done to Date (001-989)" and end at "Unearned Balance". Do not mark this area to the point that the amounts can not be read. Write the words "See Addendum" directly below the "X" out portion (see example no.8).
- B. Fill in and attach the "Addendum" page(s) to the front of each Final Estimate (see examples 3 thru 8). Change the claim sheet by marking through the dollar amount shown

and type in the revised dollar amount shown as "Revised Amount Due on Final Estimate" on the Addendum.

Mark and change the "Accounting Distribution" amounts beside the 1 for the Participating Dollars and beside the 2 for the Non-participating Dollars as appropriate (see example no.4).

- C. Correct the front page of the Final Estimate by marking through the dollar amount shown after the field "Amount Due this Estimate" and after the fields "Participating" and the field "Non-participating" and type in the corrected dollar amount if necessary (see example no.5).
- D. Correct the last page of the Final Estimate that shows the "Total Non-participating" dollar amount by marking through the dollar amount shown and type in the corrected dollar amount if necessary (see example no.8).
- 4. Send the Final Estimate with Addendum, claim sheet and Contractor's Notice dated 11-1-99 to the Contractor for his signatures and seals, as appropriate, just like you would normally do.

Note: The Construction Division, upon receipt of the Final Estimate with Addendum, will calculate and log the total approved dollars earned and total approved dollars to be paid to the contractor and enter into the "Gray-Book" software in the computer, update the estimate history file in the computer, log onto the "Record of Payments on Contracts" and complete the form for the Comptrollers office titled "Construction Engineers Report to Accompany Final Estimate.

Byron Poynter

Construction Consultant

Copy to: Distribution List

CCD.NEWSYS.WDP 1

# OKLAHOMA DEPARTMENT OF TRANSPORTATION ADDENDUM TO FINAL ESTIMATE ADDITIONS AND/OR DEDUCTIONS FROM FINAL ESTIMATE

PROJECT COUNTY					JOB PIECE CONTRACTOR		BAMS NO.	
-		_				Amount of Cor	rections	
Estimate	Item	Item		New Final	Added Quantity	Deducted Quantity	Contract	Corrected
Line Number	Description	Number	Units	Quantity	to Final Estimate	to Final Estimate	Price	Dollar Amount
			1					\$0.00
								\$0.00
		1						\$0.00
								\$0.00
								\$0.00
		1		1				\$0.00
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								\$0.00 \$0.00
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	EXAMPLE # 1							\$0.00
	# 1							\$0.00
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	MANY							\$0.00
1 1	P.XI				1		)	\$0.00
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								\$0.00
	Add Agent and the second secon	L	J		Total of Corrected	Dollar Amount		\$0.00
					* Amount Approx	red for Payment		
					New Amount Appr	oved for Payment		\$0.00
					* Less Previous	Payment		
	·			Revised A	mount Due or	n Final Estimate	е	\$0.00
Contractor Sig	nature	_Date						
Resident Engi	neer	_Date			* Input From th	e Final Estimate		

DOT Form 124A Ray, 5/94		FUN	D A	GENCY	ORDER N	o. c	LAIM NO.	CLAIM OF:			
DEPARTME		<u> </u>	3	45	100521			GLOVER CON	0980023 STRUCTION	/ ca	TNC*
TRANSPOR	TATION	HOR56	SENCY E	SP.				2401 SOUTH	6TH ST.	WEST	INC.
Notorized C	Claim Form SUB-AC	TIVITY	OBJ	ECT	соммодіт	Y Y	AMOUNT	P.O. BOX 4	89 FOR	<sub>s</sub> ox	74402
							7,994.37		7,994	.37	]
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				-	RECF			Oklahoma I	)enartment	of Tran	coortatic
					APR 05	1999		AS	SIGNMENT	OI IIAII	Sportain
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					. 0.5.			and authorize the	State Treasurer	to issue a	-
Enter the partial ment number if	payment or fina	al pay- parged	Partial Number	Fin: Num		T\$	7,994.37	warrant in paymer Date:	nt to said assigne	:c.	
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	E Xa	.t/\				V/45	TER C	COPY"			
The undersigned	contractor or du	ly authoriz	ed agent o	flauriil am	heing first duly	r civom on or	ath case that this		<u> </u>		
claim is true and been completed of the contract. Affian	correct. Affiair	nt further . accordance	states that the with the pla	e work, sei ns. specifi	rvices or material	s as shown by	this claim have	APPROVAL	5	7 .	994.3
the facts pertainin obtain payment; (has been personal	ig to the giving	g of things ware of the	s of value facts and	to governm circumstan	ent personnel in o	rder to procur	the contract or	Hala	5	7 ,	994.3
filing of this claim; paid, given or do any money or other	and, neither th nated or agree	ne contracto d to pay,	or nor anyo give or dor	ne subject ate to an	to the contractor	s difection or	control has been	Shar to	2 <del> </del>		994.3
Subscribed and Sworn to before me	イ	12,19	99 2	Claim:	tal	[[J]	g paymont		\$		
State of	Plaho	<u> </u>			mus of	prog	ee .	The state of the s	\$		994.3
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								complies with the p	urchasing laws o	ot this State	<b>:.</b>
						,					
								Agency's Approving	g Officer	-	
		T	TOTAL	7	,994.37						
			L_					Director		Dat	ie

# OKLAHOMA DEPARTMENT OF TRANSPORTATION ADDENDUM TO FINAL ESTIMATE ADDITIONS AND/OR DEDUCTIONS FROM FINAL ESTIMATE

	PROJECT COUNTY	MASTP-53(158)&STP-53(155) OKMULGEE	-			JOB PIECE	13992(04)	BAMS NO.	950215
	COUNTY	ORMOLGEE	-			CONTRACTOR	MR. GOODWRENC	<u>,                                    </u>	
							Amount of Co	rections	
	Estimate	ltem	Item		New Final	Added Quantity	Deducted Quantity	Contract	Corrected
	Line Number	Description	Number	Units	Quantity	to Final Estimate	to Final Estimate	Price	Dollar Amount
	120	SHEET ALUM. SIGNS	850	٠, S.F.	300.61	7.00		\$12.00	\$84.00
	121	(PL) 2 1/4" SQUARE POST TUBE	851	L.F.	500.00		82.50	\$8.00	(\$660.00)
									\$0.00
	991	ASPH. CONC. TYPE A DED.		L.S.	(1,500.00)	1.00		\$18.44	\$18.44
	993	LIQUIDATED DAMAGES		DAY	(20.00)	6.00		\$600.00	\$3,600.00
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									\$0.00
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			]						\$0.00
. 1									\$0.00
.									\$0.00
		. 0							\$0.00
		#3_/							\$0.00
		6							\$0.00
		EXAMPLE #3							\$0.00
- 1		LYAN.							\$0.00
		L.C.			}				\$0.00 \$0.00
									\$0.00
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									\$0.00
									\$0.00
l			L	L	<del></del>	Total of Corrected	Dollar Amount	L	\$3,042.44
						* Amount Approv	ved for Payment		\$1,166,118.91
						New Amount Appr			\$1,169,161.35
							Payment		\$1,158,124.54
					Revised A		n Final Estimat	е	\$11,036.81
	Contractor S	ignature	Date				A CONTRACTOR OF THE PARTY OF TH		
	•				<del></del>				
	Resident Eng	jineer	Date			* Input From th	e Final Estimate		

DOT Form 324A Rav. 5/94		FUN	D A	GENCY	ORDI	ER NO.	CL	AIM NO.	CLAIM OF:			,
DEPARTME				345	10052	······································				980023		
TRANSPOR	TATION	HOR-A	JENCY I									
Notorized of CCOUNT	Claim Form	CTIVITY	OB.	JECT	СОММ	ODITY	Δ	MOUNT	ر م <del>خاص غیبی</del> در محاص		and the second	5 g. 2 v ,
				J	APR	05 199 0.D.O.T.	1] /= [	7 <del>,994,37</del> 1,036.81 —	Oklahoma D ASS I hereby assign this	AGAI epartmen	NST	portation
Enter the partia ment number if against an encur	claim is to be	nal pay- charged	Partial Number		al TO'AM	TAL 10UNT \$	7	1,036.81 7,994-37	and authorize the S warrant in payment Date:	tate Treasure t to said assig	gnee.	(Locato
Receipt of Good (OFFICE OF P			IED CON	NTRACTS	ONLY):_		7	NA			· ·	
DATE OF DELIVERY YEAR	PURCHA ORDE NUMBI	ASE R ER	QUANTI	TY U	NIT	ITE		ESCRIPTION	***************************************	UNIT PRICE	AMOU	JNT
02/18/99	21				PR	MS-NO: OJECT: ON:	MAS R11		,STP-53(155 3950215.Y21		-	994-37 036.81
The undersigned claim is true and been completed of the contract. Affiai the facts pertainin obtain payment; thas been persona filing of this claim paid, given or do any money or othe Subscribed and Sworn to before m  State of	d correct. Affin or supplied in our supplied in ont further states ag to the giving to the giving the states and directly and, neither onated or against thing of values.  Primary JOB	ant further accordance in that (s) he is ng of thing aware of the ly involved the contracted ceed to pay, e, either dire	states that i with the p with thuly at s of value is facts and in the pro or nor any give or do city or indi	the work, se islans, specific uthorized age; to government of circumstan occedings on the subject of the control of the contro	irvices or in cations, or intent of the conent personn notes surrounding to the to the conent possible of the conent possible of the conent occurring the punty of public for the conent occurring the punty of the conent occurring the punty of the conent occurring the conent occurring the punty of the conent occurring the conent occurrence occurren	naterials as sharders, requests contractor for the in order to the inding the magnetic procurement through the contractor of order to the contractor of the	s and all the purpo procure king of the of the country	this claim have other terms of ose of certifying the contract or he contract and optract and the control has been the COMIANOMA	APPROVAL I hereby approve this complies with the pure service of t	s claim for purchasing law	$ \begin{array}{c} 77^{1} \\ 11, \\ 77^{2} \end{array} $ $ \begin{array}{c} 11, \\ 77^{2} \end{array} $ $ \begin{array}{c} 11, \\ 77, \\ 77, \\ 3 \end{array} $	036.81 994.37 036.81 994.37 036.81 036.81
			TOTAL	11	<del>7,994.</del> 1,036.8	<del>37</del> 81			Agency's Approving	, Officer	Date	

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																						R	ıı	. D	990210.B950215.Y21

13992(04) HASTP-53(158),STP-53(155 COUNTY: OKHULGEE ₱₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹₹ HIGHWAY NO: USO75 FINAL EST. NO: 21 AM PAY PERIOD FROM: 04/01/98 TO 04/01/98 INCLUSIVE IN ACCOUNT WITH:

ADDRESS: P.O. BOX 489 HUSKOGEE OK 74402 FINAL EST. NO: 21 AMOUNT DUE THIS ESTIMATE CONTRACT AHOUNT: 1,191,719.10 DATE OF WORK ORDER: 09/25/95 DATE WORK BEGAN: 10/30/95
DAYS THIS PERIOD: 000 DAYS TO DATE: 920 CONTRACT-TIME: 235 CD REVISED-DAYS: 894 11,036.81 ACCOUNT NO. | C.O. CLAIM NUMBER | OBJECT CODE | PARTICIPATING \$7<del>,99</del>4-87- | A \$.00 | 400100 | NON PARTICIPATING

CALCULATION CHECKED IN OKLA. CITY B CONTRACTOR HEREBY CERTIFIES THAT ALL LABORERS, MECHANICS, APPRENTICES AND TRAINEES EMPLOYED BY
HIN OR BY ANY SUBCONTRACTOR PERFORMING WORK UNDER THE CONTRACT ON THE PROJECT HAVE BEEN PAID WAGES AT RATES NOT
LESS THAN THOSE REQUIRED BY THE CONTRACT PROVISIONS, AND THAT THE WORK PERFORMED BY EACH SUCH LABORER, HECHANIC APPRENTICE OR TRAINEE CONFORMED TO THE CLASSIFICATIONS SET FORTH IN THE CONTRACT OR TRAINING PROGRAM PROVISIONS APPLICABLE TO THE WAGE RATE PAID.

APPLICABLE TO THE WAGE RATE PAID.

WE HEREBY AGREE THAT WE WILL ACCEPT THIS ESTIMATE AS FULL COMPENSATION FOR ALL MONEY DUE US BY THE DEPARTMENT OF TRANSPORTATION, AND HEREBY RELINQUISH ALL CLAIMS, EITHER IN CONTRACT OR IN TORT, WHICH HAVE ARISEN OR WHICH HIGHT ARISE OUT OF THE CONSTRUCTION OF SAID PROJECT.

THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL INDEBTEDNESS FOR LABOR, MATERIALS, FUEL, EQUIPMENT, EQUIPMENT RENTAL, PARTS, SUPPLIES, INSURANCE PREHIUMS, AND CLAIMS FOR ITEMS NOT SPECIFICALLY MENTIONED, WHICH ARE ATTRIBUTABLE TO PERFORMANCE OF THE WORK ON THIS PROJECT OR WHICH WERE INCOMPONABLED THEKEIN IN ANY MANNER, HAVE BEEN PAID IN FULL, AND THAT THERE ARE NOT NOW ANY PRESENTLY OUTSTANDING, UNPAID CLAIMS FOR SUCH INDEBTEDNESS; THAT MY POSITION WITH THE COMPANY IS SUCH, THAT IF THERE WERE ANY SUCH OUTSTANDING CLAIMS OF THE NATURE SPECIFIED HEREIN, I WOULD ORDINARILY BE AWARE OF THEM.

FURTHER AFFIANT SAYETH NOT.

FURTHER AFFIANT SAYETH NOT.



GLOVER CONSTRUCTION CO. 2401 SOUTH-6TH ST. W ATTEST: STATE OF OKLAHOMA, COUNTY O BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, INTAND\_FOR BAIR COUNTY AND STATE, PERSONALLY APPEARED PERSONCS WHE EXECUTED THE WITHIN AND FOREGOING INSTRU-AND ACKNOWLEDGED TO HE THAT THE, SHE, OR IT) EXECUTED THE SAME FOR THE USES AND PURPOSES THEREIN SET FORTH AND UPON OATH AVERRED THAT THE MATTERS THEREIN CON-TAINED ARE TRUE AND CORRECT.

SUBSCRIBED AND SWORN TO BEFORE HE THIS 2 DAY

OF 1911.

MY COMMISSION EXPIRES: \_

STATE OF OKLAHOHA

CONTRACT: 100521 BAMS-NO: 950215 -ET-NO.: 05

COUNTY

D E P A R T H E N T O F T R A N S P O R T A T I O N FINAL ESTIMATE NO. 21

JOB-PIECE: 13992(04)

OKHULGEE PROJECT NO.: MASTP-53(158),STP-53(155 R11.D990218.B950215.Y21 DATE OF COMPLETION 4/01/98

				_						1.8950215.Y21	
		FINAL ESTIMATE NO. 21		F	ROM: 04/01/98	3 10 04/01/9	8 INCLUSIVE		COMPLETION 4/01	./98	
	TN	ACCOUNT WITH:				TOTAL WORK	TOTAL WORK	TOTAL WORK			
			ITEM		ROJECT AGREE		DONE PREV.	DONE ON	CONTRACT		
		TTEM	NUMBER		MENT ESTIMATE		ESTIMATE	CONTRACT	PRICE	AMOUNT	
1		A I En	NUMBER	יוט ווט	QUANTITIES	ESITUALE	ESTIDATE	CONTRACT	PRICE	INDUNA	_
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	120	SHEET ALUMINUM SIGNS	850(A)	S.F	294.00	54.36	239,25	293.61	12.0000	3,523.32	_
7		(PL) 2 1/4" SQUARE TUBE POST	851	L.F	583.00	31100	582.50	582.50	8.0000	4,660.00	
		3" a 7.58 GALV. STL.PIPE POSTS		L.F	80.00	80.00	302130	80.00	11.0000	880.00	
		TRAFFIC STRIPE (PLASTIC) (4" WI		L.F	35,500.00	55.55	30,583.00	30,583.00	0.5000	15,291.50	
		TRAF. STR. (PLASTIC) (ARROWS)	855(B)	EA.	41.00		35.00	35.00	46.0000	1,610.00	
		TRAF, STR. (PLASTIC)(WORDS)	855(C)	EA.	-28.00		22.00	22.00	160.0000	3,520.00	
		(PL) REHOVAL OF EXISTING SIGHS		EA.	2.00		16.00	16.00	115.0000	1,840.00 ×	
		Y030-TRAFFIC LIGHTING PAY QUAN	TITIES								
	130	2"PVC SCH.40 PLAST.COND.BORE	802(B)	L.F	975.00		728.00	728.00	8.0000	5,824.00	
	131	2"PVC SCH.40 PLAST.COND.TR.	802(B)	L.F	4,465.00		3,986.00	3,986.00	1.8000	7,174,80	
	132	PULL BOX(SIZE I)	803	EA.	14.00		9.00	9.00	115.0000	1,035.00	
	133	STRUCTURAL CONCRETE	804	C.Y	16.00		15.66	15.66	250.0000	3,915.00	
		REINFORCING STEEL	804	LB.	902.00		901.80	- 901.80 -	0.7000	631.26	
	135	40'MTG.HT P.&6'&6'HLMA(G.STL)	806(A)	EA.	27.00		27.00	27.00	1,400.0000	37,800.00	
	136	BREAKAWAY BASE (DES. B)	807	EA.	27.00		27.00	27.00	270.0000	7,290.00	- /,
н	137	ROADWAY LUMINAIRE(250 WATT HPS	)809(A)	EA,	54.00		54.00	54.00	230.0000	12,420.00	- V
ag	138	SERVICE POLE	810(A)	EA.	1.00		1.00	1.00	1,700.0000	1,700.00	V/
e	139	I/C NO. 12 ELEC. COND.	811	L.F	5,535.00	5,184.00		5,184.00	0.2000	1,036.80	У
9	140	1/C NO. 4 ELEC. COND.	811	L.F	11,420.00		9,136.00	9,136.00	0.6000	5,481.60	
•		Y008-(NON-PART, TRAFFIC)									
	144	#(PL) PORT. CHANGEABLE MESSAGE	S960.87	EA.	2.00		2.00	2.00	40,000.0000	80,000.00 #	
		STAK-STAKING				•					
	148	STAKING	642	LUM	1.00	020	0.75	0.95	18,000.0000	17,100.00	
		MATERIALS ON HAND & NOT IN PLA	CE								
	801	(PL)PORT. CHANGEABLE MESS.SIGN	960.87	EA					36,000.0000	0.00	
	803	1/C NO. 4 ELEC. COND.	811	LF					0.3500	0.00	
		1-WAY 2 SEC. AD.PD.SG.HD	831	EA					190.0000	0.00	
		1-WAY 3 SEC AD SG HD (MAM)S-6		EA					170.0000	0.00	
		1-WAY 3 SEC. AD.SG.HD.(MAM)S-9		EA					185.0000	0.00	
		1-WAY 3 SEC. AD.SG.HD.(HAH)S-1		EA					185.0000	0.00	
		SOL.STE.DIG.IND.VEH LP DET.	828(A)	EA					78.0000	0.00	
		TRAF VEH ACT SOL ST SIG CON AS		EA					6,551.0000	0.00	
		MASTER CONTROLLER	960.66	EA					989.0000	0.00	
		RDY LIHIHAIRES (250 WATT)	809(A)	EA					165.0000	0.00	
	812	POLE & 25' TS HST ARM (G.STL)	806(A)	EΑ					1,439.2300	0.00	

# NON-PARTICIPATING

\* INDICATES OVERRUN

S T A .T E 0 F 0 K L A H 0 H A CONTRACT: 100521 BAHS-NO: 950215 SHEET-NO.: 06

OKHULGEE

COUNTY

D E P A R T H E N T O F T R A N S P O R T A T I O N JOB-PIECE: 13992(04) PROJECT NO.: HASTP-53(150),STP-53(155 R11.D990218.B950215.Y21

		FINAL ESTIMATE NO. 21			FROM: 04/01/9	8 TO 04/01/9	8 INCLUS	IVE	DATE OF	COMPLETION 4/	01/98	
	IN AL	CCOUNT WITH:				TOTAL WORK	TOTAL W	ÖRK	TOTAL WORK			
			ITEM		PROJECT AGREE	DONE THIS	DONE PR	EV.	DONE ON	CONTRACT		
		ĮTEM .	NUHBER	UN	HENT ESTIMATE	ESTIMATE	ESTIMA	TE	CONTRACT	PRICE	THUONA	
		ર્વે			QUANTITIES							
	813 P	POLE & 35' TS HST ARH (G.STL)	806(A)	EA						1,818.7700	0.00	
	814 F	POLE & 40' TS MST ARH (G.STL)	806(A)	EΑ						1,997.8700	0.00	Λ,
	815 F	POLE & 45' TS MST ARH (G. STL)	806(A)	EΑ						2,450.6200	0.00	X 1 1 /
	816 F	POLE & 50' TS MST ARM (G. STL)	806(A)	EA 1						2,750.9600	0.00	* /
	817 3	32' MH POLE 30' TS & 10' LMA	806(A)	EΑ						1,789.8500	0.00	1. /
	818 3	32' HH POLE 25' TS & 10' LHA	B06(A)	EΑ						1,581.8300	0.00	
	819 3	32' MH POLE 20' TS & 10' LMA	806(A)	EΑ						1,523.9900	0.00	0
	820 3	32' MH POLE 15' TS & 10' LMA	806(A)	EΑ						1,460.5800	0.00	$\kappa_{I}$
	821 3	32'MTG HT POLE 50',25'&10'LM	806(A)	EΑ						3,724.3200	0.00	. 17/
	822	40' HTG HT POLE & 6'& 6' HHLA	806(A)	EA	_					1,065.6800	0.00	16/
	823	BREAKAWAY BASE (DES. B)	807	EΑ						192.4400	0.00	V. <b>T</b> /
	824 (	OPTICAL EMITTERS	961.35	EΑ						1,568.4800	0.00	Y, Y
	825 2	2-CHANNEL PHASE SELECT	961.38	EΑ						1,818.7700	0.00	<i>V</i>
	826 (	OPTICAL DETECTOR (MODEL 511)	961.36	EΑ						417.1500	0.00	
ů	827 (	OPTICAL DETECTOR (HODEL 521)	961.36	EΑ						472.7700	0.00	/
3	828	OPTICAL DETECTOR (MODEL 522)	961.36	EΑ						773.1200	0.00	
	829	OPTICAL DET. CABLE	961.37	LF		811.00-	81	1.00		0.4320	0.00	
5		REDUCTION IN QUANTITY DUE TO O	UT OF SPEC.	MAT	ERIAL							
	901										0.00	
>		TOTAL WORK DONE TO DATE(001-98	9)								1,183,237.35	X /
->	991	ASPH CONC TYPE A						1.00-	1.00-	1,518.4400	1,518.44-	
->	> 993	LIQ DAMAGES 26 DAYS 2 600/DAY		DAY	,	26:.00-	-		26.00-	600.0000	15,600.00-	
-		TOTAL DEDUCTIONS/ADJUSTHENTS (?	71 - 220)								17,118.44	•

# NON-PARTICIPATING

\* INDICATES OVERRUN

# NON-PARTICIPATING

\* INDICATES OVERRUN

# OKLAHOMA DEPARTMENT OF TRANSPORTATION NOTICE TO CONTRACTORS

11-1-99

The Department of Transportation is in the process of changing to a new type of soft-ware for payment of progressive and final estimates. The "old" system will become obsolete January 1, 1999.

For Projects which have been completed under the old system but have not received a final estimate, the process will be as follows:

A final estimate will be printed before the old system is vacated and before the final audit is complete. An addendum sheet will be added to the final estimate showing any changes found during final audit plus or minus (if it is needed).

You should consider the addendum changes and the units on the final estimate as part of your review of the proposed final payment.

Please acknowledge the addendum by signing the appropriate block.

As always, if your records are significantly different than depicted on the final estimate (with or without the addendum), contact the Resident Engineer to reconcile the difference.

#### OKLAHOMA DEPARTMENT OF TRANSPORTATION

DATE:

October 7, 1999

TO:

Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM:

George Raymond, Assistant Construction Engineer

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO. 991007

COARSE AGGREGATE FOR CLASS P CONCRETE

The 1996 Standard Specification for aggregate size of the Class P Concrete has been found to be unduly rigid for the prestressed structures where it is normally used (refer page 5-66, table 509-1 note (a)).

The specification has been revised in the 1999 Standard Specifications. Referring to Section 700 - page 12, note 4 reads:

4. Coarse aggregate for Class AA or P Concrete shall be furnished in the No. 67 size. No. 7 or No. 8 coarse aggregate may be used in Class P Concrete if either the specified 28-day compressive strength is in excess of 6000 psi (41.4 Mpa) or permeability limits are specified.

This Directive allows the use of the specification as written in the 1999 Standard Specifications, on all ongoing projects, with no further authority.

eorge Raymond

Assistant Construction Engineer

Copy to: Distribution List

CCD.PAGG- One

#### OKLAHOMA DEPARTMENT OF TRANSPORTATION

DATE:

**September 17, 1999** 

TO:

Field Division Engineers, Construction Engineers & Resident Engineers

FROM:

**Byron Poynter, Construction Division** 

SUBJECT:

**CONSTRUCTION CONTROL DIRECTIVE NO. 990917** 

BOND BREAKER BETWEEN BEAMS AND BRIDGE FLOOR

Recent field visits have found that some bridge contractors are using roofing paper, plastic sheets or other material to seal off the haunch area of the deck forming. In some cases the sheets have been placed completely across the beam resulting as a bond breaker between the top of the beam and the bridge deck. (Refer to Bob Rusch's memo and sketch enclosed.)

