

APPENDIX I

POSTERS REQUIRED ON FEDERAL AID PROJECT

BULLETIN BOARD

The Resident Engineer provides the Contractor with all posters except:

-  EEO Policy Statement and notices (Provided by the Contractor, and
-  Workers' Compensation Notice Poster (WCN Form AR-P provided by the Contractor's insurance carrier.

The Resident Engineer should obtain posters needed for distribution to the Contractor from the EEO Section.

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Important



U.S. Department of Transportation

U. S. DEPARTMENT OF LABOR

Wage Rate Information Federal-Aid Highway Project

Construction work on this project is subject to the minimum wage rate provisions of Section 113, Title 29, United States Code and the overtime wage provisions of the Contract Work Hours and Safety Standards Act. As an employee of the contractor or a subcontractor, you are entitled to be paid not less than the hourly rate for the particular classification of work performed as set forth in the schedule attached below.

The schedule affixed below contains no minimum wage rates for the following employees:

1. Apprentices properly registered under approved Federal or State apprenticeship programs. Each approved program contains the applicable rates.
2. Persons employed pursuant to apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting equal employment opportunity in connection with Federal-aid highway construction programs. Programs thus certified will set forth the rates applicable.

Call any failure to receive the required rate to the attention of the representative of the contracting agency shown below or the nearest representative of the Federal Highway Administration.

(State highway department representative)

**RESIDENT ENGINEER'S
NAME AND TELEPHONE NUMBER**

Additional information may be obtained from the Federal Highway Administration, Washington, D.C. 20590. Any communication should list the name, location, and type of project, the name of the contractor and his address, your name and address, and a statement of what you do, what rate you are paid, and what rate you think you should be paid.

(Attach Secretary of Labor minimum wage rate schedule)

Form 7-1000 (1-10-78) 1-11

U. S. DEPARTMENT OF LABOR

PREVIOUS EDITIONS ARE OBSOLETE



U.S. Department of Transportation

DEPARTAMENTO DE TRANSPORTACION DE LOS ESTADOS UNIDOS

Importante



DEPARTAMENTO DE TRANSPORTACION DE LOS ESTADOS UNIDOS

Informacion Sobre Escalas De Salarios Proyecto De Carretera Con Ayuda Federal

El trabajo de construcción de este proyecto está sujeto a los reglamentos sobre salarios mínimos comprendidos en la Sección 113, Título 29 del Código de los Estados Unidos y a las provisiones de salarios por horas extras de trabajo en la ley de Horas de Trabajo Por Contrato y Normas de Seguridad.

Como empleado del contratista o subcontratista, usted tiene derecho a que se le pague no menos del salario mínimo por hora de acuerdo al trabajo que realice según la clasificación de tareas establecida en la lista que se incluye más abajo.

Esta lista no incluye salarios mínimos para los siguientes empleados:

1. Aprendices inscritos de acuerdo a programas de entrenamiento federal o estatales aprobados. Cada uno de estos programas ya contiene las escalas aplicables al mismo.
2. Personas empleadas con fines de aprendizaje y en programas de entrenamiento que han sido certificados por el Secretario de Transportación en el sentido de que promueven la oportunidad de igualdad en el empleo, de acuerdo a lo establecido en programas de construcción de carreteras con ayuda federal. Estos programas así certificados ya cuentan con las escalas aplicables a los mismos.

Si usted no recibe el salario requerido, notifique al representante de la agencia contratante que damos a continuación, o al representante más cercano de la Administración Federal de Carreteras.

(Representante del Departamento Estatal de Carreteras)

**RESIDENT ENGINEER'S
NAME AND TELEPHONE NUMBER**

Puede obtener información adicional de la Administración Federal de Carreteras (Federal Highway Administration), Washington, D.C. 20590.

Incluya en su comunicación el nombre, localidad y tipo de proyecto, así como el nombre y dirección del contratista, su nombre y dirección y una explicación del tipo de trabajo que realiza, el salario que le están pagando y el salario que usted cree debería pagarse.

(Incluyan la lista de las escalas de salarios mínimos del Secretario del Trabajo)

Form 7-1000 (1-10-78) 1-11

U. S. DEPARTMENT OF LABOR

PREVIOUS EDITIONS ARE OBSOLETE

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
SUPPLEMENTAL SPECIFICATION
WAGE RATE DETERMINATION

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
SUPPLEMENTAL SPECIFICATION
WAGE RATE DETERMINATION

U. S. DEPARTMENT OF LABOR	Decision No.:	AR0900007	
STATE: Arkansas	Date of Decision:	February 11, 2000	
COUNTY: Statewide			
Description of Work: Construction, Alteration, and/or Repair of Streets, Highways, Freeways, and Water and Sewer Utilities Projects (does not include Structures on Highway Rest Areas).			
CLASSIFICATION	BASIC HOURLY RATES	CLASSIFICATION	BASIC HOURLY RATES
Painters	\$ 7.20	Concrete mixer operators	\$ 5.15
Compactors	7.20	Less than 5 sacks	6.20
Concrete finishers	7.20	5 sacks or over	6.10
Electricians	8.75	Backhoe operator	6.10
Ironworkers		Rubber tired (1 yard or less)	6.70
Structural	6.30	Cherry picker operator	6.70
Pumpcrete	5.45	Concrete paver operator	6.70
Laborers		Concrete spreader operator	6.70
Air tool operator	5.15	Craze, derrick, dragline, shovel, backhoe operators:	
Asphalt heater operator	5.15	1 1/2 yards or less	6.70
Asphalt roller	5.85	Over 1 1/2 yards	7.20
Chain saw operator	5.15	Consiler operator	5.65
Choker/fer grader	5.45	Distributor operator	5.65
Concrete joint sealer	5.15	Drill operator (wagon or truck)	5.65
Concrete saw operator	5.15	Elevating grader operator	6.70
Form setter	5.45	Euclid or like equipment operator (bottom or end dump)	5.25
Laborer	5.15	Finishing machine operator	6.10
Flaplayer	5.45	Flagger	5.15
Foreman	6.40	Forklift operator	5.15
Victoriaman	5.15	Front grader operator	5.15
Painters	6.20	Front end loader operators:	
Idle driver/lookman	6.20	Finish	6.70
Power equipment operators:		Rough	5.65
Aggregate spreader operator	5.80	Hydro seeder operator	5.15
Asphalt plant foreman	5.15	Mechanic	6.90
Asphalt plant driver operator	5.15	Motor patrol operators:	
Batch plant operator	5.80	Finish	6.90
Batcher operators:		Rough	5.65
Finish	6.90	Matching machine operator	5.15
Rough	5.65	Oil and greaser	5.45
Roll float operator	5.65		
Concrete curing machine operator	5.65		

CLASSIFICATION	BASIC HOURLY RATES	CLASSIFICATION	BASIC HOURLY RATES
Pile driver operator	\$ 6.20	Trenching machine operator	\$ 5.55
Power broom operator	5.15	Stoneasons	7.20
Pug mill operator	5.15	Truck drivers:	
Roller operator (self-propelled)	5.25	Distributor truck driver	5.45
Scraper Operators:		Semi-trailer	5.45
Finish	6.90	Lowboy driver	5.65
Rough	5.65	Transit mix truck driver	5.45
Sod slicing machine operator	5.15	Truck driver	5.45
Stabilizer mixing machine operator	5.65	(heavy-maximum payload in excess of 3000 lbs.)	5.15
Tractor operators:		Truck driver	5.15
Crawler type	5.15	(light-maximum payload 3000 lbs.)	6.90
Farm & wheel	5.15	Well drillers	
Wheel type			
(with attachments 1 yard or under)	5.55		

Welders - receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5 (a) (1) (V)).

GOVERNMENT PRINTING OFFICE DOCUMENT - GENERAL WAGE DETERMINATION ISSUED UNDER THE DAYIS-BACON AND RELATED ACTS, VOLUME V, FEBRUARY 11, 2000

NOTICE TO ALL EMPLOYEES

Working on Federal or Federally
Financed Construction Projects



MINIMUM WAGES

You must be paid not less than the wage rate in the schedule posted with this Notice for the kind of work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 a week. There are some exceptions.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, contact the Contracting Officer listed below.

<p>RESIDENT ENGINEER'S NAME AND TELEPHONE NUMBER</p>
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or you may contact the nearest office of the Wage and Hour Division, U.S. Department of Labor. The Wage and Hour Division has offices in several hundred communities throughout the country. They are listed in the U.S. Government section of most telephone directories under: U.S. Department of Labor
Employment Standards Administration

U.S. Department of Labor
Employment Standards
Administration
Wage and Hour Division

Wage and Hour Division

Federal Minimum Wage

\$4.75 per hour
beginning October 1, 1996

\$5.15 per hour
beginning September 1, 1997

Employees under 20 years of age may be paid \$4.25 per hour during their first 90 consecutive calendar days of employment with an employer.

Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.

Tip Credit - Employers of "tipped employees" must pay a cash wage of at least \$2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee's tips combined with the employer's cash wage of at least \$2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference. Certain other conditions must also be met.

Overtime Pay

At least 1 1/2 times your regular rate of pay for all hours worked over 40 in a workweek.

Child Labor

An employee must be at least 16 years old to work in most non-farm jobs and at least 18 in work in non-farm jobs declared hazardous by the Secretary of Labor. Youths 14 and 16 years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs under the following conditions:

No more than -

- 3 hours on a school day or 18 hours in a school week;
 - 8 hours on a non-school day or 40 hours in a non-school week.
- Also, work may not begin before 7 a.m. or end after 7 p.m., except from June 1 through Labor Day, when evening hours are extended to 9 p.m. Different rules apply in agricultural employment.

Enforcement

The Department of Labor may recover back wages either administratively or through court action, for the employees that have been underpaid in violation of the law. Violations may result in civil or criminal action.

Fines of up to \$10,000 per violation may be assessed against employers who violate the child labor provisions of the law and up to \$1,000 per violation against employers who violate or repeatedly violate the minimum wage or overtime pay provisions. This law prohibits discriminating against or discharging workers who file a complaint or participate in any proceedings under the Act.

Note: • Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.

- Special provisions apply to workers in American Samoa.
- Where state law requires a higher minimum wage, the higher standard applies.

For Additional Information, Contact the Wage and Hour Division office nearest you -- listed in your telephone directory under United States Government, Labor Department.

This notice may be placed on the work site with at this address: <http://www.dol.gov>

The law requires employers to display this poster where employees will readily see it.

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division
Washington, D.C. 20309



11-1000-1000-1000-1000



U.S. Department of Transportation
Federal Highway Administration

NOTICE

The highway construction underway at this location is a Federal or Federal-aid project and is subject to applicable State and Federal laws, including Title 18, United States Code, Section 1020, which reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or the cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the costs thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction of any highway or related project submitted for approval to the Secretary of Transportation; or

or whoever knowingly makes any false statement, false representation, false report, or claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the execution of any highway or related project approved by the Secretary of Transportation; or

or whoever knowingly makes any false statement or false representation as to a material fact in any statement, certificate, or report submitted pursuant to the provisions of the Federal-Aid Road Act approved July 11, 1916 (39 Stat. 355), as amended and supplemented.

Such person shall be fined under this title or imprisoned not more than five years, or both."

Any person having reason to believe this statute is being violated should report the same to the agency representative(s) named below.

