

PROJECT MANUAL

INVITATION FOR BID # NS-24-12

GUM BRANCH BRIDGE REPLACEMENT

BIDS DUE: Friday, December 9, 2011 @ 2:00 pm

ISSUED November 15, 2011

Northern Kentucky University
Jeff Strunk, CPPO
Director, Procurement
Lucas Administrative Center, Suite 617
1 Nunn Drive
Highland Heights, KY 41099

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

Contents

Contract Document	# of Pages
NOTICE OF ADVERTISEMENT	2
FORM OF PROPOSAL	12
TECHNICAL SPECIFICATIONS FOR BIDDERS	42
INSTRUCTIONS TO BIDDERS	11
GENERAL TERMS & CONDITIONS	29
ADDENDA	(ISSUED AS REQUIRED)

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

NOTICE OF ADVERTISEMENT

BRIEF SCOPE OF WORK:

Project entails construction of bridge and roadway, culvert demolition and bank restoration, and downstream bridge removal and bank restoration at Gum Branch Bridge. Refer to Technical Specifications for Bidders.

PROJECT TIMETABLE:

Invitation for Bid Issued	Tuesday, November 14, 2011
Pre Bid Meeting	Tuesday, November 22, 2011 at 9:00 am
Last Date for Questions	Tuesday, November 29, 2011 at 12:00 Noon
BIDS DUE	Friday, December 9, 2011 at 2:00 pm
Construction start date	February 1, 2012 (subject to permit authorizations, weather, flooding, etc)
Substantial Completion	One month after start date
Final Completion	Two months after start date

Contract award will be made immediately upon evaluation of bids.

Note that implementation is dependent upon final funding approval and permitting.

PRE-PROPOSAL MEETING: At the Jobsite (end of Gum Branch Road, across from Big Bone State Park)

All contractors and subcontractors shall visit the site to check and verify existing conditions before submitting a bid. Any discrepancies discovered between existing conditions and those shown on drawings or noted in the specifications shall be reported immediately to NKU in writing, so all bidders can be given proper information as to existing conditions. Failure to make this required inspection before submitting a response will be taken as acceptance by the contractor of the conditions as they exist in the field, whether shown on the drawings or noted in the specifications, and as shown on the owner's drawings and noted in the specifications. No subsequent claims for extra compensation arising from existence of discrepancies between actual conditions and those shown on drawings and/or noted in specifications will be considered.

BONDS:

A 5% bid bond is required. Performance and payment bonds of 100% will be required of the successful bidder.

Performance and Payment Bonds will be required of the successful bidder.

PREVAILING WAGE: This is not expected to be a prevailing wage job but if your bid exceeds \$250,000.00 please use the rates listed in the prevailing wage determination for this IFB.

CONTACT FOR BID PACKAGE AND DRAWINGS:

RFP Package and Drawing may be purchased (non-refundable) from American Reprographics Co.: 800.966.2260 or 513.326.2300 or www.qcrepro.com

SUBMITTAL OF BID:

The bidder shall submit, by the time and date specified via US Postal Service, courier or other delivery service, its bid response in a **sealed package** addressed to:

Jeff Strunk, CPPO
Director, Procurement
Lucas Administrative Center, Suite 617
1 Nunn Drive
Northern Kentucky University
Highland Heights, KY 41099

Information relative to this project obtained from other sources, including other university administration, faculty or staff may not be accurate, will not be considered binding and could adversely affect the potential for selection of your proposal. All requests for additional information and all questions should be directed to Jeff Strunk, Procurement Services: strunk@nku.edu.

Both inner and outer envelopes/packages should bear respondent's name and address, and clearly marked on package(s) as follows:

**IFB NS-24-12
GUM BRANCH BRIDGE REPLACEMENT**

Note: Bids received after the closing date and time will not be considered.

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**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

FORM OF PROPOSAL

LUMP SUM BASE BID

The Bidder agrees to furnish all labor, materials, supplies, supervision and services required for Landscaping of the Central Plaza at Northern Kentucky University. These services to be provided in accordance with Specifications and Contract Documents, and any duly issued Addenda for the LUMP SUM BASE BID set forth below:

**Construction Cost
Gum Branch Bridge Replacement**

<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>COST</u>
BRIDGE AND ROADWAY CONSTRUCTION				
1	1	LS	\$ _____	\$ _____
Clearing and Grubbing of Debris and Vegetation and Demolition in Construction Zone, Including Off-site Disposal of Trees, Stumps, Logs, Debris in Creek, Partial Demolition of Downstream Wingwalls of Existing Culvert, etc., as Necessary to Construct New Bridge, Roadway, and Driveways				
2	1	EA	\$ _____	\$ _____
Relocate Existing Mailbox				
3	1	LS	\$ _____	\$ _____
Excavate and Construct Strip Footers for Bridge and Wingwalls, Including All Materials and Any Flow Diversion or Bypass Pumping Necessary to Protect and Dewater Work Zone				
4	1	LS	\$ _____	\$ _____
Furnish 36' Span x 24' Width x 9' Height CON/SPAN (or equivalent) Bridge Structure With Precast Headwalls and Wingwalls,				
5	1	LS	\$ _____	\$ _____
Install 36' Span x 24' Width x 9' Height CON/SPAN (or equivalent) Bridge Structure With Precast Headwalls and Wingwalls According to Manufacturer's Specifications. Furnish and Install Any and All Miscellaneous Appertenances, Including But Not Limited To Backfill Per Manufacturer's Requirements, Backfill Drainage Piping, Joint Sealing, etc.				

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>COST</u>
6	Construct Temporary Gravel Driveway Widening As Necessary to Maintain Access Through Driveways Throughout Construction	1	LS	\$ _____	\$ _____
7	Strip Topsoil, Rework/Recompact Top 24" of Native Soil, Place and Compact Fill, (to 95% Compaction), Up to Subgrade Level For Roadway Construction and Embankment Areas	1	LS	\$ _____	\$ _____
8	Excavate and Prepare Subgrade, and Construct New Asphalt Roadway Pavement to Boone County Street Specifications	280	SY	\$ _____	\$ _____
9	Transition New Asphalt Roadway Pavement to Existing Asphalt Pavement, Including Milling Keyway, Removing Deteriorated Material at Edge of Existing Pavement, and Sealing Joint at Existing Pavement	1	LS	\$ _____	\$ _____
10	Excavate and Prepare Subgrade, and Construct New Gravel Driveway and Shoulders as Per Plan	95	SY	\$ _____	\$ _____
11	Place and Compact Additional Gravel, (Varying Thickness), Onto Existing Gravel Driveways to Level and Smooth Transitions with New Pavement	35	TN	\$ _____	\$ _____
SUBTOTAL - - BRIDGE AND ROADWAY CONSTRUCTION					\$ _____

CULVERT DEMOLITION AND RESTORATION

12	Demolition and Off-site Disposal of Existing Double Metal Culvert, Concrete Wingwalls, Asphalt and Gravel Pavement, and Miscellaneous Debris	1	LS	\$ _____	\$ _____
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**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>COST</u>
13	Import and Place Rip-Rap, (Sized as Indicated on Plans), For Toe of Wrapped-Earth Bank and Around Bridge Wingwalls and Abutments, Including Non-Woven Geotextile Filter Fabric (KYTC Type IV) Beneath (Assumed 1.5 TN/CY)	120	TN	\$ _____	\$ _____
14	Wrapped-Earth Stream Bank Restoration, (As Per Detail #2), Including Excavation and Preparation, Stone Leveling Pad, Three Wrapped Layers, Seed and Mulch, and Plantings	125	LF	\$ _____	\$ _____
15	Slope Resoration Above Wrapped-Earth Bank, Including Grading, Seed and Mulch, Erosion Control Blanket, and Plantings (Assumed to be 5' Width From Top of Wrapped-Earth Bank)	65	SY	\$ _____	\$ _____
16	Site Restoration, Including Repair/Regrade All Disturbed Areas, (Beyond Creek Banks), Seed, and Install Short Term Degradable Erosion Control Blanket (East Coast Erosion Control Blankets ECS-1B or equivalent)	1	LS	\$ _____	\$ _____
SUBTOTAL - - CULVERT DEMOLITION AND RESTORATION					\$ _____
DOWNSTREAM BRIDGE REMOVAL AND RESTORATION					
17	Demolition and Off-site Disposal of Existing Downstream Bridge Deck, Concrete Wingwalls, Driveway Gravel Pavement, and Miscellaneous Debris	1	LS	\$ _____	\$ _____

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

18	Import and Place Rip-Rap, (Sized as Indicated on Plans), For Toe of Wrapped-Earth Bank and Around Bridge Wingwalls and Abutments, Including Non-Woven Geotextile Filter Fabric (KYTC Type IV) Beneath (Assumed 1.5 TN/CY)	30	TN	\$ _____	\$ _____
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	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT</u>	<u>UNIT COST</u>	<u>COST</u>
19	Wrapped-Earth Stream Bank Restoration, (As Per Detail #2), Including Excavation and Preparation, Stone Leveling Pad, Three Wrapped Layers, Seed and Mulch, and Plantings	80	LF	\$ _____	\$ _____
20	Slope Resoration Above Wrapped-Earth Bank, Including Grading, Seed and Mulch, Erosion Control Blanket, and Plantings (Assumed to be 5' Width From Top of Wrapped-Earth Bank)	50	SY	\$ _____	\$ _____
21	Site Restoration, Including Repair/Regrade All Disturbed Areas, (Beyond Creek Banks), Seed, and Install Short Term Degradable Erosion Control Blanket (East Coast Erosion Control Blankets ECS-1B or equivalent)	1	LS	\$ _____	\$ _____

SUBTOTAL- - DOWNSTREAM BRIDGE REMOVAL AND RESTORATION \$ _____

TOTAL CONSTRUCTION ESTIMATE \$ _____

Allowance Items

1	Excavation, Forming, and Concrete Placement For Each Additional 12" of Depth for Strip Footing, If Necessary to Reach Sound Rock		SF	\$ _____	
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**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

DATE: _____ AUTHORIZED SIGNATURE: _____

No bidder may withdraw his bid for a period of thirty (30) days after the date set for the opening of bids. Clerical errors and omissions in the computation of the lump sum bid shall not be a cause for withdrawal of the bid without forfeit of bid bond. Bids may be withdrawn, in person only, prior to the closing date and time for the receipt of bids.

NOTE: The Authentication of Bid and Statement of Non-Collusion and Non-Conflict of Interest must be properly executed for this Bid to be valid. This Bidder, in compliance with this Request for Bid, and having carefully examined the complete contract documents, as well as the specifications for the work as prepared by Northern Kentucky University, hereby proposes to furnish all labor, supervision, materials, supplies and services required to perform the specifics of the Contract Documents, within the time set forth herein and for the final negotiated price.

The Bidder, hereby acknowledges receipt of the following Addenda:

ADDENDUM NO. _____ DATED _____ ADDENDUM NO. _____ DATE _____
ADDENDUM NO. _____ DATED _____ ADDENDUM NO. _____ DATE _____

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

REFERENCES

Bidder Qualifications: The bidder is required to submit a list of completed projects where he has performed similar work to that specified herein.

Organization: _____

Contact Name: _____

Phone Number: _____

Date Work Completed: _____ **Value of Contract:** _____

Project Manager assigned to this project: _____

Brief Project Description: _____

Organization: _____

Contact Name: _____

Phone Number: _____

Date Work Completed: _____ **Value of Contract:** _____

Project Manager assigned to this project: _____

Brief Project Description: _____

Organization: _____

Contact Name: _____

Phone Number: _____

Date Work Completed: _____ **Value of Contract:** _____

Project Manager assigned to this project: _____

Brief Project Description: _____

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

PROPOSED PROJECT SCHEDULE:

Please include as part of your “Form of Proposal” a one page project schedule assuming that a contract is awarded immediately after bid opening.

BID BOND:

A bid bond form is included as part of this “Form of Proposal”, however one provided by your Surety is acceptable.

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

LIST OF MATERIALS AND EQUIPMENT

Every item listed must be clearly identified so that the Owner will know what the Bidder proposes to furnish. Failure to submit a proper list may result in rejection of the Bidder's Proposal.

The use of the manufacturer or dealer name only, or stating "as per plans and specifications", will not be considered as sufficient identification. No material or equipment will be considered which is not in every respect equal to that specified. or shown on the drawings.

Item Description	Brand Name,	Manufacturer,

Include cut sheets, installation instructions and operational instructions as an attachment to the end of the form of proposal.

Signed By: _____

Company Name: _____

Date: _____

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

**AUTHENTICATION OF BID, STATEMENT OF NON-COLLUSION, NON-
CONFLICT OF INTEREST AND BIDDER CERTIFICATIONS**

By signing below the Contractor swears or affirms, under the penalty of false swearing as provided by KRS 523.040, that he/she is in compliance with all of the following:

- 1.** That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation).
- 2.** That the submitted bid or bids covering the Bid Package indicated have been arrived at by the bidder independently and have been submitted without collusion with, and without any agreement, understanding or planned common course of action with any other contractor, vendor of materials, supplies, equipment or services described in the Invitation for Bid, designed to limit independent bidding or competition; as prohibited by provision KRS 45A.325;
- 2A.** Any agreement or collusion among bidders or prospective bidders which restrains, tends to restrain, or is reasonably calculated to restrain competition by agreement to bid at a fixed price, or to refrain from bidding, or otherwise, is prohibited. The provisions of KRS 365.080 and 365.090, which permit the regulation of resale price by contract, do not apply to sales to the State.
- 2B.** Any person who violates any provisions of Kentucky Revised Statute 45A.325 shall be guilty of a felony and shall be punished by a fine not less than five thousand dollars nor more than ten thousand dollars, or be imprisoned not less than one year nor more than five years, or both such fine and imprisonment. Any firm, corporation, or association which violates any of the provisions of KRS 45A.325 shall, upon conviction, be fined not less than ten thousand dollars nor more than twenty thousand dollars.
- 3.** That the content of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids and will not be communicated to any such person prior to the official opening of the bid or bids;
- 4.** That the bidder is legally entitled to enter into the contracts with the Commonwealth of Kentucky and is not in violation of any prohibited conflict of interest, including those prohibited by the provisions of KRS 45A.330 to .340 and 164.390; and
- 5.** That I have fully informed myself regarding the accuracy of the statements made, including Bid Amount.
- 6.** Unless otherwise exempted by KRS 45.590, the Bidder intends to comply in full with all requirements of the Kentucky Civil Rights Act and to submit data required by the Kentucky Equal Employment Act upon being designated the successful bidder.
- 7.** That the Bidder, if awarded a contract, would not be in violation of Executive Branch Code of Ethics established by KRS 11A.990.
- 8. Campaign Finance Laws** Pursuant to KRS 45A.110 and KRS 45A.115 the undersigned hereby swears or affirms, under penalty prescribed by law for perjury, that neither he/she, individually, nor, to the best of his/her knowledge and belief, the corporation, partnership, or other business entity which he/she represents in connection with this procurement, has knowingly violated any provisions of the campaign finance laws of the Commonwealth of Kentucky, and that the award of a contract to him/her, individually, or the corporation, partnership or other business entity which he/she represents, will not violate any campaign finance laws of the Commonwealth.
- 9. Worker's Compensation and Unemployment Insurance** Pursuant to KRS 45A.480, the undersigned hereby swears or affirms, under penalty of perjury, that all contractors and subcontractors employed, or that will be employed under the provisions of this contract shall be in compliance with the requirements for worker's compensation insurance under KRS Chapter 342 and unemployment insurance under established KRS Chapter 341.
- 10. Vendor Report of Prior Violations** The Bidder/Owner shall reveal to the University, prior to this award of a contract, any final determination of a violation by the Contractor within the previous five (5) year period of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342. The Contractor is further notified this statute requires that for the duration of this contract, the Contractor shall be in continuous compliance and the Contractor's failure to reveal a final determination of a violation or failure to comply with the cited statutes for the duration of the contract, shall be grounds for the Contractor's disqualification by the University from eligibility to bid or submit proposals to the University for a period of two (2) years. Please list any final determination(s) of violation(s) including the date of determination and the state agency issuing the determination. If no violations have occurred, type **none** in the space below.