Please stop this practice immediately. The entire top of the bridge beam must remain in contact with the bottom of the bridge deck.

Afflon Poynter P.E. Construction Division

copy to: Distribution List

Beambreaker 6

From

Subject

## Oklahoma Department of Transportation

Date September 16, 1999

Byron Poynter, Consultant - Construction Division

RECEIVED

Bob Rusch, Bridge Engineer

SEP 1 7 1999

Forming Bridge Deck Haunches for Prestressed Concrete Beams

CONSTRUCTION

Recently it has come to the attention of the Bridge Division that some of the haunches for prestressed beams have been formed using roofing paper and / or plastic sheets to prevent concrete leakage around the deck haunches. This practice must be **STOPPED** immediately. The horizontal shear design requires that the concrete on the top surface of the prestressed beam be in contact with the haunch over the full width of the top flange. The Bridge Division has noted the following problems:

- The stiff paper has caused rounding and narrowing of the haunch.
- A significant width of paper being left between the top of the prestressed concrete beam and bottom of the haunch. This breaks the bond between the beam and the deck, resulting in a reduction in the load-carrying capacity of the superstructure.
- When the paper or plastic is left in place, we are not able to inspect the haunch concrete.

When forming haunches, do not allow the use of roofing paper, plastic sheets, or any material that reduces either the specified haunch width or contact surfaces between the beam and the haunch concrete. Your cooperation in this manner is greatly appreciated.

If you have any questions, please give Mark Baker a call at (405) 521-6499.

Robert J. Rusch, P.E. Bridge Engineer

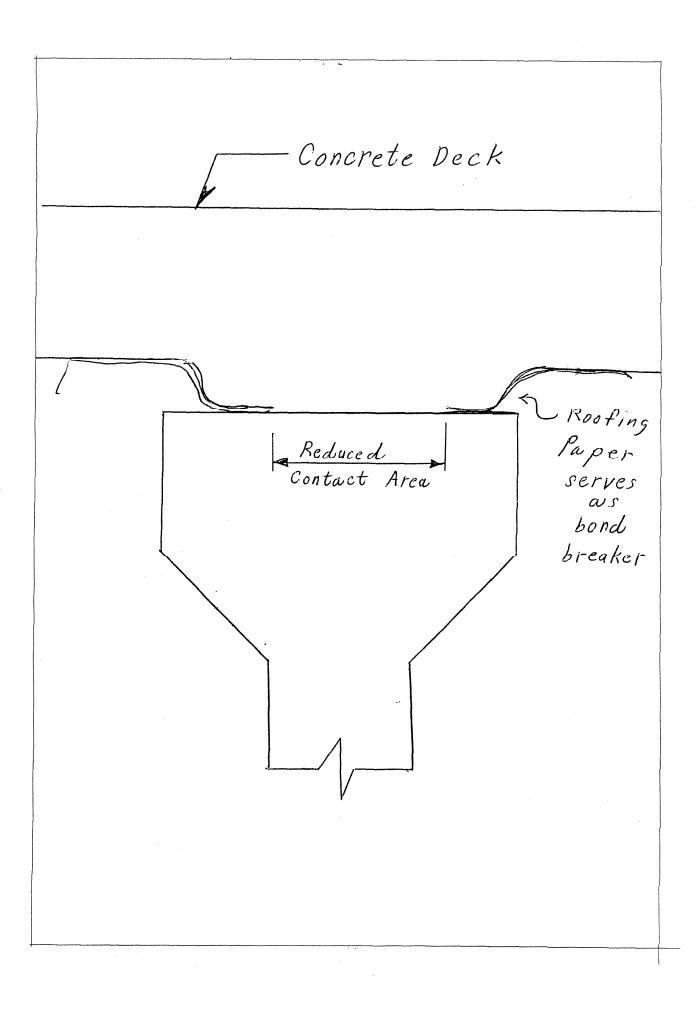
Attachment

RJR/wp

cc: Chief Engineer

Assistant Director - Preconstruction
Assistant Director - Operations

Mark Baker



#### OKLAHOMA DEPARTMENT OF TRANSPORTATION

DATE: September 1, 1999

TO: Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM: Byron Poynter, Construction Division

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO. 990901.

#### PILE BENT PROTECTION

It is desired to have a positive protection for piles from 5 ft. below the computed scour line to the bottom of the pile cap. This has been done with a coal tar paint and where a splice is needed in the scour area, an inorganic-zinc-epoxy-urethane paint system is used. These systems require a curing period which may result in significant time loss.

An alternative is to encase the pile in concrete (refer to Bridge Engineer Bob Rusch's letter and details enclosed). If encasement is selected instead of painting, the bottom of the casing is set at the elevation of the computed scour line and extended to at least one foot above the ground line or the normal water surface. The encasement may be extended to the bottom of the bent cap, in lieu paint, should the contractor elect to do so. If encasement to the bent cap is considered, cross-bracing may be omitted on approval of the Bridge Division.

Encasement is offered as an alternative to painting and there will be no additional compensation when it is used. You may implement this Directive on all projects.

Byron Poynter

Construction Division

CCD.9908.09.wpd

To

### Oklahoma Department of Transportation

Assistant Director - Operations

Date August 3, 1999 RECEIVED

Bridge Engineer

AUG 0 4 1999

DIVISION

CONSTRUCTION Specifications for Painting Piling

This memo is in response to our meeting on the specifications for painting piling. The Bridge Division is concerned about the durability of piling used in pile bents and placed in potentially corrosive environments. In order to improve the durability, we are requiring the application of paint to the upper part of the piling. During the meeting, Mr. Behne questioned the amount of time required for the Coal Tar Epoxy to cure after the pile has been painted at a welded field splice. Cure times vary with different products, but a minimum of 48 hour cure time is recommended for handling and seven days is required for a complete cure. Cure times can be speeded up with the addition of heat.

We contacted paint companies and asked them if there was an alternate product with extremely quick cure times which could be used for painting field splices. The product would have to resist the abrasive forces of piling driving, perform as good as or better than the coal tar epoxy, and be user friendly to Contractor application. We were not able to find such a product.

Our recommendation is that contractors make every effort to avoid splicing the pile in the region that requires paint. In most cases the region requiring paint will never exceed 50'. This will require careful planning on the part of the Contractor. They will need to determine the length of painted pile, splice a section of pile equal to or greater than that length, and apply the coal tar epoxy paint prior to pile driving. Since we have extended the paint requirement 5' below the computed scour line, we have built in a driving tolerance of 5' for piles that drive too short and 10' to 15', depending on the elevation of the ground line, for piles that drive too long. The portion, which is exposed above the ground line for the piles that drive too long, would be painted with the inorganic zinc epoxy - urethane (IZ - E - U) paint system after pile driving.

As an alternate to painting the piling below the ground line, the Contractor may elect to encase the piling in concrete as shown in the attached sketch and use the IZ-E-U paint system above the concrete encasement. If the Contractor chooses this option, he will be required to use an inhibitor in his concrete mix.

Our goal is to design bridges that have a 75-year design life with little or no maintenance. The addition of these paints and / or the concrete encasement will extend the life of our pile bents.

If you have any questions, please give me or Walt Peters a call at (405) 521-2606.

Bridge Engineer

RJR/wp

Attachment

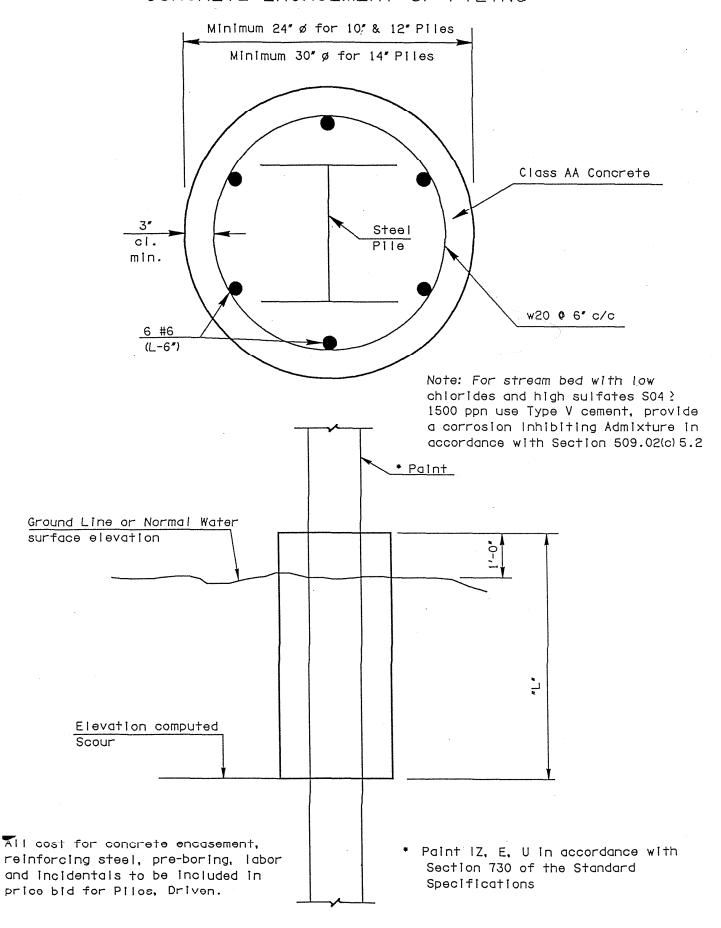
Chief Engineer cc:

Assistant Director - Preconstruction

Construction Engineer
Assistant Bridge Engineers
Construction Coordinator

MemoR77.wpd

#### CONCRETE ENCASEMENT OF PILING



#### OKLAHOMA DEPARTMENT OF TRANSPORTATION

DATE:

July 29, 1999

TO:

Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM:

Byron Poynter, Construction Engineer

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO. 990729.

#### PROFILOGRAPH SETTINGS

The Research Division has found that the Ames computerized profilographs have adjustable filter controls that significantly affect the results of a given trace. Enclosed is the complete report.

However, the conclusion is that the manufacturer recommends that the high pass filter be left at zero, increase the low pass filter to 3.0 and select "off-set" for vertical positioning of the blanking band. These settings will most nearly compare with the results taken by the manual profilographs.

In all cases consult the individual contract for proper handling of the profile measurements, as there are many versions of the specifications and others will follow. Ensure that the settings are correct on contractor operated profilographs.

Construction Engineer

Copy to: Distribution List

cd990729 One

#### Oklahoma Department of Transportation Materials and Research Division Ames 4000-B Computerized Profilograph Setup

	<u>English</u>	<u>Metric</u>	RECEIVED
Reduction Setup Modify Length	528 ft	161 m	AUG 2 4 1999
Units Short Segments	ft 264 ft	m * 80 m	CONSTRUCTION DIVISION

<sup>\*</sup> Special Provisions (SP's) that have this requirement say 80.5 m. However, the program will only take whole numbers. Current SP's give the contractor a choice of combining short segments with the previous extent or treating them as separate extents, at his option.

Bump Settings  Modify Bump/Dip Width  Modify Bump/Dip Height  Bump Detection On  Dip Detection on	25 ft 0.4 in on off	7.62 m 10 mm on off
Blanking Band Modify Width Modify Positioning Modify Rounding	0.2 in offset 0.01 in	5 mm offset 0.25 mm
Filter Settings High Pass Settings Low Pass Settings	0 3.0 ft	0 0.91 m or 91 cm
Identification Operator Name Company Name	Your Name ODOT	Your Name ODOT
Graphing Setup Horizontal Scaling Paper Factor Vertical Offset	300 to 1 1.600 260	300 to 1 1.600 260
Reports Setting Produce Graph Produce Sum. Tables Short Segment Sum. Header Long Form	on on on	on on on
Produce Graph Produce Sum. Tables Short Segment Sum.	on on	on on

#### Oklahoma Department of Transportation Materials and Research Division

#### Ames 4000-B Computerized Profilograph Setup

	<b>English</b>	<u>Metric</u>
Reduction Setup		
Modify Length	528 ft	161 m
Units	ft	m
Short segments	264 ft	* 80 m

<sup>\*</sup> Special Provisions (SP's) that have this requirement say 80.5 m. However, the program will only take whole numbers. Current SP's give the Contractor a choice of combining short segments with the previous extent or treating them as separate extents, at his option.