<p><i>(Federal projects only)</i> State Highway Department</p> <p>MANEY DIRECTOR</p>	<p><i>(Both Federal and Federal-aid projects)</i> Federal Highway Division Administrator</p> <p>Sandra L. Olin Federal Highway Division Little Rock, AR 72203-1998 (501) 221-2222</p>
<p><i>(Both Federal and Federal-aid projects)</i> Department of Transportation Office of Inspector General Toll Free Hotline 1-800-424-9071</p>	

Form FHWA 1022 (Rev. 8-99)

	<p>ARKANSAS WORKERS' COMPENSATION COMMISSION</p> <p>324 Spring Street, Little Rock, AR 72201 Main Office - 1-800-622-4472 / 501-683-3930 Little Rock Office - 1-800-354-2711 / 479-783-7970 Springfield Office - 1-800-822-5376 / 479-751-2750</p>
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WORKERS' COMPENSATION INSTRUCTIONS: EMPLOYERS AND EMPLOYEES

All aspects of this publication conform to the provisions of the Arkansas workers' compensation laws and regulations. This publication is not intended to constitute an offer of insurance or any other financial product. It is intended to provide information only. For more information, contact the Arkansas Workers' Compensation Commission at 324 Spring Street, Little Rock, AR 72201. Telephone: (501) 683-3930. Fax: (501) 683-3931. Website: www.arkcomp.com

STATE OF ARKANSAS
PUBLIC EMPLOYER CLAIMS DIVISION
ARKANSAS INSURANCE DEPARTMENT
2209 WEST TULLING SQUARE, SUITE 201
LITTLE ROCK, AR 72201-1964

IN CASE OF JOB-RELATED INJURIES OR OCCUPATIONAL DISEASES

The Employer Shall:

1. Provide all necessary medical, surgical and hospital treatment, as prescribed by law, following the injury and for such additional time as ordered by the Workers' Compensation Commission.
2. Pay the compensation payments in accordance with the provisions of the law. The first installment of compensation becomes due on the 15th day after the employer has notice of the injury or death, except in those cases where liability has been found by the employer.
3. Provide prompt reporting of accidents to appropriate parties.
4. Keep a record of all injuries received by its employees.

The Employee Shall:

The employee shall report the injury to the employer on Form D and, if the injury is not reported by the employer, the employee shall report the injury to the Arkansas Workers' Compensation Commission as soon as possible. The employee shall not be responsible for disability, medical or other benefits prior to the date of the employee's notice of injury. All reporting procedures specified by the employer must be reasonable and shall apply to each employee, regardless of the employee's position. The foregoing shall not apply when an employer requires emergency medical attention outside the employer's normal business hours; however, in that event, the employee shall cause a report of the injury to be made to the employer on the employer's next regular business day.

Failure to give such notice shall not bar any claim (1) if the employer had knowledge of the injury or death, (2) if the employer's records reflect the conditions of absence arose out of and in the course of employment, or (3) if the employee's records reflect the grounds that for some satisfactory reason such notice could not be given. Objection to failure to give notice must be made at or before the first hearing on the claim.

Statutory Information:

Ark. Code Ann. § 11-5-114(b) states: "Treatment or services provided as prescribed by any physician called then ordered according to the foregoing, except emergency treatment, shall be at the claimant's expense."

Ark. Code Ann. § 11-5-114(c), however, indicates: "When compensability is controverted, subsection (b) shall not apply."

- (1) The employee requests medical assistance in writing prior to seeking the same as a result of a alleged claim injury; and
- (2) The employer refuses to refer the employee to a medical provider within forty (40) hours after the request as provided above; and
- (3) The alleged injury is later found to be a compensable injury; and
- (4) The employee has not under a previous order of medical treatment.

If you have any questions regarding your rights under the Arkansas workers' compensation laws, you may call an Arkansas Workers' Compensation Commission legal advisor at our toll-free number listed above.

All employees who are within the operation of the Arkansas workers' compensation laws and have complied with its provisions must post this notice in a CONSPICUOUS place in or about their place or places of business.



NOTICE

EMPLOYEE POLYGRAPH PROTECTION ACT

The Employee Polygraph Protection Act prohibits most private employers from using lie detector tests either for pre-employment screening or during the course of employment.

PROHIBITIONS:

Employers are generally prohibited from requiring or requesting any employee or job applicant to take a lie detector test, and from discharging, disciplining, or discriminating against an employee or prospective employee for refusing to take a test or for exercising other rights under the Act.

EXEMPTIONS:

The Act permits polygraph tests to be administered by the law. Also, the law does not apply to Federal Government or certain private individuals engaged in national security related activities.

The Act permits polygraph tests to be administered in the private sector, subject to restrictions, to certain prospective employees of security sensitive, armed, air, alien, and gun, and in pharmaceuticals, manufacturers, distributors and suppliers.

The Act also permits polygraph testing, subject to restrictions, of certain employees of private firms who are reasonably suspected of involvement in a workplace incident (theft, embezzlement, etc.) that resulted in economic loss to the employer.

EXAMINEE RIGHTS

Where polygraph tests are permitted, they are subject to numerous strict standards concerning the conduct and length of the test. Examinees have a number of specific rights, including the right to a written notice before testing, the right to refuse or discontinue a test, and the right not to have test results disclosed to unauthorized persons.

ENFORCEMENT

The Secretary of Labor may bring civil actions to seek civil penalties and assess civil penalties up to \$10,000 against violators. Employees or job applicants may also bring their own civil actions.

ADDITIONAL INFORMATION

Additional information may be obtained, and complaints of violations may be filed, at local offices of the Wage and Hour Division, which are listed in the telephone directory under U.S. Government Department of Labor, Employment Standards Administration.

THE LAW REQUIRES EMPLOYERS TO DISPLAY THIS POSTER WHERE EMPLOYEES AND JOB APPLICANTS CAN READILY SEE IT.

The law does not prevent any provision of any State or local law or any collective bargaining agreement which is more restrictive with respect to lie detector tests.

FMLA requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to "eligible" employees for certain family and medical reasons. Employees are eligible if they have worked for a covered

employer for at least one year, and for 1,250 hours over the previous 12 months, and if there are at least 50 employees within 75 miles.

Reasons For Taking Leave:

Unpaid leave must be granted for any of the following reasons:

- to care for the employee's child after birth, or placement for adoption or foster care;
- to care for the employee's spouse, son or daughter, or parent, who has a serious health condition; or
- for a serious health condition that makes the employee unable to perform the employee's job.

At the employee's or employer's option, certain kinds of paid leave may be substituted for unpaid leave.

Advance Notice and Medical Certification:

The employee may be required to provide advance leave notice and medical certification. Taking of leave may be denied if requirements are not met.

- The employee ordinarily must provide 30 days advance notice when the leave is "foreseeable."
- An employer may require medical certification to support a request for leave because of a serious health condition, and may require second or third opinions (at the employer's expense) and a fitness for duty report to return to work.

- Upon return from FMLA leave, most employees must be restored to their original or equivalent positions with equivalent pay, benefits, and other employment terms.
- The use of FMLA leave cannot result in the loss of any employment benefit that accrued prior to the start of an employee's leave.

Unlawful Acts By Employers:

- FMLA makes it unlawful for any employer to:
 - interfere with, restrain, or deny the exercise of any right provided under FMLA;
 - discharge or discriminate against any person for opposing any practice made unlawful by FMLA or for involvement in any proceeding under or relating to FMLA.

Enforcement:

- The U.S. Department of Labor is authorized to investigate and receive complaints of violations.
- An eligible employee may bring a civil action against an employer for violations.

FMLA does not affect any Federal or State law prohibiting discrimination, or supersede any State or local law or collective bargaining agreement which provides greater family or medical leave rights.

For Additional Information:

Contact the nearest office of the Wage and Hour Division, listed in most telephone directories under U.S. Government, Department of Labor.

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division
Washington, D.C. 20210

WH Publication 1470
June 1993

You Have a Right to a Safe and Healthful Workplace.

IT'S THE LAW

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in the inspection.
- You can file a complaint with OSHA within 30 days of discrimination by your employer for making safety and health complaints or for exercising your rights under the OSHA Act.
- You have a right to see OSHA citations issued to your employer. Your employer must post the citations at or near the place of the alleged violation.
- Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- You have the right to copies of your medical records or records of your exposure to toxic and harmful substances or conditions.
- Your employer must post this notice in your workplace.



La Ley de Seguridad y Salud Ocupacional de 1970 (OSHA) y el 306 garantiza condiciones de trabajo seguras y saludables para los trabajadores. El 306(a) garantiza que cualquier trabajador en todo el mundo, la Administración de Seguridad y Salud Ocupacional (OSHA), puede solicitar una inspección de su lugar de trabajo si cree que existen condiciones peligrosas y poco saludables en su lugar de trabajo. Usted o su representante puede participar en la inspección. Puede presentar un reclamo a OSHA durante un plazo de 30 días si su empleador lo discrimina por presentar reclamos de seguridad y salud o por ejercer sus derechos de acuerdo con la Ley. Tiene el derecho de ver las citaciones de la OSHA enviadas a su empleador. Su empleador debe colocar las citaciones en un lugar visible en el sitio de la supuesta infracción o cerca de él. Su empleador debe corregir los peligros en el lugar de trabajo dentro del plazo indicado. Tiene el derecho de recibir copias de su historial médico o de los registros de su exposición a sustancias o condiciones tóxicas y peligrosas. Su empleador debe exhibir este aviso en un lugar visible de su lugar de trabajo.

1-800-321-OSHA
www.osha.gov

U.S. Department of Labor • Occupational Safety and Health Administration • OSHA 3167



Under the Occupational Safety and Health Act of 1970 (OSHA) and 306, assures safe and healthful working conditions for workers throughout the Nation. The Occupational Safety and Health Administration, in the U.S. Department of Labor, has the primary responsibility for enforcing the OSHA Act. The rights listed here may vary depending on the particular circumstances. To file a complaint, refer to the nearest OSHA office. For more information, call 1-800-321-OSHA or your nearest OSHA office: Atlanta (404) 562-2390 • Boston (617) 552-2300 • Chicago (312) 452-2220 • Dallas (214) 767-4751 • Denver (303) 844-1600 • Kansas City (816) 426-5861 • New York (212) 337-3151 • San Francisco (415) 973-4310 • Seattle (206) 534-5930. Teleprinter (TTY) number is 1-877-889-5627. To file a claim more information on OSHA Federal and state programs, visit OSHA's website at www.osha.gov. If your workplace is not an OSHA approved plant, your employer must post the required state equivalent of this poster.

1-800-321-OSHA
www.osha.gov

U.S. Department of Labor • Occupational Safety and Health Administration • OSHA 3165

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APPENDIX II
FORMS AVAILABLE ON THE LAN

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APPENDIX II

LIST OF FORMS ON THE LAN

'Construc' on CSD4

FORMS SUBDIRECTORY

Forms\Word 2000

FORM NO.	TITLE	FILENAME
19-100	Motor Vehicle Requisition	f19_100.dot
19-101	Overtime Payroll - Administrative	f19_101.dot
19-102	Travel By Privately Owned Vehicle	f19_102.dot
19-103	Reimbursement for Travel and Other Expenses	f19_103.dot
19-104	Authorization for Employee Moving Expenses	f19_104.dot
19-105	Out of State Travel Authorization	f19_105.dot
19-106	AHTD Aircraft Travel Authorization-Beechcraft	f19_106.dot
19-106A	AHTD Aircraft Travel Authorization-Cessna	f19_106a.dot
19-113	Vendor's Invoice	f19_113.dot
19-114	Bi-weekly Payroll Summary	f19_114.dot
19-118	Request for Movement of Property	f19_118.dot
19-119	Estimate Sheet	f19_119.dot
19-121	Personnel Application Flow Data	f19_121.dot
19-122	Inter Office Memorandum	f19_122.dot
19-128	Position Advertisement Request Form	f19_128.dot
19-130	Overtime Summary	f19_130.dot
19-131	Summary of Hours Worked	f19_131.dot
19-134	Proposed Personnel Classification/Title Change Form	f19_134.dot
19-135	Equipment Report	f19_135.dot
19-135A	Aircraft Equipment Report	f19_135a.dot
19-139	Daily Time & Equipment Report	f19_139.dot
19-141	Daily Time & Equipment Corrections	f19_141.dot
19-144	Monthly Inventory Summary	f19_144.dot
19-150	Manufacturing Cost Report	f19_150.dot
19-151	Confirmation Purchase Order	f19_151.dot
19-152	Transfer Request	f19_152.dot
19-153	Requisition	f19_153.dot
19-156	Shipping Ticket and Release	f19_156.dot
19-157	Release	f19_157.dot
19-159	Certification of Nonowned Auto Insurance Coverage	f19_159.dot
19-162	Daily Soil Cement/Lime Base Report	f19_162.dot
19-162M	Daily Soil Cement/Lime Base Report - Metric	f19_162m.dot
19-165	Daily Report of Volumetric Hauling	f19_165.dot
19-165M	Daily Report of Volumetric Hauling - Metric	f19_165m.dot
19-166E	Test Pile Record-Engineering News Record Formula	f19_166e.dot
19-166EM	Test Pile Record-Engineering News Record Form-Metric	f19166em.dot
19-166W	Test Pile Record-Wave Equation Analysis	f19_166w.dot
FORM NO.	TITLE	FILENAME