FORM OF PROPOSAL

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

* KRS Chapter 136 - Corporation and Utility Taxes; * KRS Chapter 139 - Sales & Use Tax; * KRS Chapter 141 - Income Taxes;
* KRS Chapter 337 - Wages & Hours; * KRS Chapter 338 - Occupational Safety & Health of Employees; * KRS Chapter 341 - Unemployment Compensation; * KRS Chapter 342 - Worker's Compensation

<u>KRS VIOLATION</u>	<u>DATE</u>	<u>STATE AGENCY</u>
_____	_____	_____
_____	_____	_____

READ CAREFULLY - SIGN IN SPACE BELOW - FAILURE TO SIGN INVALIDATES BID or OFFER

AUTHORIZED SIGNATURE: _____
DATE: _____
NAME (Please Print Legibly): _____

FIRM: _____
FED ID. OR SSN#: _____

PERMANENT ADDRESS: _____

STREET	CITY	STATE	ZIP
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CONTACT PERSON: _____

TITLE: _____
TELEPHONE NO: _____ FAX NO: _____
E-MAIL: _____

State of _____)

County of _____)

The foregoing statement was sworn to me this _____ day of _____, 20____, by _____.

(Notary Public)
My Commission expires: _____

THIS DOCUMENT MUST BE NOTORIZED

**NORTHERN KENTUCKY UNIVERSITY
GUM BRANCH BRIDGE REPLACEMENT
INVITATION FOR BID, NS-24-12**

Bid Bond

5% of Contract Price

KNOW ALL MEN BY THESE PRESENTS, that we _____ (here insert full name and address or legal title of Contractor)
as Principal, hereinafter called the Principal, and _____ (here insert full name and address or legal title of Surety)
a corporation duly organized under the laws of the State of Kentucky as Surety, hereinafter called Surety, are held and firmly bound unto **Northern Kentucky University** as Obligee, hereinafter called Obligee, in the sum of :

_____ Dollars (\$ _____),
representing 5% of the Principal's total bid price and for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for _____ (Here insert full name, address and description of project)
NOW THEREFORE, if the Obligee shall accept the bid of the Principal within the period specified, or if no period is specified, within 45 days after its opening, and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bid or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bonds or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this day of _____ 2011

(Principal) _____ (Seal)	
(Title)	(Witness)
(Surety) _____ (Seal)	
(Title)	(Witness)

THIS DOCUMENT MUST BE NOTORIZED

Technical Specifications for Bidders GUM BRANCH BRIDGE REPLACEMENT

TECHNICAL SPECIFICATIONS FOR

CONCRETE STREETS, CURBS AND SIDEWALKS

The cement concrete pavement work shall consist of a single course of cement concrete, including reinforcement, longitudinal construction joints, and contraction joints on a prepared subgrade or insulation course in conformity with the lines, grades and cross sections shown on the standard drawings.

GRADING

This term shall consist of all earthwork above and below subgrade elevations including necessary excavations and/ or filling for curb and gutter, catch basins, sidewalks, cut slopes, construction of embankments, and all other work incidental thereto. All cut and fill slopes shall be constructed no steeper than 2.5 horizontal to 1 vertical unless stated

1.1 Excavation

The alignment of the roadway shall be staked at 25 foot intervals indicating the cut or fill for final grading. All excavations shall be made to approximate subgrade elevation. The exposed subgrade shall be proofrolled with a heavy piece of on-site equipment.

1.2 Excavation Below Subgrade

Whenever an excavation below subgrade elevation to remove soft or yielding soils is required, the excavation can be backfilled with soils that were removed provided they are clean clayey soils free of organic matter and other deleterious materials, aerated and dried to near optimum moisture content. These soils shall be placed in shallow level layers, 6 to 8 inches, near optimum moisture content or with 3 percent of optimum moisture content on the wet side of the curve and compacted with a kneading type of compaction equipment such as a sheepsfoot roller, to a density not less than 95 percent of maximum density as determined by the standard Proctor moisture-density test (ASTM D698-78 or AASHTO T-99) or 90 percent of maximum density as determined by the modified Proctor moisture-density test (ASTM D1557-78).

1.3 Embankment

The City Inspector shall be notified before starting the grading. All topsoil shall be removed to a depth of at least 4 inches to remove the surface vegetation and heavy root system. This material should be stockpiled and used for landscaping. None of this topsoil shall be used in embankments within the right of way or within the zone of influence of a structure.

The embankment shall be constructed of clean clayey soils free of organic or other deleterious materials. Limestone may be incorporated with the clayey soils provided that the size and quantity of limestone does not retard compaction. The embankment soils shall be placed in shallow level layers, 6 to 8 inches and compacted near optimum moisture content or within 3 percent of optimum moisture content on the wet side of the curve with a kneading type compaction equipment, such as a sheepsfoot roller, to a density not less than 95 percent of maximum density as determined by the standard Proctor moisture-density test (ASTM D699-78 *or* ASHO T-99) or 90 percent of maximum density as determined by the modified Proctor moisture-density test (ASTM D1557-78). At the discretion of the Inspector a recognized testing laboratory may be required to run moisture density tests (ASTM D698-78 or ASTM D1557-78) and field density tests (ASTM D1556-64 or ASTM D2922-73) to determine the percent compaction. The cost of such testing shall be at the expense of the contractor or developer.

1.4 Subgrade Preparation

The subgrade is defined as the top one (1) foot of the soil profile at finished grade prior to placing the pavement. This top one (1) foot of soil will consist of compacted fill placed for embankments as outlined in Item 1.3, undisturbed soils in the transitional area from cut to fill immediately below the topsoil and undisturbed soils in cut areas. The top one (1) foot of subgrade shall be compacted to 98 percent of maximum density as determined by the standard Proctor moisture-density (ASTM 0698-78) or 93 percent of maximum density as determined by the modified Proctor moisture-density test (ASTM D1557-78) within one (1) percent of optimum moisture content immediately prior to placing any pavement. This specification increases the compaction requirements in compacted fill areas since the embankment shall be compacted to 95 percent or 90 percent of maximum density standard Proctor and modified Proctor respectively. In transitional areas from cut to fill, the soils have been subject to the seasonal changes of freezing and thawing and wetting and drying. These soils will exist at moisture contents well above optimum moisture content and at densities on the order of 60 to 80 percent of maximum densities. These soils will have to be aerated and dried in order to obtain the specified percent of compaction for subgrade. Soils in cut areas will exist at moisture contents above optimum moisture content and at densities on the order of 90 percent of maximum density. These soils shall be aerated and dried in order to achieve the recommended moisture content and density for subgrade.

Any soft spots resulting from high moisture content that are encountered at the time of construction shall be aerated and dried to reduce the moisture content to near optimum moisture content, then recompact to the specified density.

The subgrade shall be shaped to plan elevation, grade and cross section.

Sewer Laterals or any other excavations within the limits of the area to be paved shall be backfilled with a well-graded granular soil. This granular backfill shall be placed in shallow level layers, not exceeding 12 inches, near optimum moisture content and compacted with an appropriate type of compaction equipment, such as a vibrating plate or roller, to a density not less than 93 percent or 90 percent of maximum density, standard Proctor and modified Proctor, respectively, or 120 percent of a relative density test (ASTM D2049-69). Under no circumstances should the granular backfill be flushed to obtain compaction.

Normally there is some time delay between subgrade preparation and placing of the pavement. Immediately prior to placing the subgrade should be in a moist condition near optimum moisture content. If the subgrade has become excessively wet it shall be scanted, aerated, dried and recompact immediately prior to placing the pavement. If the subgrade has become excessively dry the surface shall be wetted so as to increase the moisture content to near optimum moisture content and recompact immediately prior to placing the pavement.

The City Inspector shall be given not less than 24 hours before placement of the pavement in order that he may have adequate time to check the alignment, grade, cross section and quality of the subgrade.

1.5 Equipment for Compaction

Any compaction equipment capable of uniformly producing the required density, without lamination of, or within, successive layers, will be permitted.

1.6 Reinforcing Tie-Rod Installation for Curbs

Where curbs are to be constructed on the surface of existing pavement the pavement will be drilled vertically to depth and spacing shown of details. The centerline of the holes will be the centerline of the proposed curve. Deformed reinforcing rods *will* be inserted in the holes to tie the proposed concrete curb to the existing pavement.

1.7 Forming

Forms will be erected to receive the specified curb width on the surface of the pavement. The elevation of the top of the forms will be set to satisfy the proposed height of curb above the finished pavement surface. Forms will maintain smooth alignment without abrupt changes.

1.8 Reinforcing Steel Installation

Deformed reinforcing steel cut to length conforming to existing gutter contraction joints or not to exceed fifteen (15) feet where joints do not exist, will be tied to the rods previously inserted in drilled holes, so that a minimum of two (2) inches of concrete will cover the steel on top and sides of finished-curbs. Reinforcing steel will not be continuous thru joints.

1.9 Cleaning of Existing Pavement

The existing surface or edge of pavement *will* be swept clean of all dirt and debris prior to placement of concrete. The surface will be wetted with water just prior to placement of concrete to improve the bond between the existing pavement and proposed curbs.

1.10 Concrete Placement and Finishing

The concrete will be placed and vibrated to prevent honeycomb forming on the face of the curb. After the concrete has been edged, both front and back, with a one-half (1/2) Inch radius edging tool, the front form will be removed and the surface of the front face and top of the curb will be finished. The back form shall remain in place until concrete has set.

1.11 Contraction Joints

Contraction joints conforming to existing joints in pavement will be saw cut and then filled as described in 8.3.

1.12 Curing

Curing of all concrete shall conform to 7.1.

1.13 Concrete Sidewalk Restoration

Concrete sidewalks are to be five (5) inches thick and of a width as specified on the plan or *conforming* to the width of the existing sidewalk.

Sidewalks to be finished to true surface and grade and free from irregularities. Finish to be sack-finished texture marked in squares equal to the width. All edges are to be neatly edged.

Expansion joints to be placed at intersection joints with street curbing and/or existing pavement.

1.14 Wheel Chair Ramps

It will be necessary to provide wheel chair ramps at all intersections where sidewalks extend to the curb line and at all crosswalks.

These ramps will extend through the curb into the gutterline, thus making it necessary for this provision during curb construction. Care will be taken to insure that gutter drainage does not cut onto sidewalks where ramps are constructed.

The ramps will be constructed according to Federal Specifications enacted and effective June 1, 1975.

1.15 Not Used

1.16 Subgrade for Sidewalks and Driveways

Subgrade for sidewalks and driveways shall comply to 1.4 and 1.5.

1.17 Equipment Operated on Streets

Only pneumatic-tired equipment will be allowed to operate over any paved street surface. Any damage caused by the operation of equipment shall be repaired at the contractor's expense. Paved streets adjacent to new developments shall have all mud removed daily or be subject to the fine provided in an ordinance.

1.18 Utilities

Care shall be taken at all times to protect all utilities.

1.19 Soil Density Tests

Soil density tests, including moisture - density tests (ASTM D698-78 or ASTM D1557-78) and field density tests (ASTM D1556-64 or ASTM D2922-78) are required to determine the percent compaction in accord with the following:

- A. Embankments - a minimum of one (1) test for each three (3) feet in elevation per 400 lineal feet or every 2500 cubic yards, or fraction thereof, of embankment section;
- B. Utility backfill excavations for storm, sanitary sewer and water system crossings - a minimum of one (1) test for each two (2) feet in elevation per 100 lineal feet, or fraction thereof, of utility trench open cut beneath street subgrade and within three (3) feet outside of street pavements;
- C. Subgrades – a minimum of one (1) test per 100 lineal feet for streets 500 lineal feet or less or one (1) test per 200 lineal feet for streets over 500 lineal feet at each of the following locations, where applicable:
 - 1. Compacted fill placed for embankments;
 - 2. Undisturbed soils in transitional areas from cut to fill immediately below the topsoil; and
 - 3. Undisturbed soils at depths greater than 3 feet below the original ground in cut areas.

Density tests of soil embankment, utility excavations, or subgrade are not applicable when at least one of the following conditions exist:

- A. More than 5 percent of the material contains greater than one (1) inch sieve size particles; or

- B. More than 60 percent of the material contains greater than No. 4 sieve size particles except DGA (dense graded aggregate).

Proof of conditions (1) or (2) shall be performed by at least one (1) graduation test by a recognized testing laboratory and mailed directly to the inspector.

All soil density testing shall be at the expense of the developer. The results of these tests shall be mailed directly to the developer, design engineer, inspector, and the contractor. The results of all soil testing shall be compared to the densities, stated in Items 1.2, 1.3, and 1.4 of these regulations. Any deficiencies found in construction work must be remedied in the field or resolved between the developer, contractor, and Inspector subject to approval by a qualified registered professional engineer.

MATERIALS

Concrete shall be composed of Portland Cement, air-entraining agent, aggregates, and water combined in such proportions as to meet current KDOT Class A 3500 psi concrete specifications.

2.1 Portland Cement

Cement shall conform to requirements of the current ASTM specifications for Portland Cement Type I or Type III (Designation C-150).

2.2 Air-Entraining Agent

Air-entraining agents shall conform to the requirements of current ASTM Specifications for Air-entraining Agents for Concrete (Designation C-260).

2.3 Chemical Admixes for Concrete

Admixtures shall conform to requirements of the ASTM Specifications for Admixtures of Type A and Type D (Designation C-494).

2.4 Aggregates

Aggregates shall conform to current requirements for concrete pavements of the Kentucky Department of Transportation, Bureau of Highways.

2.5 Water

Water used in mixing or curing concrete shall be equal to that supplied for drinking.

2.6 Reinforcing Steel

Reinforcing steel, if specified, shall conform to current Standard Specifications of the Kentucky Department of Transportation, Bureau of Highways.

2.7 Joints

Expansion joints shall be non-extruding preformed fillers conforming to Kentucky Department of Transportation specifications.

Contraction joints may be either sawed or premolded 1/8 inch thick width as shown on the details and shall be carried through the integral curb.

2.8 Curing

Curing materials shall conform to current Kentucky Department of Transportation, Bureau of Highways Specifications, Section 823, 601.25.

BATCHING, TESTING AND FORMING

3.1 Batching

Batching shall conform to Kentucky Department of Transportation, Bureau of Highways Specifications 601-08 through 601.18.

3.2 Strength of Concrete

All concrete shall attain minimum strength to meet KDOT Class A 3500 psi concrete specifications.

3.3 Testing

At least three (3) test cylinders shall be made for each day's placement if less than 100 cubic yards or each 100 cubic yards or portion thereof by a recognized testing laboratory and broken one (1) at 7 days and two (2) at 28 days. The results of these tests shall be sent directly to the City Inspector.

For each set (at least three) of test cylinders made the slump and air content shall be measured. The slump test shall be run in accordance with ASTM C14378 and the air content test in accordance with ASTM C231-81. The results of these tests shall be sent directly to the City Inspector.

The fabricating, curing, breaking and reporting the test cylinders, the slump test and air content test shall be made at the contractor's expense.

3.4 Forms

Forms may be of wood or metal and shall have a depth equal to or greater than the prescribed edge thickness of the pavement. Forms shall be straight and free from bends or warps.

3.5 Setting Forms

When forms are set and secured they shall provide the specified elevation and thickness of slab. Forms shall have "J" bolts securely bolted thereto, and spaced as shown on typical sections. They shall be cleaned and oiled each time they are used.

PLACING

4.1 Placing Concrete

The concrete shall be mixed in quantities required for immediate use and shall be deposited on the subgrade to the required depth and width of the construction lane in successive batches and in a continuous operation, without the use of intermediate forms or bulkheads. The concrete shall be placed as uniformly as possible, in order to minimize the amount of additional spreading necessary. While being placed, the concrete shall be vibrated and compacted with suitable tools, so that the formation of voids or honeycomb pockets is prevented.

No concrete shall be placed around manholes or other structures until they have been brought to the required grade and alignment. Additional tamping and compaction will be required after raising manholes.