	*		ŕ
Bump	Settings		
<b>-</b> -	Modify Bump/Dip Width	25 ft	7.62 m
	Modify Bump/ Dip Height	0.4 in	10 mm
	Bump Detection On	on	on
	Dip Detection On	off	off
	Dip Detection on	011	OII
Blanki	ing Band		
	Modify Width	0.2 in	5 mm
	Modify Positioning	offset	offset
	Modify Rounding	0.01 in	0.25 mm
Filter	Settings		
	High Pass Settings	0	0
	Low Pass Settings	3.0 ft	91 mm
T.1	7		
Identii	fication	**	37 37
	Operator Name	Your Name	Your Name
	Company Name	ODOT	ODOT
Granh	ing Setup		
Grapii	Horizontal Scaling	300 to 1	300 to 1
	Paper Factor	1.600	1.600
	Vertical Offset	260	260
	vertical Offset	200	200
Repor	ts Setting		
•	Produce Graph	on	on
	Produce Sum. Tables	on	on
	Short Segment Sum.	on	on
	Header Long Form	on	on
	Count End Scallops	on	on
	Court mire comrobo	~~~	

#### Oklahoma Department of Transportation

Materials & Research Division

Date July 9, 1998

To Byron Poynter, Construction Division Engineer

From Lawrence J. Senkowski, Assistant Division Engineer

Subject Analyzing data with the computerized Ames profilograph

In a recent investigation, the Office of Research discovered that the computerized Ames profilographs have adjustable filter controls that could significantly affect the results of a given trace. Attached you will find a report demonstrating that the <u>results can vary from 33 percent higher to 25 percent lower than actual roughness</u> when the filter setting is changed from 0 to 10. Additionally, it appears that "must grind bumps" are also filtered out with increased settings. The attached example showed a <u>20 percent reduction in must grind bumps at a setting of 3 and a 50 percent reduction at a setting of 10.</u>

Close examination indicates that the manufacturer's recommended low pass filter setting of 2.0 gives results that are 10 percent higher than the manual profilographs. Therefore, when analyzing the data, it is recommended to keep the high pass filter at zero, increased the low pass filter to 3.0, and select "off-set" for vertical positioning of the blanking band.

Also, it is imperative that the header information not be detached from traces that are submitted for payment.

Attachment

cc: Jack Telford Paul Rachel Gary Williams File 2120-98-04

#### PROFILOGRAPH COMPARISON - Item No. 2120-98-04

At the request of ODOT Field Division III, The ODOT Office of Research conducted a comparison of smoothness test results, where testing was done with three different proifilographs. The profilographs participating in the comparison were the following. An Ames manual profilograph which had been returned to Ames Engineering, was rebuilt and computerized, and returned to Division III, The ODOT Office of Research's (new) Ames computerized profilograph, and Division IV's McCracken manual profilograph, recently transferred to them from Research. The comparison was done because of differing results from Division III's profilograph. Division III had tested Gordon Cooper Drive, in Tecumseh, with their Ames manual profilograph, which was later returned to the manufacturer to be rebuilt and computerized. When the newly computerized profilograph was returned to them, they tested the same project again. The Contractor had done some grinding since the first test, so the project was expected to be somewhat smoother. Test results from the rebuilt, computerized unit showed it to be rougher. During the June 11, 1998 comparison, the profilograph units listed tested the project with the following results.

Profilograph	Profile Index (In/Mi)						
	Run 1	Run 2					
Field Division III's (rebuilt) Ames computerized unit.	16.28	16.13					
Office of Research's (new) Ames computerized unit	15.12	15.17					
*Field Division IV's (manual) McCracken unit	9.5	9.5					

<sup>\*</sup> Interpreted by the ProScan System.

The Ames Computerized profilographs have three user-selected controls which can affect the results produced. These are 1) blanking band positioning, 2) low pass filter and 3) high pass filter.

Blanking band positioning allows the user to select how the blanking band will be placed on the profile line. The two options are "similar vertical positioning" and "off-set vertical positioning". In "similar vertical positioning" the blanking band is placed so that the end of the last band placement, for a 1/10 mi segment, is used as the starting point for band placement on the next segment. The other option, "off-set vertical positioning", places the band such that band position for each each segment is independent of adjacent segments. The "off-set vertical positioning method is similar to the method used by the ProScan system, which ODOT uses.

The low pass filter "allows the operator to filter out unwanted chatter from the trace so that a

smoother propfile will be printed and analyzed" (Ames 4000B Manual). As discussed further in this report, as settings of this filter increase, the resulting profile indexes decrease.

The high pass filter option allows the user to filter out sharp horizontal curves and vertical curves where the blanking band cannot be placed properly on a 1/10 mile length of trace due to elevation differences. Surfaces with these conditions are generally excepted from smoothness testing. Most state DOT's (including ODOT) do not use this option.

During the Gordon Cooper Drive test, both computerized units were set on "similar" blanking band positioning and had their Low Pass filters set on 2.0. The Ames Engineering representative suggested setting the Low Pass Filter on 2.0 during the class held when the computerized profilographs were delivered. "Similar" was the default blanking band position and neither profilograph operator (Research or Division III) changed it.

Although all three profilographs demonstrated acceptable repeatability, results from individual units differed widely. Ames Engineering representatives suggested checking the tapes for unusual amounts of "spiking" (caused by unfiltered vibration). The tapes showed little or no "spiking".

The McCracken manual profilograph which participated in the comparison is the oldest profilograph owned by ODOT. It is close to the point where it will have to be rebuilt if it is to continue in use. Because of this, and because it's results differed considerably from the two computerized units, it was decided that it should be checked on a track it had tested earlier. This was done on a track on U.S. 69 which was first used during a profilograph operator's course in 1995. The track has been tested various times since then. It was last tested five months ago. Results approximately agreed with previous tests and were considerably closer (between the two units) than during the Gordon Cooper Drive tests. Test results are shown below.

Profilograph	Profile Index (In/Mi)		
·	Run 1	Run 2	
Office of Research's (new) Ames computerized unit	17.70	17.73	
*Field Division IV's (manual) McCracken unit	16.2	16.4	

<sup>\*</sup> Interpreted by the ProScan System.

John Klatt of Ames Engineering had agreed (by phone) to try to meet with Research and Division III profilograph operators on this problem during his next trip to Oklahoma. On 6-25-98, He delivered an Ames Computerized profilograph to the McAlester Residency and met with Division III personnel, then came to the U.S. 69 test site where he met Office of Research personnel. He indicated the

following actions could be taken to get closer agreement between Ames computerized profilographs and other units.

- 1. Blanking band position should be changed from "similar" to "off-set".
- 2. The low pass filter setting can be changed.

When a roadway or bridge has been tested with an Ames computerized profilograph, the data collected (the profile) can be re-analyzed, using different low pass filter settings, as long as the data is still in the computer memory. Blanking band positioning, filter settings, etc. can be changed and the data analyzed using the changed settings, without having to test the roadway or bridge a second time. Parameters used during each analysis are automatically printed as a "header" on the tape where test results and the profile resulting from the analysis are printed (Figure 1).

Data from the U.S. 69 test strip was analyzed with the blanking band position changed from "similar" to "off-set". This blanking band position was used on all re-analyses. Analysis was done using various low pass filter settings, to determine which would give results with the closest agreement to those from the McCracken manual profilograph. Re-analysis was also done with two settings (0.0 and 10.0) which were outside the range where the two units were generally in agreement (within +/-10 percent). This was done to see what the effect of these settings would be on results.

Results of re-analyses of the U.S. 69 Test strip data, with low pass filter settings from 0.0 to 10.0 are listed below. Profile lines generated at each setting were visually inspected. At the 0.0, setting, there was noticeable "spiking" present on the profile line. None of the profile lines generated at other settings contained obvious spikes. However, as the settings became higher, more sharp breaks in the profile line, and short-length bumps appeared smoothed or filtered out. As filter settings became higher, the number of must-grind bumps identified was lowered as increased filtering was applied to short-length bumps and low spots. Figure 3 shows the profile lines generated at filter settings of 0.0, 2.5 and 5.0.

Profile Indices Determined by Office of Research Ames Computerized Profilograph,  Low Pass Filter Settings between 0.0 and 10.0							
Low Pass Filter Setting	0.0	2.0	2.5	3.0	4.0	5.0	10.0
Profile Index (Inches/Mile)	21.31	16.54	16.10	15.79	15.05	14.61	12.70
No. of Must- Grind Bumps	19	15	15	15	13	11	9

# Ames Profilograph Software Version 3.29B SERIAL # 480398

Contractor = Operator = jrrywilliams District = 3 Route # = 0 Pavement # = conc Pass # = 1 File = JR1FILE1.PDF Band Placement = Linear regression Band Positioning = Off-Set Band Width(in.) = 0.20 Bump Height(in.) = 0.40 Bump Width(ft.) = 25.00 Reduction Length(ft.) = 528 Low pass Filter(ft.) = 5.00 High Pass Filter(ft.) = 0.00 Scallop Rounding(in.) = 0.01 Horizontal Scale = 300 To 1 Paper Factor = 1.800 Vertical Calibration = 1.353 Horizontal Calibration = 1.422 Bump Detection = On Dip Detection = Off --Collection Time and Date--e: 09:32:42 Date: 06-11-1998 Time: 09:32:42 --Printed Time and Date--Time: 08:09:52 Date: 06-30-1998

Figure 1 "Header" Information Printed on Each Tape by the Ames Computerized Profilograph

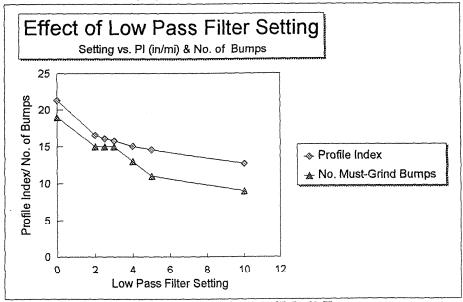


Figure 2 Effect of Low Pass Filter Setting, U.S. 69 Test

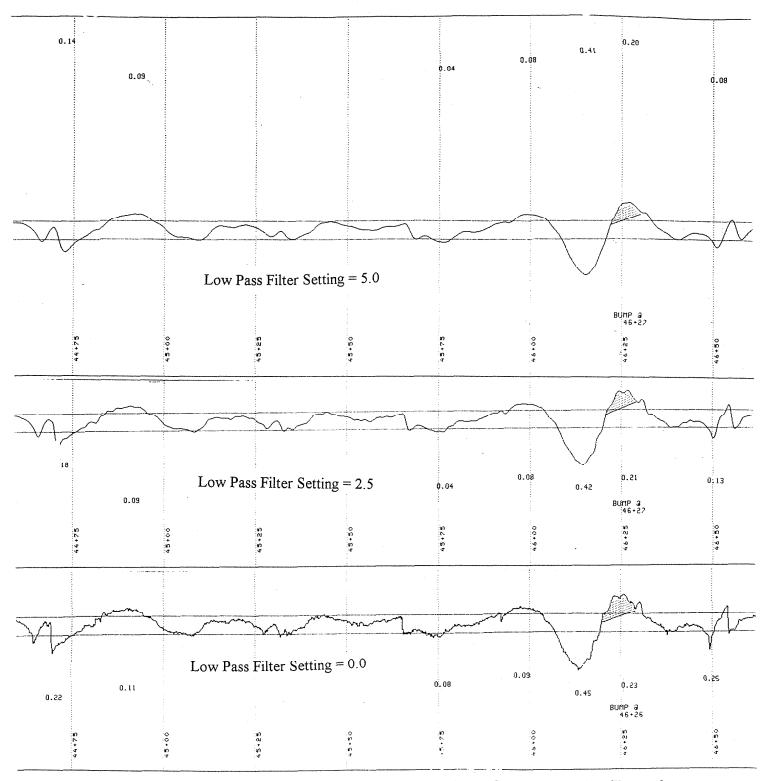


Figure 2 Section of Profile Line Generated by Research's Ames Computerized Profilograph with Low Pass Filter Settings of 0.0, 2.5 and 5.0

On the U.S. 69 test strip, a low pass filter setting of 2.5 resulted in the Ames computerized unit producing a profile index of 16.10. This agreed reasonably well with the result produced by the McCracken manual unit (interpreted by the ProScan System). The average of the two profile indices from the two tests by the manual unit was 16.30

Fortunately, data from the project where the original comparison was done (Gordon Cooper Drive, Tecumseh) was still in memory on the Office of Research Ames profilograph computer. Re-analyzing it with "off-set" blanking band positioning and various low pass filter settings produced the results summarized below. On this re-analysis, the first filter setting tried was 3.0, reasonable agreement with the manual unit was reached with a setting of 5.0. With this setting the Ames computerized unit produced a profile index of 9.33. Two Tests by the McCracken Manual unit, interpreted by the ProScan System, resulted in a profile index of 9.5 on each of the two tests. Discussion by telephone with an Ames Engineering representative indicated that 5.0 is the low pass filter setting most likely to produce results agreeing with those from manual profilographs, interpreted by ProScan.

Profile Indices Determined by Office of Research Ames Computerized Profilograph,  Low Pass Filter Settings between 3.0 and 5.0				
Low Pass Filter Setting	3.0	4.0	5.0	
Profile Index (Inches/Mile)	10.60	10.15	9.33	

Obviously, the low pass filter setting on the Ames Computerized profilograph, required to reach a reasonable agreement with the McCracken manual profilograph is not the same for all surfaces tested. Several variables may determine the filter setting required. Some possibilities are; length of path tested, roughness of the path tested, length of bumps and low spots, surface finish, and speed of the profilograph during testing. Information developed during this comparison indicates that higher (low pass) filter settings tend to produce lower profile indices, for the same path tested. This may cause a situation where a Contractors claims the low pass filter was set too low, causing a high reading.

