

PROJECT SPECIFICATIONS
FOR
COUNTY JAIL
PARKING LOT IMPROVEMENTS
PROJECT NO. PW16B0061



County of Jefferson, Missouri
P.O. BOX 100
HILLSBORO, MO 63050
FEBRUARY 23, 2016

REQUEST FOR BID

BID OF

Bidder Name: _____

Bidder Address: _____

FOR CONSTRUCTING:

Removal and Replacement of Existing County Jail
Parking Lot Located in Hillsboro, Missouri

APPROVED FOR SUBMITTAL

BY:

(County Engineer)

DATE: 1/25/2016



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BID NOTICE

Sealed bids for County Jail Parking Lot Improvements Project No. PW16B0061 will be received at the office of The Department of the County Clerk, Jefferson County Administration Center, 729 Maple Street, Hillsboro, Missouri until 2:00 o'clock P.M. (CDT) on the 23rd day of February, 2016, and at that time will be publicly opened and read. All bids shall be submitted in triplicate in an opaque sealed envelope, marked with the Project title, name and address of the Bidder, and accompanied by the other required documents. Bids submitted via fax or electronic will be rejected. Late Bids will not be accepted and will be returned to the sender, unopened.

The proposed work includes: The removal and replacement of the existing parking lot pavement section, along with minor drainage improvements, and associated work items, materials and testing. The work in general will consist of bituminous surfacing, concrete pad installation, aggregate base, drainage pipe/manholes, parking paint, and material testing.

Work shall be in accordance with the provided Specifications, and Project Technical Specifications and Plans. Where not specifically covered by the Specifications or Project Technical Specifications or Plans, the Contractor shall adhere to the 2011 Edition of the "Missouri Standard Specifications for Highway Construction", and all supplemental revisions.

Plans and specifications for this project will be available, at no cost, as a downloadable file from the Jefferson County website (<http://www.jeffcomo.org/PublicWorksProjects.aspx?nodeID=Purchasing>), beginning Friday, January 29th, 2016. The bidder will be responsible to check the County's website for addendum(s) regarding this project prior to bid opening. All potential bidders must complete the "Plan Holder Contact Information" form and submit this form to Public Works at pwprojects@jeffcomo.org and request placement on the bidder's list.

All labor used in the construction of this public improvement shall be paid a wage no less than the prevailing hourly rate of wages of work of a similar character in this locality as established by the State of Missouri's "Annual Wage Order" that is currently effective 10 calendar days prior to bid opening.

The County of Jefferson, Missouri hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

All bidders must be on MoDOT's Qualified Contractor List per Section 102.2 of the Missouri Standard Specifications for Highway Construction, 2011 Edition including all revisions. **The contractor questionnaire must be on file 7 days prior to bid opening.**

Contractors and sub-contractors who sign a contract to work on public works project must provide a 10-Hour OSHA construction safety program, or similar program approved by the Department of Labor and Industrial Relations, to be completed by their on-site employees within sixty (60) days of beginning work on the construction project.

A certified or cashier's check or a bid bond in the amount of 5% shall be submitted with each proposal. **A certificate of insurance shall be submitted with each proposal.**

All bids shall be made on the forms provided. The County of Jefferson, Missouri reserves the right to reject any or all bids, to waive any informality in the bids received, and to award the contract to the lowest, responsive, responsible bidder as determined by the County.

END BID NOTICE

BID SUBMITTAL PACKAGE



JEFFERSON COUNTY, MISSOURI DEPARTMENT OF PUBLIC WORKS

PROJECT NAME: COUNTY JAIL PARKING LOT IMPROVEMENTS

PROJECT NUMBER: PW16B0061

BID OPENING DATE: 02/23/2016 @ 2:00 o'clock P.M. (CDT)

Funding Source: County Road Tax

County Project Manager: Jason Jonas (636)797-5369 jjonas@jeffcomo.org

BIDDER'S NAME: _____

IN ORDER TO BE CONSIDERED A RESPONSIVE, RESPONSIBLE BIDDER, THE CONTRACTOR MUST READ, UNDERSTAND, COMPLETE AND SUBMIT 3 COPIES OF ALL FORMS WITHIN THIS BID SUBMITTAL PACKAGE (INCLUDING THIS COVER AND ALL SHEETS WITH THE BID SUBMITTAL BORDER), ALONG WITH OTHER SUBMITTAL REQUIREMENTS AS STATED ON THE BIDDER CHECKLIST.

The County does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

PLAN HOLDER CONTACT INFORMATION

All potential bidders must complete this form and submit it to the Jefferson County email address listed below in order to provide contact information as required. All other plan holders may submit this form at their own option. Addendums will be posted on the county website. In the event of disruption of website services, all such information will be communicated to all registered plan holders.

Project:	County Jail Parking Lot Improvements Project No. PW16B0061
Plans & Specifications:	\$0.00 AVAILABLE ONLINE
Bid Opening Date:	February 23, 2016
Estimate:	\$110,000.00

Company Name*:

Contact Name*:

Address*:

Phone*:

Email*:

*required information

Email this completed form to:

pwprojects@jeffcomo.org

BIDDER CHECKLIST

- 1. 3 collated copies of all of the following documents encompass a complete bid submittal
 - a) Complete and Submit Plan Holder's List Form prior to bid submittal (email before bid opening)
 - b) Bid Submittal Cover Sheet with bidder's name printed or typed
 - c) Instructions and Notices to Contractors initialed on each page, all spaces filled, signed.
 - d) Balanced Bid Form, complete, signed, and embossed (if corporation), **addenda acknowledged and attached**
 - e) Bid Guaranty/Bid Bond (Assurance Company's form is valid substitute to generic form herein)
 - f) Bidder's Acknowledgement completed and signed
 - g) Affidavit of Federal Employment Authorization (Annual Worker Eligibility Verification Affidavit)
 - h) Certification Regarding Anti-collusion (see notice 12)
 - i) Certification Regarding Use of Contract Funds for Lobbying (see notice 12)
 - j) Certification Regarding Debarment and Suspension (see notice 12)
 - k) Certification Regarding Affirmative Action and Equal Opportunity (see notice 12)
 - l) Bid to be submitted in ink with proper signatures with no white out or initialed changes
 - m) Enclose Certificate of Insurance
- 2. Submit completed Contractor Questionnaire and/or Contractor Prequalification Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Secs 101-103 of the Standard Specifications, and Rule 7 CSR 10-15.900, "Prequalification to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website (required on all Public Works projects)
- 3. For submittal of paper bids, the complete set of bidding documents includes all information through the Affidavit of Federal Employment Authorization. The Project Technical Specifications are for the bidder's information only and is not to be returned with the bid.
- 4. If submitting the bid by mail, it is to be completed, executed, and submitted in a sealed envelope addressed to County of Jefferson, Missouri. **Provide the vendor name, vendor address, vendor number, county, route and project number on the outside of the envelope (if applicable).**
- 5. Please read all items in the bidding document carefully. For paper bids, complete all items in **ink** or by **typing** in the information.
- 6. Sign this bidding document properly. If submitted in the name of a firm or corporation, the legal name of the firm or corporation should appear in the space designated, and be signed for by one or more persons legally qualified to execute papers in the name of said firm or corporation. Affix Corporate Seal if the Bidder is a Corporation.
- 7. For paper bids, submit a bid bond executed by bidder and surety, or attach cashier's check to the bid bond form.
- 8. For paper bids, staple addenda (if applicable) to the bid in the appropriate part of the bid. The letter accompanying the addenda should be stapled to the inside of the back cover of the bid and returned. The bidder should retain a duplicate copy.
- 9. Common Mistakes:
 - a) Not signing the bid
 - b) Not incorporating the addendum into the bidding documents, including attaching the letter to the bid
 - c) Not providing a bid bond
 - d) Using a different bid bond form than the one provided
 - e) Using pencil to fill out the bid
 - f) Using white out to make corrections to the itemized bid sheets
 - g) Not initialing changes made

All questions concerning the bid document preparation can be directed to the Jefferson County Public Works Department at 636-797-5369. Project specific questions can be directed to Jason Jonas.

Special Needs: If you have special needs addressed by the Americans with Disabilities Act, please notify Jefferson County Public Works Department, at 636-797-5369 or through Missouri Relay System, TDD 1-800-735-2966, at least five (5) working days prior to the bid opening.

INSTRUCTIONS AND NOTICES TO CONTRACTORS

BIDDER SHALL INITIAL EACH SHEET ACKNOWLEDGING UNDERSTANDING AND ACCEPTANCE

Sealed bids for the proposed work will be addressed and delivered to the office of The County Clerk, 729 Maple Street, Jefferson County Administration Center, Hillsboro, Missouri until 2:00 o'clock P.M. (CDT) on February 23, 2016, and at that time will be publicly opened. All bids shall be submitted in triplicate in an opaque sealed envelope, marked with the Project title, name and address of the Bidder, and accompanied by the other required documents. Bids submitted via fax or electronic will be rejected. Late Bids will not be accepted and will be returned to the sender, unopened.

(1) PROPOSED WORK:

The removal and replacement of the existing parking lot pavement section, along with minor drainage improvements, and associated work items, materials and testing. The work in general will consist of bituminous surfacing, concrete pad installation, aggregate base, drainage pipe/manholes, parking paint, and material testing.

(2) PLANS AND SPECIFICATIONS: Plans (if applicable) and specifications for this project are available through the Jefferson County, Missouri Government website (Jeffcomo.org) under the "Invitation for Bids/Request for Proposals" tab in the "Quick Links" box in the upper right corner of the homepage. It is the bidder's responsibility to obtain these documents from the provided source, including copies for use in construction if awarded the project. Paper copies of any documents will require advance notice and are subject to administrative fees for labor and material costs, similar to that of a "Freedom of Information Act" request. Plans, specifications, and any other project documents are made available only for the purposes of obtaining bids, and as a resource to the awarded contractor. These documents do not confer a license or grant for any other use.

(3) CONTRACT DOCUMENTS AND SITE CONDITIONS: Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize themselves with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize themselves with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Contract Documents. Each bidder will, at their own expense, make such investigations and tests as the bidder may deem necessary to determine his Bid for performance of the Work in accordance with the time, price and other terms and conditions of the Contract Documents. On request, the County will provide each bidder access to the site to conduct such investigations and tests, as each bidder deems necessary for submission of his Bid. The lands upon which the Work is to be performed rights - of - way for access thereto and other lands designated for use by the Contractor in performing the work are identified in the projects specifications or plans.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(4) COMPLIANCE WITH CONTRACT PROVISIONS: The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction, 2011," and "Missouri Standard Plans for Highway Construction, 2009" and Supplemental Revisions (if applicable), their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted. All questions about the meaning or intent of the Contract Documents shall be submitted to the county project manager as stated on the "Bidder Checklist." Replies will be issued by Addenda, mailed or electronically delivered, to all parties recorded by the County Engineer as having received the Bidding Documents. Oral and other interpretations or clarifications will be without legal effect.

The following documents are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications
Supplemental Plans to October 2009 Missouri Std. Plans
For Highway Construction (if applicable)

These supplemental bidding documents contain all current revisions to the bound printed versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

Please note that within the above-listed documents, the term "Commission" shall be replaced with the term, "County of Jefferson", and the term "Engineer" is a reference to the County Director of Public Works/Highway Engineer.

The contracting authority for this contract is Jefferson County Public Works.

(5) PRIME CONTRACTOR REQUIREMENTS: The prime contractor must be on MoDOT's approved contractor listing at least 7 days before the day of the bid opening in order for MoDOT to concur with the award of this project. The limitation in Sec 108.1.1 of the Missouri Standard Specifications for Highway Construction that "the contractor's organization shall perform work amounting to not less than 40 percent of the total contract cost" is waived for this contract. Instead, the less restrictive terms of the Federal Highway Administration's rule at Title 23 Code of Federal Regulations (CFR) § 635.116(a) shall apply, so that the contractor must perform project work with its own organization equal to and not less than 30 percent of the total original contract price. Second-tier subcontracting will not be permitted on this contract. All other provisions in Sec 108.1.1 et seq. of the Missouri Standard Specifications for Highway Construction shall remain in full force and effect, and shall continue to govern the contractor and its subcontractors, in accordance with the provisions of Title 23 CFR § 635.116.

(6) SUBCONTRACTORS: No subcontract may be awarded by the prime contractor under this contract to anyone without approval of the County. In order for such approval to be obtained the Contractor shall submit a request to subcontract. This is not required for bid submittal. The proposed subcontractor must also submit, through the Contractor, the following documents in an acceptable form:

- a. Copy of any subcontracts, if requested
- b. Certification by proposed subcontractor regarding equal employment opportunity;
- c. Certification by proposed subcontractor concerning labor standards and prevailing wage requirements;
- d. Any such other documents and evidence as the County may reasonably request to show that the subcontractor has fully complied with any reporting requirements to which it is or was subject.
- e. Affidavit of Federal Employment Authorization to be completed and turned in by proposed subcontractors.
- f. Subcontractor shall have certificate of insurance with the same limits as the prime contractor listing Jefferson County Public Works as Additional Insured and as a certified holder. The endorsement is also required.
- g. E-verify MOU in it's entirety.

The documents by proposed subcontractors are not required to be attached to the Contractor's Bid.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(7) **SUBCONTRACTOR DISCLOSURE:** Requirements contained within Sec 102.7.12 of the Missouri Standard Specification for Highway Construction shall be waived for this contract.

(8) **SALES AND USE TAX EXEMPTION:** County of Jefferson, a tax exempt entity, will furnish a Missouri Project Exemption Certificate as described in Section 144.062 RSMo to the awarded contractor who in turn may use the certificate to purchase materials for a specific project performed for the tax exempt entity. Only the materials and supplies incorporated or consumed during the construction of the project are exempt. The certificate will be issued to the contractor for a specific project for a defined period of time.

(9) **PERIOD OF PERFORMANCE:** If the bid is accepted, the bidder agrees that work shall be diligently prosecuted at such rate and in such manner as, in the judgment of the engineer, is necessary for the completion of the work within the time specified as follows in accordance with Sec 108:

Working Days: **40**

(10) **LIQUIDATED DAMAGES:** The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages to be recovered in accordance with Sec 108 shall be as follows:

Liquidated damages per day: **\$ 700**

(11) **BID GUARANTY:** The bidder shall submit a Bid Guaranty. The project bid bond form is included in the bid book. The bidder shall mark the box below to identify the type of Bid Guaranty.

Paper Bid Bond
 Cashier's Check

Bid Guaranty shall be made payable to the Owner, in the amount of five percent of the Bidder's maximum Bid price and in the form of a certified or bank check or a Bid Bond (on form attached, if a form is prescribed) issued by a Surety.

The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security within 15 days of the Notice of Award. Failure to do so may result in the annulment of the Notice of Award and forfeiture of the Bid Security. The Bid Security of any Bidder whom the Owner believes to have a reasonable chance of receiving the award may be retained by the Owner until the earlier of the seventh day after the "effective date of the Agreement" (which is the date when the agreement has been executed by all parties) by Owner to Contractor and the required Contract Security is furnished or the sixty-first day after the Bid opening. Bid Security of other Bidders will be returned within seven days of the Bid opening.

(12) **CERTIFICATIONS FOR FEDERAL JOBS:** By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the contracting authority may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

(13) **SUBSTITUTE MATERIALS, EQUIPMENT, AND VALUE ENGINEERING:** The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by a Contractor, it must first be approved to be acceptable by the county. Proposals to alter the project design or specifications, otherwise known as "Value Engineering" must also be proposed, submitted, and accepted. Application for such acceptance will not be considered by County Engineer until after the "effective date of the Agreement". Bidders should assume that no modifications to the contract or design will be allowed for it is not guaranteed that a modification will be allowed. Bid on the plans and Specifications "As-Is" or with any issued addendum during the bidding phase.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(14) FEDERAL AND STATE INSPECTION: The Federal Government is not participating in the cost of construction of this project. All applicable County laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate County representative in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

(15) PREVAILING WAGE (STATE): This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations. The applicable state wage rates for this contract are detailed in "Annual Wage Order No. 22", which is attached to this bidding document. This supplemental bidding document has important legal consequences. It shall be conclusively presumed that this is in the bidder's possession, and it has been reviewed and used by the bidder in the preparation of any bid submitted on this project.

(16) WORKER ELIGIBILITY REQUIREMENTS: Execution of the construction contract for this project is dependent upon the awarded bidder providing an Affidavit of Compliance AND E-Verify Memorandum-of-Understanding (MOU) between the bidder and Department of Homeland Security to the Contracting Authority as required by section 285.530 RSMo. **The cover page and signature page of the E-Verify MOU and the Affidavit must be submitted with the bid.** A sample Affidavit of Compliance can be found at the Missouri Attorney General's website at the following link:

http://ago.mo.gov/forms/Affidavit_of_Compliance.pdf

All bidders must also be enrolled in the E-Verify Program, and include their MOU prior to contract execution. Bidders who are not enrolled will need to go to the following website link and select "Enroll in the Program" to get started. After completing the program, they will receive their E-Verify MOU with Department of Homeland Security. This document will need to be printed out and kept on file so that a copy can be attached to the Affidavit of Compliance.

http://www.dhs.gov/files/programs/gc_1185221678150.shtm

This requirement also applies to subcontractors and contract labor, but this contract only requires submittal of the verification documents for the prime contractor. It is the prime contractor's responsibility to verify the worker eligibility of their subcontractors in order to protect their own company from liability as required by section 285.530 RSMo.

(17) ANTIDISCRIMINATION: The Contracting Authority hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(18) OSHA TEN HOUR TRAINING REQUIREMENTS: Missouri Law, 292.675 RSMO, requires any awarded contractor and its subcontractor(s) to provide a ten-hour Occupational Safety and Health Administration (OSHA) Construction Safety Program (or a similar program approved by the Missouri Department of Labor and Industrial Relations as a qualified substitute) for their on-site employees (laborers, workmen, drivers, equipment operators, and craftsmen) who have not previously completed such a program and are directly engaged in actual construction of the improvement (or working at a nearby or adjacent facility used for construction of the improvement). The awarded contractor and its subcontractor(s) shall require all such employees to complete this ten-hour program, pursuant to 292.675 RSMO, unless they hold documentation on their prior completion of said program. Penalties, for Non-Compliance include contractor forfeiture to the Contracting Authority in the amount of \$2,500, plus \$100 per contractor and subcontractor employee for each calendar day such employee is employed beyond the elapsed time period for required program completion under 292.675 RSMO.

(19) TRAINEES: By submitting this bid, the bidder certifies that the bidder is familiar with the Training Provision in the Missouri Highways and Transportation Commission's "General Provisions and Supplement Specifications" which are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The number of trainee hours provided under this contract will be **0 slots** at 1000 hours per slot or **0 hours**.

(20) ADDENDUM ACKNOWLEDGEMENT: An addendum, if issued, will be posted on the County's website (Jeffcomo.org in same location as these specifications), and will be emailed to the provided contact on the "Plan Holder Information Request" form. Bidder must submit the plan holder form with a valid contact to receive any addenda. By submitting a bid, the bidder acknowledges he or she was afforded equal opportunity to gain access and knowledge of any addenda. The County shall not be held liable for a bidder's failure to provide contact information leading to the failure to be aware of any contract modifications. The undersigned states that all addenda (if applicable) have been received, acknowledged and incorporated into their bid, prior to submittal. For paper bids, staple addenda to the bid in the appropriate part of the bid.

No Addenda I have checked the County's website for addenda and acknowledge there are no addenda

Addenda I have checked the County's website for addenda and acknowledge the contract modifications

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(THIS SPACE INTENTIONALLY LEFT BLANK)

(21) SIGNATURE AND IDENTITY OF BIDDER: The undersigned states that the following provided information is correct and that (if not signing with the intention to bind themselves to become the responsible and sole bidder) they are the agent of, and they are signing and executing this, as the bid of

_____, which is the correct LEGAL NAME as stated on the contractor questionnaire (if applicable).

a) The organization submitting this bid is a(n) (1) individual bidder, (2) partnership, (3) joint venturer (whether individuals or corporations, and whether doing business under a fictitious name), or (4) corporation. Indicate by marking the appropriate box below.

sole individual

partnership

joint venture

corporation, incorporated under laws of state of _____.

b) If the bidder is doing business under a fictitious name, indicate below by filling in the fictitious name

Executed by bidder this _____ day of _____ 20____.

THE BIDDER CERTIFIES THAT THE BIDDER AND ITS OFFICIALS, AGENTS, AND EMPLOYEES HAVE NEITHER DIRECTLY NOR INDIRECTLY ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THIS BID, AND THAT THE BIDDER INTENDS TO PERFORM THE WORK WITH ITS OWN BONAFIDE EMPLOYEES AND SUBCONTRACTORS, AND DID NOT BID FOR THE BENEFIT OF ANOTHER CONTRACTOR.

THE BIDDER ACKNOWLEDGES THAT THIS IS AN UNSWORN DECLARATION, EXECUTED UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND/OR FALSE DECLARATION UNDER THE LAWS OF MISSOURI, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS. THE FAILURE TO PROVIDE THIS CERTIFICATION IN THIS BID MAY MAKE THIS BID NON-RESPONSIVE, AND CAUSE IT TO BE REJECTED.

THE BIDDER CERTIFIES THAT THE BIDDER'S COMPANY KNOWINGLY EMPLOYS ONLY INDIVIDUALS WHO ARE AUTHORIZED TO WORK IN THE UNITED STATES IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND ALL PROVISIONS OF MISSOURI EXECUTIVE ORDER NO. 07-13 FOR CONTRACTS WITH THE CONTRACTING AUTHORITY.

Check this box ONLY if the bidder REFUSES to make any or all of these certifications. The bidder may provide an explanation for the refusal(s) with this submittal.

Signature of Bidder's Owner, Officer, Partner or Authorized Agent

Please print or type name and title of person signing here

Attest:

Secretary of Corporation if Bidder is a Corporation

Affix Corporate Seal (If Bidder is a Corporation)

NOTE: If bidder is doing business under a fictitious name, the bid shall be executed in the legal name of the individual, partners, joint ventures, or corporation, and registration of fictitious name filed with the secretary of state, as required by sections 417.200 to 417.230 RSMo. If the bidder is a corporation not organized under the laws of Missouri, it shall procure a certificate of authority to do business in Missouri, as required by section 351.572 et seq RSMo. A certified copy of such registration of fictitious name or certificate of authority to do business in Missouri shall be filed with the Missouri Highways and Transportation Commission, as required by the standard specifications.

(22) MODIFICATION AND WITHDRAWAL OF BIDS: Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

If, within twenty-four hours after Bids are opened, any Bidder files a duly signed written notice with the County and promptly thereafter demonstrates to the reasonable satisfaction of the County that there was a material and substantial mistake in the preparation of his Bid, that Bidder may withdraw his bid. Thereafter, that Bidder will be disqualified from further bidding on the Work.

(23) OPENING OF BIDS: Bids will be opened publicly. All Bids shall remain open for sixty days after the day of the Bid opening, but the County may at their sole discretion, release any Bid and return the Bid Security prior to that date. The County reserves the right to reject any and all bids, to waive any and all informalities, and the right to reject non-responsive bids with County Council concurrence. In evaluating Bids, the County shall require Bidders to be on MoDOT's approved contractor listing at least 7 days before the day of the bid opening, and consider whether the Bid meets all requirements of the advertisement and proposal, and any alternates and all unit prices requested in the Bid forms are provided.

(24) AWARD OF CONTRACT: This project will be awarded to the lowest, responsive, responsible bidder.

The County may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by the County. The County may conduct such investigations as they deem necessary to assist in the evaluation of whether any Bid is responsive in accordance with the Contract Documents to the County's satisfaction within the prescribed time. If the contract is to be awarded, the County will give the Successful Bidder a Notice of Award within sixty days after the date of the Bid opening.

Section 39 of the General Provisions set forth the County's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to the County it shall be accompanied by the required Contract Security.

When the County gives a Notice of Award to the Successful Bidder, it will be accompanied by at least four unsigned counterparts of the Agreement and all other Contract Documents. Within fifteen days thereafter Contractor shall sign and deliver at least four counterparts of the Agreement to the County with all other Contract Documents attached. The County will return one executed Contract Agreement to the Contractor.

(25) FAILURE TO EXECUTE AGREEMENT: Failure to execute the agreement and to file the acceptable contract bonds within 15 days after the unexecuted agreement has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the bid guaranty. A bidder failing to file an acceptable bid or contract bond from an approved surety or failing to execute the agreement within the time provided, resulting in a cancellation of the award to that bidder, disqualifies that bidder, and any other firm having common ownership or control with that bidder, from performing any work on the County project or projects which are the subject of that bid, as a prime contractor, a subcontractor or a supplier.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(THIS SPACE INTENTIONALLY LEFT BLANK)

(26) ITEMIZED BID: Bid Forms must be completed in ink or by typewriter. The Bidder shall indicate, in figures, a unit price for each item on the form, the product of the respective quantities and unit prices in the column provided, the subtotal for each item group, and the gross sum (Total Bid).

In case of discrepancy between the gross sum shown on the bid and that obtained by adding the products of the quantities of work and the unit prices, the bidder agrees that the unit prices shall govern, and any errors found in said products and gross sum may be corrected by the County.

Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).

The address, phone number, and email to which communications regarding the Bid are to be directed must be shown.

Bids shall be submitted, in triplicate, at time and place indicated in the Invitation to Bid and shall be included in an opaque sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by the other required documents.

If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "**BID ENCLOSED**" on the face thereof

Failure to submit the following required documents prior to the bid opening will make the bid non-responsive and not eligible for award consideration:

- a. Complete and Submit Plan Holder's List Form prior to bid submittal (email before bid opening)
- b. Bid Submittal Cover Sheet with bidder's name printed or typed
- c. Instructions and Notices to Contractors initialed on each page, all spaces filled, signed.
- d. Balanced Bid Form, complete, signed, and embossed (if corporation), **addenda acknowledged and attached**
- e. Bid Guaranty/Bid Bond (Assurance Company's form is valid substitute to generic form herein)
- f. Bidder's Acknowledgement completed and signed
- g. Affidavit of Federal Employment Authorization (Annual Worker Eligibility Verification Affidavit)
- h. Certification Regarding Anti-collusion (see notice 12 above)
- i. Certification Regarding Use of Contract Funds for Lobbying (see notice 12 above)
- j. Certification Regarding Debarment and Suspension (see notice 12 above)
- k. Certification Regarding Affirmative Action and Equal Opportunity (see notice 12 above)
- l. Bid to be submitted in ink with proper signatures with no white out or initialed changes
- m. Enclose Certificate of Insurance

IN ORDER TO BE CONSIDERED A RESPONSIVE, RESPONSIBLE BIDDER, THE CONTRACTOR MUST READ, UNDERSTAND, COMPLETE AND SUBMIT 3 COPIES OF ALL FORMS WITHIN THIS BID SUBMITTAL PACKAGE, ALONG WITH OTHER SUBMITTAL REQUIREMENTS AS STATED ABOVE AND ON THE BIDDER CHECKLIST.

The County does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE_____

BID FORM

TO: JEFFERSON COUNTY, MISSOURI
BID FOR: COUNTY JAIL PARKING LOT IMPROVEMENTS
LOCAL PROJECT NO. PW16B0061

1. The undersigned BIDDER proposes and agrees, if this BID is accepted, to enter into an Agreement with the County in the form included in the Contract Documents to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Instructions to Bidders. This Bid will remain open for sixty days after the day of Bid opening. BIDDER will sign the Agreement and submit all documents required within fifteen (15) days after the COUNTY'S Notice of Award.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
 - (a) BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as BIDDER deems necessary; and
 - (b) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or a corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over the County.
4. Bidder will complete project for the following unit prices. It is understood that the quantities given for the following bid items are not guaranteed by the Jefferson County Public Works Department and are used solely for the purpose of comparing bids and awarding the contract, and may or may not represent the actual quantities encountered on the job, and that the sum of quantities listed below, multiplied by the unit price shall constitute the gross sum bid:

(Enter Unit Prices Beginning on Next Sheet Below)

BID ITEMS:

DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
MOBILIZATION	LS	1		
SAWCUT ASPHALT PAVEMENT	LF	1120		
PAVEMENT REMOVAL, FULL-DEPTH	SY	2100		
GEOSYNTHETIC FABRIC (UNDER AGGREGATE BASE)	SY	2100		
AGGREGATE BASE (8 IN.)	TON	780		
HOT-MIX ASPHALT PAVEMENT (4 IN.)	TON	475		
8 IN. THICK CONCRETE PAD (40'x20')	SY	90		
4 IN. PAINT PAVEMENT MARKINGS	LF	1250		
PAINT HANDICAP PARKING SYMBOL	EACH	2		
PERFORATED PVC MANHOLE WITH CLEAN STONE AND FILTER FABRIC	EACH	1		
MANHOLES	EACH	1		
TIE INTO EXISTING STRUCTURE	LS	1		
15 IN. DIAMETER STORM SEWER	LF	140		
MATERIAL TESTING SERVICES	LS	1		

PROJECT TOTAL _____

NOTICE TO BIDDER- Bidders must complete the submitted section in its entirety.

5. BIDDER agrees that the work will be completed within **40 Working days** or the CONTRACTOR shall pay the COUNTY, not as a penalty but as **liquidated damages**, a sum equal to **Seven Hundred Dollars (\$700.00)** for each day, as defined by Sec 108 of the 2011 Edition of the "Missouri Standard Specifications for Highway Construction", elapsing between the expiration of such time limit plus such extensions as may be necessary to cover contingencies beyond the CONTRACTOR'S control and the date of the full completion.

The County reserves the right to negotiate additional terms for the time of completion with the successful bidder.

6. Communications concerning this Bid shall be addressed to the following:

Name: _____ Title: _____ Phone () -

Email: _____ Address: _____

7. The terms used in this Bid which are defined in the General Provisions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Provisions.

8. **CERTIFICATIONS FOR FEDERAL JOBS:** By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the contracting authority may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

9. BIDDER has examined copies of all the Contract Documents including but not limited to the Bidder's Checklist, Bid Notice, Instructions and Notices to Contractors, and the following Addenda, if applicable. Bidder must acknowledge all addenda to be considered responsive.

