SECTION 101 — DEFINITIONS AND TERMS

101.01 GENERAL. These Standard Specifications for Road and Bridge Construction are written to the bidder, before the award of the Contract, and to the Contractor. The sentences which direct the Contractor to perform work, are written in the active voice-imperative mood. These directions to the Contractor are written as commands. For example, a requirement to provide cold weather protection would be expressed as, "Provide cold-weather protection for concrete," rather than "The Contractor shall provide cold weather protection for concrete." In the imperative mood, the subject "the bidder" or "the Contractor" is understood.

All other requirements to be performed by others have been written in the active voice. Sentences written in the active voice identify the party responsible for performing the action. For example, "The Engineer will determine the density of the compacted material." Certain requirements of the Contractor may also be written in active voice, rather than active voice-imperative mood.

Sentences that define terms, describe a product or desired result, or describe a condition that may exist are not written in either the active voice or the imperative mood. These types of sentences that describe a condition use verbs requiring no action. For example, "The characteristics of the soils actually encountered in the subgrade may affect the quality of cement and depth of treatment necessary."

101.02 ABBREVIATIONS. The following abbreviations, when used in the Contract, represent the full text shown.

AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ADA	American with Disabilities Act
ADT	Average Daily Traffic
ACHP	Advisory Council on Historic Preservation
ACI	American Concrete Institute
AGC	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AN	Advance Notification
ANSI	American National Standards Institute
APD	Appalachian Development Highway System Program
APWA	American Public Works Program
AQ	Air Quality
AQR	Air Quality Report
ARTIMIS	Advanced Regional Traffic Interactive Management and Information System
ARA	American Railway Association
AREA	American Railway Engineering Association
ASA	American Standards Association (now ANSI)
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
AST	Above Ground Storage Tank System
ASTM	American Society for Testing and Materials
ATSSA	American Traffic Safety Services Association
AVL	Automatic Vehicle Location
AWPA	American Wood Preservers' Association
AWWA	American Water Works Association
AWS	American Welding Society

BA	Biological Assessment
BDR	Bridge Development Report
BHR	Bridge Hydraulics Report
BMP	Best Management Practices
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
BTS	Bureau of Transportation Statistics
CAAA	Clean Air Act Amendment (1990)
CAD	Certified Agricultural District
CADD	Computer Aided Drawing and Design
CAP	Communicating All Promises
CBD	Central Business District
CDE	Chief District Engineer
CE	Categorical Exclusion
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIO	Chief Information Officer
CMAQ	Congestion Management and Air Quality Improvement Program
CMS	Changeable Message Sign
CO	Carbon Monoxide
COA	Class of Action
COE	US Army Corps of Engineers
CR	County Road
CRA	Cultural Resource Assessment
CSRP	Conceptual Stage Relocation Plan
CRSI	Concrete Reinforcing Steel Institute
CTP	Comprehensive Transportation Plan
CVO	Commercial Vehicle Operations
DAQ	KNREPC, Division for Air Quality
dBA	Decibels (A-Weighting)
DBE	Disadvantaged Business Enterprise
DEA	Division of Environmental Analysis
DEIS	Draft Environmental Impact Statement
DEP	Department for Environmental Protection
DFWR	Kentucky Department of Fish and Wildlife Resources
DHV	Design Hourly Volume
DOE	Determination of Eligibility
DOI	US Department of The Interior
DOW	KNREPC, Division of Water
DROD	Draft Record of Decision
DSEIS	Draft Supplementation Environmental Impact Statement
DSHE	Deputy State Highway Engineer
DWM	KNREPC, Division of Waste Management
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	US Environmental Protection Agency
ER	Federal-Aid Highway Emergency Relief Program
ESA	Endangered Species Act
ESBA	Endangered Species Biological Assessment
ESAL	Equivalent Single Axle Load
FAPG	Federal Aid Policy Guide
FHPM	Federal Highway Program Manual
FHWA	Federal Highway Administration
FIA	Federal Insurance Administration
FIRM	Flood Insurance Rate Maps

FLH	Federal Lands Highways Program
FOIA	Freedom of Information Act
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FR	Federal Register
FRA	Federal Railroad Administration
FSEIS	Final Supplemental Environmental Impact Statement
FSS	Federal Specifications and Standards, General Services Administration
FTA	Federal Transit Administration
FWS	US Fish and Wildlife Service
FY	Fiscal Year
GIS	Geographic Information System
GMS	Groundwater Management Systems
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HAR	Highway Advisory Radio
HC	Hydrocarbons
HES	Hazard Elimination System
HOV	High Occupancy Vehicle
HTF	Highway Trust Fund
HUD	Housing and Urban Development
HZM	Hazardous Material
IA	Independent Assurance
ICAR	Intergovernmental Coordination and Review
IJR	Interchange Justification Report
IM	Interstate System/Interstate Maintenance Program
ISTEA	Intermodal Surface Transportation Efficiency Act of 1996 (superseded by TEA-21)
ITS	Intelligent Transportation System
JPC	Jointed Plain Concrete
KAHC	Kentucky Association of Highway Contractors
KM	Kentucky Method
KNREPC	Kentucky Natural Resources and Environmental Protection Cabinet
KRMCA	Kentucky Ready Mixed Concrete Association
KRS	Kentucky Revised Statutes
KTC	Kentucky Transportation Center
KYTC	Kentucky Transportation Cabinet
Leq (h)	Level Equivalent for One Hour
LESA	Land Evaluation and Site Assessment
LOS	Level of Service
LTAP	Local Technical Assistance Program
LRP	Long Range Plan
MAGLEV	Magnetic Levitation Transportation Technology Deployment Program
MCL	Materials Central Laboratory
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways
MVE	Motor Vehicle Enforcement
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criterion
NAPA	National Asphalt Pavement Association

NCAT	National Center for Asphalt Technology
NCHRP	National Cooperative Highway Research Program
NCR	Non-Conformance Report
NDR	National Driver Registration
NEC	National Electric Code
NEMA	National Electrical Manufacturer's Association
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NHI	National Highway Institute
NHPA	National Historic Preservation Act
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NIST	National Institute for Standards and Technology
NMA	Non-Major Action
NMFS	National Marine Fisheries Service
NOAA	National Oceanic Atmospheric Administration
NOV	Notice of Violation
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPHQ	National Partnership for Highway Quality formerly National Quality Initiative (NQI)
NPS	National Park System
NRCS	National Resources Conservation Service formerly SCS
NRHP	National Register of Historic Places
NSR	Noise Study Report
NTI	National Transit Institute
NTIS	National Technical Information Service
NTPEP	National Transportation Product Evaluation Program
NWIM	National Wetland Inventory Map
OEP	FHWA Office of Environmental Policy
OGC	Office of General Counsel, Transportation Cabinet
OMS	Operations Management System
OPA	Office of Public Affairs, Transportation Cabinet
OSA	Office of State Archeologist
OSHA	Occupational Safety and Health Administration
PAH	Polynuclear Aromatic Hydrocarbons
PAIKY	Plantmix Asphalt Industry of Kentucky
PCCC	Percentage Catalyst Cold-Start
PCCN	Percentage Catalyst Hot-Start
PE	Preliminary Engineering
PE	Professional Engineer
PM10	Inhalable Particulates
PMS	Pavement Management System
PMS	Pavement Marking System
ppm	Parts per Million
QA	Quality Assurance
QAT	Quality Assurance Team
QC	Quality Control
QCP	Quality Control Plan
QL	Qualified Laboratories
RCRA	Resource Conservation Recovery Act
ROD	Record of Division
RS	Rural Secondary
RVP	Reid Vapor Pressure
RWIS	Road Weather Information Station
SAE	Society of Automotive Engineers

SASHTO	Southern Association of State Highway and Transportation Officials
SCH	State Clearinghouse
SCS	Soil Conservation Service
SHA	State Highway Agency
SHE	State Highway Engineer
SHRP	Strategic Highway Research Program
SHPO	State Historic Preservation Officer
SIC	Standard Industrial Codes
SIP	State Implementation Plan
SOx	Sulfur Oxides
SP	State Primary (State Maintained)
SPIB	Southern Pine Inspection Bureau
SR	State Road
SS	State Secondary (State Maintained)
SSPC	Steel Structures Painting Council
STOC	Statewide Transportation Operations Center
STP	Surface Transportation Program
STIP	State Transportation Improvement Program
SUPP	Supplemental Road (State Maintained)
SYP	Six Year Plan
TCM	Transportation Control Measures
TCP	Traffic Control Plan
TDIP	Technology Deployment Initiatives and Partnerships Program
TE	Transportation Enhancement Program
TEA-21	Transportation Equity Act for the 21st Century (1998-2003)
TEBM	Transportation Engineer Branch Manager
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TMC	Transportation Management Center
TRAC	Transportation and Civil Engineering Program
TRIMARC	Traffic Response and Incident Management Assisting the River Cities
TRB	Transportation Research Board
TSD	Treatment, Storage, and Disposal
TSM	Transportation Systems Management
TSO	Time Sharing Option
TSP	Total Suspended Particulates
UA	Urbanized Area
UATS	Urban Area Transportation Study
UL	Underwriters' Laboratory
UNL	Unscheduled Needs List
UPWP	Unverified Planning Work Program
USC	United States Code
USCG	US Coast Guard
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USGS	US Geological Survey
USNL	Unscheduled Needs List
UST	Underground Storage Tank
VE	Value Engineering
VPH	Vehicles Per Hour
VMS	Variable Message Sign
WBE	Woman-owned Business Enterprise
WCLIB	West Coast Lumber Inspection Bureau
WER	Wetland Evaluation Report
WMP	Wetland Mitigation Plan

101.03 DEFINITIONS. The following terms, when used in the Contract have the meaning described.

Advertisement — A public announcement, inviting Bid Proposals to perform work or furnish materials.

Authorized Adjustment — An order issued by the Engineer to the Contractor detailing changes to the specified work quantities that do not increase or modify the scope of the original Contract.

As Built Plans — The final Plans reflecting all changes to the original Plans.

Award — The acceptance by the Department of a Bid Proposal.

Base Course — See definition for Pavement Structure.

Best Management Practice Plan — The documentation detailing how the Contractor intends to conform to the requirements of Section 213 of the Standard Specifications.

Bidder — An individual, partnership, firm, corporation, or any acceptable combination thereof, or joint venture, submitting a Bid Proposal.

Bid Proposal — The offer of a bidder, on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

Bridge — A structure, including supports, erected over a depression or an obstruction, such as water, a highway, or a railway, and carrying traffic or other moving loads via a track or passageway and with an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments, spring lines of arches, or extreme ends of openings for multiple boxes.

Bridge Length - The dimension of a structure measured along the center of the roadway between backs of abutment headwalls or between ends of the bridge floor.

Bridge Roadway Width - The clear width of a structure measured at right angles to the center of the roadway between the bottom of curbs or, when curbs are not used, between the inner faces of a parapet or railing.

Cabinet — The Kentucky Transportation Cabinet.

Calendar Day — Any day shown on the calendar, beginning and ending at midnight.

Change Order — A written order issued by the Engineer to the Contractor, detailing significant changes to the specified work quantities or that increase or modify the scope of the original Contract.

Channel — A natural or artificial watercourse.

Codes — Code numbers listed with pay items are bid item code numbers used in project Bid Proposals.

Commercial — Materials readily available from commercial sources. These

Quality or Grade	materials require no sampling or testing.
Commissioner	Chief Executive Officer of the Department of Highways or a duly authorized representative.
Commonwealth	The Commonwealth of Kentucky.
Construction Revision	Any change in the Plans authorized by the Department.
Contract	The written agreement between the Department and the Contractor setting forth the obligations of the each party for the performance of the prescribed work. The Contract includes the Bid Proposal, Contract Form, Contract Payment Bond, Contract Performance Bond, Standard Specifications, Supplemental Specifications, Standard Drawings, Plans, Special Provisions, Special Notes, Notice of Award, Notice to Begin Work, all change orders, and all Supplemental Agreements, all of which constitute one instrument.
Contract Form	A document describing the work and the specifications to which the work shall be performed, which, when signed by an agent of both the Department and the Contractor, binds both parties to the terms described therein.
Contract Payment Bond	The form of security furnished by the Contractor and his surety and approved by the Commissioner as security for the faithful payment in full of all legal accounts for labor, materials, and supplies furnished in the Contract.
Contract Item or Pay Item	A specific unit of work that a price is provided for in the Contract.
Contract Performance Bond	The security furnished to the Department to guarantee completion of the work according to the Contract.
Contract Time	The number of working days or calendar days allowed for completion of the Contract. When a calendar date of completion is shown in the Bid Proposal instead of a number of working or calendar days, complete the Contract by that date.
Contractor	The individual, partnership, firm, corporation, or any acceptable combination thereof, or joint venture, contracting with the Department of Highways for performance of the work.
Controlling Item or Operation	An item or operation that, if delayed, will delay the completion time of the Contract. The Engineer will determine the controlling items or operations.
County	The county containing the project.
Culvert	Any structure not classified as a bridge providing an opening under the roadway.
Department	The Kentucky Department of Highways.
Design Quantity	The original Contract quantity not including contingencies.

Detour The directing of traffic onto another roadway to bypass a temporary traffic control zone.

Diversion The directing of traffic onto a temporary roadway or alignment placed in or next to the right-of-way.

Employee Any person working on the project who is under the direction or control of, or receives compensation from, the Contractor or subcontractor.

Engineer The State Highway Engineer of the Department, or a duly authorized representative responsible for engineering supervision of the Contract.

Equipment All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the work.

Extra Work An item of work not provided for in the Contract as awarded but found essential by the Engineer for the satisfactory completion of the Contract.

Federal Project Any project funded wholly or in part by the Federal Government.

Final Estimate The final Contract payment amount for all quantities of work including all changes from the design quantity.

Force Account A basis of payment for the directed performance of highway construction work with payment based on the actual cost of labor, equipment, and materials furnished and considerations for overhead and profit according to Subsection 109.04.

Formal Acceptance Acceptance by the Department which relieves the Contractor of further obligation for the work performed in conformance with the Contract.

Highway A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Highway Separation Any structure carrying highway traffic over or under another highway or street.

Highway-Railway Separation Any structure carrying highway traffic over or under the tracks of any railway.

Holidays

New Year's Day. The first day of January plus one other day determined by the Governor of Kentucky each year.
Martin Luther King Day. The third Monday in January.
Good Friday. Friday before Easter.
Memorial Day. The last Monday in May.
Independence Day. The fourth day of July.
Labor Day. The first Monday in September.
Presidential Election Day. The first Tuesday after the first Monday in November of presidential election years.
Veteran's Day. The eleventh day of November.
Thanksgiving Day. The fourth Thursday in November plus the

following Friday.
Christmas Day. The twenty-fifth day of December plus one other day determined by the Governor of Kentucky each year.

These holidays are subject to subsequent changes by the General Assembly of the Commonwealth of Kentucky.

Independent Assurance The Department's Division of Materials will conduct testing to provide an unbiased and independent evaluation of all sampling and testing procedures used in the acceptance program.

Inspector The Engineer's authorized representative assigned to make detailed inspections of Contract performance.

Laboratory The official testing laboratory of the Department.

Local Traffic Traffic that has either its origin or destination at some point within the limits of the project or an adjacent project. Local traffic includes traffic on all side roads that lead into the project without another satisfactory outlet over a passable road or street and school buses and mail delivery vehicles making stops within the project.

Major and Minor Items All original Contract items having a value of 10 percent or more of the original Contract amount, based on the original Contract price and original estimated quantity, are major items. All remaining items are minor items.

Masonry Concrete or stone masonry.

Materials Any substances used in connection with the construction and maintenance of any structure or the roadway and its appurtenances.

Median The portion of a divided highway separating the traveled ways for traffic moving in opposite directions.

Minor Structures Any structure not classified or defined as a bridge or a culvert, including catch basins, inlets, manholes, retaining walls, steps, buildings, fences, and other miscellaneous items.

New Never been used before.

Non–Conformance Report A formal written document of notification detailing a deficiency, or non-conformance in characteristic, documentation, or procedure, which renders the quality of an item or activity unacceptable or indeterminate. Corrective action is required, including but not limited to, supportive documentation of correction for the deficiency.

Notice of Award Written notice to the Contractor stating that their Bid Proposal has been accepted by the Cabinet.

Notice to Contractors The official notice inviting bids for the proposed highway improvements.

Notice to Begin Written notice to the Contractor to proceed with the Contract

Work	work. When applicable, the Engineer will begin counting Contract time (working days) starting with the Notice to Begin Work date.
Quality Assurance	QA consists of all planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy specified requirements for quality. QA serves to provide confidence in the Contract requirements, which include materials handling and construction procedures, calibration and maintenance of equipment, production process control and any sampling, testing and inspection which is performed by the Department for these purposes.
Quality Assurance Team	Department teams which check the validity of the QCP to ensure all work is in accordance with the Contract.
Quality Control	The sum total of activities performed by the Contractor to ensure the end product meets the Contract requirements.
Quality Control Plan	A detailed description in manual format of the type and frequency of inspection, staffing, materials handling and construction procedures, calibration and maintenance of equipment, production process control, sampling, and testing deemed necessary to measure and control quality as specified by the Contract documents.
Qualified Laboratories	Department approved laboratories used for sampling and testing of material.
Pavement Structure	The combination of base course and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed. ***Subgrade.*** The top surface of a roadbed upon which the pavement structure and shoulders including curbs are constructed. ***Base Course.*** The layer or layers of specified or selected materials of designed thickness placed on a subgrade to support a surface course. ***Surface Course (Wearing Course).*** One or more layers of a pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate.
Pay Item or Contract Item	A specific unit of work that a price is provided for in the Contract.
Plans	The approved Contract drawings including the plan, profile, and cross section sheets; general notes; the working drawings; supplemental drawings; and construction revisions showing the location, type, character, dimensions, and details of the work required.
Professional Archaeologist	An individual with a Masters degree in archaeology or anthropology, or an individual with Society of Professional Archaeologists certification, specializing in historic or prehistoric archaeology and having field experience in archaeological investigation.
Profile Grade	The trace of a vertical plane intersecting the top surface of the

	proposed wearing surface, usually along the longitudinal centerline of the roadbed. Profile grade means either the elevation or gradient of such trace according to the context.
Project	The specific section of the highway, including approaches and all appurtenances, and construction to be performed under the Contract.
Project Completion	The satisfactory completion of all work relating to both Contract Bid Proposal items and items added by supplemental agreement.
Project Completion Notice	The notice issued by standard form that the Project has been satisfactorily completed and is ready for final inspection.
Proper Local Authorities	Officials authorized by law to act for counties and other civil subdivisions.
Proposal Guaranty	The security furnished with a Bid Proposal guaranteeing that a bidder submitting an accepted Bid Proposal enters into the Contract.
Ramp	An interconnecting roadway of a traffic interchange, or a connection between highways at different levels or between parallel highways on which vehicles may enter or leave a designated roadway.
Responsive Bid	A Bid Proposal which conforms to all requirements of the proposal pamphlet.
Responsible Bidder	A bidder that is a responsible Contractor.
Responsible Contractor	A Contractor that has the requisite skill, resources, desire, and integrity to complete the work in conformance with the provisions of the Contract.
Right-of-Way	A general term denoting land, property, or interest, acquired for or devoted to transportation purposes.
Road	A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.
Roadbed	The graded portion of a highway within the top and side slopes, prepared as a foundation for the pavement structure, shoulders, and median.
Roadside	A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.
Roadside Development	Those items necessary to the complete highway providing for the preservation of landscape materials and features; the rehabilitation and protection against erosion of all areas disturbed by construction through seeding, sodding, mulching, and the placing of other ground covers; such suitable planting and other improvements as may increase the effectiveness and enhance the appearance of the highway.

Roadway	The portion of a highway within the limits of construction.
Shoulder	The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.
Sidewalk	That portion of the roadway outside normal vehicle paths constructed primarily for the use of pedestrians.
Skew or Skew Angle	The acute angle formed by the intersection of a line normal to the centerline of the roadway with a line parallel to the face of the abutments, or in the case of culverts, with the centerline of the culverts.
Special Notes	See definition for Specifications.
Special Provisions	See definition for Specifications.
Specifications	A general term applied to written directions, provisions, and requirements pertaining to performance of the work. Specifications are included in documents such as the Special Notes, Special Provisions, Standard Specifications, or Supplemental Specifications. ***Special Notes.*** Specifications developed for a specific item of work which may be appropriate only for a particular project but may become standard if regularly used as future projects using the item develop. ***Special Provisions.*** Specifications developed for a specific item of work which may be appropriate only for a particular project but may become standard if regularly used as future projects using the item develop. ***Standard Specifications.*** A book of specifications approved for general application and repetitive use by the Department entitled, "Standard Specifications for Road and Bridge Construction". ***Supplemental Specifications.*** Additions and revisions to the Standard Specifications that are made subsequently to issuance of the Standard Specifications.
Specified Completion Date	The date by which the Contract work is specified to be completed.
Standard Drawings	Detailed drawings approved for repetitive use.
Standard Specifications	See definition for Specifications.
State Highway Engineer	The State Highway Engineer of the Department acting directly or through an authorized representative.
Street	A general term denoting a public way for purposes of vehicular travel in a city, including the entire area within the right-of-way.
Structures	Bridges, culverts, or minor structures.

Subcontractor	An individual, firm, or corporation who, with the written consent of the Department, subcontracts any part of the Contract. First tier Subcontractors are those to whom the Contractor subcontracts a portion of the work. Second tier Subcontractors are those to whom a first tier Subcontractor subcontracts a portion of the work.
Subgrade	See definition for Pavement Structure.
Substructure	All of that part of the structure below the bearings of simple and continuous spans, skewbacks of arches and tops of footings or rigid frames, together with the back walls, wingwalls, and wing protection railings.
Superintendent	The Contractor's authorized representative in responsible charge of the work.
Superstructure	The entire structure except the substructure.
Supplemental Agreement	A written agreement executed by the Contractor and the Commissioner, with the consent of the surety when required, covering significant changes, and revised or new unit prices and items, that supplements the original Contract.
Supplemental Drawings	Drawings included in the Plans to specify construction details.
Supplemental Specifications	See definition for Specifications.
Surety	The corporation, firm, or individual, other than the Contractor, executing a bond furnished by the Contractor.
Surface Course (Wearing Course)	See definition for Pavement Structure.
Temporary Structures	Structures required for the use of traffic during construction and not remaining a part of the permanent roadway.
Through Traffic	All traffic other than traffic defined as Local Traffic.
Titles or Headings	The titles or headings of the Sections and Subsections herein are intended for convenience of reference and shall not have any bearing on their interpretation.
Traveled Way	The portion of the roadway used for the movement of vehicles, exclusive of shoulders and auxiliary lanes.
Work	The furnishing of all labor, materials, equipment, and other incidentals necessary or convenient to the successful completion of the project or Contract item and the performance of all duties and obligations imposed by the Contract.
Working Day	A calendar day, exclusive of Saturday, Sunday, holidays, or days when the weather, seasonal, or temperature limitations of the specifications, or other conditions beyond the control of the Contractor, prevent, as judged by the Engineer, construction operations from proceeding for at least 5 hours by the normal

working force engaged in performing the controlling item or items of work.

Working Drawings Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data the Contractor is required to submit to the Engineer for review.

SECTION 102 — BIDDING REQUIREMENTS AND CONDITIONS

102.01 PREQUALIFICATION OF BIDDERS. All organizations and individuals bidding on Department projects and accepting subcontracts on Department projects must apply for and receive Department prequalification and possess a Certificate of Eligibility as provided in regulations published by the Department according to KRS Section 176.140.

The Department reserves the right to waive this requirement on certain projects in connection with the letting of contracts not covered by the statutes. The Department will place a waiver of this requirement in the Notice to Contractors and the Bid Proposal for such projects.

102.02 CURRENT CAPACITY RATING. The Department will determine the current capacity rating of a bidder as the net difference between the bidder's maximum capacity rating as set forth in a Certificate of Eligibility and the total value of uncompleted Contract work, held as a prime contractor, that the bidder is performing for any owner.

The Department will determine the value of uncompleted Contract work, held as a prime contractor, that the bidder is performing from the last approved pay estimate for each uncompleted Contract. The Department will not give credit for any work subcontracted.

The Department will divide the total Bid Proposal of a joint venture equally among the participants in the joint venture. The Department will divide the total value of the uncompleted work of joint ventured projects equally among the joint venturers in determining a bidder's current capacity rating.

The Department will not consider Bid Proposals exceeding the current capacity rating of a bidder.

102.03 CONTENTS OF THE BID PROPOSAL FORM. Upon request, the Department will furnish the prospective bidder with a Bid Proposal form. The form states the location and description of the contemplated construction and shows the approximate estimate of the various quantities and kinds of work to be performed or materials to be furnished, and includes a schedule of items for which unit bid prices are invited. The Bid Proposal form states the time allowed to perform the work, the amount of the Proposal Guaranty, and the date, time, and place of the opening of the Bid Proposals. The form also includes any special provisions or requirements varying from or not contained in the Standard Specifications.

The Department considers all papers bound with or attached to the Bid Proposal form a part of the Bid Proposal. Do not detach or alter any parts of the submitted Bid Proposal.

The Department considers the Plans, Specifications, and other documents designated in the Bid Proposal form a part of the Bid Proposal whether attached or not.

The prospective bidder must pay the Department the sum stated in the Notice to Contractors for each copy of the Bid Proposal form.