FORM NO.	TITLE	FILENAME
19-166WM	Test Pile Record-Wave Equation Analysis – Metric	f19166wm.dot
19-167E	Piling Record - Engineering News Record Formula	f19_167e.dot
19-167EM	Piling Record - Engineering News Record Form-Metric	f19167em.dot
19-167W	Piling Record - Wave Equation Analysis	f19_167w.dot
19-167WM	Piling Record - Wave Equation Analysis-Metric	f19167wm.dot
19-170	Schedule I-Reconciliation of Allotments	f19_170.dot
19-171	Schedule II-Reconciliation of Outstanding Encumbrances	f19_171.dot
19-172	Schedule III-Reconciliation of Expenditures	f19_172.dot
19-173	Schedule IV-Reconciliation of Transfers	f19_173.dot
19-174	Payment of Partial Delivery	f19_174.dot
19-175	Schedule V-Reconciliation of Spec. Project Allotments	f19_175.dot
19-180	Doctor's Release to Return to Work	f19_180.dot
19-186	Equip. & Proc. Telephone & Verbal Quotations	f19_186.dot
19-196	Special Project Authorization	f19_196.dot
19-197	Special Project Final Report	f19_197.dot
19-200	Driveway Access Permit	f19_200.dot
19-208	Daily Report for _____ (Prime, Tack)	f19_208.dot
19-208M	Daily Report for _____ (Prime, Tack) - Metric	f19_208m.dot
19-209	Daily Report for Asphalt Surface Treatment	f19_209.dot
19-209M	Daily Report for Asphalt Surface Treatment - Metric	f19_209m.dot
19-213	Daily Report of __ Operations -Roadway Insp. Record	f19-213.dot
19-213M	Daily Report of __ Operations -Rdwy Insp. Record-Metric	f19-213m.dot
19-218	Intra-District/Division Movement of Property	f19_218.dot
19-220	Documentation of Exceptional Performance	f19_220.dot
19-224	Documentation of Counseling	f19_224.dot
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19-227	Admin. Order 99-03 Drug Free Work Place Policy	f19_227.dot
19-228	Employee Grievance Form	f19_228.dot
19-229	Pul. Co. Tech. College Non Credit Registration Form	f19_229.dot
19-230	Inter Agency Training Program Enrollment Form	f19_230.dot
19-231	AHP Employee Photo Log	f19_231.dot
19-232	Telephone Credit Card Request	f19_232.dot
19-233	Statement of Selective Service Status	f19_233.dot
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19-236	Auth. For Use of Dept. Owned Credit Card	f19_236.dot
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19-325	Request For Lump Sum Benefit (Ret. Sys.)	f19_325.dot
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19-327	Fed. Withholding Certificate for ASHERS Retirees	f19_327.dot
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19-509	Telefax Transmission Cover Sheet	f19_509.dot
19-511	Request for Business Cards	f19_511.dot
19-512	Political Activities / Employee Oath of Office / Restrictions Of Present and Former Employees / Right to Terminate	f19_512.dot
19-515	Leave Correction Form	f19_515.dot
19-520	QIP Suggestions	f19_520.dot
19-525	Monthly Chronological Telephone Log	f19_525.dot
19-526	Cellular Phone/Long Distance Verification Form	f19_526.dot
19-556	Active Employees Direct Deposit Authorization	f19_556.dot
19-557	Compensatory Time Agreement	f19_557.dot
FCS-017	Computer Services Request	fcs_017.dot
FCS-098	User ID/Application Request	fcs_098.dot
FCS-180	Internet User Agreement Form	fcs_180.dot
FCS-181	Internet Access Termination Form	fcs_181.dot
INS-001	Change Form (Hospitalization Insurance)	INS_001.dot

MISC SUBDIRECTORY**(misc)**

FORM NO.	TITLE	FILENAME
	Restraining Condition Clearance Request	clr-frm2.doc
	Inspection Report-Conc. Ready Mix Plant	conform.doc
	Conversion Factor Calculations	conv-fac.doc
	Conversion Factor Calculations -metric	conv-facm.doc
	Daily Report of ACHM/Aggr. Operations	dr-form.doc
	Final Construction Inspection Report	insprpt.doc
M-40	Materials Division Seed Certification	m-40.doc
M-41	Materials Division Fertilizer Certification	m-41.doc
M-170	Miscellaneous Materials Certification	m170.doc
M-171	Portland Cement &/or Liquid Asphalt Certification	m171a.doc
M-189	Traffic Paint & Bead Job Quantities	m189.doc
M-196	Qualified Products Usage List	m196.doc
	Request for Advance Payment for Stored or Stockpiled Materials Under Paid Invoice	mat-paid.doc
	Request for Advance Payment for Stored or Stockpiled Materials Under Unpaid Invoice	mat-unpd.doc
	Record of Measurement-Non Perm./Perm. Pvmt Mkgs	pvmkg.doc
	Report of Work Performed (RWP)	rwp.doc
	Report of Work Performed (RWP based on % complete)	rwp1.doc
	SemiFinal/Interim Construction Inspection Report	Sfinsprt.doc
	Job Subst. Comp / Jobs in Liquidated Damages	sub-comp.doc
	Temporary Construction Easement Form	tce.doc
	Analysis of Overruns & Underruns, Approved Change Orders, Schedule of Time, Source of Borrow	time.doc
	Approved Trainee Record	trainee.doc
	Utility diary form	Util-Dia.doc
	Exceptions-Vehicle Fringe	vfringe.doc
	Daily Force Account Report	force.wks
	Pile and Driving Equipment Data Form	pileinfo.doc
	Pile and Driving Equipment Data Form - Metric	pilein_m.doc
19-168	Daily Report of ___ Operations, Roadway Insp. Report	19-168.xls

NPDES SUBDIRECTORY*(\misc\npdes\)*

FORM NO.	TITLE	FILENAME
	Storm Water Discharge Notice	bulletin.doc
	SWPPP Inspection Report Form	Inspection.doc
	Instructions for Stormwater Pollution Plan Insp. Report	form-ins.doc
	NOI Form for Renewal of a Permit	NOI-6-30-Form.doc
	ADEQ Notice of Intent	noiform.doc
	ADEQ Notice of Termination	notform.doc
	SWPPP Special Provision	SWPPP-SP.doc
	NPDES Permit # Cross Reference: NOI/NOT/Project #	trak-noi.doc

CHG_ORDR SUBDIRECTORY*(\misc\chg_ordr\)*

Analysis of Non-complying Pavement Mixtures- Binder, Voids, VMA, Stability, Density	96analysis.doc
Analysis of Non-complying Pavement Mixtures- Gradation, Asphalt Content, Gradation, and/or Fines to Asphalt Cement Ratio	adgrad.doc
Checklist for Change Orders	cklist.doc
Analysis of Non-complying Pavement Mixtures-Density	density.doc
Analysis of Supplemental Agreement Item	sa.doc
Instructions for Change Orders in Excel	co-inst.doc
Change Order (Chief Engineer)	co-chief.xls
Change Order (District Engineer)	co-de.xls

NOTE: Forms in bold print denote OSD Forms or other frequently used forms.

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APPENDIX III

REPORT FORM INSTRUCTIONS

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APPENDIX III

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DAILY SOIL CEMENT/LIME BASE REPORT

FORM 19-162

This report should be completed as an Original Source Document (OSD) for the following Contract Items:

<u>Spec. No.</u>	<u>Pay Item</u>
301	Processing Lime Treated Subgrade (___" Uniform Thickness)
301	Lime in Treated Subgrade
307	Processing Cement Stabilized Base Course (___" U.T.)
307	Cement In Stabilized Base Course
307	Soil Aggregate in Cement Stabilized Base Course (___" U. T.)

Preparation of this report should be on a daily basis, beginning with the initial day of processing.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report should be checked by the Resident Engineer's Office personnel. The checked report should be distributed at such time that the original will reach the Construction Office not later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

Item 1. Number the reports consecutively.

Item 2. Enter the State Job Number.

Item 3. Enter the Job Name as shown on the contract.

Item 4. Enter the date the work was performed.

Item 5. Enter the Federal Aid Project Number(s), if any. If no Federal Aid is involved, enter "State Job".

Item 6. Enter the Soil Type in the area processed, if known. When soil type is unknown, enter a brief description of the soil; i.e. "light brown, silty clay," etc.

Item 7. Enter the start and the stop temperatures.

Item 8. Enter the truck number and pounds of lime or cement delivered to the Roadway. The weights of all loads should be totaled and converted to tons at the end of the day.

NOTE: Computerized FRM 168 may be used for this, at the Resident Engineer's option.

Item 9. Enter the source of the Lime or Cement used.

Item 10. Enter the Station limits of processing.

Item 11. Compute the linear feet of processing this date.

Item 12. Enter the width of normal roadway processed.

Item 13. Compute the area or length of normal roadway processed, and circle the appropriate contract pay item unit (S. Y. or Sta.).

Item 14. Compute the area processed outside the normal roadway, circle the appropriate contract pay item unit (S.Y. or Sta.). When payment is by the Station, convert the additional area to the equivalent of normal Stations and enter the computed Stations.

Item 15. Enter the total of normal square yards/Stations and additional square yards/Stations of processing this date, and circle the appropriate contract pay item (S. Y. or Sta.).

Item 16. The volume of material processed is computed as follows:

$$\text{VOLUME(C.Y.) PROCESSED} = \frac{\text{Area Proc.(S.Y.)} \times \text{Avg. Depth of Soundings (ft.)}}{3}$$

The weight of material processed is calculated as follows:

$$\text{WEIGHT(Tons) PROCESSED} = \frac{\text{Area (S.Y.)} \times \text{Avg. Depth (ft.)} \times \text{Max.Unit.Wt.x9}}{2000} \quad \text{of Soundings} \quad \text{(#/c.f.)}$$

Item 17. The percents by volume and weight are computed as follows:

$$\text{PERCENT BY VOLUME} = \frac{\text{Cement (Tons)} \times 2000 \times 100}{\text{Vol. Proc.(C.Y.)} \times 94 \times 27} = \frac{\text{Cement (Tons)} \times 78.8}{\text{Vol. Proc. (C.Y.)}}$$

$$\text{PERCENT BY WEIGHT} = \frac{\text{Lime/Cement (Tons)} \times 100}{\text{Weight Processed}}$$

Item 18. Enter the theoretical maximum density (proctor density) of the processed material.

Item 19. Enter the percent Lime/Cement content recommended by Materials and Research.

Item 20. Enter the date of final Lime processing (if applicable).

Item 21. Record the method for curing base.

Item 22. Record soundings and compute the average.

Item 23. The Resident Engineer will sign the Report.

Distribution of the completed Report is as follows:

Original Construction Office
Copy Resident Engineer Office File
Copy Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-162 is considered an Original Source Document (OSD).

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DAILY REPORT OF VOLUMETRIC HAULING

FORM 19-165

This report form may be used, at times, as an Original Source Document (OSD) for the following Contract Items:

<u>Spec. No.</u>	<u>Pay Item</u>
209	Removing and Replacing Base Course and Asphalt Surfacing
210	Borrow
210	Special Compaction of Earthwork
302	Selected Material (Class SM__)
303	Aggregate Base Course (Class__)
304	Aggregate Surface Course
307	Soil Aggregate in Cement Stabilized Base Course (____" Compacted Depth)
401	Blotter Course Material
620	Water For Grass
622	Sod Mulch

Preparation of this report should be on a daily basis, beginning with the initial day of hauling.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report should be checked by the Resident Engineer Office personnel. The checked report should be distributed at such time that the original will reach the Construction Office not later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

- Item 1.** The Job Number, Job Name, and date shall be shown on all reports.
- Item 2.** Reports shall be numbered consecutively daily for each material or item hauled. All reports should be numbered separately and independently for each contract item with a series of numbers for each item.
- Item 3.** Locations of all sources of materials shall be shown.
- Item 4.** The complete name, or authorized abbreviation, of the material or item should be used.
- Item 5.** Inspectors shall sign all reports.
- Item 6.** Identification of all trucks used the day of the report should be maintained. Only trucks measured previously, and the measurement documented by a completed "Truck Measurement Form" (Form 19-507) for the project listed in Item 1, should be permitted to haul.
- Item 7.** All truck capacities should be shown. This volume shall be the same as shown on the completed "Truck Measurement Forms" for each truck.