NO.	Date Released	Bidder's Initials	
1	/ /2016		
2	/ /2016		
3	/ /2016		
4	/ /2016		Initial Above if No Addenda is Acknowledged

COMPLETE BID SUBMITTED on _____, 2016

By _____
(Corporation Name)

_____ (State of Incorporation) _____ (dba Name if Applicable)

By _____
(Typed Name of Person Authorized to Sign) X _____
(Signature of Authorized Person)

_____ (Title) _____ (Affix Corporate Seal)

Attest _____
(Typed Name of Secretary)

X _____
(Signature of Secretary)

Business Address: _____

Business Phone: (____) - _____

BID BOND

Suitable bid security in the amount of:

(\$_____) Dollars and equal to five (5%) percent as called for in the advertisement for bids which accompanies this proposal. This sum is to be forfeited to the County of Jefferson if the party or parties making the proposal fail to enter into a contract with the approved securities within fifteen (15) days after the Notice of Award has been made. The undersigned has examined the Plans and Specifications for the work to be done and has satisfied himself as to the work to be done and the conditions under which it must be carried out.

The Contractor shall commence work within three (3) days after the date of a written Notice to Proceed from the County and shall fully complete all work under this proposal within the scheduled time established by the Contract Documents. This proposal shall be equally binding to all heirs, administrators, executors, successors and assigns.

FIRM NAME _____

BY _____

TITLE _____

ATTEST _____

TITLE _____

ADDRESS _____

TELEPHONE _____

BIDDER'S ACKNOWLEDGMENT

(Complete and fill out all parts applicable, and strike out all parts not applicable)

STATE OF _____)
)
COUNTY OF _____) SS.

On this _____ day of _____ 20_____, before me appeared _____ to me personally known, who, being by me first duly sworn, did say that he executed the forgoing Proposal with full knowledge and understanding of all its terms and provisions and of the plans and specifications; that the correct legal name and address of the Bidder (including those of all partners or joint ventures) is fully and correctly set out above; that all statements made therein by or for the Bidder are true; and

(if a sole individual) acknowledged that he executed the same as his free act and deed.

(if a partnership or joint venture) acknowledged that he executed the same, with written authority from, and as the free act and deed of, all said partners or joint venturers.

(if a corporation) that he is the _____
(President or other agent)

of _____; that the above Proposal was signed and sealed in behalf of said corporation by authority of its board of directors; and he acknowledged said proposal to be the free act and deed of said corporation.

Witness my hand and seal at _____, _____
The day and year first above written.

(SEAL) _____ Notary Public

My commission expires 20

ANNUAL WORKER ELIGIBILITY VERIFICATION AFFIDAVIT

(for joint ventures, a separate affidavit is required for each business entity)

On the _____ day of _____, 20____, before me appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, stated as follows:

- I, the Affiant, am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the state to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities.
- I, the Affiant, am the _____ of _____, and I am duly authorized, directed, and/or empowered to act officially and properly on behalf of this business entity.
- I, the Affiant, hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security, and the aforementioned business entity shall participate in said program to verify the employment eligibility of newly hired employees working in connection with any services contracted by the Jefferson County. I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.
- I, the Affiant, also hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection with any services contracted by Jefferson County, any alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).
- I, the Affiant, am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 though 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.
- I, the Affiant, acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

Affiant Signature

Notary Public

My commission expires:

[documentation of enrollment/participation in a federal work authorization program attached]

AGREEMENT FORM

THIS AGREEMENT is dated as of _____, in the year ____ by and between JEFFERSON COUNTY, MISSOURI (hereinafter called OWNER OR COUNTY) and _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants herein after set forth and in the amount of _____, agree as follows:

ARTICLE 1. WORK

CONTRACTOR shall complete all work as specified or indicated in the Contract Documents for the County Jail Parking Lot Improvements Project. The work is generally described as follows:

The proposed work includes: The removal and replacement of the existing parking lot pavement section, along with minor drainage improvements, and associated work items, materials and testing. The work in general will consist of bituminous surfacing, concrete pad installation, aggregate base, drainage pipe/manholes, parking paint, and material testing.

ARTICLE 2. ENGINEER

The County has designated the Director of Public Works, who is hereinafter called ENGINEER and who has the authority assigned to OWNER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME

3.1 The work will be completed and ready for final payment in accordance with Section 30 of the General Provisions within **40 working days** after the date when the Contract Time commences to run. Allowances will be made for weather conditions and other occurrences beyond the control of the CONTRACTOR.

If the CONTRACTOR is unable to begin work as required, the ENGINEER shall be notified in writing. Unless the ENGINEER gives written approval for a delay in beginning the work, calendar days will begin to be counted for liquidated damages. The count will continue until the CONTRACTOR begins full operation. The count will resume when work is suspended, or full operation is not maintained.

3.2 Liquidated Damages. The Contractor agrees that should he fail to complete work in the time specified or such additional time as may be allowed by the Owner under this contract, the Contractor shall pay the County, not as a penalty but as **liquidated damages**, a sum equal to **Seven Hundred Dollars (\$700.00)** for each day, as defined by Sec 108 of the 2011 Edition of the "Missouri Standard Specifications for Highway Construction", elapsing between the expiration of such time limit plus such extensions as may be necessary to cover contingencies beyond the CONTRACTOR'S control and the date of the full completion.

ARTICLE 4. CONTRACT PRICE

4.1 Owner shall pay Contractor for performance of the work in accordance with the contract documents in current funds.

BID ITEMS:

DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
MOBILIZATION	LS	1		
SAWCUT ASPHALT PAVEMENT	LF	1120		
PAVEMENT REMOVAL, FULL-DEPTH	SY	2100		
GEOSYNTHETIC FABRIC (UNDER AGGREGATE BASE)	SY	2100		
AGGREGATE BASE (8 IN.)	TON	780		
HOT-MIX ASPHALT PAVEMENT (4 IN.)	TON	475		
8 IN. THICK CONCRETE PAD (40'x20')	SY	90		
4 IN. PAINT PAVEMENT MARKINGS	LF	1250		
PAINT HANDICAP PARKING SYMBOL	EACH	2		
PERFORATED PVC MANHOLE WITH CLEAN STONE AND FILTER FABRIC	EACH	1		
MANHOLES	EACH	1		
TIE INTO EXISTING STRUCTURE	LS	1		
15 IN. DIAMETER STORM SEWER	LF	140		
MATERIAL TESTING SERVICES	LS	1		

PROJECT TOTAL _____

ARTICLE 5. PAYMENT PROCEDURES

Contractor shall submit Application for Payment in accordance with Section 33 of the General Provisions. The Engineer as provided in the General Provisions will process application for Payment.

5.1 Progress Payment. Owner will make progress payments per the Contract Bid Price on the basis of the Contractor's Application of Payment as recommended by the Engineer, on or about the First day of each month during the construction as provided below. All progress payments will be on the basis of the Work measured on the job site according to unit of measurement as shown within the Project Technical Specifications or Missouri Standard Specifications.

5.1.1 The Owner may initiate withholding of retainage as provided by Section 109.9 of the Missouri Standard Specifications for Highway Construction. Release of any retained percentage shall be as provided by Section 109.9.

5.1.2 When the Contractor receives any payment from the Owner, the Contractor shall make prompt payment to subcontractors and suppliers as provided by Section 109.13 of the Missouri Standard Specifications for Highway Construction.

5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with Section 33 of the General Provisions, Owner shall pay the remainder of the Contract Price as recommended by the ENGINEER.

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS

In order to induce the County to enter into this Agreement CONTRACTOR makes the following representations:

6.1 CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal laws, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.

6.2 CONTRACTOR has studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site of otherwise affecting cost, progress or performance of the Work which were relied upon by the ENGINEER in the preparation of the Drawings and Specifications. When the information is available it will either be included in the bid documents or made available at the Jefferson County Public Works Department for the Contractor's review.

6.3 CONTRACTOR has made or caused to be made examinations, investigations and tests and studies of such reports and related data in addition to those referred to in Article 9 as he deems necessary for the performance of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract documents; and no additional examinations, investigations, tests, reports or similar data will be required by CONTRACTOR for such purposes.

6.4 CONTRACTOR has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.

6.5 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

ARTICLE 7. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR are attached to this Agreement, made a part hereof and consists of the following:

- 7.1 This Agreement
- 7.2 Exhibits to this Agreement (if any)
- 7.3 Contract Performance and Payment and Materials Bonds, consisting of 3 pages.
- 7.4 Notice of Award
- 7.5 General Provisions (page 1 to 13, inclusive).
- 7.6 Specifications bearing the title PROJECT SPECIFICATIONS FOR COUNTY JAIL PARKING LOT IMPROVEMENTS, PW16B0061 and consisting of all pages as listed in the table of contents thereof.

- 7.7 Addenda numbers ____ to ____ , inclusive.
- 7.8 CONTRACTOR'S Bid and all attachments
- 7.9 Documentation submitted by CONTRACTOR prior to Notice of Award
- 7.10 Any Modification, including Change Orders, duly delivered after execution of agreement.

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be altered, amended or repealed by a Modification (as defined in Article 35 of the General Provisions).

ARTICLE 8. MISCELLANEOUS

- 8.1 Terms used in this Agreement which are defined in Article 1 of the General Provisions shall have the meanings indicated in the General Provisions.
- 8.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 8.3 The County and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 9. OTHER PROVISIONS

- 9.1 Access to records. In connection with this Contract the County shall have access to any books, documents, papers, and records of the CONTRACTOR, which are directly pertinent to this project for the purpose of making an audit, examination, excerpts, and transcriptions.
- 9.2 Applicable Laws and Regulations. The CONTRACTOR expressly agrees to comply with all applicable rules and regulations as set forth in the Contract Documents or as may be required by law, and further agrees to submit all certifications, notices, and affirmative action plans as may now or hereafter be required, and to place such conditions and provisions in any and all subcontracts as may be required.
- 9.3 Conflict of Interest. The CONTRACTOR covenants that he or she presently has not interest of any kind and shall not acquire any type of interest, direct or indirect, in the program or any property therein, which would conflict in any manner or degree with the performance of his or her services and obligation hereunder. The CONTRACTOR further covenants that in the performance of this contract, no person known to have any conflicting interest shall be knowingly employed in the performance of this Contract.

ARTICLE 10. VENUE

- 10.1 It is agreed by the parties that any action at law, suit in equity, or other judicial proceeding to enforce or construe this Agreement, or regarding its alleged breach, shall be instituted only in the Circuit Court of Jefferson County, Missouri.

IN WITNESS WHEREOF, the parties hereto have signed this agreement in quadruplicate. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

FOR: JEFFERSON COUNTY, MISSOURI

BY: _____ Date: _____
COUNTY EXECUTIVE

ATTEST: _____
COUNTY CLERK _____ DEPUTY CLERK

FOR: _____

BY: _____ Date: _____
CONTRACTOR

ATTEST: _____

I hereby certify under section 50.660 RSMo there is either: (1) a balance of funds, otherwise unencumbered, to the credit of the appropriation to which the obligation contained herein is chargeable, and a cash balance otherwise unencumbered, in the treasury, to the credit of the funds from which payment is to be made, each sufficient to meet the obligation contained herein; or (2) bonds or taxes have been authorized by vote of the people and there is a sufficient unencumbered amount of the bonds yet to be sold or of the taxes levied and yet to be collected to meet the obligation in case there is not a sufficient unencumbered cash balance in the treasury.

COUNTY AUDITOR

APPROVED AS TO FORM

COUNTY COUNSELOR

CONTRACT PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the Undersigned _____

of _____
(firm)

*a (corporation) duly authorized by law to do business as a construction contractor in the
(partnership)

State of _____ (hereinafter called the "Contractor"), and _____

_____ (hereinafter called the "Surety"), a corporation

duly authorized to do a Surety business under the laws of the State of Missouri, are held

firmly bound unto Jefferson County, (hereinafter called the "County"), in the penal sum

of _____ Dollars (\$_____), lawful money of the United States, for the

payment of which to be made unto said County; we bind ourselves, our heirs, executors,

administrators, successors and assigns, jointly and severally, firmly by these presents as

follows:

The conditions of this obligation are such that, whereas on the _____ day

of _____, 20____, the said Principal entered into a written Agreement, which

Agreement is hereby made a part hereof, with the said County for the construction of

_____.

NOW THEREFORE, if the said Principal shall faithfully and properly perform the foregoing Contract according to all the terms thereof, and shall, as soon as the work contemplated by said contract is completed, pay to the proper parties all amounts due for all labor and material required by this contract in the construction work, and all insurance premiums for both compensation and all other kinds of insurance on said work, and for all labor performed in such work whether by subcontractor or otherwise, then this obligation shall be void, otherwise it shall remain in full force and effect, and may be sued on for the

use and benefit by any person furnishing material or performing labor, either as an individual or as a subcontractor, for any contractor in the name of said County.

Every Surety on this bond shall be deemed held, any contract on the contrary notwithstanding, to consent without notice.

- a) To the extension of time to the Contractor in which to perform the contract.
- b) To changes in the plans, specifications, amount of work or contract.

IN TESTIMONY WHEREOF, the Parties hereunto have caused the execution hereof in _____ original counterparts as of the _____ day of _____, 20____.

(SEAL) _____

Attest:

_____ By _____

(SEAL) _____

Attest:

_____ By _____

PAYMENT AND MATERIALS BOND

KNOW ALL MEN BY THESE PRESENT, that we, _____
Principal and Address

_____, as Principal, and _____
Surety and Address
as Surety, are held and firmly bond unto The County of Jefferson, Missouri, hereinafter called Obligee,
in the amount of \$_____, for the payment of which we jointly and severally bind ourselves,
our heirs, executors, administrators, successors, trustees, and assigns firmly by these presents.

WHEREAS, the Principal has entered into a contract with Obligee for

_____; and
describe briefly

WHEREAS, the Obligee requires that the Principal enter into a surety bond satisfying the terms of
Section 107.170 R.S.Mo.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such, that if the Principal shall pay,
or cause to be paid in full, the claims of all persons performing labor upon, or furnishing materials to
be used in, or furnishing appliances, equipment or power contributing to such work under said
contract, then this obligation shall be void; otherwise to remain in full force and effect. The total
amount of surety's liability under this bond shall in no event exceed the amount hereof, and in no
event shall the undertaking hereby be construed to impose liability on the surety beyond that
required by the terms of Section 107.170 R.S.Mo.

Signed and sealed this _____ day of _____, 20____.

PRINCIPAL

By _____

SURETY

By _____

(ACKNOWLEDGMENT FOR PRINCIPAL)
(ACKNOWLEDGMENT AND POWER OF ATTORNEY FOR SURETY)

GENERAL PROVISIONS

1) **DEFINITIONS:** The following terms as used in these Contract Documents are respectively defined as follows:

- a) "Owner" - A person, firm, corporation, municipality or Government agency, by which the Contract will be awarded. Where ever the Owner is specified, it shall also be construed to mean his authorized representative.
- b) "Consultant" - The Engineering firm responsible for the preparation of construction plans.
- c) "Contractor" - The person, firm, or corporation to whom the contract is awarded.
- d) "Subcontractor" - A person, firm, or corporation, performing any part of the Contractor's obligations hereunder at the site of work excluding, however, the furnishing of standard materials, such as cement, lumber, and other materials not worked to a special design under the plans and specifications for the work.
- e) "Contract Documents" - The agreement subscribed by the parties, the Invitation to Bidders, Information for Bidders, the Proposal, and the Plans and Specifications.
- f) "Work" - The furnishing of all labor, materials, equipment and other incidentals necessary or convenient to the successful completion and carrying out of all duties and obligations of the Contractor under the Contract Documents.
- g) "Days" - Except where otherwise specifically provided in the Contract Documents, calendar days including Sundays and Holidays.

2) **NOTICE:** Unless otherwise specified herein, any notice required under the Contract Documents shall be deemed given if deposited in the United States mail, first class postage prepaid. Notice may also be given by hand delivery to the authorized representative

3) **INTENT OF THE CONTRACT DOCUMENTS:** The intention of the Contract Documents is to include in the contract price the cost of all labor and materials, water, fuel, tools, plant, equipment, light, transportation and all other expense as may be necessary for the proper execution of the work.

In interpreting the Contract Documents, words describing materials of work which have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with such well-known meaning recognized by architects, engineers and the trade.

The work shall be executed in strict conformity with the plans and specifications.

The Contract Documents are complimentary and what is called for by any one shall be as binding as if called for by all. Anything stated in the specifications and not shown in the drawings, or shown in the drawings and not stated in the specifications, shall be of like effect as if shown or stated in both.

4) **PLANS / PROJECT SPECIFICATIONS:** Unless otherwise provided in the Contract Documents, the Plans, Project Specifications and subsequent addendums are available; free of charge, as a downloadable file from the Jefferson County website (<http://www.jeffcomo.org/PublicWorksProjects.aspx?nodeID=Purchasing>). The Contractor will be responsible for reproducing the plans necessary to carry out all the work.

In case of discrepancy in the plans, the matter shall be immediately submitted to the Consultant or Owner without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

5) **SUPERVISION AND PERSONNEL:** The Contractor shall have at the work site at all times a job supervisor. That individual shall be capable of reading and understanding the project plans and specifications, have authority to order materials and equipment, and have authority to execute work as directed by the Owner. The Contractor shall provide the name and phone numbers of the person appointed as job supervisor prior to issuance of notice to proceed.

All workers shall have sufficient skill and experience to properly perform the work assigned to them. The owner may demand the dismissal of any person employed by the contractor in, about or upon the work who engages in misconduct, is incompetent or negligent in the due and proper performance of assigned duties, or who neglects or refuses to comply with any proper directions given. Such person shall not again be employed thereon without the written consent of the owner. Should the contractor continue to employ or re-employ any such person, the owner may suspend the work until the contractor complies with such orders.

6) COMPLIANCE WITH LAWS: The Contractor shall comply with all laws, ordinances, rules and regulations bearing in the conduct of the work and shall obtain at his expense all permits and licenses necessary for the prosecution of the work.

The Contractor shall be responsible for the payment of all Federal, State, municipal or local taxes, including but not limited to sales and use taxes, applicable to the performance of the contract and shall indemnify and hold harmless the Owner from the consequences of his failure to pay such taxes.

A sales tax exemption for construction materials is allowed by RSMo Section 144.062 RSMo, which applies to contractors for the County. Jefferson County will issue an exemption certificate to the contractors, subcontractors and suppliers for the purchase of materials used in construction.

7) USE OF JOB SITE: The Contractor shall confine his equipment, apparatus, the storage of materials and operations of his workmen to limits indicated by law, ordinance, permits, easements or plans and shall not encumber the premises with his materials.

The Contractor shall not load or permit any part of any structure to be loaded to the extent that its safety may be endangered.

8) SANITARY PROVISIONS: The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his employees as may be necessary to comply with the sanitary requirements of law or ordinance.

9) SURVEYS: The Contractor shall provide all surveys necessary to the performance of his work. All work shall be done to the lines, grades and elevations shown on the plans. Any work done without being properly located may be ordered removed and replaced at the Contractor's expense.

The Owner or Consultant may, in his sole discretion, check from time to time the reference marks, lines, grades and measurements established by the Contractor but his exercise or failure to exercise such right shall not relieve the Contractor of his obligation under the preceding paragraph.

10) CONDITIONS AT THE SITE: The Contractor shall make such investigations of conditions above or below the surface of the ground, as he may deem necessary for the proper and timely performance of his work, including but not limited to the making of borings. No oral representations by any persons respecting such conditions shall in any manner be binding upon the Owner or the Consultant.

The Owner may have, for its own use, made borings at or near the site of the work. The boring data, if collected, will be made available to the Contractor, for his own convenience, if he desires to examine it.

Any interpretations or conclusions drawn by the Contractor from such data shall be his own and the Owner makes no representation or guaranty concerning the accuracy or completeness of such data.

11) UTILITIES AND OTHER OBSTRUCTIONS: It shall be the sole responsibility of the Contractor in the performance of the contract to locate and avoid all utilities, other structures and obstructions whether located below or above the surface of the ground. For that purpose he shall employ all necessary precautions and methods to prevent damage to utilities, other structures and obstructions. In the event such damage does occur, the Contractor shall be solely liable therefore and he shall notify the affected utility and Owner immediately, make or have made all necessary repairs and bear the expense thereof and all damage caused thereby.

If the Contractor finds he cannot safely work at a location designated in the plans and specifications, either because of utilities, other structures or obstructions that may be damaged, he shall notify the Owner immediately.

Certain information relating to piping and underground utilities and structures, such as gas mains, water mains, and electric duct lines, has been gathered by the Consultant for its purposes and has been shown on the plans for the convenience of the Contractor and for such use as he may, at his own risk, desire to make of it. Any interpretations or conclusions drawn by the Contractor from such data on the plans shall be his own and the Owner and the Consultant makes no representations or guaranty concerning the accuracy or completeness of such data.

12) STRUCTURES ENCOUNTERED AND PROTECTION OF LIFE AND PROPERTY: The Contractor shall, at his own expense, support and protect all buildings, bridges, conduits, wires, water pipes, sewers, pavements, curbing, sidewalks, equipment and fixtures of all kinds and all other public or private property that may be encountered or endangered in the execution of the work herein contemplated. He shall replace, repair or to otherwise make good any damage caused to any such property to the satisfaction of the Owner thereof.

In the event the Contractor does not perform his obligations under the preceding paragraph, the Owner reserves the right at its election to make good any damage to public or private property caused by the work of the Contractor and the cost thereof shall be borne by the Contractor.

In the event the Contractor refuses or fails to pay bills therefore upon presentation, the Owner may pursue any remedies available to it or may deduct the amount thereof from any money that may be due the Contractor hereunder from time to time.

Throughout the performance of the work, the Contractor shall construct and adequately maintain suitable and safe crossings over the trenches, and such detours as are necessary to care for the public and private traffic. The material excavated from trenches shall be deposited in such manner as shall give as little inconvenience as possible to the traveling public, to adjoining property owners, to other contractors or to the Owner.

The Contractor at his own expense shall provide the necessary watchmen and sufficient warning lights and barricades and take such other precautions as are necessary to protect life and property.

The Contractor shall provide watchmen or additional watchmen at any point where they may be requested by the proper official of any municipality or governmental body affected.

Nothing in this section shall be construed as requiring the Contractor to provide a road patrol.

13) PROTECTION OF WORK: The Contractor shall provide proper facilities, take all necessary precautions and assume the entire cost for protecting the work against adverse weather conditions and for handling all storm and flood water, sewage, seepage, ice or snow that may be encountered during the performance of the contract and the manner for providing for such contingencies and for carrying on the work in freezing weather shall meet with the approval of the Owner. If the Contractor shall fail to provide such protection or in the event of emergencies, the Owner may provide such protection at the Contractor's expense.

The contractor assumes all risk of damage to or destruction of the work covered by this contract until the work is completed and accepted by the Owner and shall repair or replace at his expense any work damaged or destroyed prior to such completion and acceptance regardless of cause.

14) ACCIDENT PREVENTION: Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws and building and construction codes shall be observed.

15) BLASTING: The Contractor shall comply with all Federal, State, County and municipal laws, rules and regulations applicable to the transportation, storage or use of explosives.

The Contractor shall assume all responsibility for any injury or damage that may be done during the transportation, storage or use of any explosives.

16) OTHER CONTRACTS: The Owner may award other contracts for additional work, and the Contractor shall fully cooperate with such other contractors, and carefully schedule and fit his own work to that work provided under the other contract. The Contractor shall not commit or permit any act, which will interfere with the performance of work by any other contractor.

17) CUTTING AND PATCHING: The Contractor shall do all cutting, fitting, or patching of his work that may be required to make its several parts connect with the work of other contractors shown upon, or reasonably implied by the plans and specifications.

The Contractor shall not endanger any work by cutting, digging, or otherwise, and shall not cut or alter the work of any other contractor.

18) CLEANING UP: The Contractor shall at all times keep the premises free from accumulation of waste material of rubbish and at the completion of the work shall remove from and about the site all his rubbish, tools, equipment, scaffolding and surplus materials and shall leave his work clean and ready for use.

19) SURVEILLANCE: The Contractor shall provide safe, sufficient and proper facilities at all times for the surveillance of work by the Consultant, the Owner, the Missouri Department of Transportation, the Federal Highway Administration, or any other governmental agency, it being agreed that these agencies have the right of entry.

The Contractor shall within 24 hours after receiving written notice from the Owner proceed to remove all materials rejected by the Owner, whether worked or unworked, and take down all portions of the work, which shall be considered as unsound or improper, or in any way failing to conform to the plans and specifications.

Should it be considered necessary or advisable by the Owner at any time before acceptance of the entire work to make an examination of work already completed by removing or tearing out same, the Contractor shall, on written request, promptly furnish all necessary facilities, labor, and material for that purpose. If such work is found to be defective or nonconforming in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, an equitable adjustment shall be made in the contract price to compensate the Contractor for the additional services involved in such examination and reconstruction and, if completion of the work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.

Unless otherwise provided in this contract, acceptance by the Owner shall be made as promptly as practicable after completion of all work required by this contract. Acceptance shall be final and conclusive except as regards latent defects, fraud, or gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guarantee.

20) MATERIALS AND WORKMANSHIP: Unless otherwise stipulated in the specifications, all workmanship, equipment, materials and articles incorporated in the work covered by this contract are to be new and of the best grade of their respective kinds for the purpose. When required by the plans and specifications, the Contractor shall furnish the Owner or Consultant, for approval, certified copies of test results made of the materials or articles, which he contemplates incorporating in the work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment, materials and articles installed or used without such approval shall be at the risk of subsequent rejection.

If not otherwise provided, material or work called for in this contract shall be furnished and performed in accordance with established practice and standards recognized by architects, engineers and the trade.

21) COOPERATION WITH UTILITIES: All utility facilities and appurtenances within the project limits shall be located or relocated by the utility owner, unless otherwise specified. Locations of these utilities will be provided by the utility owners and may not be exact, particularly with regard to underground installations. The contractor shall call for locates prior to the start of any work.

The contractor shall lead the efforts to coordinate with utility owners and the engineer in the location and relocation of utility facilities to minimize effects upon the contractor's work, interruption to utility service and duplication of work by the utility owners. Facilities or appurtenances that are to remain in place during construction shall be accounted for and protected by the contractor's work procedures.

In the event utility services are interrupted as a result of damage within the project limits, the contractor shall notify the appropriate utility authorities and cooperate with the utility owners until service has been restored. Work shall not begin around fire hydrants until provisions for continued service have been made and approved by the local fire authority.

When the failure of the owners of utility facilities to cooperate and coordinate their work with that of the contractor results in actual delay to the contractor in the overall completion of the contractor's work, such delay will be

considered in the count of working days or date specified for completion as contractor's sole compensation from the County, provided the contractor notified the engineer in writing of the delay at the time the delay occurred.

The contractor shall use every precaution to prevent damage to all public and private utilities. Repairs to damaged utilities caused by negligent or wrongful acts or omissions on the part of the contractor shall be corrected at the contractor's expense. Damaged facilities shall be restored to a condition similar or equal to that existing before the damage occurred. The utility will designate who shall repair the damaged facility and the contractor shall not make repairs without utility approval.

Should there be located within the right of way any public or private utility facilities that are to remain in place and which will interfere with the contractor's proposed methods of operation, the contractor, in cooperation with the engineer, shall make all necessary arrangements with the owner for any temporary or permanent removal or relocation of such facilities desired for the contractor's convenience. Any cost involved shall be at the contractor's expense.

If utility facilities or appurtenances are found that are not noted in the contract documents and could not be discovered in accordance with [Sec 102.5 of the Missouri Standard Specifications](#), the engineer shall be notified in writing as soon as possible of the conflict and will determine whether relocation of the utility is necessary to accommodate construction. If relocation is necessary, the contractor will make the necessary arrangements with the utility owner. Compensation for the relocation of utilities will be worked out between the County and the utility owner prior to the relocation of any utility. No additional compensation will be made to the contractor for coordinating the location and/or relocation of utilities.

22) "OR EQUAL CLAUSE": Whenever, in these specifications or in any of the Contract Documents, any article, appliance, device or material is designated by a manufacturer's or vendor's or proprietary or trade name and such words are not followed by the condition "or equal", it shall be deemed that the words "or equal" do follow such designation unless the text clearly requires a contrary interpretation. Any article or material equaling the standards fixed may be used in place of that specifically mentioned by the specifications, provided that the material proposed is first submitted to and approved by the Owner or Consultant.

If by reason of the unavailability of material or equipment, a substitute item of material or equipment is approved by the Owner or Consultant, the Owner shall receive the benefit of any economy resulting from the substitution.

23) SUBLETTING OR ASSIGNING THE CONTRACT: The bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the County.

Second tier subcontracting will not be permitted on this project. It will be the responsibility of the Contractor to insure that his subcontractors do not, in turn, subcontract any portion of the work.

The Contractor shall furnish to the County a signed copy of all subcontracts at or before the pre-construction meeting. This applies to Federal and local projects.

The Prime Contractor must be on MoDOT's approved Contractor Listing unless otherwise stipulated in the contract. The Prime Contractor must also perform with its own organization, contract work amounting to not less than 30% of the total original contract price. This applies to Federal and local projects.

24) WARRANTIES AND GUARANTEES: Clauses that require the contractor to guarantee materials and workmanship and otherwise maintain the work for a specified period after satisfactory completion and final acceptance will not be approved. This is not even permissible as a non-participating bid item.

Routine warranties or guarantees provided by a manufacturer are valid. Contractors' warranties or guarantees providing for satisfactory in-service operation of mechanical and electrical equipment and relates components for a period not to exceed six (6) months following project acceptance are permissible

25) INSPECTION BY JEFFERSON COUNTY: The Contractor shall assure that representatives of the County shall have the opportunity at any time to inspect and review the work done by the Contractor and his subcontractors on this project and shall grant them access to all parts of the work.

26) **MATERIAL TESTING:** All project sampling and testing of materials shall be performed by an independent consultant employed by the Contractor. The County will have a project representative onsite to ensure proper testing procedures are followed by the Contractor hired consultant. Acceptance testing specified to be conducted by the consultant hired by the Contractor. Consultant inspector must be MoDOT Certified (EPG 136.11.17.1 and EPG 106.18). Costs associated with providing the sample materials shall be incidental to the cost of the project. A copy of all consultant testing reports shall be provided to the County.

27) **TRAFFIC CONTROL:** The Traffic Control Plan for this overlay project must follow the Federal Highway Administration's Manual On Uniform Traffic Control Devices (MUTCD 2009 including revision 1 and 2, May 2012) for all traffic control operations.

28) **STORM WATER POLLUTION PREVENTION PLAN (SWPPP):** The County's Storm Water Pollution Prevention Plan will be as stated in this General Provision and/or as shown on the plans.

The primary purpose of this plan is to protect the public and waterways from the adverse effects of construction.