102.04 ISSUANCE OF BID PROPOSAL FORM. The Department reserves the right to disqualify or refuse to issue a Bid Proposal form to a potential bidder for any of the following reasons:

1) failure to comply with any prequalification regulations of the Department;
2) default under previous contracts;
3) when a bidder's existing, uncompleted contracts and subcontracts with the Department are behind schedule to the extent that they might hinder or prevent prompt completion of any additional contracts;
4) when either the actual progress for all of a bidder's existing grade and drain; or grade, drain, and surfacing; or bridge contracts and subcontracts is 20 percent or more behind the scheduled progress for the contracts and subcontracts, or when any one of the bidder's contracts or subcontracts is 30 percent or more behind schedule;

5) when the average actual progress for all of a bidder's surfacing or resurfacing, seeding, signing, or other miscellaneous contracts and subcontracts is 50 percent or more behind the scheduled progress or when any one of these contracts or subcontracts exceeds the original Contract time or completion date without significant cause;
6) failure to reimburse the Commonwealth for monies owed on any previously awarded contracts, including those contracts where the prospective bidder is party to a joint venture and the joint venture fails to reimburse the Commonwealth for monies owed; and
7) failure to reimburse the Commonwealth for monies owed for plans and Bid Proposal forms.

The Department will resume issuing Bid Proposal forms to the bidder only after the bidder improves his operations to the satisfaction of the State Highway Engineer.

102.05 INTERPRETATIONS OF QUANTITIES IN BID SCHEDULE. The Department's estimated quantities appear in the bid schedule only for the purpose of comparing the Bid Proposals. The Department will pay the Contractor only for the actual quantities of work performed and accepted or materials furnished according to the Contract. The Department may increase, decrease, or omit the estimated quantities of work and materials furnished.

102.06 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, SPECIAL NOTES, AND SITE OF WORK. Examine the site of the proposed work, the Bid Proposal, Plans, specifications, contract forms, and bulletins and addendums posted to the Department's website before submitting the Bid Proposal. The Department considers the submission of a Bid Proposal prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the Contract.

Professing ignorance or a misunderstanding regarding requirements of the work does not in any way serve to modify the provisions of the Contract.

102.07 PREPARATION OF BID PROPOSAL.

102.07.01 General. Submit the Bid Proposal on the forms furnished by the Department including the Highway Bid Program bid item sheets and disk created from the Department's internet web site. Specify a unit price in figures for each pay item for which a quantity is given and show the products of the respective unit prices and quantities written in figures in the column provided for that purpose. Round the products by dropping all digits past the cent. Indicate the total amount of the Bid Proposal, obtained by adding the rounded amounts of the items. Write in ink or type all figures.

When an item in a Bid Proposal allows a bidder to make a choice, indicate a choice according to the specifications for that particular item.

Sign Bid Proposals in ink using the individual, one or more members of the partnership, one or more members of each firm representing a joint venture, one or more officers of a corporation, or an agent of the bidder legally qualified and acceptable to the Department. When proposing as an individual, indicate the name and post office address of the individual. When proposing as a partnership, indicate the name and post office address of each partnership member. When proposing as a joint venture, indicate the name and post office address of each member or officer of the firms represented by the joint venture. When proposing as a corporation, indicate the name of the corporation and the business address of its corporate officials.

102.07.02 Computer Bidding. Subsequent to ordering a Bid Proposal for a specific project, use the Department's Highway Bid Program on the internet web site of the Department of Highways, Division of Contract Procurement. Download the bid item quantities from the Department's web site to prepare a Bid Proposal for submission to the

Department. Insert the completed bid item sheets printed from the Highway Bid Program into the Proposal and submit along with the disk created by said program.

In case of a dispute, the Bid Proposal and bid item sheets created by the Highway Bid Program take precedence over any bid submittal.

Furthermore the Department takes no responsibility for loss, damage of disks or the compatibility with the bidder's computer equipment or software.

102.08 IRREGULAR BID PROPOSALS. The Department will consider Bid Proposals irregular and will reject them when the bidder either:

1) omits both a unit price for any pay item and an amount for the entire quantity of the same pay item, except when the Bid Proposal allows a choice of authorized pay items; or
2) submits zero as a unit price for any pay item or as an amount for the entire quantity of the same pay item except when the Bid Proposal form allows a choice of authorized pay items; or
3) fails to submit the bid on the current revised pay items; or
4) fails to submit a disk created from the Highway Bid Program.

The Department will consider Bid Proposals irregular and may reject them for the following reasons:

1) when the Bid Proposal is on a form other than that furnished by the Department or printed from other than the Highway Bid Program , or when the form is altered or any part is detached; or
2) when there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Bid Proposal incomplete, indefinite, or ambiguous as to its meaning; or
3) when the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award; or
4) any failure to comply with the provisions of Subsection 102.07; or
5) Bid Proposals in which the Department determines that the prices are unbalanced; or
6) when the sum of the total amount of the Bid Proposal under consideration exceeds the bidder’s Current Capacity Rating.

102.09 BID PROPOSAL GUARANTY. The Department will reject and will not read any Bid Proposal that is not accompanied by a guaranty in the form of a cashier’s check, certified check, or bid bond and in an amount no less than the amount indicated on the Bid Proposal form. Make the cashier’s check, certified check, or bid bond payable to the Kentucky State Treasurer.

102.10 DELIVERY OF BID PROPOSALS. Submit each Bid Proposal in a special envelope furnished by the Department. Correctly fill in the blank spaces on the envelope to clearly indicate its contents. When using an envelope other than the envelope furnished by the Department, use an envelope of the same general size and shape similarly marked to clearly indicate its contents. When sent by mail, address the sealed Bid Proposal to the Department at the address and in care of the office and official receiving the Bid Proposals. Submit all Bid Proposals prior to the time and at the place specified in the Notice to Contractors. The Department will time-stamp and return to the bidder unopened Bid Proposals received after the time for opening of bids.

102.11 WITHDRAWAL OR REVISION OF BID PROPOSALS. A bidder may withdraw or revise a Bid Proposal after depositing the Bid Proposal with the Department, provided the Department receives the request for such withdrawal or revision in writing or by telegram before the time set for opening Bid Proposals.

102.12 COMBINATION BID PROPOSALS. The Department may issue Bid

Proposals for projects in combination or separately. Submit Bid Proposals on either the combination or the separate projects of the combination. The Department reserves the right to make awards on combination bids or separate bids to the best advantage of the Department.

102.13 PUBLIC OPENING OF BID PROPOSALS. The Department will publicly open and read all Bid Proposals at the time and place indicated in the Notice to Contractors, or at any other location the Department designates.

102.14 DISQUALIFICATION OF BIDDERS. The Department may consider any of the following reasons sufficient for the disqualification of a bidder and the rejection of the bidder's Bid Proposal(s):

1) more than one Bid Proposal for the same work submitted by an individual, firm, or corporation under the same or different name;
2) evidence of collusion among bidders. The Department will not recognize participants in such collusion as bidders for any future Department work until the Department reinstates such participant as a qualified bidder.

   Collusive bidding is a violation of the law and may result in criminal prosecution, civil damage actions, and State and Federal administrative sanctions.

102.15 PROCESS AGENT. Every corporation doing business with the Department shall submit evidence of compliance with KRS Sections 271A.070, 271A.385, 271A.555, 271A.565, and 271A.615, and file with the Department the name and address of the process agent upon whom process may be served.

Every individual residing in another state, or members of a co-partnership who reside in another state, doing business with the Department shall file with the Department the names and addresses of at least 2 persons residing in Kentucky upon whom process may be served.

When any change is made in any such corporation's, individual's, or co-partnership's process agent, the corporation, individual, or co-partnership shall immediately file with the Department a statement of the change. The former agent shall remain agent for the purpose of service of process until the bidder files a statement with the Department designating the new agent.

Submit or file evidence of compliance with the KRS Sections cited above and/or designation of process agents, as required by this section, with the Department at the time of qualifying or at the time of submitting a Bid Proposal, or at any time prior to the issuance of the Contract and work order and/or purchase order.

SECTION 103 — AWARD AND EXECUTION OF CONTRACT

103.01 CONSIDERATION OF BID. The Department will tabulate the bid as soon as possible after opening the Bid Proposals and will compare the bids based on a correct summation of items at the prices bid. The Department will then make the result public. In the event of a discrepancy between unit bid prices and extensions, the Department will use the unit bid price. The Commissioner reserves the right to reject any or all Bid Proposals and to waive minor technicalities if doing so is in the best interest of the Commonwealth.

103.02 AWARD OF CONTRACT. Unless rejecting all Bid Proposals, the Department will award the Contract to the lowest responsible bidder, without discrimination on the grounds of race, creed, color, sex, or national origin, whose Bid Proposal complies with the requirements of the law, the regulations, and the Contract.

The Department may reject unbalanced Bid Proposals and award the Contract to the next lowest acceptable bidder.

The Department will award the Contract within 10 calendar days after the date of receiving Bid Proposals unless the Department deems it best to hold the Bid Proposals of any or all bidders for a period not to exceed 60 calendar days for final disposition of award. The Department may hold the Bid Proposal of the lowest bidder longer than 60 days if the bidder concurs. The Department will mail the official Notice of Award to the address shown on the Contractor's Certificate of Eligibility.

103.03 CANCELLATION OF AWARD. The Department reserves the right to cancel the award of any contract at any time before the execution of that contract by all parties without any liability against the Department.

103.04 RETURN OF PROPOSAL GUARANTIES. The Department will return the Proposal Guaranties of all except the 2 lowest bidders within 5 calendar days after checking, tabulating, and comparing the Bid Proposals. The Department will hold the Proposal Guaranty of the lowest bidder and the Proposal Guaranty of the second lowest bidder, as determined by the Commissioner, until the Department awards the Contract and executes and approves the Contract and bonds of the successful bidder, or until the Department rejects all Bid Proposals. If the Department does not make an award within 60 calendar days, the Department will return all Proposal Guaranties.

The Department will not release a bidder from the obligations of the Bid Proposal because of an alleged error in the preparation of the Bid Proposal unless the Department retains the bidder's Proposal Guaranty.

103.05 REQUIREMENT OF CONTRACT BONDS. To be acceptable to the Department, the surety must have a minimum A. M. Best rating of an "A-", be listed on the U.S. Treasury Listing of approved sureties for an amount equal to or greater than the amount of the bond and be an admitted carrier in the Commonwealth of Kentucky. Submit Contract bonds conditioned upon the faithful performance of the requirements of the Contract and any modifications in conformity with the Contract; payment of proper compensation under the required labor and wage conditions as provided in the Contract; payment of claims against the Contractor for materials, labor and supplies; and reimbursement to the Department for any overpayment made on the Contract. Maintain the Contract bonds in full force for the time required by law. If at any time during the performance of the Contract the surety company falls below the minimum acceptable requirements, the Contractor shall file new bonds in an amount established by the Commissioner, or his designee, within 14 calendar days of such failure to meet the minimum requirements.

The surety of the Contract bonds shall only sign a prescribed form through a duly appointed power of attorney with certifications acceptable to the Department. File an attested copy of all certifications of attorneys-in-fact with the Franklin County Court Clerk prior to submission to the Department and file a certified copy with the Department.

All non-resident agents of Kentucky signing the bonds as representatives of a surety

company shall obtain the countersignature of a licensed Kentucky agent of the insurer as required by law. All appointments of attorneys-in-fact shall contain a provision that the appointment will not be revoked without giving the Department notice in writing at least 30 calendar days prior to the effective date of the revocation and filing same with the Franklin County Court Clerk. More than one surety may execute a bond for any one Contract, and, in such event when 2 or more sureties are provided on such bond, each surety shall be liable and obligated for the full amount required herein before.

The Department reserves the right to copy the surety on all of its communications with the Contractor concerning the Contractor's performance, or performance deficiencies, on the project and further reserves the right to communicate directly with the surety to inform them of the Contractor's performance, or performance deficiencies, on the bonded project.

103.06 EXECUTION OF CONTRACT. Within 15 calendar days after receiving the Contract, execute and file it with the Department along with the following items:

1) the Contract bonds required in Subsection 103.05;
2) satisfactory evidence of required liability insurance;
3) satisfactory evidence of compliance with Subsection 102.15;
4) when the bidder lists proposed subcontractors in the Bid Proposal, and the amount of work proposed to be subcontracted is not to be deducted from the bidder's current capacity rating, then submit Form TC 14-9, Confirmation of Subcontract, reported in the Bid Proposal. Sign submittal and obtain signatures of each proposed subcontractor. Verify all signatures by a notary public.
5) when the Bid Proposal form designates a certain percentage of the Contract as the Disadvantaged Business Enterprise (DBE) portion, submit the necessary number of agreements with DBEs to meet or exceed these designated percentages. Execute an agreement with each DBE that includes the items of work, the unit price that the DBE will be paid for each item, and notarized signatures of both parties. Should the bidder fail to reach the designated DBE percentages, then the Department will consider whether the bidder made reasonable efforts to meet these percentages prior to issuing a work order.

Execute the Contract and bonds only on the form furnished by the Department. Upon the filing with the Department by the Contractor of the executed Contract accompanied by the listed items, the Commissioner will, within the period not exceeding 30 calendar days from the date of such filing, make final disposition of the Contract and, if Contract bonds are approved, will issue Notice to Begin Work. Should the Department withhold the Notice to Begin Work in excess of the 30 calendar day period, the Contractor shall have the option of accepting or rejecting the Contract without forfeiting the Proposal Guaranty.

103.07 APPROVAL OF CONTRACT. The Contract is not binding until the Commissioner executes it and certain agencies of the Commonwealth, as required by law, certify that sufficient funds are available.

103.08 FAILURE TO EXECUTE CONTRACT. The bidder's failure to execute the Contract or to comply with all requirements of Subsection 103.06 within 15 calendar days after the Contract has been received by the bidder will be just cause for the Department to nullify the award. It is understood by both the bidder and the Commissioner that, in the event of the annulment of the award, the bidder will forfeit the amount of guaranty deposited with the Bid Proposal as agreed liquidated damages to the Commonwealth; not as a penalty, but in liquidation of damages sustained. The Department can then make an award to the next lowest responsible bidder; or readvertise the work or take other action as provided by statute on this subject, as the Commissioner may elect. A bidder who forfeits a Proposal Guaranty according to this Section will not be considered in future bid proposals for the same project unless there has been a substantial change in the design of the project subsequent to the forfeiture of the Guaranty.

SECTION 104 — SCOPE OF WORK

104.01 INTENT OF CONTRACT. The intent of the Contract is to provide for the construction and completion in every detail of the work described. Furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work according to the Contract.

104.02 ALTERATIONS OF PLANS OR CHARACTER OF WORK.

104.02.01 General. At any time, and without invalidating the Contract or releasing the surety, the Engineer reserves the right to make, in writing, changes in quantities and alterations in the work when necessary to complete the project satisfactorily. Perform the work as altered.

When alterations or changes in quantities significantly change the character of the work under the Contract, the Department will adjust the Contract. The Department will not consider loss of anticipated profits. Before performing the significantly changed work, reach agreement with the Department concerning the basis for the adjustment. Absent an agreement, the Engineer will determine a fair and equitable adjustment.

If the alterations or changes in quantities do not significantly change the character of the work, the Department will make payment as provided elsewhere in the Contract. A significant change occurs when:

1) the character of the work is altered materially in kind or nature from that involved or included in the original proposed construction or,
2) the quantity of a major item of work, as defined in Subsection 101.03, increases above 125 percent or decreases below 75 percent of the original Contract quantity. The Department will allow an adjustment in cost only for the quantity in excess of 125 percent of the original Contract quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

104.02.02 Overrun and Underrun Formulas. The Department will use the following supplemental formulas to determine the adjusted unit prices for the items listed herein when a listed item is a major item and either an underrun or overrun of more than 25 percent occurs in its constructed quantity. This formula does not apply to items not specifically listed in this Subsection.

The excessive underrun of an item is defined as 75 percent of the original Contract quantity of the item minus the final quantity of the item. The excessive overrun of an item is defined as the final quantity of the item minus 125 percent of the original Contract quantity of the item.

The Department will apply this subsection when all the following conditions are met:

1) an excessive underrun or overrun occurs for one or more of the bid items listed below;
2) the affected item is a major item, as defined in Subsection 101.03; and
3) the final quantity of the affected item is at least 30 percent of the original Contract quantity. When the final quantity of the affected item is less than 30 percent of the original Contract quantity, the Department will not apply the formula but will prepare a supplemental agreement according to Subsections 109.03 and 109.04.

The specified bid items which are covered by this subsection are:

- Pavement Markers
- Pavement Striping (temporary and permanent)
- Temporary Marking Tape
- Delineators
- Asphalt Pavement Milling and Texturing

- Concrete Overlay Latex
- Concrete Overlay Low Slump
- Concrete Class M for Full Depth Patching

The Department will apply this subsection to other bid items when specified in the Contract.

For the excessive underrun and overrun quantities, the Department will adjust the payment according to the appropriate following formula:

Excessive Underrun Formula

$$NP = OP + \frac{(EU \times 0.25 \times OP)}{FQCI}$$

Excessive Overrun Formula

$$NP = OP - \frac{(EO \times 0.25 \times OP)}{FQCI}$$

Where:

NP = New Unit Price
OP = Original Unit Price Bid by Contractor
EU = Excessive Underrun
EO = Excessive Overrun
FQCI = Final Quantity Contract Item

When the Contractor submits a completed Bid Proposal for a project containing one or more of the listed items, the Contractor agrees to accept payment for excessive underruns or excessive overruns in the quantities of these items according to the appropriate formula. The Contractor further agrees that the formulas provide full and complete compensation for the excessive underrun or excessive overrun quantities, including any and all unreimbursed expenses, loss of expected reimbursement, loss of anticipated profits, delay, inefficiency, and all other costs.

104.02.03 Differing Site Conditions. Differing site conditions exist when one party discovers that:

1) subsurface or latent physical conditions differ materially from those shown in the Contract, or
2) unknown subsurface or latent physical conditions differ materially from conditions normally encountered or from those generally recognized as inherent in the work provided for in the Contract.

Promptly notify the Engineer in writing of the specific differing conditions before disturbing the conditions and before performing the affected work.

Upon written notification, the Engineer will investigate the conditions and determine if the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of work under the Contract. When justified, the Engineer will make an adjustment, in time, or cost, or both, excluding anticipated profits, and modify the Contract in writing accordingly. The Engineer will notify the Contractor whether or not the conditions warrant an adjustment.

The Department will allow no Contract adjustment unless the Contractor provides the required written notice.

104.03 EXTRA WORK. Perform Extra Work for which there is no quantity or price in the Contract only by supplemental agreement. The Department will pay for this Extra Work at a unit price or lump sum price agreed upon and included in a written

supplemental agreement executed by all parties to the Contract as specified in Subsection 109.04. The Department will consider an extension of Contract time for Extra Work according to Subsection 108.07. When requested by the Engineer, provide justification and all necessary documentation to support proposed prices or time extensions.

104.04 RIGHTS IN AND USE OF MATERIALS FOUND ON THE WORK. The Contractor, with the Engineer's approval, may use on the project stone, gravel, sand, or other material found in the excavation that the Engineer determines is suitable. The Department will pay both for the excavation of such materials at the corresponding Contract unit price and for the pay item for which the excavated material is used. Replace all excavated material so removed and used with other acceptable material at no additional expense to the Department. The Department will not charge the Contractor for the materials found in the excavation and used in the work. Do not excavate or remove any material from outside the grading limits, as indicated by the slope and grade lines, without the Engineer's written authorization.

Take ownership of and dispose of any materials of value, such as merchantable timber or coal, that may be encountered during construction of the project and that are not necessary to perform or complete the work. Leave a sufficient amount of material on the site to complete the project according to the Contract.

104.05 FINAL CLEANING UP. The Department will not consider the work complete and will not make final payment until the Contractor clears the right-of-way, borrow pits, and all ground the Contractor occupies in connection with the work of all rubbish, equipment, excess materials, temporary structures, and weeds. Place rubbish and all waste materials of whatever nature, other than hazardous materials, on either public or private property in a location out of view from the roadway and in a manner to the Department that does not present an unsightly appearance. Restore in an acceptable manner all property, both public and private, that was damaged in the prosecution of the work. Drain all ditches and all borrow pits where practical, and leave all space under structures unobstructed and in such condition that drift will not collect and induce scouring.

104.06 METRIC CONFLICTS. The Department's Standard Drawings and Standard Specifications are in Metric or English units. Conflicts may occur when using plans designed in Metric Units. Additionally, metric materials may not be readily available. When conflicts occur or when materials are unavailable, submit to the Engineer a proposed solution or substitution for approval. The Department will make no separate measurement or payment for this work.

SECTION 105 — CONTROL OF WORK

105.01 AUTHORITY OF DEPARTMENT PERSONNEL.

105.01.01 Authority of the Engineer. The Engineer will decide all questions regarding the quality and acceptability of materials furnished, work performed, and the rate of progress of the work; all interpretation of the Plans and Specifications; and the acceptable fulfillment of the Contract. The Engineer will, in writing, suspend the work, wholly or in part when the Contractor fails to correct conditions unsafe for the workmen or the general public; for failure to carry out Contract provisions; for failure to carry out orders; for periods of unsuitable weather; for conditions unsuitable for the prosecution of the work; or for any other condition or reason determined to be in the public interest.

To prevent misunderstanding, the Engineer, within a reasonable time, will decide any and all questions concerning the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer will decide all questions concerning the interpretation of the Contract relating to the work, and all questions concerning the acceptable fulfillment of the work performed by the Contractor. The Engineer will determine the quantity and quality of the several kinds of work performed and materials furnished that the Department will pay for under the Contract, and such decision and estimate will be final and conclusive. In case any question arises, the Engineer's estimate will be a condition precedent to the right of the Contractor to receive any money due under the Contract. The Contractor may appeal to the Commissioner any decision of the Engineer by procedures outlined in Subsection 105.13. The Engineer will answer any questions as to the meaning of the Contract, or any obscurity as to the wording of the Contract and give all directions and explanations necessary to make definite any of the provisions of the Contract, or necessary to complete or give them due effect.

The Contractor may request and the Engineer will provide written instructions concerning any significant item.

105.01.02 Authority of Inspectors. Inspectors employed by the Department are authorized to inspect all work performed and materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials furnished. The inspector is not authorized to alter or waive provisions of the Contract. The inspector is not authorized to issue instructions contrary to the Contract, or to act as foreman for the Contractor. However, the inspector has the authority to reject work or materials until any questions at issue are referred to and as the Engineer decides.

105.01.03 Inspection of Work. Provide the Engineer access to all materials and each part or detail of the work, and furnish the Engineer with such information and assistance as required to make a complete and detailed inspection.

At the Engineer's request, at any time before acceptance of the work, remove or uncover such portions of the finished work as directed. After examination, restore said portions of the work to the standard required by these Specifications. Should the work thus exposed or examined prove acceptable, the Department will pay for the uncovering, or removing, and the replacing of the covering or making good of the parts removed as Extra Work. Should the work so exposed or examined prove unacceptable, perform the uncovering, or removing, and the replacing of the covering or making good of the parts removed at no expense to the Department.

As the Engineer directs, remove and replace, at no expense to the Department, all work performed or materials used without the Engineer's supervision or inspection, unless the Engineer failed to inspect after having been given 3 working days notice in writing that the work was to be performed.

When any unit of government or political subdivision or any railroad corporation pays a portion of the cost of the work covered by the Contract, provide access to its respective representatives to inspect the work. Such inspection in no way makes any unit of government or political subdivision or any railroad corporation a party to this Contract,

and in no way interferes with the rights of either party hereunder.

105.01.04 Removal of Defective and Unauthorized Work. Remedy, or remove and replace in an acceptable manner, at no expense to the Department, all work which has been rejected. The Department will consider any work performed beyond the lines and grades specified in the Plans or as given, except as herein provided, or any Extra Work performed without a supplemental agreement, as unauthorized and at no expense to the Department. The Department will not measure such work for payment.

Should the Contractor decline or neglect to begin the removal and the replacement of any defective work or remove any unauthorized work within the amount of time stated in a written notice to do so has been given him, the Department may retain all monies due or which may become due the Contractor until the requirements of these Specifications have been met. When deemed best by the Commissioner, the Commissioner will employ the necessary labor to make good or remove such defective or unauthorized work and deduct the cost from any monies due or to become due the Contractor.

105.02 PLANS AND WORKING DRAWINGS. Roadway plans will, in general, show alignment, profile, typical section of improvement, and general cross sections.

Structure plans will, in general, show in detail all dimensions of the work contemplated. When the structure plans do not show all dimensions in detail, they will show general features and such details as are necessary to give a comprehensive idea of the structure. When such drawings are necessary to give comprehensive idea of the structure, submit detailed shop or working drawings to the Department for review. The Contractor shall bear all risk for work done or material ordered prior to the Department's review of these drawings for the structures involved.

Submit working drawings for steel structures consisting of shop detail, erection, and other working plans, showing details, dimensions, size of materials, and other information necessary to completely fabricate and erect the work.

Submit working drawings for concrete structures consisting of such detailed plans as required to successfully prosecute the work and which are not specified in the Plans. These may include plans for falsework, bracing, centering and form work, cofferdams, caissons, layout diagrams, and diagrams for bent reinforcement.

Submit the working drawing in a timely manner to allow review and include this review time in the project's schedule. The Department will review the Contractor's working drawings in general only. The Department's review does not relieve the Contractor from any responsibility whatsoever.

Upon final review of all working drawings, submit to the Department copies of the final detailed drawings and upon completion of the work, surrender to the Department the original tracings.

Include in the Contract price the cost of furnishing all working drawings.