Results of the U.S. 69 tests are tabulated by segment for each re-analysis in the Appendix attached. Inspection of the profile plots indicates that disagreement between the two profilographs by individual segments is due mainly to distance calibration differences. This occurs where both measure the same bumps and low spots, but don't put them in the same segments due to differences in horizontal distance measurement.

#### Conclusions

- 1. To get results on the Gordon Cooper Drive project which (reasonably) agree with those from the McCracken manual profilograph, the smoothness test data should be analyzed using the following parameters; Blanking band position = "Off-set" and Low pass filter setting = 5.0.
- 2. Low pass filter settings required to produce results which reasonably agree with manual profilographs are not the same for all projects tested.
- Since higher (low pass) filter settings tend to lower the profile index produced, further comparison should be done to determine settings which are most likely to produce profile indices agreeing with results from manual units. The settings identified should then be specified (required during acceptance testing).
- 4. The "header" information, which is automatically printed at the beginning of the profile tape from Ames Computerized Profilographs, should be a required part of any tapes (from this type of profilograph) used to determine smoothness for acceptance purposes. The "header" lists all parameters used to analyze the data, including filter settings and type of blanking band positioning used.

Gary Williams July 9, 1998

### Appendix, Profilograph Test Results by Segment, U.S. 69 Tests Analyzed at Various Low Pass Filter Settings

#### McCracken Manual Profilograph

Track1	Track 2

- <u>segment</u>	Length	PRI (In/Mi)	Segment	Length	PRI (In/Mi)	Avg. PRI
1	0.100	12.0	1	0.100	12.0	12.0
2	0.100	1.5	2	0.100	1.0	1.2
3	0.100	2.5	3	0.100	2.5	2.5
4	0.100	7.5	4	0.100	14.0	10.8
5	0.100	17.0	5	0.100	12.0	14.5
6	0.100	30.0	6	0.100	31.5	30.7
7	0.100	22.0	7	0.100	24.5	23.2
8	0.100	29.5	8	0.100	28.0	28.7
9	0.089	24.7	9	0.087	23.0	23.9
T	otal Avg.	16.2		Total Avg.	16.4 Total Avo	g. 16.3

#### Ames Computerized Profilograph

L.P. Filter=0.0

#### L.P. Filter=2.0

Segment	Length	<u>PRI</u>	Segment	<u>Length</u>	PRI
1	0.100	14.8	1	0.100	11.6
2	0.100	2	2	0.100	0.7
3	0.100	2.4	3	0.100	2
4	0.100	6.8	4	0.100	4.6
5	0.100	26.4	5	0.100	21.3
6	0.100	34.5	6	0.100	26.1
7	0.100	35.2	7	0.100	29.4
8	0.100	35.5	8	0.100	26.1
9	0.106	33.5	9	0.105	27.9
-	Total Avg	21.31	-	Total Avg	16 54

#### Ames Computerized Profilograph

L.P. Filter=2.5

L.P. Filter=3.0

gment	Length	PRI	Segment	Length	PRI
1	0.10	11.4	1	0.100	11.0
2	0.100	0.7	2	0.100	0.6
3	0.100	2.0	3	0.100	2.0
· 4	0.100	4.3	4	0.100	4.2
5	0.100	21.2	5	0.100	20.8
$\epsilon$	0.10	25.6	6	0.100	24.6
7	0.10	27.9	7	0.100	28.0
8	0.10	25.6	8	0.100	25.0
9	0.10	25.6	9	0.106	26.6
	Total Avg.	16.1		Total Avg.	15.79

L.P. Filter=4.0

#### L.P. Filter=5.0

egment	Length	PRI	Segment	Length	PRI
1	0.100	10.7	1	0.100	10.6
2	0.100	0.6	2	0.100	0.3
3	0,100	2.0	3	0.100	1.9
4	0.100	3.8	4	0.100	3.8
5	0.100	20.2	5	0.100	19.7
6	0.100	22.9	6	0.100	21.8
7	0.100	26.9	7	0.100	26.5
8	0.100	23.9	8	0.100	23.2
9	0.106	23.9	9	0.106	23.3
-	Total Avg.	15.05		Total Avg.	14.61

## Ames Computerized Profilograph

#### L.P. Filter=10.0

<u> segment</u>	<u>Length</u>	PRI
1	0.100	9.9
2	0.100	0
3	0.100	1.3
4	0.100	1.6
5	0.100	18.1
6	0.100	19.4
7	0.100	24
8	0.100	20.3
9	0.106	19.3
-	12.7	

#### OKLAHOMA DEPARTMENT OF TRANSPORTATION

DATE:

June 25, 1999

TO:

Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM:

Byron Poynter, Construction Engineer

SUBJECT:

CONSTRUCTION CONTROL DIRECTIVE NO. 990625

#### CURTAIN WALL SUBSTITUTIONS

There have been some occasions where steel sheet piling has been used for Curtain Walls instead of the reinforced concrete curtain walls specified. The steel walls will not have the durability of the concrete walls and could shorten the life of the structure if the steel walls deteriorate rapidly. This is especially true in some areas of the state where there is an exceptional amount of acid in the soil.

<u>Do not allow</u> this substitution on highway route projects. It may be used on Local Government Projects when it is specified or special approval is obtained form the Bridge Division (see Bob Rusch's Memo enclosed).

#### WHAT IS ACCEPTABLE:

When the curtain wall is to be placed in a stream that is so saturated that the trench walls will not stand, the concrete curtain wall may be cast in separately "in the flat" and then lifted into place after a sufficient curing period. This method will require a few additional reinforcing steel bars for the connection to the structure, for lifting and possibly a slight thickness increase to provide a tongue & groove joint, depending on the configuration needed. Confer with the Bridge Division as needed.

yron Poynter, P.E.

Construction Engineer

Copy to: Distribution List

To

# Oklahoma Department of Transportation

Date June 10, 1999

RECEIVED

From Bridge Engineer

Construction Engineer

JUN 1 1 1999

Curtain Walls for Reinforced Concrete Boxes

CONSTRUCTION

It has recently come to our attention that steel sheet piling has been used for curtain walls on several recent state highway projects. It is our opinion that even the galvanized steel sheet piling curtain walls will not be as durable as the concrete curtain walls. For this reason, we request that the practice of substituting the steel sheet piling curtain walls for the concrete curtain walls shown on the plans **be stopped**. Steel curtain walls should only be used on county projects when specified on the plans or when approved by the Bridge Engineer.

If you have any questions, please give me or Walt Peters a call at 521-2606.

Robert J. Rusch, P.E Bridge Engineer

RJR/wp

cc: Assistant Bridge Engineers

Engineering Managers
Construction Coordinator

MemoR72.wpd

DATE:

May 12, 1999

TO:

Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM:

Byron Poynter, Construction Engineers

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO.990512

This Directive Cancels Directive No.900828

# CHARGING TIME TO CONSTRUCTION PROJECTS.

It is essential that accounting of time begins on the "effective date of work order" or "date work began" whichever is the earliest and continue until "the date of completion".

The number of calendar days set up on a project includes the amount of "Normal Adverse Weather" anticipated for the project. With reference to the standard specification, when work is interrupted due to conditions described as a. b. or c. days, show the credit in the weather related column on the report.

Other weather related interruptions of the work which could not have been anticipated and non-weather interruptions such as utilities in the way, are reported in the "other" column so that one full day of credit will be given for one full day of delay.

It is essential that the contractor is advised, at the end of each month, as to the amount of time remaining to complete the work.

It is essential that adjustments to the contract time balance with the calendar in "real time". When time is added to a contract, each day is to be related to an actual calendar day to avoid time periods which overlap other time periods.

# SUSPENSIONS (EXTENSIONS):

When a project is to remain dormant for a period of time such as, a winter hold-over for a spring planting season, it is not necessary to continue time reports through the dormant period. However, with the first time report after the dormant period, add in the days of the suspension so that each day of the project duration will be accounted for.

#### INSTRUCTIONS FOR COMPLETING THE TIME REPORT FORM

Refer to the accompanying Time & Diary Report Form:

- (1) This number is the amount of time remaining from the last report, or the contract time if this is the first report The report for the first one half of the month will be approximate since it is not known how bad the weather will be until the end of the month. Due to this approximation, it is more precise to use the time remaining at the end of the preceding month to complete the end of month report for the current month.
- (2) Enter the month & day in this column. Since the year is in the heading, it need not be repeated in this column.
- (3) Charge each day in this column, one day for each date.
- (4) Show the weather related days lost in this column. Indicate low temperature, high temperature, precipitation.
- (5) This column is for days lost due to weather related reasons not anticipated in the contract and non-weather related reasons such as, utilities in the way. These credits are for unexpected occurrences and are not related to the days in the weather chart.

- (4) When there are reasons for crediting time in both columns on the same
- (5) date, list only the one with the greatest impact to the work. This will typically be the "other" column since credit is direct with no allowance for anticipated weather. When the credit is given in the "other" column and there is also weather related reasons on the same date, the weather condition is to be mentioned in the narrative part of the report in case of a delay claim. (Days of bad weather are not be counted towards a delay.)
- (6) In this space, enter the lessor of, the total number of Weather Days or the number of Normal Adverse days from the chart in the contract. When the arithmetic is performed, credit will be given if it is due.
- (7) Enter days added by formal change order. This amount will be added to the time remaining and listed on the next report as "Time Remaining From Last Report".
- (8) Time Remaining. This is the main information to pass on to the contractor. As he/she proceeds with the work, the amount of time remaining must be known. This number is carried to the top of the succeeding report.
- (9) In this space enter the number of days which have passed since the Effective Date of Work Order (or the date work began if earlier).
- (10) The Revised Time is Day Number + The amount of Time Remaining.

#### SPECIAL CONDITIONS:

THE AUTHORIZED TIME HAS BEEN EXCEEDED AND THE CONTRACT IS IN LIQUIDATED DAMAGES.

Weather days have not been estimated beyond the authorized time. Credit each day of bad weather to the project in the "other" column.

#### COMPLETE-BY CONTRACTS.

Complete-by contracts usually have an excessive amount of time between the effective date of work order and the complete-by date to complete the work. This allows the contractor to do the work when it best suits his schedule. Some contracts have a secondary provision that when work begins, it must be completed within a given time period.

For the purpose of tracking time, the number of days which will occur before the complete-by date is totaled and used to gage progress as the computer system does not recognize "complete-by". The complete-by date can only be moved by change order and these are approved only in case of a special circumstance imposed on the contract by ODOT such as a significant change in the scope of the work.

This Directive includes a revised Time & Diary Report form as part of the instructions for filling out the form and a second copy without the column markings, for your use.

Byron Poynter Construction Engineer

Copy to: Distribution List

TIME.REG 1

OT From 78 7-98							TIME &	<u>DIAR</u>	Y REP	Ţ	PROJECT NO			
Report No				Contr.	Contr. Amt.\$ County Amt. Earned \$				County		CONTRACTOR			
Effective Date W/O Work Began Description:									Amt, Paid \$	Contract Time				
Time Ren	naining From	Last Repo	rt - (1)	7										
Month & Day	Days Charged	Days Lost	ost Tem					Explain Reason for not Charging Time OR Give Brief Description of Work Peformed						
Day		Weather Related	Other	н	L	Prec.								
(2)	(3)	(4)	(5)											
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TOTAL		ļ	<u> </u>	<u> </u>		(1)		(0)	(0)	(10)				
1st Period	(-)	(+)	(+)	(-) (	6)	(+)		(8)	(9)	(10)				
TOTAL 2nd Period	(-)	(+)	(+)	Ad	mal * iverse ier Days	Days Adde Change O	ed by T rders Ren	Time maining CD	Day No.**	Revised Time	Correct:	Contr	actor	
TOTAL for	(-)	(+)	(+)	(-) (	6)	(+) (7)		(8)	(9)	(10)	_	Resident 1	Engr.	

Copy to: OKC Division File Contractor

\* Enter the smaller of the two: Total Weather Related Days or Number of Normal Adverse Days
\*\* Enter number of days expired since the earliest of, work order effective date or work began date.

	ROM:		WOLK Degan	·		6	carned a	County		CONTRACTOR Amt. Paid \$	Contract Time	
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Month &	Days Charged	Days Lost		Days Lost Temp.			Explain Reason for not Charging Time OR Give Brief Description of Work Peformed					
Day	Charged	Weather Related	Other	Н	L		•			<b>5 0</b>		
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TOTAL 1st Period	(-)	(+)	(+)	(-)		(+)						
TOTAL 2nd Period	(-)	(+)	(+)	Adv	nal * /erse er Days	Days Added by Change Orders	Time Remaining CD	Day No.**	Revised Time	Correct:		Contractor
TOTAL for Month	(-)	(+)	(+)	(-)		(+)					Resid	lent Engr.