- A. Cold Weather Concreting - Concrete may be placed when the air temperature in the shade and away from artificial heat is thirty-five (35) degrees Fahrenheit or higher. No concrete shall be placed upon frozen subgrade. Concrete shall be protected from freezing for a period up to seven (7) days.
- B. Hot Weather Concreting - Except by approval of the inspector, concrete placing shall cease if the temperature of the plastic concrete cannot be maintained at ninety (90) degrees Fahrenheit or lower.

To facilitate the placement of concrete in hot weather, a retarding chemical admixture Type B or D, in conformance with ASTM C-494, may be used.

FINISHING

5.1 Finishing

Pavement shall be struck off and consolidated with a mechanical finishing machine or by hand-finishing methods. Finishing machine shall be provided with a screed which will consolidate the concrete by pressure, vibration, or both.

The concrete shall be brought to a true and even surface, free from pockets.

When hand-finishing is used, the concrete shall be struck off and consolidated with a vibrating screed to the elevation shown on the plans. When forward motion of the screed is stopped, the vibrator shall be shut off and not allowed to idle on the concrete.

5.2 Straight Edging

The inspector may require areas to be straight edged to determine any irregularities

5.3 Edging

Before final finishing and initial set, edges of the slab and curb shall be edged with an edger having a radius of 1/8 inch.

5.4 Final Surface Finish

Final finishing shall be accomplished with a burlap drag followed with brooming at right angles to the center line.

INTEGRAL CURB

6.1 Integral Curb

Integral curb shall be constructed with or immediately following the screeding operation. Care shall be taken so that the curb construction does not lag the pavement construction and form a “cold joint”.

All concrete driveway entrances shall be provided with premolded expansion joint material along the full width of the driveway.

CURING

7.1 Curing

Concrete shall be cured by protecting it against loss of moisture, rapid temperature change, from rain, flowing water, and mechanical injury for a period of not less than 5 days. Moist curing, waterproof paper, pigmented liquid membrane compound, or a combination thereof may be used.

Immediately after finishing operations have been completed, the entire surface shall be covered by the curing medium.

JOINTS

8.1 Joints

Joints, tie bars, and load transfer bars shall be constructed and spaced as detailed in Appendix C of the Boone County Subdivision Regulations (Joint Details - C12).

Concrete pavement shall include expansion, contraction, and longitudinal Joints. Transverse Joints are expansion and contraction Joints which shall be continuous across the pavement lane including the curb. Longitudinal joints are parallel to the pavement lanes. Construction joints are necessary when the placement of concrete is delayed. The location of transverse construction joints may be either planned (coincidental with a contraction joint) or emergency (not coincidental with a contraction joint). In general, the location of longitudinal Joints shall be centered between pavement lanes except for street widths 30 feet and wider.

8.2 Expansion Joints

Expansion joints shall be Type 1. Filler material shall conform to Item 2.7 of these regulations and extend the entire width of the pavement. All dimensions and spacing shall be shown on the plans or referenced herein. The filler shall be held accurately in place during the placing and finishing of the concrete by a bulkhead, a metal channel cap or other approved method. Expansion joints shall be installed at the following locations: (1) at all street intersections at the point of curvature of the turning radii entering the intersection; and (2) at cul-de-sacs or turnarounds at the point of curvature of the first turning radii approaching the turnaround. In no case shall the expansion joint spacing exceed 300 feet.

No concrete shall be left above the expansion material or across the joint at any point. Any concrete spanning the ends of the joint next to the forms shall be carefully cut away after the forms are removed.

Before the pavement is opened to traffic, the groove above the filler shall be cleaned and sealed with joint sealing material specified in Item 2.7 of these regulations.

8.3 Contraction Joints

Transverse contraction joints shall be Type 2. They may be sawed or grooved with a metal jointing tool, equal to a depth of one-fourth (1/4) of the pavement thickness. If the pavement is grooved with a metal jointing tool, special care should be taken to prevent surface irregularities at the joint location.

The spacing of undoweled contraction joints shall be specified by the design engineer and shown on the plans or referenced herein. In no case shall the contraction joint be spaced at intervals greater than a distance of fifteen (15) feet between joints.

If sawed Joints are specified, they shall be sawed within a time frame of between four (4) hours and eight (8) hours following placement of each pavement section. However, depending upon temperature, weather conditions, and other factors affecting setting times, variations to these time frames may be required to ensure that joints are sawed early enough to control cracking, but late enough to prevent any damage by blade action to the slab surface and to the concrete immediately adjacent to the joint.

8.4 Construction Joints

Transverse construction joints shall be used wherever the placing of concrete is suspended for more than thirty (30) minutes. A transverse construction joint shall be Type 3, with smooth bars if the joint occurs at the location of a contraction joint. A transverse construction joint shall be Type 4 with deformed tie bars if the joint occurs at any other location.

8.5 Longitudinal Joints

Longitudinal joints between lanes shall be Type 6 of the tied construction type. An alternative longitudinal joint Type 7 may be used with slip-form paving operations. The location of longitudinal joints shall be centered between pavement lanes and coincide with lane markings wherever possible, except for street widths of 30 feet and wider where joints shall be located at equal intermediate locations. In these cases, longitudinal joints may be sawed and shall be Type 5.

8.6 Integral Curb Joints

In the construction of transverse joints, special care must be taken to ensure that all transverse joints extend continuously through the pavement and curb.

TIE BARS

9.1 Tie Bars

All tie bar reinforcement for concrete pavement shall conform to Item 2.6 of these regulations. All tie bars shall be deformed bars for Types 4, 3, 6, and 7, and plain or smooth bars for Type I and 3.

JOINT SEALING

10.1 Joint Sealing Compound

The material used for filling and sealing cracks and/or joints shall be Meadows 0164 Hot Pour Rubber Asphalt Sealer, Meadows HI-Spec Hot Pour Joint Sealing Compound or approved equal.

10.2 Application

Material must be melted in a double boiler, oil jacketed melter equipped with a mechanical agitator, pump, gas pressure gauges, and separate temperature thermometers for both oil bath and melting-vat, with accessible control valves and gauges.

On start up of melter, raise the oil bath temperature, not to exceed 450 (F). Add small quantities of crack filler material to the melter and while continuously agitating, add additional material as needed. Control material temperature at 380

(F). Do not exceed 400 (F) at start up.

The sealing and filling of joints and/or cracks may be done at air temperature of 40 (F) or higher. For best results, cracks should be filled to a depth of 1/4" below the surface. Where necessary to limit the depth of the sealant, use cotton or kraft rope inserted to the correct depth of the cleaned joint or crack.

Small quantities of unused material remaining in the melter may be remelted and used the following day.

If premolded joints were utilized in the construction of the street, cracks must be sawed to 1/2" depth before applying sealer.

STRUCTURES ENCOUNTERED IN THE PAVED AREA

11.1 Manholes And Catch Basins

All manholes and catch basins encountered in the areas to be paved shall be raised or lowered to the surface of the new pavement. Catch basins may be separated from the pavement and curb by boxing out around basin.

PROTECTION OF PAVEMENT

12.1 Protection And Opening To Traffic

Traffic shall be excluded from the pavement by erecting and maintaining barricades and signs until the concrete is at least fourteen (14) days old or has attained a compressive strength of 3,500 pounds per square inch and/or 550 pounds per square inch flexural strength. This traffic restriction shall apply to the contractor's construction equipment and vehicles, as well as general traffic. As soon as curing and sealing are completed, the contractor shall clean up the pavement free from all debris.

CURB, GUTTER, SIDEWALK AND DRIVEWAYS

13.1 Curb, Gutter, Sidewalk And Driveways

Construction of curb, gutter, sidewalk, and driveways shall require the same care as the street pavement. The preceding requirements shall apply, where pertinent, to the construction of curb, gutter, sidewalks, and driveways within the right-of-way. In addition, sidewalks or driveways shall be constructed so that the transverse joint spacing shall be equal to the width of the sidewalk or driveway, but in no case shall the transverse joint spacing for driveways exceed twelve (12) feet and not greater than five (5) feet for sidewalk spacing. Sidewalk and driveways, within the right-of-way, shall be constructed with a pavement

thickness of at least four (4) inches (see Appendices for typical section details). Commercial and Industrial entrances will require sidewalk thickness conforming to driveway pavement thickness.

PAVEMENT THICKNESS

14.1 Pavement Thickness

Pavement thickness shall be as provided on plans.

14.2 Tolerance In Pavement

Deficiency in pavement thickness determined by drilling or coring new concrete pavements shall not exceed 0.20 Inches. When thickness of pavement is deficient by more than 0.20 inches, such areas shall be removed and/or replaced unless otherwise determined by the Inspector and a qualified registered professional engineer.

TECHNICAL SPECIFICATIONS

CAST-IN-PLACE CONCRETE

GENERAL

- 1.1 Related Documents
- A. Conditions of the Contract apply to this Section as fully as though repeated herein.
- 1.2 Section Includes
- A. Labor, material and equipment required for complete installation of all concrete work.
 - B. Such work shall include foundations, walls, beams, columns, slabs, sidewalks, and any additional concrete work not specifically listed.
- 1.3 References
- A. Standards of American Society for Testing Materials listed in this section and in referenced ACI publications.
 - B. ACI Manual of Concrete Inspection.
 - C. Standard Drawings KDOT, 1991 (including Headwall Supplement).
 - D. Latest Addition of KDOT Standard Specifications for Road & Bridge Construction.
- 1.4 Submittals
- A. Submit shop drawings showing reinforcing grade, bar size, placement, laps, splices and details.
 - B. Submit promptly two (2) copies of all test and inspection reports required by quality control section listed below. Any deviation from specifications or drawings encountered by testing or inspection personnel shall be reported immediately to Engineer.
- 1.5 Warranty
- A. If any concrete is found defective in strength, is not true to line or level, is poured out of place, or has not been protected properly against the effects of weather, or if any reinforcing is found exposed or not properly placed, the Owner or the Engineer may direct that such concrete be removed and replaced at Contractor's expense. Random cores will be taken to assure proper placement of reinforcing and slab thickness.

PRODUCTS

2.1 Materials

- A. Portland Cement: ASTM C 150, Type I.
- B. Portland Cement Air Entraining: ASTM C 150, Type IA or Type IIIA. Air entraining agents conforming to ASTM C 260 may be used in lieu of air entraining cement.
- C. Fine Aggregate: ASTM C 33, clean, hard, natural sand.
- D. Coarse Aggregate: State of Kentucky Department of Transportation Construction and Material Specifications No. 805.04. Grading No. 57 Max. Size - 1".
- E. Water: Potable.
- F. Pozzolans - Fly Ash: Not Permitted.
- G. Admixtures: Except for air entraining and water reducing, not permitted without approval of engineer. Submit manufacturer's information to Engineer, with historical strength tests based on proposed cement, aggregate and admixtures.
- H. Reinforcing Steel: ASTM A 615. Grade 60.
- I. Welded Wire Fabric: ASTM A 185 flat sheets for floor slabs on grade.
- J. Expansion Joint Filler: Non-extruding resilient bituminous type conforming to ASTM D 1751.
- K. Joint Sealant: Two-part semi-rigid epoxy 100% solids sealant - Metzger/McGuire MM-80 as manufactured by Metzger McGuire or Masterbuilders' Masterfil CJ.
- L. Curing Compound: To meet all specifications described within KDOT "Standard Specifications for Road & Bridge Construction" latest edition.
- M. Curing Membrane: Polyethylene film (white), 6 mil for slabs.
- N. Hardener: Lapidolith manufactured by Sonneborn.
- O. Bond Breaker: 4 mil polyethylene film or 15# building paper.

- P. Polyurethane Sealer: Sonothane by Sonneborn.
- 2.2 Concrete Mixes
- A. All concrete to meet KDOT Class A Standards.

EXECUTION

- 3.1 Concrete Forms
- A. Construct forms to shape, lines and dimensions of members as called for on drawings. Secure sufficiently tight to prevent leakage of mortar.
 - B. Design and construct formwork and related bracing to maintain position and shape under loads incurred during concrete placement.
 - C. Removal of formwork for self-supporting structural concrete beams/slabs.
 - 1. Removal to meet all standards of KDOT "Standard Specifications for Road & Bridge Construction" latest edition.
 - 2. Footing and wall forms may be removed as soon as no damage to concrete will occur upon stripping forms. Do not backfill against concrete retaining walls until concrete has full specified strength.
- 3.2 Reinforcing
- A. Reinforcing must be free of excessive rust, loose scale, mud, oil and any nonmetallic coating that will adversely affect bonding capacity.
 - B. Placement of reinforcing bars, including bar clearance and concrete coverage shall be in accordance with KDOT "Standard specifications for Road and Bridge Construction" latest edition. Place in accordance with approved shop drawings and contract documents.
 - C. Splices and laps for reinforcing shall be governed by KDOT "Standard Specifications for Road and Bridge Construction" latest edition.
- 3.3 Cold Weather Requirements
- A. Cold weather requirements govern when minimum ambient temperature is expected to fall below 40 degrees F.
 - B. Concrete will not be placed on frozen ground.
 - C. Mix, place, protect and cure concrete in strict accordance with KDOT "Standards Specifications for Road and Bridge Construction" latest edition.

3.4 Hot Weather Requirements

- A. Hot weather requirements govern when maximum ambient temperature is expected to rise above 85° F.
- B. Mix, place, protect and cure concrete in strict accordance with KDOT "Standard Specifications for Road & Bridge Construction" latest edition.
- C. Admixtures proposed for construction under these conditions, such as water-reducing retarders, shall be tested thoroughly with concrete mixes for this job. All aspects of concrete construction applicable shall be considered before approval. Submit specifications on retarder to Engineer for approval with concrete mix designs.
- D. Batch, mix and transport concrete as per KDOT "Standard Specifications for Road and Bridge Construction" latest edition.
- E. Water curing will be required for hot weather construction.
- F. General Contractor will take every precaution to insure that all concrete operations are performed promptly and without interruption.

3.5 Joints in Concrete Construction

- A. Construction Joints for walls and continuous wall footings shall have reinforcing cross joints so that shear keys will not be necessary. Construction joints will be located at General Contractor's discretion and will be at such locations that each section can be filled in one continuous operation.
- B. Construction joints for concrete beams and structural slabs shall be at mid-span unless otherwise stated on the plans. Reinforcing shall extend through joint. No horizontal joint will be allowed.
- C. All other joints to meet KDOT Standards.

3.6 Placement

- A. Reinforcing shall be properly placed and secured before pouring concrete.
- B. Place concrete as near as possible to its final position to avoid segregation. Place in a continuous operation between construction joints so that concrete remains plastic and flows readily to avoid cold joints.
- C. Distribute concrete evenly and consolidate with mechanical vibrators.
- D. Concrete temperature at time of placement shall not exceed 90°.

3.7 Curing And Protection

- A. Protect freshly cast concrete from damaging effects of the elements - freezing, rapid drop in temperature, and loss of moisture - and from future construction operations.

- B. Concrete - Curing Options:
 - 1. Curing compound - 2 coats for exterior concrete.

 - 2. Backfill - Footings.

 - 3. Wet Burlap - Footings.

 - 4. Forms, if left in place, should be sprinkled and exposed surfaces should be covered.

3.8 Exterior Concrete Work

- A. Use air-entrained concrete for all exterior work such as sidewalks, curbs, and retaining walls.

- B. Sidewalks:
 - 1. Construct walks 4" thick in panels with no panel having a surface area exceeding 36 square feet.

 - 2. Control Joints: Not more than 1/8" in width, tool to a depth of 1/4 of walk thickness.

 - 3. Expansion Joints: 1/2" thick expansion joint filler. Construct between walk and any abutting masonry or concrete. Construct transverse expansion joints at uniform intervals of not more than 40 feet.

 - 4. Slope sidewalks, ramps, and entry slabs a minimum of 1/8" per foot or to Local Sub. Regulation Standards.

 - 5. Finish: Broom finish surface with joints and edges tooled with edging tool. Surface shall not vary in flatness more than 1/4" in 10 feet.

- C. Curbs:
 - 1. Construct straight and true. Top and sides shall not vary more than 1/4" in 10 feet.

 - 2. Joints: Where practical, align joints in curb with like joints in adjoining work.

 - 3. Expansion Joints: 1/2" thick expansion joint filler cut to shape of

curb at intervals of not more than 40 'L ext .