For all of Jefferson County projects, the County's "Erosion and Sediment Control/Storm Water Management Design Manual" shall be followed. A copy of that manual is available on the Jefferson County website at:

<http://www.jeffcomo.org/StormwaterErosion.aspx?nodeID=StormwaterDivision>

For projects without a drawing showing erosion and sediment control measures, the Engineer or his representative will direct what measures are to be used and where they will be placed. Pay items for these measures will be in the table of "ESTIMATED QUANTITIES". Any measures not covered by a pay item or not specifically addressed on the Plans or Specifications will be by negotiated price.

Maintenance of any item utilized, will be considered incidental to that pay item. Maintenance shall be considered as the repair or replacement of any measure paid for, but not properly functioning before final acceptance of the project. Maintenance shall take place at the time as directed by the Engineer.

Concrete wash down pits shall be utilized for the washing of all concrete trucks. The pits shall be of adequate size to handle all wash down water. The pits shall be lined with a plastic liner (10 mil minimum) to prevent the seepage of the water into the adjoining ground. Berms may be necessary to prevent the migration of any splash water into the streams. The hardened waste from the wash down pits shall be removed and broken into pieces no larger than one cubic foot. The waste concrete pieces may be used as revetment, but will not be considered in measurement for payment. The cost of the wash down pits, berms and disposal shall be incidental to the cost of the concrete.

Any spillage of hazardous waste shall be cleaned up by the Contractor at no additional cost to the Owner. Measures shall be taken to ensure that no hazardous waste reaches a stream or adjoining property.

Any fines assessed for not following the SWPPP, will be the sole responsibility of the Contractor. If the Owner is fined by a State or Federal agency, liquidated damages in the amount of the fine will be charged to the Contractor by the Owner. Contractor agrees that it shall remit payment for said liquidated damages immediately upon request by Owner. Failure to do so may, at the Owner's option, be considered a breach of contract thereby entitling Owner to such other damages as may result. These damages shall be in addition to the liquidated damages described in this paragraph.

29) **SCHEDULE AND PROGRESS REPORTS:** The Contractor shall, within 15 calendar days after date of notice to proceed, submit to the Owner five copies of a diagram covering operations in the work for the County's review and approval subject to update. The diagram will be used as a basis for review of monthly progress reports until the project is completed. At the request of the Owner, the diagram may be updated to demonstrate actual progress.

30) **TIME OF COMPLETION AND LIQUIDATED DAMAGES:** The parties recognize that time is of the essence of this contract and, after the Contractor receives notice to proceed from the Owner, the work to be performed hereunder shall be commenced and shall be completed within the respective number of days specified in the proposal.

If the Contractor fails to complete the work within the time specified, or any extension thereof granted hereunder, the Contractor should pay the Owner the sum specified in the Contract for each day, as defined by Sec 108 of the 2011

Edition of the "Missouri Standard Specifications for Highway Construction", the Contractor is in default. It is agreed that said daily sum is to be paid, not as a penalty, but as compensation to the Owner as liquidated damages for loss which the Owner will suffer because of such default through increased administrative and engineering costs and other tangible and intangible costs. Such damages may be at the Owner's option, be deducted from any monies held by it which are payable to the Contractor.

The completion of the work included under this Contract is defined for purposes of determining liquidated damages, as that time when all of the structures and appurtenances have been completed and tested and are, in the opinion of the Owner, ready for continuous permanent use and occupancy for the purposes intended, which includes all grading, cleaning up, or other minor work which is required to provide a completed project in accordance with the plans and specifications. The date shall be the date of a letter from the Owner to the Contractor indicating substantial completion or final acceptance.

31) EXTENSION OF TIME: The Contractor shall not be entitled to any extension of time for completion of the work as herein above specified unless the Contractor, within 10 days from the beginning of any delay, notifies the Owner in writing of such delay and the cause thereof and the Owner shall determine:

- a. That such delay arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of public enemy, acts of Government in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors arising from such unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors; and
- b. That the Contractor cannot complete the work within the time specified solely by reason of such causes.

The Owner shall make a determination as soon as practicable after the Contractor's notice is received and shall decide the amount of additional time, if any, for completion of the work which conditions justify. Any time extensions will require approval of the Owner.

32) FORFEITURE OF CONTRACT: Should the Contractor at any time refuse, neglect or fail to supply a sufficient number of properly skilled workmen or sufficient equipment or materials of the proper quality, or execute the work with diligence and in accordance with approved schedules, or fail in the performance of any of the covenants herein contained, the Owner may, after three days written notice to the Contractor and his bonding company, provide any such labor, equipment or materials and deduct the cost thereof from any money then due or thereafter to become due to the Contractor under this contract.

Alternatively, the Owner, may after ten days written notice to the Contractor and his bonding company, terminate the employment of the Contractor for said works and enter upon the premises and take possession of all materials, tools and equipment thereon and finish or contract with others to finish the work. The Owner and such others may use such materials, tools and equipment to finish the work. The Contractor shall not be entitled to rental or other compensation for the use of his construction tools and equipment, but shall only be entitled to the return thereof in the condition existing when possession was taken, ordinary wear and tear excepted. In case of such discontinuance of the employment of the Contractor, the Contractor shall not be entitled to receive any further payment under this Contract until the said work shall be wholly finished, at which time, if the unpaid balance of the amount to be paid under this contract shall exceed the expenses incurred by the Owner to the Contractor, but if such expenses shall exceed such unpaid balance, the Contractor shall pay the difference from money then due or thereafter to become due to the Contractor under this contact. The expense incurred by the Owner as here provided for finishing the work and its cost incurred through such default shall be certified by the Consultant, whose certificate thereof shall be conclusive and binding upon the parties. The remedies of the Owner under this Article are exclusive of and in addition to any other contained in this contract, the Contractor's bonds, or provided by law.

33) PAYMENTS: The Contractor shall receive as full compensation for all work hereunder a sum equal to the value of the work done based in his proposal, attached hereto and made a part of this contract.

Payment shall be made to the Contractor monthly, based upon the approved pay request. The final payment shall be paid to the Contractor, subject to approval of the final change order, within 30 days after completion and acceptance of the entire work herein contracted for, and upon receipt by the County, and approval of, all final documentation. Final

documentation shall include proof of the meeting of DBE goals, and the release by materials suppliers and subcontractors of having received full payment.

By the 15th of each month the Contractor shall submit to the Owner an invoice containing an estimate of the percentage of the total work under the contract accomplished to the end of such month. The invoice shall be in such form and detail as required by the Owner.

The requirements set forth in Section 109 of the Missouri Standard Specifications For Highway Construction for payments, retained percentage, release of retained percentage, prompt payment to subcontractors and suppliers and final payment shall apply to all contracts where the Federal Government is participating in the cost of construction.

34) PAYMENTS NO EVIDENCE OF PERFORMANCE: No certificate for payment made under this contract except the final certificate of final payment, shall be evidence of the performance of this contract, either wholly or in part. No payment shall be construed to be an acceptance of defective work or improper materials.

35) CHANGES: The Owner and/or the Consultant shall have the right to make changes within the scope of the work or change the quantities of the work to be performed. No such change shall be valid unless made in writing by the Owner or Consultant, and for all Federal Aid Contracts such changes shall first be approved by both the Missouri Highway and Transportation Department and the Federal Highway Administration.

In the event such changes cause an increase or decrease in the Contractor's cost of or time required for performance of the contract, the contract price and/or period of performance shall be equitably adjusted; provided, the increase or decrease in the amount of the work for which unit prices apply under the specifications shall be computed by multiplying the change in quantities (measured as provided in the contract documents) of such work by such contract prices.

In the absence of a bid price for a given item of work not provided for nor fairly included in the bid prices for other items of work, a written agreement may be made between the Owner and the Contractor to be included in the written order for such extra work.

Whenever the Contractor and the Owner are unable to agree on prices for extra work and the Owner directly or acting through the Consultant orders the Contractor to proceed with the work by force account, the work will be paid for in the manner herein described and the compensation thus provided shall constitute full payment for said work. Payment will be determined as follows:

For all materials purchased by the Contractor and used in the force account work, he will be paid the actual cost of such materials, including sales taxes if required, and freight and delivery charges as shown by original receipted bills, to which will be added an amount equal to 15 percent of the sum thereof. The Owner or Consultant, however, reserves the right to approve or to reject the materials to be used and the sources of supply of any materials furnished by the Contractor.

For all equipment and machinery used in the force account work, the Contractor will be paid reasonable operated and maintained rental prices to which no percentages will be added.

The Contractor will be paid the cost of wages for all labor while engaged in the force account plus the actual cost chargeable to the force account work of workmen's compensation insurance, social security taxes, unemployment compensation insurance and such additional amounts as are paid by the Contractor by reason of an employment contract generally applicable to his employees, to which total sum will be added an amount equal to 15 percent of wages and other costs listed above. In evidence of the costs of labor, equipment and materials for which payment is to be made under the force account order; the Contractor shall provide a certified statement of wages actually paid, together with copies of supporting payrolls, of equipment rental charges, and of bills for materials.

Wage rates used in determining the amount of the payment will be the actual wage rates paid by the Contractor for work under this contract, except that no rate used shall exceed the rate of comparable labor currently employed on the project.

Payment for services of foremen in direct charge of the specific operation will be made. Payment for the services of superintendents, timekeepers or other overhead personnel will not be made nor will payment for services of watchmen

be made unless required specifically by the force account work. The actual function performed by an employee rather than his payroll title will be the criterion used in determining the eligibility of an employee's services for payment under this provision.

The types and amounts of equipment and machinery used by the Contractor in carrying out his work under the force account order shall be in keeping with normal practice for work of a similar nature, except that the Owner or Consultant may, at his discretion, limit by specific instruction the type and amounts of equipment and machinery to be used.

In computing the hourly rental of such equipment, less than 30 minutes shall be considered ½ hour, except when the minimum rental to be paid shall be one hour. Rental time will not be allowed while equipment is inoperative due to breakdowns. The rental time of equipment to be paid for shall the time the equipment is in operation on the force account work being performed, and, in addition, shall include the time required to move the equipment to the work and return it to its original location. When approved in advance by the Owner or Consultant, towing or transporting costs will be allowed when the equipment is moved by means other than its own power. No payment will be made for moving time, towing or transporting the equipment if it is used at the site of the work on other than force account work. No payment will be allowed for the use of small tools and minor items of equipment, which, as used herein, are defined as individual tools or pieces of equipment having a replacement value of \$50.00 each or less.

For additional premiums paid on Performance and Labor and Materials Bonds by reason of increases in the account of work over and above that called for in the original contract due to the inclusion of the force account work, and for additional premiums paid on Public Liability and Property Damage Insurance by reason of extra hazard inherent in the force account work of the type called for in the original contract, the Contractor will, on presentation of substantiating evidence from his bonding and insurance carriers, be paid the actual costs of the increase in premium, to which no percentages will be added. Payment for the cost of additional premiums paid on Workmen's Compensation Insurance by reason of extra hazard introduced into the Contractor's operations by the inclusion of force account work is covered by the provisions above, except that any claim for additional cost based on the application, by reason of extra hazard, of a higher insurance rate to any portion of the payroll over and above that chargeable to the force account work under the provisions above, must be substantiated by evidence from the Contractor's insurance carrier.

The Contractor and Owner shall compare records of the work performed on a force account basis at the end of each day. These records shall be prepared in triplicate by the Contractor and shall be signed by both the Owner and the Contractor's representative, one copy being retained by the Contractor and two copies retained by the Owner. Payment for force account work will be included in monthly progress payments.

36) LIENS AND CLAIMS: In addition to other remedies available the Owner hereunder, in all cases of non-payment by the Contractor or a subcontractor of any sums of money due for labor, materials, supplies, equipment or other items in performing in this contract, or if at any time there should be evidence of a lien or claim chargeable to the Contractor or a subcontractor for which, if established, the Owner might become liable, the Owner is hereby authorized and empowered to retain out of any payment then due or thereafter to become due to the Contractor, an amount sufficient to indemnify the Owner against any such lien or claim.

Alternatively, without limiting other remedies and rights of the Owner under the Contract, under the Contractor's bonds or under the law, the Owner may withhold, in addition to the 10 percent retention, a sufficient amount of payments otherwise due to the Contractor to cover payments that may be past due and payable by the Contractor or his subcontractors or suppliers for just claims for labor or materials furnished in and about the performance of the work under this contract and for failure of the Contractor to make proper payments to his subcontractors. The Owner shall disburse and shall have the right to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment there from. The Owner will render the Contractor a proper accounting of all such funds disbursed in behalf of the Contractor.

Final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete waiver or release by himself and his subcontractors and others of all liens and claims arising out of the work, or receipts in full lieu thereof, and if required, an affidavit that so far as he has knowledge or information the releases and receipts include all the labor and materials for which a lien could be filed.

37) RESPONSIBILITY: Nothing in the Contract Documents shall be construed as placing the work under the specific direction or supervision of the Owner or the Consultant or relieving the Contractor from his liability as an independent contractor and, as such, he shall perform his work, including, but not limited to, supervision and control of his own

personnel and scheduling of the work as required to ensure its proper and timely performance, and he shall be solely responsible for the exercise of due care to prevent bodily injury and damage to property in the execution of the work.

The Owner or Consultant shall have the right of entry to the site for the purpose of verifying compliance with the plans and specifications.

38) INDEMNIFICATIONS AND INSURANCE:

Responsibility for Claims for Damage or Injury:

The Contractor and surety shall indemnify and save harmless the County, and its members, agents and employees from all claims or suits made or brought for personal injury, death or property damage, caused or contributed to be caused by:

- (a) The negligence of the contractor, subcontractors, suppliers or their respective officers, agents or employees;
- (b) The creation or maintenance of a dangerous condition of or on the County's property or right of way, which condition occurred at least in part due to the acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees; or
- (c) The failure of the contractor, subcontractors, suppliers of their respective officers, agents or employees, to perform the work in accordance with the plans and specifications.

Neither the County nor the Contractor, by execution of a contract, shall intend to or create a new or enlarge an existing cause of action in any third party. This provision shall not be interpreted to create any new liability which does not exist under the statutory limited waiver of sovereign immunity, or to waive or extinguish any defense which either party to this contract or their respective agents and employees may have to an action or suit by a third party.

Contractor's Responsibility for Work:

Until the County accepts the work, it shall be in the custody and under the charge and care of the Contractor. The Contractor shall restore and replace, at the Contractor's expense, any lost or stolen County-owned material in the Contractor's custody or control. Damages to any portion of the work before its completion and acceptance, caused by the action of the elements or from any other reason, shall be restored or replaced at the Contractor's expense. Issuance of a payment estimate on any part of the work done will not be considered as final acceptance of any work completed up to that time. The County may, in its discretion, make such adjustments as it considers being proper for damage to the work due to unforeseeable causes beyond the control of, and without fault or negligence on the part of the Contractor.

Liability Insurance Requirements

The Contractor shall procure and maintain at its own expense, until acceptance of the project by the County, liability insurance for all damages and losses imposed by law and assumed under the contract, of the kinds and in the amounts specified in the relevant sections shown herein. Before the Contractor commences the work, the Contractor shall require the insurance company or companies to furnish to the County evidence of such insurance showing compliance with these specifications. All insurance required herein shall be occurrence policies in a form acceptable to the County, and shall remain in force until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by its formal acceptance by the County.

Each policy or its declaration pages shall provide that the policy shall not be materially changed or canceled until the County has been given at least 30 days advance notice in writing. If any policy is canceled before the contract work is complete, a satisfactory replacement policy must be in force, with notice and evidence of insurance submitted to the County, prior to the effective date of cancellation of the former policy. All evidence of insurance and notices shall be submitted to: Director of Public Works, Jefferson County Public Works Department, 725 Maple Street, PO Box 100, Hillsboro, Missouri 63050. **The Contractor shall furnish the County with a complete copy of the policy prior to the time the Contractor commences work on the site of the project.** Failure to furnish evidence of proper insurance, or complete insurance policies will result in temporary suspension of work and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

Workers' Compensation Liability Insurance

The Contractor shall furnish evidence to the County that, with respect to the operations it performs, it carries workers' compensation insurance, or is qualified as self-insured, sufficient to comply with all its obligations under state laws relating to worker's compensation. The Contractor shall also require each subcontractor on the project to furnish the same evidence to the County. This evidence shall be furnished to and approved by the County prior to the time the Contractor or the subcontractor commences work on the site of the project.

Commercial General Liability Insurance

The Contractor shall obtain one or more occurrence-based policies of commercial general liability insurance (Form CG 00 01 or equivalent), which provide coverage for the contract work. The minimum limits of liability for commercial general liability insurance shall be: \$1,000,000 each bodily injury or property damage occurrence, combined single limit, \$2,000,000 general aggregate with a per project endorsement and \$1,000,000 products/completed operations aggregate. Each such policy shall be endorsed so as to cover liability arising from blasting if applicable, other inherently dangerous activities and underground property damage. Each such policy shall be endorsed to include broad form general liability, contractual liability and completed operations coverage.

Commercial Auto Liability Insurance

The Contractor shall obtain one or more occurrence-based policies of auto liability insurance, which provide for its owned, non-owned and hired vehicles of every type and description, which are used in the contract work. The minimum limits of liability for such insurance shall be \$1,000,000 combined single limit.

Additional Insureds

Each such policy of commercial general liability insurance shall name the County of Jefferson and its employees as additional insureds. Each commercial general liability insurance policy shall also contain a separation of insureds condition. The insurance afforded by the Contractor shall be primary insurance.

Subcontractor's Coverage

If any part of the contract is subcontracted, each subcontractor, or the Contractor on behalf of the subcontractor, shall obtain the same commercial general liability insurance and commercial automobile liability insurance coverage. The commercial general liability insurance shall name the same entities specified above as additional insureds, and shall have the same separation of insureds conditions.

Railroad Protective Liability Insurance

In addition to other required liability insurance, the Contractor shall provide railroad protective liability insurance if applicable, for and in behalf of the railroad as outlined in provisions for each project. The insurance policy shall be submitted to the County in original and duplicate for approval. No work will be permitted on the railroad right of way until such approval is granted.

Insurance with Other Than Missouri Companies

Any insurance policy required as specified above, if written by an insurance company organized in a state other than Missouri, shall be signed by an agent or broker licensed by the State of Missouri. In the case of policies written by companies organized in a state other than Missouri, the evidence of insurance submitted as authorized in the contract shall be signed by an agent or broker licensed by the State of Missouri. Nothing in this provision limits or waives the requirement that each insurance policy must be issued by a company authorized to issue such insurance in Missouri.

Third Party Liability

Neither the State of Missouri, the County of Jefferson nor the Contractor, by execution of the contract including these specifications, intend to create a right of action in a third party beneficiary except as specifically set out in these

specifications and the contract. It is not intended by any required contractual liability in the contract or in these specifications that any third party beneficiary has a cause of action arising out of the condition of the project when completed in accordance with the plans and accepted by the County.

Personal Liability of Public Officials

There shall be no personal liability upon the County, or any member, employee or agent of the County in carrying out any of the provisions of the contract or in exercising any power or authority granted to them, it being understood that in such matters they act as agents and representatives of the County, with official and public duty doctrine immunity. If any provision of the contract appears to impose a duty on such an individual, the duty remains exclusively that of the County and is not a personal duty or obligation of the individual.

39) BOND: The Contractor at his expense shall, before commencing work hereunder, procure and deliver to the Owner a Performance Bond and a Labor and Materials Payment Bond in the amount of 100% of the contract as awarded, as security for the faithful performance of the contract and the payment of all obligations thereunder by the Contractor and his subcontractors. The Bonds shall be written in such form as may be satisfactory to the Owner and provided by a guaranty or surety company listed in the latest issue of U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for such company in said Circular 570. In substance, the condition of the obligation under said bond or bonds shall be as follows:

“The condition of this obligation is such that if the above bound Principal shall in all respects comply with the terms and conditions of said contract and his obligations thereunder, including the specifications and plans referred to therein, and such changes and alterations as may be made in said contract, specifications and plans and shall indemnify and save harmless the Owner against or from all costs, expenses, damages, injuries or losses to which the said Owner may be subjected by reason of any wrongdoing, misconduct, want of care or skill, negligence of default on the part of said Principal, his subcontractors, officers, agents or employees, in the execution of performance of said contract and shall promptly pay all just claims for damages for injury to property and for labor, equipment, materials and supplies incorporated in the work or consumed in the performance thereof incurred by said Principal, his subcontractors, officers, agents or employees, in or about the construction or improvement contracted for, then this obligation shall be void; otherwise, to remain in full force and virtue in law. The Surety hereby waives notice of any changes, alterations or modifications, including any extensions of the period of performance, in the contract, specifications and plans.”

If any surety upon any bond furnished in connection with this contract becomes unacceptable to the Owner, or if any such surety fails to furnish reports as to his financial condition from time to time as requested by the Owner, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the Owner and of persons supplying labor or materials in the prosecution of the work contemplated by this contract.

40) ROYALTIES AND PATENTS: The Contractor shall indemnify, defend and save harmless the Owner and the Consultant from all liabilities, decrees, judgments, claims or disbursements, including attorney fees and/or damages and expenses which may come against or be incurred by the Owner or the Consultant by reason of the use of any patented material, machinery, devices, equipment or processes furnished or used in the performance of the work under this contract or the use by the Owner of the completed structure or by reason of the use of patented designs furnished by the Contractor and accepted by the Owner. In the event any claim, action at law or suit in equity of any kind whatsoever is made or brought against the Owner, the Owner shall have the right, without impairment of the foregoing indemnification, to retain from the money due and to become due said Contractor a sufficient amount of money to protect itself against loss.

41) SPECIFICATION CONFLICTS: Where any provision of specifications referred to or incorporated into the Contract Documents is inconsistent or in conflict with the provisions of the Contract Documents, the provisions of the Contract Documents shall govern.

42) STANDARDS: Where materials and methods are indicated in the specifications as being in conformance with a standard specification, reference in all cases shall be to the latest edition of the specification and shall include all interim revisions, unless specifically stated otherwise.

43) FEDERAL EMPLOYMENT AUTHORIZATION: The Contractor shall comply with the requirements of the revised Statutes of the State of Missouri Chapter sections 285.525 to 285.555. If any part of the contract is subcontracted, each subcontractor shall comply with the same requirements of this specification.

No Contractor shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

As a condition for the award of the contract the Contractor shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such Contractor shall also sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

A Contractor may enroll and participate in a federal work authorization program and shall verify the employment eligibility of every employee in the Contractor's hire whose employment commences after the Contractor enrolls in a federal work authorization program.

A general contractor or subcontractor of any tier shall not be liable under sections 285.525 to 285.550 when such general contractor or subcontractor contracts with its direct subcontractor who violates subsection 1 of this section, if the contract binding the contractor and subcontractor affirmatively states that the direct subcontractor is not knowingly in violation of subsection 1 of this section and shall not henceforth be in such violation and the contractor or subcontractor receives a sworn affidavit under the penalty of perjury attesting to the fact that the direct subcontractor's employees are lawfully present in the United States.

44) OSHA TRAINING: The Contractor shall comply with the requirements of the revised Statutes of the State of Missouri Chapter sections 292.675. If any part of the contract is subcontracted, each subcontractor shall comply with the same requirements of this specification.

Any Contractor signing a contract to work on the construction of public works for the Owner shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees which includes a course in construction safety and health approved by OSHA or a similar program approved by the department which is at least as stringent as an approved OS11A program. All employees are required to complete the program within sixty (60) days of beginning work on such construction project.

Any employee found on a worksite subject to this section without documentation of the successful completion of the course required under this section shall be afforded twenty (20) days to produce such documentation before being subject to removal from the project. The contractor shall forfeit as a penalty to the Owner two thousand five hundred dollars (\$2,500) plus one hundred dollars (\$100) for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training. The penalty shall not begin to accrue until the time period in this section has elapsed.

The Owner shall withhold and retain all sums and amounts due and owing as a result of any violation of this section when making payments to the contractor under the contract. The contractor may withhold from any subcontractor, sufficient sums to cover any penalties the Owner has withheld from the contractor resulting from the subcontractor's failure to comply with the terms of this section. If the payment has been made to the subcontractor without withholding, the contractor may recover the amount of the penalty resulting from the fault of the subcontractor in an action maintained in the circuit court in the county in which the public works project is located from the subcontractor.

In determining whether a violation of this section has occurred, and whether the penalty of this section shall be imposed, the Department of Labor and Industrial Relations shall investigate any claim of violation. Upon completing such investigation, the Department shall notify the Owner and any party found to be in violation of this section of its findings and whether a penalty shall be assessed. Determinations under this section may be appealed in the circuit court in the county in which the public works project is located. The Department may establish rules and regulations for the purpose of implementing the provisions of this section.

This section shall take effect on August 28, 2009.

END OF GENERAL PROVISIONS

Project Technical Specifications

DOCUMENT 00 01 10

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JEFFERSON COUNTY JAIL
PARKING LOT IMPROVEMENTS
DEPARTMENT OF PUBLIC WORKS
JEFFERSON COUNTY, MISSOURI
HR # 845-1175

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APPLICABLE MoDOT STANDARD PLANS

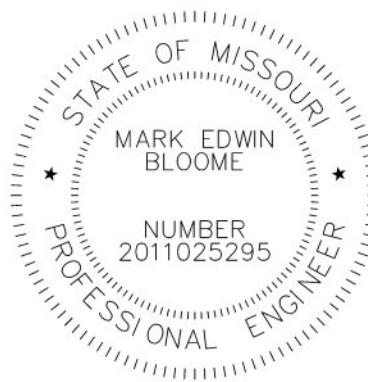
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Applicable MoDOT Standard Plans can be found at

http://www.modot.org/business/standards_and_specs/currentstandardplans.htm

SPECIFIERS:

Civil Engineer:



Mark E. Bloome, P.E.
MO #2011025295
Lic. Exp.: 12-31-2017

END OF SECTION

SECTION 03 10 00 - CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Formwork for cast-in place concrete.
 - 2. Shoring, bracing, and anchorage.
 - 3. Form accessories.
 - 4. Form stripping.
- B. Related Sections:
 - 1. Section 03 20 00 - Concrete Reinforcing.
 - 2. Section 03 30 00 - Cast-In-Place Concrete.
 - 3. Section 32 13 13 - Concrete Paving

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 318 - Building Code Requirements for Structural Concrete.
 - 2. ACI 347 - Guide to Formwork for Concrete.
- B. American Forest and Paper Association:
 - 1. AF&PA - National Design Specifications for Wood Construction.
- C. The Engineered Wood Association:
 - 1. APA/EWA PS 1 - Voluntary Product Standard for Construction and Industrial Plywood.
- D. American Society of Mechanical Engineers:
 - 1. ASME A17.1 - Safety Code for Elevators and Escalators.
- E. ASTM International:
 - 1. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
 - 2. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
- F. West Coast Lumber Inspection Bureau:
 - 1. WCLIB - Standard Grading Rules for West Coast Lumber.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 347.
- B. For wood products furnished for work of this Section, comply with AF&PA.

1.4 COORDINATION

- A. Coordinate this Section with other sections of work, requiring attachment of components to formwork.

PART 2 PRODUCTS

2.1 FORM MATERIALS

- A. Form Materials: At discretion of Contractor.

2.2 FORMWORK ACCESSORIES

- A. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Size, strength and character to maintain formwork in place while placing concrete.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify lines, levels, and centers before proceeding with formwork. Verify dimensions agree with Drawings.

3.2 INSTALLATION

- A. Earth Forms:
 1. Earth forms are not permitted.
- B. Formwork - General:
 1. Provide top form for sloped surfaces steeper than 1.5 horizontal to 1 vertical to hold shape of concrete during placement, unless it can be demonstrated that top forms can be omitted.
 2. Construct forms to correct shape and dimensions, mortar-tight, braced, and of sufficient strength to maintain shape and position under imposed loads from construction operations.
 3. Camber forms where necessary to produce level finished soffits unless otherwise shown on Drawings.
 4. Carefully verify horizontal and vertical positions of forms. Correct misaligned or misplaced forms before placing concrete.
 5. Complete wedging and bracing before placing concrete.
- C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

3.3 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

- C. Arrangement: Arrange formwork to allow proper erection sequence and to permit form removal without damage to concrete.
- D. Screeds:
 - 1. Set screeds and establish levels for tops of concrete slabs and levels for finish on slabs.
 - 2. Slope slabs to drain where required or as shown on Drawings.
 - 3. Before depositing concrete, remove debris from space to be occupied by concrete and thoroughly wet forms. Remove freestanding water.

3.4 FORM CLEANING

- A. Clean forms as erection proceeds, to remove foreign matter within forms.
- B. Clean formed cavities of debris prior to placing concrete.
- C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
- D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

3.5 FORM REMOVAL

- A. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
- B. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.
- C. Leave forms in place for minimum number of days as specified in ACI 347.

3.6 ERECTION TOLERANCES

- A. Construct formwork to maintain tolerances required by ACI 318.

END OF SECTION

SECTION 03 20 00 - CONCRETE REINFORCING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Reinforcing bars.
 - 2. Welded wire fabric.
 - 3. Reinforcement accessories.

- B. Related Sections:
 - 1. Section 03 10 00 - Concrete Forming and Accessories.
 - 2. Section 03 30 00 - Cast-In-Place Concrete.
 - 3. Section 32 13 13 - Concrete Paving

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 318 - Building Code Requirements for Structural Concrete.

- B. ASTM International:
 - 1. A185/A185M-07 Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.
 - 2. ASTM A615/A615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.

- C. American Welding Society:
 - 1. AWS D1.4 - Structural Welding Code - Reinforcing Steel.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 318.

1.4 QUALIFICATIONS

- A. Welders: AWS qualified within previous 12 months.

1.5 COORDINATION

- A. Coordinate with placement of formwork, formed openings and other Work.

PART 2 PRODUCTS

2.1 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, 60 ksi yield grade.

B. Welded Plain Wire Fabric: ASTM A185/A185M.

2.2 ACCESSORY MATERIALS

- A. Tie Wire: Minimum 16 gage annealed type.
- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions.
- C. Reinforcing Splicing Devices: Mechanical threaded type; sized to fit joined reinforcing.

2.3 FABRICATION

- A. Fabricate concrete reinforcement in accordance with ACI 318.
- B. Form reinforcement bends with minimum diameters in accordance with ACI 318.
- C. Weld reinforcement in accordance with AWS D1.4.
- D. Locate reinforcement splices not indicated on Drawings, at point of minimum stress.