- Item 8.** Each load should be documented by recording the time of discharge directly on the form. Adequate caution should be exercised to assure accuracy in the number of loads.
- Item 9.** Numbers of loads and total volumes will be obtained by counting the number of discharges for each truck and multiplying this by the truck capacity (Item 7). When using this form to document "Water for Grass," line through "C.Y." and enter "M. GAL."
- Item 10.** Cumulative totals should be kept for each material hauled.
- Item 11.** Summaries should be recorded on all changes in locations, Stations, rates of application, or any other separation affected by the distribution of funds or quantities required for control of the work or payment to the Contractor.
- Item 12.** The Resident Engineer will sign the Report.

When using this report to document "Water for Grass":

Column 3: Indicate "Right Side", "Median", etc. for Location.

Columns 4, 6, and 7: Leave blank.

Any observations or instructions required for control of the work or to verify payments to the Contractor should be noted under "Remarks."

Distribution of the completed Report is as follows:

Original	Construction Office
Copy	Resident Engineer Office File
Copy	Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-165 is considered an Original Source Document (OSD).

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TEST PILE RECORD
ENGINEERING NEWS RECORD FORMULA ANALYSIS
FORMS 19-166E & 19-166EM

This Report form is used as an Original Source Document (OSD) for the following contract item:

<u>Spec. No.</u>	<u>Pay Item</u>
805	Test Piles (_____ " _____)

Separate forms are provided for determining pile bearing values by the Engineering News Record Formula (Form 19-166E) or by Wave Equation Analysis (Form 19-166W). The Engineering News Record Formula, Method A in Section 805 of the Standard Specifications, is to be used on all projects unless otherwise specified in the plans or contract.

A report should be prepared for each test pile driven, beginning with the initial one driven.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report should be checked by the Resident Engineer Office personnel. The Resident Engineer should then use the checked report to determine his recommendation for production pile lengths for the bents of piling represented by the test pile. The completed original report should be promptly sent to the District Engineer for approval. When time is critical, the Resident Engineer should telecopy Test Pile results to the District. (The report should also be distributed by mail at that time.) Refer to Section 805 of this Manual for additional information.

INSTRUCTIONS FOR PREPARATION

- Item 1.** Enter the Job Number.
- Item 2.** Enter the FAP Number for this bridge site.
- Item 3.** Enter the Job Name as shown on the contract.
- Item 4.** Enter the Bridge Number in which the test pile is being driven.
- Item 5.** Enter the Bent Number in which the test pile is being driven.
- Item 6.** Enter the minimum acceptable bearing for the test pile.
- Item 7.** Enter the type and size piling.
- Item 8.** Enter the weight of the hammer or ram of the pile driving hammer being used.
- Item 9.** Enter the Brand and Model of the pile driving hammer being used.
- Item 10.** Enter the applicable pile driver information.
- Item 11.** Enter the plan test pile length for this location.
- Item 12.** Enter the Pile I.D. Number (Heat # for Steel, Casting Yard I.D. # for precast concrete piling).

- Item 14.** Enter the Pile Number. (Piling are numbered from right to left.)
- Item 15.** Enter the length of the test pile driven, even if the Contractor elects to drive a pile longer than the test pile length shown on the plans.
- Item 16.** Enter the length of buildup, if any. This is the actual buildup, before allowance for splice
- Item 17.** Enter the applicable allowance for splice, if any.
- Item 18.** Enter the actual piling length cut off for pay and nonpay, as applicable.
- NOTE: If practical refusal is obtained (three [3] times the required bearing for test piles) along with the minimum penetration, cut-off should be paid. Cut-off should not be paid if the Contractor stops driving due to the pile spalling.
- Item 19.** Enter the calculation for the cut-off allowance = 50% pay cut-off length + allowance [1' (0.3 m) for steel piles, 3' (1 m) for concrete piles]
- Item 20.** Compute the total allowed length of test pile.
(Item 15 + Item 16 + Item 17 - Item 18 + Item 19 = Item 20)
- Item 21.** Enter the number of blows per foot for each foot of test pile for which bearing information is useful (for metric projects, record the number of blows per 300 mm or 0.3 m increments). This is done using a "counting board" with a known elevation and a piling marked each foot (300 mm) its entire length.
- Item 22.** Enter the average drop (stroke) of the hammer in feet for each foot of the test pile driven. (For metric projects, the stroke should be measured to the nearest 50 mm for each 300 mm of pile driven.) This is constant for steam and air hammers, but will normally vary when diesel pile driving hammers are used.
- Item 23.** Compute and enter the average penetration [in inches (mm)] per blow for each foot (300 mm) of pile driven.
- Item 24.** Compute and enter the bearing of each foot (300 mm) of pile driven, using the formulas contained in subsection 805.06 of the 1993 Specifications (see subsection 805.09 of the 1996 Specifications for a metric version of the Engineering News Record Formula).
- Item 25.** Using a level and level rod, determine the applicable information and enter on the form, and enter appropriate plan information.
- Item 26.** Enter the length of pile in place above and below the ground in the appropriate blanks.
- Item 27.** Enter the Bent Number(s) which the test pile represents and the elevation of natural ground for each bent. ("Natural Ground" in a fill area refers to the original ground elevation prior to embankment being placed. "Natural Ground" in an area of excavation refers to the final ground elevation, as in channel excavation, or the bottom elevation of the excavated footing as shown on the plans.)

If the Resident Engineer feels other information is useful in determining production piling lengths, such as minimum penetration for each bent or minimum bearing for each bent, he may add columns for this information as he sees fit.

Item 28. The Resident Engineer shall review the information on the Test Pile Record and recommend appropriate piling lengths for each bent represented by the Test Pile. Five (5) feet (1.5 m) of bearing and/or 200 blows of bearing is required.

The Resident Engineer may, at times, feel it desirable to round the recommended piling length up to obtain an even piling length, or to recommend a longer piling length than the above constraints require in order to set piling in a more stable strata. The Resident Engineer should review the soil log on the plans in conjunction with this. These items should be discussed thoroughly with the District and Staff Construction Engineers during the approval process of pile lengths.

Item 29. The Resident Engineer shall sign the form.

Distribution of the completed Report is as follows:

Original	District Engineer (to Construction Office after approval)
Copy	District Engineer (to R E after approval)
Copy	District Engineer File
Copy	Resident Engineer Office File

Refer to Section 805 of this Manual for additional information.

Production pile lengths are normally determined by test pile results and authorized by the DISTRICT ENGINEER prior to being ordered by the Contractor. After authorization of pile lengths, the District Engineer shall forward the original of the test pile record to the Construction Office for inclusion in the Master File. The District Engineer will also send a copy to the Resident Engineer. The Resident Engineer will notify the Contractor in writing of these lengths.

**TEST PILE RECORD
WAVE EQUATION ANALYSIS
FORMS 19-166W & 19-166WM**

This Report form is used as an Original Source Document (OSD) for the following contract item:

<u>Spec. No.</u>	<u>Pay Item</u>
805	Test Piles (_____ " _____)

These forms (19-166W and 19-166WM) are for use on projects where Wave Equation Analysis or Dynamic Testing (Methods B & C) is specified in the plans or contract.

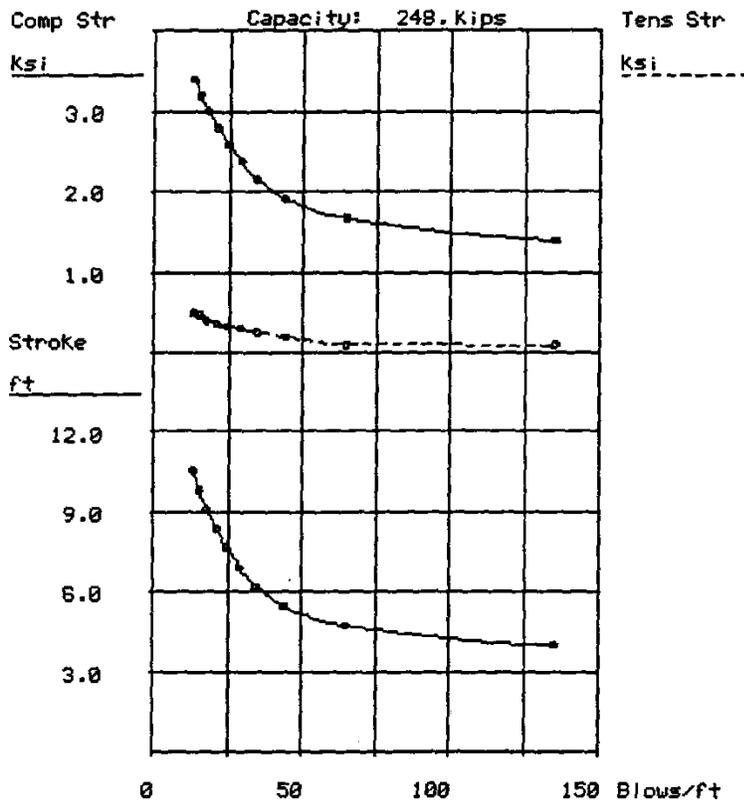
The Pile and Driving Equipment Data Form, Figure 805-2 on page 800-37 of this manual, must be submitted by the contractor in order for Bridge Division to perform the Wave Equation Analysis. (See flow chart on page 800-36 of this manual.) Bridge Division will use this data to provide the RE with a bearing graph that shows a hammer blow count relationship for the required ultimate bearing capacity. This initial bearing graph is used during the driving of the first test pile to determine if the ultimate bearing capacity is achieved. See Section 805.01(d)(2) of this Manual for additional information on this method of determining bearing values.

The Inspector should prepare the report in accordance with the instructions below.

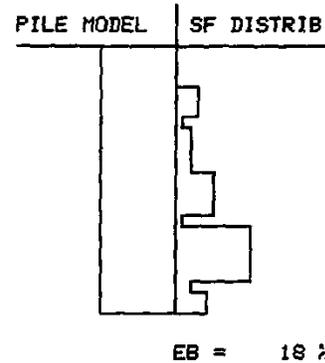
INSTRUCTIONS FOR PREPARATION

- Item 1.** Enter the Job Number.
- Item 2.** Enter the FAP Number applicable to this bridge site.
- Item 3.** Enter the Job Name as shown on the contract.
- Item 4.** Enter the Bridge Number in which the test pile is being driven.
- Item 5.** Enter the Bent Number in which the test pile is being driven.
- Item 6.** Enter the required ultimate bearing capacity for the test pile.
- Item 7.** Enter the type and size piling.
- Item 8.** Enter the Brand and Model of the pile driving hammer being used.
- Item 9.** Enter the hammer and pile cushion materials and thicknesses as shown on the Pile and Driving Equipment Data Form.
- Item 10.** Enter the fuel setting used on this test pile.
- Item 11.** Enter the plan test pile length for this location.
- Item 12.** Enter the hammer energy rating.
- Item 13.** Enter the Pile I.D. Number (Heat # for Steel, Casting Yard I.D. # for precast concrete piling).
- Item 14.** Enter the date the test pile is driven.