4. Control Joints: Construct by inserting metal plates not over 1/8" thick in forms at 10 foot intervals.
5. Curbs on Public Streets to meet all Local Standards.

3.9 Field Quality Control - General Contractor/Testing Agency Responsibility

A. Reference also Spec. Section 01400 for payment for testing and ACI Manual of Concrete Inspection.

B. The following testing and inspection requirements shall be done by an independent testing laboratory approved by the Engineer. General Contractor will assist in testing, inspection, and coordination as necessary, and in any corrective work required.

1. Obtain copies of all mix design data, including any approved concrete admixtures.
2. Inspect all excavations and/or prepared subgrade for suitability of pouring concrete. Grade will be uniform and level with subgrade formed for edges thickened as detailed.
3. Inspect concrete formwork for dimensions and alignment.
4. Inspect reinforcing bars for grade, size, location, splicing and cover.
5. Concrete Tests:
 - a. Cylinder tests for Compressive Strength – ASTM C39:
 - 1) Concrete cylinders will be cast in steel or plastic molds. No wood or cardboard molds are acceptable.
 - 2) Cast one (1) set of four (4) test cylinders for 10 or greater cubic yards.
 - 3) Cast one (1) set of four (4) test cylinders for each additional 100 cu. yds. of each mix placed each day.
 - 4) Test one (1) cylinder at 7 days and two (2) cylinders at 28 days. Maintain fourth cylinder as spare.

- 5) For first set of cylinders cast for slab-on-grade, test one (1) cylinder at 3 days. Analyze probable 28 day strength. Inform Engineer immediately by telephone if there appears to be concern for achieving required 28 day strength.
 - b. Random test concrete trucks for slump, air content, and temperature.
 - c. All concrete not meeting specification will be rejected and removed from the job site.
- C. Examine location and construction of all joints in concrete for conformance with plans, notes and specifications.
- D. All work is to be performed in accordance with ACI requirements for hot or cold weather concreting, as may apply.
- E. Inspect for adequate consolidation of all concrete.
- F. Verify specified methods for curing and protection of concrete are being followed.
- G. Submit daily reports to Engineer during all concrete operations indicating location of pour; quantity of concrete poured; concrete slump, temperature and air content; field conditions - temperature, weather, wind; and curing method.

Note: Geotechnical Engineering Services Within This Section To Be Accomplished By Thelen And Associates At Contractor's Expense.

TECHNICAL SPECIFICATIONS

ASPHALT CONCRETE PAVEMENT FOR STREET AND DRIVEWAY CONSTRUCTION

The work covered by these specifications consists of furnishing all labor, equipment and materials and in performing all operations in connection with the construction of asphalt concrete pavement in accordance with these specifications and the applicable improvement drawings.

The asphaltic concrete pavement work shall consist of multiple layers of asphaltic concrete with or without granular base and subbase courses, constructed on a prepared subgrade in conformity with the lines, grades, and cross sections shown on the plans. A string-line or automatic grade control device shall be used.

The data included herewith is based upon the general soil conditions, which exist in the area. These general soil conditions, representing approximately 75 percent of the soils in the area, are clayey overburden soils, described as lean to moderately plastic silty clays, classified according to the Unified Soil Classification System as CL soils. Any site which is made up of soils substantially different should be evaluated independently by a qualified Geotechnical Engineer. The work consists of drilling, testing and as engineering evaluation of all field and laboratory data in light of the proposed design. Examples of substantially different soil conditions are the very silty clays or clayey silts along the flood plain of the Licking and Ohio Rivers, the clayey sands, the fine to medium sands and the fine to coarse sands and gravels of the flood plain of the Ohio River such as the Belleview Bottoms in Boone County, the loess type deposits, clayey sands, silty sands and sandy clays of the Ft. Wright area and the "fat" waxy looking clays in Boone County.

GRADING

This term shall consist of all grading above or below subgrade elevations of whatever nature required to bring the street to proper subgrade elevations including necessary excavation and proper sloping of all cuts, and other work incidental thereto.

1.1 Excavations:

All excavations shall be made to approximate grade or subgrade elevations consistent with approved plans. Excavations shall not be steeper than a cut slope of 2.5 horizontal to 1 vertical.

1.2 Excavation Below Subgrade:

Whenever excavations below subgrade elevation to remove spongy or unstable material, organic matter or other materials is required, the contractor shall remove same and shall replace with compactable soils as per Item 1.3. The excavation can be backfilled with soils that were removed provided they are clean clayey soils free of organic matter and other deleterious material, aerated and dried to near optimum moisture content or clean clayey borrow soils that have moisture contents near optimum moisture content.

1.3 Construction Of Embankment:

All surface vegetation and heavy root system shall be removed to eliminate all vegetation from the area upon which the embankment is to be constructed. Soils so removed shall not be used in construction of embankment. These materials shall be stockpiled and respread across scarified areas after the scarified areas have been brought to within inches of finished grade.

Embankments shall be constructed of approved soils to approximate subgrade elevation in shallow level layers, 6 to 8 inches, within three (3) percent of optimum moisture content on the dry side of the curve or within four (4) percent of optimum moisture content on the wet side of the curve, compacted with an appropriate equipment to a density not less than 95% percent of maximum density, as determined by the standard Proctor moisture-density test (ASTM D698-78 or AASHTO T-99) or 87% percent of maximum density as determined by the modified Proctor moisture-density test (ASTM D1557-58-78 or AASHTO T-180). All soils placed in areas involving public improvements shall be constructed to slopes no steeper than 2.5 horizontal to 1 vertical and flatter where possible for ease of maintenance.

1.4 Backfill:

Clayey soils or granular soils shall be used to backfill utility crossings within the right-of-way and compacted to the densities stated in Item 1.3. Under no conditions shall granular backfill be flushed with water to obtain compaction. Utilities which are parallel and within three (3) feet either side of the pavement shall be compacted.

1.5 Subgrade:

The subgrade is defined as the top one (1) foot of the soil profile at finished grade prior to placing the pavement. This top one (1) foot of soil will consist of: (a) compacted fill placed for embankments and as outlined in Item 1.3; (b) undisturbed soils in the transitional areas from cut to fill immediately below the topsoil; or (c) undisturbed soils at depths greater than 3 feet below the original ground surface in cut areas. The top (1) foot of subgrade shall be compacted to 98 percent of maximum density as determined by the standard Proctor moisture-density test (ASTM D687-78 or AASHTO T-99) or 90% percent of maximum density as determined by the modified Proctor moisture-density test (ASTM 1557-78 or AASHTO T-180) within two (2) percent of optimum moisture content on the dry side of the curve or four (4) percent of optimum moisture content on the wet side of curve immediately prior to placing the pavement. In transitional areas from cut to fill, the soils have been subject to the seasonal changes of freezing and thawing and wetting and drying. These soils will exist at moisture contents well above optimum moisture content and at densities on the order of 60 to 80 percent of maximum density (ASTM D698-78). These soils shall be scarified, aerated and dried in order to obtain the specified percent compaction for subgrade. Soils in cut areas, 3 feet below original grade, will exist at moisture contents above optimum moisture content and at densities on the order of 90 percent of maximum density (ASTM D698-78). These soils shall be scarified, aerated, and dried in order to obtain the specified percent compaction for subgrade.

Subgrade Underdrainage Systems – In order to maintain maximum densities of subgrade comprised of clayey and granular soils, four inch (4”) minimum perforated pipe underdrainage systems shall be installed and connected to an approved storm sewer systems at each of the following locations and in accord with the relating details on Page C.2 in Appendix “C” of the 2005 Boone County Subdivision Regulations.

- A. Interconnecting street catch basins opposite each other at the sump and catch basins at entrance to cul-de-sacs.
- B. Extending from any street catch basin perpendicular for full width beneath street pavement.
- C. Extending perpendicular from any street catch basin to any water line trench within the right-of-way
- D. Extending from any street catch basin when excavations within subgrade are replaced with clean granular soils.
- E. Extending from any street catch basin to intercept a water table generated from a natural spring or other damaging discharge observed during grading operations.

All connections to catch basins shall be inspected and approved by the proper inspection authority.

Any soft or yielding areas resulting from high moisture content that are encountered at the time of construction shall be scarified, aerated, and dried to reduce the moisture content nearer to optimum moisture content, then recompacted to the specified density.

The subgrade shall be shaped to plan elevation and cross section. Immediately prior to placing the concrete, the subgrade shall be checked for conformity with the cross section shown on the plans by means of an approved template on the side forms. If necessary, the materials shall be removed or added as required, to bring all portions of the subgrade to correct elevations. The subgrade shall be thoroughly compacted and again checked with the template. Concrete shall not be placed on any parts of the subgrade which have not been checked for correct elevation. The subgrade shall be clean of loose or wet material prior to placing concrete.

Prior to placing the concrete, the Contractor shall proof roll the compacted subgrade with a fully loaded single axle dump truck. The Inspector shall observe the proof rolling for consistency. Areas which are subject to excessive pumping or rutting shall be reworked and recompacted as described above. All subgrade testing shall be made not more than 48 hours prior to placement of pavement, unless extreme weather conditions dictate retesting (rain, freezing temperature, excessive temperature, etc.). The appropriate Inspector shall be contacted not less than (12) twelve hours prior to placement of materials.

1.6 Equipment For Compaction Of Backfill, Embankment And Subgrade

Any compaction equipment capable of producing the required embankment and subgrade densities, without lamination, will be permitted. Clayey type soils shall be compacted with kneading type compaction equipment, such as a sheepsfoot roller. Cohesionless soils shall be compacted with vibratory type equipment, such as a vibrating plate or roller. All compaction equipment shall be in good condition and shall be operated efficiently to assure uniform compaction.

1.7 Subgrade For Sidewalks And Driveways:

Subgrade for sidewalks and driveways within the limits of the right-of-way shall comply with Item 1.5

1.8 Equipment Operated On Streets:

The contractor shall be permitted to operate only pneumatic tired equipment over any paved streets surfaces and shall be responsible for correcting any damage to street surfaces resulting from the contractor's operation. Paved streets adjacent to new development shall have all loose soil or mud removed at the end of each day's work.

1.9 Utilities:

Special precautions shall be taken by the contractor to avoid damage to existing overhead and underground utilities. Before proceeding with the work, the contractor shall confer with all Public or private companies, agencies or departments that own or operate utilities in the vicinity of the construction work.

The contractor shall be diligent in his efforts to use every possible means to locate existing utilities.

1.10 Soil Density Tests:

Soil density tests, including moisture-density tests (ASTM D698-78 or ASTM D1557-78) and field density tests (ASTM D 1556-64 or ASTM D292278), are required to determine the percent compaction in accord with the following:

- A. Embankment - Minimum of one (1) test for each three (3) feet in elevation per 400 lineal feet or every 2500 cubic yards, or fraction thereof, of embankment section;
- B. Utility backfill excavations for storm, sanitary sewer and water system crossings - a minimum of one (1) test for each two (2) feet in elevation per 100 lineal feet, or fraction thereof, of utility trench open cut beneath street subgrade and within three feet outside of street pavements;
- C. Subgrades - minimum of one (1) test per 100 lineal feet for streets over 500 lineal feet or less or one (1) test per 200 lineal feet for streets over 500 lineal feet at each of the following locations, where applicable:
 - 1. Compacted fill placed for embankments;
 - 2. Undisturbed soils in transitional areas from cut to fill immediately below the topsoil; and
 - 3. Undisturbed soils at depths greater than 3 feet below the original ground in cut areas.

Density test soil embankment, utility excavations, or subgrade are not applicable when at least one of the following conditions exist:

- A. More than 5 percent of the material contains greater than one (1) inch sieve size particles; or
- B. More than 60 percent of the material contains greater than No. 4 sieve size particles except DGA (dense graded aggregate)

Proof of conditions (1) or (2) shall be performed by at least one (1) graduation test by a recognized testing laboratory and mail directly to the inspector.

All soil density testing shall be at the expense of the Contractor. The results of these tests shall be mailed directly to the owner, design engineer and inspector. The results of all soil testing shall be compared to the densities, stated in Items 1.3, 1.4, 1.5, and 1.7 of these regulations. Any deficiencies found in construction work must be remedied in the field or resolved between the developer, contractor, and inspector, subject to approval by a qualified registered professional engineer.

PREPARATION OF GRANULAR SUBBASE

2.1 Thickness Of Granular Subbase:

The thickness of granular subbase comprises a portion of the required Design Thickness, when specified.

ASPHALT PAVEMENT

3.1 Description And General Requirements:

This item shall consist of furnishing all materials and performing all construction procedures required to build an asphalt pavement, on prepared and approved subgrade, conforming to the requirements of these specifications and to the pavement design shown on the approved plans. It may include any, or all, but is not necessarily limited to, materials and methods specified under this Item (Item 3) only.

Asphalt pavement shall consist of an asphalt concrete surface course, or courses, constructed on a base course, or courses and/or subbase course designed in compliance with the requirements of Item 4.2.

Successive layers of the pavement shall be offset from the edge of the underlying layer, a distance equal to the course thickness of the lower layer, except when abutting existing construction. When the asphalt layers of the pavement abut a building foundation, barrier curb, or similar vertical surface, the abutting surface shall be heavily painted with asphalt prior to construction of the asphalt course. The surface course shall be finished one-fourth (1/4) inch above adjacent flush construction to permit proper compaction.

3.2 Materials And Construction Requirements

3.2.1. Asphalt Concrete Surface Course

Asphalt Concrete Surface Course materials and construction shall conform to the current requirements of the Kentucky Department of Transportation, Bureau of Highways, for Bituminous Concrete Surface, Class I and Binder (Section 401, 402). Surface course mixture composition shall conform to the requirements Surface Class I and Binder as set forth in Table B-1. Minimum Asphalt Concrete Surface Course Thickness shall be as stated in Table B-2.

3.2.2 Asphalt Concrete Base Course

Asphalt Concrete Base Course materials and construction shall conform to the current requirements of the Kentucky Department of Transportation, Bureau of Highways, Specifications for Asphalt Concrete Base Course (Section 401, 403).

Composition requirements of the mixture shall conform to the gradation limits for Asphalt Concrete Base Course set forth in Table B-1. Asphalt content used shall fall within the range shown and shall be approved by the inspector.

3.2.3 Crushed Aggregate Base Course

3.2.3.1 Description

Crushed Aggregate Base Course, when provided for in the approved structural design of the pavement, shall consist of a granular layer constructed on prepared subgrade or subbase in accordance with these specifications and in conformity with the approved dimensions, lines, grades, and cross sections.

3.2.3.2 Materials And Construction Methods

Crushed Aggregate Base Course shall conform to all the current requirements for materials and construction methods of the Kentucky Department of Transportation for Dense Graded Aggregate Base Course as per Section 303.

3.2.4 Granular Subbase Course

3.2.4.1 Description

Subbase, when provided for in the approved structural design of the pavement, shall consist of a granular layer conforming to the following material and construction specifications.

3.2.4.2. Materials And Construction Methods

Crushed Aggregate Subbase Course shall conform to all the current requirements for materials and construction methods of the Kentucky Department of Transportation for Dense Graded Aggregate Subbase Course as per Section 303.

- 3.2.5. Asphalt Prime Coat: Asphalt Prime Coat shall be applied to the surface of granular courses upon which asphalt base or surface courses will be constructed.

Asphalt Prime shall conform to the Kentucky Department of Transportation requirements for Cutback Asphalt Emulsion Primer Type L as per Section 407. Prime shall be applied to the surface of granular base course at a rate of 0.25 to 0.50 gallons per square yard, as directed by the inspector, in conformance with requirements of the referred to specification.

- 3.2.6 Asphalt Tack Coat: Tack Coat shall consist of SS-1H, meeting the current requirements of the Kentucky Department of Transportation. It shall, when directed by the inspector, be diluted with equal parts of water. Application equipment and procedure shall conform to the requirements of the Kentucky Department of Transportation for Tack Coats as per Section 407. Tack Coat shall be applied to the surface of asphalt courses that have become dusty or dry from traffic use at a rate of 0.10 gallon per square yard of the diluted SS-1H before the subsequent course is constructed or in other circumstances when the inspector so directs.