Copy to: OKC Division File Contractor

<sup>\*</sup> Enter the smaller of the two: Total Weather Related Days or Number of Normal Adverse Days
\*\* Enter number of days expired since the earliest of, work order effective date or work began date.

DATE:

April 13, 1999 REVISED MAY 24, 1999. **SEE SHADED** 

REVISIONS

TO:

Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM:

Byron Poynter, Construction Engineer

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO. 990413.

This Directive Cancels Directive No. 930306

930603

#### TARE WEIGHTS

This Directive supersedes tare requirements of page 6, section 100 of the Contract Administration Manual.

When plant operations weight the net weight rather than the gross weight of the loaded vehicle, the producer will have to add the tare weight to obtain the gross weight to satisfy delivery requirements. If the tare weight is used only for determination of gross weight, it need be taken only one time per project.

When the tare weight is used for determination of pay weights, the tare should be taken once daily unless there is evidence of an increase in the tare ( accumulation of dirt & debris, added passenger etc.).

Oklahoma Statute 47 14-109(d) states "no department or agency of the state or any county or city or public entity thereof shall accept loads moving in interstate or intrastate commerce in excess of the legal load limits of this state." Although many loads arrive at times when an inspector may not be available to reject the load, the statute is to be enforced to the full extent possible.

Enclosed is a copy of OS 47 14-109 and the revised three page Chart of Maximum Weights Acceptable For Truck Deliveries On ODOT Construction Projects. Please note that there are separate charts for interstate, non-interstate and dump truck combinations.

With reference to section 47 OS 14.109, the table in section (a) does not apply to truck-tractor and dump semi-trailer when used in combination.

The separate treatment of dump type arrangements apparently stems from the problem of the long dump trailers tipping over when raised to full height in the wind.

Byton Poynter

Construction Engineer

Copy to: Distribution List

cd990413 One

§ 14-103F. Manufactured Home Used in Construction, Oil Field or Seasonal Farming Activities—Special Decals

Any person, firm or corporation owning a manufactured home used in the course of his construction, oil field or seasonal farming activities, may apply for a special decal allowing such person to transport said manufactured home on the highways of this state, provided this section shall not be construed to waive the permit otherwise required by Sections 14-103A and 14-103C of Title 47 of the Oklahoma Statutes.

Such special decal shall be issued by any motor license agent upon proof that said person, firm or corporation has paid all ad valorem taxes due on such manufactured home for the current tax year. The fee for such special decal shall be Four Dollars (\$4.00). Such special decal shall be valid for the taxable year.

Laws 1985, c. 238, § 5, emerg. eff. July 8, 1985.

§ 14-104. Repealed by Laws 1972, c. 56, § 2, emerg. eff. March 20, 1972.

From:

Laws 1961, p. 414, § 14-104. Laws 1969, c. 76, § 1.

#### § 14-105. Loads on Vehicles

- (a) No vehicle shall be driven or moved on any highway unless such vehicle is so constructed or loaded as to prevent any of its load from dropping, sifting, leaking, blowing or otherwise escaping therefrom, except that sand may be dropped for the purpose of securing traction, or water or other substances may be sprinkled on a roadway in cleaning or maintaining such roadway.
- (b) No person shall operate on any highway any vehicle with any load unless said load and any covering thereon is securely fastened so as to prevent said covering or load from becoming loose, detached or in any manner a hazard to other users of the highway. Any vehicle loaded with sand, cinders, or other loose material susceptible to blowing or otherwise escaping shall have such load covered so as to prevent the blowing or escaping of said load from the vehicle.
- (c) This section shall not apply to trucks loaded with livestock, poultry or agricultural products only except baled agricultural products, provided that any such truck shall be so constructed or loaded as to prevent such livestock or poultry from escaping therefrom.

Laws 1961, p. 414, § 14-105, eff. Sept. 1, 1961; Laws 1967, c. 285, § 1, emerg. eff. May 8, 1967; Laws 1979, c. 284, § 2, eff. July 1, 1979.

# § 14-106. Trailers and Towed Vehicles

Every trailer, or semitrailer, shall be equipped with a coupling device which shall be so designed and constructed that the trailer, or semitrailer will

follow substantially in the path of the vehicle drawing it without whipping or swerving from side to side. In addition, every such trailer or semitrailer except a semitrailer drawn by a truck-tractor type designed to draw or support the front end of a semitrailer, shall be coupled with stay chains or cables to the vehicle by which it is being drawn which chains or cable shall be of sufficient size and strength to prevent parting from the drawing vehicle should the regular coupling device break or become otherwise disengaged.

Laws 1961, p. 415, § 14-106, eff. Sept. 1, 1961.

Automobiles €174.

#### Safety chains

Obligation to use. Murry v. Advanced Asphalt Co., Okl.App., 751 P.2d 209 (1987).

#### § 14-107. Definitions

As used in this chapter:

- 1. "Axle load" means the total load transmitted to the road by all wheels whose centers are included between two parallel transverse vertical planes forty (40) inches apart, extending across the full width of the vehicle; and
- 2. "Tandem axle" means any two or more consecutive axles whose centers are more than forty (40) inches apart, but not more than ninety-five (95) inches apart.

Laws 1961, p. 415, § 14-107, eff. Sept. 1, 1961; Laws 1972, c. 52, § 3, emerg. eff. March 15, 1972; Laws 1977, c. 55, § 3, emerg. eff. May 16, 1977.

Automobiles ←5(1), 11, 337.

#### § 14-108. Reserved

- § 14-109. Single Axle Load Limit—Gross Weight of Vehicle and Load—Exceptions—Additional Fees
  - (a) On any road or highway:
- 1. No single axle weight shall exceed twenty thousand (20,000) pounds; and
- 2. The total gross weight in pounds imposed thereon by a vehicle or combination of vehicles shall not exceed the value given in the following table corresponding to the distance in feet between the extreme axles of the group measured longitudinally to the nearest foot.

Distance in Feet Between Maximum Load in Pounds the Extremes of Any Carried on Any Group of 2 or Group of 2 or More Consecutive Axles

	2 Axles	3 Axles	4 Axles	5 Axles	6 Axles
4	34,000				
5	34,000				
6	34,000				
7	34,000				
8	34,000	42.000			
9	39,000	42,500			
10	40,000	43,500			
11		44,000			
12		45,000	50,000		

0.S.

Distance in Feet Between the Extremes of Any. Carried on Any Group of 2 or Group of 2 or More Consecutive Axles

2 Axles 3 Axles 4 Axles 5 Axles 6 Axles

3 45,500 50,500 — — — —

3CCut.	110 12000				
	2 Axles	3 Axles	4 Axles	5 Axles	6 Axles
13		45,500	50,500		
14		46,500	51,500		
15	<del></del>	47,000	52,000	***************************************	
16	<del></del>	48,000	52,500	58,000	
17		48,500	53,500	58,500	
18		49,500	54,000	59,000	
19		50,000	54,500	60,000	
20		51,000	55,500	60,500	66,000
21		51,500	56,000	61,000	66,500
22		52,500	56,500	61,500	67,000
23		53,000	57,500	62,500	68,000
24		54,000	58,000	63,000	68,500
25		54,500	58,500	63,500	69,000
26		56,000	59,500	64,000	69,500
27	-	57,500	60,000	65,000	70,000
28	***************************************	59,000	60,500	65,500	71,000
29		60,500	61,500	66,000	71,500
30		62,000	62,000	66,500	72,000
31		63,500	63,500	67,000	72,500
32		64,000	64,000	68,000	73,500
33		<del></del>			
34			64,500	68,500	74,000
35			65,000	69,000	74,500
			66,000	70,000	75,000
36	************		68,000	70,500	75,500
37		***************************************	68,000	71,000	76,000
38			69,000	72,000	77,000
39			70,000	72,500	77,500
40	<del></del> ;		71,000	73,000	78,000
41			72,000	73,500	78,500
42			73,000	74,000	79,000
43			73,280	75,000	80,000
44			73,280	75,500	80,500
45			73,280	76,000	81,000
46			73,280	76,500	81,500
47			73,500	77,500	82,000
48			74,000	78,000	83,000
49			74,500	78,500	83,500
50		-	75,500	79,000	84,000
51	***************************************		76,000	80,000	84,500
52			76,500	80,500	85,000
53			77,500	81,000	86,000
54		-	78,000	81,500	86,500
55			78,500	82,500	87,000
56		. —	79,500	83,000	87,500
57			80,000	83,500	88,000
58				84,000	89,000
59				85,000	89,500
60	<del></del>		***************************************	85,500	90,000

- (b) Except as to gross limits, the table in subsection (a) of this section shall not apply to a truck-tractor and dump semitrailer when such are used as a combination unit. In no event shall the maximum load in pounds carried by any set of tandem axles exceed thirty-four thousand (34,000) pounds for vehicles exempt from said table. However, any such vehicle operating with split tandem axles or tri-axles shall adhere to the table.
- (c) Special permits may be issued as provided in this title for divisible loads for vehicle configurations in excess of six (6) axles. Said permits may

not exceed the Table "B" federal weights formula imposed by Title 23, U.S. Code, Section 127. Vehicles moving under such permits shall not traverse H-15 bridges or less without the expressed approval of the Secretary of Transportation.

- (d) Except for loads moving under special permits as provided in this title, no department or agency of the state or any county or city or public entity thereof shall accept loads moving in interstate or intrastate commerce in excess of the legal load limits of this state.
- (e) Exceptions to this section will be refuse collection vehicles used by counties, cities and towns or by private companies contracted by counties, cities and towns provided the following conditions are met:
- 1. Calculation of weight for a refuse collection vehicle shall be "Gross Vehicle Weight". The "Gross Vehicle Weight" of a refuse collection vehicle may not exceed the otherwise applicable weight by more than fifteen percent (15%). The weight on individual axles must not exceed the manufacturer's component ratings which includes axle, suspension, wheels, rims, brakes and tires as shown on the vehicle certification label or tag; and
- 2. Refuse collection vehicles operated under these exceptions will not be allowed to operate on interstate highways.
- (f) Refuse collection vehicles operating under exceptions shall purchase an annual special overload permit for One Hundred Dollars (\$100.00). This fee shall be apportioned as provided for in Section 1104 of this title.
- OI this title.

  Laws 1961, p. 415, § 14-109, eff. Sept. 1, 1961; Laws 1969, c. 307, § 1, emerg. eff. April 28, 1969; Laws 1972, c. 52, § 4, emerg. eff. March 15, 1972; Laws 1977, c. 55, § 4, emerg. eff. May 16, 1977; Laws 1985, c. 155, § 1, emerg. eff. June 11, 1985; Laws 1985, c. 179, § 62, operative July 1, 1985; Laws 1986, c. 279, § 22, operative July 1, 1986; Laws 1987, c. 6, § 5, emerg. eff. March 16, 1987; Laws 1987, c. 232, § 2, emerg. eff. July 5, 1987; Laws 1990, c 108, § 1, operative July 1, 1990.

#### § 14-109.1. Load Overweight Violations Not to Be Recorded as Traffic Offenses Under Certain Conditions

Motor vehicle load overweight violations shall not be recorded as traffic offenses on the driving record of the operator of the vehicle, unless the operator is the owner of the vehicle, or the owner of a majority of the stock of any company which is the owner of the vehicle, on which the violation occurs. Laws 1977, p. 1004, S.J.R.No.33, § 1.

#### § 14-110. Carrying Registration Certificate— Inspection

The registration certificate for any truck, trailer, semitrailer or combination thereof shall be carried in or on the vehicle at all times and shall be presented on demand of any officer of the Department of

OKLAHOMA DEPARTMENT OF TRANSPORTATION							
POLICY DIRECTIV	E			NO PHOE			
SUBJECT NON-A	CCEPTANO	CE OF OVERWEIGH	IT DELIVERIES	PAGE NO. 1 of 1 DATED 05-30-99			
EFFECTIVE DATE 05-30-9	9	ISSUED BY DIRECTOR	APPROVED C	M=Call			
POLICY REPLACED Yes	POLICY NO.	D-404-3	PAGE NO. All	DATED 09-01-96			



#### **POLICY**

CERTAIN CONSTRUCTION AND MAINTENANCE MATERIALS, DELIVERED IN VEHICLES AND WHICH ARE FOUND TO BE TO BE IN EXCESS OF THE LEGAL WEIGHT LIMITS, SHALL NOT BE ACCEPTED.

# IMPLEMENTATION (SPECIFIC):

Oklahoma Statute Title 47 Section {14-109(d)} states in part, "Except for loads moving under special permits as provided in this title, no department or agency of the state or any county, city or public entity thereof shall accept loads moving in interstate or intrastate commerce in excess of the legal load limits of this state."