105.03 RECORD PLANS. Record Plans are those reproductions of the original Plans on which the accepted Bid Proposal was based and stamped "RECORD PLANS", and signed by a duly authorized representative of the Department. The Department will make these plans available for inspection in the Central Office at least 24 hours prior to the time of opening bids and up to the time of letting of a project or projects. The quantities appearing on the Record Plans are the same as those on which Bid Proposals are received. The Department will use these Record Plans as the controlling plans in the prosecution of the Contract. The Department will make 2 sets of Record Plans for each project, and will maintain one on file in the Central Office and one on file in the District Office. The Department will not make any changes on Record Plans subsequent to their issue.

105.04 CONFORMITY WITH PLANS AND SPECIFICATIONS. Perform all work and furnish all materials in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements specified in the Contract. Where definite tolerances are specified in the Contract, the Department will use such tolerances to establish the limits of reasonably close conformity. Where tolerances are not specified in

the Contract, the Engineer will determine the limits of reasonably close conformity in each individual case.

When the Engineer finds the materials, or the finished product in which the materials are used, not within reasonably close conformity with the Contract but that reasonably acceptable work has been produced, he will then make a determination to accept the work in place. In this event, the Engineer will document the basis of acceptance by Contract modification providing for an appropriate adjustment in the Contract price for such work or materials as he deems necessary to conform to his determination based on engineering judgment.

When the Engineer finds that either the materials, the finished product in which the materials are used, or the work performed are not in reasonably close conformity with the Contract and have resulted in an inferior or unsatisfactory product, remove, replace, or correct the work and materials at no additional expense to the Department.

When referenced standards, such as those promulgated by AASHTO, ASTM, or other recognized organizations, or the Department's own specifications, standard drawings, or similar documents are revised subsequent to the letting date, the Contractor may propose to furnish materials or perform work conforming to the latest edition at the time the work is done. The Engineer may approve such a request if the material or work is deemed to be equal to or better than originally required; however, the Engineer may require a reduction in bid prices before granting approval when the revision significantly reduces the cost of furnishing material or performing the work. In the event of any dispute, the Department will select the referenced standard current at the date of advertisement for Bid Proposals or the standard specifically referenced in the Contract to determine the cost.

105.05 COORDINATION OF CONTRACT DOCUMENTS. All documents defined under Contract in Subsection 101.03 are essential parts of the Contract. A requirement occurring in one is as binding as though occurring in all. They are complementary and describe and provide for a complete contract. In the case of a discrepancy, the governing ranking will be:

Dimensions
1. Plan
2. Calculated
3. Scaled

Documents
1. CAP report
2. Special Notes
3. Special Provisions
4. Plans
5. Standard Drawings
6. Supplemental Specifications
7. Standard Specifications

Do not take advantage of any apparent error or omission in the Contract. Immediately notify the Engineer upon discovering such an error or omission. The Engineer will then make any necessary corrections and interpretations deemed necessary for fulfilling the intent of the Contract.

105.06 COOPERATION BY CONTRACTOR. Maintain copies of the Plans and Specifications at the site of the work at all times and furnish copies to each foreman. Require each foreman to have with him on the site, at all times, a copy of that part of the Plans and Specifications applying to the work he is directing. Be present or have a representative present on the project at all times, when construction is in progress, to receive and carry out such instructions as the Engineer may give. Provide reasonable facilities to enable the Engineer to inspect the workmanship and materials entering into the work, and cooperate in setting and preserving survey stakes, bench marks, etc., and in all other things necessary to satisfactorily complete the work as contemplated.

When the Department lets separate contracts within the limits of any one project or for adjacent projects, conduct the work so as not to interfere with or hinder the progress or completion of the work being performed by other contractors. Cooperate with contractors working on the same project or adjacent projects. In case of a dispute with other

contractors, the Engineer will referee and make a final and binding decision.

The Contractor shall assume all liability, financial or otherwise, in connection with the Contract and shall protect and save harmless the Department from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by him because of the presence and the operations of other contractors working within the limits of the same project. The Contractor shall assume all responsibility for all work not completed or accepted on the Contract because of the presence and operations of the other contractors.

As far as possible, arrange the work and place and dispose of the materials being used so as not to interfere with the operations of the other contractors within the limits of the same project or on adjacent projects. Join the work with that of the other contractors in an acceptable manner, and perform it in proper sequence with the work of the other contractors.

105.07 COOPERATION WITH UTILITIES. The Department will notify all utility facility owners or other parties affected and endeavor to have all necessary adjustments of utility fixtures, pipelines, and other appurtenances in conflict with construction made as soon as practical.

The Department will arrange to have the owners of all water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cables, signals, sewers, and all other utility appurtenances in conflict with the limits of the proposed construction relocate or adjust those facilities in conflict except as otherwise provided for in the Contract.

Consider all of the permanent and temporary utility facilities in their present or relocated positions, as specified in the Special Note for Utilities/Impact on Construction included in the Bid Proposal form, when preparing a Bid Proposal. The Department will not allow any additional compensation for delays, inconvenience, or damage sustained by the Contractor due to any interference from the said utility appurtenances or due to the operation of moving them. The Department will review requests for an extension of Contract time for such delays according to Subsection 108.07.

Prior to any excavation activities, comply with the requirements for Excavators in the Underground Facility Damage Prevention Act of 1994 which is contained in KRS 367.4901 through 367.4917.

105.08 PROTECTION AND RESTORATION OF EXISTING ROADWAY FACILITIES. Protect and preserve all existing roadway facilities including:

1) those which are to remain in place and remain in service as a part of the improved roadway;
2) those which are to be removed and reused as a part of the improved roadway; and
3) those which are to be removed and neatly stacked along the right-of-way for future Department use.

Restore and replace in kind any such existing facilities damaged or destroyed by the Contractor through faulty handling as the Engineer directs, at no expense to the Department.

105.09 CONSTRUCTION STAKES, LINES, AND GRADES. Unless the Contract specifies otherwise, the Engineer will establish lines, slopes, and grades, and will furnish the Contractor with all necessary information relating to lines, slopes, and grades.

Furnish, set, and preserve the stakes and marks necessary to construct the project according to the established lines, slopes, and grades as provided in Section 201.

105.10 HAULING.

105.10.01 Hauling to Projects. According to Subsections 107.01 and 109.01.05, perform the hauling of materials and all other hauling in conjunction with the construction

of a project so as not to violate any of the truck size, gross weight, axle weight, or tire width limitations provided by law or regulation.

105.10.02 Hauling Within Project Limits.

A) Grade and Drain Projects. The Department will not restrict vehicles operating at any phase of grade and drain construction as to any type of equipment or loading except as provided under Subsection 207.03.03 and as specified hereinafter for Hauling Over Structures.

B) Hauling Over Structures. Inspect and examine all structures to determine whether or not any structure has been damaged before beginning hauling. For damaged structures, request the Department to appraise the existing damage and grant a release, in writing, from liability for the damage disclosed, or otherwise stand liable. Repair all damage to the structure, including joints, that may be incurred as a result of the hauling operations, at no expense to the Department. Submit for the Engineer's review and approval all proposed methods to protect structures prior to the start of hauling.

The Department will list construction vehicles allowed on bridges in the Table of Empty Construction Vehicles Permissible on Bridges, provided that the vehicles are equipped with tires no smaller than the listed tire sizes, that the axle loads are not in excess of those listed, and that the vehicles do not operate on structures of lesser design loads than indicated.

The Department additionally limits the operation of construction vehicles over structures as follows:

1) obtain written approval from the Engineer before any off-highway vehicle is operated over a structure;
2) limit the movement of off-highway construction vehicles across bridges to one-lane operation centrally aligned with the bridge and at intervals between vehicles no less than 100 feet;
3) maintain bridge floors free from spilled materials, lumber, or any other impact producing obstruction;
4) do not use an earth cushion on bridge;
5) prior to hauling construction loads over a bridge, construct temporary approaches 100 feet in length with the 50 feet adjacent to each end of the bridge constructed to the finished grade elevation of the bridge. Maintain temporary ramps and approaches, at the direction of the Engineer, to minimize the impact of moving construction loads onto the highway structure;
6) for off-highway construction vehicles on the approaches and bridges, do not exceed a speed of 10 mph; and
7) protect from overloads, by temporary fill or by other means, culverts, regardless of span, pipe culverts, and other items which are covered or which are to be covered by fill or backfill.

TABLE OF EMPTY[1] CONSTRUCTION VEHICLES PERMISSIBLE ON BRIDGES

Make & Model	Manufacturers Rated Capacity	Wheelbase	Listed Tire Size	Axle Weight - lbs (Empty)[1]				Min. Bridge Design Load
				Front	Middle	Rear	Total	
Off Highway Trucks - Rear Dump								
Euclid R-12	12 tons	12′-4″	12.00 x 25	10,450	----	12,350	22,800	H 15
Dart D2210	18 tons	11′-0″	F-13.00 x 25, R-16.00 x 25	14,500	----	15,500	30,000	H 15
Euclid R-20	20 tons	12′-11″	16.00 x 25	14,550	----	19,750	34,300	H 15
I-H 65 (B)	20 tons	12′-4″	16.00 x 25	14,300	----	22,100	36,400	H 15
WABCO Haulpak 25	25 tons	10′-10″	18.00 x 25	20,575	----	21,675	42,250	H 15
Dart D2320	27 tons	12′-0″	F-16.00 x 25, R-18.00 x 25	20,000	----	24,000	44,000	H 15
WABCO Haulpak 30	30 tons	10′-10″	18.00 x 25	22,150	----	24,200	46,350	H 15
Dart D2330	32 tons	12′-0″	18.00 x 25	23,000	----	24,000	47,000	H 15
I-H 100	30 tons	13′-1″	18.00 x 25	21,500	----	26,000	47,500	H 15
WABCO Haulpak 35	35 tons	10′-10″	18.00 x 25	23,100	----	25,000	48,100	H 15
Euclid R45 (14FFD)	45 tons	15′-0″	10 - 18.00 x 35	25,400	----	48,600	74,000	HS 15
Two Wheel Tractor - Four Wheel Tractor - Scraper								
WABCO D-Pull	7 yd³	16′-1″	18.00 x 25	15,918	----	7,152	23,070	H 15
Euclid S-7	7 yd³	17′-10″	18.00 x 25	18,300	----	8,200	26,200	H 15
WABCO 111-A	11 yd³	18′-10 1/2″	18.00 x 25	19,998	----	10,320	30,300	H 15
Michigan 110	8 yd³	19′-5″	23.50 x 25	21,080	----	9,920	31,000	H 15
Euclid S-7 Hancock	12 yd³	20′-0″	18.00 x 25	19,530	----	13,840	33,370	H 15
Michigan 110-H	12 yd³	20′-9″	23.50 x 25	26,116	----	11,734	37,850	H 15
I-H 270	14 yd³	22′-0″	26.50 x 25	28,000	----	14,200	42,200	H 15
WABCO "C"	14 yd³	22′-4″	24.00 x 25	27,720	----	18,480	46,200	H 15
A-C 260	15 yd³	21′-0″	26.50 x 25	29,800	----	16,600	46,400	H 15
I-H E-270	21 yd³	25′-5″	26.50 x 25	31,450	----	17,550	49,000	H 15

[1] *The two construction vehicles so referenced are permissible on bridges when loaded and the respective axle weights indicated are the loaded weights.*

TABLE OF EMPTY[1] CONSTRUCTION VEHICLES PERMISSIBLE ON BRIDGES								
Make & Model	Manufacturers Rated Capacity	Wheelbase	Listed Tire Size	Axle Weight - lbs (Empty)[1]				Min. Bridge Design Load
				Front	Middle	Rear	Total	
Two Wheel Tractor – Four Wheel Tractor - Scraper								
Michigan 210	15 yd³	23′-6″	26.50 x 29	33,728	----	15,872	49,600	H 15
Cat 621	14 yd³	23′-5″	26.50 x 29	35,900	----	15,500	51,400	H 15
Euclid TS-14	14 yd³	23′-4″	29.50 x 25	29,300	----	24,000	53,300	H 15
A-C 260	23 yd³	23′-5″	26.50 x 25	36,700	----	21,300	58,000	H 15
[1]WABCO D-Pull	7 yd³	16′-1″	18.00 x 25	24,980	----	18,080	43,070	H 15
[1]Michigan 110	8 yd³	19′-5″	23.50 x 25	30,210	----	26,790	57,000	H 15
Four Wheel Tractor – Six Wheel Tractor – Scraper								
John Deere SD 760	9 yd³	8′-0″, 19′-4 3/4″	11.00 x 16, 18.00 x 25 (2)	6,420	14,080	10,600	31,100	H 15
Euclid SS-24	24 yd³	11′-8″, 25′-6 1/4″	14.00 x 25, 27.00 x 33 (2)	16,900	31,850	29,550	78,300	H 15
Cat 632	28 yd³	10′-11″, 27′-11″	16.00 x 25, 29.5 x 35, 33.50 x 39	17,200	32,800	33,000	83,000	H 15
Cat 630	21 yd³	10′-11″, 25′-8″	16.00 x 25, 29.50 x 35 (2)	17,785	34,020	25,520	77,325	H 20
Euclid SS-28	28 yd³	11′-8″, 28′-9 1/2″	14.00 x 25, 33.50 x 30, 37.50 x 33	15,740	38,500	36,520	90,760	H 20
Euclid SS-40	40 yd³	11′-4″, 28′-9″	14.00 x 25, 33.50 x 33, 37.50 x 33	16,250	40,500	37,250	94,000	H 20
Cat 650	32 yd³	12′-4″, 30′-1″	18.00 x 25, 33.50 x 39, 37.50 x 39	24,200	44,100	39,700	108,000	H 20

[1] *The two construction vehicles so referenced are permissible on bridges when loaded and the respective axel weights indicated are the loaded weights.*

C) Hauling Over Pavements Within Project Limits. During the construction of surfaces or pavements, equip all hauling vehicles operating over the subgrade and base, intermediate, and surface courses with rubber tires. Ensure that all hauling vehicles operating over the base, intermediate, and surface courses conform to the axle weight and tire width limitations provided by law or regulation.

Limit hauling over pavements as follows:

1) do not allow the gross weight to exceed the posted load limit of a bridge in any instance; and
2) comply with any decreased gross weight limits when, in the Engineer's judgment, the roadway or structures would be damaged by allowing the posted load limit.

105.11 MAINTENANCE DURING CONSTRUCTION. Maintain the work during construction and until the Department accepts the project. Provide maintenance through continuous and effective work prosecuted day by day, with adequate equipment and forces keeping the roadway or structures in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, maintain the previous course or subgrade until completing the succeeding course.

Include the cost of all maintenance work in the unit prices bid on the appropriate pay items.

The Department will be responsible for routine roadway maintenance operations such as mowing, ditching, snow removal, signing, and pothole patching for portions of the roadway that remain open to traffic and unaffected by Contractor operations. The Department will conduct these operations in a manner not to disturb the construction operations.

105.12 FINAL INSPECTION AND ACCEPTANCE OF WORK. Notify the Engineer when the project is near completion. The Engineer will then advise in writing all work items that are unsatisfactory. When these work items are complete to the Engineer's satisfaction, the Engineer will call the project complete and issue a Project Completion Notice. When there are seasonal limitations or other compelling situations, the Engineer may call the project complete without requiring correction of the unsatisfactory work items until weather permits or the situation is remedied. When the project is called complete, it is ready for the Department's final inspection.

The Department and other appropriate agencies, such as FHWA, will complete final inspections on all items of work for Formal Acceptance within 90 calendar days of the date of issuance of the Project Completion Notice with the exception of striping, seeding, other erosion control items, tree planting, and landscaping. The Department will make final inspections on seeding and other erosion control items according to Section 213. The Department will make final inspections on tree planting and landscaping as the Contract specifies. The Department will make individual final inspections on particular groups of work items such as structures, electrical, grade and drain, and surface. The Department may make final inspections before the project is called complete on items of work that have been completed. The Engineer will issue written final inspection reports for items of work upon completion of each final inspection. The reports will include a list of all uncompleted work and required corrective work. The Engineer will issue a Comprehensive Final Inspection Report that will include all inspection reports with the exception of striping, seeding, tree planting and landscaping. Complete all items of uncompleted work and all required corrective work listed in the final inspection reports within 90 calendar days of receiving the Engineer's comprehensive final inspection report. When the specified seasonal or temperature limitations prohibit the Contractor from performing the work, complete the work within 90 calendar days after the date the Engineer directs.

When the following occur, substitute the deferral date for the date of the Engineer's comprehensive final inspection report when determining the above time limits for completion of uncompleted work and corrective work:

1) the Contract specifies deferral of payment,
2) the project is complete before the date the Department can make payment (deferral date), and
3) the deferral date is later than the date of the Engineer's comprehensive final inspection report.

When applicable, submit required as-built drawings, project documentation, and required information on materials incorporated into the project. Consider them as uncompleted work or required corrective work.

When the electrical inspection report requires a follow up inspection by the Department, a mandatory post inspection meeting will be required following the inspection. The Contractor and Department personnel will meet within 2 weeks of the date of the follow up inspection. Upon commencement of the meeting, the Contractor will have the remainder of time from the date that the Comprehensive Final Inspection Report was issued to complete any corrective work that still has not been completed to the satisfaction of the Department.

If there is a dispute regarding any of the items listed as uncompleted work or required corrective work on any of the final inspection reports, submit in writing a letter of dispute to the Engineer within 30 days of receipt of the report. The Department will respond back in writing to the letter of dispute within 21 days. If there is still a dispute, proceed according to Subsection 105.13. When the dispute does not apply to all items of work in the report, complete the items not in dispute as specified herein.

The Department will assess liquidated damages according to Subsection 108.09 for failure to complete the required work items within the specified time period. After 30 days of liquidated damages, the Department may proceed according to Subsections 102.04 and 108.10.

When all uncompleted work and required corrective work is finished, the Department will make Formal Acceptance of the project and take responsibility for the project, subject to Section 107.17. Formal Acceptance is effective as of the date all corrective work was completed. If there are no uncompleted work items or required corrective work listed on any of the final inspection reports, the Department will make Formal Acceptance as of the project completion date.

105.13 CLAIMS RESOLUTION PROCESS. The Engineer and Contractor should attempt to resolve project disputes as they arise. When project issues remain unresolved, contract parties may take the following course of action. The Kentucky Administrative Regulations (KAR 603 2:015 Sections 9 & 10) and Kentucky Revised Statutes (KRS 13B.140) mandate the process for resolving project claims.

The Contractor must notify the Resident Engineer of the intent to file a claim by submitting form TC 63-32, "Notice of Changed Condition/Disagreement" to initiate the claims process. Form TC 63-32 must be submitted to the Resident Engineer within 10 days of the date that the Contractor knew of or should have known of the events causing the claim. If the claim is for extra work as defined by subsection 104.03, submit TC 63-32 prior to beginning the disputed work. If the TC 63-32 is not received as required or if it is received after the 10-day deadline, the Cabinet will not consider a claim.

The Resident Engineer will respond to the Contractor notifying them of the receipt of notice of the claim by submitting form TC63-33, "Acknowledgement of Notice of Changed Condition/Disagreement," to the Contractor. The Resident Engineer will send this form within 7 days of receiving form TC 63-32.

Once the proper forms are submitted for the particular work involved in the claim, the Contractor must complete the work as the contract documents and Engineer direct. Both

parties should carefully track this work and associated costs according to Subsection 109.04. The Contractor's compliance with this provision and the Engineer's accounting of the costs does not validate the claim. When the Engineer determines a claim is justified, the Department will pay for it as Extra Work as provided in Subsection 104.03. This provision does not establish a claim contrary to the terms of Subsection 104.02.

Submission of the claim will proceed in one of the following methods:

1. When the claim involves extra work, submit a report detailing the dollar amount of the claim, the basis of the claim, and any supporting documentation to the Engineer no later than 30 days after the receipt of form TC 63-44, "Final Inspection and Formal Acceptance Report of Completed Construction."
2. When the claim involves final quantities and payments, submit a report detailing the dollar amount of the claim, the basis of the claim, and any supporting documentation to the Engineer no later than 60 days after receipt of form TC 63-34, "Final Release," as sent by the Department.
3. When the claim involves a delay, submit a report detailing the dollar and time amount of the claim, the basis of the claim, an as-built schedule compared with the as-bid schedule indicating the delay or delays, a description detailing the responsible party and actions causing the delay, and any supporting documentation to the Resident Engineer no later than 30 days after the receipt of form TC 63-44, "Final Inspection and Formal Acceptance Report of Completed Construction." If the Contractor did not submit an as-bid schedule at the Pre-Construction Meeting, the Cabinet will not consider the claim for delay.

Upon the submission of the claim materials by the Contractor, the Resident Engineer and District T.E.B.M. will have 60 days to attempt to settle the claim with the Contractor. If the claim is not settled, the District will submit it to the Director of the Division of Construction who will have 90 days to make a final determination.

Prior to making the final determination, Director will hold an informal conference with the Contractor for the purpose of reaching a resolution to the claim or identifying issues needing resolution. If the conference is unsuccessful, the Director will notify the Contractor of the Cabinet's decision (the final determination) and the Contractor's right to a hearing according to the KAR 603 2.015 Section 10.

Should the Resident Engineer or Director fail to meet the previously mentioned deadlines, their inaction indicates a denial of the claim. Should the Director fail to submit a final decision within the deadline stipulated previously, the Cabinet will bear the costs associated with the hearing officer should such an event occur.

Upon a written agreement of both parties, the claim could be mediated through a formal nonbinding mediation with a mutually agreed upon mediator. The parties will equally share the costs associated with this action. If either party terminates the mediation, the Contractor may still request a hearing according to KRS Chapter 13B and has 30 days from the notice of termination of the mediation to make such a request.

If the Contractor wishes to request a hearing, they must do so within 30 days of the notification of the Cabinet's final decision and should be in accordance with KRS Chapter 13B. The previous Administrative Claims Process must be exhausted prior the Contractor requesting an Administrative Hearing.

As an alternative course of action, the Contractor may choose to forego the KRS Chapter 13B Administrative Hearing and file a lawsuit with the district court in Frankfort, Kentucky.

SECTION 106 — CONTROL OF MATERIALS

106.01 SOURCE OF SUPPLY AND MATERIALS REQUIREMENTS. Provide materials that conform to all requirements of the Contract. At the Department's option, the Engineer may approve the materials at the source of supply before delivery is started. When requested by the Engineer, submit representative samples of the materials intended for use in the work for the Engineer to examine and test according to Subsection 106.02. The Department may inspect or test all materials at any time during their preparation, storage, and use. If the Department determines that previously approved materials from any source are not uniform and satisfactory or that the product from any source proves unacceptable, cease operations. Provide acceptable material and resume operations. Do not use material which, after approval, has in any way become unfit for use. Use only new materials.

106.02 SAMPLES, TESTS, AND CITED SPECIFICATIONS. The Department will bear the cost of conducting tests except as otherwise provided. The Engineer will collect samples at the site of work and will retain custody of the samples until delivered to the laboratory, to a common carrier, or to the US Postal Service. The Contractor may deliver to the laboratory samples that a Department employee placed in containers and sealed with a Department seal. The Department will not accept for testing any samples submitted in any other manner. When requested, give the Engineer assistance in obtaining samples.

Perform, or ensure that the material producer performs, all testing necessary for quality control and process control. The Department will sample and test to ensure the acceptability of the materials incorporated into the work.

The Department will sample, test, and approve all materials in conformance with the Department's Kentucky Methods and the Manual of Field Sampling and Testing Practices; but the Department reserves the right to sample at any point and to perform any additional or special tests necessary to ensure the suitability of the material for its intended use. The Department may charge the supplier or Contractor for the cost of any additional test or inspection of unacceptable material.

The Department will bear only the costs of normal acceptance testing of materials actually used in the work. Show good faith and request sampling of only those sources from which material will be furnished for the project. Do not use Department sampling and testing to investigate various potential materials sources for informational purposes. When the Contractor submits samples from or requests sampling of materials sources that are not used, the Department may charge the Contractor for the cost of sampling and testing the source.

Bear the cost of special investigations or tests beyond the normal acceptance testing, which are required to determine the degree of acceptability of finished work that incorporates materials not conforming to the Contract. This provision applies to materials on which testing is not normally completed until after their incorporation into the work. This provision is not a means to use materials that are previously tested and rejected prior to use. The Department or a Department approved commercial testing laboratory will perform these tests and investigations.

Whenever reference is made to the standards of AASHTO, ASTM, Federal Specifications, or standards promulgated by other recognized societies or organizations, the current specification at the date of the bid letting is applicable.

When a sieve number is designated in these Specifications, use sieves that conform to AASHTO M 92.

Fabricate, purchase, or otherwise furnish any special equipment necessary to obtain samples when the Contract requires.

106.03 PLANT INSPECTION.

106.03.01 General. The Engineer may undertake the inspection of materials at the source. For plant inspections, conform to the following conditions:

1) Cooperate with and assist the Engineer, and ensure that the producer cooperates with and assists the Engineer.
2) Provide the Engineer full entry at all times to such parts of the plant as may concern the manufacture or production of the materials being furnished.
3) For tests performed at the source of supply or other locations for the convenience of the Contractor, the Engineer may require the Contractor to furnish a suitable laboratory and the necessary testing equipment.
4) Provide and maintain adequate safety measures, according to Subsection 107.01.01.

The Department reserves the right to retest all materials that are tested at the source of supply, after delivery and prior to their incorporation into the work. The Department reserves the right to reject all retested materials that fail to conform to the requirements of the Contract.