DESIGN OF ASPHALT PAVEMENT STRUCTURE

4.1 Description

Asphalt pavement structures for subdivision streets shall be designed in conformance with the requirements of this specification. Thickness of the total pavement and of component layers shall be determined on the basis of Street Classification.

4.2 Pavement Thickness Requirements

Thickness of component layers of the pavement for streets within the right-of-way and of the total pavement structure shall be determined as per Table B-2. Where streets are to serve industrial or commercial areas, the pavement design shall be based on a study prepared by the subdivider's engineer projecting the type of vehicles using said streets and traffic volumes, and approved by the planning commission's duly authorized representative.

ADJUSTING UTILITY TOPS

5.1 Description

The contractor shall raise or lower existing utility tops to coincide with the finished grade elevation of the paving.

JOINT SEALING COMPOUND

- 6.1 The materials used for filling and sealing cracks and/or joints between concrete and/ or asphalt shall be W.R. Meadows Sealtight # 164 Hot Pour Rubber Asphalt Sealer or approved equal.

PAVEMENT THICKNESS MEASUREMENTS

- 7.1 Pavement thickness for each type street classification shall be as provided in Table B-2. Streets that are subjected to exceptionally heavy truck traffic shall require a more complete detailed analysis by the subdivider's engineer and approved by the Planning commission's Duly authorized representative.

Upon completion of all asphalt courses, cores shall be taken at approximately 300 foot intervals alternating lanes, to determine pavement thickness. On streets less than 600 feet in length, a minimum of three (3) pavement cores shall be taken. A deviation of the specified thickness of 0.2 inches shall be tolerable. When the pavement thickness is less than the allowable deviation, additional pavement cores shall be taken at 25 foot intervals ahead and behind, until the specified thickness has been measured. The depth of the total deviation shall be determined by averaging all deficient cores. The length of the deficient area shall be determined by distance between the two farthest deficient cores plus 25 feet. The minimum deficient area shall be 25 feet in length times the lane width.

When the pavement thickness is less than the specified allowable deviation, the developer shall have the following options:

- A. Remove the pavement, lower the subgrade to County specifications, retest the subgrade and replace the pavement.
- B. After having satisfied all other County specifications pertaining to pavement construction (i.e., fill density testing, subgrade testing, etc.), the developer shall pay the appropriate Legislative Body a portion of the contract price. The contract price will be figured using the given variables below. This is similar to the procedure set forth in Section 501.28 of the Kentucky Transportation Cabinet's "Standard Specifications for Road and

Bridge Construction, 1991 Edition".

When determining the contract price, the minimum deficient area to be used will be 25 linear feet, each lane being separate.

PAVEMENT DEFICIENCY

Deficiency in Thickness Proportional Part of by Cores <u>(inches)</u>	Determined Contract Price Due to <u>Appropriate Legislative Body</u>
0.00'' to 0.20''	0%
0.21'' to 0.30	20%
0.31'' to 0.40	40%
0.41'' to 0.50''	60%
0.51'' to 0.75''	80%
0.76'' to 1.00''	100%

The minimum thickness allowed under this option is as follows:

<u>Designed Depth</u>	<u>Minimum Thickness</u>
7.0''	6.0''
8.0''	7.0''
9.0''	8.0''
10.0''	9.0''

Any pavement that has a thickness deficiency of more than the 1" deviation will have to be replaced, as stated in Option #1.

TABLE B-1
TABLE OF COMPOSITION LIMITS FOR BITUMINOUS CONCRETE

Sieve Size	Percent Passing by Weight		
	Base	Binder	Surface
1-1/2 inch	100		
1 inch	(2)		
3/4 inch	70-98	100	
1/2inch	---	---	100
3/8 inch	44-76	57-85	80-100
No. 4	30-58	37-68	55-80
No. 8	21-45	25-52	35-60
No. 16	14-35	15-38	20-45
No. 50	5-20	5-20	5-21
No. 100	3-10	3-10	3-14
No. 200	2-6	2-6	2-7
Asphalt Content (1)	3.5-6.5	4.0-7.0	4-8

- (1) Percent by weight of total mixture.
- (2) When the specified thickness of the Base course is 2 inches or less, either 100 percent of the aggregate shall pass the 1-inch sieve or the Contractor may request in writing to use Bituminous Concrete Binder. When the Contractor elects to use bituminous concrete binder in lieu of bituminous concrete base, all requirements for thickness and compaction (or density) will apply, the same as if bituminous concrete base was used.

TECHNICAL SPECIFICATIONS

BITUMINOUS CONCRETE PAVEMENT

1.1 Excavation

- A. All topsoil will be removed and spread on site unless directed otherwise by the Engineer.
- B. The subgrade soil shall be of uniform material and density to provide for satisfactory pavement performance. Soft spots will be excavated and recompacted with the same type of material as found in adjacent subgrade. Uniform support cannot be obtained merely by dumping extra granular material on soft spots.

1.2 Patching

Before resurfacing all holes shall be thoroughly cleaned, primed, and patched with bituminous concrete (Bit. Concrete Surface conforming to Ky. Standard Specs.).

1.3 Cleaning Gutters

All gutters shall be thoroughly cleaned of all foreign material before resurfacing. Where vegetation exists same shall be removed and area sprayed with an approved weed killer.

1.4 Removal Of Abrupt Irregularities

When resurfacing any abrupt projections above existing grade shall be removed so as to facilitate at least a three quarter inch (3/4") coverage over object.

1.5 Adjusting Manhole Covers & Valve Boxes

Manhole covers and valve boxes shall be adjusted by the contractor and/or Utilities Companies prior to application of surface course.

1.6 Subgrade Fabric

When specified or required by the Engineer subgrade fabric will be placed over smooth subgrade extending a minimum of one foot (1') beyond the base course. The fabric will be left smooth with the edges anchored to prevent scooting during base course application. The fabric will be lapped a minimum of one foot (1') and tacked to prevent scooting, also.

1.7 Primer Coat

Asphalt prime coat shall be applied to the surface of granular base course prior to placement of leveling course. The material and method of application will conform to Kentucky Standard Specifications for Primer-L, and will be applied at a rate of 0.50 gal/SY of base course surface.

1.8 Tack Coat

Tack coat will be applied to the surface of concrete or asphalt base prior to application of leveling course, paving fabric or surface course. Tack coat will be applied to the surface of leveling course prior to application of paving fabric. Tack coat may be required by the Engineer to be applied to the surface of the paving fabric prior to application of surface course. The method of application will conform to the Kentucky Standard Specifications for Tack Coats. The material will be SS-1h, and will be applied at the rate of 0.2 gal/SY of surface except for paving fabric. The material for tacking paving fabric will be AC-20 and will be applied at the rate of 0.3 gal/SY of surface.

1.9 Paving Fabric

The fabric shall be nonwoven polypropylene fabric having the following properties: Tensile strength, either direction - min. 50#; Elongation, warp direction, @ 20#, ins./3 ins.-0.6 max.; Elongation, fill direction, @30%, ins./3 ins.-1.0 max.; and Weight, oz/SY (fused two sides)3-5. The fabric will be machine placed and essentially wrinkle free. Brooming may be necessary to remove air bubbles and insure complete contact. The fabric will be overlapped a minimum of six inches (611). Tack coat will be applied to the overlap to prevent slipping. The minimum air temperature will be 50 degrees F when the tack coat (AC-20) and fabric are applied. The minimum air temperature will have been 50 degrees F for six hours prior to the application. The temperature of the tack coat (AC-20) will be a minimum of 290 degrees F.

1.10 Base Course

The base course shall consist of Bituminous Concrete Base conforming to Kentucky Standard Specifications and applied to a depth specified on the Plans. Whenever in their Plans and Specifications thicknesses of pavement are mentioned it shall mean compacted thicknesses.

1.11 Leveling Course

Leveling course shall consist of Bituminous Concrete Surface conforming to Kentucky Standard Specifications and will be applied to areas of existing surface which are obviously off grade to a depth sufficient to bring same to grade as near as practicable. The leveling course will be machine tapered to within one foot of the curb to retain as much curb height as possible even if it necessitates increasing the street crown to accomplish the tapers.

1.12 Surface Course

The surface course will consist of Bituminous Concrete Surface or Sand Asphalt Surface conforming to Kentucky Standard Specifications and applied to a depth Specified on the Plans. Whenever In their Plans and Specifications thicknesses of pavement are mentioned, it --hall mean compacted thicknesses. Application shall be by self-propelled bituminous concrete pavers and compaction shall be by a self-propelled steel wheel roller of not less than eight (8) tons. Application and compaction shall conform to Kentucky Standard Specifications. The surface course will contact the curb but every effort will be made by the contractor to retain as much curb height as possible without reducing the thickness of surface specified.

1.13 Transportation of Materials

Bituminous mixtures shall be transported by truck which shall have tight, clean, smooth metal beds that have been sprayed with a minimum amount of soap emulsion, paraffin oil, or lime so2ution to prevent the mixture from adhering to the beds. Each truck shall be covered with a canvas or other suitable material of such size that will protect the mixture from the weather.

TECHNICAL SPECIFICATIONS

EXISTING UTILITIES

1.1 Existing Utilities

The relocating of any existing utilities necessitated by the work will be done at the sole expense of the Contractor if any expense is incurred. Any damage to existing utilities will be repaired by the Contractor at his own expense.

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**TECHNICAL SPECIFICATIONS
STORM SEWERS
SCOPE OF WORK**

WORK INCLUDED

1.1. The Contractor shall furnish all material, equipment, tools, and labor necessary to do the work as shown on the contract drawings, and unload, haul, and distribute all pipe, and accessories. The contractor shall also remove the pavement as stipulated; excavate the trenches and pits to the required dimensions, construct and maintain all bridges for traffic control; sheet, brace, and support the adjoining ground or structures where necessary; handle all drainage or ground water; provide barricades, guards, and warning lights, lay the pipe, backfill and consolidate the trenches and pits, remove surplus excavated material; clean the site work, and maintain the street or other surfaces over the trenches as specified.

Prior to preparation of bid and prior to construction, the contractor should review the specifications with the appropriate agency to insure compliance with the most recent specifications.

MATERIALS

(See Bid Sheet for Type of Pipe)

2.1. Pipe shall meet the following requirements:

Aluminized Steel Type 2 Ultra Flo Pipe

Manufacture of Pipe - AASHTO M-36 Type IR

Aluminized Coating - AASHTO M-274

Connecting Bands - AASHTO M-36 IR with additional information. Connecting bands shall be an H-12 hugger band with 7/8" diameter O-ring gasket. Bands diameter 48" and smaller shall have one bolt, bar and strap connector and larger than 48" shall have 2 bolt bar and strap connectors per band.

Perma - Loc Polyvinyl Chloride Large Diameter Jelical Solid T Ribbed Pipe

Manufacture of Pipe - AASHTO M-304 M-89 (18" - 48")

Joints - Intregal Bell B=Gasketed Joint

Gasket - ASTM F477

Installation - ASTM D2321

Polyvinyl Chloride Pipe

ASTM D3034 - SDR 35 (4" - 15")

ASTM F679 (18" - 27")

Joints - ASTM D3212

Gasket - ASTM F477

Installation - ASTM D2321

Polyvinyl Chloride Pipe

ASTM F-794 Series 46 (18" - 48")

Joints - ASTM D3212

Gasket - ASTM F-477

Installation - ASTM D2321

High Density Polyethylene Pipe (N-12 Pipe) - (Up to 30")

Material - ASTM D3350

CONSTRUCTION

- 3.1. No pipe shall be laid until the location has been staked by the Engineer.
- 3.2. A trench shall be excavated wide enough to allow for proper placement and compaction of the selected materials in the haunching area. The wall of the trench shall be as nearly vertical as possible. If rock or other unyielding material is encountered, it shall be excavated and foundation prepared as required under KY Department of Transportation, Bureau of Highways, Standard Specifications, Section 611.06 through 611.08. In case unstable foundation is encountered at the established grade, the unstable material shall be removed and replaced with a suitable material to a width and depth and in a manner that will provide a uniform and firm foundation. Manholes or junction boxes may be precast concrete or masonry. Boxes shall be sized to provide the space of a standard precast manhole and on concrete footing slab eight (8") inches thick and walls shall be no less than eight (8") inches thick.
- 3.3. In all operations such as placing the pipes, jointing, bedding, and backfilling, care shall be exercised and it shall be the contractor's responsibility to see that the pipes are not damaged during the unloading or placement on the bed, during compaction of the backfill. Any pipe culvert which is not in true alignment and grade or which shows undue settlement after laying, or is otherwise damaged, shall be taken up and replaced without extra compensation.
- 3.4. Basis of payment shall be at the unit price per foot bid, complete and in place.

BEDDING AND BACKFILL

- 4.1. Bedding
The bedding directly underneath the pipe is required to bring the trench bottom up to grade (MAX 6"). The purpose of the bedding is to provide uniform longitudinal support of the pipe. The bedding shall be a stable, well graded, granular material.
- 4.2. Backfilling
Initial backfill shall be (class II coarse sands and gravels with maximum particle size of 1½ " including variously graded sands and gravel containing small percentages of fine, generally granular, and non-cohesive. Maximum loose lift thickness shall be eight inches. Compaction to be obtained by hand or walk behind compaction equipment. Controlled moisture content and well graded backfill may be required to limit the compaction effort while maintaining pipe shape. Initial backfill to extend 12 inches above pipe.

Contractor shall backfill the remaining portion of the trench for yard areas to 95% Standard Proctor and public right-of-way areas or designated public areas to the current County Subdivision Regulations by approved mechanical or pneumatic compaction equipment. Compaction test reports must be submitted to both owner and engineer.

When backfilling with bankrun gravel is required by the Engineer, the backfilling shall all be done by tampers or rammers. Mechanical tamping will be required on lines where street pavement is to be replaced immediately.

When backfilling with Controlled Density Backfill (CLSM), the Contractor must meet all KDOT Specifications and specifications set forth in this document and plans.

Whenever, in the opinion of the Engineer it is necessary, he may require the Contractor to use a combination of any of the above outlined methods for proper compaction of the backfill in the trenches.

Before final acceptance, the Contractor will be required to level off all trenches where backfill material has been piled up or to bring the trench up to the level of the surrounding street, roadway, or terrain, where necessary. Also, the removal from the streets, roadways, and private property of all excess earth or other materials will be required. The Contractor must provide extra material necessary for filling the trench at no extra cost.

Trench compaction shall be tested by Thelen and Associates at the Contractors expense.

PAYMENT

5.1. Payment will be made at the unit price per foot bid, complete and in place.

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CATCH BASINS & JUNCTION BOX

SCOPE OF WORK

- 1.1. The Contractor shall furnish all materials, equipment, and labor necessary to construct double gutter curb inlet catch basins, manholes, yard catch basins, and detention structures as shown on the attached plans and detailed drawings. Catch Basins are to be poured or precast concrete only.

MATERIALS

- 2.1. Concrete shall comply with Street Paving Specifications.

PAYMENT

- 3.1. Payment will be made at the unit price bid each, complete and in place, with frame and grating.

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TECHNICAL SPECIFICATONS FOR CLEARING & EXCAVATION

1.1 Construction Review Services

Owner will engage a Geotechnical Engineering Firm for quality control testing during earthwork operations.

Geotechnical Engineering Firm will distribute test reports to Owner, Architect, Engineer and Contractor for General Construction.

1.2 Earthwork Pre-Construction Meeting

A Pre-Construction Meeting shall be held at the site with the Owner's representative, the Civil Engineer, Contractor, the Geotechnical Engineer and any other interested parties to review the scope and schedule of the proposed earthwork. At this meeting the Contractor shall inform the group of erosion control measures to be utilized and types of equipment to be used.

CLEARING AND GRUBBING

1.3 Description

This work shall consist of clearing, grubbing, removing, and disposing of all vegetation, buildings and foundations not removed by others, and debris which is within designated limits inside the Project construction area, except such objects as are designated to remain or to be removed in accordance with other Sections of these Specifications. This work shall also include the Preservation from injury or defacement of all vegetation and objects to remain.