In compliance with this Statute, any vehicle delivering materials for construction or maintenance projects from outside the project limits and having a way bill indicating the vehicle to be in excess of the legal weight limit, as configured, which does not possess a special permit for the excess weight, will not be permitted to unload and will, if possible, be removed from the project. Department personnel should verify vehicle configuration weight limits using the standards and formulas shown on Appendix 1.

If a vehicle is unloaded prior to detection of an excess weight condition, payment of the load will be limited to the legal weight of materials. No payment will be made for materials in the load which exceed the legal weight limit.

It is not the intent of the Directive to require scale tickets on items that are not paid for by weight or volume based on weight.

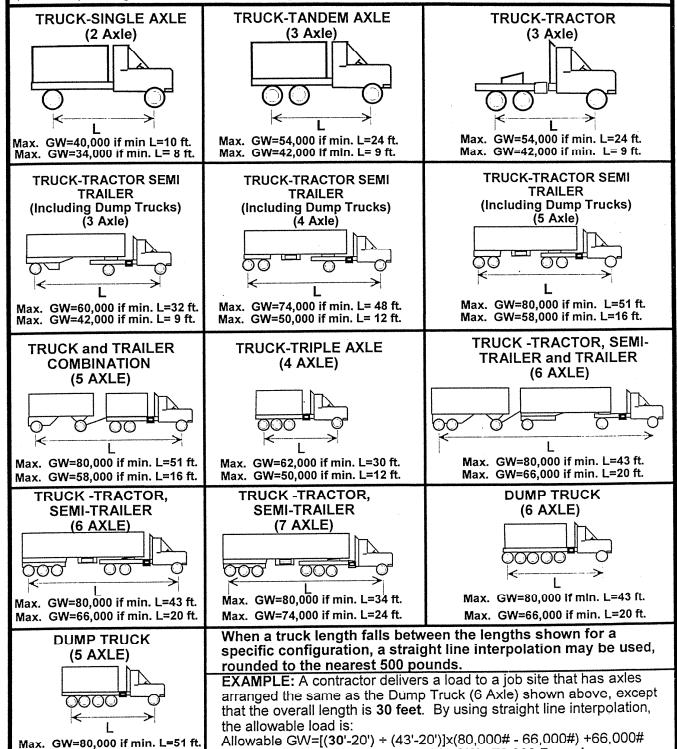
In conjunction with routine and normal inspection of projects, construction or maintenance personnel are to make occasional "spot" checks to ensure that incoming loads do not exceed weight limits.

# FOR INTERSTATE TRAVEL ONLY

D404-3 REVISED 5/20/99 PAGE 1 of 3

MAXIMUM WEIGHTS ACCEPTABLE FOR TRUCK DELIVERIES OF MATERIALS ON OKLAHOMA DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECTS

(For weights of trucks with overall lengths between the limits shown, use straight line interpolation)



NOTE: MAXIMUM WEIGHTS SHOWN ON THESE FIGURES ARE TO BE USED ONLY FOR ACCEPTANCE OF MATERIALS BY OKLAHOMA DEPARTMENT OF TRANSPORTATION PERSONNEL. THESE MAXIMUM WEIGHTS HAVE NO BEARING ON THE DEPARTMENT OF PUBLIC SAFETY ENFORCEMENT AUTHORITY OF SIZE & WEIGHT STATUTORY REQUIREMENTS OR THE MAXIMUM WEIGHT FOR WHILE THE VEHICLE IS INSURED.

Use Allowable GW= 72,000 Pounds

=72.087 Pounds

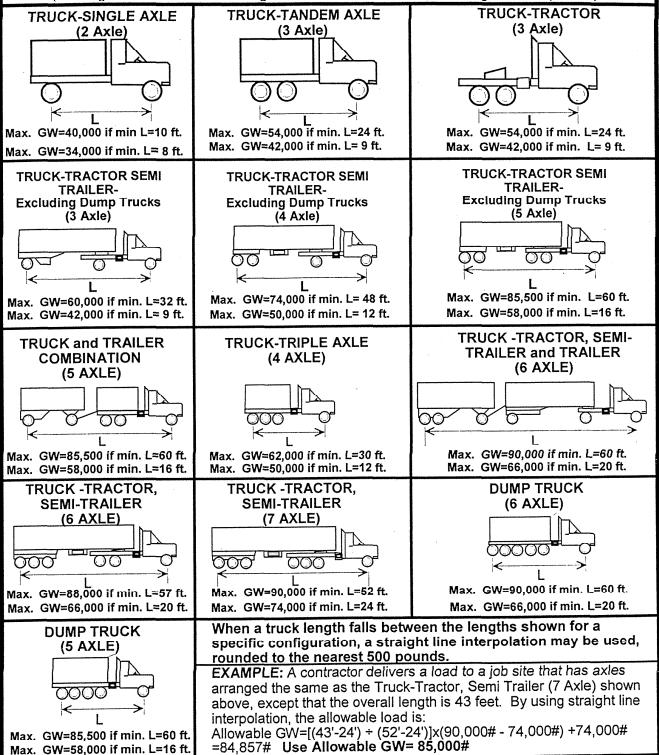
Max. GW=58,000 if min. L=16 ft.

D404-3 REVISED 5/20/99 PAGE 2 of 3

# FOR NON-INTERSTATE TRAVEL ONLY

MAXIMUM WEIGHTS ACCEPTABLE FOR TRUCK DELIVERIES OF MATERIALS ON OKLAHOMA DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECTS

(For weights of trucks with overall lengths between the limits shown, use straight line interpolation)

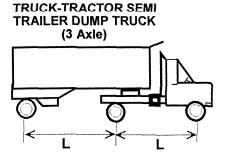


NOTE: MAXIMUM WEIGHTS SHOWN ON THESE FIGURES ARE TO BE USED ONLY FOR ACCEPTANCE OF MATERIALS BY OKLAHOMA DEPARTMENT OF TRANSPORTATION PERSONNEL. THESE MAXIMUM WEIGHTS HAVE NO BEARING ON THE DEPARTMENT OF PUBLIC SAFETY ENFORCEMENT AUTHORITY OF SIZE & WEIGHT STATUTORY REQUIREMENTS OR THE MAXIMUM WEIGHT FOR WHILE THE VEHICLE IS INSURED.

PAGE 3 of 3

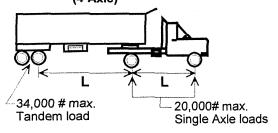
# FOR TRAVEL ON NON-INTERSTATE HIGHWAYS

FOR TRUCK-TRACTOR, SEMI TRAILER DUMP TRUCKS ONLY



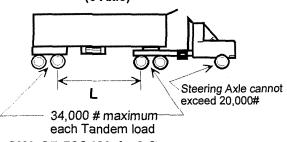
Max. GW=60,000# if each L is 8 ft. or greater
(No single axle can exceed 20,000#)

TRUCK-TRACTOR SEMI TRAILER DUMP TRUCK (4 Axle)



Max. GW=74,000# if each L is 8 ft. or greater

TRUCK-TRACTOR SEMI TRAILER DUMP TRUCK (5 Axle)



Max. GW=85,500 if L is 8 ft. or greater

#### **GENERAL RULES**

The Oklahoma Vehicle, Criminal, Alcohol, Tobacco & Drug Laws, Section 14-109 B States;

"B. Except as to gross limits, the table in subsection A of this section shall not apply to a truck-tractor and dump semitrailer when such are used as a combination unit. In no event shall the maximum load in pounds carried by any set of tandem axles exceed thirty-four thousand (34,000) pounds for vehicles exempt from the table. However, any such vehicle operating with split tandem axles or tri-axles shall adhere to the table."

#### Section 14-109.2 B states;

- **\*B.** This section shall not be construed to allow or permit any vehicle or combination of vehicles to exceed:
- 1. The axle load limit, as prescribed in Section 14-109 of this title, of twenty thousand (20,000) pounds per single axle; or
- 2. The tandem axle weight as prescribed in Sections 14-101 and 4-109 of this title (34,000 pounds); or
- 3. The overall gross vehicle weight of eighty thousand (80,000) pounds for vehicles or ninety thousand (90,000) pounds for longer combination vehicles as defined in U.S. Code 23, Section 127, operating on the Dwight D. Eisenhower System of Interstate and Defense Highways In accordance with the provisions of Section 14-118 of this title: or
- 4. The total overall gross weight of ninety thousand (90,000) pounds for all other highways in this state, except those highways prescribed in Section 14-113 of this title."

#### **DEFINITIONS**

Axle Load- the total load transmitted to the road by all wheels whose centers are included between two parallel transverse vertical planes forty (40)inches apart, extending across the full width of the vehicle. No single axle may exceed twenty thousand (20,000) pounds.

<u>Tandem Axle-</u> two or more consecutive axles whose centers are more than forty (40) inches apart, but no more than ninety-five (95) inches apart. No tandem axle shall exceed thirty-four thousand (34,000) pounds.

<u>Triple, or Tri-Axle-</u> a group of three consecutive axles. No triple axle shall exceed fourty-two thousand (42,000) pounds.

NOTE: MAXIMUM WEIGHTS SHOWN ON THESE FIGURES ARE TO BE USED ONLY FOR ACCEPTANCE OF MATERIALS BY OKLAHOMA DEPARTMENT OF TRANSPORTATION PERSONNEL. THESE MAXIMUM WEIGHTS HAVE NO BEARING ON THE DEPARTMENT OF PUBLIC SAFETY ENFORCEMENT AUTHORITY OF SIZE & WEIGHT STATUTORY REQUIREMENTS OR THE MAXIMUM WEIGHT FOR WHILE THE VEHICLE IS INSURED.

§ 14-103F. Manufactured Home Used in Construction, Oil Field or Seasonal Farming Activities—Special Decals

Any person, firm or corporation owning a manufactured home used in the course of his construction, oil field or seasonal farming activities, may apply for a special decal allowing such person to transport said manufactured home on the highways of this state, provided this section shall not be construed to waive the permit otherwise required by Sections 14–103A and 14–103C of Title 47 of the Oklahoma Statutes.

Such special decal shall be issued by any motor license agent upon proof that said person, firm or corporation has paid all ad valorem taxes due on such manufactured home for the current tax year. The fee for such special decal shall be Four Dollars (\$4.00). Such special decal shall be valid for the taxable year.

Laws 1985, c. 238, § 5, emerg. eff. July 8, 1985.

§ 14-104. Repealed by Laws 1972, c. 56, § 2, emerg. eff. March 20, 1972.

From:

Laws 1961, p. 414, § 14-104. Laws 1969, c. 76, § 1.

#### §: 14-105. Loads on Vehicles

- (a) No vehicle shall be driven or moved on any highway unless such vehicle is so constructed or loaded as to prevent any of its load from dropping, sifting, leaking, blowing or otherwise escaping therefrom, except that sand may be dropped for the purpose of securing traction, or water or other substances may be sprinkled on a roadway in cleaning or maintaining such roadway.
- (b) No person shall operate on any highway any vehicle with any load unless said load and any covering thereon is securely fastened so as to prevent said covering or load from becoming loose, detached or in any manner a hazard to other users of the highway. Any vehicle loaded with sand, cinders, or other loose material susceptible to blowing or otherwise escaping shall have such load covered so as to prevent the blowing or escaping of said load from the vehicle.
- (c) This section shall not apply to trucks loaded with livestock, poultry or agricultural products only except baled agricultural products, provided that any such truck shall be so constructed or loaded as to prevent such livestock or poultry from escaping therefrom.

Laws 1961, p. 414, § 14-105, eff. Sept. 1, 1961; Laws 1967, c. 285, § 1, emerg. eff. May 8, 1967; Laws 1979, c. 284, § 2, eff. July 1, 1979.

#### § 14-106. Trailers and Towed Vehicles

Every trailer, or semitrailer, shall be equipped with a coupling device which shall be so designed and constructed that the trailer, or semitrailer will

follow substantially in the path of the vehicle drawing it without whipping or swerving from side to side. In addition, every such trailer or semitrailer except a semitrailer drawn by a truck-tractor type designed to draw or support the front end of a semitrailer, shall be coupled with stay chains or cables to the vehicle by which it is being drawn which chains or cable shall be of sufficient size and strength to prevent parting from the drawing vehicle should the regular coupling device break or become otherwise disengaged.

Laws 1961, p. 415, § 14-106, eff. Sept. 1, 1961.

Automobiles ⇔174.

#### Safety chains

Obligation to use. Murry v. Advanced Asphalt Co., Okl.App., 751 P.2d 209 (1987).

#### § 14-107. Definitions

As used in this chapter:

- 1. "Axle load" means the total load transmitted to the road by all wheels whose centers are included between two parallel transverse vertical planes forty (40) inches apart, extending across the full width of the vehicle; and
- 2. "Tandem axle" means any two or more consecutive axles whose centers are more than forty (40) inches apart, but not more than ninety-five (95) inches apart.

Laws 1961, p. 415, § 14-107, eff. Sept. 1, 1961; Laws 1972, c. 52, § 3, emerg. eff. March 15, 1972; Laws 1977, c. 55, § 3, emerg. eff. May 16, 1977.