106.03.02 Field Laboratory. Provide a field laboratory at the site of asphalt plants, and the site of mixing or batching concrete. Locate the field laboratory conveniently near the plant and conform to the applicable requirements of Subsection 401.02.01 A). Include a supply of water when it is required to perform the necessary testing. Provide this field laboratory for the exclusive use of the Engineer, the technicians employed by the Contractor, or the material producer, to perform testing for quality control and process control.

At material or product sources other than those listed above, the Engineer will determine if the field laboratory will be required for proper testing and inspection of the material or product.

106.04 BUY AMERICA REQUIREMENT. Produce, mill, fabricate, and manufacture in the United States of America all iron and steel materials, including but not limited to structural steel, guardrail materials, corrugated steel culvert pipe, structural plate, prestressing strands, and steel reinforcing bars. Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department.

Use foreign materials only under the following conditions:

1) When the materials are not permanently incorporated into the project; or
2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or $2,500.00, whichever is greater

106.05 CERTIFICATION OF COMPLIANCE. The Engineer may allow use prior to sampling and testing of certain materials accompanied by Certificates of Compliance stating that such materials fully comply with the requirements of the Contract. Deliver each lot of such materials to the work site with a Certificate of Compliance that is signed by an authorized agent of the testing agency and that clearly identifies the lot. The Engineer may sample and test materials used on the basis of Certificates of Compliance at any time, and when such materials fail to conform to the Contract, the Engineer will reject them, whether in place or not.

The Engineer will determine the form and distribution of Certificates of Compliance.

The Engineer reserves the right to refuse permission to use materials on the basis of Certificates of Compliance.

106.06 DEFECTIVE MATERIAL. Remove materials delivered to the work site that fail to conform to the requirements of the Contract and dispose of them so as to prohibit their return to the site or incorporation into the work. If the Contractor declines or neglects to remove unsatisfactory material from the work site within the time that the Engineer directs such removal, the Department may retain all monies due or which may become due the Contractor on pay estimates until the Contractor removes the

unsatisfactory material. As an alternative, the Commissioner may elect to employ the necessary labor to remove and dispose of the unsatisfactory materials and deduct the cost of same from any money due or that may become due the Contractor.

106.07 DEPARTMENT–FURNISHED MATERIAL. Furnish all materials required to complete the work, except those specified as Department-furnished. The Department will deliver or make available Department-furnished materials at locations specified in the Contract. Include the cost of handling and placing all Department-furnished materials after they are turned over to the Contractor in the Contract price for the item incorporating the Department-furnished materials.

The Department will hold the Contractor responsible for all Department-furnished material that is turned over to the Contractor. The Department will deduct from any monies due the Contractor to make good on any material shortages and deficiencies, from any cause whatsoever, and for any damage that may occur after such turnover, and for any demurrage charges.

The Department will apply the requirements of this section to Department-furnished items that the Contractor is required to return to the Department, such as, but not limited to, traffic signals and structural steel members.

106.08 STORAGE OF MATERIALS. Store materials to ensure preservation of their quality and fitness for the work. Locate stored materials to facilitate prompt inspection. The Contractor may use that portion of the right-of-way not required for construction of the roadway for storing materials, plant, and equipment. Provide any additional space required at no expense to the Department.

If the Department provides partial payment for material prior to the Contractor incorporating them into the work, store these materials according to Subsection 109.05.01.

106.09 LIST OF APPROVED MATERIALS. Due to the special or lengthy tests required for approval of certain materials, the Department maintains a List of Approved Materials. Use only materials included on the List of Approved Materials at the time of use on the project. The Department will sample and test materials on the list after delivery to the project as specified or when deemed necessary, and will reject any material found not to conform to the Contract regardless of any prior approval.

106.10 FIELD WELDER CERTIFICATION REQUIREMENTS. Welder's or welding operator's qualifications to perform field welding shall remain effective for 2 years from the date of test unless:

1) the welder or welding operator is not engaged in the welding process for which the welder or welding operator is qualified for a period exceeding 6 months; or
2) in the judgment of the Engineer, there is reason to question the welder's or welding operator's ability.

Keep records of the types of welds and dates engaged in welding within the 2-year period to maintain the welder's or welding operator's qualification. If the Contractor fails to maintain such records for review and use in each project's records, the Department will require the welder or welding operator to be retested at any time.

SECTION 107 — LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107.01 LAWS TO BE OBSERVED. In all operations connected with the work, the Department will require strict compliance with all state, federal, and local ordinances, regulations, laws, and bylaws controlling or limiting in any way the actions of those engaged on the work, in such manner to save the Commonwealth, its agents, and employees harmless.

107.01.01 Safety, Health, and Sanitation. Comply with all applicable state, federal, and local laws governing safety, health, and sanitation. Provide all safeguards, safety devices, and protective equipment and take all other actions that are reasonably necessary to protect the life and health of all employees and personnel on the project, provide for the safety of the public, and protect all property affected by the performance of the work covered by the Contract, and as the Engineer directs.

As provided in KRS Chapter 338 in the Kentucky Occupational Safety and Health Act and in subsequent regulations and standards promulgated by the Kentucky Occupational Safety and Health Standards Board, do not require any personnel employed in performance of the Contract, including employees of subcontractors, to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to the employee's health and safety.

Ensure that all workers exposed to construction equipment or highway traffic wear high visibility safety apparel that conforms to and is labeled as meeting Performance Class 2 or 3 of the ANSI/ISEA 107-2004 publication. Additionally, for nighttime work, the Department will require flaggers to wear ANSI Performance Class 3 apparel.

Provide fall protection according to 29 CFR Part 1926 as adopted by Kentucky Administrative Regulations. Include but do not limit to the following protection: safety nets, safety belts, lifelines, lanyards, life vests, hand rails, temporary bridge flooring, or equivalent protection.

For work over a navigable stream, unless working exclusively on a bridge deck, provide a manned power boat. Position the boat under personnel for rescue whenever work is in progress.

107.01.02 Motor Vehicle Laws. Obey all Motor Vehicle Laws on all state, federal, and county roads and city streets, including roads and streets used as detours and roads and streets under construction beyond the limits of the proposed improvement specified in the Contract. Obey the specific provisions of such laws within the limits of construction when stated in the Contract for that particular type of construction.

107.01.03 Water Pollution. Conform to the Department's requirements for abating and minimizing water pollution as specified in Section 213.

107.01.04 Air Pollution. Perform construction activities in a manner that prevents air pollution from occurring as the result of burning (where allowed), drilling, blasting, production of materials, hauling, or any other necessary construction operations of any kind. Conform to the applicable provisions of KRS Chapter 224 and regulations issued by the responsible state and federal agencies, and conform to regulations established by local governmental agencies pursuant to KRS Chapter 77.

Apply water or other approved materials when, where, and as directed or approved by the Engineer in order to effectively prevent and control dust from becoming an air pollutant, safety hazard, or other type nuisance during the construction of a project. For failure to perform this item of work satisfactorily, the Department will defer the processing of any pay estimates due the Contractor for the project, until the work is in compliance.

When dust results entirely from the performance of the work, include all costs for providing dust control in the pay items for the work being performed.

When dust is caused either partially or entirely by the traveling public, the Department will pay for the water at the Contract unit price per 1,000 gallons. The Contractor may use materials other than water to prevent and control dust caused partially or entirely by the traveling public, provided the Engineer approves the use of such materials and the Contractor furnishes and applies the materials at no expense to the Department.

When the Contract designates blast cleaning concrete and steel surfaces, perform the blast cleaning as specified in the Contract. Choose a method allowed by the Contract that conforms to the air and water pollution regulations applicable to the county or city where the site of work is located and to the applicable safety and health regulations. Discontinue any method that does not consistently provide satisfactory work and conform to the above requirements, and replace it with an acceptable method. While blast cleaning, confine all debris of every type, including dirty water, resulting from the blast cleaning operation. Immediately and thoroughly clean debris from the blast–cleaned surfaces and all other areas where any escaped debris may have accumulated.

Perform all drilling, grinding, and sawing of rock, shale, concrete, and other similar dust-producing materials with equipment provided with water sprays, fabric-filtered collection systems, or other suitable devices to prevent excessive dust from becoming airborne.

Perform all burning according to Regulation 401 KAR 63:005.

107.01.05 Highways Through National Forests and National Parks. When the construction of all or a portion of a project is through a National Forest, National Park, or other type of governmentally controlled property, perform the work according to the Clearing and Fire Plans stated herein, as applicable.

The Contract will indicate the portion of a project that is within a National Forest, National Park, or other governmentally controlled property. The Contractor is responsible for determining the extent to which this subsection is applicable to a specific project.

A) Clearing Plans. Perform the clearing operation according to the following:

1) Plainly mark the boundaries of the clearing limits specified in the Plans or established by the Engineer prior to clearing.
2) Do not cut or damage any residual stand of trees, shrubs, or ground cover outside the boundaries of the clearing limits.
3) Contrary to Subsection 104.05, yard or stockpile merchantable timber within the clearing limits for disposition by the governmental agency in charge of the forest or other type property.
4) Dispose of logs, brush, limbs, stumps, and all other undesirable materials by burning, chipping, or hauling to approved dumps or waste areas. Perform burning as prescribed in the Fire Plan.

B) Fire Plan. The term Forest Officer-in-Charge means the officer or employee of the U.S. Forest Service designated by the Forest Supervisor to supervise burning and fire precautions on the project. The Forest Officer-in-Charge will be the District Ranger, or his designated representative.

Comply with all Kentucky State Fire Laws and the following:

1) Do not perform burning without written permission from the Forest Officer-in-Charge. The Forest Officer-in-Charge will stipulate the hours for burning and the time to extinguish all fires.
2) Prior to beginning any burning, submit to the Forest Officer-in-Charge a burning plan stating the intended burning times and dates. Prior to beginning any burning, notify the Forest Officer-in-Charge.
3) Maintain an on-site representative authorized to receive and carry out all instructions issued by the Forest Officer-in-Charge with regard to the burning and fire precautions.

4) At all times when burning is in progress, maintain a sufficient number of personnel to control the fires. Attend to all fires at all times.
5) Maintain adequate fire tools on the project at all times when burning is in progress, and store the tools in sealed tool boxes clearly marked "FOR FIRE ONLY". The US Forest Service will provide these boxes, and the Forest Officer-in-Charge will specify the location to place each box. Keep each box as near the burning as practical, and never more than 1/8 mile from the burning. Move the fire tools along the job as the burning operation progresses. Maintain the fire tools ready for fire-fighting at all times, and return the tools to the U.S. Forest Service in serviceable condition after completing the burning operations.
6) Provide a satisfactory water pump with 500 feet of one-inch or 1 1/2-inch hose and a minimum of 300 gallons of available water.
7) Provide adequate spark arresters acceptable to the Forest Officer-in-Charge for all steam and internal combustion engines, including tractors, trucks, power rollers, power shovels, and chain saws. Confine the use of welding equipment, cutting torches, and similar equipment to an area cleared of all vegetation, leaves, and debris. Do not refuel power saws while hot. Refuel power saws only on a roadway or other cleared area.
8) Remove all flammable material for a distance of no less than 500 feet from brush or debris to be burned.
9) Prohibit smoking at such times as the Forest Officer-in-Charge deems necessary as a precautionary measure. At such times, allow smoking only in designated places cleared of debris, leaves, or other flammable material and approved by the Forest Officer-in-Charge.
10) The Contractor shall bear full responsibility (monetary or otherwise) for all fires resulting from his operations.
11) Notify the Forest Officer-in-Charge immediately in the event of escape of any fire, and act immediately to control the fire. The Forest Officer-in-Charge may, at his discretion, take charge of the fire control operations. Provide the Forest Officer-in-Charge with sufficient personnel, tools, and equipment as the Forest Officer-in-Charge deems necessary to control any fire caused by the project activities. The Contractor's actions in this regard shall not minimize the liability of the Contractor for damages and for the cost of controlling the fire.

C) Measurement and Payment. The Department will not measure or pay for any work required by this Subsection. The Department considers this work as incidental to other items in the Contract.

107.02 RIGHT-OF-WAY. The Department will make every effort to provide all necessary right-of-way and to clear all utility facilities on each project, but when the right of entry is lawfully withdrawn or invalidated, or when because of some other unforeseen reason either the right-of-way or the right of entry is obstructed, make no monetary claim for any damages, nor hold the Department liable for any delays resulting from such unforeseen conditions or occurrences. The Engineer may extend the Contract because of these delays, according to Subsection 108.07.

107.03 LABOR REQUIREMENTS. Comply with all state and federal labor laws and with the wage requirements specified in the Contract. The Department will set forth these requirements in the Contract. Do not discriminate against any worker because of race, creed, color, sex, national origin, age, or handicap.

107.04 PERMITS, LICENSES, TAXES. Procure all permits, licenses, inspections, and memberships, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work. When any portion of the project is located in an Enterprise Zone as defined in KRS 154, Subchapter 45, the Department

will not seek an exemption from sales and use tax provided for in KRS Chapter 139. Accordingly, the Department will not execute any certificates of exemption for the purchase of building materials or any other tangible personal property to be incorporated into the project.

107.05 PATENTED DEVICES, MATERIALS, AND PROCESSES. When using any design, device, material, or process covered by letters of patent or copyright, provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the Surety shall indemnify and save harmless the Commonwealth, any affected third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material, or process, or any trademark or copyright, and shall indemnify the Commonwealth for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the prosecution or after the completion of the work.

107.06 RESTORATION OF SURFACES OPENED BY PERMIT. Do not allow any openings to be made in any surface or pavement except with the written permission of the Department. If the Department grants an encroachment permit to any person or corporation resulting in the need for an opening in the surface or pavement, perform necessary repair work at the opening as the Engineer directs and at the expense of the party to whom the permit was granted.

107.07 FEDERAL AID PARTICIPATION. When the Federal Government participates in the cost of the work covered by the Contract, proceed with the work under the supervision of the Commonwealth, but subject to the inspection and approval of the proper officials of the Federal Government and according to the applicable federal statutes, rules and regulations.

The Federal Government's inspection will not make the Federal Government a party to this Contract and will not interfere with the rights of either party under this Contract.

107.08 PUBLIC CONVENIENCE AND SAFETY. Store materials and conduct work to cause the minimum necessary obstruction to the traveling public.

For roads under construction that are used by the traveling public, maintain the roadbed, subgrade, or newly laid surface in a condition that the public can travel over in comfort and safety. Whenever the alignment of the new roadway and the grade line specified in the Plans or as established by the Engineer require any excavation or the construction of an embankment on any part of the existing traveled road, perform the work through completion with continuous, successive operations as quickly as practical, and maintain the completed work in a smooth and acceptable condition. Maintain open, passable sections where the old road and the new road coincide with as little inconvenience to the traveling public as possible. Do not close any sections of the road without first obtaining the Engineer's written permission.

When constructing temporary crossings for crossovers, bridges, or culvert openings, the Contractor is responsible for accidents that occur on the roadway approaches as well as the structures of such crossings.

107.09 RAILWAY-HIGHWAY PROVISIONS. When the Plans require hauling materials across the tracks of any railway, the Department will arrange with the railway company for permission for the Contractor to cross the railway right-of-way and tracks, provided that the Contractor executes a license agreement satisfactory to the railway company and agrees to reimburse the railway company for all costs associated with providing and removing temporary grade crossings, and for all costs of other work or items the railway company deems necessary for protection of its property and operations. When the Contractor desires railway crossings for his convenience, the Contractor shall make his own arrangements for the use of such crossings.

Perform all work on the railway right-of-way at times and in a manner to not unnecessarily interfere with the movement of trains or traffic upon the track of the railway

company, and according to all other requirements of the Contract. Take all precautions to avoid accidents, damage, delays or interference with the railway company's trains or other property.

When work includes construction, maintenance, or demolition of a railroad bridge, conform to the personnel safety rules for bridge workers. These rules are consistent with existing OSHA regulations, but the FRA will be the enforcement agency. The rules are published in the June 24, 1992 Federal Register.

107.10 CONSTRUCTION OVER OR ADJACENT TO NAVIGABLE WATERS. Conduct all work over, on, or adjacent to navigable waters in a manner that does not interfere with the free navigation of the waterway and does not impair the existing navigable depths except as allowed by permit issued by either the US Coast Guard or the US Army Corps of Engineers.

107.11 USE OF EXPLOSIVES. Comply with Federal, State, and local regulations on the purchase, transportation, storage, and use of explosive material. Regulations include but are not limited to the following:

1) KRS 351.310 through 351.9901.
2) 805 KAR 4:005 through 4:165
3) Applicable rules and regulations issued by the Office of Mine Safety and Licensing.
4) Safety and health. OSHA, 29 CFR Part 1926, Subpart U.
5) Storage, security, and accountability. Bureau of Alcohol, Tobacco, and Firearms (BATF), 27 CFR Part 181.
6) Shipment. DOT, 49 CFR Parts 171-179, 390-397.
7) National Park Service regulations. For projects in National Parks, also comply with NPS Director's Order #65, Explosives Use and Blasting Safety.

Submit a general blasting plan for acceptance at least 30 days before drilling operations begin. Include, as a minimum, the working procedures and safety precautions for storing, transporting, handling, detonating explosives, addressing misfires on the project. Specifically address how traffic will be impacted and what procedures and plans are in place to limit and address accident occurrence.

Notify each property owner and public utility company having structures or facilities in proximity to the site of the work of the intent to use explosives. Give such notice sufficiently in advance to enable those being notified to take the necessary steps to protect their property from injury.

Preserve the original bearing value of rock located under proposed structure foundations from damage by blasting, by concussion from blasting, or by excessive breakage. The Contractor shall bear any increases in structure costs caused by blasting damage to rock under proposed foundations.

107.12 PROTECTION AND RESTORATION OF PROPERTY.

107.12.01 General. Do not enter upon private property for any purpose without obtaining permission from the property owner.

The Contractor is responsible for preserving all public and private property and shall use every precaution necessary to prevent such damage or injury. Exercise the necessary precautions to prevent damage to pipes, conduits, and other underground structures. Carefully protect from disturbance or damage all land monuments and property marks until the Engineer has witnessed or otherwise referenced their location, and do not remove them until directed.

The Contractor is responsible for all damage or injury to property resulting from any act, omission, neglect, or misconduct in the Contractor's manner or method of executing the work, or due to the Contractor's non-execution of the work, or due to defective work

or materials.

When or where any direct or indirect damage or injury occurs to public or private property by or on account of any act, omission, neglect, or misconduct in the Contractor's execution, or lack of execution of the work, the Contractor shall restore, at no expense to the Department, such property to a condition similar or equal to that existing before such damage or injury was done.

If the Contractor fails to restore such property or repair such damage or injury within a reasonable time, then the Department may, upon 48 hours notice, proceed to repair, rebuild, or otherwise restore such property, and the Department will deduct the cost thereof from any monies due or that may become due to the Contractor under the Contract.

107.12.02 Preservation of Mailboxes. The Contractor is responsible for preserving mailboxes within the right-of-way and easements for the project. Remove and relocate mailboxes as necessary during construction of the project, and reinstall at their permanent location as soon as is practical. During construction of the project, provide access to mailboxes for US Postal Service vehicles at all times. Install mailboxes at both their temporary and final locations according to the requirements of the Department and the US Postal Service. When a new post is necessary for the final installation, furnish a 4-inch by 4-inch by 7-foot treated wood post, conforming to Section 820. Install other types of posts conforming to the requirements of the Department and the US Postal Service when the post is furnished by the owner of the mailbox.

Except for surfacing materials, perform all work necessary to preserve, remove, relocate, and reinstall mailboxes, and maintain access for US Postal Service vehicles, at no expense to the Department.

107.13 RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify and save harmless the Commonwealth, the Department, and all its officers, agents, and employees from all suits, actions, or claims of any character brought on account of any of the following:

1) injuries or damages sustained by any person or property resulting from the Contractor's acts;
2) neglecting safeguarding the work;
3) acts, omissions, neglect, or misconduct;
4) claims or amounts recovered from any infringement of patent, trademark, or copyright; and
5) claims or amounts arising or recovered under the Workers Compensation Act, or any other law, ordinance, order, or decree.

The Department will retain money due the Contractor in amounts sufficient to cover the cost of such suits, actions, or claims for the use of the Commonwealth.

By executing this Contract, the parties do not intend to create for the public or any of its members a third party beneficiary, or to authorize anyone not a party to the Contract, a suit for personal injuries or property damage.

107.14 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the Department makes final written acceptance of the work, protect against injury or damage to any part of the work by the action of the elements, or from any other cause, whether arising from the execution, or from the non-execution, of the work. Rebuild, repair, and restore any portion of the work damaged by any of the above causes. The Contractor shall bear the expense of such repairs except for damages to the work due to unforeseeable causes beyond the control of and without fault or negligence of the Contractor, including but not restricted to acts of God or of the public enemy, acts of the Government, slides that the Engineer finds to have been unavoidable, and ordinary wear and tear on any section of the road that the Engineer orders opened to traffic.

The Department may issue written encroachment permits to make openings in, along, or across the road, but in such cases the individuals or organizations obtaining the permit

shall perform the work.

107.15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES. At points where the work is adjacent to the properties of utility companies or others to which damage from performing the work might result in considerable expense, loss, or inconvenience, do not start the work without first making all arrangements necessary to protect the adjacent property. Cooperate with the owners of any underground or overhead utility lines while they remove or relocate such utilities so that their operations progress in a reasonable manner with minimal duplication, and so that the services rendered by those parties is not unnecessarily interrupted.

Use all possible care in excavating on the project to avoid damaging existing utilities, whether the utilities are or are not specified in the Plans. Elevations and locations of existing utilities specified in the Plans are approximate only. As specified in Subsection 107.12, the Contractor is responsible for protecting and restoring existing utility property specified in the Plans.

In the event that water and utility services are interrupted as a result of accidental breakage, or as a result of being exposed or unsupported, promptly notify the proper authority and cooperate with that authority to restore services. When water service is interrupted, perform the repair work continuously until the service is restored. Do not perform work around fire hydrants until the local fire authority approves the plan for restoring service.

Prior to any excavation activities, comply with the requirements for Excavators in the Underground Facility Damage Prevention Act of 1994 which is contained in KRS 367 Sections 1 through 10.

107.16 PERSONAL LIABILITY OF PUBLIC OFFICIALS. In carrying out any of the provisions of the Contract, or in exercising any power or authority granted to them by or within the scope of the Contract, the Commissioner, Engineer, or their authorized representatives have no liability, either personally or as officials of the Commonwealth; in all such matters they act solely as agents and representatives of the Commonwealth.

107.17 NO WAIVER OF LEGAL RIGHTS. The Department is not precluded or estopped, by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work and payment for the work, from showing the true quantity and character of the Contractor's work and materials furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or that the Contractor's work or materials that the Contractor furnishes do not conform to the Contract.

The Department is not precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment according thereto, from recovering from the Contractor and his surety such damages as it may sustain by reason of the Contractor's failure to comply with the terms of the Contract. Neither the Department's acceptance, or the acceptance of any representatives of the Department, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any Department possession of the work operate as a waiver of any portion of the Contract or of any power herein reserved, or any right to damages herein provided. A waiver of any breach of the Contract does not operate as a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the Contract, is liable to the Department for latent defects, fraud or such gross mistakes as may amount to fraud, and the Department's rights under any warranty or guaranty.

107.18 REQUIRED LIABILITY INSURANCE. In addition to any other forms of insurance or bonds required under the terms of the Contract, carry insurance of the following kinds and amounts:

A) Public Liability Insurance. Furnish proof of insurance to the Department, with respect to all construction operations, for regular Contractors' Public Liability

Insurance providing for a limit of no less than (amount shown in the Bid Proposal) dollars for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of (amount shown in the Bid Proposal) dollars for all damages arising out of bodily injuries to or death of 2 or more persons in any one accident.

B) Property Damage Liability Insurance. Furnish proof of insurance to the Department, with respect to all construction operations, for regular Contractors' Property Damage Liability Insurance providing for a limit of no less than (amount shown in the Bid Proposal) dollars for all damages arising out of injury to or destruction of property in any one accident, and subject to that limit per accident, a total (or aggregate) limit of (amount shown in the Bid Proposal) dollars for all damages arising out of injury to or destruction of property during the policy period.

C) Protective Public Liability Insurance. Furnish proof of insurance (carried in the Contractor's own behalf) to the Department, with respect to all subcontractor construction operations, for regular Contractors' Protective Public Liability Insurance providing for a limit of no less than (amount shown in the Bid Proposal) dollars for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of (amount shown in the Bid Proposal) dollars for all damages arising out of bodily injuries to or death of 2 or more persons in any one accident.

D) Protective Property Damage Liability. Furnish proof of insurance (carried in the Contractor's own behalf) to the Department, with respect to subcontractor construction operations, for regular Contractors' Protective Property Damage Liability Insurance providing for a limit of no less than (amount shown in the Bid Proposal) dollars for all damages arising out of injury to or destruction of property in any one accident and, subject to that limit per accident, a total (or aggregate) limit of (amount shown in the Bid Proposal) dollars for all damages arising out of injury to or destruction of property during the policy period.

E) Liability Insurance for Highway and Railroad Separation. Furnish proof of insurance (carried in the behalf of the Railroad Company shown in the Bid Proposal) to the Department, with respect to all construction operations and subcontractor construction operations, for Railroad Company regular Protective Public Liability Insurance providing for a limit of no less than (amount shown in the Bid Proposal) dollars for all damages arising out of bodily injuries to or death of one person, and, subject to that limit for each person, a total limit of (amount shown in the Bid Proposal) dollars for all damages arising out of bodily injuries to or death of 2 or more persons in any one accident, and regular Protective Property Damage Liability Insurance providing for a limit of no less than (amount shown in the Bid Proposal) dollars for all damages arising out of injury to or destruction of property in any accident and, subject to that limit per accident, a total (or aggregate) limit of (amount shown in the Bid Proposal) dollars for all damages arising out of injury to or destruction of property during the policy period.