PART 3 EXECUTION

3.1 PLACEMENT

- A. Place, support and secure reinforcement against displacement. Do not deviate from required position beyond specified tolerance.
- B. Accommodate placement of formed openings.
- C. Space reinforcement bars with minimum clear spacing in accordance with ACI 318.
- D. Maintain concrete cover around reinforcement as follows:

Reinforcement Location		Minimum Concrete Cover
Footings and Concrete Formed Against Earth		3 inches
Concrete exposed to earth or weather	No. 6 bars and larger	2 inches
	No. 5 bars and smaller	1-1/2 inches
Supported Slabs, Walls, and Joists	No. 14 bars and larger	1-1/2 inches
	No. 11 bars and smaller	3/4 inches
Beams and Columns		1-1/2 inches
Shell and Folded Plate Members	No. 6 bars and larger	3/4 inches
	No. 5 bars and smaller	1/2 inches

3.2 ERECTION TOLERANCES

A. Install reinforcement within the following tolerances for flexural members, walls, and compression members:

Reinforcement Depth	Depth Tolerance	Concrete Cover Tolerance
Greater than 8 inches	plus or minus 3/8 inch	minus 3/8 inch
Less than 8 inches	plus or minus 1/2 inch	minus 1/2 inch

END OF SECTION

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes cast-in-place concrete for the following:
 - 1. Sidewalk.
 - 2. Curb.
- B. Related Sections:
 - 1. Section 03 10 00 - Concrete Forming and Accessories.
 - 2. Section 03 20 00 - Concrete Reinforcing.
 - 3. Section 32 13 13 - Concrete Paving

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 305 - Hot Weather Concreting.
 - 3. ACI 306.1 - Standard Specification for Cold Weather Concreting.
 - 4. ACI 308.1 - Standard Specification for Curing Concrete.
 - 5. ACI 318 - Building Code Requirements for Structural Concrete.
- B. ASTM International:
 - 1. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 - 2. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 3. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - 4. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
 - 5. ASTM C150 - Standard Specification for Portland Cement.
 - 6. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.
 - 7. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
 - 8. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete.
 - 9. ASTM C845 - Standard Specification for Expansive Hydraulic Cement.
 - 10. ASTM C1017/C1017M - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
 - 11. ASTM D994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
 - 12. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
 - 13. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
 - 14. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 15. ASTM E1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.

1.3 SUBMITTALS

- A. Design Data:
 - 1. Submit concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:
 - a. Hot and cold weather concrete work.
 - b. Air entrained concrete work.
 - 2. Identify mix ingredients and proportions, including admixtures.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 318.
- B. Conform to ACI 305 when concreting during hot weather.
- C. Conform to ACI 306.1 when concreting during cold weather.
- D. Acquire cement and aggregate from one source for Work.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Maintain concrete temperature after installation at minimum 50 degrees F for minimum 7 days.

1.6 COORDINATION

- A. Coordinate placement of joint devices with erection of concrete formwork and placement of form accessories.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I – Normal Portland type.
- B. Normal Weight Aggregates: ASTM C33
- C. Water: ACI 318; potable.

2.2 ADMIXTURES

- A. Manufacturers:
 - 1. BASF Corporation-Construction Systems.
 - 2. Cortec Corporation.
 - 3. Euclid Chemical Company.
 - 4. Grace Construction Products.
 - 5. Green Umbrella.
 - 6. Sika Corporation.
 - 7. Substitutions: Permitted.

- B. Air Entrainment: ASTM C260.
- C. Chemical: ASTM C494/C494M.
- D. Plasticizing: ASTM C1017/C1017M.

2.3 JOINT DEVICES AND FILLER MATERIALS

- A. Joint Filler ASTM D994; Asphalt impregnated fiberboard or felt.
- B. Sealant: ASTM D6690, Type I.

2.4 CONCRETE MIX

- A. Select proportions for normal weight concrete in accordance with ACI 301.
- B. Provide concrete to the following criteria:

Material and Property	Measurement
Compressive Strength (28 day)	3500 psi
Cement Type	ASTM C150
Aggregate Type	Normal weight

- C. Admixtures: Include admixture types and quantities indicated in concrete mix designs only when approved by Architect/Engineer.
 - 1. Use accelerating admixtures in cold weather. Use of admixtures will not relax cold weather placement requirements.
 - 2. Do not use calcium chloride nor admixtures containing calcium chloride.
 - 3. Use set retarding admixtures during hot weather.
 - 4. Add air entrainment admixture to concrete mix for work exposed to freezing and thawing or deicing chemicals.
- D. Ready Mixed Concrete: Mix and deliver concrete in accordance with ASTM C94/C94M.
- E. Site Mixed Concrete: Mix concrete in accordance with ACI 318.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify requirements for concrete cover over reinforcement.
- B. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Remove laitance, coatings, and unsound materials.
- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.
- C. Remove debris and ice from formwork, reinforcement, and concrete substrates.
- D. Remove water from areas receiving concrete before concrete is placed.

3.3 PLACING CONCRETE

- A. Place concrete in accordance with ACI 318.
- B. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints, are not disturbed during concrete placement.
- C. Deposit concrete at final position. Prevent segregation of mix.
- D. Place concrete in continuous operation for each panel or section determined by predetermined joints.
- E. Consolidate concrete.
- F. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- G. Place concrete continuously between predetermined expansion, control, and construction joints.
- H. Saw cut joints within 12 hours after placing. Use 3/16 inch thick blade, cut into 1/4 depth of slab thickness.

3.4 CONCRETE FINISHING

- A. Finish concrete surfaces in accordance with ACI 318.

3.5 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Cure concrete in accordance with ACI 308.1.

3.6 FIELD QUALITY CONTROL

- A. Field testing will be performed by Owner's testing laboratory in accordance with ACI 318.
- B. Submit proposed mix design of each class of concrete to testing firm for review prior to commencement of Work.
- C. Strength Test Samples:
 - 1. Sampling Procedures: ASTM C172.
 - 2. Cylinder Molding and Curing Procedures: ASTM C31/C31M, cylinder specimens, standard cured.
 - 3. Sample concrete and make one set of three cylinders for every 75 cu yds or less of each class of concrete placed each day and for every 5,000 sf of surface area for slabs and walls.
 - 4. When volume of concrete for any class of concrete would provide less than 5 sets of cylinders, take samples from five randomly selected batches, or from every batch when less than 5 batches are used.
 - 5. Make one additional cylinder during cold weather concreting, and field cure.
- D. Cylinder Compressive Strength Testing:
 - 1. Test Method: ASTM C39/C39M.
 - 2. Test Acceptance: In accordance with ACI 318.
 - 3. Test one cylinder at 7 days.
 - 4. Test two cylinders at 28 days.
 - 5. Dispose remaining cylinders when testing is not required.
- E. Maintain records of concrete placement. Record date, location, quantity, air temperature and test samples taken.

3.7 PATCHING

- A. Allow Architect/Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Architect/Engineer upon discovery.
- C. Patch imperfections in accordance with ACI 318.

3.8 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by Architect/Engineer.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect/Engineer for each individual area.

END OF SECTION

SECTION 31 05 13 - SOILS FOR EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Subsoil materials.
 - 2. Topsoil materials.
- B. Related Sections:
 - 1. Section 31 05 16 - Aggregates for Earthwork.
 - 2. Section 31 22 13 - Rough Grading.
 - 3. Section 31 23 17 - Trenching.
 - 4. Section 31 23 23 - Fill.
 - 5. Section 31 25 13 - Erosion Controls: Slope protection and erosion control.
 - 6. Section 32 91 19 - Landscape Grading.
 - 7. Section 32 92 19 - Seeding.
 - 8. Section 33 05 14 - Public Manholes and Structures.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 2. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 3. ASTM D2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- C. Missouri Department of Transportation (MoDOT): Standard Specification Book for Highway Construction, (Current Edition) including Special Provision for Erosion Control and all addenda. References made to compensation, method of measurement and basis of payment shall not apply.

1.3 QUALITY ASSURANCE

- A. Furnish each material from:
 - 1. Excavated and reused materials
 - 2. If not reused material – A single source throughout the Work.
- B. Topsoil work shall be performed in accordance with MoDOT Specification Section 804 – Topsoil.
- C. Maintain one copy of MoDOT Specification Section 804 on site.

PART 2 PRODUCTS

2.1 SUBSOIL MATERIALS

- A. Subsoil Type S1:
 - 1. Excavated and re-used material.
 - 2. Well-Graded.
 - 3. Free of lumps larger than 3 inches (75 mm), rocks larger than 2 inches (50 mm) and debris.

2.2 TOPSOIL MATERIALS

- A. Topsoil Type S2:
 - 1. Conforming to MoDOT Standard Specification Section 804 – Topsoil which states as follows:
 - a. "Topsoil shall be obtained from sources approved by the engineer. Topsoil shall be a fertile, friable and loamy soil of uniform quality, without admixture of subsoil material, and shall be free from material such as hard clods, stiff clay, hardpan, partially disintegrated stone, pebbles larger than one inch (25 mm) in diameter and other impurities. Topsoil shall be relatively free from grass, roots, weeds and other objectionable plant material or vegetative debris undesirable or harmful to plant life or which will prevent the formation of a suitable seedbed."

2.3 SOURCE QUALITY CONTROL

- A. Testing and Analysis of Subsoil Material: Perform in accordance with ASTM D698.
- B. Testing and Analysis of Topsoil Material: Perform in accordance with ASTM D698.
- C. When tests indicate materials do not meet specified requirements, change material and retest.
- D. Furnish materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.1 EXCAVATION

- A. Excavate subsoil and topsoil from areas designated. Strip topsoil to full depth of topsoil in designated areas.
- B. Stockpile excavated material meeting requirements for subsoil materials and topsoil materials.
- C. Remove excess excavated materials subsoil and topsoil not intended for reuse, from site.
- D. Remove excavated materials not meeting requirements for subsoil materials and topsoil materials from site.

3.2 STOCKPILING

- A. Stockpile materials on site at locations designated by Engineer.

- B. Stockpile in sufficient quantities to meet Project schedule and requirements.
- C. Separate differing materials with dividers or stockpile apart to prevent mixing.
- D. Stockpile topsoil 8 feet high maximum.
- E. Prevent intermixing of soil types or contamination.
- F. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.
- G. Stockpile unsuitable materials on impervious material and cover to prevent erosion and leaching, until disposed of.

3.3 STOCKPILE CLEANUP

- A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION

SECTION 31 05 16 - AGGREGATES FOR EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Coarse aggregate materials.
 - 2. Fine aggregate materials.
- B. Related Sections:
 - 1. Section 31 05 13 - Soils for Earthwork: Fill and grading materials.
 - 2. Section 31 22 13 - Rough Grading.
 - 3. Section 31 23 17 - Trenching.
 - 4. Section 31 23 23 - Fill.
 - 5. Section 31 25 13 - Erosion Controls: Slope protection and erosion control.
 - 6. Section 32 11 23 - Aggregate Base Courses.
 - 7. Section 32 91 19 - Landscape Grading.
 - 8. Section 33 05 14 - Public Manholes and Structures.
 - 9. Section 33 42 14 - Public Pipe Culverts.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses.
 - 2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. ASTM International:
 - 1. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 2. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 4. ASTM D2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
 - 5. ASTM D4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- C. Missouri Department of Transportation (MoDOT): Standard Specification Book for Highway Construction, (Current Edition) including Special Provision for Erosion Control and all addenda. References made to compensation, method of measurement and basis of payment shall not apply.

1.3 SUBMITTALS

- A. Materials Source: Submit name of imported materials suppliers.
- B. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout the Work.
- B. Aggregate shall be in the gradation and type in accordance with MoDOT Spec. Section 1007.
- C. Maintain one copy of MoDOT Specification Section 1007 on site.

PART 2 PRODUCTS

2.1 COARSE AGGREGATE MATERIALS

- A. Coarse Aggregate Type A1 (Road/Driveway Base Course): MoDOT Specification Section 1007 Type 1. "Type 1 aggregate for base shall consist of crushed stone, sand and gravel or reclaimed asphalt or concrete. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing No. 40 sieve shall have a maximum plasticity index of six. Any sand, silt and clay and any deleterious rock and shale shall be uniformly distributed throughout the material. The aggregate shall be in accordance with the following gradation requirements: "

Sieve	Percent by Weight (Mass)
Passing 1-inch	100
Passing 1/2-inch	60-90
Passing No. 4	35-60
Passing No. 30	10-35

2.2 FINE AGGREGATE MATERIALS

- A. Fine Aggregate Type A2 (Bedding): MoDOT Specification Section 1007 Type 5. "Type 5 aggregate for base shall consist of crushed stone, sand and gravel or reclaimed asphalt or concrete. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing the No. 40 sieve shall have a plasticity index not to exceed six. Any sand, silt and clay, and any deleterious rock and shale shall be uniformly distributed throughout the material. Type 5 aggregate shall be in accordance with the following gradation requirements: "

Sieve	Percent by Weight (Mass)
Passing 1-inch	100
Passing 1/2-inch	60-90
Passing No. 4	35-60
Passing No. 30	10-35

2.3 STRUCTURAL FILL MATERIALS

- A. Structural Fill Aggregate Type A3: MoDOT Specification Section 1007 Type 7. "Type 7 aggregate for base shall consist of crushed stone, sand and gravel, or reclaimed asphalt or concrete. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing the No. 40 sieve shall have a plasticity index not to exceed six. Any sand, silt and clay, and any deleterious rock and shale shall be uniformly distributed

throughout the material. Type 7 aggregate shall be in accordance with the following gradation requirements: “

Sieve	Percent by Weight (Mass)
Passing 11/2-inch	100
Passing 1-inch	70-100
Passing No. 8	15-50
Passing No. 200	0-12

2.4 SOURCE QUALITY CONTROL

- A. Coarse Aggregate Material - Testing and Analysis: Perform in accordance with ASTM C136.
- B. Fine Aggregate Material - Testing and Analysis: Perform in accordance with ASTM C136.
- C. When tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.1 STOCKPILING

- A. Stockpile materials on site at locations designated by Engineer.
- B. Stockpile in sufficient quantities to meet Project schedule and requirements.
- C. Separate different aggregate materials with dividers or stockpile individually to prevent mixing.
- D. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.
- E. Stockpile unsuitable materials on impervious material and cover to prevent erosion and leaching, until disposed of.

3.2 STOCKPILE CLEANUP

- A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION

SECTION 31 10 00 - SITE CLEARING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing surface debris.
 - 2. Removing designated paving and curbs.
 - 3. Removing designated trees, shrubs, and other plant life.

- B. Related Sections:
 - 1. Section 31 22 13 - Rough Grading.
 - 2. Section 31 23 18 - Rock Removal.
 - 3. Section 31 25 13 - Erosion Controls

1.2 REFERENCES

- A. Missouri Department of Transportation (MoDOT): Standard Specification Book for Highway Construction, (Current Edition) including Special Provision for Erosion Control and all addenda. References made to compensation, method of measurement and basis of payment shall not apply.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with MoDOT Standard Specification Book for Highway Construction, including all addenda, applicable portions of Section 201 as determined by Engineer.

- B. Conform to USEPA and MoDNR Standards and Specifications for Soil Erosion and Sediment Control.

- C. Conform to local codes and ordinances for disposal of debris and removal of trees.

- D. Maintain one copy of Missouri Department of Transportation (MoDOT) Specification Section 201 on site.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Wire Supported and Self Supporting Silt Fence as specified in Section 31 25 13

- B. Herbicide: approved by authority having jurisdiction.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify existing plant life designated to remain is tagged or identified.
- C. Identify salvage area for placing removed materials.

3.2 PREPARATION

- A. Call Missouri One Call service at 1-800-DIG-RITE not less than three working days before performing Work.
 1. Request underground utilities to be located and marked within and surrounding construction areas.

3.3 PROTECTION

- A. Locate, identify, and protect utilities indicated to remain, from damage.
- B. Site clearing shall not be conducted during heavy rains or excessively muddy soil conditions to prevent mud tracking and sediment runoff onto or into sidewalks, streets, and existing drainage system.
- C. Protect trees, plant growth, and features designated to remain, as final landscaping.
- D. Protect bench marks, survey control points, and existing structures from damage or displacement.

3.4 CLEARING

- A. Clear designated areas in accordance with the MoDOT Standard Specification Section 201, Articles 201.2.1 through 201.2.5.4 – Which states as follows:
 1. “201.2.1 General. The engineer will designate all trees, shrubs, plants and other objects that are to remain. All designated items shall be preserved. Any damage to natural terrain, vegetation or objects designated to remain shall be repaired or replaced, as determined by the engineer, at the contractor's expense.
 2. “201.2.2 Clearing and Grubbing. Unless otherwise specified in the contract documents, the entire length of the project shall be cleared and grubbed to the limits and requirements specified. Clearing and grubbing shall include removal of all trees, stumps, roots and any objectionable matter resting on or protruding through the surface of the original ground, except for those items designated to remain.”
 3. “201.2.2.1 Clearing. The area for clearing shall be within the following limits:
 - (a) Highway construction areas on the right of way or right of way easements, including structures, frontage roads, streets, ramps, approaches, ditches, channels and all other access roads, connections and incidental items that are to be constructed. These areas shall extend 10 feet (3 m) outside of construction lines, or to the right of way limits if less than 10 feet (3 m).
 - (b) Material sites within the right of way or right of way easements.
 - (c) Areas enclosed by interchange loops and ramps.

(d) Site distance areas for intersecting routes.”

4. “201.2.2.2 Limits of Grubbing. Within the limits of the cut areas, grubbing shall be performed to a minimum depth of 18 inches (450 mm) below the finished earth grade of roadways, ditches, channels, borrows and structures. The areas below the natural ground surface shall be grubbed to a depth necessary to remove all stumps, roots, buried logs and other objectionable material. In embankment areas, undisturbed stumps and roots extending no more than 6 inches (150 mm) above the ground line may remain, provided the stumps and roots are a minimum of 4 feet (1.2 m) below the finished earth grade. Except in areas to be excavated, holes created by removals shall be backfilled with suitable material and compacted to the approximate density of the adjacent area.”
5. “201.2.2.3 Selective Clearing and Grubbing. All areas outside the limits designated for clearing and grubbing, but on the right of way, shall be free of unsightly vegetation, debris and other objectionable matter. In lieu of grubbing, undisturbed stumps outside the slope stake limits and in mowable areas may be cut to a maximum height of 3 inches (75 mm) above the ground. Low hanging, unsound or unsightly branches on trees or shrubs designated to remain shall be removed as directed by the engineer.”
6. “201.2.3 Scalping. The contractor shall scalp all areas where excavation or embankment is to be performed, except mowed or burned over sod may remain where the embankment to be constructed is at least 4 feet (1.2 m) above natural ground. Scalping shall include the removal of surface material such as sod, grass, residue of agricultural crops, sawdust and any other vegetative matter without removing more earth than is necessary.”
7. “201.2.4 National Forest Land. Before beginning work on a highway to be constructed over national forest land, the contractor shall obtain information from the forest ranger in charge to determine rules and regulations covering construction procedures and shall follow those requirements. Before any fires are set, the contractor shall notify the forest ranger in charge, and shall secure a burning permit.”
8. “201.2.5 Removal and Disposal of Material. The contractor shall dispose of all trees, stumps, brush, roots and all other objectionable matter removed in the clearing and grubbing process.”
9. “201.2.5.1 Open Burning. Open burning in incorporated areas will be permitted only under a permit or waiver from MDNR. Open burning of tree trunks, tree limbs and natural vegetation from clearing operations may be allowable in out state areas as defined in MDNR regulations. The contractor shall obtain all necessary permits and approvals before open burning is initiated, and shall comply with permit conditions, MDNR regulations, and all laws in accordance with Sec 107. A contractor representative shall be present during all burning. Measures shall be taken to ensure that structures or vegetation on adjacent property, or items designated to remain on the right of way, shall not be jeopardized. Fires set for the purpose of training fire fighters and industrial employees in fire fighting methods may be permitted after coordination with MDNR or local fire departments, and shall be in strict accordance with NFPA standards.”
10. “201.2.5.2 Disposal of Wood. Burial of stumps and debris will not be permitted on the right of way. Products of clearing and grubbing may be removed from the right of way and disposed of out of sight from the roadway, provided there is no conflict with governing regulations for the wasted material. A signed, written agreement with the property owner shall be submitted by the contractor to the engineer prior to the disposal of material on that property.”
11. “201.2.5.3 Disposal of Scalping. The products of scalping shall be deposited at the toe of embankments where such areas are available within the limits of the roadway balance affected. If such areas are not available, the products shall be neatly and uniformly deposited on the right of way in such a manner that no drainage will be blocked.”

12. "201.2.5.4 Disposal of Timber. Except in national forest areas, all timber that has not been removed from the right of way prior to construction and is not designated to remain in place shall become the property of the contractor."
- B. Remove trees and shrubs within marked areas.
- C. Grub out stumps, roots and rocks in designated cut areas to a depth not less than 12-inches below the finished earth grade. Except in areas to be excavated, stump holes shall be backfilled with subsoil (S1) and topsoil (S2) to depths as indicated on the drawings.
- D. Clear undergrowth and deadwood, without disturbing subsoil.
- E. Cap off and seal abandoned lines and remove portions of lines within excavated areas.
- F. Apply herbicide to remaining stumps to inhibit growth.

3.5 REMOVAL

- A. Remove debris, rock, and extracted plant life from site.
- B. Partially remove paving and curbs as indicated on Drawings. Neatly saw cut edges at right angle to surface.
- C. Remove abandoned utilities. Indicated removal termination point for underground utilities on Record Documents.
- D. Continuously clean-up and remove waste materials from site. Do not allow materials to accumulate on site.
- E. Do not burn or bury materials on site. Leave site in clean condition.

3.6 SILT FENCE

- A. Silt Fence installation, maintenance and removal as specified in Section 31 25 13.

END OF SECTION

SECTION 31 22 13 - ROUGH GRADING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavating topsoil.
 - 2. Excavating subsoil.
 - 3. Cutting, grading, filling, rough contouring and compacting for site structures and paving.
- B. Related Sections:
 - 1. Section 31 05 13 - Soils for Earthwork: Soils for fill.
 - 2. Section 31 05 16 - Aggregates for Earthwork: Aggregates for fill.
 - 3. Section 31 10 00 - Site Clearing: Excavating topsoil.
 - 4. Section 31 23 16 - Excavation.
 - 5. Section 31 23 17 - Trenching: Trenching and backfilling for utilities.
 - 6. Section 31 23 18 - Rock Removal.
 - 7. Section 31 23 23 - Fill.
 - 8. Section 31 25 13 - Erosion Control
 - 9. Section 32 91 19 - Landscape Grading: Finish grading with topsoil to contours.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. ASTM International:
 - 1. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 2. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 3. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 4. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 5. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 - 6. ASTM D2419 - Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
 - 7. ASTM D2434 - Standard Test Method for Permeability of Granular Soils (Constant Head).
 - 8. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 9. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
- C. Missouri Department of Transportation (MoDOT): Standard Specification Book for Highway Construction, (Current Edition) including Special Provision for Erosion Control and all

addenda. References made to compensation, method of measurement and basis of payment shall not apply.

1.3 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM C136, ASTM D2419, and ASTM D2434.
- B. Perform Work in accordance with MoDOT Standard Specifications sections 804 as determined by the Engineer. – Which states as follows:
 1. “804.1 Description. This work shall consist of furnishing and placing approved selected topsoil at the locations shown on the plans or as directed by the engineer.”
 2. “804.2 Material. Topsoil shall be obtained from sources approved by the engineer. Topsoil shall be a fertile, friable and loamy soil of uniform quality, without admixture of subsoil material, and shall be free from material such as hard clods, stiff clay, hardpan, partially disintegrated stone, pebbles larger than one inch (25 mm) in diameter and other impurities. Topsoil shall be relatively free from grass, roots, weeds and other objectionable plant material or vegetative debris undesirable or harmful to plant life or which will prevent the formation of a suitable seedbed.”
 3. “804.3 Construction Requirements.”
 4. “804.3.1 The engineer shall be notified sufficiently in advance of the opening of any material source to permit the engineer to prepare for necessary checking and measurement. Topsoil shall be secured from areas from which the topsoil has not been previously removed either by erosion or mechanical methods. The soil shall not be removed in excess of the depth approved by the engineer. The contractor shall furnish the source of material, unless otherwise shown on the plans. During the period of removal of the topsoil material, the site shall be kept drained, and when all material has been removed, the site shall be left in a neat and presentable condition to the satisfaction of the engineer.”
 5. “804.3.2 The surface on which the topsoil is to be placed shall be free of all loose rock and foreign material greater in any dimension than one half the depth of the topsoil to be added. The surface shall be raked or otherwise loosened just prior to being covered with topsoil. Topsoil shall be placed and spread over the designated areas to the depth shown on the plans. After settling, the completed work shall conform to the thickness shown on the plans. After spreading, all large clods and foreign material shall be removed by the contractor.”
 6. “804.4 Method of Measurement. Topsoil will be measured to the nearest cubic yard (m³), based on area multiplied by the average depth as determined by the engineer.”
 7. “804.5 Basis of Payment. The accepted quantity of topsoil will be paid for at the contract unit price, including hauling from any distance.”
- C. Maintain one copy of MoDOT Specification Section 804 on site.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Topsoil: Type S2 as specified in Section 31 05 13.
- B. Subsoil Fill: Type S1 as specified in Section 31 05 13.
- C. Granular Fill: Type A2 as specified in Section 31 05 16.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify survey bench mark and intended elevations for the Work are as indicated on Drawings.

3.2 PREPARATION

- A. Call Missouri One Call service at 1-800-DIG-RITE not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum.
- C. Notify utility company to remove and relocate utilities.
- D. Protect utilities indicated to remain from damage.
- E. Protect plant life, lawns and other features remaining as portion of final landscaping.
- F. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.3 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, relandscaped, or regraded, without mixing with foreign materials for use in finish grading.
- B. Do not excavate wet topsoil.
- C. Stockpile in area designated on site to depth not exceeding 8 feet and protect from erosion. Stockpile material on 36 mil Hypalon material and cover over with same material, until disposal.
- D. Remove excess topsoil not intended for reuse, from site.

3.4 SUBSOIL EXCAVATION

- A. Excavate subsoil from areas to be further excavated, relandscaped, or regraded.
- B. Do not excavate wet subsoil.
- C. When excavating through roots, perform Work by hand and cut roots with sharp axe.
- D. Stockpile subsoil in area designated on site to depth not exceeding 8 feet and protect from erosion.
- E. Benching Slopes: Horizontally bench existing slopes greater than 1: 4 to key placed fill material to slope to provide firm bearing.
- F. Stability: Replace damaged or displaced subsoil as specified for fill.

3.5 FILLING

- A. Fill areas to contours and elevations with unfrozen materials.
- B. Place material in continuous layers as follows:
 - 1. Subsoil Fill: Maximum 6 inches compacted depth.
 - 2. Granular Fill: Maximum 6 inches compacted depth.
- C. Maintain optimum moisture content of fill materials to attain required compaction density.
- D. Slope grade away from road and structures a minimum 2 percent slope for minimum distance of 10 ft, unless noted otherwise.
- E. Make grade changes gradual. Blend slope into level areas.
- F. Repair or replace items indicated to remain damaged by excavation or filling.

3.6 FIELD QUALITY CONTROL

- A. Perform laboratory material tests in accordance with ASTM D698.
- B. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D2922.
 - 2. Moisture Tests: ASTM D3017.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

END OF SECTION

SECTION 31 23 16 - EXCAVATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavating for paving, roads, and parking areas.
 - 2. Excavating for site structures.

- B. Related Sections:
 - 1. Section 31 05 13 - Soils for Earthwork: Stockpiling excavated materials.
 - 2. Section 31 05 16 - Aggregates for Earthwork: Stockpiling excavated materials.
 - 3. Section 31 22 13 - Rough Grading: Topsoil and subsoil removal from site surface.
 - 4. Section 31 23 17 - Trenching: Excavating for utility trenches.
 - 5. Section 31 23 18 - Rock Removal: Removal of rock during excavating.
 - 6. Section 31 23 23 - Fill.
 - 7. Section 31 25 13 - Erosion Controls: Slope protection and erosion control.
 - 8. Section 33 05 14 - Public Manholes and Structures.
 - 9. Section 33 42 14 - Public Pipe Culverts.

1.2 REFERENCES

- A. Local utility standards when working within 24 inches of utility lines.

1.3 SUBMITTALS

- A. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 PREPARATION

- A. Call Local Utility Line Information service at 1-800-DIG-RITE not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.

- B. Identify required lines, levels, contours, and datum.

- C. Notify utility company to remove and relocate utilities.

- D. Protect utilities indicated to remain from damage.

- E. Protect plant life, lawns, and other features remaining as portion of final landscaping.
- F. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.2 EXCAVATION

- A. Underpin adjacent structures which may be damaged by excavation work.
- B. Excavate subsoil to accommodate building foundations, slabs-on-grade, paving and site structures and construction operations.
- C. Compact disturbed load bearing soil in direct contact with foundations to original bearing capacity; perform compaction in accordance with Section 31 23 17 and Section 31 23 23.
- D. Slope banks with machine to angle of repose or less until shored.
- E. Do not interfere with 45 degree bearing splay of foundations.
- F. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- G. Trim excavation. Remove loose matter.
- H. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.
- I. Notify Engineer of unexpected subsurface conditions.
- J. Correct areas over excavated with structural fill Type A3 as specified in Section 31 23 23.
- K. Stockpile subsoil in area designated on site to depth not exceeding 8 feet and protect from erosion.
- L. Repair or replace items indicated to remain damaged by excavation.

3.3 FIELD QUALITY CONTROL

- A. Request visual inspection of bearing surfaces by Engineer before installing subsequent work.

3.4 PROTECTION

- A. Prevent displacement or loose soil from falling into excavation; maintain soil stability.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
- C. Protect structures, utilities and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth operations.

END OF SECTION

SECTION 31 23 17 - TRENCHING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavating trenches for utilities as shown on the contract plans.
 - 2. Compacted fill from top of utility bedding to subgrade elevations.
 - 3. Backfilling and compaction.

- B. Related Sections:
 - 1. Section 31 05 13 - Soils for Earthwork: Soils for fill.
 - 2. Section 31 05 16 - Aggregates for Earthwork: Aggregates for fill.
 - 3. Section 31 22 13 - Rough Grading: Topsoil and subsoil removal from site surface.
 - 4. Section 31 23 16 - Excavation: General building excavation.
 - 5. Section 31 23 18 - Rock Removal: Removal of rock during excavating.
 - 6. Section 31 23 23 - Fill: General backfilling.
 - 7. Section 32 91 19 - Landscape Grading: Filling of topsoil over backfilled trenches to finish grade elevation.
 - 8. Section 33 42 14 - Public Pipe Culverts.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN·m/m³)).
 - 2. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN·m/m³)).
 - 4. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 - 5. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 6. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with MDNR requirements for storm sewer installation.