Automobiles ←5(1), 11, 337.

#### § 14-108. Reserved

- § 14-109. Single Axle Load Limit—Gross Weight of Vehicle and Load—Exceptions—Additional Fees
  - (a) On any road or highway:
- 1. No single axle weight shall exceed twenty thousand (20,000) pounds; and
- 2. The total gross weight in pounds imposed thereon by a vehicle or combination of vehicles shall not exceed the value given in the following table corresponding to the distance in feet between the extreme axles of the group measured longitudinally to the nearest foot.

- ILA.CO	O LIMICS	A LIVICO	O WYIES	O TAKE
34,000				
34,000				
34,000				
34,000	-			
34,000	42,000			
39,000	42,500			
40,000	43,500	-,	4-1-4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
	44,000			
		50,000		
	34,000 34,000 34,000 34,000 34,000 39,000	34,000     ——       34,000     ——       34,000     ——       34,000     42,000       39,000     42,500	34,000	34,000

Distance in Feet Between the Extremes of Any. Group of 2 or More Consecutive Axles

Maximum Load in Pounds Carried on Any Group of 2 or More Consecutive Axles

260	ACTIVE LIVICS				
	2 Axles	3 Axles	4 Axles	5 Axles	6 Axles
13		45,500	50,500		
14		46,500	51,500		
15		47,000	52,000		
16		48,000	52,500	58,000	
17		48,500	53,500	58,500	
18		49,500	54,000	59,000	
19		50,000	54,500	60,000	
20		51,000	55,500	60,500	66,000
21		51,500	56,000	61,000	66,500
22		52,500	56,500	61,500	67,000
23		53,000	57,500	62,500	68,000
24		54,000	58,000	63,000	68,500
25		54,500	58,500	63,500	69,000
26		56,000	59,500	64,000	69,500
27		57,500	60,000	65,000	70,000
28		59,000	60,500	65,500	71,000
29		60,500	61,500	66,000	71,500
30		62,000	62,000	66,500	72,000
31		63,500	63,500	67,000	72,500
32		64,000	64,000	68,000	73,500
33			64,500	68,500	74,000
34			65,000	69,000	74,500
35			66,000	70,000	75,000
36			68,000	70,500	75,500
37			68,000	71,000	76,000
38			69,000	72,000	77,000
39		***************************************	70,000	72,500	77,500
40			71,000	73,000	78,000
41	`.		72,000	73,500	78,500
42			73,000	74,000	79,000
43			73,280	75,000	80,000
44			73,280	75,500	80,500
45			73,280	76,000	81,000
46			73,280	76,500	81,500
47			73,500	77,500	82,000
48			74,000	78,000	83,000
49			74,500	78,500	83,500
50			75,500	79,000	84,000
51			76,000	80,000	84,500
52			76,500	80,500	85,000
53			77,500	81,000	86,000
-				81,500	86,500
54			78,000	01,000	
55			78,500	82,500	87,000
56			79,500	83,000	87,500
57	<del></del>	***************************************	80,000	83,500	88,000
58				84,000	89,000
59				85,000	89,500
60				85,500	90,000

- (b) Except as to gross limits, the table in subsection (a) of this section shall not apply to a trucktractor and dump semitrailer when such are used as a combination unit. In no event shall the maximum load in pounds carried by any set of tandem axles exceed thirty-four thousand (34,000) pounds for vehicles exempt from said table. However, any such vehicle operating with split tandem axles or tri-axles shall adhere to the table.
- (c) Special permits may be issued as provided in this title for divisible loads for vehicle configurations in excess of six (6) axles. Said permits may

not exceed the Table "B" federal weights formula imposed by Title 23, U.S. Code, Section 127. Vehicles moving under such permits shall not traverse H-15 bridges or less without the expressed approval of the Secretary of Transportation.

- (d) Except for loads moving under special permits as provided in this title, no department or agency of the state or any county or city or public entity thereof shall accept loads moving in interstate or intrastate commerce in excess of the legal load limits of this state.
- (e) Exceptions to this section will be refuse collection vehicles used by counties, cities and towns or by private companies contracted by counties, cities and towns provided the following conditions are met:
- 1. Calculation of weight for a refuse collection vehicle shall be "Gross Vehicle Weight". The "Gross Vehicle Weight" of a refuse collection vehicle may not exceed the otherwise applicable weight by more than fifteen percent (15%). The weight on individual axles must not exceed the manufacturer's component ratings which includes axle, suspension, wheels, rims, brakes and tires as shown on the vehicle certification label or tag; and
- 2. Refuse collection vehicles operated under these exceptions will not be allowed to operate on interstate highways.
- (f) Refuse collection vehicles operating under exceptions shall purchase an annual special overload permit for One Hundred Dollars (\$100.00). This fee shall be apportioned as provided for in Section 1104 of this title.
- of this title.

  Laws 1961, p. 415, § 14-109, eff. Sept. 1, 1961; Laws 1969, c. 307, § 1, emerg. eff. April 28, 1969; Laws 1972, c. 52, § 4, emerg. eff. March 15, 1972; Laws 1977, c. 55, § 4, emerg. eff. May 16, 1977; Laws 1985, c. 155, § 1, emerg. eff. June 11, 1985; Laws 1985, c. 179, § 62, operative July 1, 1985; Laws 1986, c. 279, § 22, operative July 1, 1986; Laws 1987, c. 6, § 5, emerg. eff. March 16, 1987; Laws 1987, c. 232, § 2, emerg. eff. July 5, 1987; Laws 1990, c. 108, § 1, operative July 1, 1990.

#### § 14-109.1. Load Overweight Violations Not to Be Recorded as Traffic Offenses Under Certain Conditions

Motor vehicle load overweight violations shall not be recorded as traffic offenses on the driving record of the operator of the vehicle, unless the operator is the owner of the vehicle, or the owner of a majority of the stock of any company which is the owner of the vehicle, on which the violation occurs. Laws 1977, p. 1004, S.J.R.No.33, § 1.

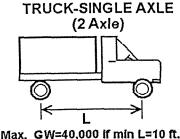
#### § 14-110. Carrying Registration Certificate— Inspection

The registration certificate for any truck, trailer, semitrailer or combination thereof shall be carried in or on the vehicle at all times and shall be presented on demand of any officer of the Department of



# MAXIMUM WEIGHTS ACCEPTABLE FOR TRUCK DELIVERIES OF MATERIALS ON OKLAHOMA DEPARTMENT OF TRANSPORTATION CONSTRUCTION PROJECTS

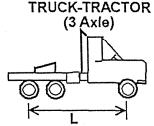
(For weights of trucks with overall lengths between the limits shown, use straight line interpolation)



Max. GW=40,000 if min L=10 ft. Max. GW=34,000 if min. L= 8 ft.

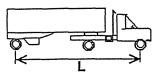
# TRUCK-TANDEM AXLE (3 Axle)

Max. GW=54,000 if min. L=24 ft. Max. GW=42,000 if min. L= 9 ft.



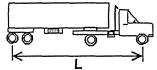
Max. GW=54,000 if min. L=24 ft. Max. GW=42.000 if min. L= 9 ft.

#### TRUCK-TRACTOR SEMI TRAILER (3 Axle)



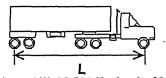
Max. GW=60,000 if min. L=32 ft. Max. GW=42,000 if min. L= 9 ft.

#### TRUCK-TRACTOR SEMI TRAILER (4 Axle)



Max. GW=74,000 if min. L= 48 ft. Max. GW=50,000 if min. L= 12 ft.

#### TRUCK-TRACTOR SEMI TRAILER (5 Axle)



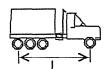
Max. GW=85,500 if min. L=60 ft. Max. GW=58,000 if min. L=16 ft.

#### TRUCK and TRAILER COMBINATION (5 AXLE)



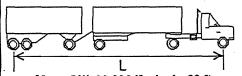
Max. GW=85,500 if min. L=60 ft. Max. GW=58,000 if min. L=16 ft.

# TRUCK-TRIPLE AXLE (4 AXLE)



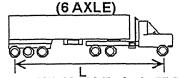
Max. GW=62,000 if min. L=30 ft. Max. GW=50,000 if min. L=12 ft.

#### TRUCK -TRACTOR, SEMI-TRAILER and TRAILER (6 AXLE)



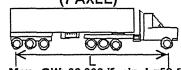
Max. GW=90,000 if min. L=60 ft. Max. GW=66,000 if min. L=20 ft.

# TRUCK -TRACTOR, SEMI-TRAILER



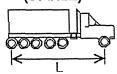
Max. GW=88,000 if min. L=57 ft. Max. GW=66,000 if min. L=20 ft.

TRUCK -TRACTOR, SEMI-TRAILER (7 AXLE)



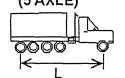
Max. GW=90,000 if min. L=52 ft. Max. GW=74,000 if min. L=24 ft.

#### DUMP TRUCK (6 AXLE)



Max. GW=90,000 if min. L=60 ft. Max. GW=66,000 if min. L=20 ft

#### DUMP TRUCK (5 AXLE)



Max. GW=85,500 if min. L=60 ft. Max. GW=58,000 if min. L=16 ft.

When a truck length falls between the lengths shown for a specific configuration, a straight line interpolation may be used, rounded to the nearest 500 pounds.

**EXAMPLE:** A contractor delivers a load to a job site that has axles arranged the same as the Truck-Tractor, Semi Trailer (7 Axle) shown above, except that the overall length is 43 feet. By using straight line interpolation, the allowable load is:

Allowable GW=[(43'-24') + (52'-24')]x(90,000# - 74,000#) +74,000# =84.857# Use Allowable GW= 85.000#

NOTE: MAXIMUM WEIGHTS SHOWN ON THESE FIGURES ARE TO BE USED ONLY FOR ACCEPTANCE OF MATERIALS BY OKLAHOMA DEPARTMENT OF TRANSPORTATION PERSONNEL. THESE MAXIMUM WEIGHTS HAVE NO BEARING ON THE DEPARTMENT OF PUBLIC SAFETY ENFORCEMENT AUTHORITY OF SIZE & WEIGHT STATUTORY REQUI REMENTS OR THE MAXIMUM WEIGHT FOR WHILE THE VEHICLE IS INSURED.

DATE:

March 31, 1999

TO:

Field Division Engineers, Division Construction Engineers, and

**Resident Engineers** 

FROM:

Byron Poynter, Construction Engineers

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO. 990331

# CLARIFICATION OF CONSTRUCTION SIGNS (METRIC)

On conversion of Construction Traffic Control Signs from English to metric, the dimension for the medium size sign shown as 6.26 SF to 15.99 SF English measure was rounded upwards from 1.485 SM to 1.49 SM thus allowing an interpretation that a 16 SF sign would be the medium size rather than the large size, since 1.49 SM is slightly greater than 16 SF.

The intent has been, that the same nominal sizes paid for in English measure would be the same in metric. The dimensions have been revised to avoid any further misinterpretation (see memo from Chief Traffic Engineer enclosed).

This is your authority to pay for signs of 1.48 SM or greater at the same rate as the signs from 1.50 SM to 2.99 SM, on ongoing projects.

Byron Poynter

Construction Engineer

Copy to: Distribution List

METRIC.SNS ONE

DATE:

March 30, 1999

TO:

Byron Poynter, Construction Engineer

FROM:

Harold R. Smart, Chief Traffic Engineer

SUBJECT: Construction Traffic Control Signs

Due to unit conversion from English to metric, the following pay items had to be modified to clarify the sign sizes:

	English	Metric	Metric (Revised)
Small Sign	0 sf to 6.25 sf	0 to 0.58 m2	0 to 0.59 m2
Medium Sign	6.26 sf to 15.99 sf	0.59 m2 to 1.49 m2	0.60 m2 to 1.47 m2
Large Sign	16.0 sf to 32.99 sf	1.50 m2 to 2.99 m2	1.48 m2 to 3.06 m2

The rounding error created some confusion for the Field personnel. Converting 16 sf to metric would be 1.485, which was rounded to 1.49. Pay items showed this as being a medium sign. This was not our intention. A 16 sf sign should be considered as a large sign. The revised pay items for signs corrected the rounding error.

The Traffic Engineering Division regrets any confusion or problems that were created due to the conversion. If you have any questions or comments, please contact this office.

HRS:FE:dlt

DATE:

February 2, 1999

TO:

Field Division Engineers, Division Construction Engineers, and

Resident Engineers

FROM:

Byron Poynter, Construction Engineers

SUBJECT: CONSTRUCTION CONTROL DIRECTIVE NO. 990202.

### SEPARATOR FABRIC SPECIFICATION

The specification for separator fabric for bases used in the paving section (Section 325) has been modified for the 1996 (metric) Specification Book for Highways and Bridges. You may accept Separator Fabric meeting the specification of 1996 on projects that were let under an earlier specification, with no further action.

Construction Engineer

Copy to: Distribution List

cd9812.22 One