F) General. Carry the insurance herein before specified until all work required to be performed under the terms of the Contract is satisfactorily completed as evidenced by the Formal Acceptance by the Commonwealth. When the Contract is a joint venture, each party to such undertaking shall furnish proof of endorsement on any insurance required indicating the extension of coverage to that contract undertaking, or the joint venture shall provide the coverage required for the undertaking by a contract of insurance for that purpose. Provide insurance at no expense to the Department.

When subletting any part of the work, provide on behalf of the subcontractors or ensure that when subletting the subcontractors provide similar insurance to cover their operations.

SECTION 108 — PROSECUTION AND PROGRESS

108.01 SUBCONTRACTING OF CONTRACT. Do not subcontract, sell, transfer, assign, or otherwise dispose of the Contract or Contracts or any portion of the Contract or Contracts, or of the right, title, or interest therein, without the Engineer's written consent. When the Engineer gives such consent, the Engineer will allow the Contractor to subcontract a portion, but the Contractor must perform with his own organization work amounting to no less than 30 percent of the total Contract cost. The Department will not allow any subcontractor to exceed the percentage to be performed by the Contractor and will require the Contractor to maintain a supervisory role over the entire project. Do not allow any subcontractor to further subcontract any portion of the work without obtaining written consent from the Engineer. When the Engineer gives such consent, the first tier subcontractor may further subcontract a portion of his work not to exceed 50 percent of the work originally subcontracted to him by the Contractor. Do not allow any second tier subcontractor to subcontract any portion of the work.

The Engineer's written consent to subcontract, assign, or otherwise dispose of any portion of the Contract does not, under any circumstances, relieve the Contractor of his liabilities and obligations under the Contract. The Engineer will make transactions only with the Contractor. The Engineer will recognize subcontractors only in the similar capacity of employees or workers of the Contractor who are subject to the same requirements as to character and competence as specified in Subsection 108.06.

The Contractor shall not use equipment in the performance of the Contract to which title is not held by the Contractor or an approved subcontractor, except licensed trucks or miscellaneous special equipment of minor importance to the work without an approved lease or rental agreement. Equipment that is leased or rented from an established, Department approved rental company is released from this requirement.

The Engineer will approve equipment lease or rental agreements only when a true copy of the agreement is submitted to the Department. Submit the agreement signed by both the lessor and lessee, with signatures that are verified by a notary public. In unexpected or emergency situations, the Engineer may give oral approval to use leased or rented equipment only for the duration of the unexpected or emergency situation. After the unexpected or emergency situation ends, immediately remove the equipment from the project or submit an acceptable copy of the lease or rental agreement prior to that time.

Submit lease or rental agreements that provide for reimbursement based on the time the equipment is used on the project. Employ, or ensure that an approved subcontractor employs, all operators of leased equipment while working on the project.

108.02 PROGRESS SCHEDULE. The scheduling documents are considered the Contractor's plan of action. The Contractor may change their plan of action as needed. However, the Contractor must inform the Cabinet of deviations from the schedule, giving the Cabinet a 24-hour notice prior to working on items deviating from the schedule. The 24-hour notice can be reduced if approved by the Engineer. The Contractor should attempt to follow their schedule if possible and any deviations must be reflected in the next schedule update.

If the Engineer deems a Preconstruction Conference necessary, submit a written narrative as described below at least two working days prior to the Preconstruction Conference. During the Preconstruction Conference, the Contractor shall make a verbal presentation of their progress schedule detailing their proposed progression of work, including the items discussed in the written narrative. If the Engineer does not deem a Preconstruction Conference necessary, the Contractor will submit a Written Narrative to the Engineer at least two working days prior to the start of work. Any submission of scheduling documents must be in triplicate and be accompanied by a signed statement of approval by the Contractor's project superintendent/manager.

These initial project schedule documents should reflect the Contractor's schedule as the project was bid. Any questions that the Contractor may have that would lead to changes in this schedule should be discussed at the Preconstruction Conference and the initial schedule can be adjusted based on those discussions.

The Department will review the schedule in general for the purpose of managing its employees and resources, and for conformance to the specifications, and flow of logic. The Department accepts no liability for determining the Contractor's ability to meet their schedule as it is Contractor's sole responsibility to provide an accurate and feasible schedule. All schedule risk rests with the Contractor.

When the Written Narrative is not received for review two working days prior to the preconstruction conference, or if they are not in conformance with the specifications, the preconstruction conference will be postponed until two working days after submission of an acceptable Written Narrative.

When at the Preconstruction Conference, or anytime during the project, the Engineer determines that the project warrants the submittal of an Activity Bar Chart, the Contractor will have 30-days to submit the baseline progress schedule documents consisting of a Written Narrative and Activity Bar Chart. These documents should describe the schedule in Level 1 detail for the upcoming 45 days and at least Level 2 detail for the remainder of the project (the Levels of Detail are described in part D of this section). These baseline documents should be updated monthly, or as agreed upon by the Contractor and Engineer, to reflect project progress.

When there is no Preconstruction Conference, or when the Engineer determines that a Written Narrative alone will suffice for the progress scheduling documents, updates will occur through bi-weekly progress schedule meetings between the Contractor and Engineer. The format and frequency of these meetings may be adjusted only when mutually agreed upon by the Engineer and Contractor.

When baseline scheduling or update scheduling documents are not submitted within their time limitations, or when any of the provisions within this section of the project specifications are not satisfied, the progress pay estimates will be held until the scheduling documents are presented or the outstanding provisions are satisfied. When the provisions of this section have not been satisfied such that two consecutive progress payments have been held, the Department will continue to withhold progress payments and will charge the Contractor a daily penalty equal to one half the project's liquidated damages rate starting from the date the scheduling documents were due and continuing until the provisions of this section are met. Any costs associated with these scheduling requirements and updates are incidental to the project.

A) Written Narrative. The initial written narrative shall include, but may not be limited to the following:

1. Provide a description that includes how the Contractor will sequence and stage the work, how the Contractor plans to maintain and control traffic, and what equipment and crew sizes are planned to execute the work.
2. Provide a list of project milestones including, if applicable, winter shut-downs, holidays, or special events. The Contractor shall describe how these milestones and other dates effect the prosecution of work.
3. Provide a list of Owner responsibilities and associated timelines, including any submittals, shop drawings, or any other items that are to be reviewed by the Department.
4. Discuss any known problems that the Contractor foresees including any utilities or railway related issues.

B) Activity Bar Chart. The initial activity bar chart shall include, but is not limited to the following:

1. Display the calendar time-line on the x-axis where the minor time divisions will be no greater than one day.
2. Display as-bid start dates and activity durations of items including but not limited to the activities. The project items, material fabrications, document approvals, or other time-sensitive items that will occur within the first 45 calendar days of the project must be listed in Level 1 detail.

C) Updates.

1) All scheduling documentation should be updated to show progress to the current data date that should be not less current than one week prior to the submission date. The updated schedule documents should describe the upcoming 45 days of activities in Level 1 detail and the remainder of the project in at least Level 2 detail.
2) The updated completion date based on current progress should be evident. In the event the progress schedule shows the project to be completed past the contract's completion date, the narrative shall address how the Contractor plans to prosecute the work to get the project back to within the contract time allowed. Any float, or any time remaining between the last item of work and the contract completion date, will not be held against the Contractor. The Cabinet will not reduce the contract time because of float without just compensation to the Contractor.
3) When it is necessary to provide a project schedule update, the updated narrative must contain, but may not be limited to the following items:

    - Provide updates on the items of work to include any delays or gains to the previously submitted scheduled items such as rain events, unforeseen utility delays, discrepancies in geologic data, agreements or change orders approved by the Cabinet, or other issues that effect the items of the previous submittal.
    - List any changes to the maintenance of traffic as previously submitted and explain why the change will need to be made.
    - Discuss any other issues that the Contractor foresees that may affect the schedule that were not listed in the previous submittal.

4) The updated bar chart shall include, but is not limited to the following.

    - Update the start dates and activity durations of items on the previously submitted bar chart.
    - The project items, material fabrications, document approvals, or other time-sensitive items that will occur within the next 45 calendar days of the update submission must be listed in Level 1 detail.

D) Levels of Detail.

1) Level 1. This level of detail presents a logically flowing schedule of the daily activities required to complete the project. The maximum activity length should be 10-days unless approved by the Engineer. Locations and/or stations numbers should be used to further describe activities.
2) Level 2. This level of detail presents the logical progression of activities required to complete the controlling items of work, in the time limits allotted in the contract documents, to the satisfaction of the engineer.

108.03 PRECONSTRUCTION CONFERENCE. After Contract award, the Engineer may schedule a Preconstruction Conference. The purpose of the Preconstruction Conference is to bring the Contractor and Department together as a team for the project in question. Communication lines should be established and open discussions of project issues should be held. At the close of this conference, the contractual parties of the project should have a similar understanding of the project schedule, project issues, party responsibilities, and project goals. The discussions and agreements occurring at this conference should be recorded and kept with the project file.

The Preconstruction Conference is comprised of 3 separate meetings that may be held concurrently or at separate times and places. These meetings include a Preconstruction Meeting, a Right-of-Way and Utilities Meeting, and an EEO and DBE/WBE Meeting.

The Right-of-Way and Utilities Meeting and the EEO and DBE/WBE Meeting are specialty meetings and are self-explanatory. The Preconstruction Meeting should involve discussions of, but not be limited to, the following:

1) Project information
2) Project Plans & Proposal
3) Designating key personnel of all parties (names of the project superintendent, the safety officer, the project and company EEO officers, Project Traffic Coordinator, and the names and telephone numbers of persons responsible for traffic control 24 hours per day, 7 days a week)
4) Materials, suppliers, equipment (owned/rented), subcontractors, and personnel resources
5) DBE/WBE Work (the Contractor should present a letter from each DBE/WBE subcontractor designating the superintendent and stating that this individual is not affiliated with the prime contractor)
6) Contract time and Project Progress Schedule (specifically, key dates, local events, project milestones, Department responsible activities, work day/hour restrictions, maintenance of traffic, and work methods)
7) Permits
8) Staking (designating the Professional Engineer/Licensed Surveyor)
9) Environmental issues (designating inspector and presenting BMP, seeding, and spill prevention plans)
10) Blasting
11) Waste/Borrow Sites and hauling limitations
12) Public and worker safety plans
13) Traffic Control Plans (traffic signing diagrams should be presented)
14) Requirements for future meetings (the Contractor should hold Prepave, Prepour, and any other preliminary meeting the Engineer requests)

It is critical that the Preconstruction Meeting involve the Contractor's presentation of their proposed work plan to the Department staff in attendance. If the Contractor does not provide the required submissions, the Engineer may order the preconstruction conference suspended until such time as the Contractor furnishes them. Do not begin work until the preconstruction conference has been concluded. The Engineer will not allow additional compensation or an extension of Contract time as a result from any delays due to such as suspension.

108.04 PROSECUTION OF THE WORK. Do not begin the work until receiving the Commissioner's official Notice to Begin Work. After receiving notice, begin work within the following schedule:

1) when the Contract stipulates Contract time in working days, begin work within 30 calendar days of the date specified in the Notice to Begin Work, and prosecute the work efficiently and continuously with adequate force and equipment to completion within the number of days allowed;
2) when the Contract stipulates Contract time in calendar days, begin work after receipt of the Notice to Begin Work, and prosecute the work efficiently and continuously with adequate force and equipment to completion within the number of days allowed; and
3) when the Contract specifies a fixed completion date, begin work after receipt of the Notice to Begin Work at such time as will enable completion of the work by the specified completion date.

108.05 LIMITATIONS OF OPERATIONS. Limit operations so that there is not an unnecessarily large section of the roadway under construction at any time causing undue inconvenience to the traveling public. In the prosecution of the work, start operations at such points as the Engineer may direct. When operations have temperature or seasonal limitations, schedule the work to comply with any specification, manufacturer, or supplier requirements. When ordered by the Commissioner, open any or all sections to travel, whether the whole length of road is completed or not.

108.06 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT.

A) General. Employ, at all times, sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the Contract.

Employ workers that have sufficient skill and experience to properly perform the work assigned to them. Employ workers engaged in special work or skilled work that have sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

If the Engineer judges that any person employed by the Contractor does not perform the work in a proper and skillful manner or is intemperate or disorderly, at the written request of the Engineer, the Contractor shall remove such person from the project and shall not employ such person again in any portion of the work without the approval of the Engineer. Should the Contractor fail to remove such person or persons as directed, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until the Contractor complies with such orders.

Use only equipment of sufficient size and in such mechanical condition as to conform to the requirements of the work and to produce a satisfactory quality of work. Use equipment that does not harm the roadway, adjacent property, or other highways.

When a weight or weight range is specified for compaction equipment, use equipment that has a plate or sign attached showing its weight, or minimum and maximum weights when applicable. In lieu of the plate or signs, the Contractor may weigh the equipment on scales certified by the Division of Weights and Measures before using the equipment on each project.

When the methods and equipment that are used to accomplish the construction are not prescribed in the Contract, use any methods or equipment that will, to the satisfaction of the Engineer, accomplish the Contract work in a manner conforming to the Contract.

B) Alternate Methods and Equipment. When the Contract specifies certain methods and equipment, use such methods and equipment unless the Engineer authorizes others. Request approval from the Engineer to use a method or type of equipment other than those specified in the Contract. Make the request in writing and include a full description of the methods and equipment proposed and an explanation of the reasons for desiring to make the change. If the Engineer's approval is granted, the Contractor is fully responsible for producing construction work according to the Contract. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not conform to the Contract, discontinue the use of the substitute method or equipment and complete the remaining construction with the specified methods and equipment. Remove the deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct, at no expense to the Department. The Engineer will not change the basis of payment or the Contract time for the construction items involved as a result of authorizing a change in methods or equipment.

108.07 DETERMINATION AND EXTENSION OF CONTRACT TIME.

108.07.01 General. When the Engineer suspends or delays the performance of work, in writing, for an unreasonable period of time (not originally anticipated, customary,

or inherent to the construction industry) and the Contractor believes that additional compensation or Contract time is due because of the suspension or delay, the Contractor shall submit to the Engineer, in writing, a request for an adjustment within 7 calendar days of receipt of the notice to resume work. Include the reasons and support for the adjustment in the request.

If the Engineer agrees that the cost or time required for the performance of the Contract has increased because of the suspension and the cause of the suspension was beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the Contract in writing, accordingly. The Engineer will notify the Contractor whether or not conditions warrant an adjustment. The Department will not allow any Contract adjustment if:

1) the Contractor does not provide the required written notice, or
2) the performance would have been suspended or delayed by any other cause, or
3) an adjustment is provided for or excluded under any other term or condition of the Contract.

108.07.02 Working Days. When the Contract time is specified in working days the Engineer will charge all working days that occur, beginning with the 31st calendar day following the date of the Notice to Begin Work, to the Contract even when the Contractor is not performing work, except that during December, January, February, and March, the Engineer will not charge working days to the Contract regardless of whether or not the Contractor is performing work. During the months when the Engineer is charging working days, the Engineer will furnish the Contractor biweekly statements showing the number of days charged for the period, the total number of days charged to the Contract through that date, and the number of days remaining for completion of the Contract. The Contractor acknowledges acceptance of, and agreement with, all bi-weekly statements unless the Contractor submits a written protest containing supporting evidence for a change within 14 calendar days of receiving the bi-weekly statement.

The Department bases the specified Contract time on the original quantities of work as defined in Subsection 102.05. The Engineer will not shorten the Contract time when the final Contract cost is less than the original Contract cost because of net decreases in the quantities or the elimination of items. When the final Contract cost is greater than the original Contract cost because of net increases in the original quantities or the addition of items, the Engineer will grant an extension of the Contract time. The Engineer will determine the number of additional working days due for the additional work by dividing the value of the additional work by the value of the original Contract work and multiplying this ratio by the number of original Contract working days. When, however, the Engineer determines that the additional work is of such character, or occurs so near the time of completion of the project, that the Contractor requires more time to complete the additional work than is indicated by the working day/Contract amount ratio, the Engineer may extend the Contract time by as much as the anticipated number of working days necessary to complete the additional work. In these instances, the Engineer will establish the number of allowable working days at the time the Contractor agrees to perform the additional work.

The Contract may require that, before the Contractor orders or uses specific materials or products, the Contractor submit to the Department shop drawings, manufacturer's brochures or specifications, material certifications or mill test reports, and other similar requirements describing each of the specific materials or products identified. When any such requirements are applicable, the Department considers obtaining, preparing, or producing that which is required, gaining the necessary review or approval by the Department, and obtaining delivery to the project of these materials or products as an essential part of the Contract. When the Engineer deems that the Contract item or job-site operation associated with these requirements is the controlling item or operation, the Engineer will charge working days without regard to conditions on the project site, until

the Contractor delivers sufficient materials or products, or other conditions arise, which causes a job-site operation to become the controlling operation.

When the Contract specifies that the Contractor wait for a period of time after embankment construction to achieve anticipated settlement, the Engineer will not consider the embankment where settlement is anticipated as the controlling item during the waiting period. If the Engineer determines that the controlling item or operation is delayed by the settlement period, the Engineer will not charge working days until the specified waiting period and settlement is complete. The Engineer will charge working days when work can begin or resume on the controlling item or operation.

108.07.03 Calendar Days. When the Contract time is specified in calendar days, the Engineer will charge every calendar day, beginning with the calendar day following the date of the Notice to Begin Work, including all Saturdays, Sundays, holidays, and non-working days, to the Contract. The Engineer bases the Contract time on the original quantities of work as defined in Subsection 102.05. The Engineer will not shorten the Contract time when the final Contract cost is less than the original Contract cost because of net decreases in the quantities or the elimination of items. When the final Contract cost is greater than the original Contract cost because of net increases in the original quantities or the addition of items, the Engineer will grant an extension of the Contract time. The Engineer will determine the number of additional calendar days due for the additional work by dividing the value of the additional work by the value of the original Contract work and multiply this ratio by the number of original Contract calendar days. When, however, the Engineer determines that the additional work is of such character, or occurs so near the time of completion of the project, that the Contractor requires more time to complete the additional work than is indicated by the calendar day/Contract amount ratio, the Engineer may extend the Contract time by as much as the anticipated number of calendar days necessary to complete the additional work. In these instances, the Engineer will establish the number of allowable calendar days at the time the Contractor agrees to perform the additional work.

The Engineer will not allow any extension of time for weather or resulting conditions, except for delays caused by earthquakes, tornadoes, or other similar catastrophic forces.

108.07.04 Fixed Completion Date. When the Contract time is specified as a fixed completion date, complete all work on the project by that date regardless of the length of time between the Notice to Begin Work and the specified completion date.

The Engineer bases the Contract time on the original quantities of work as defined in Subsection 102.05. The Engineer will not shorten the Contract time when the final Contract cost is less than the original Contract cost because of net decreases in the quantities or the elimination of items. When the final Contract cost is greater than the original Contract cost because of net increases in the original quantities or the addition of items, the Engineer will grant an extension of the Contract time. The Engineer will determine the length of the extension of time, in calendar days, due for the additional work by dividing the value of this additional work by the value of the original Contract work and multiply this ratio by the number of calendar days from Notice to Begin work to the original fixed completion date. When the Engineer determines that the additional work is of such character, or occurs so near the time of completion of the project, that the Contractor requires more time to complete the additional work than is indicated by the Contract time/Contract amount ratio, the Engineer may extend the Contract time by as much as the anticipated number of calendar days necessary to complete the additional work. In these instances, the Engineer will establish the number of allowable calendar days at the time the Contractor agrees to perform the additional work.

When the period between the execution of the Contract and the issuance of the Notice to Begin Work exceeds 30 calendar days, as provided in Subsection 103.06, the Department may extend the fixed completion date by the number of calendar days the Notice to Begin Work was withheld in excess of the 30 calendar days.

The Engineer will not allow any extension of time for weather or resulting conditions, except for delays caused by earthquakes, tornadoes, or other similar catastrophic forces.

108.08 SUSPENSION OF WORK. The Engineer may order the Contractor in writing to suspend, delay or interrupt all or part of the work for such period of time as the Engineer may determine to be appropriate for the convenience of the Commonwealth.

If the Engineer suspends or delays the performance of all or any portion of the work for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation or Contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer, in writing, a request for adjustment within seven calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time requested for the performance of the Contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, subcontractors at any tier, its suppliers, or weather, the Engineer will make an adjustment (excluding profit) and modify the Contract in writing accordingly. The Engineer will notify the Contractor whether or not the adjustment is warranted.

The Engineer will not allow any Contract adjustment unless the Contractor has submitted the request for adjustment within the prescribed time.

The Engineer will not allow a Contract adjustment under this clause to the extent that the performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this Contract.

108.09 FAILURE TO COMPLETE ON TIME. For each calendar day that the Contractor fails to complete the work after the final Contract time allowed according to Subsection 108.07 for the completion of the Contract, the Department will deduct the applicable daily charge specified in this subsection from any money due the Contractor; not as a penalty, but as agreed liquidated damages. The Department will deduct daily charges as agreed liquidated damages for each calendar day without regard to inclement weather or the temperature limitations in the Contract, except that the Department will not deduct liquidated damages when the specified seasonal or temperature limitations prohibit the Contractor from performing work on the controlling item or operation. The Department will charge the agreed liquidated damages on a calendar day basis regardless of whether the Contract time is measured in calendar days, working days, or is established as a specified completion date contract.

Because the prosecution of work in connection with the construction of road and bridge projects will inconvenience the public, obstruct traffic, and interfere with business, complete the work as quickly as practical. Also, the Department's costs for the administration of the Contract, including inspection, engineering, supervision, and maintaining detours, increases with the time that the Contractor takes to execute the work.

When the Department allows the Contractor to continue and to finish the project beyond the Contract time, such permission does not operate as a waiver by the Department of any of its rights under the Contract.

The Engineer may require the Contractor to perform work to fulfill the requirements of Subsections 212.03.03 D), 212.03.03 F), 713.03.05, and 714.03.06 after the Contract time has elapsed and after the Engineer has declared the project otherwise complete. The Department will not assess liquidated damages for this work provided that the Contractor completes the work within the following periods:

1) complete topdressing work specified in Subsection 212.03.03 D) within 60 calendar days after the Engineer's direction to begin this work; and
2) complete corrective work to fulfill the seeding acceptance requirements of Subsection 212.03.03 G) within 30 days after the Engineer's direction to correct the seeding, or at a later date that the Engineer directs at the time of inspection.

3) complete corrective work to fulfill the striping acceptance requirements of Subsection 713.03.05 and 714.03.06 within 30 days after the Engineer's direction to correct the striping, or at a later date that the Engineer directs at the time of inspection.

When the Contractor has not completed this work within the time period allowed above as applicable, the Department will assess liquidated damages at 25 percent of the original Contract daily charge from the expiration of the time allowed above until the Contractor completes the specified work, except that the Department will not deduct liquidated damages when the specified seasonal or temperature limitations prohibit the Contractor from performing work on the controlling item or operation..

The Department will apply the following schedule of agreed liquidated damages:

Original Contract Amount		Daily Charge
(From)	(To and including)	
0.00	100,000.00	250.00
100,000.01	500,000.00	750.00
500,000.01	1,000,000.00	1,650.00
1,000,000.01	5,000,000.00	2,400.00
5,000,000.01	10,000,000.00	3,250.00
10,000,000.01	20,000,000.00	4,000.00
20,000,000.01	or more	4,750.00

108.10 DEFAULT AND TERMINATION OF CONTRACT. The Commissioner, after giving due notice to the Contractor and his Surety, has the authority to take the prosecution of the work out of the hands of the Contractor or Surety, or both, for any breach of the Contract that the Contractor commits, as follows:

1) failure to begin the work under the Contract within the time specified
2) failure to prosecute the work with sufficient forces, equipment, or materials to complete the work within the time specified
3) failure to perform the work satisfactorily
4) discontinuing the work before completion without the Engineer's permission
5) neglecting or refusing to remove such materials or to perform anew such work that the Engineer rejects as defective or unsuitable
6) bankruptcy or insolvency, or committing any acts of bankruptcy or insolvency
7) allowing any final judgment against him to remain unsatisfied for a period of 10 calendar days
8) making an assignment for the benefit of his creditors
9) for any other reason, failing to carry on the work according to the Contract

The Commissioner will give the Contractor and his Surety written notice specifying the delay, neglect, or default and the action required. When the Contractor or his Surety, within a period of 10 calendar days after such notice, fails to proceed satisfactorily in compliance therewith, the Commissioner then has full power and authority to take the work out of the hands of the Contractor or Surety, or both; to use any or all suitable materials and equipment on the project; or to enter into Contract, or use such other methods as required to complete the work.

Any contractor employed by the Surety to perform work on the project shall comply with the prequalification requirements of Subsection 102.01.

When the Commissioner takes over the incomplete work under any of the provisions of this section, the Department will deduct all additional costs and damages, and the costs and charges of completing the same from monies due or to become due the Contractor; and when the total of such damages, costs, and charges exceeds the balance of the Contract price that would be payable to the Contractor had he completed the work, then the Contractor and Surety shall, on demand, pay to the Department the amount of such excess.

108.11 EMERGENCY DEFERMENT OR TERMINATION OF CONTRACT. When a national emergency exists, by reason of war conditions involving the US; by reason of orders of the US Government or its duly authorized agencies; or by Executive Order with respect to the prosecution of war or to national defense; and such emergency, upon a finding by the Department, creates a shortage of materials, labor, or equipment that prevents the Contractor from proceeding with his contract, the Department and the Contractor may defer such construction in whole or in part, or the Department may terminate such contract, or any part thereof.