1.5 COORDINATION

- A. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 PRODUCTS

2.1 FILL MATERIALS

- A. Subsoil Fill: Type S1 as specified in Section 31 05 13.
- B. Structural Fill: Type A3 as specified in Section 31 05 16.
- C. Granular Fill: Type A2 as specified in Section 31 05 16.
- D. Concrete: 3,000 psi 28 days.

PART 3 EXECUTION

3.1 LINES AND GRADES

- A. Lay pipes to lines and grades indicated on Drawings.
 - 1. Engineer reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

3.2 PREPARATION

- A. Call Missouri 1 Call at 1-800-DIG-RITE not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum locations.
- C. Protect plant life, lawns and other features remaining as portion of final landscaping.
- D. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Maintain and protect above and below grade utilities indicated to remain.
- F. Establish temporary traffic control and detours when trenching is performed in public right-of-way. Relocate controls and reroute traffic as required during progress of Work.

3.3 TRENCHING

- A. Excavate subsoil required for utilities.

- B. Remove lumped subsoil, boulders, and rock up of 1/6 cubic yard, measured by volume. Remove larger material as specified in Section 31 23 18.
- C. Perform excavation within 24 inches of existing utility service in accordance with utility's requirements.
- D. Do not advance open trench more than 200 feet ahead of installed pipe.
- E. Cut trenches to width indicated on Drawings. Remove water or materials that interfere with Work.
- F. Excavate bottom of trenches maximum 2 feet wider than outside diameter of pipe.
- G. Excavate trenches to depth indicated on Drawings. Provide uniform and continuous bearing and support for bedding material and pipe.
- H. Do not interfere with 45 degree bearing splay of foundations.
- I. When Project conditions permit, slope side walls of excavation starting 2 feet above top of pipe. When side walls can not be sloped, provide sheeting and shoring to protect excavation as specified in this section.
- J. When subsurface materials at bottom of trench are loose or soft, excavate to greater depth as directed by Engineer until suitable material is encountered.
- K. Cut out soft areas of subgrade not capable of compaction in place. Backfill with Fill Type A2 and compact to density equal to or greater than requirements for subsequent backfill material.
- L. Trim excavation. Remove loose matter.
- M. Correct areas over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Engineer.
- N. Stockpile excavated material in area designated on site in accordance with Section 31 05 13.

3.4 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation work.
- D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage to new and existing Work from settlement, water or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.5 BACKFILLING

- A. Backfill trenches to contours and elevations with unfrozen fill materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place material in continuous layers as follows:
 - 1. Subsoil Fill: Maximum 6 inches compacted depth.
 - 2. Structural Fill: Maximum 6 inches compacted depth.
 - 3. Granular Fill: Maximum 6 inches compacted depth.
- D. Employ placement method that does not disturb or damage utilities in trench.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Do not leave more than 25 feet of trench open at end of working day.
- G. Protect open trench to prevent danger to the public.

3.6 TOLERANCES

- A. Top Surface of Backfilling Under Paved Areas: Plus or minus 0.1 foot from required elevations.
- B. Top Surface of General Backfilling: Plus or minus 0.1 foot from required elevations.

3.7 FIELD QUALITY CONTROL

- A. Perform laboratory material tests in accordance with ASTM D698.
- B. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D2922.
 - 2. Moisture Tests: ASTM D3017.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.

3.8 PROTECTION OF FINISHED WORK

- A. Protect finished work.
- B. Reshape and re-compact fills subjected to vehicular traffic during construction.

END OF SECTION

SECTION 31 23 18 - ROCK REMOVAL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing discovered rock during excavation.
- B. Related Sections:
 - 1. Section 31 22 13 - Rough Grading.
 - 2. Section 31 23 16 - Excavation: Building excavation.
 - 3. Section 31 23 17 - Trenching: Trenching and backfilling for utilities.
 - 4. Section 31 23 23 - Fill: Backfill materials.

1.2 DEFINITIONS

- A. Rock: Solid mineral material with volume in excess of 1/3 cu yd or solid material that cannot be removed with 3/4 cu yd capacity excavator.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify site conditions and note subsurface irregularities affecting Work of this section.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum.

3.3 ROCK REMOVAL BY MECHANICAL METHOD

- A. Excavate and remove rock by mechanical method.
 - 1. Drill holes and use impact tools, expansive tools, wedges or mechanical disintegration compound to fracture rock.
- B. Cut away rock at bottom of excavation to form level bearing.
- C. Remove shaled layers to provide sound and unshattered base for structures and roads.
- D. In utility trenches, excavate to 6 inches below invert elevation of pipe and 18 inches wider than pipe diameter.
- E. Remove excavated materials from site.

- F. Correct unauthorized rock removal in accordance with backfilling and compacting requirements of Section 31 23 23.

3.4 FIELD QUALITY CONTROL

- A. Request visual inspection of structures and roads bearing surfaces by Engineer before installing subsequent work.

END OF SECTION

SECTION 31 23 23 - FILL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Backfilling site structures to subgrade elevations.
 - 2. Fill under paving.
 - 3. Fill for over-excavation.

- B. Related Sections:
 - 1. Section 31 05 13 - Soils for Earthwork: Soils for fill.
 - 2. Section 31 05 16 - Aggregates for Earthwork: Aggregates for fill.
 - 3. Section 31 22 13 - Rough Grading: Site filling.
 - 4. Section 31 23 16 - Excavation.
 - 5. Section 31 23 17 - Trenching: Backfilling of utility trenches.
 - 6. Section 32 91 19 - Landscape Grading: Filling of topsoil to finish grade elevation.
 - 7. Section 33 05 14 - Public Manholes and Structures.
 - 8. Section 33 42 14 - Public Pipe Culverts.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 2. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 4. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 - 5. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 6. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

PART 2 PRODUCTS

2.1 FILL MATERIALS

- A. Subsoil Fill: Type S1 as specified in Section 31 05 13.

- B. Structural Fill: Type A3 as specified in Section 31 05 16.

- C. Granular Fill: Type A1 as specified in Section 31 05 16.
- D. Concrete: 3,000 psi 28 days.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
- B. Verify underground tanks are anchored to their own foundations to avoid flotation after backfilling.
- C. Verify structural ability of unsupported walls to support loads imposed by fill.

3.2 PREPARATION

- A. Compact subgrade to density requirements for subsequent backfill materials.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with structural fill and compact to density equal to or greater than requirements for subsequent fill material.
- C. Proof roll to identify soft spots; fill and compact to density equal to or greater than requirements for subsequent fill material.

3.3 BACKFILLING

- A. Backfill areas to contours and elevations with unfrozen materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy subgrade surfaces.
- C. Place material in continuous layers as follows:
 1. Subsoil Fill: Maximum 6 inches compacted depth.
 2. Structural Fill: Maximum 6 inches compacted depth.
 3. Granular Fill: Maximum 6 inches compacted depth.
- D. Employ placement method that does not disturb or damage other work.
- E. Maintain optimum moisture content of backfill materials to attain required compaction density.
- F. Do not backfill against unsupported foundation walls.
- G. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.
- H. Slope grade away from building minimum 2 percent slope for minimum distance of 10 ft, unless noted otherwise.
- I. Make gradual grade changes. Blend slope into level areas.

- J. Remove surplus backfill materials from site.
- K. Leave fill material stockpile areas free of excess fill materials.

3.4 TOLERANCES

- A. Top Surface of General Backfilling: Plus or minus 0.1 foot from required elevations.

3.5 FIELD QUALITY CONTROL

- A. Perform laboratory material tests in accordance with ASTM D698.
- B. Perform in place compaction tests in accordance with the following:
 1. Density Tests: ASTM D2922.
 2. Moisture Tests: ASTM D3017.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.
- D. Proof roll compacted fill surfaces under paving,

3.6 PROTECTION OF FINISHED WORK

- A. Protect finished work.
- B. Reshape and re-compact fills subjected to vehicular traffic.

END OF SECTION

SECTION 31 25 13
EROSION CONTROLS AND SWPPP

PART 1 GENERAL

1.1 SUMMARY

A. Related Sections:

1. Section 31 05 13 - Soils for Earthwork.
2. Section 31 05 16 - Aggregates for Earthwork.
3. Section 31 10 00 - Site Clearing.
4. Section 31 23 16 - Excavation.
5. Section 31 23 23 - Fill.
6. Section 32 91 19 - Landscape Grading.
7. Section 32 92 19 - Seeding.
8. Section 33 05 14 - Public Manholes and Structures.
9. Section 33 42 14 - Public Pipe Culverts.

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials:

1. AASHTO T88 - Standard Specification for Particle Size Analysis of Soils.
2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. American Concrete Institute:

1. ACI 301 - Specifications for Structural Concrete.

C. ASTM International:

1. ASTM C127 - Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate.
2. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
3. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft³ (2,700 kN-m/m³)).
4. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

D. Precast/Prestressed Concrete Institute:

1. PCI MNL-116S - Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products.

E. U.S. Environmental Protection Agency:

1. Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, (Document No. EPA 832-R-92-005) published by the U.S. Environmental Protection Agency (USEPA) in September 1992.

F. Missouri Department of Natural Resources:

1. Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri, published by Missouri Department of Natural Resources in November 1995.
 - a. See website at: www.dnr.mo.gov/wpsc/wpcp-guide.htm

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with Missouri Department of Natural Resources and Jefferson County Requirements.

PART 2 PRODUCTS

2.1 ROCK AND GEOTEXTILE MATERIALS

- A. Rock: In accordance with 31 05 16 Drainage Aggregate Material A3.

2.2 CONCRETE MATERIALS AND REINFORCEMENT

- A. Cement: Type as specified in Section 03 30 00. Furnish in accordance with Missouri Department of Transportation Standard Specifications.
- B. Fine and Coarse Aggregates: Type as specified in Section 31 05 16. Furnish in accordance with Missouri Department of Transportation Standard Specifications.
- C. Water: Clean and not detrimental to concrete.
- D. Aggregate, Sand, Water, Admixtures - Precast: Determined by precast fabricator, as appropriate to design requirements and PCI MNL-116S.
- E. Reinforcement Steel: Type as specified in Section 03 20 00.
- F. Welded Steel Wire Fabric: Type as specified in Section 03 20 00.

2.3 PLANTING MATERIALS

- A. Seeding: as specified in Section 32 92 19.

2.4 MIXES

- A. Concrete: as specified in Section 03 30 00.

2.5 SOURCE QUALITY CONTROL (AND TESTS)

- A. Perform tests on cement, aggregates, and mixes to ensure conformance with specified requirements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify compacted subgrade or granular base is acceptable and ready to support devices and imposed loads.
- C. Verify gradients and elevations of base or foundation for other work are correct.

3.2 SITE STABILIZATION

- A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.
- B. Construct, stabilize and activate erosion controls before site disturbance within tributary areas of those controls.
- C. Stockpile and waste pile heights shall not exceed 15 feet. Slope stockpile sides at 2:1 or flatter.
- D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.
 - 1. During non-germinating periods, apply mulch at recommended rates.
 - 2. Stabilize disturbed areas which are either at finished grade or will not be disturbed within one year in accordance with Section 32 92 19 permanent seeding specifications.
- E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

3.3 FIELD QUALITY CONTROL

- A. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.
- B. Field test concrete in accordance with Section 03 30 00.
- C. Compaction Testing: As specified in Section 31 23 23.

3.4 CLEANING

- A. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove and dispose of sediment.
- B. Do not damage structure or device during cleaning operations.
- C. Do not permit sediment to erode into construction or site areas or natural waterways.
- D. Clean channels when depth of sediment reaches approximately one half channel depth.

3.5 PROTECTION

- A. Protect finished Work.
- B. Immediately after placement, protect paving from premature drying, excessive hot or cold temperatures, and mechanical injury.
- C. Protect paving from elements, flowing water, or other disturbance until curing is completed.

3.6 EROSION AND SEDIMENT CONTROL

- A. Structural Best Management Practices:
 1. Silt Fences or Straw Bales shall be utilized as needed to prevent sediment from washing downstream. Silt fences and straw bales shall be maintained by the contractor. Built-up sediment shall be removed from the silt fence or straw bales when it has reached a third the height of the bale or silt fence. Straw bales and silt fencing shall be replaced as needed.
- B. Offsite Vehicle Tracking:
 1. Contractor to clean vehicles prior to entering City, County, or State roads to prevent tracking of sediments. Dump truck shall be covered with tarpaulin when hauling materials to and from the construction site.

3.7 CONTROL OF WASTE MATERIALS

- A. Waste Materials:
 1. All waste materials will be removed off-site for proper disposal. No waste materials will be allowed to be buried onsite. Contractor shall be responsible for removal and disposal of waste materials. All sanitary waste to be collected from portable sanitary units.
- B. Inventory of Materials:
 1. The following materials or substances are anticipated to be present onsite during construction.
 - a. Fertilizers
 - b. Cement
 - c. Aggregate
 - d. Wood Building Materials
 - e. Masonry Building Materials
 - f. Steel Reinforcing
 - g. Paints and Coatings
 - h. Oil Products.
- C. Material Management Practices
 1. The following practices shall be used onsite during the construction project to reduce the risk of spills or other exposure of materials and substances to storm water runoff:
 - a. Contractor will only store materials onsite needed for this particular project.

- b. All materials stored onsite will be stored in a neat, orderly manner in Products stored onsite shall be kept in their original container supplied by the manufacturer.
- c. Contractor shall follow manufacturer's recommendations for proper use and disposal of materials.
- d. All vehicles and equipment shall be monitored for oil, gas, diesel, or other hazardous fluid leaks.
- e. Fertilizers used will be applied in accordance with manufacturer's recommendations. Fertilizers shall not be stored onsite. Partial bags of fertilizer shall be transferred to a sealable bin.

D. Hazardous Materials:

- 1. The following practices shall be used to reduce the risk associated with hazardous materials:
 - a. Products should be kept in the original containers unless they are not resealable.
 - b. Original labels and material safety data will be retained by the Contractor and provided to the Owner and Engineer.
 - c. Contractor shall follow manufacturer's recommendations for proper use and disposal of materials. In addition, contractor shall follow the local, State, and Federal requirements/recommendations for proper disposal.

E. Spill Cleanup

- 1. The following practices will be followed for spill cleanup:
 - a. Manufacturer's recommended methods for spill cleanup will be made aware to the job site superintendent as well as locations for spill prevention and cleanup.
 - b. Materials and equipment for spill cleanup shall be readily available to the contractor. Suggested onsite equipment includes, but is not limited to brooms, rags, gloves, goggles, sawdust, plastic, and metal trash containers.
 - c. All spills will be cleaned up immediately upon discovery.
 - d. Spills of toxic or hazardous material will be reported to the appropriate local, State, or Federal agency.

F. Contractor shall be responsible for spill prevention and cleanup. Should any spills occur, the contractor shall be responsible for taking appropriate action to prevent future occurrences of a similar spill.

3.8 ADDITIONAL REQUIREMENTS

- A. The storm water pollution plan reflects current federal, state, and local regulations regarding storm water management and erosion and sediment control. In addition to the storm water pollution plan, the contractor shall perform work in general conformance with the following documents:
 - 1. Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, (Document No. EPA 832-R-92-005) published by the U.S. Environmental Protection Agency (USEPA) in September 1992.

2. Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri, published by Missouri Department of Natural Resources in November 1995.

END OF SECTION

SECTION 32 11 23

AGGREGATE BASE COURSE

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Aggregate base course.
- B. Related Sections:
 - 1. Section 32 12 16 - Asphalt Paving.
 - 2. Section 32 13 13 - Concrete Paving

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
 - 2. AASHTO T99 - Standard Specification for Moisture-Density Relations of Soils Using a 2.5 kg (5.5 lb) Rammer and a 305 mm (12 in.) Drop.
- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN·m/m³)).
 - 2. ASTM D1556 - Standard Test Method for Density of Soil in Place by the Sand-Cone Method.
 - 3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 4. ASTM D2940 - Standard Specification for Graded Aggregate Material For Bases or Subbases for Highways or Airports.
 - 5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
- C. Missouri Department of Transportation (MoDOT): Standard Specifications for Highway Construction, 2011, and all addenda. References made to compensation, method of measurement and basis of payment shall not apply.

1.3 SUBMITTALS

- A. Samples: Submit, in air-tight containers, a 25 lb. sample of each type of aggregate fill to the Engineer. Samples shall be obtained and provided to the Engineer at least 7 days prior to material placement.
- B. Materials Source: Submit name of aggregate materials suppliers.
- C. Manufacturer's Certificate: Certify aggregate suppliers are MoDOT approved.

1.4 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout the Work.

PART 2 PRODUCTS

2.1 AGGREGATE MATERIALS

- A. Type 1 or 5 Aggregate in accordance with Section 1007 of the MoDOT Standard Specifications.

2.2 SOURCE QUALITY CONTROL

- A. Testing and Analysis of Coarse Aggregate Material: the Engineer will perform in accordance with ASTM D698.
- B. When tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify compacted substrate is dry and ready to support paving and imposed loads.
- B. Verify substrate has been inspected, gradients and elevations are correct.

3.2 PREPARATION

- A. Prepare subgrade in accordance with MoDOT Standard Specification Section 304 prior to placement of aggregate base course.
- B. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- C. Do not place fill on soft, muddy, or frozen surfaces.

3.3 AGGREGATE PLACEMENT

- A. Aggregate Base: Place in accordance with MoDOT Standard Specification Section 209.2.1.
- B. Level and contour surfaces to elevations, profiles, and gradients indicated.
- C. Place coarse aggregate in continuous layers and compact. Fill shall be compacted to 100% standard Proctor density.

- D. Maintain a maximum variation of 3% from Optimum Moisture Content of backfill materials to attain the required compaction density.
- E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.4 TOLERANCES

- A. Maximum Variation From Flat Surface: 1/4 inch measured with 10 foot straight edge.
- B. Maximum Variation From Thickness: 1/2 inch.
- C. Maximum Variation From Elevation: 1/2 inch.

3.5 FIELD QUALITY CONTROL

- A. Field compaction and moisture testing of materials will be performed by the Engineer in accordance with ASTM D698.
- B. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Construction of Hot Mix Asphalt (HMA) pavement.
- B. Related Sections:
 - 1. Section 32 11 23 - Aggregate Base Course.

1.2 REFERENCES

- A. Missouri Department of Transportation (MoDOT): Standard Specifications for Highway Construction, 2011, and all addenda. References made to compensation, method of measurement and basis of payment shall not apply.

1.3 SUBMITTALS

- A. Asphalt mixes: Submit mix data. Bituminous plant and mixture MUST be MoDOT approved.

1.4 TESTING & INSPECTION

- A. Testing and inspection of asphaltic concrete mixes and testing of placed aggregate base course and asphaltic concrete pavement will be performed by the Engineer. Testing and inspection will be performed in a manner to minimize disruption of work.
- B. Allow Engineer access to mixing plant for verification of weights or proportions, character of materials used and determination of temperatures used in preparation of asphaltic concrete pavement.
- C. When requested, Engineer will perform tests on asphaltic pavement mix to determine conformity with specifications.
- D. Engineer will perform one series of compaction tests for stabilizing base course and for asphaltic pavement course. Contractor shall pay for all costs of additional testing due to improper performance of work.
- E. When stabilizing base course, or portion thereof, has been placed and compacted in accordance with specifications, notify the Engineer to perform density tests. Do not place asphaltic concrete pavement until satisfactory results have been verified and base course approved in writing by the Engineer.
- F. When compaction test results for the asphaltic concrete pavement courses indicate nonconforming work, remove defective work, replace and retest.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Asphaltic Concrete Binder Course: In accordance with MoDOT Standard Specification Section 401. Mix shall be BP-1 or BP-2.
- B. Asphaltic Concrete Surface Course: In accordance with MoDOT Standard Specification Section 401. Mix shall be BP-1 or BP-2.
- C. Tack Coat: In accordance with MoDOT Standard Specification Section 407 at an application rate of .05 gallons per square yard.

PART 3 EXECUTION

3.1 REMOVAL

- A. Partial-Depth Pavement Removal (Milling): Perform in accordance with MoDOT Standard Specification Section 622.

3.2 INSTALLATION

- A. Provide all items and perform all preparation and work in accordance with the following referenced MoDOT Standard Specifications, sections/articles:
 1. Asphaltic concrete binder course: Section 403.
 2. Asphaltic concrete surface course: Section 403.
 3. Tack Coat: Section 407.

3.3 PREPARATION

- A. Prepare surfaces to receive asphaltic concrete pavement in accordance with MoDOT Standard Specification Section 403 and the Drawings.

3.4 PLACEMENT OF HOT MIX ASPHALT PAVEMENT

- A. Asphaltic concrete pavement courses shall be placed in accordance with MoDOT Standard Specification Section 403.
- B. Tack coat shall be placed between all asphalt lifts in accordance with the MoDOT Standard Specifications.
- C. In the event of sudden rain, the loading of trucks shall immediately stop, whether they be from the plant or storage bins. Material in transit will be permitted to be laid at the Contractor's risk provided the pavement is free of standing water and the proper temperatures of the asphaltic mix are maintained. Approval to unload the trucks in transit shall in no way relax the requirements of quality, density or smoothness of the bituminous mixture being placed.
- D. At least four weeks prior to the start of construction, the Contractor shall submit samples of the coarse aggregate(s), the fine aggregate(s), mineral filler and asphalt he proposes to use for the purpose of establishing a job mix formula. This requirement may be waived

by the Engineer, provided the Contractor can show evidence that his proposed materials have produced an asphaltic concrete mixture meeting the project requirements.

- E. Compact each course by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- F. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.5 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with a 10 foot straight edge.
- B. Scheduled Compacted Thickness: Within 1/4 inch.
- C. Variation of Indicated Elevation: Within 1/2 inch.

END OF SECTION

SECTION 32 13 13
CONCRETE PAVING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Concrete paving for:
 - a. Concrete dumpster pad.
- B. Related Requirements:
 - 1. Section 32 11 23 - Aggregate Base Courses.
 - 2. Section 32 17 23 - Parking Markings.

1.2 REFERENCES

- 1. Missouri Department of Transportation (MODOT): Standard Specifications for Highway Construction, 2011, and all addenda. References made to compensation, method of measurement and basis of payment shall not apply.

1.3 SUBMITTALS

- A. Product Data:
 - 1. Submit data on concrete materials, joint filler, admixtures and curing compounds.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with requirements of Section 03 10 00, Section 03 20 00, and Section 03 30 00.
- B. Obtain cementitious materials from same source throughout.

1.5 AMBIENT CONDITIONS

- A. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.1 AGGREGATE BASE COURSE

- A. Aggregate Base Course: As specified in Section 32 11 23.

2.2 CONCRETE PAVING

- A. Performance / Design Criteria:
 - 1. Paving: Design for dumpster pad.

- B. Form Materials:
 - 1. Form Materials: As specified in Section 03 10 00.
 - 2. Joint Filler: As specified in Section 03 30 00.
- C. Reinforcement:
 - 1. Reinforcing Steel and Wire Fabric: Type specified in Section 03 20 00.
- D. Concrete Materials:
 - 1. Concrete Materials: As specified in Section 03 30 00.

2.3 FABRICATION

- A. Fabricate reinforcing in accordance with CRSI Manual of Practice.

2.4 MIXES

- A. Concrete Mix: As specified in Section 03 30 00.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify compacted granular subbase is dry and ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.

3.2 PREPARATION

- A. Moisten substrate to minimize absorption of water from fresh concrete.
- B. Notify Architect/Engineer minimum 24 hours prior to commencement of concreting operations.

3.3 INSTALLATION

- A. Base Course:
 - 1. Aggregate Base Course: Install as specified in Section 32 11 23.
- B. Forms:
 - 1. Place and secure forms and screeds to correct location, dimension, profile, and gradient.
 - 2. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Reinforcement:
 - 1. Place reinforcing at mid-height of paving.
 - 2. Interrupt reinforcing at joints.
 - 3. Place dowels to achieve paving and curb alignment as detailed.
- D. Placing Concrete:
 - 1. Place concrete as specified in Section 03 30 00.
 - 2. Ensure reinforcing, inserts, embedded parts and formed joints are not disturbed during concrete placement.

3. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.

E. Joints

1. Place contraction joints at 20 foot intervals.
2. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.

F. Finishing:

1. Finish concrete as specified in Section 03 30 00.

G. Curing and Protection

1. Cure and Protect as specified in Section 03 30 00.

3.4 FIELD QUALITY CONTROL

A. Field Quality Control as specified in Section 03 30 00.

END OF SECTION

SECTION 32 17 23

PAVEMENT MARKINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Pavement markings.
- B. Related Sections:
 - 1. Section 32 12 16 - Asphalt Paving.

1.2 REFERENCES

- A. Missouri Department of Transportation (MoDOT): Standard Specifications for Highway Construction, 2011, and all addenda. References made to compensation, method of measurement and basis of payment shall not apply.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Paint Pavement Markings: Comply with MoDOT Standard Specification Section 1048.

PART 3 EXECUTION

3.1 REMOVAL

- A. Obliteration of pavement markings and raised reflective pavement marker removal shall be performed in accordance with MoDOT Standard Specification Section 620.50.

3.2 INSTALLATION

- A. Perform pavement marking installation in accordance with MoDOT Standard Specification Section 620.40.

END OF SECTION

SECTION 32 91 19
LANDSCAPE GRADING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Final grade topsoil for finish landscaping.

B. Related Sections

1. Section 31 05 13 - Soils for Earthwork.
2. Section 32 92 19 - Seeding and Soil Supplements: Finish ground cover.

1.1 QUALITY ASSURANCE

A. Furnish topsoil material from single source throughout the Work.

PART 2 PRODUCTS

2.1 MATERIAL

A. Topsoil: From site.

1. Contractor shall strip and stockpile onsite topsoil per Section 31 05 13.

B. Topsoil: Imported from Approved Site.

1. Additional topsoil may be imported from an approved site at the request of the Owner. Said item to be paid for by the cubic yard (additive alternate). Imported Topsoil must be free from lead and other contaminants. Lead testing will be required. Contractor shall not import any topsoil without the written approval of the Engineer and Owner. If requested, a sample of the topsoil shall be provided in a zip lock bag.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify substrate base has been contoured and compacted.

C. Verify trench backfilling have been inspected.

3.2 PREPARATION

A. Protect landscaping and other features remaining as final Work.

B. Protect sidewalks, utilities, paving, and curbs.

3.3 SUBSTRATE PREPARATION

- A. Eliminate uneven areas and low spots.
- B. Remove debris, roots, branches, stones, in excess of 1 inch in size. Remove contaminated subsoil.

3.4 PLACING TOPSOIL

- A. Place topsoil in areas where seeding will occur to nominal depth of 4 inches. Place topsoil during dry weather.
- B. Fine grade topsoil to eliminate rough or low areas. Maintain profiles and contour of subgrade.
- C. Remove roots, weeds, rocks, and foreign material while spreading.
- D. Manually spread topsoil close to plant material, building, and paved areas to prevent damage of stated items.
- E. Roll placed topsoil.
- F. Remove surplus subsoil and topsoil from site.

3.5 TOLERANCES

- A. Top of Topsoil: Plus or minus 1/2 inch.

3.6 PROTECTION OF INSTALLED WORK

- A. Protect finished Work.
- B. Prohibit construction traffic over topsoil.

END OF SECTION

SECTION 32 92 19

SEEDING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparation of subsoil.
 - 2. Seeding lawns shown and specified herein.
 - 3. Mulching.
 - 4. Maintenance.
 - 5. Reconditioning existing lawns disturbed during construction.
- B. Related Sections:
 - 1. Section 31 22 13 - Rough Grading: Rough grading of site.
 - 2. Section 31 23 23 - Fill.
 - 3. Section 32 91 19 - Landscape Grading

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM C602 - Standard Specification for Agricultural Liming Materials.

1.3 DEFINITIONS

- A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.4 SUBMITTALS

- A. Product Data: Submit seed vendor's certification for required grass seed mixture, indicating percentage by weight, and percentages of purity, germination, and weed seed for each grass species.
- B. Upon seeded lawn acceptance, submit written maintenance instructions recommending procedures for maintenance of seeded lawns.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Include maintenance instructions, cutting method and maximum grass height.

1.6 QUALITY ASSURANCE

- A. Contractor will provide and pay for materials testing. Provide the following data:
 - 1. Test representative material samples proposed for use.
 - 2. Topsoil:
 - a. pH factor.
 - b. Mechanical analysis.
 - c. Percentage of organic content.
 - d. Recommendations on type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring nutrients to satisfactory level for planting.
 - 3. Allowable tolerances:
 - a. Finish grade of lawn areas shall be one inch below grade of adjacent pavement of any kind.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging and location of packaging. Damaged packages are not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis and manufacturer's name.
- C. Deliver all products in sufficient quantity and time to maintain approved construction schedule, as amended.
- D. Store all products off the ground, in a dry location, out of the way of construction operations. Provide protection to prevent damage until installed.

1.8 COORDINATION

- A. Coordinate with installation of underground drainage system.

1.9 PROJECT CONDITIONS

- A. Work Notification: Notify Engineer at least 7 working days prior to start of seeding operations.
- B. Protect existing utilities, paving and other facilities from damage caused by seeding operations.
- C. Perform seeding work only after work affecting ground surface has been completed.
- D. Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.
- E. Provide hose and lawn watering equipment as required.

1.10 WARRANTY

A. Contractor's Warranty: Supply Owner with warranty in accordance with General Conditions for a period of one year plus one growing season.

1.11 MAINTENANCE

A. Owner or Property Owner will perform maintenance of installed and accepted seeded lawns.

B. Maintain seeded lawn areas, including watering, spot weeding, applications of herbicides, fungicides insecticides and re-seeding until a full, uniform stand of grass free of weeds, undesirable grass species, disease, and insects is achieved and accepted.

1. Water as needed to maintain adequate surface soil moisture for proper seed germination. Continue watering for not less than 30 days. Thereafter, apply $\frac{1}{2}$ " of water twice weekly until acceptance.
2. Repair, rework, and re-seed all areas that have washed out, are eroded, or do not catch.
3. Apply Type B fertilizer to lawns approximately 30 days after seeding at a rate equal to 1.0 lb. Of actual nitrogen per 1,000 square feet. (140 lbs./acre). Apply with mechanical rotary or drop type distributor. Thoroughly water into soil.