- Item 15.** Enter the Pile Number. (Piling are numbered from right to left.)
- Item 16.** Enter the length of the test pile driven, even if the Contractor elects to drive a pile longer than the test pile length shown on the plans.
- Item 17.** Enter the length of buildup, if any. This is the actual buildup, before allowance for splice
- Item 18.** Enter the applicable allowance for splice, if any.
- Item 19.** Enter the actual piling length cut off for pay and nonpay, as applicable.
- Item 20.** Enter the calculation for the cut-off allowance = 50% pay cut-off length + allowance [1' (0.3 m) for steel piles, 3' (1 m) for concrete piles]
- Item 21.** Compute the total allowed length of test pile.
(Item 16 + Item 17 + Item 18 - Item 19 + Item 20 = Item 21)
- Item 22.** Enter the number of blows per foot for each foot of test pile from the beginning of driving until the end of driving (for metric projects, record the number of blows per 300 mm or 0.3 m increments). This is done using a "counting board" with a known elevation and a piling marked each foot (300 mm) its entire length.
- Item 23.** Enter the average drop (stroke) of the hammer in feet for each foot of the test pile driven. (For metric projects, the stroke should be measured to the nearest 50 mm for each 300 mm of pile driven.) This is constant for steam and air hammers, but will normally vary when diesel pile driving hammers are used.
- Item 24.** Using the applicable bearing graph provided by Bridge Division, determine if the ultimate bearing capacity has been obtained for each foot (300 mm) of pile driven.
- NOTE: Test piles are to be driven until (1) the required ultimate bearing capacity or greater, as indicated by the bearing graph, has been obtained for 3 feet (1 m) and (2) the top of the pile is at plan grade; but not to more than when (3) a hammer blow count of 20 blows per inch (25 mm) has been obtained. In no case shall the test pile be driven less than the minimum penetration specified.
- Item 25.** Using a level and level rod, determine the applicable information and enter on the form, and enter appropriate plan information.
- Item 26.** Enter the length of pile in place above and below the ground in the appropriate blanks.
- Item 27.** Enter the Bent Number(s) which the test pile represents and the elevation of natural ground for each bent. ("Natural Ground" in a fill area refers to the original ground elevation prior to embankment being placed. "Natural Ground" in an area of excavation refers to the final ground elevation, as in channel excavation, or the bottom elevation of the excavated footing as shown on the plans.)



DELMAG D 22-23
 Efficiency 0.720
 Helmet 2.10 Kips
 H Cushion 46717 K/in
 P Cushion 980 K/in
 Q = 0.100 0.120 in
 J = Variable
 Pile Length 30.00 ft
 P-Top Area 196.00 in²



FUEL SETTING 1 6" THK. PLYWOOD PC & 2" THK. ALUM/MICARTA HC

No.	Ultimate Capacity kips	Max C. Stress ksi	Max T. Stress ksi	Blow Count BPF	Stroke ft	Energy k-ft
1	248.0	1.399	.097	135.2	4.00	3.32
2	248.0	1.668	.107	64.9	4.73	5.65
3	248.0	1.914	.193	44.0	5.46	8.15
4	248.0	2.154	.257	34.5	6.19	10.47
5	248.0	2.376	.295	29.0	6.92	12.60
6	248.0	2.607	.320	24.5	7.65	15.19
7	248.0	2.807	.346	21.2	8.38	17.80
8	248.0	3.015	.397	17.6	9.11	21.38
9	248.0	3.207	.470	15.1	9.84	24.88
10	248.0	3.392	.498	13.0	10.57	28.68

EXAMPLE OF BEARING GRAPH FROM BRIDGE DIVISION

If the Resident Engineer feels other information is useful in determining production piling lengths, such as minimum penetration for each bent or minimum bearing for each bent, he may add columns for this information as he sees fit.

Item 28. Attach the applicable bearing graph to the report before submitting to the Resident Engineer for review.

Item 29. The Resident Engineer shall review the information on the Test Pile Record and recommend appropriate piling lengths for each bent represented by the Test Pile. Test piles are to be driven until (1) the required ultimate bearing capacity or greater has been obtained for 3 feet (1 m) and (2) the top of the pile is at plan grade; but not to more than when (3) a hammer blow count of 20 blows per inch (25 mm) has been obtained. In no case shall the test pile be driven less than the minimum penetration specified.

The Resident Engineer may, at times, feel it desirable to round the recommended piling length up to obtain an even piling length, or to recommend a longer piling length than the above constraints require in order to set piling in a more stable strata. The Resident Engineer should review the soil log on the plans in conjunction with this. These items should be discussed thoroughly with the District and Staff Construction Engineers during the approval process of pile lengths.

Item 30. The Resident Engineer shall sign the form.

As soon as possible, the report should be checked by the Resident Engineer Office personnel. The Resident Engineer should then use the checked report to determine his recommendation for production pile lengths for the bents of piling represented by the test pile. The completed original report should be faxed to Bridge Division for review and approval of the production pile lengths. Refer to Figure 805-1 for the proper procedure for handling Wave Equation Analysis Test Pile Records.

Production pile lengths determined using wave equation analysis are determined by test pile results and must be authorized by the BRIDGE ENGINEER prior to being ordered by the Contractor. After receiving approval of pile lengths from Bridge Division, the Resident Engineer shall send the original test pile record to the Construction Office, who will then in turn forward the report to Bridge Division for signature. The Resident Engineer will also send a copy of the original report, along with a copy of Bridge Division's approval memo, to the District Engineer. The Resident Engineer will then notify the Contractor of these lengths by letter in accordance with the instructions in Section 805.01(a) of this manual.

Distribution of the completed Test Pile Record is as follows:

Original Construction Office (after receiving approval memo fax from Bridge)
Copy District Engineer File (attach copy of Bridge's approval memo)
Copy Resident Engineer Office File
Copy Job Inspector

PILING RECORD
ENGINEERING NEWS RECORD FORMULA ANALYSIS
FORMS 19-167E & 19-167EM

This report form is used as an Original Source Document (OSD) for the following contract items:

<u>Spec. No.</u>	<u>Pay Item</u>
805	Steel Piling (_____)
805	Concrete Piling (____" _____)

Separate forms are provided for determining pile bearing values by the Engineering News Record Formula (Form 19-167E) or by Wave Equation Analysis (Form 19-167W). The Engineering News Record Formula, Method A in Section 805 of the Standard Specifications, is to be used on all projects unless otherwise specified in the plans or contract.

This report should be prepared for each bent of pile driven, beginning with the initial bent driven.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report should be checked by the Resident Engineer Office personnel. The completed report should be distributed at such time that the original will reach the Construction Office not later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

- Item 1.** Enter the Job Number.
- Item 2.** Enter the FAP Number applicable to the particular bent of pile driven.
- Item 3.** Enter the Job Name as shown on the contract.
- Item 4.** Enter the Bridge Number in which the Bent is located.
- Item 5.** Enter the Bent Number in which the pile are being driven.
- Item 6.** Enter the weight of the hammer or ram of the pile driving equipment being used.
- Item 7.** Enter the type of piling driven (i.e., precast concrete, steel).
- Item 8.** Enter the Brand and Model of the pile driving hammer being used.
- Item 9.** Enter the size piling driven (i.e., 18" square, HP 10 x 42, etc.)

- Item 10.** Enter the maximum energy rating of the pile driving equipment used.
- Item 11.** Enter the approved piling length for the bent of piling driven.
- Item 12.** Enter the bearing specified in the plans or Specifications.
- Item 13.** Enter the date each pile is driven.
- Item 14.** Enter the Pile Number for each pile driven in the bent. (Piling are numbered from right to left.)
- Item 15.** Enter the length of each pile driven, even if the Contractor elects to drive a pile longer than the approved pile length.
- Item 16.** Enter the length of buildup, if any for each pile in the bent. This is the actual buildup, before allowance for splice.
- Item 17.** Enter the applicable allowance for splices, if any.
- Item 18.** Enter the actual piling length cut off for pay and nonpay, as applicable, for each pile in the bent.

NOTE: If practical refusal is obtained (two [2] times the required bearing for production piles) along with the minimum penetration, cut-off should be paid. Cut-off should not be paid if the Contractor stops driving due to the pile spalling or other pile damage.

- Item 19.** Enter the cut-off allowance, which is determined by the following formula:

$$\text{allowance} = 50\% \text{ pay cut-off length} + \text{allowance} \begin{matrix} \text{Cut-off} \\ [1' (0.3 \text{ m}) \text{ for steel piles, } 3' \\ (1 \text{ m}) \text{ for concrete piles}] \end{matrix}$$

- Item 20.** Compute the total allowed length of each pile in the bent.

$$(\text{Item 15} + \text{Item 16} + \text{Item 17} - \text{Item 18} + \text{Item 19} = \text{Item 20})$$

- Item 21.** Enter the length of pile in place below the ground.
- Item 22.** Enter the average penetration (in inches [mm]) per blow for the last 20 blows of each pile driven.
- Item 23.** Enter the average drop (stroke) of the hammer in feet for the last 20 blows of pile driven. (For metric projects, measure the stroke to the nearest 50 mm.) This is constant for steam and air hammers, but will normally vary when diesel pile driving hammers are used.
- Item 24.** Compute and enter the bearing of each pile driven, using the formulas contained in subsection 805.06 of the 1993 Specifications (see subsection 805.09 of the 1996 Specifications for a metric version of the Engineering News Record formula).
- Item 25.** Enter the applicable pile identification number for each pile driven in the bent (casting yard ID #, heat #, etc.).

Item 26. Enter any pertinent comments, if any, for each pile (i.e., 4:12 batter, pile spalled at the top, etc.).

Item 27. Enter the totals for the bent of pile.

Item 28. Both the Inspector and Resident Engineer shall sign the form.

Distribution of the completed Report is as follows:

Original	Construction Office
Copy	District Engineer
Copy	Resident Engineer Office File
Copy	Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-167 is considered an Original Source Document (OSD).

PILING RECORD
WAVE EQUATION ANALYSIS
FORMS 19-167W & 19-167WM

This report form is used as an Original Source Document (OSD) for the following contract items when Wave Equation Analysis or Dynamic Testing is specified in the plans or contract:

<u>Spec. No.</u>	<u>Pay Item</u>
805	Steel Piling (_____)
805	Concrete Piling (____" _____)

This report should be prepared for each bent of pile driven, beginning with the initial bent driven.

The Inspector should prepare the report in accordance with the instructions below.

The appropriate bearing graph must be attached to each piling record. See Section 805.01 of this manual for additional information.

As soon as possible, the report should be checked by the Resident Engineer Office personnel. The completed report should be distributed at such time that the original will reach the Construction Office not later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

- Item 1.** Enter the Job Number.
- Item 2.** Enter the FAP Number applicable to the particular bent of pile driven.
- Item 3.** Enter the Job Name as shown on the contract.
- Item 4.** Enter the Bridge Number in which the Bent is located.
- Item 5.** Enter the Bent Number in which the pile are being driven.
- Item 6.** Enter the required ultimate bearing capacity for the piling at this location.
- Item 7.** Enter the size and type of piling driven (i.e., 16" sq. precast concrete, HP 10 x 42 steel).
- Item 8.** Enter the Brand and Model of the pile driving hammer being used.
- Item 9.** Enter the hammer cushion and pile cushion materials and thicknesses.
- Item 10.** Enter the fuel setting used. This setting should be the same setting used to drive the test pile which established the pile lengths for this bent.
- Item 11.** Enter the approved piling length for the bent of piling driven.
- Item 12.** Enter the maximum energy rating of the pile driving equipment used.
- Item 13.** Enter the date each pile is driven.
- Item 14.** Enter the Pile Number for each pile driven in the bent. (Piling are numbered from right to left.)
- Item 15.** Enter the length of each pile driven, even if the Contractor elects to drive a pile longer than the approved pile length.

2003 SPECIFICATIONS

APPENDIX III

Item 16. Enter the length of buildup, if any for each pile in the bent. This is the actual buildup, before allowance for splice.

Item 17. Enter the applicable allowance for splices, if any.

Item 18. Enter the actual piling length cut off for pay and nonpay, as applicable, for each pile in the bent.

Item 19. Compute the total allowed length of each pile in the bent.

The allowed length is computed

$$(\text{Item 15} + \text{Item 16} + \text{Item 17} - \text{Item 18} + \text{Pay for Cutoff} = \text{Item 19})$$

The Pay for Cutoff which is determined by the following formula:

$$\text{Pay for Cutoff} = 50\% \text{ pay cut-off length} + \text{allowance} \quad [1' (0.3 \text{ m}) \text{ for steel piles,} \\ 3' (1 \text{ m}) \text{ for concrete piles}]$$

Item 20. Enter the length of pile in place below the ground.