108.11.01 Deferment. In all cases where the Department defers construction, the Department and the Contractor will execute a written agreement stating the terms and conditions of such deferment.

108.11.02 Termination. When the Department terminates the Contract or any portion of the Contract, and the Contractor is released before completing all items of work included in the Contract, the Department will pay for the actual items of work completed. The Department will pay on the basis of agreed prices for the following:

1) Items that have no unit prices included in the Contract.
2) Contracts that the Department has decreased in excess of 25 percent and the Contract unit prices are not sufficient to equitably reimburse the Contractor for overhead.
3) Major items where the Department has decreased the total cost of the major item in excess of 25 percent. A major item is defined in Subsection 101.03.

The Department will not pay for any claim for anticipated profits.

The Department may, at the Engineer's option, purchase unused materials that the Contractor has obtained and that the Department has inspected, tested, and accepted, at such points of delivery as the Department designates and at a cost shown by receipted bills or other proper evidence.

108.12 TERMINATION OF CONTRACT IN THE PUBLIC INTEREST. When unexpected state, federal , or local conditions of extraordinary significance occur which are beyond the control of both the Contractor and the Department, causing the Department to determine that termination of a contract will be in the public interest, the Department will terminate all or selected portions of the work in the Contract that remain incomplete. The Engineer will then determine equitable payment procedures to adequately compensate the Contractor for this unusual and unexpected termination of the Contract. The Department will compensate the Contractor for a terminated contract in an amount not exceeding the original total Contract amount, unless the Engineer approved change orders for increases prior to the occurrence of the unexpected conditions or the Engineer makes subsequent field measurements of authorized excavation and other such variable items that verify that the Contractor completed quantities in excess of the Contract quantities.

108.13 TERMINATION OF CONTRACTOR'S RESPONSIBILITY. The Department will consider the Contract complete when the Contractor has completed all work, the Commissioner has accepted the project, and the Contractor has complied with all obligations relative to the Contract and the bonds, except as provided in Subsection 107.17.

SECTION 109 — MEASUREMENT AND PAYMENT

109.01 MEASUREMENT OF QUANTITIES.

109.01.01 General. The Engineer will measure all work completed under the Contract according to the English system.

A station, when used as a definition or term of measurement, will be 100 linear feet measured horizontally.

The Engineer will determine quantities of material the Contractor furnishes and work the Contractor performs under the Contract using measurement methods and computations generally recognized as conforming to good engineering practice.

The Engineer will take longitudinal measurements for area computations of pavement surfaces horizontally, and make no deductions for individual fixtures having an area of one square meter or less. The Engineer will determine transverse measurements for area computations of pavement surfaces using the neat dimensions specified in the Plans or ordered in writing except the Department will measure JPC Pavement according to Subsection 501.04.

The Engineer will measure structures according to neat lines specified in the Plans or as altered by the Engineer to fit field conditions.

For all items measured by the linear foot, such as pipe culverts, guardrail, underdrains, etc., the Engineer will measure parallel to the base or foundation of the structures unless otherwise specified in the Plans.

In computing volumes of excavation and embankments, the Engineer will use the average end area method or other acceptable methods. For the purpose of ascertaining the quantities, the Engineer will use the planimeter.

The Engineer will specify and measure the thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing.

When the Contract uses the term "ton", it means the short ton consisting of 2,000 pounds. A metric ton consists of 1 000 kilograms.

The Engineer will measure asphalt materials by the gallon or ton. The Engineer will measure volumes at 60 °F or will make corrections to determine the volume at 60 °F, using ASTM D 1250 for asphalts or ASTM D 633 for tars. When the Contractor ships bituminous materials by truck or transport, the Engineer may use net certified weights, subject to correction for loss, for computing quantities. Certify weights according to the Department's current procedures.

The Engineer will measure cement by the ton.

When the Contract uses the term "lump sum" as an item of payment it means the complete payment amount for the work described.

When the Contract specifies a complete structure or structural unit (in effect, "lump sum" work) as the unit of measurement, the structure or structural unit will include all necessary fittings and accessories.

When the Contract specifies standard manufactured items such as fence, wire, plates, rolled shapes, pipe, or conduit, and these items are identified by thickness or diameter, unit weight, section dimensions or other dimensions, such identification refers to nominal weights or dimensions. Unless the Department specifies more stringent tolerances, the Engineer will accept manufacturing tolerances established by the industries involved.

When the Contract designates design quantities for a specific portion of the work as the pay quantities, the Engineer will use these as the final pay quantities for that specific portion of the work, unless the Engineer revises the dimensions of said portions of the work from those specified in the Plans. When the Engineer's revised dimensions result in an increase or decrease in the quantities of such work, the Engineer will revise the final pay quantities accordingly.

The Engineer will perform final measurement of only those quantities that are delivered, in-place, and accepted. When weights include rejected material, the Engineer will deduct the quantity of such rejected material from the final measurement.

For the measurement of concrete or stone masonry, the Engineer will include only

that volume within the neat lines as specified in the Plans or as the Engineer has staked. The Engineer will use the prismoidal formula in computing the volumes of structures, or portions of structures, having end sections of unequal areas.

The Engineer will measure quantities of work or materials not included herein according to the applicable Sections in these Standard Specifications. When not so specified, the Engineer will measure other quantities according to well recognized practices and will not consider local rules or customs.

109.01.02 Weighing - General. Except as otherwise provided, furnish all scales. Provide scales that are suitable for the purposes intended and conform to the tolerances and specifications of the Division of Weights and Measures. Have all scales inspected to ascertain their accuracy whether operating at a commercial plant or operating on the project. Ensure that all scales are inspected, by a representative of a commercial scale company registered with the Division of Weights and Measures, within 3 months before the beginning of production, every 3 months during production, and any other time the Engineer deems necessary. The Engineer will accept inspection by the Division of Weights and Measures as a substitute for a commercial scale company inspection.

Keep a copy or ensure that the material supplier keeps a copy of the latest report of inspection by the Division of Weights and Measures or commercial scale company on file at the scale location.

Furnish or ensure that the material supplier furnishes all personnel necessary to perform weighing, including tare weighing, and to prepare all required records.

Use properly housed truck pit-scales of an approved type that are tested, or automatic printing scales as specified in Subsection 109.01.03. Use scales that are accurate to within 0.2 percent throughout their entire weighing range.

Certify or ensure that the material supplier certifies the quantities furnished each day for all materials which the Department will pay for in tons.

Complete or ensure that the material supplier completes a weight ticket for each load of material delivered to the project and that the weigher or plant manager signs each weight ticket, unless otherwise approved by the Engineer. Ensure redistribution yards provide the producing source of the material on the ticket.

A) Weight Tickets. Ensure that the weigher or plant manager prepares or signs each weight ticket, unless otherwise approved by the Engineer.

B) Daily Summary. Prepare or ensure that the material supplier prepares the daily summary, and ensure that the plant manager signs the summary certifying that the day's total net weight is correct.

C) Tare Sheet. Prepare or ensure that the material supplier prepares the daily tare sheet, when used, and ensure that the plant manager signs the tare sheet certifying that the tare data is correct.

Provide the completed and signed daily summary and daily tare sheet to the Engineer on the project within 3 working days.

When hauling material over a route passing a permanent scale installation operated by the Department of Vehicle Regulation (DVR), the DVR will weigh each load. Ensure that the driver advises the state weigher that his load is going to a Transportation Cabinet project, and that the driver requests a ticket. Provide this to the Department representative receiving the material along with the supplier's ticket.

At temporary locations utilizing portable scales, ensure that the trucks stop for check weighing when the DVR officer or the Engineer directs.

The Engineer will select trucks on a random basis for check weighing on other approved scales. The Engineer may have these check weights performed on loaded trucks to check gross weight, or empty trucks to check tare weight, or both.

Each time the Engineer directs a truck away from the project haul route to another scale, and when the check weighing indicates the accuracy of the Contractor's or material supplier's scales is acceptable, the Department will pay the agreed unit price of $2.50 per mile or $25.00 or each truck checked, whichever is larger, for Scale Check

Reimbursement.

The Engineer will measure the distance for Scale Check Reimbursement as the total additional distance haul vehicles travel for acceptable scale checks based on the vehicle odometer to the nearest 0.1 mile. The Department will pay the agreed unit price per mile or per truck checked as full compensation for all costs and delays associated with the check weighing.

If the check weighing or any additional checks performed by or at the Engineer's direction show, that the accuracy of the Contractor's or material supplier's scales is not acceptable, the Department will not pay for any Scale Check Reimbursement, and the Engineer will adjust pay weights as specified below.

The Contractor's or material supplier's scales are not acceptable if tare check weights are more than 0.4 percent plus 120 pounds greater than the initial weight, and gross check weights are more than 0.4 percent plus 120 pounds less than the initial weight, when checked at a permanent scale location. If the Engineer deems it appropriate, the Engineer will modify initial tare weights by the estimated fuel consumption between the initial weight and check weight. If the Engineer determines that the check weights are outside these tolerances, the Engineer will direct the Contractor to perform additional checks to determine if net pay weights are within specified tolerances. If the Engineer determines that pay weights are outside these tolerances, the Engineer will reduce, by the difference greater than the specified tolerance for check weighing, the net weights of all loads previously weighed that day and all previous days back to the latest acceptable check weight or the latest scale certification, or for the previous 10 working days, whichever is least.

For check weights that are determined on scales with short platforms requiring split weights, the Department will accept check weights that are within 1.0 percent of the initial weight; if not, the Department will require check weights determined on a larger scale and apply the tolerance for check weights and adjustments specified for permanent scales.

For check weights that are determined by DVR portable scales, the Department will accept check weights that are within 2.0 percent of the initial weight; if not, the Department will require check weights determined on a permanent scale and apply the tolerance for check weights and adjustments specified for permanent scales.

When check weights that are determined on permanent scales are outside the specified 0.4 percent tolerance, the Department will require that the certifying firm immediately order the Contractor to have an approved scale company check the Contractor's or material supplier's scales. The Engineer may either suspend weighing operations or may allow weighing to continue with the Engineer making appropriate adjustments until an approved scale company has checked the scales.

The Department will not make separate measurement or payment for work required by this section other than Scale Check Reimbursement. The Department considers all work necessary to determine the weight of materials as incidental to the Contract unit prices for the various items that include such materials.

Obtain actual truck weights for all deliveries except as otherwise provided; the Department will accept railroad weights on aggregate deliveries of less than 10,000 tons.

Include in the Contract unit prices for the various pay items of the project, all other costs in connection with furnishing, installing, certifying or testing, and maintaining scales; for furnishing check weights and scale house; and all other items specified in this Section for weighing highway and bridge construction materials for proportioning or payment.

On a daily basis, weigh empty trucks used to haul material that the Department pays for by weight when the Engineer directs, and identify each truck with a plainly legible mark.

When the Department measures a material in units of weight and the Contractor delivers the material in standard containers of uniform size, the Engineer may measure the material by counting the containers and converting the count to weights provided that the material supplier prints the net weight of the materials on the container and the Contractor provides certification to the Engineer that the net weights are accurate within the tolerances allowed. Dispose of, or remove from the work, all empty containers when and

as the Engineer directs.

As an alternative to the specified units of measure, the Contractor may request the following:

1) For material specified to be measured by volume, the Contractor may request that the Engineer measure the material by weight and convert the weight to volume for payment.
2) For material specified to be measured by weight, the Contractor may request that the Engineer measure the material by volume and convert the volume to weight for payment.

Obtain the Engineer's approval, in writing, prior to implementing either of these alternatives. If approved, the Engineer will determine the conversion factors between the volume and weight measurements.

109.01.03 Automatic Printing Scales. Use the following types of scales:

1) Truck scales with an automatic printer
2) Scales used for automatic batching and recording in batch plants producing asphalt mixtures (when surge or storage bins are not used)
3) A weigh box or hopper located under a surge or storage bin

Do not use belt scales for determining pay weights.

Use only automatic printers that are an integral part of the scale equipment or the scale, and directly connected so that gross weights cannot be manually entered. The Department will allow the manual entry of truck tare weights, truck numbers, or other data.

Equip all aggregate sources and hot-mix asphalt plants furnishing materials that the Department pays for directly by weight with automatic printing scales for determining pay weights. The Engineer may grant exceptions to this requirement for installations that normally supply a total of less than 10,000 tons of material per year to Department projects.

A) Truck Tare Weights. Determine truck tare weights by weighing each truck once daily at random times on an approved scale. Submit a tare sheet showing all tare weights at the end of each working day.

The only exceptions to this requirement are:

1) When using truck scales and the capability exists, determine each truck tare just prior to loading each load and print it on the weight ticket. In this case, the Department will not require the daily tare sheet.
2) When the automatic printing scales are so designed and operated that tare weight is not used to calculate net weight, determine the tare weight of each truck before that truck begins hauling. In this case, the Department will not require further tare weighing or the daily tare sheet.
3) When all hauling is within the project limits or on the Contractor's haul roads, and the automatic printing scales are designed and operated so that tare weight is not used to calculate net weight, determine tare weights only as the Engineer deems necessary to conform to Subsection 105.10.02.

B) Printing. Use an automatic printer that produces a weight ticket for each load, in the required number of copies, and that contains all information that is shown on the Department's conventional weight ticket in digital form. Ensure that the weight tickets for each project indicate a sequential load number for each load. When using the weights that are printed in conjunction with automatic batching at asphalt batch plants, use a system that prints the weight of each individual batch component, the total weight of each batch, and the total weight of all

batches in each truck load.

Submit weight tickets that show truck tare and gross weight on each ticket.

The Contractor may show weights in tons in lieu of pounds, provided that the Contractor shows the weight to at least 0.01 ton.

Provide a ticket that includes the certification stating the material is to be used on a Department project only and space for the signature of the Department representative receiving the material on the project.

C) Certification of Quantities. Certify or ensure that the material supplier certifies the daily quantities, and conform with the following requirements:

1) Use automatic printing scales, and perform accuracy checks of both the scales and the printing system, that conform to the Contract.
2) Ensure that the weigher or plant manager signs each ticket, unless otherwise approved by the Engineer.
3) Determine the pay quantity for each day as the certified quantity, less any material not actually delivered to the project, and less any deductions.
4) Prepare or ensure that the material supplier prepares the daily tare sheet (when used) and ensure that the plant manager signs the document, certifying that the tare data is correct.
5) Submit the completed and signed daily summary and daily tare sheet to the Engineer within 3 working days.
6) The Department reserves the right to inspect the Contractor's (or material supplier's) weighing equipment and procedures at any time, and to occasionally check-weigh a truck on other approved scales.

D) Scale and Printer Accuracy. Use scales with a degree of accuracy that conforms to the Contract. Use an automatic printing system with a degree of accuracy that conforms to the requirements of the Division of Weights and Measures. Note that the requirements listed in Subsection 401.02.03 are related to the accuracy of the batching process in automatic batch plants, and are not related to weighing for determining pay quantities.

When observed during production, ensure that the printed weight is within 60 pounds of the weight shown on the scale display.

E) Printer or Scale Malfunction. If the automatic printer becomes inoperative or is recording weights that are outside the specified accuracy tolerance, continue production only if weights can be read directly and produce weight tickets manually. However, continue manual weighing and preparing tickets manually only until the end of the workday in which the printer malfunction occurs.

If the scales malfunction or are operating outside the specified accuracy tolerance, continue production by weighing the material on other scales that conform to the Contract.

Notify the Engineer immediately of any scale or printer malfunction.

When manually weighing or preparing tickets due to equipment malfunction, proceed as follows:

1) Truck Tare Weights. Determine truck tare weights by weighing each truck once daily at random times on an approved scale. Submit a tare sheet showing all tare weights at the end of each working day. Prepare or ensure that the material supplier prepares the daily tare sheet and ensure that the plant manager signs the document, certifying that the tare data is correct.
2) Weight Tickets. Manually weigh each load of material and issue a hand written ticket for each load and certify by signing each ticket.
3) Daily Summary Sheet. Prepare or ensure that a summary sheet is prepared as follows:

    a) list all loads shipped that day
    b) truck number and load number for each load

c) net weight of each load
d) total net weight shipped that day, supported by an adding machine tape

The Department will accept a computer printout in lieu of the standard form, provided it includes a certification similar to the standard form, space for the signature of the plant manager, space for the checkers signature, and space for the Engineers signature of approval.

If the Contractor uses equipment that is capable of calculating a cumulative total of net weights for each material and printing the cumulative total for the project on each ticket as the day progresses, with the final ticket showing the daily total for the project, then the Department will accept a daily summary without the listing of individual loads.

4) Certification of Quantities. Certify the quantity according to Subsection 109.01.02.

109.01.04 Weighing Small Quantities. After obtaining the Engineer's approval, the Contractor may certify the quantities of certain materials, in lieu of the Engineer weighing them. The materials, maximum daily quantities, and maximum quantities per project covered by this subsection are as follows.

Item	Maximum Daily Quantity	Maximum Quantity Per Product
Aggregates	100 tons	200 tons
Plant-mixed aggregate bases	100 tons	200 tons
Cement-treated bases	50 tons	100 tons
Asphalt Prime or Tack	5 tons	20 tons
Asphalt Mixtures	50 tons	100 tons

109.01.05 Overloads. The Department will not pay for that portion of any load that exceeds the legal or authorized load limit.

Weigh all material on approved scales. Accompany each shipment with a certified weight ticket.

The Engineer may direct the Contractor to reweigh any shipment if the Engineer determines that the stated weight appears to be incorrect. The Engineer may direct the Contractor to discontinue weighing by any method and require weighing by other approved means at any time the Engineer discovers unsatisfactory results.

109.02 SCOPE OF PAYMENT. Receive and accept the compensation provided for in the Contract as full payment for furnishing all materials and for performing all work under the Contract, including changes in work, materials, or Plans as provided herein, in a complete and acceptable manner; for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof; and for all expenses incurred in consequence of the suspension or discontinuance of the work as specified under the Contract. The Department's payment of any estimate does not relieve the Contractor of any obligation to make good any defective work or material.

Accept the Department's payment of the Contract unit prices for the various bid items of the Contract as full compensation for all labor, materials, supplies, equipment, tools, and all things of whatever nature required for the complete incorporation of the item into the work the same as though the items were to be read "In Place".

109.03 COMPENSATION FOR ALTERED QUANTITIES. Should the Engineer require any alterations in the Plans, as described in Subsections 102.05 and 104.02, that result in an increase or decrease in the quantities of the work, the Contractor shall accept the Contract unit prices for the actual quantities of work performed as payment in full, except as provided for by supplemental agreement and except that should any alteration directly cause the loss of any work or material that the Contractor has already furnished

under the terms of the original Contract, the Department will reimburse the Contractor for the actual cost of such work or of salvaging such material. The Department may purchase any such material at the Contractor's actual salvage cost.

109.04 EXTRA WORK. The Department will pay for extra work performed according to Subsection 104.03 at a lump sum price or at unit prices stipulated in a supplemental agreement; or, in lieu of such agreement, the Department may require the Contractor to perform such work on a force account basis.

109.04.01 Supplemental Agreement. The Department may enter into a supplemental agreement with the Contractor to perform work which is not included in the original Contract, or as provided in Subsection 104.02. Both the Department and the Contractor will execute the supplemental agreement. An executed supplemental agreement immediately becomes a part of the original Contract, and is subject to all general and special provisions of the original Contract.

109.04.02 Force Account Work. When the Contractor and the Department cannot agree to either a lump sum price or unit price for extra work, the Department may authorize the Contractor to perform such work on a force account basis. The Department will pay for extra work on a force account basis as outlined hereinafter, only when all items of work are agreed to in writing before the Contractor begins the work.

A) Labor. For all labor and for foremen in direct charge of the specific operations, the Department will pay the Contractor:

1) the actual cost of wages paid, but at rates not to exceed those for comparable labor currently employed on the project, as the Engineer determines;
2) an amount equal to the sum of the products of established labor burden percentages and the actual cost of wages. The amounts determined by the established labor burden percentages constitute full compensation for the cost of workers compensation insurance, social security taxes, unemployment compensation insurance, public liability insurance; and any other taxes or insurance which are added to labor costs; and
3) an amount equal to 25 percent of the actual cost of wages and the other costs identified above. This amount is full compensation for office overhead and general superintendence.

B) Materials. For all materials that the Contractor incorporates into the work and the Engineer accepts, the Department will pay the actual cost of such material, including transportation charges and sales taxes, to which the Department will add a sum equal to 15 percent.

C) Equipment and Tools. For any machinery or special equipment that the Engineer has authorized for use and the Contractor has used, the Department will pay the rental rate stated on the rental company invoice for the actual agreed time and rate that such equipment is required on the work and will add an amount equal to 15 percent of the rental sum as full compensation for fuel, lubricants, and filters.

The Department will pay for equipment that the Contractor is already using on the project, and which is not obtained specifically for the force account work based on an hourly rate. The Department will determine the hourly rate by taking the Blue Book monthly rental rate, adjusted for age and geographic region, dividing it by 176 and adding the Blue Book estimated operational cost. The Department will pay rental rates for equipment required to be on standby at one half the normal rate, excluding operational cost, and pay for standby time for a maximum of 8 hours per day and 40 hours per week.

The Engineer will measure the rental of equipment by time in hours of actual working time and the necessary traveling time of the equipment

within the limits of the project, unless the Engineer has ordered special equipment in connection with force account work, in which case the Engineer will also include travel time and transportation to the project.

The Department will not pay rental rates or percentages for the use of small tools and manual equipment.

D) Bonds. The Department will pay an amount equal to the product of an established percentage and the summation of the total cost of the foregoing items. This amount constitutes full compensation for the Contractor's bond costs.

E) Records and Statements. Compare all records of force account work with the Engineer at the end of each day. Prepare all force account records on suitable forms that the Engineer will provide for this purpose. Sign and obtain the Engineer's signature on each form. Retain one copy and provide the original to the Engineer at the end of each day. Certify and submit all requests for payment of force account work, with signed records of the costs, to the Engineer no later than one week before the closing date of the current pay estimate period, or other designated periods as directed.

Furnish satisfactory evidence of the actual rates paid for workers compensation insurance, social security tax, unemployment insurance, public liability insurance, and bonds.

Furnish statements, accompanied and supported by original receipted invoices, for all materials used, including transportation charges. When the Contractor does not specifically purchase materials for the force account work and uses materials from his stock, the Contractor shall include, in lieu of the original invoices, an affidavit certifying that the Contractor took such materials from stock, that the Contractor actually used that quantity in the force account work, and that the cost for which the Contractor is requesting payment represents his actual cost.

F) Overhead. The Department will pay for overhead cost associated with administering the work, not to exceed 5 percent, when a Subcontractor performs the work.

109.05 PARTIAL PAYMENTS. The Department will make partial payments bi-weekly as the work progresses. The Department will base the partial payments on estimates that the Engineer prepares of the value of the work performed, materials placed, and for materials delivered for which the Department allows payment.

For each partial payment, the Department will pay 100 percent of the value computed from the bi-weekly estimate as due, less any previous partial payments.

The Engineer will furnish to the Contractor a copy of each pay estimate, which will show in detail the amount of all quantities that the Department will pay.

109.05.01 Materials on Hand.

A) General. The Department will make partial payments only after the materials are delivered to a site that the Department owns or controls, and stored in a manner that protects them from theft or damage. The Engineer may require the Contractor to submit certified statements showing the actual cost of each material for which the Contractor requests partial payment and the quantity of material delivered.

A storage site owned or controlled by the Department is a site on land owned by the Department or on land for which the Department has been granted a temporary easement. When a temporary easement is necessary for the storage site, obtain a lease for the site, and grant the Department a temporary easement at no charge. In such cases, obtain a lease for the duration of the Contract and grant a temporary easement that gives the Department full control of the site.

The Department's partial payments for materials on hand do not constitute final acceptance of those materials and do not relieve the Contractor of any

responsibility for the loss or deterioration of the materials due to any cause. Replace, at no expense to the Department, any materials lost or rejected for noncompliance with the Contract as a result of segregation, mixing with foreign materials, deterioration, or other causes. The Department will have full control of the disposition or use of all materials for which the Department makes partial payments.

The Department will make payments only for such materials which conform to the Contract. The Engineer will base payments upon the quantity of materials stored on the closing date of the pay estimate. The Department will not pay for any stored material in excess of that required for the project; the maximum quantity the Department will pay for will be the design quantity as increased or decreased by approved changes. The Department will not compensate the Contractor for additional haul or extra handling charges.

B) Payments. The Department may make partial payments for nonflammable and nonperishable materials that the Contractor will be incorporating into Contract items for the project, which conform to the Contract, for which the Contractor has documented and certified the delivered quantities, and which the Contractor has stockpiled and protected as required herein and as required by the Engineer. Upon written request from the Contractor, the Department will make partial payments for up to 95 percent of the Contractor's documented cost of each stockpiled material when the total documented cost of all the units of the material is more than $10,000.00 or 3 percent of the project's total bid price. Support the documented costs by copies of receipts showing the Contractor's payment for the stockpiled material. Provide the receipts to the Engineer no later than 30 days after the Department makes payment. However, the Department will not allow the total amount for partial payments for the materials for a Contract item to be more than 75 percent of the Contract unit cost of the item that the Contractor is constructing with the materials.

When the Contractor has completely erected and connected all structural steel, as specified in the Plans, the Department will make an additional partial payment. The Department will make partial payments for structural steel only after the Contractor completes and the Engineer approves both the fabrication and shop painting, and after the Engineer approves the manner of storing the steel. The Department will make this payment in an amount such that the total partial payments through the erection stage are 97 percent of the Contract price for structural steel. The Department will pay for the remaining 3 percent when the Contractor has satisfactorily completed the painting of the structural steel.