PART 2 PRODUCTS

2.1 MATERIALS

A. Lawn Seed: Fresh, clean, and new crop seed mixture.

1. Mixed by an approved method.
2. Composed of following varieties, mixed to specified proportions by weight and tested to minimum percentages of purity and germination. Poa Annua, bent grass, and noxious weed seed free.

	<u>Blend</u>	<u>Parts</u>	<u>Purity</u>	<u>Minimum Germination</u>
3.	Rate: 10 lbs Per 1,000 S.F.			
	Rebel II - type Tall Fescue	29%	98%	90%
	Olympic - type Tall Fescue	24%	98%	90%
	Tribute - Type Tall Fescue	20%	98%	90%
	Bonanza - type Tall Fescue	15%	98%	90%
	Adventure - Type Tall Fescue	10%	98%	90%
	Other Crop Seed	1%		
	Inert Matter	1%		
	Weed Seed	0.15%		
	Noxious Weeds	0.0%		

B. Fertilizer:

1. Granular, non-burning product composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer.
 - a. Type A: Starter fertilizer containing 9% nitrogen, 13% phosphoric acid, and 7% potash by weight, or similar approved composition.

- b. Type B: Top dressing fertilizer containing 16% nitrogen, 4% phosphoric acid, and 8% potash by weight or similar approved composition.
- C. Straw Mulch: Clean oat or wheat straw well seasoned before bailing, free from mature seed bearing stalks or roots of prohibited or noxious weed.
- D. Water: Free of substance harmful to seed growth. Hoses or other methods of transportation furnished by Contractor.
- E. Erosion control blankets shall be manufactured of degradable materials, consisting of curled wood fibers, 80% six-inch length of longer and covered with photodegradable extruded plastic mesh, installed with staples in length and size as recommended by manufacturer.

PART 3 EXECUTION

3.1 INSPECTION

- A. Verify existing conditions before starting work.
- B. Examine finish surfaces, grades, topsoil quality, and depth. Do not start seeding work until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Limit preparation to areas, which will be immediately seeded. Remove existing vegetation or temporary seeding.
- B. Loosen topsoil of lawn areas to minimum depth of 4 inches. Remove stones over one inch in any dimension and sticks, roots, rubbish, and extraneous matter.
- C. Grade lawn areas to a smooth, free draining even surface with a loose, moderately coarse texture. Roll and rake, remove ridges and fill depressions as required to drain.
- D. Apply limestone, at rate determined by soil test, to adjust pH of topsoil to not less than 6.0 nor more than 6.8. Distribute evenly by machine and incorporate thoroughly into topsoil.
- E. Apply Type A fertilizer to indicated turf areas at a rate equal to 1.0 lb. of actual nitrogen per 1,000 sq. ft. (220 lbs./acre).
- F. Apply fertilizers by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with soil to a depth of 3 inches by disking or other approved method. Fertilize areas inaccessible to power equipment with hand tools and incorporate into soil.
- G. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed after fine grading and prior to seeding.

3.3 INSTALLATION

A. SEEDING

1. After fertilizing and prior to seeding, the ground surface shall be smooth, dry, friable and of uniformly fine texture. No seed shall be placed when the ground is not in a proper condition, and no seed shall be placed until the prepared ground surface has been approved by the Engineer. If, as a result of rain, the prepared ground surface becomes crusted or eroded; or if eroded places, ruts, or depressions exist for any reason, the Contractor shall rework the soil to the satisfaction of the Engineer.
2. No seed shall be sown during high winds, nor shall any seed be sown until the purity test has been completed for the seed to be used and shows that the seed meets the noxious weed seed requirements.
3. The optimum depth for seeding shall be 1/4-inch. Seeding shall be applied evenly with a rotary or drop type distributor in two directions at right angles to each other. Half of the specified pounds of seed shall be placed in one direction, and the other half of specified pounds shall be placed at right angle to the first direction.
4. Broadcasting will not be allowed except in inaccessible areas as approved by the Engineer. The seed shall be broadcast evenly by hand or with an approved seeding device. The seed shall be covered with a thin layer of topsoil by light raking or other approved method. The optimum depth for broadcast seeding shall be 1/4-inch.
5. The beginning and termination dates for placing the seed shall be as follows and shall not be adjusted except as approved by the Engineer in writing:
 - a. Fall Seeding: August 15 to September 30
 - b. Spring Seeding: April 1 to May 15
6. Seed indicated areas and all areas disturbed as a result of construction operations.
7. Perform seeding operations when the soil is dry and when winds do not exceed 5 miles per hour velocity.
8. Sow grass seed at a rate of 10.0 lbs. per 1,000 sq. ft. (435 lbs./acre).
9. After seeding, rake or drag surface of soil lightly to incorporate seed into top 1/8 inch of soil. Roll with light lawn roller.

B. MULCHING:

1. Place straw mulch on seeded areas within 24 hours after seeding.
2. Place straw mulch uniformly in a continuous blanket at the rate of 2-1/2 tons per acre, or two 50 lb. bales per 1,000 sq. ft. of area. A mechanical blower may be used for straw mulch application.
3. Crimp straw into soil by mechanical means.

C. Provide straw bale checking in ditches or problem swales at intervals required to adequately slow water velocity and impede soil loss.

3.4 REPAIR OF SEEDING

- A. The Contractor is responsible for the proper care of the seeded areas during the period when the vegetation is being established. If, at any time before completion and acceptance of the entire work covered by this contract, any portion of the surface becomes eroded, gullied or otherwise damaged or vandalized following seeding; has been winter-killed or otherwise destroyed, the affected portion shall be repaired to re-establish the condition and grade of the soil and reseed the areas as specified herein to attain established turf.

3.5 SEED PROTECTION ON SLOPES

- A. Cover seeded slopes where grade is 4:1 or greater with matting. Roll erosion control blanket down over slopes without stretching or pulling.
- B. Lay erosion control blanket smoothly on soil surface, burying top end of each section in narrow 6 inch trench. Leave 12 inch overlap from top roll over bottom roll. Leave 4 inch overlap over adjacent section.
- C. Staple outside edges and overlaps at 36 inch intervals.
- D. Lightly dress slopes with topsoil to ensure close contact between matting and soil.
- E. In ditches, unroll matting in direction of flow. Overlap end of strips six inch with upstream section on top.

3.6 ACCEPTANCE

- A. Inspection to determine acceptance of seeded lawns will be made after 60 days of completed installation upon Contractor's request. Provide notification at least ten working days before requested inspection date.
 1. Seeded areas will be acceptable provided all requirements, including maintenance, have been complied with, and a healthy, uniform, close stand of specified grass is established free of weeds, undesirable grass species, disease, and insects.
 2. No individual lawn areas shall have bare spots or unacceptable cover totaling more than two percent of the individual areas, in areas requested to be inspected.
- B. Upon acceptance, Owner will assume lawn maintenance.

3.7 CLEANING

- A. Perform cleaning during installation of work and upon completion of work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from seeding operations.

END OF SECTION

SECTION 33 05 14

PUBLIC MANHOLES AND STRUCTURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cast-in-Place concrete manholes and structures with transition to cover frame, covers, anchorage, and accessories.
 - 2. Modular precast concrete manholes and structures with tongue-and-groove joints with transition to cover frame, covers, anchorage, and accessories.
 - 3. Doghouse manhole connections to existing storm sewer lines.
 - 4. Bedding and cover materials.

- B. Related Sections:
 - 1. Section 31 05 13 - Soils for Earthwork: Soils for backfill in trenches.
 - 2. Section 31 05 16 - Aggregates for Earthwork: Aggregate for backfill in trenches.
 - 3. Section 31 23 16 - Excavation: Excavating for manholes, structures and foundation slabs.
 - 4. Section 31 23 23 - Fill: Backfilling after manhole and structure installation.
 - 5. Section 33 42 14 - Public Pipe Culverts.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Manholes and Structures:
 - 1. Basis of Measurement: By each manhole, catch basin, end section, head wall, flared pipe end.
 - 2. Basis of Payment: Includes excavating, concrete foundation slab, concrete structure sections cover frame, PVC structure, grate and cover, to design depth, forming and sealing pipe inlets and outlets.

1.3 REFERENCES

- A. American Association of State Highway Transportation Officials:
 - 1. AASHTO M288 - Geotextiles.
 - 2. AASHTO M306 - Drainage Structure Castings.
 - 3. AASHTO M91 - Sewer and Manhole Brick (Made from Clay or Shale).

- B. American Concrete Institute:
 - 1. ACI 530/530.1 - Building Code Requirements for Masonry Structures and Specifications for Masonry Structures.

- C. ASTM International:
 - 1. ASTM A48/A48M - Standard Specification for Gray Iron Castings.
 - 2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

3. ASTM C32 - Standard Specification for Sewer and Manhole Brick (Made From Clay or Shale).
4. ASTM C55 - Standard Specification for Concrete Brick.
5. ASTM C478 - Standard Specification for Precast Reinforced Concrete Manhole Sections.
6. ASTM C497 - Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile.
7. ASTM C913 - Standard Specification for Precast Concrete Water and Wastewater Structures.
8. ASTM C923 - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes and Laterals.

1.4 SUBMITTALS

- A. Shop Drawings: Indicate structure locations, elevations, piping, sizes and elevations of penetrations.
- B. Product Data: Submit manhole covers, component construction, features, configuration, dimensions.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with MoDOT standard specifications and requirements.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years documented experience.
- B. Installer: Company specializing in performing work of this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Comply with precast concrete manufacturer's instructions and ASTM C913 for unloading, storing and moving precast manholes and drainage structures.
- B. Store precast concrete manholes and drainage structures to prevent damage to Owner's property or other public or private property. Repair property damaged from materials storage.
- C. Mark each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying symbols and numbers shown on Drawings to indicate its intended use.

PART 2 PRODUCTS

2.1 CONCRETE MANHOLES AND STRUCTURES

- A. Furnish materials in accordance with MoDOT requirements

- B. Manhole and Structure Sections: Reinforced precast concrete in accordance with ASTM C478 with gaskets in accordance with ASTM C923.
 - 1. Joints for Precast Manholes and Structures: In accordance with ASTM C913; maximum leakage of 0.025 gallons per hour per foot of joint at 3 feet of head.

2.2 PVC MANHOLES AND STRUCTURES

- A. Manufacturer's
 - 1. Nyloplast.
 - 2. Substitutions: (Per Preapproval by Engineer)

2.3 FRAMES AND COVERS

- A. Furnish materials in accordance MoDOT standards.
- B. Product Description:
 - 1. Lid: As shown on plans.
 - 2. Grate: As shown on plans.
 - 3. Substitutions: (Per Preapproval by Engineer)

2.4 ACCESSORIES

- A. Bituminous Interior Manhole Coating:
- B. Concrete: In accordance with MoDOT Standard Specification Section 501.

2.5 BEDDING AND COVER MATERIALS

- A. Bedding and Cover Type A2, as specified in Section 31 05 16.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify items provided by other sections of Work are properly sized and located.
- C. Verify built-in items are in proper location, and ready for roughing into Work.
- D. Verify correct size of manhole and structure excavation.

3.2 PREPARATION

- A. Coordinate placement of inlet and outlet pipe or duct sleeves required by other sections.
- B. Do not install manholes and structures where site conditions induce loads exceeding structural capacity of manholes or structures.

- C. Inspect precast concrete and PVC manholes and structures immediately prior to placement in excavation to verify manholes and structures are internally clean and free from damage. Remove and replace damaged units.

3.3 INSTALLATION - GENERAL

- A. Excavation and Backfill:
 - 1. Excavate for manholes and structures in accordance with Section 31 23 16 in location and to depth shown. Provide clearance around sidewalls of manhole or structure for construction operations, granular backfill.
 - 2. When groundwater is encountered, prevent accumulation of water in excavations. Place manholes or structures in dry trench.
 - 3. Where possibility exists of watertight manhole or structure becoming buoyant in flooded excavation, anchor manhole or structure to avoid flotation.
- B. Place foundation slab, trowel top surface level.
- C. Place manhole sections plumb and level, trim to correct elevations, anchor to foundation slab.
- D. Backfill excavations for manholes and structures in accordance with Section 31 23 16.
- E. Cut and fit for pipe.
- F. Grout base of shaft sections to achieve slope to exit piping. Trowel smooth. Contour to form continuous drainage channel.
- G. Set cover frames and covers level without tipping, to correct elevations.

3.4 PRECAST CONCRETE MANHOLE AND STRUCTURE INSTALLATION

- A. Lift precast manholes and structures at lifting points designated by manufacturer.
- B. When lowering manholes and structures into excavations and joining pipe to units, take precautions to ensure interior of pipeline and manhole or structure remains clean.
- C. Set precast manholes and structures bearing firmly and fully on crushed stone bedding, compacted in accordance with provisions of Section 31 23 16 or on other support system shown on Drawings.
- D. Assemble multi-section manholes and structures by lowering each section into excavation. Install rubber gasket joints between precast sections in accordance with manufacturer's recommendations. Lower, set level, and firmly position base section before placing additional sections.
- E. Remove foreign materials from joint surfaces and verify sealing materials are placed properly. Maintain alignment between sections by using guide devices affixed to lower section.
- F. Joint sealing materials may be installed on site or at manufacturer's plant.

- G. Verify manholes and structures installed satisfy required alignment and grade.
- H. Remove knockouts or cut structure to receive piping without creating openings larger than required to receive pipe. Fill annular space with mortar.
- I. Cut pipe to finish flush with interior of manhole or structure.
- J. Grout base of shaft sections to achieve slope to exit piping. Trowel smooth. Contour to form continuous drainage channel.

3.5 DOGHOUSE MANHOLE AND STRUCTURE INSTALLATION

- A. Stake out location and burial depth of existing sewer line in area of proposed manhole or structure.
- B. Carefully excavate around existing sewer line to adequate depth for foundation slab installation. Protect existing pipe from damage. Cut out soft spots and replace with granular fill compacted to 95% dry density.
- C. Prepare crushed stone bedding or other support system shown on Drawings, to receive foundation slab as specified for precast manholes and structures.
- D. Install pre-cast concrete or cast-in-place concrete manhole or structure around existing pipe in accordance with the appropriate paragraphs specified herein.
- E. Grout pipe entrances in accordance with MoDOT Standard Specification 604.
- F. Provide channel in accordance with MoDOT Standard Specification 604. Trowel smooth.

3.6 CASTINGS INSTALLATION

- A. Set frames using mortar and masonry as indicated on Drawings. Install radially laid concrete brick with $\frac{1}{4}$ inch thick vertical joints at inside perimeter. Lay concrete brick in full bed of mortar and completely fill joints. Where more than one course of concrete brick is required, stagger vertical joints.
- B. Set frame and cover 2 inches above finished grade for manholes and other structures with covers located within unpaved areas to allow area to be graded away from cover beginning below top surface of frame.

3.7 FIELD QUALITY CONTROL

- A. Test concrete manhole and structure sections in accordance with ASTM C497.
- B. Vertical Adjustment of Existing Manholes and Structures: Conform with Section 33 01 31.
 - 1. Where required, adjust top elevation of existing manholes and structures to finished grades shown on Drawings.
 - 2. Reset existing frames, grates and covers, carefully removed, cleaned of mortar fragments, to required elevation in accordance with requirements specified for installation of castings.

3. Remove concrete without damaging existing vertical reinforcing bars when removal of existing concrete wall is required. Clean vertical bars of concrete and bend into new concrete top slab or splice to required vertical reinforcement, as indicated on Drawings.
4. Clean and apply sand-cement bonding compound on existing concrete surfaces to receive cast-in-place concrete in accordance with MoDOT Standard Specification Section 604.

END OF SECTION

SECTION 33 42 14

PUBLIC PIPE CULVERTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Pipe culverts.
 - 2. Accessories.
 - 3. Bedding and cover materials.
 - 4. Concrete encasement and cradles.
 - 5. Slope protection at pipe end.

- B. Related Sections:
 - 1. Section 31 05 16 - Aggregates for Earthwork.
 - 2. Section 31 23 16 - Excavation: Excavating for culvert piping.
 - 3. Section 31 23 17 - Trenching: Excavating for culvert piping.
 - 4. Section 31 23 23 - Fill: Backfilling over piping up to subgrade elevation.
 - 5. Section 31 25 13 - Erosion Controls and SWPPP.
 - 6. Section 33 05 14 - Public Manholes and Structures.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M252 - Corrugated Polyethylene Drainage Tubing.
 - 2. AASHTO M294 - Specification for Corrugated Polyethylene Pipe, 305- to 915-mm (12- to 36-In.) Diameter.
 - 3. AASHTO T99 - Standard Specification for the Moisture-Density Relations of Soils Using a 2.5 kg (5.5 lb) Rammer and a 305 mm (12 in.) Drop.
 - 4. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 2. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 4. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 SUBMITTALS

- A. Product Data: Submit data on pipe, fittings and accessories.

- B. Manufacturer's Installation Instructions: Submit special procedures required to install Products specified.

- C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

- A. Project Record Documents:

- 1. Accurately record actual locations of pipe runs, connections, and invert elevations.
- 2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

- B. Operation and Maintenance Data: Procedures for submittals.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with Jefferson County Requirements and in accordance with MoDOT standard highway specifications Section 730.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing work of this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Block individual and stockpiled pipe lengths to prevent moving.
- B. Do not place pipe or pipe materials on private property or in areas obstructing pedestrian or vehicle traffic.
- C. Do not place pipe flat on ground. Cradle to prevent point stress.
- D. Store UV sensitive materials out of direct sunlight.

1.8 COORDINATION

- A. Coordinate unrecorded or variations in site conditions, and corresponding adjustments to construction requirements.

PART 2 PRODUCTS

2.1 PIPE CULVERT

- A. Polypropylene Culvert Pipe: Dual Wall, smooth interior.
 - 1. Manufacturers:
 - a. ADS Model N-12 HP.
 - b. Substitutions: Section 01 60 00 – Product Requirements.
 - 2. Furnish materials in accordance with Missouri Department of Transportation Standards Section 730 latest editions.
 - 3. Meets ASTM F2736 for 12" to 30" or ASTM F2881 for 36" to 60".
- B. Reinforced Circular Concrete Pipe: **ASTM C76**, Class **III**.
 - 1. Furnish materials in accordance with MoDOT standard Specification Section 724.

2.2 ACCESSORIES

- A. Fill at Pipe Ends: Fill at Pipe Ends: Type A3 as specified in Section 31 05 16.
- B. Erosion Control Matt: Type as specified on plans in accordance with manufacturer's recommendations.
- C. Scour Stop: Alternative to Rip Rap, install Scour Stop in accordance with manufacturer's recommendations.
- D. Flared End Section: Concrete Flared End Section manufactured to accept pipe per Culvert Manufacturer.

2.3 BEDDING AND COVER MATERIALS

- A. Bedding and Cover to 6" above top of storm culvert: Fill Type A2, as specified in Section 31 05 16.
- B. Full Height Granular Backfill within 4 feet of road surface or if any part of trench undermines road surface: Fill Type A1, as specified in Section 31 05 16.
- C. Surface as determined by plans.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify excavation base is ready to receive work and excavations, dimensions, and elevations are as indicated on Drawings. Notify Engineer of discrepancies.

3.2 PREPARATION

- A. Hand trim excavations to required elevations. Correct over excavation with fine aggregate.
- B. Remove large stones or other hard or organic matter capable of damaging piping or impeding consistent backfilling or compacting.

3.3 EXCAVATION AND BEDDING

- A. Excavate culvert trench to 6 inches below pipe invert, in accordance with Section 31 23 17 for work of this Section. Hand trim excavation for accurate placement of pipe to elevations indicated.
- B. Place bedding material at trench bottom, level fill materials in one continuous layer not exceeding 6 inches compacted depth, compact to 95 percent.

3.4 INSTALLATION - PIPE

- A. Lift pipe into position. Do not drop or drag pipe over prepared bedding.
- B. Shore pipe to required position; retain in place until after compaction of adjacent fills. Ensure pipe remains in correct position and to required slope. Cradle bottom 20 percent of pipe diameter to avoid point load.
- C. Refer to Section 31 23 23 for backfilling and compacting requirements. Do not displace or damage pipe when compacting.

3.5 PIPE ENDS

- A. Place fill at pipe ends, as indicated on Drawings.

3.6 ERECTION TOLERANCES

- A. Lay pipe to alignment and slope gradients noted on Drawings; with maximum variation from indicated slope of 0.1%.

3.7 FIELD QUALITY CONTROL

- A. Request inspection prior to and immediately after placing aggregate cover over pipe.

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Protect pipe and bedding from damage or displacement until backfilling operation is complete.

END OF SECTION

REVISIONS TO MODOT STANDARD SPECIFICATIONS

Rev. 4/21/15

Modifications to the 2011 Missouri Standard Specifications for Highway Construction shall be as listed herein.

SECTION 102

BIDDING REQUIREMENTS AND CONDITIONS

All references to submitting electronic bids in Section 102 shall be deleted. Please refer to the "Bid Notice" for directions to submit bids on County projects.

Delete Section **102.3 Bidding** – in its entirety and replace it with the following:

102.3 Bidding Documents. Upon request, the Commission will furnish the bidding documents to the prospective bidder. The documents will state the location, description and requirements of the contemplated construction and will show the estimate of the various quantities and kinds of work to be performed or material to be furnished, and will have a schedule of items for which unit bid prices are invited. The bidding documents will state the time in which the work shall be completed, the amount of the bid guaranty, and the date, time and place of the opening of bids.

102.3.1 All papers bound with or attached to or referenced in the bidding documents are considered a part thereof and must not be detached or altered when the bid is submitted.

102.3.2 The prospective bidder will be required to pay the Commission the sum stated in the notice of bid opening for each copy of a project's bidding documents. The *Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction*, including all revisions of these documents, and other items referenced in the bidding documents, whether attached or not, will be considered a part of the bid. A prospective bidder will be expected to separately purchase the current edition of the *Missouri Standard Specifications for Highway Construction* and the *Missouri Standard Plans for Highway Construction*, including all revisions of these documents.

102.3.3 It will be conclusively presumed that all of the bidding documents are in the bidder's possession and that these documents have been reviewed and used by the bidder in the preparation of any bid submitted. The effective dates of the *General Provision & Supplemental Specifications* and the *Supplemental Plans for Highway Construction* will be specified in the contract documents. A copy of the latest version of these documents is available on MoDOT's web site.

Delete Section **102.7 Preparation of Bidding Documents** – in its entirety and replace it with the following:

102.7 Preparation of Bidding Documents. All bids shall be properly signed, sealed and submitted in accordance with Sec 102.10. Each bidder shall specify in the bid, in figures, a unit price for each of the separate items listed in the bidding documents, except a unit price entry will not be necessary for those items having a quantity of one and only the amount for that item need be entered. Zero will be considered a valid bid. The bidder shall not enter zero in any "Unit Price" field unless zero is the intended bid for that item. A unit price left blank, with or without an extension, other than items having a quantity of one, will be considered as zero by the Commission. In case of alternate items, unit prices shall be entered for only one alternate, unless otherwise specified in the bidding documents. A unit price shall not exceed two decimal places. Bids shall not contain interlineations, alterations or erasures except as noted in Sec 102.7.1. The bidder shall show the products of the respective unit prices and quantities in the amount column provided for that purpose. The extension of each line item shall be rounded to the nearest second decimal place value, with half cents rounded up. These extensions shall be totaled and in case of errors or discrepancies in extensions, the unit prices shall govern. All entries in the bid shall be in ink or typewritten. If, in the sole discretion of the engineer, an obvious and apparent clerical error exists in the unit price listed for an item due to a misplaced decimal, but the extension appears to be correct and as intended in all respects, the engineer may correct the unit price bid in accordance with the extension listed. All errors in extensions or totals will be corrected by the engineer and such corrected extensions and totals will be used in comparing bids.

102.7.1 A bidder may alter or correct a unit price, lump sum bid or extension entered on the paper bid form or the computer-generated itemized paper bid form by crossing out the figure with ink and entering a new unit price, lump sum bid or extension above or below in ink, with the bidder's initials.

102.7.2 A bidder may submit a separate bid on any or all projects, except that bids shall be submitted for all projects in a required combination. Bidders not having the ability to simultaneously execute all contracts for bids submitted during a bid

opening may state, in one of the bids, the maximum total value of contract awards the bidder is willing to accept for that bid opening. Only one statement of "Maximum Monetary Value of Awards Accepted this Bid Opening" shall be completed per bid opening. In the event a bidder submits multiple statements of maximum award, the lowest value stated will be used. The Commission reserves the right to select and award the combination of bids, not exceeding this maximum, that will be to the best interest of the State, provided these bids are in conformance with the requests for bids. Any corrected bid that exceeds the lowest specified maximum award may be declared non-responsive.

102.7.3 The bid of an individual, including those doing business under a fictitious name, shall include the signature and address of the individual. The signature shall be exactly the same as that appearing on the contractor questionnaire.

102.7.4 The bid by a partnership or joint venture, including individuals doing business under fictitious names or corporations, shall be executed by at least one of the partners followed by the title "Partner" or one of the joint venturers followed by the title "Joint Venturer" and the business address of the partnership or joint venturer shown. The true legal name and address of each partner and joint venturer shall also be shown and shall appear exactly the same as that shown on the contractor questionnaire.

102.7.5 The bid by a corporation, whether acting alone or as a joint venturer, shall show the address and name of the corporation exactly as shown on the contractor questionnaire, and shall include the signature or digital ID and title of a person authorized by its board of directors to bind the corporation.

102.7.6 Each bidder shall submit with each bid a sworn statement, executed by or on behalf of the bidder to whom a contract may be awarded, certifying that the bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with the bid or any contract that may result from its acceptance.

102.7.7 A bid will not be accepted or considered if the bid is the product of collusion among bidders, if the bidder is disqualified or determined not responsible or if the bid is irregular in accordance with Sec 102.8.

SECTION 105 **CONTROL OF WORK**

Delete Section 105.1- Authority and Duties of Commission in Contract Administration - items (a) through (h) that pertain exclusively to MoDOT and not to the County of Jefferson.

Revise 105.4 - Coordination of Contract Documents. - such that the governing ranking will be as follows:

- (a) Project Technical Specifications
- (b) Project Specific Drawings
- (c) General Provisions
- (d) Revisions to MoDOT Standard Specifications
- (e) General Special Provisions
- (f) Supplemental Specifications
- (g) Standard Specifications
- (h) Standard Drawings
- (i) Bid Items or Quantities

SECTION 106 **CONTROL OF MATERIAL**

Delete Section 106.12 - Pre-Acceptance List of Material and Sources - in its entirety.

SECTION 107 **LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

If a Corps of Engineers 404 Permit has been issued specifically for this project, then the provisions of that permit shall be followed and shall hold precedence over Section 107.10.

SECTION 109

MEASUREMENT AND PAYMENT

Delete Section 109.9.1.2 of Division 109.9 - Retained Percentage - in its entirety.

Delete Section 109.14 – Price Adjustment for Fuel - in its entirety.

SECTION 203

ROADWAY AND DRAINAGE EXCAVATION, EMBANKMENT AND COMPACTION

Modify Section 203.3.1 of Section 203.3 – Borrow – as follows:

Replace the first sentence with the following: Borrow will consist of approved material required for the construction of embankment or for other portions of the work, and shall be obtained from borrow areas shown on the plans, from areas designated by the engineer, or from other approved sources.

Modify Section 203.4 as follows:

Delete the reference in Section 203.4.1 that states, “Finishing by hand methods will not be required”: Replace with the following:

Hand raking or fine grading by mechanical means of the disturbed areas shall be required to remove debris and stones. The soil shall be tilled to a depth of 4” and graded to a reasonably smooth surface.

Replace Section 203.4.1.1 with the following:

Field Stone. Before final project acceptance, the removal and disposal requirements of all loose field stones shall be guided by the following table:

<u>Location - limits</u>	<u>Limits</u>	<u>Maximum Stone Size</u>
Residential and business where lawns are maintained	All disturbed areas	Relatively free of stones – ½” maximum
Foreslopes, roadside ditches and backslopes outside of maintained lawn areas	Right of way	1” maximum
Rock cut sections	All disturbed areas	As directed by the Engineer

SECTION 206

EXCAVATION FOR STRUCTURES

Replace Section 206.4.13 – Excavation Classification – with the following: “Unless otherwise shown on the plans, excavation for structures will be classified as Class 1 Excavation, Class 1 Excavation in Rock, Class 2 Excavation, Class 2 Excavation in Rock, Class 3 Excavation, Class 3 Excavation in Rock, Class 4 Excavation and Class 4 Excavation in Rock. In general, Class 1 Excavation and Class 2 Excavation will apply to excavation for bridges and large retaining walls. Class 3 Excavation will apply to excavation for pipe culvert installations, utilities, retrofit pipe culverts, drop inlets, and manholes. Class 4 Excavation will apply to excavation for box culverts, small retaining walls and other miscellaneous structures. Class 1 Excavation will include all excavation above a specified elevation indicated on the plans while Class 2 Excavation will include all excavation below this specified elevation. The classification of excavation for all structures will be shown on the plans.

Replace Section 206.5.2 – with the following: “Final measurement of Class 3 Excavation for pipe culverts, utilities, retrofit pipe culverts, drop inlets or manholes will be made to reflect the actual computed quantity established from field measurements. The plan quantities were estimated based on the random boring data and visual observations of the adjacent existing ditch lines. The revision or correction will be computed and added to or deducted from the contract quantity. Measurement of Class 3 Excavation will be made to the nearest cubic yard for each structure of that volume of material actually removed from within the area bounded by vertical planes of 12 inch minimum to 18 inches maximum outside of the outer walls of the structure. The upper limits of the volume measured, will be the existing ground line, or the lower limits of the roadway excavation, whichever is lower. The lower limits of the volume measured will include excavation necessary for pipe bedding.

SECTION 304
BASES AND AGGREGATE SURFACES

Delete Section 304.3.5 - Substitutions for Aggregate Base - in its entirety.

Modify Section 304.5 – Method of Measurement – as follows:

Final measurement of the completed aggregate base course will be based on actual field measurements to the nearest square yard.

Replace Section 304.6 - Basis of Payment – with the following: “The accepted quantities of aggregate base course of the thickness and type specified will be paid for at the contract unit price for each of the pay items included in the contract. Payment will be considered full compensation for water used in performing this work.”

SECTION 401
PLANT MIX BITUMINOUS BASE AND PAVEMENT

Section 401.4 Job Mix Formula – The County may waive submission of representative mixture samples. The Contractor, at the time he submits his job mix formula, shall request in writing whether samples are required. The County will respond in writing and if samples are required, they shall be submitted within ten working days of receipt of the County’s letter.