Item 21. Enter the number of blows for the last foot of piling driven (for metric projects, record the number of blows per 300 mm).

Item 22. Enter the average drop (stroke) of the hammer in feet for the last 20 blows of pile driven. (For metric projects, measure the stroke to the nearest 50 mm.) This is constant for steam and air hammers, but will normally vary when diesel pile driving hammers are used.

Item 23. Using the applicable bearing graph provided by Bridge Division, determine if the ultimate bearing capacity has been obtained.

Item 24. Enter the applicable pile identification number for each pile driven in the bent (casting yard ID #, heat #, etc.).

Item 25. Enter any pertinent comments, if any, for each pile (i.e., 4:12 batter, pile spalled at the top, etc.).

Item 26. Enter the totals for the bent of pile.

Item 27. Both the Inspector and Resident Engineer shall sign the form.

NOTE: Piling are to be driven until: (1) the required ultimate bearing capacity or greater, as indicated by the bearing graph, has been obtained and (2) the top of the pile is at plan grade; but not more than when (3) a hammer blow count of 20 blows per inch (25 mm) has been obtained. In no case shall the pile be driven less than the minimum penetration specified.

Distribution of the completed Report is as follows:

Original Construction Office

Copy District Engineer

Copy Resident Engineer Office File

Copy Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-167 is considered an Original Source Document (OSD).

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DAILY REPORT OF _____ OPERATIONS

ROADWAY INSPECTOR'S RECORD

FORM 19-168

This report form may be used as an Original Source Document (OSD) in lieu of that generated by the computerized Daily Report System on CONTRACT ITEMS WITH VERY SMALL QUANTITIES, IF THE RESIDENT ENGINEER FEELS THE TOTAL QUANTITY FOR THE PROJECT DOES NOT JUSTIFY SETTING UP THE COMPUTER FILE and generating the computerized version.

Preparation of this report shall be on a daily basis, beginning with the initial day of hauling.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report shall be checked by the Resident Engineer's Office personnel. The report should be distributed so that the original will reach the Construction Office no later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

- Item 1.** The complete name, or authorized abbreviation, of the material or item should be used.
- Item 2.** Enter the State Job Number.
- Item 3.** Enter the Job Name as shown on the Contract.
- Item 4.** Enter the date the work was performed.
- Item 5.** Reports shall be numbered consecutively daily for each material or item hauled. All reports should be numbered separately and independently for each contract item with a series of numbers for each item.
- Item 6.** Show the general location on the job; i.e., Shoulders, Islands, Right Main Lanes, Ramp __, etc.
- Item 7.** The complete name, or authorized abbreviation, of the material or item should be used.
- Item 8.** Enter the Source of the Material.
- Item 9.** Inspectors shall sign all reports.
- Item 10.** Enter each truck's identification number.
- Item 11.** Enter the net weight of each load from each scale ticket along with the time the load was discharged. Changes in location or rate of application may be separated by drawing a heavy line after the last load before the change or by starting on new lines.

NOTE: Specifications require automatic printing scales.

NOTE: Quantities should be corrected for moisture, if applicable, before the summary is completed.

Item 12. Enter the Station limits in which the material was placed. These limits should be broken at all equations, bridge ends, and where the rate of application changes.

Item 13. Enter the actual location where the material was placed; i.e., Right Main Lane, Roadway, Left Shoulder, etc.

Item 14. Enter the Length of each section where the material was placed.

Item 15. Enter the amount of material placed in each section (less moisture).

Item 16. Compute the rate of application. Enter this over the planned rate of application; i.e.: 4.9 T/Sta.
5 T/Sta.

Item 17. Any observations or instructions required for control of the work or to verify payments to the Contractor should be noted under "Remarks."

Item 18. The Resident Engineer will sign the Report.

Item 19. Enter the total this date and correct same for moisture. Compute the cumulative totals to date for the material.

Item 20. Enter the percent moisture of the material.

Distribution of the completed Report is as follows:

Original	Construction Office
Copy	Resident Engineer Office File
Copy	Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-168 is considered an Original Source Document (OSD).

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DAILY REPORT FOR _____

PRIME, TACK

FORM NO. 19-208

This report should be completed as an Original Source Document (OSD) for the following Contract Items:

<u>Spec. No.</u>	<u>Pay Item</u>
401	Prime Coat
401	Tack Coat
401	Emulsified Asphalt in Base Course

Preparation of this report should be on a daily basis, beginning with the initial day of hauling.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report should be checked by the Resident Engineer Office personnel. The checked report should be distributed at such time that the original will reach the Construction Office not later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

Item 1. Enter the Contract name of the Item or the Authorized Abbreviation.

Item 2. Enter The State Job Number.

Item 3. Enter the Job Name as shown on the Contract.

Item 4. Enter the date the work was performed.

Item 5. Number the reports consecutively, beginning with the first day's work.

Item 6. Enter the Federal Aid Project Number(s), if any. If no Federal Aid is involved, enter "State Job".

Item 7. The Inspector shall sign the report.

Item 8. Enter the temperature at the time work begins, regardless of the high and low for the day.

Item 9. Enter the temperature at the time work ends, regardless of the high and low for the day.

Item 10. Enter a general description of the day's weather conditions, i. e., "Partly Cloudy", "Fair", etc.

Item 11. Enter the Type of Asphalt being used, i. e., "MC-30", etc.

Item 12. Enter the Producer's Tank Number (from the delivery ticket).

Item 13. Enter the Seal Number of the Producer's Tank (from the delivery ticket).

Item 14. Enter the percent of water added above that which is necessary for production of emulsions.

Item 15. Enter the Station limits of each application.

Item 16. Enter the location where the material is placed, i. e., "Left Lane", "Right Shoulder", etc.

Item 17. Enter the width and computed length of application.

Item 18. Compute the area of each application.

Item 19 Using the calibrated "stick" provided by the Contractor, enter the gallon reading at the beginning of each application.

Item 20. Using the calibrated "stick" provided by the Contractor, enter the gallon reading at the end of each application.

Item 21. Compute the gallons applied. When emulsified asphalt is used and additional water is added to the manufactured product, enter the difference between the "Start" and "Stop" in the first half of the column, followed by the adjusted quantity reduced by the water content in the second half.

Item 22. Enter the temperature of the material at each application over the correction factor for that temperature. Temperature Correction Factor Tables are found in Appendix IV of this Manual.

Item 23. Using the Temperature Correction Factor (Item 22) and the Gallons Applied (Item 21), compute the gallons of liquid asphalt applied, corrected to 60 degrees F. **Report to the whole gallon.**

Item 24. Enter the total area covered and gallons of material applied.

Item 25. Enter a cumulative summary of each material applied to date.

Item 26. Any observations or instructions required for control of the work or to verify payments to the Contractor should be noted under "Remarks."

Item 27. The Resident Engineer will sign the Report.

NOTE: When an asphalt distributor is first used on a project, a copy of the calibration of that distributor **MUST** accompany the first Report on which it is used.

Distribution of the completed Report is as follows:

Original	Construction Office
Copy	Resident Engineer Office File
Copy	Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-208 is considered an Original Source Document (OSD).

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

DAILY REPORT FOR -1-
PRIME, TACK, PMBS BS CRS

Job -2- Job Name -3- Date -4- Report -5-
 FAP No. -6- Inspector -7-
 Temperature -8- Stop -9- Weather -10-
 Asphalt Type -11- Tank No. -12- Seal No. -13- Water -14- %
 (Emulsified Asphalt Only)

STATION	STATION	LOCATION	WIDTH/ LENGTH	SQ. YDS.	GALLON S START	GALLON S STOP	GALLON S APPLIED	TEMP./ CORR. FACTOR	GALLONS @ ___°F
<u>-15-</u>		<u>-16-</u>	<u>-17-</u> <u>-17-</u>	<u>-18-</u>	<u>-19-</u>	<u>-20-</u>	<u>-21-</u>	<u>-22-</u> <u>-22-</u>	<u>-23-</u>
TOTAL				<u>-24-</u>	TOTAL				<u>-24-</u>

SUMMARY

<u>-25-</u>	SQ. YDS.	ASPHALT (GALLONS)	RATE OF APPL. (GAL. PER SQ. YD.)
This Date			
Previous This Date			
Including This Date			

Remarks -26-
:

-27-
Resident Engineer

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DAILY REPORT FOR BITUMINOUS SURFACE TREATMENT

FORM NO. 19-209

This report should be completed as an Original Source Document (OSD) for the following Contract Items:

<u>Spec. No.</u>	<u>Pay Item</u>
402	Mineral Aggregate in Asphalt Surface Treatment (Class___)
402	Asphalt in Surface Treatment

Preparation of this report should be on a daily basis, beginning with the initial day of hauling.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report should be checked by the Resident Engineer Office personnel. The checked report should be distributed at such time that the original will reach the Construction Office not later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

- Item 1.** Enter the State Job Number.
- Item 2.** Enter the Job Name as shown on the Contract.
- Item 3.** Enter the date the work was performed.
- Item 4.** Number the reports consecutively, beginning with the first day's work.
- Item 5.** Enter the Federal Aid Project Number(s), if any. If no Federal Aid is involved, enter "State Job".
- Item 6.** The Inspector shall sign the report.
- Item 7.** Indicate whether this day's work was on the 1st or 2nd course. Use separate sheets to report 1st and 2nd courses placed on the same day.
- Item 8.** Enter the temperature at the time work begins, regardless of the high and low for the day.
- Item 9.** Enter the temperature at the time work ends, regardless of the high and low for the day.
- Item 10.** Enter a general description of the day's weather conditions, i.e., "Partly Cloudy", "Fair", etc.
- Item 11.** Enter the Type of Asphalt being used, i. e., "CRS-2", etc.
- Item 12.** Enter the Producer's Tank Number (from the delivery ticket).
- Item 13.** Enter the Seal Number of the Producer's Tank (from the delivery ticket).
- Item 14.** Enter the Station limits of each application.

- Item 15.** Using the calibrated "stick" provided by the Contractor, enter the gallon reading of the asphalt distributor at the beginning of each application.
- Item 16.** Using the calibrated "stick" provided by the Contractor, enter the gallon reading of the asphalt distributor at the end of each application.
- Item 17.** Compute the gallons applied. When emulsified asphalt is used and additional water is added to the manufactured product, enter the difference between the "Start" and "Stop" in the first half of the column, followed by the adjusted quantity reduced by the water content in the second half.
- Item 18.** Enter the temperature of the material on each application.
- Item 19.** Enter the Temperature Correction Factor for the temperature of the material. There factors may be found in Appendix IV.
- Item 20.** Compute the gallons of each application, reduced to the standard temperature of 60 degrees F. Report to the whole gallon.
- Item 21.** Compute the total gallons of material applied.
- Item 22.** Enter the class of Mineral Aggregate used. (This is specified in the Contract.)
- Item 23.** Indicate the Station limits in which the material was placed. These limits should be broken at all equations, bridge ends, and where either roadway location or rates of application change.
- Item 24.** Enter the truck number of each discharging truck in the top one-half of the block.
- A. When the method of measurement is by the cubic yard:
- (1.) Strike through "Ton" in the heading.
 - (2.) Enter the Volume hauled beneath each corresponding truck number.
- B. When the method of measurement is by the ton:
- (1.) Strike through "Cubic Yards" in the heading.
 - (2.) Enter the weight of each load in tons beneath the corresponding truck number.
- Item 25:**
- A. When the method of measurement is by the cubic yard:
- (1.) Strike through "Ton" in the heading.
 - (2.) Enter the total of the volumes in each section.
- B. When the method of measurement is by the ton:
- (1.) Strike through (Cu. Yds.) in the heading.
 - (2.) Enter the total of the net weight of loads in each section.

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Item 26. Enter the total quantity of Mineral Aggregate covered in this Report.

Item 27. Enter a Summary of each material applied this date, showing:

Actual locations (i.e., "Left Lane", "Right Shoulder", etc.),

Width and length of application,

Computed area (S. Y.) of each application,

Quantity of materials used, and

Computed Rates of Application.