109.06 ACCEPTANCE AND FINAL PAYMENT. Within 180 days after the Engineer has completed final inspection and acceptance of the work, the Engineer will compile a final estimate for the Contract, showing the final quantities of all work performed, all retained percentages, and all deductions from the final amount for liquidated damages and any other deductions provided for in the Contract. The Engineer will submit the final estimate to the Contractor for his review. Within 60 calendar days after receiving the final estimate, submit to the Engineer a written statement of agreement with the final estimate or a written statement of disagreement with the final estimate. Upon the Contractor's agreement with the final estimate, or when the Contractor makes no acceptable statement of disagreement within the 60 calendar days provided herein, the Engineer will process the final estimate for payment. The Department will consider the Contractor's written statement of disagreement with the final estimate acceptable only if it contains an item-by-item list of the items that the Contractor does not agree with and the reasons for disagreeing with each listed item. When the Contractor submits an acceptable statement of disagreement with the final estimate, the Engineer will withhold payment of the final estimate to determine the validity of the Contractor's disagreement(s). After consideration of the Contractor's statement, the Engineer may revise the final estimate according to the judgment of the validity of the Contractor's disagreement(s).

After the Department deducts the total amount of all previous payments, liquidated

damages, and any other appropriate deductions, the Department will certify the amount of money due the Contractor for payment to the Commonwealth as required by law. The Contractor's acceptance of payment for the final quantities constitutes as a release to the Commonwealth and the Department.

When the final release is sent to the Contractor shows that he has been overpaid, then he has 60 days to refund the overpayment or submit a written statement of disagreement with the estimate. Failure to make this restitution will subject the Contractor to the provisions of Subsection 102.04. The Department does not waive any rights to recover the overpayment.

109.07 PRICE ADJUSTMENTS. Due to the fluctuating costs of petroleum products, the Department will adjust the compensation of specified liquid asphalt items and diesel fuel in contracts when contract quantity thresholds are met.

109.07.01 Liquid Asphalt. The Department will compare the Kentucky Average Price Index (KAPI), for the month that the Contract is let, to the index for the month that the Contractor places the material on the project to determine the percent change. When the original contract quantity for asphalt items is equal to or greater than 3,000 tons and when the average price of the liquid asphalt products increases or decreases more than 5 percent, the Department will adjust the Contractor's compensation. The KAPI is calculated monthly using the average price, per ton at the terminal, from the active suppliers of liquid asphalt.

Adjustable Contract Items**:**

- Asphalt Curing Seal
- Asphalt Prime Coat
- Asphalt Mixture for Base, All Classes
- Asphalt Mixture for Binder, All Classes
- Asphalt Mixture for Surface, All Classes
- Sand Asphalt Surface
- Asphalt Open-Graded Surface
- Asphalt Seal Coat
- Asphalt Mixture for Leveling and Wedging
- Asphalt Mixture for Scratch Course
- Drainage Blanket - Type II - Asphalt

The Department will determine the price adjustment using the following formulas:

When PC is greater than PL
Asphalt Price Adjustment = (Q x A)/100 x PL x [(PC-PL)/PL - 0.05]

When PC is less than PL
Asphalt Price Adjustment = (Q x A)/100 x PL x [(PC-PL)/PL + 0.05]

Where:
Q = Tons of material or mixture placed each month.
A = Percent of material or mixture that is asphalt.
PL = KAPI for the month that the Contract is let.
PC = KAPI for the month that the Contractor places the material or mixture.

The job-mix formula for asphalt base, binder, and surface mixtures determines "A", which is the percent of asphalt. For recycled mixtures, the Department will determine the

adjustment for the new asphalt cement only. The Department will consider materials for prime and seal as 100 percent asphalt.

109.07.02 Fuel. The Department will adjust the Contractor's compensation when the average price of diesel fuel increases or decreases more than 5 percent and the original Contract quantity for the item on which the fuel is consumed is equal to or greater than the threshold quantities listed in the following table.

Item	Threshold Quantity	Fuel/Work
Roadway Excavation	10,000 cubic yards	0.25
Embankment-in-Place	10,000 cubic yards	0.25
Borrow Excavation	10,000 cubic yards	0.25
DGA Base or Crushed Stone Base	5,000 tons	0.52
Stabilized Aggregate Base	5,000 tons	0.52
Drainage Blanket, Cement Treated or Untreated	5,000 tons	0.52
Drainage Blanket, Asphalt Treated	5,000 tons	3.00
Crushed Sandstone Base (Cement Treated)	5,000 tons	0.52
Hot-Mixed Asphalt Mixtures for Pavements or Shoulders	3,000 tons [(1)]	3.00
PCC Pavement, Base, or Shoulders	2,000 square yards [(2)]	0.14

[(1)]Total of all hot mixed asphalt Contract items.

[(2)]Total of all JPC pavement, JPC shoulder, and PCC base, Contract items.

The Department will determine the price adjustment using the following formulas:

When PC is greater than PL
Fuel Price Adjustment = Q x F x PL x [(PC-PL)/PL - 0.05]

When PC is less than PL
Fuel Price Adjustment = Q x F x PL x [(PC-PL)/PL + 0.05]

Where:

Q = Quantity for applicable item placed or performed that month.
F = The fuel to work unit ratio for each applicable item.
PL = Average reseller price of diesel fuel, excluding taxes, discounts, and superfund line items, in the Kentucky region for the month that the Contract is let.
PC = Average reseller price of diesel fuel, excluding taxes, discounts, and superfund line items, in the Kentucky region for the month that the Contractor uses the fuel on the project.

109.07.03 Payments and Deductions. When thresholds are met, the Department will adjust the Contractor's compensation for each eligible pay item, paid or deducted, monthly.

If later price decreases indicate that the Department made an overpayment, the Department will withhold the overpayment from succeeding pay estimates on the project, or the Contractor shall immediately refund the over payment to the Department.

When the Contractor places materials during any month after the month that the Contract time (including all approved time extensions) expires, the Department will use

the average price for the month that the Contractor places the material or the average price for the last month of the Contract time; whichever is least.

The Department will not grant a time extension for any overrun in the Contract amount due to payments made according to this section. The Department will not make any additional compensation due to adjustments made according to this section.

The Department will adjust the Contractor's compensation on the following months pay estimate and on the final pay estimate. The Department will make the final adjustment of the Contractor's compensation on the final estimate for the project.

SECTION 110 — MOBILIZATION AND DEMOBILIZATION

110.01 MOBILIZATION. This subsection describes the requirements for mobilization when "Mobilization" is included in the Bid Proposal as a separate bid item.

Perform all preparatory work and operations necessary to move personnel, equipment, supplies, and incidentals to the project site; to establish offices, buildings, and other facilities that are necessary for performing the work; and to accomplish all other work or operations that must be performed, including costs that must be incurred, to begin work on the project.

Do not bid an amount for Mobilization that exceeds 5 percent of the sum of the total amounts bid for all items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any bids in excess of this amount to 5 percent for bid comparisons. The Department will base the award on the maximum allowable bid of 5 percent. If any errors in unit bid prices for other Contract items in a Contractor's Bid Proposal are discovered after bid opening and such errors reduce the total amount bid for all other items, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives, so that the percent bid for Mobilization is larger than 5 percent, the Department will adjust the amount bid for Mobilization to 5 percent of the sum of the corrected total bid amounts.

110.02 DEMOBILIZATION. This subsection describes the requirements for demobilization when "Demobilization" is included in the Bid Proposal as a separate bid item.

Perform all work and operations necessary to accomplish Final Cleaning-Up as specified in Subsection 104.05; to move personnel, equipment, supplies, and incidentals from the project site; to remove all offices, buildings, and other facilities that were necessary for performing the work; and to accomplish all other work that must be performed, including costs that must be incurred, after acceptable completion of construction operations on the project.

Do not bid an amount for Demobilization that is less than 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposals that are less than this amount up to 1.5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for demobilization exceeds 1.5 percent, or the Department will award the Contract for the adjusted bid amount when the amount bid for demobilization is less than 1.5 percent.

110.03 MEASUREMENT. The Department will measure all work performed as part of Mobilization as a lump sum, when Mobilization is included in the Bid Proposal as a separate bid item.

The Department will measure all work performed as part of Demobilization as a lump sum, when Demobilization is included in the Bid Proposal as a separate bid item.

110.04 PAYMENT. The Department will pay for the quantities at the Contract unit price as follows.

When Mobilization is included in the Bid Proposal as a separate bid item, the Department will make partial payments for Mobilization in 2 equal or approximately equal payments. The Department will make the first payment on the first pay estimate on which the Contractor's total earned value on Contract items, other than Mobilization, exceeds $1,000.00. The Department will make the second payment on the first pay estimate on which the Contractor has earned 5 percent or more of the total Contract amount for Contract items, other than Mobilization. The Department will make both payments simultaneously when these requirements are met at the same time. When Mobilization is not included in the Bid Proposal as a separate bid item, then the Department will consider all costs associated with mobilization incidental to the Contract and will make no separate

payment for mobilization.

When Demobilization is included in the Bid Proposal as a separate bid item, the Department will pay for Demobilization according to the following schedule:

1) 25 percent upon formal acceptance of the project
2) 50 percent when the final estimate is submitted to the district office
3) 25 percent when the final estimate is paid

When Demobilization is not included in the Bid Proposal as a separate bid item, then the Department will consider all costs associated with demobilization incidental to the Contract and will make no separate payment for demobilization.

When Mobilization and Demobilization are included in the Bid Proposal as separate bid items, the Department will make payment under:

Code	Pay Item	Pay Unit
2568	Mobilization	Lump Sum
2569	Demobilization	Lump Sum

SECTION 111 — VALUE ENGINEERING

111.01 DESCRIPTION. Value engineering (VE) is producing an equivalent or better option to that specified in the Contract at a lesser cost. The Department may consider as a VE proposal any cost reduction proposal that is initiated, developed, and submitted to the Engineer for modification of the Contract resulting in an immediate net savings to the Department. The Department will share equally the net savings resulting from a VE proposal that the Department approves.

The Department will only consider VE proposals that may potentially result in savings to the Department without impairing essential functions and characteristics of the facility. Essential functions and characteristics include but are not limited to service life, reliability, economy of operation, ease of maintenance, standardized features, safety, satisfaction of customer needs, desired ability, and special design requirements.

The Department will process VE proposals in the same manner as prescribed for any other alterations of the Contract that would require a supplemental agreement.

111.02 MATERIALS AND EQUIPMENT. Reserved.

111.03 PROCESS.

111.03.01 Submittal and Review of the VE Proposal. The Contractor may submit a conceptual proposal for review to the Engineer. The form and format of this proposal will be at the Contractor's judgement.

In submitting a formal VE proposal as a minimum, include the following information:

1) A detailed description of the existing work and the proposed changes for performing the work.
2) A complete set of Plans and construction details when necessary, showing proposed revisions to the original Contract.
3) A detailed cost estimate for performing the work under the existing Contract and under the proposed change. Include pay items, pay units, quantities, and unit prices. Include in the unit prices all costs for labor, materials, supplies, equipment, tools, and all incidentals required for the complete incorporation of the option into the work.
4) A detailed cost estimate for costs other than those in the Contract such as future construction, design, right-of-way, utilities, maintenance, and operations costs, and the cost to prepare the VE proposal.
5) A prediction of any effects the proposed changes would have on Department costs other than construction, such as maintenance and operating costs and life cycle costs.
6) A statement of the effect the proposal would have on the time for completion of the Contract.

The Department will review the proposal. The decision of the Department to accept or reject a VE proposal will be final and will not be subject to the provisions of Subsection 105.13. The Engineer will make written notification of the Department's decision to accept or reject each VE proposal submitted under the provisions of this section. The Department reserves the right not to consider any VE proposal.

The Department will review the proposal and if acceptable will execute a supplemental agreement that incorporates the necessary Contract modifications. Unless and until the Department executes a supplemental agreement, perform all work according to the terms of the existing Contract. The Department reserves the right to include in the supplemental agreement any conditions it deems appropriate for consideration, approval, and implementation of the VE proposal.

The Department's approval of a VE proposal voids any restrictions that the Contractor had imposed on the use or disclosure of the information that the Contractor included in the

VE proposal, and the Department then has the right to use, duplicate, and disclose, in whole or in part, any data necessary to implement any portion of the proposal on this project and all other Department projects.

The Department will not be liable for any delay in acting upon any submitted proposal. The Department will allow the withdrawal, in whole or in part, of any VE proposal that the Department has not accepted within the period specified in the proposal.

111.03.02 Contract Time. The Department will adjust the Contract completion time for any time savings realized by implementing a VE proposal. The Department will not provide any incentive pay for early completion days resulting from time savings related to an approved VE proposal. The Department will grant additional contract time when specified in the supplemental agreement.

111.03.03 Procedure for Reviewing VE Proposals. Present VE proposals at least 6 weeks before the work is scheduled to begin and preferably at the pre-construction meeting.

1) The Contractor will present his VE proposal to the Resident Engineer and will include all items listed in 111.03.01. The Department will not consider any proposal that does not include all items requested at the time of submittal.
2) The TEBM Construction will review the proposal and will consult with the district's project team for comments and recommendations. If there is no district project team for the project, the TEBM will consult with the district's design, traffic, and operations divisions for any comments they may have. This consultation will be completed within 5 working days of receipt of the proposal.
3) The TEBM will document the results of his review, including but not limited to the advantages and disadvantages of the proposal; comparative costs; effect on contract scheduling and project administration and any pertinent comments from the district's divisions.
4) Within 10 working days of the receipt of a VE proposal, the TEBM will forward the Contractor's proposal together with a copy of the District's review and recommendation on acceptance of the proposal to the Director of Construction.
5) The Director of construction will make a decision on acceptance of the proposal within 2 weeks.

The Department will only accept VE proposals meeting the following criteria:

1) The Department may reject a proposal if it contains certain revisions that the Department has considered, is considering or has already approved for the Contract without obligation to the Contractor.
2) The Contractor has no claim to additional costs or delays, including development costs; loss of anticipated profits; or increased material or labor costs if the proposal is rejected.
3) The Department has sole authority in determining the acceptance of any VE proposal.
4) The Department reserves the right to reject all unacceptable work resulting from an approved proposal and can require that rejected work be removed and re-constructed under the original contract.
5) The Department will reject proposals that provide equivalent options to those already in the Contract.
6) The proposal will be disqualified if requests for additional information are not immediately met.

Basis for rejection includes but is not limited to:

1) Excessive review time required.
2) Inconsistent with established Department policies.

3) Inconsistent with project design policies or criteria.
4) Associated with a Design Build project.

The Department will not consider the following value engineering:

1) Elimination or reduction of final product work.
2) Changes in Traffic control plans only.
3) Reducing only pavement thickness.
4) Modification to existing facilities instead of replacing them with new ones.
5) Phase changing to accommodate contractor's schedule.

111.04 MEASUREMENT.

111.04.01 Revised Work. The Department will measure the quantities for all revised work specified in the supplemental agreement according to Section 109.

111.04.02 Net Savings. The Department will measure the net savings in cost by subtracting the estimated construction costs of the proposed and accepted option and all other costs associated with the option, such as design, right-of-way, utilities, the cost of preparing the value engineering proposal, and the Department's review costs from the estimated construction costs in original Contract for the option. The Department will not include road user's costs when determining net savings.

111.05 PAYMENT.

111.05.01 Revised Work. The Department will make payment directly for all completed and accepted revised work specified in the change order or supplemental agreement according to Subsection 109.04.

111.05.02 Net Savings. The Department will make payment for 50 percent of the net savings in cost.

The Department will consider payment as full compensation for all work required under this section.

SECTION 112 — MAINTENANCE AND CONTROL OF TRAFFIC DURING CONSTRUCTION

112.01 DESCRIPTION. Maintain, control, and protect vehicular, bicycle, and pedestrian traffic adjacent to and within the construction area.

112.02 MATERIALS AND EQUIPMENT. Provide certification that all Work Zone Category I, II, and III Devices are compliant with NCHRP 350.

112.02.01 Channelization Devices.

A) Traffic Cones, Drums, Barricades, Tubular Markers, Vertical Panels, and Object Markers. Conform to the Standard Drawings and the MUTCD. Regardless of the roadway type and time of day, use only 28 inch or larger cones and tubular markers.
B) Temporary Concrete Barrier. Conform to Subsection 509.02.

112.02.02 Retroreflective Material. Conform to Section 830.

112.02.03 Lighting Devices. Conform to the MUTCD.

112.02.04 Signs.

A) Warning Signs. Conform to Section 830, the Standard Drawings and the MUTCD. Use fluorescent orange work zone sign sheeting from the Department's List of Approved Materials.
B) Low Shoulder Signs. Conform to Section 830, the Standard Drawings and the MUTCD. Use fluorescent orange work zone sign sheeting from the Department's List of Approved Materials.
C) Guide Signs. Conform to Section 830, the Standard Drawings and the MUTCD. Use Type III or Type IV sheeting from the Department's List of Approved Materials.
D) Portable Changeable Message Signs. Conform to the requirements the Contract specifies.
E) Arrow Panels. Conform to the Standard Drawings and the MUTCD. Mount on traffic-worthy carriages that meet all applicable safety standards. Use either diesel powered, electric, or solar powered.

112.02.05 Temporary Pavement Markings.

A) Delineators. Conform to Section 830, Type A or B.
B) Delineator Posts. Conform to Section 832.
C) Temporary Striping.

1) Paint Application Equipment. Conform to Subsection 713.02.
2) Paint. Conform to Section 842.
3) Drop on Glass Beads. Conform to Section 839.
4) Tape. Conform to Section 831.

D) Temporary Raised Pavement Markers, Type IVA. Select from the Department's List of Approved Materials.

112.02.06 Asphalt Surfacing Materials. Conform to materials requirements in Division 400 for the mixture the Contract specifies.

112.02.07 Asphalt Base Materials. Conform to materials requirements in Divisions

300 and 400 for the bases the Contract specifies.

112.02.08 Water for Dust Control. Conform to Section 803.

112.02.09 Crash Cushions. Conform to the requirements the Contract specifies.

112.02.10 Temporary Traffic Signals. Conform to the MUTCD. Furnish signals with lenses having a diameter of 12 inches. Furnish controllers having timing intervals and cycle lengths that are changeable without special tools and the following:

A) Two Phase.

1) An adjustable cycle length from 40 seconds to 240 seconds in maximum 10 second increments.
2) Adjustable signal split intervals for two phases.
3) Adjustable yellow clearance intervals for two phases to include the range from 3 seconds to 5 seconds.
4) Adjustable all-red clearance intervals for two phases to include the range from 20 seconds to 60 seconds.
5) Capability of adjusting the above interval functions by changing keys or pins, or by keyboard entry of the desired timing.
6) Capability of adjusting the cycle length by changing a gear or by keyboard entry of the desired cycle length.

B) Multiple Phase.

1) Capability of handling vehicular and pedestrian traffic.
2) An adjustable cycle length from 0 to 255 seconds in one second increments.
3) An adjustable signal split interval for 8 phases in a standard dual-ring configuration.
4) An adjustable yellow clearance interval for all phases in the range of 3 to 5 seconds.
5) An adjustable all-red clearance interval in the range of 0 to 5 seconds.
6) Capability of implementing a minimum of three separate timing plans.
7) Capability of actuated operation.

112.02.11 Truck Mounted Attenuator (TMA). Use only NCHRP 350 TL-3 compliant devices.

112.03 CONSTRUCTION.

112.03.01 General Traffic Control. Maintain the portion of the project used by public traffic, and adequately accommodate through and local traffic. The Department will be responsible for normal routine maintenance according to Subsection 105.11.

Furnish, erect, and maintain all traffic control devices, including signs, signals, channelization devices, temporary pavement markings, pilot cars and other items necessary to maintain traffic according to the Standard Drawings, MUTCD, plans, TCP, and the ATSSA "Quality Standard for Work Zone Traffic Control Devices" manual throughout the duration of the project.

Effective April 1, 2008, ensure all flagging is performed by Department qualified flaggers.

The Department will specify in the Contract either to close all or a portion of the section of highway under construction to through traffic, or to maintain traffic through the project. The Department will outline specific requirements to properly maintain and control traffic in a Traffic Control Plan (TCP). The TCP will include the traffic control scheme and phasing. The Department will consider a deviation from the TCP. Submit the

proposed changes in the TCP to the Engineer in writing. If the Department approves the alternate TCP, the Engineer will remit approval to the Contractor, in writing.

Make provisions for the timely passage of an emergency vehicle through the work zone. When maintaining traffic over a section of highway or a bridge, provide facilities for the safe movement of traffic at all times.

Notify the Engineer before erecting traffic control devices, changing the location of devices in place, or beginning a traffic operation of any kind, except in case of an emergency. In the case of an emergency, the Engineer may direct immediate procurement of safety and warning devices as necessary to safeguard traffic. Notify the Engineer in writing a minimum of one week in advance, when it is necessary for the Department to do work such as detour signing outside the limits of the project.

Place all traffic control devices starting and proceeding in the direction of the flow of traffic. Remove traffic control devices starting and proceeding in the direction opposite to the flow of traffic.

Take responsibility for all damage caused by the failure of any traffic control device or person protecting it. Whenever evidence of damage is found before the job is called complete, the Engineer may order immediate removal and replacement of the damaged portion of the work.

Remove all traffic control devices when they are not needed for the project. Take ownership of the devices, unless the Contract specifies otherwise.

A) Approach Roads and Intersections. Furnish, install, and maintain traffic control devices required on approach roads and all intersecting roadways. Install these devices a minimum of 1,500 feet from the construction limits of the project. Ensure the condition of all traffic control devices conform to the ATSSA "Quality Standard for Work Zone Traffic Control Devices" manual throughout the duration of the project. Traffic control devices include channelization devices, signs, and detour signs, temporary pavement markings, and other items necessary to maintain and control traffic in the construction zone.

B) Lighting Devices. Ensure lighting devices are visible every night between sunset and sunrise.

C) Route Markers. Maintain Department owned route markers and signs that will remain within the limits of construction.

D) Pavement Openings. Barricade all pavement openings and other hazards. Provide them with warning signs that are visible at night.

E) Low Shoulder Signing. Provide these signs where the shoulders are low or where traffic diverts through channels other than the normal lanes. Provide signs for all surfacing, resurfacing, or widening projects that require maintenance of traffic adjacent to shoulder construction.

Provide signs for resurfacing projects without shoulder work, if a substantial portion of the shoulders remains 2 inches or more below the road surface after resurfacing.

The Engineer will designate the actual location of the signs. Conform to the following for sign sizes:

Type of Roadway	Size of Sign (inches)
All 4-lane or more divided and 5-lane	48 by 48
All other roadways	30 by 30

Install black on orange construction sign, of the size noted above. For projects where the shoulder condition exists for a substantial portion of the roadway, with the message "LOW SHOULDER" or "SHOULDER DROP OFF" and a supplemental panel underneath displaying "NEXT ___ MILES". Ensure that the distance stated on the supplemental panel covers the length of the Project. The Engineer may require additional signs after major crossroads. Where the shoulder condition exists within a short, defined area, signs without the supplemental distance plaque shall be installed in advance of the condition.

Additional signs may be necessary to warn motorists within the limits of the shoulder condition.

When shoulder work is part of the Contract, remove the signs after shoulder work is complete. Retain ownership of the signs unless the Contract specifies otherwise. When shoulder work is not part of the Contract, notify the Engineer so that arrangements can be made for the Department to replace the temporary signs with permanent, black on yellow signing. When permanent signing has been installed, temporary signs shall be returned to the Contractor.

F) Signs. Completely cover existing, permanent, and temporary signs which do not properly apply to the current traffic phasing, and maintain the covering until the signs are applicable or are removed. Use only porous cloth or geotextile fabric for sign covers. The Department will not consider tipping over portable signs or turning sign faces 90 degrees as acceptable methods.

With the Engineer, review all signing before traffic uses any lane closures, crossovers, diversions, or detours. Do not begin work until the Engineer has approved all signing. Maintain all signs, including cleaning or renewing the surfaces as necessary to provide clear visibility at all times.

Place temporary signing in locations that do not obstruct the visibility of existing signs.

Unless the Engineer directs otherwise, post mount all signs intended to remain in place for more than 3 days.

G) Arrow Panels. Have available one portable flashing arrow in reserve. Place the reserve arrow in operation if one is damaged or if there is mechanical or electrical failure.

H) Temporary Traffic Signals. Construct temporary traffic signals according to the MUTCD, Chapter 4D and as the Contract specifies. Submit proposed layouts for temporary signal head placement in writing to the Engineer for written approval. Use a central controller using a hard wire or radio connection to coordinate the signal indications at all approaches of the intersection. Mount the signal indications according to one of the following:

1) One signal indication on each side of the highway on each approach;
2) Two signal indications suspended on a span wire over the highway on each approach; or
3) One signal indication mounted on a mast arm or span wire above the highway with a second signal indication mounted on the right side of each approach.

I) TMAs. Mount the attenuator on a support vehicle that is in close conformity to the one it was tested with for NCHRP compliance. Prevent shifting during impact. Furnish installation details to the Engineer before installing the TMA on the project.

112.03.02 Long Term Lane Closure. A long term lane closure is defined as a lane closure that remains for more than 3 days and is not taken down at the end of each day's work.