Section 401.4.1 Mixture Design – Modify this paragraph as follows:

The mix design shall be submitted to the County for approval at least seven (7) days prior to mixture production. A mix design shall be submitted for all County projects. The composition of the mixture shall conform to the following limits by weight:

Total Mineral Aggregate	94.0-96.5 %
Asphalt Binder	3.5-6.0 %

Add the following item to Section 401.4.2 – Required Information:

(q) Unit weight of combined mixture.

Modify Section 401.4.3 Mixture Approval so that “the County” is substituted where it presently reads “Construction and Materials”.

Delete Section 401.4.6 Time Limit – in its entirety.

Delete Section 401.5.2 Substitutions - in its entirety.

Delete Section 401.6 Field Laboratory – in its entirety.

Delete Section 401.7.1 and replace with the following:

401.7.1 Weather Limitations. Bituminous mixtures shall not be placed (1) when either the air temperature or the temperature of the surface on which the mixture is to be placed is below 40 F (5 C), (2) on any wet or frozen surface, or (3) when weather conditions prevent the proper handling or finishing of the mixture. Temperatures are to be obtained in accordance with MoDOT Test Method TM20.

If a rainfall event occurs (with rain duration lasting more than 5 min.) before 10am on any given workday, then paving operation shall be cancelled for the balance of that workday and the contractor is not charged for the workday. Once a rainfall event begins the contractor is to immediately shut down plant mix operation. No pavement materials will be accepted at the construction site until further notice from engineer. At the contractor’s request, the engineer may waive these requirements on an individual basis.

401.7.5.1 Irregularities. Add a sentence preceding the sentence “The outside edge alignment shall be uniform” as follows:

The outside edges of the pavement shall be constructed to an angle of approximately 45 degrees with the surface of the roadbed and rolled with a hand roller for a smooth appearance.

Replace Section 401.8 Quality Control with the following:

The Contractor shall maintain equipment and qualified personnel or retain the services of a qualified testing laboratory to perform QC field inspection, sampling and testing in accordance with applicable portions of Section 403. The testing service shall be a firm different than the one retained by the County for testing services on that project. The Contractor shall notify the Engineer at the preconstruction meeting who he intends to use for testing services, the name of a contact person and his or her telephone number. A proposed third party testing service for dispute resolution shall be included with the mix design submittal.

Replace the last sentence in Section 401.8.4 Pavement Testing with the following:

The Contractor shall restore the surface from which samples have been taken immediately with the mixture under production or with a non-shrink concrete grout. A cold patch mixture will not be acceptable.

Replace Section 401.13 Method of Measurement with the following:

Measurement will be in accordance with Sec 403.22 and as modified by the Project Technical Specifications.

SECTION 402 **PLANT MIX BITUMINOUS SURFACE LEVELING**

Delete Section 402.2.2 – in its entirety.

Replace Section 402.3 Composition of Mixture with the following:

Mixture shall meet the requirements of the asphalt type specified in the contract and/or bidding documents. The mixture shall be in accordance with Sec 401.3.

Section 402.4 – Replace with the following:

402.4 Job Mix Formula. The mixture shall be in accordance with Sec 401.4 and shall conform to the following limits by weight:

Total Mineral Aggregate	92.0-96.5 %
Asphalt Binder	3.5-8.0 %

Delete Section 402.9 - in its entirety.

SECTION 403 **ASPHALTIC CONCRETE PAVEMENT**

Delete Section 403.4.1 – in its entirety.

Replace “Construction and Materials” in Section 403.4.3 with “the Engineer”.

Section 403.6 – Delete the first sentence in its entirety. Revise the fourth sentence to read: “The gyratory compactor shall be one from MoDOT’s Construction and Materials approved list.”

Delete Section 403.10.2 Substitutions – in its entirety.

Section 403.11.1 Field Mix Redesign – Replace “Central Laboratory” with “Engineer”.

Section 403.11.1.1 Approval – replace “Construction and Materials” with “the Engineer”. Delete the second sentence in this section.

Modify the first sentence of 403.17.1 Quality Control Operations – to read “The Contractor shall maintain or retain equipment and qualified personnel to perform all QC field inspection, sampling and testing as required by this specification.” Add the following sentence: “The personnel, if from an independent testing laboratory, shall be different than the company retained by the County for QC purposes.”

Section 403.17.2 Bituminous Quality Control Plan – Change “Construction and Materials” to “the Engineer”.

Revise the last sentence of 403.22.4.2 Surface Restoration to read: “If bituminous construction has been completed, the surface from which samples have been taken shall be restored within 48 hours with an approved commercial mixture or with an approved non-shrink concrete grout. Cold mix is not an acceptable patch.

Delete Sections 403.23.5 through 403.23.7.3 inclusive.

SECTION 407 **TACK COAT**

Revise the first sentence of Section 407.3 Equipment. - as follows:

“The Contractor shall provide a system for heating and applying the bituminous material and for applying blotter material.”

Add Section 407.4.1.1 Weather Limitations. Tack coat shall not be applied when either the air temperature or the temperature of the surface to be tacked is below 40 F. Temperatures are to be obtained in accordance with MoDOT Test Method TM20.

SECTION 408 **PRIME COAT**

Add Section 408.4.1.1 Weather Limitations. Bituminous material shall not be applied (1) when either the air temperature or the temperature of the surface to be primed is below 60 F or (2) when weather conditions prevent the proper construction of the prime coat. Temperatures are to be obtained in accordance with MoDOT Test Method TM20.

SECTION 413 **SURFACE TREATMENTS**

Replace “Construction and Materials” in Section 413.30.3 with “the Engineer”.

Replace “Construction and Materials” in Section 413.30.3.1 with “the Engineer”.

Revise Section 413.30.6.1 as follows: **Quality Control Operations.** Quality control shall be conducted in accordance with Sec 403.17 as modified herein by the **“REVISIONS TO MODOT STANDARD SPECIFICATIONS”**, except as follows.

SECTION 501 **CONCRETE**

Delete Section 501.2.2 - in its entirety.

Section 501.3 Mix Design. – Change the last sentence to read:

“The Contractor may be required to submit representative samples of each ingredient to the Engineer for laboratory testing.”

Revise Section 501.8.2 (e), the fifth sentence, “The Engineer may allow the use of the test concrete for appropriate incidental construction”, shall be deleted. In its place add the following sentence – “Test concrete shall not be used in construction”.

Revise Section 501.8.10 to delete the Type 1 field laboratory at the proportioning plant.

SECTION 502

PORTLAND CEMENT CONCRETE BASE AND PAVEMENT

Delete Section 502.3.7 - in its entirety.

Revise the first sentence in Section 502.11.1 to read, "Prior to approval of concrete mix designs by the engineer, the contractor shall submit a QCP to the County."

Delete Section 502.15.3 Smoothness Adjustment – in its entirety.

Delete Section 502.15.3.1 Incentives – in its entirety.

Table I shall be revised so that "Percent of Contract Price" does not exceed 100.

Delete Sections 502.15.6 Width, 502.15.7 Pay Factors, and 502.15.11 PWL Determination Table in their entirety.

SECTION 601 **FIELD LABORATORIES**

Delete this Section in its entirety.

SECTION 603 **WATER LINE INSTALLATION**

Revise Section 603.2 - Material. To include the following sentence after the table:

Materials other than those shown may be specified by the Engineer and shall meet AWWA, ASTM, ANSI and NSF specifications.

Revise Section 603.3.4 - Abandoned Water Mains. To include the following at the end of this section:

8" and larger abandoned water mains remaining under the completed road and or shoulder shall be abandoned by grout filling the line. Grout shall consist of Mortar for Grout as specified in Section 1066. The cost of the grout, plugs, labor, fuel and equipment shall be included in the lump sum unit cost for "Removal of Improvements". Smaller watermains shall be abandoned as noted above by capping and covering the cap with concrete. PVC watermains may be capped with caps made of the same material, glued in place.

SECTION 605 **UNDERDRAINAGE**

Delete Sections 605.10.2.5 through 605.10.2.5.3 in their entirety. Video inspection of edge drains will not be required.

SECTION 620 **PAVEMENT MARKING**

Replace the second through fourth sentences of Section 620.2.3.1, with "The engineer will visually inspect the pavement markings for reflectivity. The inspection will take place no sooner than seven days after application. The contractor may clean any pavement markings at the contractor's expense prior to the visual reflectivity inspection.

Replace Section 620.2.4.1 with the following:

620.2.4.1 Retroreflectivity inspection will be performed visually. Spotty or lack of reflectivity when driven during a nighttime visual inspection will be cause for reapplying the pavement marking at no additional cost to the County.

Revised Section 620.10.5.1 to read:

Final measurements of pavement markings of the type specified will be based on actual field measurements to the nearest lineal foot. Revisions or corrections will be computed and added or deducted from the contract quantity.

SECTION 622

PAVEMENT AND BRIDGE SURFACE REMOVAL AND TEXTURING

Revised Section 622.10.4 to read:

Final measurements of coldmilling of the type specified will be based on actual field measurements and computed the nearest square yard. Revisions or corrections will be computed and added or deducted from the contract quantity.

SECTION 703

CONCRETE MASONRY CONSTRUCTION

Add a sentence to the end of Section 703.3.8 -Surface Sealing for Concrete – that reads: “Surface sealing shall not be applied until after all defects in the bridge deck surface have been patched per the Engineer’s requirements.”

SECTION 706

REINFORCING STEEL FOR CONCRETE STRUCTURES

Delete the last sentence in Section 706.2.2 that allows flame cutting of uncoated reinforcement. Reinforcement shall be saw cut or sheared.

Delete the sentence in Section 706.3.1 that reads: “At other locations, the bars shall be firmly tied at alternate crossings or closer.” Replace this sentence with: “All reinforcement, including superstructure and substructure, shall be tied at 100% of crossing locations.”

SECTION 712

STRUCTURAL STEEL CONSTRUCTION

Delete the sentence in Section 712.3 that reads: “Any material that has become bent shall be straightened before being assembled or shall be replaced, if necessary.” Replace it with the following: “Any material that has become bent from the intended shape shall be replaced at no cost to the County.”

The County will not issue qualification cards as stated in Section 712.6.3, but will require proof of the welder’s certification from an accredited AWS Certified Welder Program. Welding will not be allowed on County projects without a copy of the welder’s certification being delivered to the County prior to the beginning of welding. The welder shall not weld for any process and in the positions for which he is not certified.

SECTION 720

MECHANICALLY STABILIZED EARTH WALL SYSTEMS

Delete Section 720.3.1 - in its entirety and replace with the following:

The Contractor shall submit product information on the type of mechanically stabilized earth wall system he is proposing. The wall shall be in conformance with the Plans and Project Technical Specifications. Shop drawings and design calculations shall be submitted and shall be signed and sealed by a Professional Engineer registered in the state of Missouri.

SECTION 724

PIPE CULVERTS

Revise Section 724.1.1 to read as follows:

The contract will specify the type of pipe to be used. Substitution of pipe types is not permissible.

Replace Section 724.1.2 with the following:

Metal pipe shall be constructed in accordance with Sec 725. Reinforced concrete pipe shall be constructed in accordance with Sec 726.

Revise Section 724.3.1 to read:

Inspection of pipe and pipe placement will be performed visually by the County during construction.

Delete Sections 724.3.2, 724.3.3, 724.3.4, 724.3.4.1, 724.3.5, 724.3.5.1, 724.3.6, 724.3.7, and 724.3.8.

Revise Section 724.4.1 to read:

Final measurements of pipe culverts of the type specified will be based on actual field measurements to the nearest lineal foot along the geometric center of the pipe. Revisions or corrections will be computed and added or deducted from the contract quantity.

Delete Section 724.4.4.

SECTION 725

METAL PIPE AND PIPE ARCH CULVERTS

Revise the first sentence of Section 725.1.2 to read: "If the contract specifies corrugated metallic-coated steel pipe or corrugated aluminum alloy pipe, the thickness of metal and size of corrugation for the respective pipe size shall be as shown on the plans unless otherwise specified.

Revise Section 725.4 to read:

Backfill material for metal culverts shall consist of crushed stone.

Revise Section 725.4.1 to read:

Crushed stone shall consist of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B. For all pipe culverts under roadways or sidewalks crushed stone backfill shall be used for full depth of the trench, and to the subgrade of the road, and to a point two feet on either side of the pavement width. For backfill under grass areas, the granular backfill shall be brought to one foot above the top of the pipe, then completed with earthen backfill to the required grade. Bedding material shall be the same as that specified above for backfill.

SECTION 726

RIGID PIPE CULVERTS

Revise 726.1.1 to read:

If the contract specifies reinforced concrete pipe, the type of installation and the class of pipe shall be in accordance with the plans for the applicable allowable overfill height.

Delete Section 726.1.2.

Modify the sixth sentence in Section 726.3.1 to read:

All joints shall be sealed with an approved plastic compound, tubular joint seal, an external wrap, cement mortar or other approved methods to create a soil tight condition.

Modify 726.3.2 to read:

Bedding for reinforced concrete pipe shall consist of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B.

Section 726.3.4 - Insert the following after the second sentence:

For all pipe culverts under roadways or sidewalks crushed stone backfill, meeting the requirements of Section 1009, Grade 4, Gradation B, shall be used for full depth of the trench, and to the subgrade of the road, and to a point two feet on either side of the pavement width. For backfill under grass areas, the granular backfill shall be brought to one foot above the top of the pipe, then completed with earthen backfill to the required grade.

SECTION 727

STRUCTURAL PLATE PIPE AND STRUCTURAL PLATE PIPE-ARCH CULVERTS

Delete 727.3.3 Bedding and Backfill material and replace with the following:

727.3.3 Bedding and Backfill Material. Bedding for structural plate pipe and structural plate pipe-arch culverts shall consist of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B, except if rock is encountered, the trench shall be excavated to a minimum depth of 8 inches below the bottom of the culvert.

Delete Section 727.3.4.1 and Section 727.3.4.2 and replace with the following:

Backfill shall be with crushed stone consisting of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B. Stone backfill shall be used for full depth of the trench, and to the subgrade of the road, and to a point two feet on either side of the pavement width. Layers of backfill shall be carefully tamped in place and shall be kept at approximately the same elevation on opposite sides of the structure at all times during the progress of work in order to equalize the loading.

SECTION 731
PRECAST REINFORCED CONCRETE MANHOLES AND DROP INLETS

Revise Section 731.4.1 to read:

Final measurements of precast concrete manholes and drop inlets will be based on actual field measurements to the nearest lineal foot along the geometric center of the manhole/drop inlet. Revisions or corrections will be computed and added or deducted from the contract quantity. The depth of the structure will be the vertical distance from the top of the uppermost precast section to the invert flowline.

SECTION 732
FLARED END SECTIONS

Delete Section 732.1.2.

Delete reference to HDPE and PVC in Section 732.1.3.

Delete the second sentence in Section 732.5 that reads:

When two different diameters of pipe are shown on the plans for a given location for Group B or Group C pipe, the contract unit price for the flared end section or safety slope end section that would be required for the larger diameter pipe will be used for payment purposes.

SECTION 801
LIME AND FERTILIZER

Revise the third sentence in Section 801.4.1 to read:

The soil shall be thoroughly broken up, worked, tilled and loosened to a minimum depth of 4 inches.

Revise the second sentence of 801.4.2 to read:

After application, the lime and fertilizer shall be thoroughly mixed into the soil to a minimum depth of 4 inches, except when applied hydraulically on slopes steeper than 2:1.

SECTION 803
SODDING

Add the following to Section 803.3 Construction Requirements:

Sodding placed at the downstream end of a flared end section or the downstream end of a pipe without a flared end section shall be securely fastened with metal clips. The sod shall be placed slightly lower than the flowline of the flared end section or the flowline of the culvert. Sod washed away by flows through the culvert shall be cleaned up, disposed of and replaced by the Contractor at no additional charge to the County.

SECTION 804
TOPSOIL

Add Section 804.3.3 The Contractor shall be responsible for obtaining all necessary permits for removal of topsoil from an area. This shall include but not be limited to land disturbance, stormwater discharge, endangered species, farmland protection, wetlands, hazardous waste and cultural resources. Contact agencies for most of these are listed on MoDOT's website under Local Public Agency Manual.

SECTION 805

SEEDING

Revise the third sentence of Section 805.4 to read:

Permanent stabilization of an erodible seeded area shall be defined as a minimum uniform 70% perennial vegetative cover.

Add section 805.3.4 Seeding application methods shall be as follows:

Drop seeding shall only be allowed in small disturbed areas as approved by the engineer; Drill seeding shall be allowed for flat areas and slopes up to 3(H):1(V); and

Hydro seeding shall be required on slopes 3(H):1(V) or steeper.

SECTION 806

POLLUTION, EROSION AND SEDIMENT CONTROL

Revise 806.4.4 to read as follows:

Erosion control features shall be in place prior to any clearing and grubbing of the construction site. Additional erosion control features may need to be installed as the project continues and problem areas become exposed. Until the site is stabilized, all erosion and sedimentation control BMPs must be maintained properly. Maintenance must include inspections of all erosion and sedimentation control BMPs after each rainfall event and on a weekly basis. A written inspection report by the contractor shall be submitted to the engineer after every inspection. The report shall state a summary of the site conditions, status of the erosion and sediment control BMPs, date, time and name of inspector. The Contractor shall maintain all erosion control features by removing silt buildup so that the erosion control feature is fully effective. Any erosion control features knocked down during construction shall be reinstalled at no additional cost to the County.

Add a paragraph to 806.80.3 as follows:

The Contractor shall maintain the temporary pipes throughout the length of the project. Pipes, backfill and road surface washed out shall be replaced at no additional cost to the County.

Add the following sentence to 806.100.3.2:

The Contractor shall maintain the temporary stream crossing throughout the length of the project. Pipes, backfill and road surface washed out shall be replaced at no additional cost to the County.

END OF "REVISIONS TO MODOT STANDARD SPECIFICATIONS"

AFFIDAVIT COMPLIANCE WITH THE PREVAILING WAGE LAW

Before me, the undersigned Notary Public, in and for the County of _____, State of _____, personally came and appeared_____

(Name)

_____ of _____

(Title) (Company Name)

(a corporation)(a partnership)(a proprietorship) and after being duly sworn did depose and say that all provisions and requirements set out in Chapter 290, Sections 290.210 through and including 290.340, Missouri Revised Statutes, pertaining to the payment of wages to workers employed on public works projects have been fully satisfied and there has been no exception to the full and complete compliance with said provisions and requirements with Wage Determination No._____ or Annual Wage Order No._____ issued by the Division of Labor Standards on project_____,

(Job Number)

_____,
(Route or location, if building construction)

_____ County, Missouri, and completed on the ____ day of _____, 20____.

Signature

Subscribed and sworn to me this ____ day of _____, 20____.

My commission expires _____, 20____.

Notary Public

(Revised 03-23-00)

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



JEREMIAH W. (JAY) NIXON, Governor

Annual Wage Order No. 22

Section 050
JEFFERSON COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by

John E. Lindsey, Director
Division of Labor Standards

This Is A True And Accurate Copy Which Was Filed With The Secretary of State: March 10, 2015

Last Date Objections May Be Filed: April 9, 2015

Prepared by Missouri Department of Labor and Industrial Relations

Building Construction Rates for
JEFFERSON County

REPLACEMENT PAGE

Section 050

OCCUPATIONAL TITLE	** Date of Increase	*	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Asbestos Worker (H & F) Insulator	1/16		\$38.36	55	60	\$21.41
Boilermaker	9/15		\$32.76	126	7	\$30.10
Bricklayer and Stone Mason	11/15		\$32.50	72	5	\$20.69
Carpenter	6/15	e	\$36.34	77	41	\$15.75
Cement Mason	6/15		\$30.56	80	6	\$17.30
Communication Technician	12/15		\$31.35	44	47	\$9.53 + 31.75%
Electrician (Inside Wireman)	8/15		\$34.20	82	71	\$10.78 + 39.5%
Electrician (Outside-Line Construction\Lineman)	9/15		\$42.52	43	45	\$5.00 + 36.5%
Lineman Operator	9/15		\$36.70	43	45	\$5.00 + 36.5%
Groundman	9/15		\$28.38	43	45	\$5.00 + 36.5%
Elevator Constructor	8/15	a	\$45.09	26	54	\$30.005
Glazier	6/15		\$33.13	87	31	\$19.58 + 10.53%
Ironworker	8/15		\$32.88	11	8	\$23.825
Laborer (Building):						
General		b	\$25.46	73	7	\$12.07
First Semi-Skilled			\$26.58	73	7	\$12.07
Second Semi-Skilled			\$25.96	73	7	\$12.07
Lather						USE CARPENTER RATE
Linoleum Layer and Cutter	6/15		\$31.08	92	26	\$15.45
Marble Mason	10/15		\$31.43	76	51	\$14.17
Marble Finisher	10/15		\$26.18	76	51	\$13.47
Millwright	6/15		\$36.34	77	41	\$15.75
Operating Engineer						
Group I	6/15		\$32.16	3	66	\$24.16
Group II	6/15		\$32.16	3	66	\$24.16
Group III	6/15		\$30.26	3	66	\$24.16
Group III-A	6/15		\$32.16	3	66	\$24.16
Group IV	6/15		\$26.80	3	66	\$24.16
Group V	6/15		\$26.80	3	66	\$24.16
Painter	10/15		\$31.65	104	12	\$13.76
Pile Driver						USE CARPENTER RATE
Pipe Fitter	7/15		\$37.00	91	69	\$26.68
Plasterer	7/15		\$31.06	67	3	\$17.53
Plumber	7/15		\$37.00	91	69	\$26.68
Roofer \ Waterproofer			\$30.70	15	73	\$16.67
Sheet Metal Worker	10/15		\$39.63	32	25	\$21.72
Sprinkler Fitter - Fire Protection	10/15		\$41.96	66	18	\$21.62
Terrazzo Worker	6/15		\$32.11	116	5	\$13.37
Terrazzo Finisher	10/15		\$30.35	116	5	\$11.84
Tile Setter	10/15		\$31.43	76	51	\$14.17
Tile Finisher	10/15		\$26.18	76	51	\$13.47
Traffic Control Service Driver			\$28.775	22	55	\$9.045
Truck Driver-Teamster			\$30.41	35	36	\$10.82

Fringe Benefit Percentage is of the Basic Hourly Rate

**Annual Incremental Increase

Building Construction Rates for JEFFERSON County Footnotes

REPLACEMENT PAGE

Section 050

* Welders receive rate prescribed for the occupational title performing operation to which welding is incidental.

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

- a - Vacation: Employees over 5 years - 8%; Employees under 5 years - 6%
- b - Projects over \$1 Million - \$25.46; Projects under \$1 Million - \$23.31
- c - Projects over \$1 Million - \$25.96.; Projects under \$1 Million - \$23.81
- d - Projects over \$1 Million - \$26.58; Projects under \$1 Million - \$24.83
- ** e - Projects over \$1 Million - \$36.34; Projects under \$1 Million - \$31.25

REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 ½) shall be paid for all work in excess of forty (40) hours per work week.

NO. 3: Means the regular workday shall consist of eight (8) consecutive hours, exclusive of a thirty (30) minute lunch period, with pay at the straight time rate. The regular workday shall begin between the hours of 6:00 a.m. and 9:00 a.m. The Employer may have the option to schedule the work week from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be paid at the applicable overtime rate. If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather, holiday or other conditions beyond the control of the Employer, they shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours for the workweek. All overtime work performed on Monday through Saturday shall be paid at time and one-half (1½) the hourly rate plus an amount equal to one-half (½) of the hourly Total Indicated Fringe Benefits. All work performed on Sundays and recognized holidays shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Shifts may be established when considered necessary by the Employer. Shift hours and rates will be as follows. If shifts are established, work on the First Shift will begin between 6:00 a.m. and 9:00 a.m. and consist of eight (8) hours of work plus one-half hour unpaid lunch. Hours worked during the first shift will be paid at the straight time rate of pay. The second shift shall start eight hours after the start of the first shift and consist of eight (8) hours of work plus one-half hour unpaid lunch. Work on the second shift will begin between 2:00 p.m. and 5:00 p.m. and be paid the straight time rate plus \$2.50 per hour. The third shift shall start eight hours after the start of the second shift and consist of eight (8) hours plus one-half hour unpaid lunch. Work on the third shift will begin between 10:00 p.m. and 1:00 a.m. and be paid the straight time rate plus \$3.50 per hour. The additional amounts that are to be paid are only applicable when working shifts. Shifts that begin on Saturday morning through those shifts which end on Sunday morning will be paid at time and one-half these rates. Shifts that begin on Sunday morning through those shifts which end on Monday morning will be paid at double time these rates.

NO. 11: Means eight (8) hours shall constitute a day's work, with the starting time to be established between 6:00 a.m. and 8:00 a.m. from Monday to Friday. Time and one-half (1½) shall be paid for first two (2) hours of overtime Monday through Friday and the first eight (8) hours on Saturday. All other overtime hours Monday through Saturday shall be paid at double (2) time rate. Double (2) time shall be paid for all time on Sunday and recognized holidays or the days observed in lieu of these holidays.

NO. 15: Means the regular working day shall be scheduled to consist of at least eight (8) hours, but no more than ten (10) consecutive hours, exclusive of the lunch period. The regular working day may be scheduled to commence at any time between the hours of 5:00 a.m. and 10:00 a.m. All work performed in excess of forty (40) hours in one work week, or in excess of ten (10) hours in one work day shall be paid at the rate of one and one-half (1½) times the regular hourly wage scale. Any work performed on a Saturday shall be paid for at the rate of one and one-half (1½) times the regular hourly wage scale unless such Saturday work falls under the category of Saturday Make-Up Day. Any work performed by Employees anywhere on Sunday or recognized holidays, shall be paid for at the rate of double (2) time the regular wage scale. If, during the course of a work week, an Employee is unable to work for any reason, and, as a result, that Employee has not accumulated forty (40) hours of compensable time at the straight time rate, the Employer, at his option may offer the Employee the opportunity to work on Saturday at straight time; provided, however, if during the period worked by said Employee on Saturday, the Employee's compensable time at the straight time rate exceeds forty (40) hours, all time worked in excess of the forty (40) hours will be paid at the rate of one and one-half (1½) times the regular hourly wage scale.

NO. 22: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE

NO. 26: Means that the regular working day shall consist of eight (8) hours worked between 6:00 a.m., and 5:00 p.m., five (5) days per week, Monday to Friday, inclusive. Hours of work at each jobsite shall be those established by the general contractor and worked by the majority of trades. (The above working hours may be changed by mutual agreement). Work performed on Construction Work on Saturdays, Sundays and before and after the regular working day on Monday to Friday, inclusive, shall be classified as overtime, and paid for at double (2) the rate of single time. The employer may establish hours worked on a jobsite for a four (4) ten (10) hour day work week at straight time pay for construction work; the regular working day shall consist of ten (10) hours worked consecutively, between 6:00 a.m. and 6:00 p.m., four (4) days per week, Monday to Thursday, inclusive. Any work performed on Friday, Saturday, Sunday and holidays, and before and after the regular working day on Monday to Thursday where a four (4) ten (10) hour day workweek has been established, will be paid at two times (2) the single time rate of pay. The rate of pay for all work performed on holidays shall be at two times (2) the single time rate of pay.

NO. 32: The regular working day shall consist of eight (8) hours of labor on the job between six (6) a.m. and four (4) p.m. and the regular working week shall consist of five (5) consecutive eight (8) hour day's of labor on the job beginning with Monday and ending with Friday of each week. The normal work week is 40 hours. All full-time or part-time labor performed during such hours shall be recognized as regular working hours and paid for at the regular hourly rate. All work performed during regular work hours on Saturdays will be paid at time and one-half (1 1/2). All work performed outside of regular working hours and performed during the regular work week, shall be at double (2) times the regular rate, except that the first two (2) hours following the regular work day shall be paid at one and one-half (1 1/2) times the regular rate. An early starting time of 6:00 a.m. may be used mutually agreed upon by the interested parties. SHIFT RATE: Shift work would start after 4:00 p.m. to 6:00 a.m. The first 8 hours would be at 115% of the basic wage rate. Overtime Monday through Friday would be at 1 1/2 of base shift rate. Saturday regular work day hours – 1 1/2 of base shift rate. Saturday – work after 8 hours – 2 times the basic wage rate. Sunday and Holidays – 2 times the basic wage rate. All work performed on recognized holidays and Sundays shall be paid double (2) time. Appropriate overtime rates to be based on fifteen minute increments.

NO. 35: Means a regular work week of forty (40) hours, will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof maybe worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A work day is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time maybe advanced or delayed if mutually agreed to by the interested parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 43: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1 1/2) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1 1/2) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Work performed outside the regularly scheduled working hours and on Saturdays, Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

NO. 44: Means forty (40) hours shall constitute a work week, Monday through Friday. Eight (8) hours shall constitute a work day. Hours of work shall be between the hours of 7:00 a.m. and 4:30 p.m. All work performed before 7:00 a.m. and after 4:30 p.m. and all work performed in excess of eight (8) hours in any one work day, over forty (40) hours in any work week and the first eight (8) hours of work on Saturday, shall be paid at the rate of one and one-half (1 1/2) times the regular rate of pay. All hours worked in excess of eight (8) hours on Saturday, all hours worked on Sunday and on holidays, or days that may be celebrated as such, and as designated by the federal government, shall be paid at two (2) times the regular rate of pay. All shifts for work performed between the hours of 4:30 p.m. and 1:00 a.m. shall receive eight (8) hours pay at the regular hourly rate of pay plus two dollars (\$2.00) per clock hour. All work performed between the hours of 12:30 a.m. and 9:00 a.m. on a third shift shall receive eight (8) hours pay at the regular hourly rate plus four dollars (\$4.00) per clock hour. All overtime work required after the completion of a regular shift shall be paid at one and one-half times (1 1/2 x) the "shift" hourly rate.

**REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE**

NO. 55: Means the regular work day shall be eight (8) hours between 6:00 a.m. and 4:30 p.m. The first two (2) hours of work performed in excess of the eight (8) hour work day, Monday through Friday, and the first ten (10) hours of work on Saturday, shall be paid at one & one-half (1½) times the straight time rate. All work performed on Sunday, observed holidays and in excess of ten (10) hours a day, Monday through Saturday, shall be paid at double (2) the straight time rate.