Item 28. Any observations or instructions required for control of the work or to verify payments to the Contractor should be noted under "Remarks."

Item 29. The Resident Engineer will sign the Report.

NOTE: When an asphalt distributor is first used on a project, a copy of the calibration of that distributor **MUST** accompany the first Report on which it is used.

Distribution of the completed Report is as follows:

Original Construction Office

Copy Resident Engineer Office File

Copy Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-209 is considered an Original Source Document (OSD).

DAILY REPORT OF _____ OPERATIONS
ROADWAY INSPECTOR'S RECORD
FORM 19-213

This report form may be used as an Original Source Document (OSD) in lieu of the computer generated reports created by the "Daily Report System" on Contract items with very small quantities, if the Resident Engineer feels the total quantity for the project does not justify setting up the computer file and generating the computerized version.

Preparation of this report shall be on a daily basis, beginning with the initial day of hauling.

The Inspector should prepare the report in accordance with the instructions below.

As soon as possible, the report shall be checked by the Resident Engineer's Office personnel. The report should be distributed so that the original will reach the Construction Office no later than the fourth work day following the date of the report.

INSTRUCTIONS FOR PREPARATION

- Item 1.** The complete name, or authorized abbreviation, of the material or item should be used.
- Item 2.** Enter the State Job Number.
- Item 3.** Enter the Job Name as shown on the Contract.
- Item 4.** Enter the date the work was performed.
- Item 5.** Reports shall be numbered consecutively daily for each material or item hauled. All reports should be numbered separately and independently for each contract item with a series of numbers for each item.
- Item 6.** Enter the Federal Aid Project Number(s), if any. If no Federal Aid is involved, enter "State Job".
- Item 7.** Enter the complete name(s), or authorized abbreviation(s), of the pay item(s) documented on the report.
- Item 8.** The Inspector shall sign the report.
- Item 9.** Enter the temperature at the time the work begins, regardless of the high and low for the day.
- Item 10.** Enter the temperature at the time the work ends, regardless of the high and low for the day.
- Item 11.** Enter a general statement as to the weather conditions; i.e., cloudy, clear, etc.
- Item 12.** Enter each truck's identification number.
- Item 13.** Record the time of discharge of each truck on the top line and the net weight of material hauled by each truck (in pounds) on the lower line. If applicable, the Roadway Inspector should check the net weight computation on weight tickets (Gross less Tare equals Net Weight).

DAILY REPORT OF -1-
ROADWAY INSPECTOR'S RECORD

Job No. -2- Job Name -3- Date -4- Report No. -5-

FAP No. -6- Item -7- Inspector -8-
(SIGNATURE)

Temperature Start -9- Stop -10- Weather -11-

TRUCK NUMBER	TIME OF DISCHARGE / TEMPERATURE <u>-13-</u>								LBS.
	NET WEIGHT (POUNDS)								
	/	/	/	/	/	/	/	/	
<u>-12-</u>	/	/	/	/	/	/	/	/	<u>-14</u>
	/	/	/	/	/	/	/	/	
	/	/	/	/	/	/	/	/	
	/	/	/	/	/	/	/	/	
	/	/	/	/	/	/	/	/	
	/	/	/	/	/	/	/	/	
	/	/	/	/	/	/	/	/	
	/	/	/	/	/	/	/	/	
	/	/	/	/	/	/	/	/	

Total This Date (Lbs.)

Total This Date (Tons)

Previous This Date (Tons)

Including This Date (Tons)

-15-

SUMMARY

FROM STATION	TO STATION	LOCATION	LENGTH	WIDTH	SQ. YARDS	TONS	RATE (LBS./S.Y.)
<u>-16-</u>	<u>-16-</u>	<u>-17-</u>	<u>-18-</u>	<u>-19-</u>	<u>-20-</u>	<u>-21-</u>	<u>-22-</u>
Total This Date							
Previous this Date			<u>-23-</u>			<u>-23-</u>	
Including this Date							

NOTE: At the beginning of a day's run or when operations resume after lengthy delays, the temperature of the mix should be taken at the frequency that is necessary to determine that it is within the specified range. As a general rule, temperatures should be checked once every ten loads of Hot Mix discharged into the laydown machine. Temperature should be recorded at the time of discharge.

REMARKS: -24-
RESIDENT ENGINEER -25-

- Item 14.** Compute and enter the net weight totals for each truck.
- Item 15.** This is a cumulative summary of the mix applied to date. Enter the current and previous cumulative totals of the mix, and compute the cumulative total to date for this report.
- Item 16.** Enter the Station limits where the material was placed.
- Item 17.** Enter the specific location the material was placed; i.e., left shoulder, right main lane, etc.
- Item 18.** Compute and enter the length of application.
- Item 19.** Enter the width of the material placed.
- Item 20.** Compute and enter the area covered by the material.
- Item 21.** For each location noted, enter the tons of mix placed.
- Item 22.** For each location noted, compute and enter the rate of application of the mix.
- Item 23.** The last three lines of the "Summary" are used to enter the current, previous, and to date totals, along with the associated rates of application.
- Item 24.** Any observations or instructions required for control of the work or to verify payments to the Contractor should be noted under "Remarks."
- Item 25.** The Resident Engineer will sign the Report.

Distribution of the completed Report is as follows:

Original	Construction Office
Copy	Resident Engineer Office File
Copy	Job Inspector (Optional)

Upon receipt by the Construction Office, the original will be checked and retained for inclusion with the Final Estimate. The completed Form 19-213 is considered an Original Source Document (OSD).

APPENDIX IV

VOLUME CORRECTION TABLES FOR ASPHALTS

INDEX

TABLE NAME	PAGE NO.
Volume Correction Table for Emulsified Asphalts, °F	IV-3
Volume Correction Table for Asphalt Cements and Liquid Asphalts, °F	IV-4
Volume Correction Table for Emulsified Asphalts, °C	IV-5
Volume Correction Table for Asphalt Cements, °C	IV-6
Volume Correction Table for Liquid Asphalts, °C	IV-7

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VOLUME CORRECTION TABLE TO 60° F

EMULSIFIED ASPHALTS

Applies to Emulsions with designations: RS, MS, SS, CRS, CMS, CSS

t °F	FACTOR						
40	1.0050	90	0.9925	140	0.9800	190	0.9675
41	1.0048	91	0.9923	141	0.9798	191	0.9673
42	1.0045	92	0.9920	142	0.9795	192	0.9670
43	1.0043	93	0.9918	143	0.9793	193	0.9668
44	1.0040	94	0.9915	144	0.9790	194	0.9665
45	1.0038	95	0.9913	145	0.9788	195	0.9663
46	1.0035	96	0.9910	146	0.9785	196	0.9660
47	1.0033	97	0.9908	147	0.9783	197	0.9658
48	1.0030	98	0.9905	148	0.9780	198	0.9655
49	1.0028	99	0.9903	149	0.9778	199	0.9653
50	1.0025	100	0.9900	150	0.9775	200	0.9650
51	1.0023	101	0.9898	151	0.9773	201	0.9648
52	1.0020	102	0.9895	152	0.9770	202	0.9645
53	1.0018	103	0.9893	153	0.9768	203	0.9643
54	1.0015	104	0.9890	154	0.9765	204	0.9640
55	1.0013	105	0.9888	155	0.9763	205	0.9638
56	1.0010	106	0.9885	156	0.9760	206	0.9635
57	1.0008	107	0.9883	157	0.9758	207	0.9633
58	1.0005	108	0.9880	158	0.9755	208	0.9630
59	1.0003	109	0.9878	159	0.9753	209	0.9628
60	1.0000	110	0.9875	160	0.9750	210	0.9625
61	0.9998	111	0.9873	161	0.9748	211	0.9623
62	0.9995	112	0.9870	162	0.9745	212	0.9620
63	0.9993	113	0.9868	163	0.9743	213	0.9618
64	0.9990	114	0.9865	164	0.9740	214	0.9615
65	0.9988	115	0.9863	165	0.9738	215	0.9613
66	0.9985	116	0.9860	166	0.9735	216	0.9610
67	0.9983	117	0.9858	167	0.9733	217	0.9608
68	0.9980	118	0.9855	168	0.9730	218	0.9605
69	0.9978	119	0.9853	169	0.9728	219	0.9603
70	0.9975	120	0.9850	170	0.9725	220	0.9600
71	0.9973	121	0.9848	171	0.9723	221	0.9598
72	0.9970	122	0.9845	172	0.9720	222	0.9595
73	0.9968	123	0.9843	173	0.9718	223	0.9593
74	0.9965	124	0.9840	174	0.9715	224	0.9590
75	0.9963	125	0.9838	175	0.9713	225	0.9588
76	0.9960	126	0.9835	176	0.9710	226	0.9585
77	0.9958	127	0.9833	177	0.9708	227	0.9583
78	0.9955	128	0.9830	178	0.9705	228	0.9580
79	0.9953	129	0.9828	179	0.9703	229	0.9578
80	0.9950	130	0.9825	180	0.9700	230	0.9575
81	0.9948	131	0.9823	181	0.9698	231	0.9573
82	0.9945	132	0.9820	182	0.9695	232	0.9570
83	0.9943	133	0.9818	183	0.9693	233	0.9568
84	0.9940	134	0.9815	184	0.9690	234	0.9565
85	0.9938	135	0.9813	185	0.9688	235	0.9563
86	0.9935	136	0.9810	186	0.9685	236	0.9560
87	0.9933	137	0.9808	187	0.9683	237	0.9558
88	0.9930	138	0.9805	188	0.9680	238	0.9555
89	0.9928	139	0.9803	189	0.9678	239	0.9553

Legend: t = Observed temperature in Degrees Fahrenheit

Factor = Multiplier for Converting volumes on the basis of 60° F

Disregard Specific Gravity

VOLUME CORRECTION TABLE TO 60° F
ASPHALT CEMENTS AND LIQUID ASPHALTS

Applies to Asphalt Cements and Liquid Asphalts with designations: AC, RC & MC

t °F	Factor						
50	1.0040	100	0.9842	150	0.9647	200	0.9456
51	1.0036	101	0.9838	151	0.9643	201	0.9452
52	1.0032	102	0.9834	152	0.9639	202	0.9448
53	1.0028	103	0.9830	153	0.9635	203	0.9444
54	1.0024	104	0.9826	154	0.9632	204	0.9441
55	1.0020	105	0.9822	155	0.9628	205	0.9437
56	1.0016	106	0.9818	156	0.9624	206	0.9433
57	1.0012	107	0.9814	157	0.9620	207	0.9429
58	1.0008	108	0.9810	158	0.9616	208	0.9425
59	1.0004	109	0.9806	159	0.9612	209	0.9422
60	1.0000	110	0.9803	160	0.9609	210	0.9418
61	0.9996	111	0.9799	161	0.9605	211	0.9414
62	0.9992	112	0.9795	162	0.9601	212	0.941
63	0.9988	113	0.9791	163	0.9597	213	0.9407
64	0.9984	114	0.9787	164	0.9593	214	0.9403
65	0.9980	115	0.9783	165	0.9589	215	0.9399
66	0.9976	116	0.9779	166	0.9585	216	0.9395
67	0.9972	117	0.9775	167	0.9582	217	0.9391
68	0.9968	118	0.9771	168	0.9578	218	0.9388
69	0.9964	119	0.9767	169	0.9574	219	0.9384
70	0.9960	120	0.9763	170	0.9570	220	0.938
71	0.9956	121	0.9760	171	0.9566	221	0.9376
72	0.9952	122	0.9756	172	0.9562	222	0.9373
73	0.9948	123	0.9752	173	0.9558	223	0.9369
74	0.9944	124	0.9748	174	0.9555	224	0.9365
75	0.9940	125	0.9744	175	0.9551	225	0.9361
76	0.9936	126	0.9740	176	0.9547	226	0.9358
77	0.9932	127	0.9736	177	0.9543	227	0.9354
78	0.9929	128	0.9732	178	0.9539	228	0.935
79	0.9925	129	0.9728	179	0.9536	229	0.9346
80	0.9921	130	0.9725	180	0.9532	230	0.9343
81	0.9917	131	0.9721	181	0.9528	231	0.9339
82	0.9913	132	0.9717	182	0.9524	232	0.9335
83	0.9909	133	0.9713	183	0.9520	233	0.9331
84	0.9905	134	0.9709	184	0.9517	234	0.9328
85	0.9901	135	0.9705	185	0.9513	235	0.9324
86	0.9897	136	0.9701	186	0.9509	236	0.932
87	0.9893	137	0.9697	187	0.9505	237	0.9316
88	0.9889	138	0.9693	188	0.9501	238	0.9313
89	0.9885	139	0.9690	189	0.9498	239	0.9309
90	0.9881	140	0.9686	190	0.9494	240	0.9305
91	0.9877	141	0.9682	191	0.9490	241	0.9301
92	0.9873	142	0.9678	192	0.9486	242	0.9298
93	0.9869	143	0.9674	193	0.9482	243	0.9294
94	0.9865	144	0.9670	194	0.9478	244	0.929
95	0.9861	145	0.9666	195	0.9475	245	0.9286
96	0.9857	146	0.9662	196	0.9471	246	0.9283
97	0.9854	147	0.9659	197	0.9467	247	0.9279
98	0.9850	148	0.9655	198	0.9463	248	0.9275
99	0.9846	149	0.9651	199	0.9460	249	0.9272