CONSTRUCTION REQUIREMENTS

1.4 General

The Engineer will designate all trees, shrubs, plants, and other items to remain. Paint or ribbon required for cut or scarred surfaces of trees or shrubs selected for retention shall be an approved asphaltum base paint prepared especially for tree surgery.

1.5 Clearing and Grubbing

The entire construction area shall be cleared of all weeds, brush, briars, bushes, trees, stumps, and other protruding obstructions not designated to remain, except within areas the Engineer may designate to remain undisturbed. In addition, all bushes, trees, roots and stumps within the line of slope stakes shall be grubbed. In addition, all topsoil, surficial vegetation containing the heavy root system, stumps and debris shall be removed from all proposed cut, fill and at-grade areas.

All clearing and grubbing operations shall be performed in accordance with applicable provisions of Kentucky Department of Highways Specifications for Road and Bridge Construction, Section 212, Erosion Control, and Section 213, Water Pollution Control.

Stockpile removed topsoil for use in landscape areas and completed embankment slopes. Dispose of unsuitable topsoil in Owner's spoil area.

Burning will be permitted in accordance with State & Local Regulations.

Transport unacceptable excavated material, trees, trash and debris off Owner's property and dispose of legally.

1.6 Removing Trees or Stumps

This work shall include cutting trees, removing their stumps and roots from the ground, and disposing of the material; and the removal of existing stumps and their roots and disposing of the material.

EXCAVATION & GRADING

1.7 Grading

This term shall consist of all grading above or below subgrade elevations of whatever nature required to bring the building areas and parking lots to proper subgrade elevations including necessary excavation for curb, gutter, sidewalk, construction of embankments, excavation and proper sloping of all cuts, and other work incidental thereto.

1.8 Excavations

All excavations shall be made to approximate grade or subgrade elevations consistent with approved plans. Excavations shall not be steeper than a cut slope of 2.5 horizontal to 1 vertical.

1.9 Excavation Below Subgrade

Whenever excavations below subgrade elevation to remove spongy or unstable material, organic matter or other materials is required, the contractor shall remove same and shall replace with compactable soils as per Item 1.10. The excavation can be backfilled with soils that were removed provided they are clean clayey soils free of organic matter and other deleterious material, aerated and dried to near optimum moisture content or clean clayey borrow soils that have moisture contents near optimum moisture content.

1.10 Construction of Embankment

All surface vegetation and heavy root system shall be removed to eliminate all vegetation from the area upon which the embankment is to be constructed. Soils so removed shall not be used in construction of embankment. These materials shall be stockpiled and re-spread across scarified areas after the scarified areas have been brought to within inches of finished grade.

Embankments shall be constructed of approved soils to approximate subgrade elevation in shallow level layers, 6 to 8 inches, within two (2) percent of optimum moisture content on the dry side of the curve or within three (3) percent of optimum moisture content on the wet side of the curve, compacted with an appropriate type of compaction equipment to a density not less than 95 percent of maximum density, as determined by the Standard Proctor Moisture- density test (ASTM D698-78) beneath parking lot and roadway areas and to a density not less than 98 percent of same maximum density beneath areas defined by building limits plus twenty feet all around. Embankment fill placed over sloping original ground shall be compacted on level benches cut into the sloping original ground. The upslope face of the benches shall be at least two (2) feet high. All embankment construction shall be observed, tested, and approved by an Engineer or Technician under the direction of a qualified Geotechnical Engineer.

1.11 Backfill

Clayey soils or granular soils used to backfill utility excavations beneath the buildings, pavement, or within three (3) feet of the pavement shall be compacted as described in Item 1.10. Under no conditions shall granular backfill be flushed to obtain compaction.

1.12 Subgrade

The subgrade is defined as the top one (1) foot of the soil profile at finished grade prior to placing the pavement. This top one (1) foot of soil will consist of compacted fill placed for embankments as outlined in Item 1.10, undisturbed soils in the transitional areas from cut to fill immediately below the topsoil or undisturbed soils at depths greater than 3 feet below the original ground surface in cut areas. The top one (1) foot of subgrade shall be compacted to 100 percent of maximum density as determined by the Standard Proctor moisture-density test (ASTM D698-78) within two (2) percent of optimum moisture content on the dry side of curve or three (3) percent of optimum moisture content on the wet-side of the curve immediately prior to placing the pavement. In transitional areas from cut to fill the soils have been subject to the seasonal changes of freezing and thawing and wetting and drying. These soils will exist at moisture contents well above optimum moisture content and at densities on the order of 60 to 80 percent of maximum density (ASTM D698-78). These soils shall be scarified, aerated and dried in order to obtain the specified percent compaction for subgrade.

Any soft or yielding areas, resulting from high moisture content that are encountered at the time of construction shall be scarified, aerated and dried to reduce the moisture content nearer to optimum moisture content, then re-compacted to the specified density.

The subgrade shall be shaped to plan elevation and cross section. Immediately prior to placing the concrete or asphalt, the subgrade shall be checked for conformity with the cross section shown on the plans by means of an approved template on the side forms. If necessary, the materials shall be removed or added as required to bring all portions of the subgrade to correct elevations. The subgrade shall be thoroughly compacted and again checked with the template. Concrete or asphalt shall not be placed on any parts of the subgrade which have not been checked for correct elevation. The subgrade shall be clean of loose or soft material and shall be moistened immediately prior to placing concrete or asphalt. Prior to placing the concrete or asphalt the Contractor shall proofroll the compacted subgrade with a piece of equipment, preferably a loaded single axle truck. The Engineer may observe the proofrolling for consistency. Areas which are subject to excessive pumping or rutting shall be reworked and re-compacted as described above.

Grading Contractor will grade to within + or - 0.2 feet of finish subgrade.

1.13 Equipment for Compaction of Backfill, Embankment and Subgrade

Any compaction equipment capable of producing the required embankment and subgrade densities, without lamination, will be permitted. Clayey type soils shall be compacted with kneading type compaction equipment, such as a sheepfoot roller. Cohesionless soils shall be compacted with vibratory type equipment, such as a vibrating plate or roller. All compaction equipment shall be in good condition and shall be operated efficiently to assure uniform compaction.

1.14 Subgrade for Sidewalks and Driveways

Subgrade for sidewalks and driveways within the limits of the right-of-way shall comply with Item 1.12

1.15 Equipment Operated on Streets

The contractor shall be permitted to operate only pneumatic tired equipment over any paved street surfaces and shall be responsible for correcting any damage to street surfaces resulting from the contractor's operation. Paved street adjacent to new development shall have all loose soil or mud removed at the end of each days work.

1.16 Utilities

Special precautions shall be taken by the contractor to avoid damage to existing overhead and underground utilities. Before proceeding with the work the contractor shall confer with all public or private companies, agencies or departments that own or operate utilities in the vicinity of the construction work. The contractor shall be diligent in his efforts to use every possible means to locate existing utilities.

EROSION CONTROL

2.1 Description

The Contractor shall use the erosion control plan provided by the Engineer as a guideline for the placement and types of erosion control structures to be used. If no plan is provided by the Engineer or additional erosion control structures are necessary, Contractor shall conform to the standards as written in "Kentucky Best Management Practices for Construction Activities," prepared by Department of Conservation and the Division of Water, Natural Resources, and Environmental Protection Cabinet and all other local specifications. The Contractor shall be responsible for periodic maintenance inspections and perform preventative maintenance as necessary on all erosion control measures after each rain event or at a minimum of once per week. The Contractor shall maintain a log of inspection activities.

2.2 Construction Requirements

Erosion Control shall meet the requirements of the most current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.

NORTHERN KENTUCKY UNIVERSITY
INSTRUCTIONS TO BIDDERS
NS-24-12

SECTION 1 – DEFINITIONS

1. **Addenda** – are written or graphic instructions issued by Northern Kentucky University (NKU) prior to the execution of the contract which modify or interpret the bidding documents by addition, deletions, clarification, or corrections.
2. **Alternate** – is an amount stated in the Bid Proposal to be added to or deducted from the amount of the base Bid if the corresponding change in project scope or materials or methods of construction described in the Bidding Documents is accepted. If the University designated Alternates are considered in the award, the Alternate(s) will be accepted in the sequence listed on the Bid form, and the lowest bid sum will be computed on the basis of the sum of the base bid and any Alternated accepted, within the budgeted amount.
3. **Bid** – is the sum stated in the Bid Proposal for which the bidder offers to perform the work described in the specifications and detailed on the drawn plans.
4. **Bidder** – is one who submits a bid directly to the Purchasing Agency for the work described in the Bidding Documents.
5. **Bidding Documents** – include the Notice of Advertisement, Invitation for Bid, Instructions to Bidders, Bid Proposal forms, other sample bidding and contract forms and the proposed Contract Documents including General Conditions, Special Conditions, Plans and Specifications, any Addenda issued prior to receipt of Bids.
6. **Bid Proposal** – is a complete and properly signed document, proposing to do the work or designated portion thereof for the sums stipulated therein supported by data called for by the Bidding Documents.
7. **Construction Manager** – means the person or entity employed by the owner under a separate contract, to provide professional and managerial services to the project.
8. **Consultant** – means the person or the entity, either Architect, Engineer or other Consultant, who is identified as such in the Contract Documents.
9. **Foreign Corporation** – refers to a corporation for profit, organized under the laws other than the laws of the Commonwealth of Kentucky.
10. **K.A.R.** – Kentucky Administrative Regulations; regulations that are promulgated by state agencies to enhance and clarify procedures that are authorized by a specific statute. After public review and acceptance by the agency, the regulations effectively become law until rescinded or revised by the agency.
11. **KRS References**- means the “Kentucky Revised Statutes” adopted by the Commonwealth of Kentucky including all laws and related regulatory that may have been revised, amended, supplemented or new laws enacted.
12. **NKU** – Northern Kentucky University
13. **Lump Sum** - Single total amount for Work; not consisting of several smaller amounts
14. **Notice of Intent to Award** – is a written letter issued to the apparent successful contractor after acceptance of bid price, unit prices, subcontractors and equipment and materials to inform them of such acceptance and request the required additional documentation to initiate the Contract. This is **not** an authorization to proceed.
15. **Owner** – is Northern Kentucky University, a statutory body corporate existing pursuant to Sections 164.100 et seq. of the Kentucky Revised Statutes.
16. **Prime Contract** - Contractor will have [full responsibility](#) for the Work.
17. **Project** – The total Construction, of which the Work performed under the Contract Documents, may be the whole or a part, and which may include Construction by the Owner or by separate Contractors.
18. **Project Manager** – The person designated by the University to oversee the design and construction processes associated with a Capital Construction Project.

19. **Purchasing Agency** – is Northern Kentucky University (NKU) – Procurement Services, Lucas Administrative Center, Suite 617, 1 Nunn Drive, Highland Heights, Greater Cincinnati, 41099
20. **Purchasing Official** – is the University’s authorized representative.
21. **Responsible Bidder** – shall mean a person who has the capability in all respects to perform fully the contract requirements, and the integrity and reliability which will assure good faith performance. See KRS 45A.070(6).
22. **Responsive Bidder** – shall mean a person who has submitted a Bid which conforms in all material respects to the Invitation for Bids, so that all bidders may stand on equal footing with respect to the method and timeliness of submission and as to the substance of any resulting contract. See KRS 45A.070(7).
23. **Schedule of Values** – A zero-dollar Certification of Payment (i.e., invoices), completed shortly after the beginning of a Construction Contract, which outlines the labor and material components of the Contract amount, usually by specification division. When approved by the Contractor, Architect-Engineer and the Division of Contracting and Administration, this document becomes the basis for all Applications for Payment.
24. **Unit Price** – is an amount stated in the Bid as a price per unit of measurement for materials or services as described in the bidding documents.
25. **Work** – Includes the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, supervision, materials, equipment, services, and things provided or to be provided by the Contractor to fulfill the Contractor’s obligations.

SECTION 2 – BIDDER’S REPRESENTATIONS

The Bidder by submitting a Bid, represents and warrants that:

1. The Bidding Documents have been read and understood and the Bid is made in accordance therewith.
2. The site of the proposed work has been visited and carefully examined and the Bidder is aware of and understands the local conditions under which the work is to be performed. Failure to make this required inspection before submitting a Bid will be taken as acceptance by the contractor of the conditions as they exist in the field, whether shown on the drawings or noted in the specifications, and as shown on NKU’s drawings and noted in the specifications. No subsequent claims for extra compensation arising from existence of discrepancies between actual conditions and those shown on drawings and/or noted in specifications will be considered.
3. The Bid submitted is premised upon furnishing the work required by the bidding documents without exception.
4. That the plans and specifications contained in the Bid Documents have been carefully examined and determined by the Bidder to be accurate as well as adequate and sufficient from which to submit a Bid and from which to perform the Work.

SECTION 3 – BIDDING DOCUMENTS

1. Availability of Bidding Documents
 - A. Bidders, Sub-bidders, Subcontractors, and others may obtain Bidding Documents from American Reprographics Inc., 2860 Sharon Rd. Cincinnati, OH 45241, 800.966.2260, or www.qcrepro.com for a charge.
 - B. Complete sets of Bidding Documents shall be used in preparing Bids. The Purchasing Official assumes no responsibility for misinterpretations resulting from the use of incomplete sets of bidding documents.
 - C. The Purchasing Official, in making copies of the Biding Documents available on the above terms, does so only for the purpose of obtaining Bids on the work and does not confer a license or grant for any other use.
2. Accuracy of Bid Documents
 - A. The Bidding Documents are complementary and are issued for the convenience of the Bidders. NKU assumes no responsibility for the correctness of said documents. Each Bidder should review the documents for errors or inaccuracies that may affect the scope of work implied.
 - B. All Bidders shall, upon examination of Bidding Documents promptly notify the University’s Purchasing Official of any ambiguity, inconsistency or error that they may discover upon examination of the Bidding Documents and/or of the site and local conditions.

3. Questions, Interpretations

- A. All questions regarding the meaning or interpretation of the Bidding Documents shall be directed in writing to the Purchasing Official. Questions received less than ten (10) calendar days prior to the date for receipt of Bids may not be answered.
- B. Questions will be accepted from prospective Bidders and should be submitted in a timely manner to the Procurement Officer only. E-mail submission of questions is preferable, but questions will also be accepted by mail or facsimile to the Procurement Officer. The Procurement Officer will decide whether an answer can be given before the closing date, based on the availability of time to research and communicate an answer. Answers to all substantive questions that have not previously been answered. And are not clearly specific only to the requestor, will be distributed to all vendors who are known to have received a copy of this IFB.
- C. Any interpretation, correction or change of the Bidding Documents will be made by Addendum, issued by the Purchasing Official. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding and Bidders shall not rely upon such interpretations, corrections and changes.

4. Materials, Equipment

- A. The materials, products and equipment detailed, described or referenced to manufacturers' or vendors' names, trade names, catalogue numbers, etc., are intended to establish a standard of required function, dimension, appearance and quality.
- B. Material, article or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article or equipment so proposed is, in the sole opinion and judgment of the Consultant, of equal substance and function and approved by the Purchasing Official.

5. Addenda

- A. Addenda will be mailed or delivered to all who are known by NKU Procurement Services to have requested and were furnished Bidding Documents.
- B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose
- C. No Addenda of a material nature will be issued later than five (5) working days prior to the date for receipt of bids, except for postponing the date for receipt of bids or withdrawing the invitation for Bid.
- D. Each Bidder shall ascertain, prior to submitting his Bid, that he has received all Addenda issued by Procurement Service for the particular bid invitation. The Bidder shall acknowledge receipt of all Addenda in the Form of Proposal, or by separate letter to the Purchasing Official which is received at or prior to the hour and date specified for receipt for Bids.
- E. It shall be the sole responsibility of the Bidder who received the Addendum, to insure that all of the appropriate Sub-bidders and Sub-contractors are notified in respect to the information contained in the Addendum.