112.03.03 Equipment and Traffic Control Devices Not In Use. When construction equipment and/or traffic control devices are not in use, place them outside the clear zone, beyond the ditch line, behind guardrail, or off existing right-of-way. The Engineer will approve these locations if they are within the existing right-of-way. The Engineer will designate specific areas within the right-of-way where personal vehicles may park. Move vehicles and construction equipment with the flow of traffic, not against the normal traffic flow. When entering and leaving the work zone, do not interfere with or cause hazard to traffic flow.

112.03.04 Temporary Facilities or Crossings. Provide and maintain temporary facilities, including approaches and crossings in a safe condition. Provide and maintain intersections with roads, streets, trails, and entrances to businesses, parking lots, residences, and farms.

Construct temporary approaches and bridges according to the Contract including all grading and necessary drainage.

Construct or reconstruct diversions (by-pass detours), detours, and median crossovers including associated earthwork, for the handling of traffic across new pavements as specified in the Standard drawings, in the Plans, in the TCP or elsewhere in the Contract. The Department will be responsible for snow removal on these facilities.

Obtain the Engineer's approval for temporary facilities constructed solely to accommodate construction operations. When approved, construct and maintain such temporary facilities, including furnishing and applying surfacing and dust control materials.

When temporary facilities are no longer needed, remove facilities and restore the area. Pave all temporary roadways intended for public traffic with asphaltic materials as the Contract specifies or as the Engineer directs.

112.03.05 Roadways Closed to Through Traffic. Obtain the Department's permission before closing a roadway or limiting public traffic on the roadway.

When a section of highway closes to through traffic, provide and maintain satisfactory temporary facilities for the maintenance of local traffic. Provide and maintain satisfactory crossings for all cross roads and cross streets kept open to traffic.

When the Department closes the road under construction to through traffic, the Department will relieve the Contractor of the responsibility for maintaining the road and marking suitable detours for through traffic.

112.03.06 Shoulder Edge Drop-Offs. Conform to the requirements the Contract specifies.

112.03.07 Temporary Barrier Walls. Construct temporary barrier walls according to Subsection 509.03.

112.03.08 Temporary Crash Cushions. Construct temporary crash cushions as the Contract specifies.

112.03.09 Blasting. During blasting operations, halt traffic no more than the time the Contract specifies to allow the execution of the shot and for removal of rock fragments and debris. The Contract will also specify hours when blasting is not allowed. When using explosive charges, halt all traffic on either side of the impending explosion. Have suitable equipment at the site for removing blasted material, debris, and for cleaning the existing pavement and shoulder area. After all blasts, inspect the pavement for debris and damage that may be a hazard to traffic. Clear debris before allowing traffic to proceed on the affected section.

112.03.10 Removal of Permanent Pavement Markings. Remove all permanent markings and raised pavement markers that do not conform to the traffic operation in use. Remove striping according to Section 713.03.04. Remove raised pavement markers according to Subsection 403.03.02.

When the marker's casting will conform to the final marking scheme but does not conform to the current traffic operation, the Department may allow lens removal in place of removing the entire marker. Additionally, when weather would prohibit patching for marker removal within 24 hours, the Department may allow lens removal until such time weather permits patching.

112.03.11 Temporary Pavement Markings.

A) Placement and Removal of Temporary Raised Pavement Markers. Place and remove temporary raised pavement markers when the Contract specifies. Install temporary pavement markers according to the manufacturer's recommendations. Replace missing or damaged temporary markers within 3 calendar days. After completion of the work, remove the markers from the job site, including the primer and adhesive. Take ownership of the temporary markers at the end of the project.

B) Placement and Removal of Temporary Striping. Place temporary striping on new construction, resurfacing, pavement restoration, pavement rehabilitation and other projects that have existing pavement markings as the Contract specifies. On interstates and parkways, and roadways with pre-existing 6-inch wide striping, install pavement striping that is 6 inches in width. On other routes, install pavement striping that is 4 inches in width. Ensure that all lines have clean edges with a width tolerance of plus 1/2 inch.

Except on new construction or where markings do not exist, prepare and keep a written record of the existing pavement markings locations, and furnish a copy to the Engineer before removing or obliterating the markings.

Apply temporary striping when any course of a new pavement is to be driven over by the public, including patching, milling, leveling, and wedging courses, except when existing centerline markings are plainly visible and not obscured. Install the pavement marking material for centerlines and lane lines every day before sunset that day. The Department will defer installation of edgeline markings until all shoulder paving is complete, except on Interstate and Parkway roads or when the Contract specifies otherwise. When rain or other unavoidable occurrences prevent marking before sunset, mark the pavement as soon as conditions permit. Locate no passing zones as the Engineer directs.

1) Removable Striping. Use removable striping tape when different phases of construction will require the relocation of striping to different positions on the same pavement. Relocate lane lines, edgelines, and other pavement markings as the Standard Drawings and the Contract specify. Do not use removable material as a permanent marking unless the Engineer directs.
2) Non-removable striping material. Use either tape or paint where the striping is to be covered by subsequent paving courses and for temporary paved facilities which will be removed before completing the project. Apply paint according to Section 713.

Maintain the following minimum retroreflectivity requirements at all times:

White:	175 mcd/lux/square meter
Yellow:	150 mcd/lux/square meter

Additionally, when temporary striping that is to remain in use for more than 120 days, provide striping with the following minimum initial retroreflectivity readings:

White:	300 mcd/lux/square meter
Yellow:	225 mcd/lux/square meter

The Engineer may visually accept the markings intended for less than 120 days use but may obtain retroreflectivity readings at any time conformance to the minimum retroreflectivity readings are in doubt. When striping that is to remain in use for more than 120 days, the Department will obtain retroreflectivity readings within five days of application of temporary striping using an approved 30 meter geometry handheld or mobile retroreflectometer. The Department will determine acceptance of the temporary striping in accordance with KM-202 or

KM-203 as applicable. When the Department determines the striping is not acceptable, complete corrective work within 24 hours.

Maintain all markings throughout the duration of the project. Replace missing or damaged stripes or tape within 3 days. Remove all markings placed in error or markings that do not conform to the traffic scheme in use.

112.03.12 Project Traffic Coordinator (PTC). Designate an employee to be the project PTC. Ensure that the PTC inspects the project traffic control scheme at a minimum of once per shift; reports all incidents within the work zone to the Engineer; and performs all other traffic control duties the Contract specifies. Furnish the name, and telephone number of the PTC, where he can be reached at all times. Furnish this information to the Engineer. The required qualifications of the PTC are dependent on the classification of the Project. Consider the project unclassified unless it is designated as Significant in the proposal.

A) For Significant Projects. Designate a qualified Work Zone Traffic Control Supervisor (WZTCS) as the PTC. Ensure the PTC is present on site when setting up, taking down, or affecting the traffic control scheme or phasing and as required by the Traffic Control Plan. The Department may allow a Work Zone Traffic Control Technician (WZTCT) to conduct traffic control reviews for maintenance purposes when under the supervision of the WZTCS.

B) For Unclassified Projects. Designate a qualified WZTCS or WZTCT as the PTC. When a WZTCT serves at the PTC, the Contractor must designate the WZTCS who will act as their supervisor and be available upon request when needed. The PTC is required to be present on site when setting up, taking down, or affecting the traffic control scheme or phasing and as required by the Traffic Control Plan.

112.03.13 Existing Signalized Intersections. Use traffic signals for the control of traffic through presently signalized intersections. Use flaggers to expedite the flow of traffic, if directed by the Engineer or as specified in the Contract.

Cover, turn, or take down all signal heads that are not in use. Clearly indicate the signals are not in operation. Install new signal conductors with sufficient slack in the cable to allow for a lateral movement of the signal indication of at least 15 feet in either direction from the specified location.

During construction, the Department will allow the traffic signal controller to operate in the pre-timed mode using the recall ability of the signal controller. The Department will provide assistance in adjusting signal controller timing, when requested. Submit a request for assistance in writing to the Engineer.

Cover and leave in place left turn signals when left turn lanes are used for through and left turning traffic. Shift through traffic signals to the left to a position that will provide visible signal indications for through and left turning traffic.

When the signals are relocated, locate them within or on the projected lane lines for each lane of traffic as directed by the Engineer. Submit proposed layouts for temporary signal head placement in writing to the Engineer for written approval.

After roadway work within the intersection is completed, adjust traffic signal indications back to their permanent locations as specified in the Contract. Remove excess lengths of signal conductors and permanently connect the signals.

112.03.14 Department Ordered Opening Before Completion. When any section of roadway is in acceptable condition and the Commissioner determines that the public convenience demands it, the Commissioner may allow the roadway to open to public traffic. Correct construction deficiencies found during interim project inspections and final inspection. After the opened section of roadway is inspected and accepted, the Department will take responsibility for further expenditures for that accepted section.

112.04 MEASUREMENT.

112.04.01 Maintain and Control Traffic. The Department will measure the quantity by the lump sum. The Department will not measure traffic control devices such as drums, traffic cones, barricades used for channelization purposes, delineators, object markers, lane closures not left in place more than 3 days and nights, temporary facilities constructed solely for construction traffic and vertical panels and will consider them incidental to this item of work. The Department will not measure the flaggers; traffic control coordinator; removal of pavement striping or removal of pavement markings, and will consider these items incidental to this item of work.

112.04.02 Signs. The Department will measure the quantity in square feet. The Department will measure each individual sign the first time it is installed and each additional time that it is installed through post mounting. The Department will not measure sign maintenance or subsequent relocation of original signs by methods other than post mounting and will consider them incidental to this item of work. The Department will measure signs for payment when they are required by the MUTCD, Standard Drawings, TCP, the Contract, or the Engineer. Additional signs will be considered incidental to this item of work. The Department will measure replacement units for payment, only when the Engineer determines replacement is required resulting from normal deterioration of the signs due to environmental conditions.

112.04.03 Tubular Markers. The Department will measure the quantity by each individual unit, including replacement unit. The Department will not measure installation or removal for payment and will consider them incidental to this item of work.

112.04.04 Barricades. The Department will measure the quantity by each individual unit not used for channelization purposes and not specified in the Standard Drawings. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.05 Arrow Panels. The Department will measure the quantity by each individual unit. The Department will not measure the reserved flashing arrows for payment and will consider them incidental to this item of work. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.06 Portable Changeable Message Sign. The Department will measure the quantity by each individual unit. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.07 Temporary Pavement Striping. The Department will measure the quantity in linear feet. The Department will measure the quantity for payment only once per course. The Department will not measure corrective work, maintenance of markings, or the removal of striping tape for payment and will consider them incidental to this item of work. The Department will not measure striping for payment when it fails to meet retroreflectivity requirements and is not corrected prior to it's end of use.

112.04.08 Temporary Pavement Marker Type IVA. The Department will measure the quantity by each individual unit, including replacement unit. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.09 Temporary Relocation of Signal Heads. The Department will measure the quantity of temporary relocation of existing signal heads by each individual unit. The

Department will not measure temporary relocation of new signal heads for payment and will consider it incidental to the traffic signal bid items.

112.04.10 Temporary Traffic Signals-Two Phase. The Department will measure the quantity by each individual unit, not including signals that are to become permanent. The Department considers a unit to include all components necessary to signalize the intersection. The Department will not measure installation, maintenance, timing adjustment, electrical service, or removal for payment and will consider them incidental to this item of work.

112.04.11 Temporary Traffic Signals-Multi-Phase The Department will measure the quantity by each individual unit, not including signals that are to become permanent. The Department considers a unit to include all components necessary to signalize the intersection. The Department will not measure installation, maintenance, timing adjustment, electrical service, or removal for payment and will consider them incidental to this item of work.

112.04.12 Temporary Crash Cushions. The Department will measure the quantity according to the Contract. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.13 Truck Mounted Attenuator (TMA). When listed as a bid item, the Department will measure the quantity by each individual unit.

112.04.14 Pavement Striping Removal. When listed as a bid item, the Department will measure the quantity of Department authorized pavement striping and marking removal by the unit listed in the Contract. The Department will not measure the unauthorized removal of pavement striping or markings for payment. When not listed as a bid item, the Department will consider removing pavement striping and markings incidental to Maintain and Control Traffic. The Department will not measure any corrective work required due to the removal process for payment and will consider it incidental to this item of work.

112.04.15 Temporary Concrete Barrier. The Department will measure the quantity according to Subsection 509.04. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.16 Water for Dust Control. When listed as a bid item the Department will measure the quantity in gallons.

112.04.17 Lane Closures. The Department will measure the quantity of Long Term Lane Closures by each individual unit installed, and accepted. The Department will not measure maintenance or removal of each lane closure and will consider it incidental to this item of work. The Department will not measure traffic control devices such as cones, barrels, and barricades used for delineation in conjunction with the Lane Closure and will consider them incidental to this item of work. The Department will measure signs, striping, barrier wall and other traffic control devices listed as bid items in the Contract separately for payment.

The Department will not measure lane closures other than Long Term Lane Closures for payment and will consider them incidental to Maintain and Control Traffic.

112.04.18 Diversions (By-Pass Detours). The Department will measure the quantity by lump sum completed, accepted, and then removed. The Department will not measure grade and drain work for payment and will consider it incidental to this item of work. The Department will measure base course and surface course items for payment according the applicable sections of Divisions 300 and 400. The Department will not

measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.19 Temporary Median Crossovers. The Department will measure the quantity by lump sum completed, accepted, and then removed. The Department will not measure grade and drain work for payment and will consider it incidental to this item of work. The Department will measure base course and surface course items for payment according the applicable sections of Divisions 300 and 400. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.20 Temporary Approaches. The Department will measure the quantity under the appropriate sections for grade, drain, and surface. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.04.21 Temporary Bridges. When listed as a bid item, the Department will measure the quantity by each individual unit completed, accepted, and then removed. Otherwise, the Department will consider temporary bridges incidental to Diversions, Temporary Median Crossovers, or to grade and drain work for temporary approaches. The Department will not measure installation, maintenance, or removal for payment and will consider them incidental to this item of work.

112.05 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
02650	Maintain and Control Traffic[1]	Lump Sum
02562	Signs	Square Foot
03225	Tubular Markers	Each
02012, 02013, 02014	Barricades, Type	Each
02775	Arrow Panel	Each
02671	Portable Changeable Message Sign	Each
06549-06551, 06603-06605	Pavement Striping – Temporary Removable Tape, Size and Color	Linear Foot
06510-06513	Pavement Striping – Temporary Paint, Size	Linear Foot
06514-06517	Pavement Striping – Permanent Paint, Size	Linear Foot
06585-06588	Temporary Pavement Marker, Type IVA, Direction, Color, Temporary	Each
04953	Temporary Relocation of Signal Heads	Each
04933	Temporary Signal - Two Phase	Each
04934	Temporary Signal - Multi-Phase	Each
-----	Temporary Crash Cushions	See Subsection 725.04
06530-06533	Pavement Striping Removal, Size	Linear Foot
-----	Temporary Concrete Barrier	See Subsection 509.05
02242	Water	M Gallon
02653	Lane Closures	Each
02651	Diversions (By-Pass Detours)	Lump Sum
02655	Crossovers	Lump Sum
-----	Temporary Approaches	See Applicable Sections
-----	Temporary Bridges	Each
02654	Truck Mounted Attenuator	Each

[1] The Department will make partial payments for Maintain and Control Traffic according to Subsection 109.05.

The Department will consider payment as full compensation for all work required under this section.

SECTION 113 — QUALITY CONTROL / QUALITY ASSURANCE

113.01 GENERAL. Take responsibility for the quality of construction and materials incorporated into the work. Perform all quality control inspection, sampling, and testing. The Department will verify the acceptability of all construction and materials. The Department may use the verified results of the Contractor's inspection, sampling, and testing as a part of its acceptance procedures, provided the Contractor maintains a Department-approved Quality Control Plan (QCP).

113.02 COORDINATION MEETING. Meet with the Engineer either as part of the preconstruction conference, or as a separate meeting, before the start of construction, and discuss the QCP. During the meeting, a mutual agreement of the plan details will be developed, including the forms for recording the operations, control activities, testing, administration, and the interrelationship of the QCP. Minutes of the coordination meeting shall be prepared by the QCP Manager, signed by the Contractor and the Engineer, and filed separately as part of the QCP. Subsequent conferences may be called by the Contractor or the Engineer to reconfirm mutual agreement and address deficiencies in the QCP or procedures which may require corrective action by the Contractor. Nothing in this section shall be construed to override the preconstruction conference or the preconstruction conference minutes. Do not start work without an approved QCP.

113.03 QUALITY CONTROL (QC). Provide and maintain a quality control system that will assure all materials and products submitted to the Department for acceptance will conform to the Contract requirements whether manufactured or processed by the Contractor, or procured from producers, subcontractors, or vendors. Perform the inspections and tests required to substantiate product conformance to the Contract. Document all quality control inspections and tests, and provide a copy to the Engineer. Maintain adequate records of all inspections and tests. Include in the records the nature, number, and type of deficiencies found, the quantities rejected, and the nature of corrective action taken. Perform equipment calibrations and maintain qualified personnel as the Contract requires to ensure conformance to Contract requirements. Procedures will be subject to Department approval.

Develop, furnish, execute, and maintain a QCP including, but not limited to, inspecting, testing, and ensuring conformance to the Contract, in order to establish an effective level of quality control. Prosecuting the QCP shall include all on-site materials testing and monitoring of the producer's testing such as hot-mix asphalt plant testing, aggregate plant testing, and concrete plant testing. Include the following:

A) QCP Submittal. Submit the QCP to the Engineer before beginning work. After beginning work under the approved QCP, continuously prosecute the work in accordance with this QCP. Obtain approval from the Engineer before implementing any changes to the QCP.

B) Documentation. Maintain all records that provide factual evidence that quality control activities and test have been performed. Include in these records the work of Subcontractors and suppliers. Forms for these records shall be as approved by the Department.

C) Personnel. After approval of the QCP by the Engineer, maintain the QCP staff at approved plan levels at all times until the demobilization of the Contractor forces upon project completion.

The primary duty of the QCP personnel on the project is implementing the QCP. Provide a QCP organization consisting of a QCP Manager and sufficient number of qualified personnel to ensure Contract compliance.

113.04 QUALITY ASSURANCE (QA). The Department will be responsible for determining the acceptability of the material produced. The Quality Assurance Team (QAT) will check the validity of the QCP through an appropriate review of documentation and random quality assurance testing.

The QAT will conduct random QA inspections for the duration of the Contract; inspect the full spectrum of on-going construction activities; review documentation; compare inspections and testing results with the QCP results; and prepare a written report of the results. Testing by the QAT will be performed at 25 percent of the rate specified in the Field Sampling Manual. Testing may be increased at the discretion of the Engineer. Testing will be performed at randomly selected locations without prior notification of the Contractor.

When the QAT testing results show work to be outside of specification requirements or not in agreement with the QCP results, the Department may shut down that portion of the work or the entire project until the cause of the failure or discrepancy is determined and procedures are corrected.

113.05 ACCEPTANCE. The Department will make final acceptance according to Subsection 105.12.

113.06 CLAIMS. The Department will handle claims according to Subsection 105.13.

113.07 DISPUTE RESOLUTION PROCEDURES. As part of Quality Control/Quality Assurance (QC/QA) for pay items and materials, both the Department and the Contractor will perform inspections and tests. The Contractor will perform the acceptance tests, and the Department will perform verification tests of the Contractor's acceptance test results at a reduced frequency. The Department will base the pay or material acceptance on the Contractor's acceptance test results provided the test results are verified by the Department. For a particular pay item or material, the appropriate specification will provide testing frequencies and the Department's verification procedures.

A) Avoidance of Disputes. Make every effort to avoid disputes. Use partnering concepts to aid in preventing or resolving any dispute. Monitor as follows to ensure that all data are reliable, unbiased, and truly representative of the product quality:

1) Ensure personnel and laboratory facilities meet the specified certification requirements.
2) Ensure all samples are obtained according to KM 64-113, Sampling Materials by Random Number Sampling.
3) Ensure communication of test results between parties occurs within the specified time limits.
4) Discuss all questions regarding the specifications, KM's, or sampling and testing procedures during the preconstruction, pre-paving, or similar type of meeting to clarify any confusion.
5) Resolve disputes at the lowest appropriate level of authority.

B) Procedures. When the Contractor's acceptance test results and the Department's verification test results are not within the specified tolerances, and a dispute is therefore unavoidable, use the following procedures to resolve the dispute:

1) Project Level Dispute Resolution. Together with the Engineer, attempt to determine the reason for the discrepancy at the project level by having testing personnel review previous tests and other possible factors.
2) Materials Central Laboratory (MCL) Level. If the dispute is not resolved at the project level, the MCL will conduct further investigation. In this investigation, the MCL will include the following, when applicable:

1) Review of all available test data, including the following:
   - current disputed results;
   - prior acceptance testing data;
   - Contractor's process control documentation; and
   - Department's Independent Assurance (IA) sampling and testing results.
2) Check of Contractor and Department calculations. Compare conflicting data by statistical means (e. g., f-test and t-test).
3) Evaluation of Contractor and Department sampling procedures.
4) Inspection of the equipment setup, calibration, and maintenance.
5) Retesting of all retained samples available.
6) Monitoring of the specified testing procedures.
7) Evaluation of the history of performance of the Contractor and the Department personnel and testing equipment involved. Review of test results from previous projects. Review of the results of previous dispute resolutions.
8) Additional comparative or split-sample testing.

At the conclusion of the investigation, MCL personnel will make a recommendation of resolution to the Contractor and the Engineer.

C) Third Party Resolution Level. If the dispute is not resolved at the MCL level, the Department and Contractor will use a mutually agreed upon laboratory. The results from the mutually agreeable laboratory will be final and binding.

The Department will prepare a written report describing the dispute, all subsequent actions, and the final resolution for inclusion in the project documentation.

113.08 MEASUREMENT.

113.08.01 QC. When listed as a bid item, the Department will measure the quantity by the lump sum. The Department will not measure the QCP, any actions and personnel required to carry out the QCP, any testing, any testing equipment, or any other work necessary to perform the specified QC/QA procedures for payment and will consider them incidental to this item of work.

113.08.02 Dispute Resolution. If the independent laboratory testing and investigation indicates that the Department's tests are correct, pay the cost of the investigation. If the independent laboratory testing and investigation indicates that the Department's tests are not correct, the Department will pay the cost of the investigation.

When the dispute is resolved at any level, and the Department's verification tests are correct, the Department will base the Contractor's pay on the Department's verification test results rather than on the Contractor's acceptance test results. When the Department's verification tests are not correct, the Department will base the Contractor's pay on the Contractor's acceptance test results as the appropriate section or subsection specifies.

113.09 PAYMENT.

Code	Pay Item	Pay Unit
----	QC, Type	Lump Sum

SECTION 114 — PARTNERING PROCESS

114.01 DESCRIPTION. It is the intent of the Department that all projects be partnered in some form or manner whether it be Formal or Informal Partnering. The partnering process is intended to encourage the foundation of a cohesive partnership between the Department and the Contractor. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals within the bounds of the Contract. Common objectives will be structured to meet each project's needs, but will include such basic criteria as effective and efficient contract performance, safety, and contract completion on schedule and within budget.

The Contractor and the Department should both be aware that the partnering process includes more than their relationship. The "Team" should also include utility companies, local officials, emergency personnel such as fire and police, and any one else for which the project effects or who could effect the progress of the project.

The partnering process in no ways alters the Contract itself. Also the establishment of a partnering process or charter for a project will not change the legal relationship of the parties to the contract nor relieve either party from any of the terms of the contract.

114.02 FORMAL PARTNERING. As soon as practical, the Contractor's key on-site project manager and the Department's on site representative will meet to review the project plans and specifications. They will thereafter develop plans for a Team Building Workshop for which the Contractor's key on-site staff, subcontractors, the Department's personnel, and other individuals as needed and agreed upon will be contacted to attend the workshop.

Schedule on-site project partnering meetings at regular intervals to discuss and resolve issues regarding the project throughout the duration of the contract. Contractor, subcontractor, and Department personnel will attend these meetings, and if need be, any appropriate persons needed to discuss specific issues. Prior to the meeting, the Contractor's on-site project manager and the Department's on-site representative will jointly develop an agenda. Minutes of each meeting will be recorded and distributed to all partners. It will be the responsibility of the Contractor and the Department to equally act in hosting these meetings and recording these events.

114.02.01 Team Building Workshop. The Team Building Workshop shall foster and encourage the partnering process so that the Contractor and the Department are a cohesive unit willing to work together to achieve a combined goal. An independent facilitator who is mutually satisfactory to the Contractor and the Department will facilitate the workshop, or the workshop may be co-facilitated by the Contractor and the Department.

The workshop will develop a project team and discuss issues and concerns of the project. This workshop should also develop a method for the partners to resolve any issues that arise as the project is ongoing.

114.03 INFORMAL PARTNERING. When Formal Partnering is not designated in the Contract, informal partnering will be encouraged. Scheduling on-site project meetings at a regular or on a 'as-needed' basis is encouraged to discuss and resolve issues regarding the project throughout the duration of the Contract. Contractor, subcontractor, and Department personnel should attend these meetings, and if need be, any appropriate persons needed to discuss specific issues. Record the minutes of each meeting and distribute to all partners. It will be the responsibility of the Contractor and the Department to act equally in hosting these meetings.

114.04 MEASUREMENT. All costs associated with developing and maintaining a Formal Partnership will be agreed to by both parties and will be shared equally.

Informal Partnering will not be measured for payment and the Department will consider all costs associated with the informal partnership incidental to the project.

114.05 PAYMENT. For Formal Partnering the Department will pay 50 percent of the costs to develop and maintain this partnership. The Department will make the payment under a Supplemental Agreement. The Department will consider payment as full compensation for all work required under this section.