Legend: t = Observed Temperature in DEgrees Fahrenheit

Factor = Multiplier for Converting Volumes on the Basis of 60° F

Disregard Specific Gravity

VOLUME CORRECTION TO 15 C

EMULSIFIED ASPHALTS

Applies to Emulsions with designations: RS, MS, SS, CRS, CMS, CSS

<u>t (C)</u>	<u>Factor</u>		<u>t (C)</u>	<u>Factor</u>		<u>t(C)</u>	<u>Factor</u>
4	1.00495		42	0.98785		80	0.97075
5	1.0045		43	0.9874		81	0.9703
6	1.00405		44	0.98695		82	0.96985
7	1.0036		45	0.9865		83	0.9694
8	1.00315		46	0.98605		84	0.96895
9	1.0027		47	0.9856		85	0.9685
10	1.00225		48	0.98515		86	0.96805
11	1.0018		49	0.9847		87	0.9676
12	1.00135		50	0.98425		88	0.96715
13	1.0009		51	0.9838		89	0.9667
14	1.00045		52	0.98335		90	0.96625
15	1		53	0.9829		91	0.9658
16	0.99955		54	0.98245		92	0.96535
17	0.9991		55	0.982		93	0.9649
18	0.99865		56	0.98155		94	0.96445
19	0.9982		57	0.9811		95	0.964
20	0.99775		58	0.98065		96	0.96355
21	0.9973		59	0.9802		97	0.9631
22	0.99685		60	0.97975		98	0.96265
23	0.9964		61	0.9793		99	0.9622
24	0.99595		62	0.97885		100	0.96175
25	0.9955		63	0.9784		101	0.9613
26	0.99505		64	0.97795		102	0.96085
27	0.9946		65	0.9775		103	0.9604
28	0.99415		66	0.97705		104	0.95995
29	0.9937		67	0.9766		105	0.9595
30	0.99325		68	0.97615		106	0.95905
31	0.9928		69	0.9757		107	0.9586
32	0.99235		70	0.97525		108	0.95815
33	0.9919		71	0.9748		109	0.9577
34	0.99145		72	0.97435		110	0.95725
35	0.991		73	0.9739		111	0.9568
36	0.99055		74	0.97345		112	0.95635
37	0.9901		75	0.973		113	0.9559
38	0.98965		76	0.97255		114	0.95545
39	0.9892		77	0.9721		115	0.955
40	0.98875		78	0.97165		116	0.95455
41	0.9883		79	0.9712		117	0.9541

Legend: t = Observed temperature in Degrees Celsius
Factor = Multiplier for converting volumes on the basis of 15 C

DISREGARD SPECIFIC GRAVITY

VOLUME CORRECTION TABLE TO 15 C

ASPHALT CEMENTS

Applies to Asphalt Cements & Performance Graded Binders

t (C)	Factor						
10	1.0032	45	0.9804	80	0.9574	115	0.9341
11	1.0026	46	0.9798	81	0.9567	116	0.9334
12	1.0019	47	0.9791	82	0.9560	117	0.9327
13	1.0013	48	0.9785	83	0.9554	118	0.9321
14	1.0006	49	0.9778	84	0.9547	119	0.9314
15	1.0000	50	0.9772	85	0.9541	120	0.9307
16	0.9994	51	0.9765	86	0.9534	121	0.9301
17	0.9987	52	0.9758	87	0.9527	122	0.9294
18	0.9981	53	0.9752	88	0.9521	123	0.9287
19	0.9974	54	0.9745	89	0.9514	124	0.9281
20	0.9968	55	0.9739	90	0.9507	125	0.9274
21	0.9961	56	0.9732	91	0.9501	126	0.9267
22	0.9955	57	0.9726	92	0.9494	127	0.9260
23	0.9948	58	0.9719	93	0.9487	128	0.9254
24	0.9942	59	0.9712	94	0.9481	129	0.9247
25	0.9935	60	0.9706	95	0.9474	130	0.9240
26	0.9929	61	0.9699	96	0.9468	131	0.9234
27	0.9922	62	0.9693	97	0.9461	132	0.9227
28	0.9916	63	0.9686	98	0.9454	133	0.9222
29	0.9909	64	0.9680	99	0.9448	134	0.9214
30	0.9902	65	0.9673	100	0.9441	135	0.9207
31	0.9896	66	0.9666	101	0.9434	136	0.9200
32	0.9888	67	0.9660	102	0.9428	137	0.9193
33	0.9883	68	0.9653	103	0.9421	138	0.9187
34	0.9876	69	0.9647	104	0.9414	139	0.9181
35	0.9870	70	0.9640	105	0.9408	140	0.9173
36	0.9863	71	0.9633	106	0.9401	141	0.9167
37	0.9857	72	0.9627	107	0.9394	142	0.9160
38	0.9850	73	0.9620	108	0.9388	143	0.9153
39	0.9844	74	0.9613	109	0.9381	144	0.9146
40	0.9837	75	0.9607	110	0.9374	145	0.9140
41	0.9831	76	0.9600	111	0.9368	146	0.9135
42	0.9824	77	0.9594	112	0.9361	147	0.9126
43	0.9818	78	0.9587	113	0.9354	148	0.9119
44	0.9811	79	0.9580	114	0.9347	149	0.9113
						150	0.9106

**Legend: t = Observed Temperature in Degrees Celsius
Factor = Multiplier for Converting Volumes on the Basis of 15 C**

Disregard Specific Gravity

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APPENDICES

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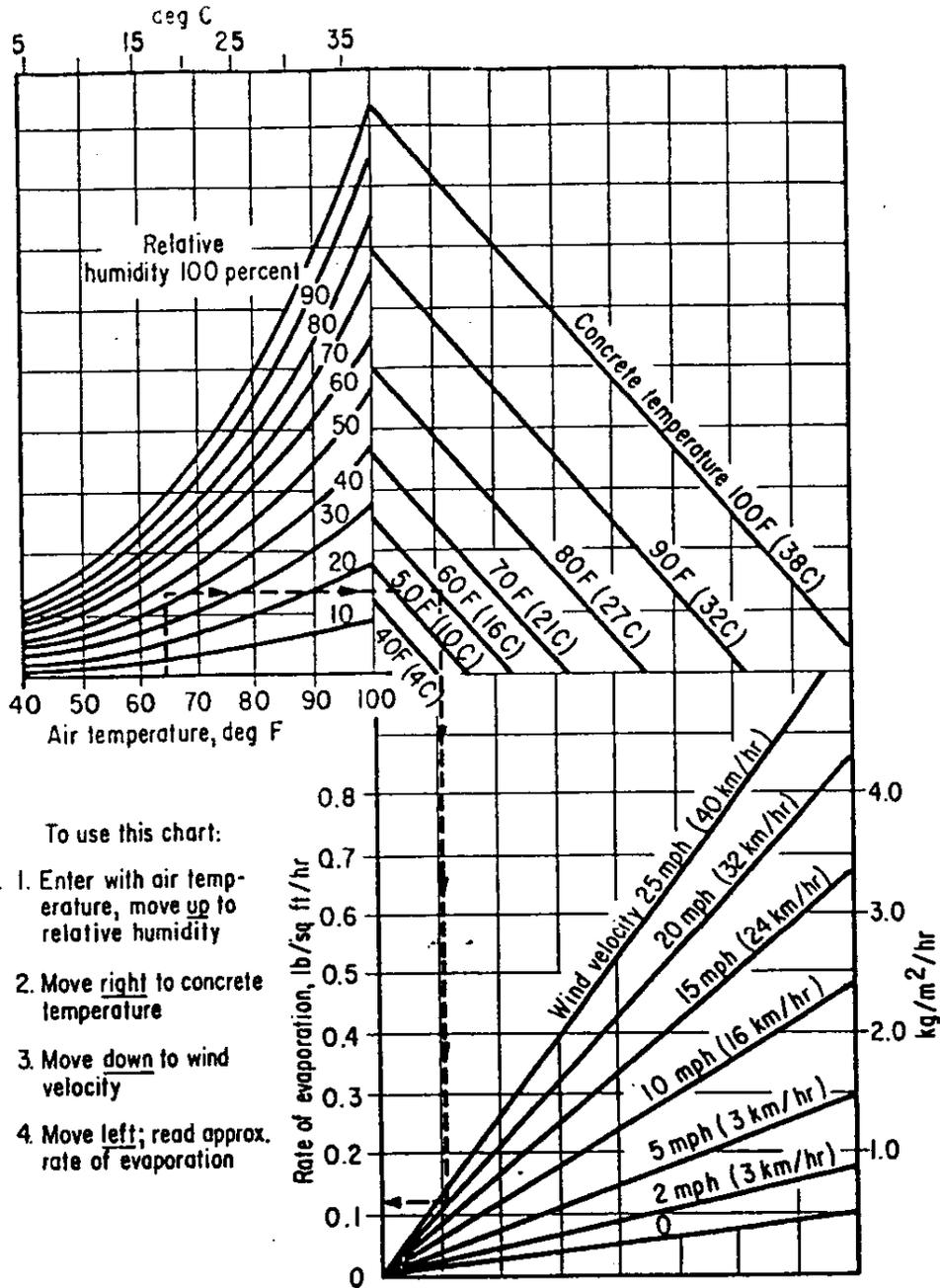
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APPENDIX V

EFFECT OF HUMIDITY AND TEMPERATURE ON PLASTIC CONCRETE

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EFFECT OF HUMIDITY AND TEMPERATURE ON PLASTIC CONCRETE



—Effect of concrete and air temperatures, relative humidity, and wind velocity on the rate of evaporation of surface moisture from concrete. This chart provides a graphic method of estimating the loss of surface moisture for various weather conditions. To use the chart, follow the four steps outlined above. If the rate of evaporation approaches 0.2 lb/ft²/hr (1.0 kg/m²/hr), precautions against plastic shrinkage cracking are necessary.

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APPENDIX VI

**LIGHTWEIGHT
PROFILOMETER
SETTINGS**

(KJ LAW & ICC)

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ICC vs. KJLaw Settings

ICC Software Settings

- Scallop
 - Minimum height = 0.03 inches
 - Minimum width = 0.08 inches
 - Resolution = 0.01 inches
- Blanking Band = 0.20 inches
- Defect Template = 0.30 inches

1 inch = 25 feet (horiz. scale of profile)

conversion

0.08 inches (25 ft / 1 in) = 2 feet

Length same as Width

KJLaw Software Settings

- Min Scallop Height = 0.03 inches
- Min Scallop Length = 2.00 feet
- Scallop Rounding = 0.01 inches
- Blanking Band Amplitude = 0.20 inches
- Blanking Band = Straight Line
- Smoothing Filter = Moving Average
- Smoothing Filter Length = 0.50 feet

Scallop Rounding
same as Resolution



AHTD Research

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