SECTION 4 – PRE-BID CONFERENCE AND SITE VISIT

- 1. A pre-bid conference and tour of the project area will be held approximately ten (10) days prior to receipt of bids. (Actual date of Pre-Bid Conference will be stated in the Invitation for Bid.) All Contractors wishing to bid on this project should have a representative attend this conference. Items discussed at the Pre-Bid Conference may become part of the contract, and any questions asked at a pre-bid meeting must also be submitted in writing.
- 2. Bidders, before submitting proposals should visit and examine the site to satisfy themselves as to the nature and scope of the project and any difficulties attending the completion of the project.
- 3. The submission of a proposal will be construed as evidence that a visit and examination has been made. Later claims for labor, equipment, or materials required or difficulties encountered which could have been foreseen had such an examination been made, will not be recognized.
- 4. Alternate site visits may be arranged at the discretion of NKU, Procurement Services.

SECTION 5 – BIDDING PROCEDURES

1. Form of Proposal. Bids shall be submitted by Bidders who have received Bidding Documents from American Reprographics Inc. and thereby listed on the Official Planholder's list and shall be made on the proposal form (Form of Proposal) provided.
 - A. Blanks. All blanks on the Form of Proposal shall be completed and all required support data shall be furnished.
 - B. Sums. Where so indicated by the makeup of the Form of Proposal, sums shall be expressed in both words and figures, and in case of discrepancy between the two, the amount indicated by words shall govern.
 - C. Modifications. Any interlineation, alteration, or erasure must be initialed in ink by the signer of the Bid or by an official designee of the signer of the Bid.
 - D. Alternates. All alternates specifically called for by the Form of Proposal shall be bid. Voluntary alternate proposals or an alternate to a lump sum proposal will not be considered unless specifically permitted by the conditions of the Notice of Advertisement or the Invitation for Bid.
 - E. Qualifications. The Bidder shall make no additional stipulations on the Bid Proposal form or qualify the Bid in any other manner.
 - F. Signatures. The Form of Proposal shall be signed by a person or persons legally authorized to bind the Bidder to a contract. The Form of Proposal shall include the legal name of Bidder and a statement indicating whether the Bidder is a sole proprietorship, a partnership, a corporation, or any other legal entity. A Bid by a corporation shall identify the state of incorporation including Federal I.D. number. A Bid submitted by an agent shall have a current signing authority attached certifying agent's authority to bind the Prime Bidder.
2. Bid Security. Where specified in the Notice of Advertisement or Invitation for Bid, the Bidder shall furnish a Bid guarantee in the required form of not less than five percent (5%) of the Bid amount. This Bid security secures the Bidder's promise (i) to enter into a contract on the terms stated in the Bid proposal, and (ii) if required, to furnish bonds covering the faithful performance of the contract and payment of all obligations thereunder. Should the Bidder refuse to enter into a contract or fail to furnish the required performance and payment bonds, the amount of the Bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
 - A. The Purchasing Official will retain the Bid security of Bidders until either (i) the contract has been executed and bonds have been furnished, or (ii) the specified time has elapsed so that Bids may be withdrawn, or (iii) all Bids have been rejected.
3. The completed University Official Bid Document, the Bid Security, and any support data required to be submitted with the Bid shall be enclosed in a sealed envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Bidder's name and address, the sealed Bid invitation number, closing date and hour. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof. NOTE: USPS Zip Code is 41099, other carriers should use Newport, 41076.
4. Timeliness of Bids. Bids shall be delivered to Suite 617, Lucas Administrative Center prior to the official time and date for receipt of Bids indicated in the advertisement of Invitation for Bid, or any extension thereof made by Addendum. The "official time" refers to the time as indicated by the time date clock located in the reception area of Suite 617.
5. Late Bids. Bids received after the official closing time and date for receipt of Bids may be considered for evaluation and award only if: (i) no other Bids were received within the legal advertisement period; and (ii) the re-advertisement time delay would seriously affect the operations of the Owner; and (iii) in the judgment of the Purchasing Official, the Bid was finalized prior to the official closing time and date for receipt of bids. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids.
6. Bids Not In Writing. Oral, e-mailed, telephonic, or telegraphic Bids or changes in Bids by such methods are not permitted and will not receive consideration.
7. Bids Withdrawn. Bids may be withdrawn prior to the closing time and date for receipt of Bids by: (i) a properly identified representative of the Bidder whose name appears on the Bid envelope, or (ii) by written request by an authorized representative of the Bidder, received by Procurement Services prior to the Bid closing date and time. Withdrawn Bids may be resubmitted up to the closing time designated for the receipt of Bids.

8. Bids Remain Open. During the stipulated time period following the time and date designated for the receipt of Bids a Bid shall remain open for the Owner's acceptance. During this period the Bid may not be modified, withdrawn or canceled by the Bidder, without the Bid security being subject to forfeiture and the suspension of the Bidder's future bidding privileges.

SECTION 6 – CONSIDERATION OF BIDS

1. Bid Opening. Unless stated otherwise in the Notice of Advertisement or Invitation for Bid, all properly identified timely Bids will be publicly opened, reviewed (for conformance with Bid submittal requirements) and if properly executed and complete, read aloud. All Bids opened and read will be listed on the official Bid tabulation which will be made available to all Bidders on the Procurement Services website.
2. Waiver of Irregularities/Rejection of Bids. The right to cancel the Invitation for Bid, to reject any and all Bids, and to waive technicalities and minor irregularities in Bids is maintained and preserved in all Invitations for Bids issued by NKU when such action is determined to be in the best interest of NKU.
3. Grounds for Rejection. Grounds for the rejection of Bids include, but shall not be limited to:
 - A. Failure of a Bid to conform to the essential requirements of the Invitation for Bid;
 - B. Any bid which does not conform to the specifications contained or referenced in any Invitation for Bids shall be rejected unless the invitation authorized the submission of alternate Bids and the items offered as alternates meet the requirements specified in the invitation;
 - C. Any Bid which fails to conform to the delivery or completion schedule established in the Bidding Documents;
 - D. A Bid imposing conditions or qualifications which would modify the terms and conditions of the Invitation for Bids, or limit the Bidder's liability to the Owner in a manner inconsistent with the provisions of the Bidding Documents;
 - E. Any Bid determined by Procurement Services in excess of funds available.
 - F. Failure to furnish a Bid security in accordance with the requirements of the Notice of Bid Opportunity or Invitation for Bid.
 - G. For other cause as documented by the Purchasing Official pursuant to a written determination and finding.
 - H. Bids received from Bidders determined by the Purchasing Official to be non-responsive bidders.
4. Minor Irregularities. Minor irregularities or technicalities in a Bid may be waived by the Purchasing Official on behalf of the University when all of the following circumstances are present:
 - A. The Purchasing Official determines that it will be in the University's best interest to do so; and the technicalities or irregularities are mere matters of form not affecting the material substance of a Bid;
 - B. Represent an immaterial deviation from, or variation in the precise requirements of the advertisement for Bids or Invitation for Bid, and have no effect on price, quality, quantity or delivery of supplies or performance of services being procured; and, the correction or waiver of the technicality or irregularity will not affect the relative standing of, or prejudice, other Bidders. If the University does not waive technical deficiencies and irregularities, the deficient Bid shall be rejected.
5. Competitive Negotiation. The University reserves the right to exercise the provisions of KRS 45A.090 regarding competitive negotiation when it is considered to be in the best interest of the University.

It is the intent of the Purchasing Official to award a contract in due course and after a reasonable Bid evaluation period to the Responsive and Responsible Bidder offering the best value to the University, provided the acceptable Bid sum is within budgeted funds. In the event that all bids submitted result in prices in excess of funds available, NKU may enter into competitive negotiations subject to the guidelines and restrictions of KRS 45A.090.
6. Rejection of Alternate Bids. The University reserves the right to accept or reject any or all alternate Bids if provided for in the Bid Documents. If alternates designated by the University are considered in the award, the alternate(s) will be accepted in the sequence in which they are listed on the Bid proposal form and the lowest Bid sum will be computed on the basis of the sum of the base Bid plus and/or minus any alternates accepted.

SECTION 7 – QUALIFICATION OF BIDDING CONTRACTOR

1. Bidder Responsibility. All bidders may be required to supply the information requested on the Contractor/Bidder Determination of Responsibility Questionnaire. The apparent low Bidder will be supplied this document at the post Bid review of the Bid submittal document. The information required by this document must be completed by the Bidder and returned to the University Purchasing Official within a reasonable time as determined by the University. In most cases the information should be completed and returned in no more than five (5) working days after the Bid submittal. The information provided will be used to determine whether the Bidder is “responsible” as defined by KRS 45A.070(6), and verify that the Bidder has the experience, qualifications and resources required to provide the quality workmanship, materials and services necessary to complete the project being Bid. In addition to the information required by the Questionnaire, the Bidder agrees to provide any additional information that may be necessary for determination of contractor responsibility, as defined by the Kentucky Model Procurement Code. The determination of contractor responsibility will not be made until the Bidder has provided a sworn statement made under penalty of perjury that he has not knowingly violated any provision of the campaign laws of the Commonwealth and that the award of a contract to a Bidder or offeror will not violate any provision of the campaign finance laws of the Commonwealth. The sworn statement required is included in the Form of Proposal.
2. Inquiries. The Purchasing Official shall have the right to make any inquiry deemed necessary to determine the ability of the Bidder to perform the work in a prompt and efficient manner and in accordance with the contract Documents. The failure of a Bidder to promptly supply information in connection with the Purchasing Official’s inquiry may be grounds for a determination that such Bidder is nonresponsive.
3. Rejection. The right is reserved to reject any Bid where an investigation and evaluation of the Bidder’s qualifications would give reasonable doubt that the Bidder could perform prompt and efficient completion of the work in accordance with the requirements with the Contract Documents.

SECTION 8 – SUBCONTRACTOR AND MATERIAL LISTING

1. List of Subcontractors. The Bidder will list the names of subcontractors proposed for each of the principal portions of the work (including those persons or entities who are to furnish material or equipment fabricated to a special design) in the designated place on the Form Of Proposal. The Bidder will be responsible for establishing to the satisfaction of the Purchasing Official, the reliability and responsibility of the listed subcontractors. The Bidder may be required by the Purchasing Official to provide additional information regarding listed subcontractors.
2. Objection and Required Substitution. If, after due investigation, there is reasonable objection to the qualifications of a listed subcontractor the Bidder shall, upon written direction from the Purchasing Official, submit the name of an acceptable substitute subcontractor with no change in Bid price. The failure of the Bidder to promptly comply with this requirement may be grounds for rejection of the bid.
3. No Objection Prior to Notice of Award. Any listed subcontractor to whom the Purchasing Official does not make written objection prior to the giving of the Notice of Award shall be deemed acceptable to the University.
4. Bidder Self Performed Work. The Bidder shall not list himself as a subcontractor on the Form of Proposal Subcontractors List unless it can be demonstrated that Bidder actively participates in the trades required and has the expertise to complete that portion of the work.
5. Substitutions Not Optional. The Bidder shall not substitute a subcontractor named on the Form of Proposal without prior notification and approval of the Purchasing Official. Any notification for a substitution of a listed subcontractor shall be in writing and the reason fully set forth therein. The reason shall demonstrate real cause and evidence good faith by the Bidder. This shall not be construed to waive the Bidder’s rights to later substitute a subcontractor for the failure of that proposed subcontractor to accept a contract from the Bidder, failure to perform in a satisfactory manner per the requirements of the contract or any other legal rights of the Bidder to manage and coordinate subcontractors.
6. Bid Documents Not a Contract. Nothing contained in the Bidding Documents shall be deemed to create a contractual relationship between the University and any subcontractor. However, it is the Bidder’s responsibility to assure that the subcontractor listed has the required expertise and financial stability to complete that portion of the work.
7. List of Materials and Equipment. The Bidder shall submit a list of major materials and equipment by the manufacturer’s name, brand and/or catalog number in the form and manner specified in the Bidding Documents.

8. Preliminary Acceptance of Materials and Equipment. Prior to the acceptance of a Bid, the Purchasing Official will make a preliminary review of the list of materials and equipment included with the Bid Proposal and advise the Bidder of the acceptance thereof, subject to satisfactory completion and approval of shop drawings, or direct other such action as may be necessary in order to meet the requirements of the Contract Documents. If any of the material or equipment named in the list are determined not to meet the requirements and standards of the specifications, the Bidder shall be required to furnish other material or equipment meeting the specifications at no change in Bid price. Preliminary review and acceptance of the submitted material and equipment list shall not relieve the Bidder from furnishing equipment and materials in complete accordance with the specifications, drawings, and Contract Documents.

SECTION 9 – UNIT PRICES

The Bidder shall submit with the Bid a list of Unit Prices as designated on Form of Proposal. Unit Prices are for the pricing of changes in the quantity from that indicated by the Contract drawings and specifications, where such changes have been authorized in writing by the University. The Unit Prices submitted shall include all necessary labor, materials, equipment, appliances, supplies, overhead and profit. Only a single Unit Price shall be quoted for each designated item of work. The Unit Price shall be used to calculate price adjustments for either increasing or decreasing the amount of Work. Unit Prices shall apply to all phases of the Work whether the Work be performed by the Bidder or by the Bidder's (contractor) Subcontractor. The University reserves the right, prior to an award of Contract, to evaluate the Unit Prices submitted and adjust and/or reject any Unit Price that is determined by the Purchasing Official to be unreasonable in amount.

SECTION 10 – PERFORMANCE BOND, LABOR & MATERIAL PAYMENT BOND

1. The successful Contractor shall furnish security bonds (form to be furnished) in an amount equal to one hundred percent (100%) of the Contract Price as security for the performance of the Contract established and for payment of all persons performing labor, including payment of all unemployment contributions which become due and payable under Kentucky Unemployment Insurance Law, and furnishing materials, equipment, supplies, taxes, and other proper charges and expenses incurred or to be incurred in the performance of the contract. All bonds shall be executed by a surety company authorized to do business in the Commonwealth of Kentucky. The bonds shall be valid after the final payment has been made on the Contract during the guaranty period and other periods limited only by statutes of limitation. If the furnishing of performance and payment bonds is required by the Bidding Documents, the bond premiums shall be paid by the Bidder. If the furnishing of bonds is not required by the Bid Documents, but required by the Purchasing Officer subsequent to the award of Contract, the successful Bidder shall procure the bonds and the University will reimburse the Bidder for the premium cost. The University reserves the right to require all bonds be provided by a surety company with a rating of "A" or better as listed in the A. M. Best-Key Rating Guide for Property and Casualty (current edition).
2. The Bidder shall execute the required performance and payment bonds for the University on the date of execution of the Contract Documents between the Owner and the Contractor, or, with the approval of the Purchasing Official, within ten (10) calendar days after that date. Unless otherwise specified in the Bidding Documents, the bonds shall be written on the bond form bound in the bidding documents and in the number of counterparts specified by the Purchasing Official.
3. Bonds shall be issued by a surety company authorized to underwrite bonds in the Commonwealth of Kentucky. The Bidder shall require the Attorney-in-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of their Power of Attorney. The date of the Power of Attorney shall not precede the date of the bonds.

SECTION 11 – AWARD OF CONTRACT

1. The issuance of an award of the Contract is contingent upon (i) securing an acceptable Bid that is responsive and from a responsible Bidder and is within the amount of budgeted funds and (ii) determining that the award of Contract will be in the best interest of Northern Kentucky University.
2. Unless otherwise provided in the Bidding Documents, the resulting contract will consist of the Invitation for Bid with any issued addenda, drawings, specifications, the Bidder's submitted Form of Proposal and the Notice of Award letter.
3. The Contract between Northern Kentucky University and the Contractor will be final and binding when the parties have executed the Agreement between the Owner and Contractor.
4. Final award of Contract will be made on the basis of the lowest, responsive and responsible bid which offers the best value.

5. The University reserves the right to negotiate and award Contracts as allowed under KRS 45A.090 should all responsive Bids exceed available funds.
6. Reciprocal Preference to be given by Public Agencies to Resident Bidders

In accordance with KRS 45A.494, a resident Offeror of the Commonwealth of Kentucky shall be given a preference against a nonresident Bidder. In evaluating bids, the University will apply a reciprocal preference against a Bidder submitting a bid from a state that grants residency preference equal to the preference given by the state of the nonresident Bidder. Residency and non-residency shall be defined in accordance with KRS 45A.494(2) and 45A.494(3), respectively. Any Bidder claiming Kentucky residency status shall submit with its bid a notarized affidavit affirming that it meets the criteria as set for in the above referenced statute.