NO. 66: Means eight (8) hours shall constitute a day's work beginning at 7:00 a.m. (or 8:00) A.M. and ending at 3:30 (or 4:30) P.M. The work week shall be forty (40) hours beginning Monday at 7:00 a.m. (or 8:00) A.M. and ending Friday at 3:30 (or 4:30) P.M. The Employer at his option may use a flexible starting time between the hours of 6:00 a.m. and 8:00 a.m. All overtime, that is worked outside of the above established working hours of Monday through Friday, shall be paid at double (2) time, including Saturdays, Sundays and Holidays.

NO. 67: Means eight (8) hours shall constitute a day's work, with a flexible starting time to begin between 6:00 a.m. to 8:00 a.m., five (5) days a week, Monday through Friday. Any work over eight (8) hours in any one day shall be at the overtime rate, which is time & one-half (1½). Any work on Saturday shall be at time & one-half (1½), unless a Make-Up Day due to inclement weather is in effect. Any work on Sundays or holidays shall be at double (2) time. Four (4) days, ten (10) hours each day to be worked during Monday through Friday, shall be paid at straight time. A Make-Up Day Due To Inclement Weather Only - Employee(s) will be permitted to work an eight (8) hour make-up day on Saturday only, and the employee will receive the regular straight time wage rate.

NO. 72: Means that except as is otherwise provided herein, the work week shall be determined to begin at 8:00 a.m. Wednesday and end at 4:30 p.m. on the following Tuesday. Except as herein provided, working hours are from 8:00 a.m. to 11:55 a.m. and 12:30 p.m. to 4:25 p.m. and no more than the regular hours shall be worked during the forenoon or afternoon at the regular rate. In the case of days of inclement weather starting time and quitting time may be adjusted so long as the hours worked on such days do not exceed eight (8) and do not extend beyond 4:30 p.m. In circumstances where the Employee or Employees have regularly been working overtime on a particular day or days, no adjustment in the starting time shall operate to deprive Employees of overtime pay, which they would have otherwise received but for the change in the starting time. The parties understand that the application of the provisions of the preceding sentence will result in Employees receiving overtime pay even where they have not worked more than with (8) hours on a particular day. Regardless of the starting time, the forenoon working hours shall end at 11:55 a.m. and the afternoon working hours shall begin at 12:30 p.m. and end 8 hours and 25 minutes after the starting time fixed by the Employer for forenoon hours. Work performed by an employee on a non-holiday Saturday, except as hereinafter provided, or at night or before or after regular working hours on a non-holiday weekday, shall be considered overtime work, for which Employees working during such time shall be paid at the rate of one and one-half (1½) times their regular hourly wage rate for each hour or fraction thereof, worked during such time. Work performed on a Sunday or the recognized holidays shall be considered overtime work for which the Employee shall be paid twice the amount of his or her regular hourly wage rate for each hour or fraction thereof worked on any such day.

REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE

NO. 73: Means eight (8) hours shall constitute a day's work to begin at 8:00 a.m. and end at 4:30 p.m. The starting time may be advanced one (1) or two (2) hours. Employees shall receive time and one-half (1½) for all time they are required to work before 8:00 a.m., during the lunch period or after 4:30 p.m. unless the starting time is advanced as provided above. Forty (40) hours shall constitute a week's work, Monday through Friday, or any part thereof by reason of inclement weather (rain or mud), Saturday or any part thereof may be worked as a make-up day at the straight time rate. The Employer shall have the option of working five (5) eight (8) hour day's or four (4) ten (10) hour day's Monday through Friday. If an Employer elects to work five (5) eight (8) hour days during any work week, hours worked more than eight (8) per day or forty (40) per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an employer elects to work four (4) ten (10) hour days in any week, work performed more than ten (10) hours per day or forty (40) hours per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an Employer is working ten (10) hour days and loses a day due to inclement weather, he may work ten (10) hours Friday at straight time. All time over the regular workday as defined and all hours worked on Saturday shall be paid at the rate of one and one-half (1½) the regular rate of wages. If workmen are required to work recognized holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work. If a laborer is assisting another craft on a make-up day and the other craft is receiving overtime pay the laborer shall receive the same overtime multiple as the craft assisted. No overtime rates shall be broken down into less than thirty (30) minute units of time. Projects that cannot be performed during regular workday: Building construction work, if required by the owner, the contractor may perform work outside the normal hours and employees shall be paid applicable straight time hourly wage rate plus a premium of \$1.50 per hour for the first eight hours worked. Any hours worked in excess of eight hours shall be paid at the applicable overtime rate plus \$1.50 per hour premium. Shift work: The Employer may elect to work, one, two or three shifts on any work. When two or more shifts are worked on any operation, the first shift or day shift shall consist of eight (8) hours exclusive of lunch time; the second or swing shift consist of eight (8) hours' work for eight and one-half hours pay, exclusive of lunch time; the third or graveyard shift shall consist of eight (8) hours' work for nine (9) hours' pay exclusive of lunch time. The swing shift shall be paid twenty-five cents (\$.25) per hour above the regular rate of pay. The graveyard shift shall be paid fifty cents (\$.50) per hour above the regular rate of pay. Multiple shift (second or third shift) operation will not be construed on the entire project if at any time it is deemed advisable and necessary for the employer to a specific operation. However, no shift shall be started between midnight and 6:00 a.m. except the graveyard shift on a three (3) shift operation, or except in unusual or emergency, regardless if the project is working one (1) or two (2) shift. Shifts shall be established for a minimum of three (3) consecutive workdays. When 2-10 or 12 hour shifts are worked, the second shift shall receive \$.50 per hour above regular rate of pay. When the employer elects to work 2-10 or 12 hour shifts, the first 8 hours shall be at straight time rates. The remaining 2 or 4 hours shall be at the overtime rate of time and one-half.

NO. 76: Means the standard workday shall consist of eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. with a thirty (30) minute unpaid lunch hour occurring in the middle of the shift. The standard workweek shall consist of five standard workdays commencing on Monday and ending on Friday. The normal starting and quitting times may be changed by mutual consent of interested parties. All time worked before and after the established eight (8) hour workday, Monday through Friday, and all time worked on Saturday, shall be paid for at the rate of time & one-half (1½) the hourly base wage rate in effect. All time worked on Sunday and holidays shall be paid at the rate of double (2) the hourly wage in effect. All work done on Saturday will be done at time & one-half (1½), unless Saturday shall be used as a make-up day. If an employee should lose one or more days in a work week and use Saturday as a make-up day the pay shall be at the regular hourly base wage rate and benefits.

NO. 77: Means the regular workday shall consist of eight (8) consecutive hours, exclusive of a thirty (30) minute lunch period, with pay at the regular straight time hourly rate. The regular workday shall begin on the job site between the hours of 6:00 a.m. and 8:00 a.m. with the starting time to be determined by the Employer, unless project owner requires different starting time. This adjustable starting time can, at the Employer's option, be staggered to permit starting portions of the work force at various times within the prescribed hours. The Employer may establish a four (4) ten (10) hour shift exclusive of the thirty (30) minute lunch period at the straight time wage rate. Forty (40) hours per week shall constitute a week's work Monday through Thursday. In the event a job is down due to weather conditions, safety or other conditions beyond the control of the Employer, then Friday may, at the option of the employer, be worked as a make-up day at the straight time wage rate. Straight time is not to exceed ten (10) hours a day or forty (40) hours per week. Time and one-half (1 ½) shall be paid for all overtime hours worked during the week, Monday through Friday and for all work performed on Saturday. Double (2) time shall be paid for all time worked on Sunday and recognized holidays.

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NO. 80: Means eight (8) hours shall constitute the regular work day and forty (40) hours a work week, Monday through Friday. The Employer shall establish the starting time between 6:30 a.m. through 9:00 a.m. An Employer may further adjust the starting time up to 9:30 a.m. throughout the year. Time and one-half (1½) shall be paid after eight (8) consecutive hours worked after the established starting time and for hours worked before the established starting time. Time and one-half (1½) shall be paid for work performed on Saturdays. Work performed on Sundays and Holidays shall be paid at the double (2) time rate of pay. The Employer when working on Highway and Road Work may have the option to schedule the work week for his paving crew only from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate of time and one-half (1½). If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather (rain, snow, sleet falling), the Employer shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours.

NO. 82: Means the work day shall consist of eight (8) hours worked between 7:00 a.m. and 4:30 p.m. Forty (40) hours will constitute the work week from Monday through Friday, inclusive. Up to four (4) hours of overtime work per day performed before or after the assigned normal work day, (twelve (12) continuous hours, starting no earlier than 6:00 a.m., Monday through Friday), shall be paid at a rate of one and one-half times (1.5x) that employee's hourly rate. Any additional overtime, Monday through Friday, shall be paid at two times (2x) the regular rate of pay. The first eight hours of overtime work on Saturday shall be paid at the rate of one and one-half times (1.5x) the regular rate of pay. Hours worked in excess of eight (8) hours on Saturday shall be paid at two times (2x) the regular rate of pay. Double time shall be paid for work performed on Sundays, recognized legal holidays or days that may be celebrated as such as designated by the federal government. All shifts for work performed between the hours of 4:30 p.m. and 1:00 a.m. shall be paid at the regular hourly rate plus two dollars (\$2.00) per clock hour. All shifts for work performed between the hours of 12:30 a.m. and 9:00 a.m. shall be paid at the regular hour rate plus four dollars (\$4.00) per clock hour. All overtime work required after the completion of a regular shift shall be paid at one and one-half times (1.5x) the "shift" hourly rate.

NO. 87: Means eight (8) hours starting between 6:00 a.m. and 8:00 a.m. and ending between 2:30 p.m. and 4:30 p.m. at the Employers discretion shall constitute a day's work. Any work prior to 6:00 a.m. or after eight (8) hours shall be paid at the overtime rate. Five (5) days from Monday through Friday inclusive shall constitute a regular work week. All hours before and after these regular hours shall be considered overtime and shall be paid for at the rate of double (2) time. All work on Saturday and Sunday shall be paid at double (2) the prevailing scale of wages.

NO. 91: Means eight (8) hours shall constitute a day's work commencing at 7:00 a.m. and ending at 3:30 p.m., allowing one-half (½) hour for lunch. The option exists for the Employer to use a flexible starting time between the hours of 6:00 a.m. and 9:00 a.m. The regular workweek shall consist of forty (40) hours of five (5) workdays, Monday through Friday. The workweek may consist of four (4) ten (10) hour days from Monday through Thursday, with Friday as a make-up day. If the make-up day is a holiday, the employee shall be paid at the double (2) time rate. The employees shall be paid time and one-half (1½) for work performed on Saturdays, before the regular starting time or after the regular quitting time or over eight (8) hours per work day (unless working a 10-hour work day, then time and one-half (1½) is paid for work performed over ten (10) hours a day) or over forty (40) hours per work week. Work performed on Sundays and recognized holidays shall be paid at the double (2) time rate of pay. SHIFT WORK: When it is necessary for the project to operate in shifts, there will be three (3) eight (8) hour shifts commencing at 8:00 a.m. Shift work must continue for a period of not less than three (3) consecutive work days, two (2) days which must be regular work days (Monday through Friday). In the event the second or third shift of any regular work day shall fall into a Saturday or a holiday, such extension into a Saturday or holiday shall be considered as part of the previous workday and employees shall be paid at the regular shift rate. The first day shift shall work a regular eight (8) hour day at regular rates. The second shift shall be eight (8) hours regular time pay plus \$2.50 per hour premium for eight (8) hours work. Third shift will be for eight (8) hours regular time pay plus \$3.00 per hour premium for eight (8) hours work.

NO. 92: Means all work performed from 8:00 a.m. to 4:30 p.m., Monday through Friday, will be at straight time pay up to forty (40) hours per week. All work performed Monday through Friday before 8:00 a.m. and after 4:30 p.m. will be done at time and one-half (1½). All work done on Saturday will be done at time and one-half (1½), unless the employer and employee agree that Saturday shall be used as a make-up day. The Employer may use a flexible starting time of 7:00 a.m. to 8:00 a.m., and quitting time of 3:30 p.m. to 4:30 p.m., and any such different work starting time shall determine whether wages are payable at the straight rate or the premium rate. All work performed on Saturday shall be paid for at time and one-half (1½), unless the Saturday has been used as a make-up day. All work performed on Sunday and holidays shall be paid for at the rate of double (2) time.

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NO. 104: Means eight (8) hours per day shall constitute a standard work day between the hours of 6:00 a.m. and 8:00 p.m. The standard work week shall be forty (40) hours between 6:00 a.m. on Monday and ending 8:00 p.m. on Friday. An overtime rate of time and one-half (1½) the base hourly rate shall be paid on all hours in excess of eight (8) hours in a day Monday through Friday. Saturdays shall be considered overtime and work done on Saturday shall be paid at time and one-half (1½) the prevailing scale. Sundays and holidays shall be considered overtime and work done on these days shall be paid at double (2) the prevailing scale.

NO. 116: Means the standard work day shall consist of eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. The standard work week shall consist of five standard work days commencing on Monday and ending on Friday inclusive. All time worked before and after the established eight (8) hour work day, Monday through Friday, and all time worked on Saturdays, shall be paid for at the rate of time & one-half (1½) the hourly base wage rate in effect. All time worked on Sundays and recognized holidays shall be paid for at the rate of double (2) the hourly base wage rate in effect.

NO. 126: Means eight (8) hours per day shall constitute a day's work and forty (40) hours per week, Monday through Friday, shall constitute a week's work. The regular starting time shall be 8:00 a.m. If a second or third shift is used, the regular starting time of the second shift shall be 4:30 p.m. and the regular starting period for the third shift shall be 12:30 a.m. These times may be adjusted by the employer. The day shift shall work a regular eight (8) hours shift as outlined above. Employees working a second shift shall receive an additional \$0.25 above the regular hourly rate and perform seven and one-half (7½) hours work for eight (8) hours pay. Third shift employees shall be paid an additional \$0.50 above the regular hourly rate and work seven (7) hours for eight (8) hours pay. When circumstances warrant, the Employer may change the regular workweek to four (4) ten-hour days at the regular time rate of pay. All time worked before and after the established workday of eight (8) hours, Monday through Friday, and all time worked on Saturday shall be paid at the rate of time and one-half (1½) except in cases where work is part of an employee's regular Friday shift. All time worked on Sunday and recognized holidays shall be paid at the double (2) time rate of pay except in cases where work is part of an employee's previous day's shift. For all overtime hours worked \$28.81 of the fringe benefits portion of the prevailing wage shall be paid at the same overtime rate at which the cash portion of the prevailing wage is to be paid. The remaining \$1.29 of the fringe benefit portion of the prevailing wage may be paid at straight time.

JEFFERSON COUNTY HOLIDAY SCHEDULE – BUILDING CONSTRUCTION

NO. 3: All work done on New Year's Day, Decoration Day, July 4th, Labor Day, Veteran's Day, Thanksgiving and Christmas shall be compensated at the double (2) time rate of pay. When any of these holidays fall on a Sunday, the following Monday shall be observed.

NO. 5: All work that shall be done on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay.

NO. 6: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day and any additional holidays which may be mutually agreed upon. Whenever any such holiday falls on a Sunday, the following Monday shall be recognized and observed as the holiday. Work performed on Sundays and holidays shall be paid at the double time rate of pay. No work shall be performed on Labor Day.

NO. 7: The following days are assigned days and are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. If a holiday falls on a Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This is applied to protect Labor Day. When a holiday falls during the normal workweek, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week. However, no reimbursement for these eight (8) hours is to be paid to the workman unless worked. If workman are required to work the above enumerated holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work.

NO. 8: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day, or the days observed in lieu of these holidays, shall be paid at the double time rate of pay.

NO. 12: All work done on New Year's Day, Decoration Day, Independence Day, Veteran's Day, Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. Should any of these days fall on Sunday, then the following day shall be observed as the holiday. Under no circumstances shall employees be permitted to work on Labor Day.

NO. 18: All work done on New Year's Day, Memorial Day, July 4th, Labor Day, Veteran's Day, Thanksgiving Day, the Friday following Thanksgiving and Christmas Day shall be paid at the double time rate of pay. When one of the above holidays falls on Sunday, the following Monday shall be considered the holiday, and when one of the above holidays falls on Saturday, the preceding Friday shall be considered the holiday, and all work performed on said day(s) shall be paid at the double time rate.

NO. 25: All work done on New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving, Christmas Day, Presidential Election Day, or days locally observed as such, and Saturday and Sunday shall be recognized as holidays and shall be paid at the double (2) time rate of pay. If a named holiday falls on a Saturday, the holiday will be observed on the preceding Friday. When a named holiday falls on Sunday, the Monday after will be observed as the holiday. Appropriate overtime rates to be based on fifteen minute increments.

NO. 26: All work done on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. When a Holiday occurs on Saturday it shall not be observed on either the previous Friday or the following Monday. Such days shall be regular work days. If such a holiday occurs on Sunday it shall be observed on the following Monday.

NO. 31: All work done on New Year's Day, Presidents Day, Good Friday, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, and Employee's Birthday shall be paid at the double time rate of pay. If a holiday falls on Sunday, the following Monday will be observed as the recognized holiday. If a holiday falls on Saturday, the preceding Friday will be observed as the recognized holiday.

JEFFERSON COUNTY HOLIDAY SCHEDULE – BUILDING CONSTRUCTION

NO. 36: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make-up day when an observed holiday occurs during the work week. Employees have the option to work that make-up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 41: The following days shall be observed as legal holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. No work shall be performed on the Fourth of July, Labor Day or Christmas Day. Any work performed on the above holidays shall be paid for at two (2) times the regular straight time rate of pay. When any of the above holidays fall on Sunday, the following Monday shall be observed as such holiday. If a holiday falls on Saturday, it shall not be considered to be observed on the previous Friday or following Monday. Such days shall be regular workdays.

NO. 45: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving, the day before Christmas, and Christmas Day, shall be paid at the double time rate of pay.

NO. 47: The following holidays are recognized: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day. When a holiday listed above falls on Saturday, it shall be celebrated on the Friday preceding the holiday. When a holiday falls on Sunday, the following Monday shall be observed. Holidays referred to above shall be paid for at the double (2) time rate of pay when worked.

NO. 51: All time worked on Sundays and recognized holidays shall be paid for at the rate of double (2) the hourly base wage rate in effect. The Employer agrees to recognize the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. If the holiday falls on Sunday, it shall be recognized on the following Monday. If the holiday falls on a Saturday, it shall be recognized as a Saturday only holiday.

NO. 54: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay. When a holiday falls on Saturday, it shall be observed on Friday. When a holiday falls on Sunday, it shall be observed on Monday.

NO. 55: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 60: All work performed on New Year's Day, Armistice Day (Veteran's Day), Decoration Day (Memorial Day), Independence Day (Fourth of July), Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. No work shall be performed on Labor Day except when triple (3) time is paid. When a holiday falls on Saturday, Friday will be observed as the holiday. When a holiday falls on Sunday, the following Monday shall be observed as the holiday.

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HOLIDAY SCHEDULE – BUILDING CONSTRUCTION**

NO. 66: All work performed on Sundays and the following recognized holidays, or the days observed as such, of New Year's Day, Decoration Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Whenever any such holidays fall on a Sunday, the following Monday shall be observed as a holiday.

NO. 69: All work performed on New Year's Day, Memorial Day, July Fourth, Labor Day, Veteran's Day, Thanksgiving Day or Christmas Day shall be compensated at double (2) their straight-time hourly rate of pay. Friday after Thanksgiving and the day before Christmas are also holidays, however, if the employer chooses to work the normal work hours on these days, the employee will be paid at straight -time rate of pay. If a holiday falls on a Saturday, the holiday will be observed on Saturday; if a holiday falls on a Sunday, the holiday will be observed on the following Monday.

NO. 71: All work performed on the following recognized holidays, or days that may be celebrated as such, shall be paid at the double (2) time rate of pay: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving and Christmas Day. If a holiday falls on Sunday, it shall be celebrated on Monday. If a holiday falls on Saturday, it shall be celebrated on the Friday proceeding such Saturday.

NO. 73: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day (or mutually agreed date of the Friday after Thanksgiving Day may be substituted for Veteran's Day), Thanksgiving Day and Christmas Day, or in the event that any of said Holidays falls on Sunday, then the day or days generally recognized as such. Any work performed anywhere on any of the aforesaid Holidays, or on the day or days recognized and observed as such, shall be paid for at double (2) time the regular hourly rate.

Heavy Construction Rates for
JEFFERSON County

REPLACEMENT PAGE

Section 050

OCCUPATIONAL TITLE	* Date of Increase	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Carpenter	6/15	\$35.68	23	16	\$15.55
Cement Mason	6/15	\$30.56	17	11	\$17.30
Electrician (Outside-Line Construction\Lineman)	9/15	\$42.52	9	12	\$5.00 + 36.5%
Lineman Operator	9/15	\$36.70	9	12	\$5.00 + 36.5%
Lineman - Tree Trimmer	10/15	\$24.99	32	31	\$9.95 + 3%
Groundman	9/15	\$28.38	9	12	\$5.00 + 36.5%
Groundman - Tree Trimmer	10/15	\$19.80	32	31	\$8.10 + 3%
Laborer					
General Laborer	6/15	\$29.11	2	4	\$12.82
Skilled Laborer	6/15	\$29.71	2	4	\$12.82
Millwright	6/15	\$35.68	23	16	\$15.55
Operating Engineer					
Group I	6/15	\$32.16	10	9	\$24.16
Group II	6/15	\$32.16	10	9	\$24.16
Group III	6/15	\$30.86	10	9	\$24.16
Group IV	6/15	\$27.40	10	9	\$24.16
Oiler-Driver	6/15	\$27.86	10	9	\$24.16
Pile Driver	6/15	\$35.68	23	16	\$15.55
Traffic Control Service Driver		\$28.775	26	25	\$9.045
Truck Driver-Teamster		\$30.41	25	21	\$10.82

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate sheet.

**REPLACEMENT PAGE
JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION**

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 1/2) shall be paid for all work in excess of forty (40) hours per work week.

NO. 2: Means a regular workweek shall be forty (40) hours and will start on Monday and end on Friday. The Employer shall have the option of working five 8-hour days or four 10-hour days Monday through Friday. If an Employer elects to work five 8-hour days during any workweek, hours worked more than eight (8) per day or 40 per week shall be paid at time and one-half the hourly rate Monday through Friday. If an Employer elects to work four 10-hour days in a week, work performed more than ten (10) hours per day or 40 hours per week shall be paid at time and one-half the hourly rate Monday through Friday. When working a five 8-hour day schedule and an Employer is prevented from working forty (40) hours Monday through Friday, or any part thereof, by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. If an Employer is working a four 10-hour day schedule and loses a day due to inclement weather, he may work 10 hours Friday at straight time. All hours worked over the 40 hours Monday through Friday will be paid at 1 1/2 overtime rate. A workday shift is to begin at the option of the Employer, between 6:00 a.m. and not later than 9:00 a.m. However, the project starting time may be advanced or delayed if required. If workmen are required to work the enumerated holidays or days observed as such or Sundays, they shall receive double (2) the regular rate of pay for such work. Overtime shall be computed at one-half (1/2) hour intervals. Shift: The Contractor may elect to work one, two or three shifts on any work. When operating on more than one shift, the shifts shall be known as the day shift, swing shift, and graveyard shift as such terms are recognized in the industry. When two shifts are worked on any operation, the shifts will consist of eight (8) or ten (10) hours exclusive of lunchtime. When three shifts are worked the first day or day shift will consist of eight (8) hours exclusive of lunchtime. The second or swing shift shall consist of seven and one-half (7 1/2) hours work for eight hours pay, exclusive of lunchtime, and the third or the graveyard shift shall consist of seven (7) hours work for eight (8) hours pay, exclusive of the lunchtime. All time in excess of normal shifts shall be considered overtime. Multiple shift (the two or three shift) operation will not be construed on the entire project if at anytime it is deemed advisable and necessary for the Employer to multiple shift a specific operation. However, no shift shall be started between midnight and six a.m. except the graveyard shift on a three-shift operation, or except in an unusual or emergency situation. If an Employer starts a shift between midnight and 6 a.m. except the graveyard shift on a three-shift operation, he shall reimburse all employees for the entire shift at the double time rate. Completion of the second shift on a two-shift operation or completion of the graveyard shift on a three-shift operation that carries over into Saturday morning, shall be at the straight time rate. Overtime shall be computed at 1/2 hour intervals.

NO. 9: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1 1/2) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1 1/2) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Worked performed in the first eight (8) hours on Saturday shall be paid at the rate of one and eight tenths (1.8) the regular straight time rate. Work performed outside these hours and on Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

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JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION

NO. 10: Means the regular workday for which employees shall be compensated at straight time hourly rate of pay shall, unless otherwise provided for, begin at 8:00 a.m. and end at 4:30 p.m. The regular workweek shall consist of five (5) days, Monday through Friday, beginning at 8:00 a.m. and ending at 4:30 p.m. except as may be modified. The starting time may be either advanced or delayed one hour or two hours at the discretion of the Employer. The Employer may have the option to schedule his work week from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate. If the Employer elects to work Monday through Thursday and is stopped due to inclement weather, holidays or other conditions beyond the control of the Employer, he shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hour workweek. All necessary overtime and work performed on Saturday, shall be paid at time and one-half (1½) the hourly rate, plus an amount equal to one-half (½) of the hourly Total Indicated Fringe Benefits. All work performed on Sundays and recognized holidays shall be paid at double (2) the hourly rate, plus an amount equal to the hourly Total Indicated Fringe Benefits. Shifts may be established when considered necessary by the Employer. Shift hours and rates will be as follows. If shifts are established, work on the First Shift will begin between 6:00 a.m. and 9:00 a.m. and consist of eight (8) hours of work plus one-half hour unpaid lunch. Hours worked during the first shift will be paid at the straight time rate of pay. The second shift shall start eight hours after the start of the first shift and consist of eight (8) hours of work plus one-half hour unpaid lunch. Work on the second shift will begin between 2:00 p.m. and 5:00 p.m. and be paid the straight time rate plus \$2.50 per hour. The third shift shall start eight hours after the start of the second shift and consist of eight (8) hours plus one-half hour unpaid lunch. Work on the third shift will begin between 10:00 p.m. and 1:00 a.m. and be paid the straight time rate plus \$3.50 per hour. The additional amounts that are to be paid are only applicable when working shifts. Shifts that begin on Saturday morning through those shifts which end on Sunday morning will be paid at time and one-half these rates. Shifts that begin on Sunday morning through those shifts which end on Monday morning will be paid at double time these rates.

NO. 17: Means eight (8) hours shall constitute the regular work day and forty (40) hours a work week, Monday through Friday. The Employer shall establish the starting time between 6:30 a.m. through 9:00 a.m. An Employer may further adjust the starting time up to 9:30 A.M. throughout the year. Time and one-half (1½) shall be paid after eight (8) consecutive hours worked after the established starting time and for hours worked before the established starting time. Time and one-half (1½) shall be paid for work performed on Saturdays. Work performed on Sundays and Holidays shall be paid at the double (2) time rate of pay. The Employer when working on Highway and Road Work may have the option to schedule the work week for his paving crew only from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate of time and one-half (1½). If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather (rain, snow, sleet falling), the Employer shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours.

NO. 23: Means the regular workweek shall start on Monday and end on Friday, except where the Employer elects to work Monday through Thursday, (10) hours per day. All work over ten (10) hours in a day or forty (40) hours in a week shall be at the overtime rate of one and one-half (1½) times the regular hourly rate. The regular workday shall be either eight (8) or ten (10) hours. If a job can't work forty (40) hours Monday through Friday because of inclement weather or other conditions beyond the control of the Employer, Friday or Saturday may be worked as a make-up day at straight time (if working 4-10's). Saturday may be worked as a make-up day at straight time (if working 5-8's). An Employer, who is working a four (4) ten (10) hour day work schedule may use Friday as a make-up day when a workday is lost due to a holiday. A workday is to begin at the option of the Employer but not later than 11:00 a.m. except when inclement weather, requirements of the owner or other conditions beyond the reasonable control of the Employer prevent work. Except as worked as a make-up day, time on Saturday shall be worked at one and one-half (1½) times the regular rate. Work performed on Sunday shall be paid at two (2) times the regular rate. Work performed on recognized holidays or days observed as such, shall also be paid at the double (2) time rate of pay. **For all overtime hours worked during the week or on Saturday \$14.55 of the fringe benefits portion of the prevailing wage shall be paid at time and one-half (1½). For all overtime hours worked on Sundays or recognized holidays \$14.55 of the fringe benefits portion of the prevailing wage shall be paid double time. The remaining \$.50 of the fringe benefit portion of the prevailing wage shall be paid at straight time.**

**REPLACEMENT PAGE
JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION**

NO. 25: Means a regular work week of forty (40) hours, starting on Monday and ending on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof maybe worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A work day is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time maybe advanced or delayed if mutually agreed to by the interest parties. All hours worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 26: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 32: Means the overtime rate shall be time and one-half the regular rate for work over forty (40) hours per week. Sundays and Holidays shall be paid at double the straight time rate.

**JEFFERSON COUNTY
HOLIDAY SCHEDULE – HEAVY CONSTRUCTION**

NO. 4: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, or observed as such, shall be paid at the double time rate of pay. When a Holiday falls on a Sunday, Monday shall be observed. No work shall be performed on Labor Day, except in case of jeopardy to life or property. This is applied to protect Labor Day.

NO. 9: All work performed on Sundays and the following recognized holidays, or the days observed as such, of New Year's Day, Decoration Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Whenever any such holidays fall on a Sunday, the following Monday shall be observed as a holiday.

NO. 11: Means all work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, and any additional holidays which may be mutually agreed upon shall be paid at the double (2) time rate of pay. Whenever any such holiday falls on a Sunday, the following Monday shall be recognized and observed as the holiday. No work shall be performed on Labor Day.

NO. 12: All work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, or days celebrated as such, shall be paid at the double time rate of pay. When one of the foregoing holidays falls on Sunday, it shall be celebrated on the following Monday. When one of the foregoing holidays falls on Saturday, it shall be celebrated on the Friday before the holiday.

NO. 16: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on Sunday, it shall be observed on the following Monday. If a holiday falls on Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid to the worker unless worked. If workers are required to work the above recognized holidays or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 21: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workman unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make-up day when an observed holiday occurs during the work week. Employees have the option to work that make-up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 25: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 31: All work performed on New Year's Day, Presidents' Day, Veterans' Day, Good Friday, Decoration Day, Fourth of July, Labor Day, Christmas Eve Day, Christmas Day, Thanksgiving Day and Day after Thanksgiving or days celebrated for the same.