SECTION 12 – PUBLIC WORKS ACT

1. Wage and Hour Acts. In performing the work, the Contractor and Subcontractors are required to comply with the wage and hour requirements prescribed by KRS 337.505-337.550, except where the contract meets exemption requirements as set forth under KRS 337.010.
2. Payment. On projects not exempted under KRS 337.010, the Contractor and Subcontractor shall pay all laborers, workmen and mechanics performing work under this contract not less than the wages set fourth in the prevailing wage schedule, incorporated as part of the Bid and Contract Documents, as determined by the Kentucky Department of Labor in accordance with provisions of KRS 337.505 through KRS 337.550. On covered contracts, the Contractor and subcontractor shall pay all workers employed on the site not less than the minimum hourly rates set fourth in the Department of Labor Wage Determination, Incorporated in the Bidding Documents. The designated wage rates represent minimum allowable rates of pay and shall not be construed to mean that higher rates may not have to be paid in order to secure labor. Thus, differences between designated wage rates and actual wage rates shall not be an appropriate basis for adjustment of the contract sum.
3. Prevailing Wage Rates. The prevailing wage rates, set forth in the wage determination, are determined by the Kentucky Department of Labor in accordance with provisions contained in KRS 337.505 through KRS 337. 550. Any Contractor or Subcontractor found to be in violation of any provisions of KRS 337.505 to 337.550 by the Commissioner of the Department of Labor and upon notification to the Senior Vice President for Administration and the Secretary of the Finance and Administration Cabinet, the Secretary of the Finance and Administration Cabinet shall declare the offending Contractor ineligible to bid on public works until such time the Contractor is in substantial compliance as determined by the Commissioner of Labor.

SECTION 13 – BASIC LEGAL REQUIREMENTS

1. Forms Required. An Authentication of Bid, Statement of Noncollusion and Nonconflict of Interest documents are bound with and included as part of the Form of Proposal. The Bidder is required to sign that document and submit it as part of the Bid. Failure to comply with these requirements shall invalidate the Bid.
2. Foreign Corporations.
 - A. Foreign Corporations are defined as corporations that are organized under the laws other than the laws of the Commonwealth of Kentucky. Foreign Corporations doing business within the Commonwealth of Kentucky are required to be registered with the Secretary of State, New Capitol Building, Frankfort, Kentucky and must be in good standing.
 - B. The Foreign Corporate Bidder, if not registered with the Secretary of State at the time of the Bid submittal, shall be required to become registered and be declared in good standing prior to the issuance or receipt of a contract.
 - C. Domestic Corporations. Domestic corporations are required to be in good standing with the requirements and provisions of the Office of the Secretary of State.

SECTION 14 – TAXES

1. Not Tax-Exempt.
 - A. Bidders are informed that construction contracts for Northern Kentucky University are not exempt from the provisions of the Kentucky Sales and/or Use Tax. The Bidder shall include in the lump sum bid and the Contractor shall pay sales, consumer, use and similar taxes for materials, equipment and supplies incorporated into the Work unless otherwise specified in the Bid Documents.

B. Northern Kentucky University, through the Commonwealth of Kentucky, is entitled to exemption from Federal Excise Tax. All Prime Bidders or Sub-bidders shall take this into consideration in their Bid.

2. Liability for Employee-Related Taxes. The Bidder and Subcontractors will be required to accept liability for payment of all payroll taxes or deductions required by local, state and federal law, including but not limited to old age pension, social security or annuities. Worker's Compensation Insurance shall be carried to the full amount as required by Kentucky Statutes. The Bidder shall be in full compliance with KRS Chapters 341 and 342.

Note: Northern Kentucky University was annexed by the City of Highland Heights in 2008. All contractors performing work for NKU must possess a Campbell County Occupational License and a City of Highland Heights Occupational License (administered by Campbell County) and must also pay applicable payroll taxes. For further information call 859.292.3884 or log onto: www.campbellcountyky.org/occllic.htm

SECTION 15 - PLANHOLDERS

1. Intent to Submit a Bid. A request for Bid Proposal and Bid Documents by a General Contractor will be considered as intent to submit a Bid. The Bidder's name will appear on the planholder's list showing all planholders and will be forwarded all Addenda issued. In the event the planholder elects not to submit a Bid, it is requested that notification of such fact be furnished to Northern Kentucky University Procurement Services prior to the closing date for receipt of Bids.
2. Planholder and Addenda Listing. The published planholder and Addenda listing is for general information purposes and the exclusion or inclusion of any firm in no way constitutes and/or implies approval or disapproval of the qualifications of any Bidder, Subcontractor, material or equipment supplier. If the Bidder or planholder notes non-receipt of any of the listed Addenda, it shall be their responsibility to obtain missing copies from Procurement Services or review same at any of the designated reporting agencies offering the Bid Documents for review.

SECTION 16 – POST BID REVIEW AND MATERIAL SUBMITTAL

The Bidder should have a responsible authorized representative at the bid opening. The Bidder's representative shall have the authority and be qualified to respond to questions that may arise about the Bidder's Bid submittal. The representative of the apparent low Bidder may be required to participate in the post Bid review of the apparent low Bid proposal, and if required by the Bid proposal, the completion and submittal of the material and equipment listing, Schedule of Values, EEO-1:Employer Information Report and the subcontractor report form. The post Bid review may include representatives of the Consultant, representative of the apparent low Bidder and required University personnel. Preliminary review will be directed toward Subcontractor, material listing, Unit Prices, and qualifications of the Bidder.

SECTION 17 – EQUAL EMPLOYMENT

1. Equal Employment Opportunity.
 - A. Bidders and subcontractors are required to comply with Federal Executive Order 11246 entitled "Equal Employment Opportunity" as amended.
 - B. The provisions of KRS 45.560 through 45.640, known as the Kentucky Equal Employment Act of 1978, hereinafter referred to as the Act, shall be binding upon the declared successful Bidder and any subsequent contract awarded to the Bidder, except that a Contractor or subcontractor otherwise subject to the provisions of KRS 45.570 is exempt as to any affirmative action or reporting requirements if:
 - 1) The contract or subcontract awarded is in the amount of \$500,000.00 or less, and the amount of the contract is not a subterfuge to avoid compliance with the provisions of this Act.
 - 2) The contractor or subcontractor utilizes the services of fewer than eight (8) employees during the course of the contract.
 - 3) The contractor or subcontractor employs only family members or relatives.
 - 4) The contractor or subcontractor employs only persons having a direct ownership interest in the business, and such interest is not a subterfuge to avoid compliance with the provisions of this Act.
 - C. All compliance reporting shall be directed to the University's representative a.k.a. project manager. It shall be the responsibility of the Contractor or subcontractor to comply with the provisions of KRS 45.560 through 45.640 unless exempted through the compliance officer.

2. Affirmative Action.

- A. The Bidder not otherwise exempted from the affirmative action or reporting requirements of the Act, shall within five (5) calendar days after being declared the successful low Bidder, submit to the University Official:
- 1) Form EEO-1
 - 2) Employee Data Sheet
 - 3) Subcontractor Reporting Form
- B. The above reporting shall be on forms provided in the Project Manual Appendix and submitted in the manner prescribed on the forms.

3. Equal Opportunity Compliance.

- A. Within ten (10) days after the receipt of this report, the Office of EEO and Contract Compliance will determine whether the Bidder's work force is reflective of the percentage of available minorities in the areas from which the Bidder's employees are drawn. If a determination is made that the Bidder's work force is reflective of the percentage of available minorities in this drawn area, the Bidder shall be "certified" and be thereby qualified for the contract and to Bid on any contract covered by this Act without filing additional data for a period of six (6) months.
- B. If it is determined by the Official that the Bidder's work force reflects an under utilization of minorities, the Bidder shall be so notified and no certification be granted. The Bidder shall then have the option of filing with the Office of EEO and Contract Compliance an affirmative action plan, indicating goals and timetables for recruiting and hiring minorities throughout the contractor's work force. The Official shall be available, upon request of any contractor, to furnish technical assistance in fulfilling the requirements of the Act.
- C. If the Bidder is subsequently awarded the Contract being sought, failure to comply with the goals and timetables set forth in the affirmative action plan shall be an unlawful practice under the Act and shall constitute a material breach of contract.
- D. If the Official determines that the submitted affirmative action program does not fulfill the provisions of the Act, the Bidder shall be so notified and no certification shall be granted.
- E. If the Bidder's work force is not reflective of the percentage of minorities in the drawing area and he has complied with all other affirmative action requirements in the Act, he may certify by verified affidavit that he has made every reasonable effort to comply with said percentage requirements and he shall thereafter be entitled to all benefits of the Act.
- F. Failure to comply with the requirements of the Act after contract award may result in payments being withheld pending satisfactory fulfillment of contractual obligations.

SECTION 18 – ANTI-KICK BACK

All Bidders shall comply with the Copeland "Anti-Kick Back" Act (18 USC 874) as supplemented in the Department of Labor Regulations (29 CFR, Part 3). This Act provides that each Bidder, subcontractor or subgrantee is prohibited from inducing, by any means, any person employed in the construction, completion or repair of public work to give up any part of the compensation to which he is otherwise entitled.

SECTION 19 – COMPLIANCE WITH KENTUCKY'S COMPENSATION AND UNEMPLOYMENT INSURANCE LAWS KRS 45A.480

The successful contractor will be required to assure, by affidavit, that all contractors and subcontractors employed, or will be employed, under the provisions of the contract shall be in compliance with Kentucky requirements for Worker's Compensation Insurance according to KRS Chapter 342 and Unemployment Insurance according to KRS Chapter 341.

SECTION 20 – PROTESTS

Any Bidder who wishes to protest or object to any award made or other decisions Pursuant to this IFB may do so only in writing to the Director of Procurement Services.

SECTION 21 – WEAPONS-FREE ZONE

The possession of, use or storage of any firearm, ammunition, explosive device (including fireworks), or other deadly

weapon in any form is prohibited on any Northern Kentucky University property or in any facility or on any property owned, leased, or operated by the University, except as permitted by law (K.R.S. 527.020).

“Weapons” include, but are not limited to, martial arts weapons, knives (other than those necessary for cooking or approved university activities, including ROTC), bows and arrows, air guns, shot guns, BB guns, and “deadly weapons” as defined by KRS 500.080(4).

SECTION 22 - NKU Clean Air Act

For the purpose of this policy:

“smoking” is defined as burning any type of tobacco product including, but not limited to, cigarettes, cigars, cigarillos, bidis, and pipes; and “facility” is defined as any structure(s), building(s), area, site, place or property under the supervision and/or control of Northern Kentucky University.

The Northern Kentucky University Highland Heights campus shall be designated as non-smoking within all common pedestrian areas, such as the Loch Norse area, Norse Commons, University Plaza and other highly populated areas, unless otherwise stipulated in this policy. Further, the campus shall be designated as nonsmoking within a thirty-foot (30) perimeter of all campus facilities, unless otherwise stipulated as a smoking area in this policy. Smoking shall be prohibited in all campus buildings and outside in areas of the campus where non-smokers cannot avoid exposure to smoke.

The six designated smoking areas are: 1) the south entrance of the lower level of Landrum Hall; 2) the north entrance of the Applied Science & Technology Building; 3) the east entrance of the University Center on the ground floor; 4) near the Sun Dial in the University Plaza; 5) the Herman Science Center plaza; 6) the south side of Health Center.

End - Instructions to Bidders

TABLE OF CONTENTS
GENERAL TERMS AND CONDITIONS
OF THE CONTRACT FOR CONSTRUCTION
BID # NS-24-12

ARTICLE TITLE

ARTICLE 1 – DEFINITIONS
ARTICLE 2 – CONSULTANT
ARTICLE 3 – CORRELATION AND INTENT OF CONTRACT DOCUMENTS
ARTICLE 4 – PRE-CONSTRUCTION CONFERENCE
ARTICLE 5 – SHOP DRAWINGS
ARTICLE 6 – LAYING OUT WORK
ARTICLE 7 – PLANS, DRAWINGS, SPECIFICATIONS AND RECORD DRAWINGS
ARTICLE 8 – TEMPORARY UTILITIES
ARTICLE 9 – MATERIALS, EQUIPMENT, APPLIANCES, AND EMPLOYEES
ARTICLE 10 – ROYALTIES AND PATENTS
ARTICLE 11 – SURVEYS, PERMITS, REGULATIONS, AND STANDARD CODES
ARTICLE 12 – PROTECTION OF WORK, PROPERTY, AND PUBLIC
ARTICLE 13 – BLASTING
ARTICLE 14 – CONSTRUCTION AND SAFETY DEVICES
ARTICLE 15 – HAZARDOUS MATERIALS
ARTICLE 16 – INSPECTION OF WORK
ARTICLE 17 – SUPERINTENDENT – SUPERVISION
ARTICLE 18 – CHANGES IN THE WORK
ARTICLE 19 – RULES AND MEASUREMENTS FOR EXCAVATION
ARTICLE 20 – CONCEALED CONDITIONS
ARTICLE 21 – DELAYS AND EXTENSION OF TIME
ARTICLE 22 – CORRECTION OF WORK BEFORE FINAL PAYMENT
ARTICLE 23 – CORRECTION OF WORK AFTER FINAL PAYMENT
ARTICLE 24 – TERMINATION OF CONTRACT FOR CONVENIENCE OF
ARTICLE 25 – OWNER’S RIGHT TO STOP WORK
ARTICLE 26 – TERMINATION OF CONTRACT - DEFAULT BY CONTRACTOR
ARTICLE 27 – SUSPENSION OF WORK
ARTICLE 28 – TIME OF COMPLETION
ARTICLE 29 – LIQUIDATED DAMAGES
ARTICLE 30 – PAYMENT TO THE CONTRACTOR
ARTICLE 31 – CONTRACTOR’S PAYMENT TO SUBCONTRACTOR
ARTICLE 32 – PROGRESS AND SCHEDULING
ARTICLE 33 – USE OF COMPLETED PORTIONS
ARTICLE 34 – IMDEMNIFICATION
ARTICLE 35 – INSURANCE
ARTICLE 36 – PERFORMANCE AND PAYMENT BONDS
ARTICLE 37 – DAMAGED FACILITIES
ARTICLE 38 – DISPUTE RESOLUTION
ARTICLE 39 – CLAIMS FOR DAMAGE
ARTICLE 40 – LIENS
ARTICLE 41 – ASSIGNMENT
ARTICLE 42 – SEPARATE CONTRACTS
ARTICLE 43 – CONTRACTOR/SUBCONTRACTOS RELATIONSHIP
ARTICLE 44 – CASH ALLOWANCE
ARTICLE 45 – PROJECT SITE LIMITS

ARTICLE 46 – CLEAN UP
ARTICLE 47 – POINTS OF REFERENCE
ARTICLE 48 – SUBSTITUTION – MATERIALS AND EQUIPMENT
ARTICLE 49 – TEST AND INSPECTION
ARTICLE 50 – WARRANTY
ARTICLE 51 – PREVAILING WAGE LAW REQUIREMENTS
ARTICLE 52 – APPRENTICES
ARTICLE 53 – GOVERNING LAW
ARTICLE 54 – NONDISCRIMINATION IN EMPLOYMENT
ARTICLE 55 – AFFIRMATIVE ACTION; REPORTING REQUIREMENTS

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**GENERAL TERMS AND CONDITIONS
OF THE CONTRACT FOR CONSTRUCTION
BID #NS-24-12**

These General Terms and Conditions are binding upon the Contractor and all Subcontractors as each are subject to the provisions contained herein.

ARTICLE 1 – DEFINITIONS

Wherever used in these General Conditions or in other Contract Documents, the following terms have the meaning indicated which are applicable to both the singular and plural thereof:

1. **CONSULTANT** - The term "Consultant" means the person and/or entity, either Architect, Engineer or other Consultant, who is identified as such in the Contract Documents.
2. **CALENDAR DAY** - The term "Calendar Day" means a day of twenty-four hours measured from midnight to the next midnight.
3. **CHANGE ORDER** - The term "Change Order" means a written order to the Contractor signed by the Owner, issued after the execution of the Contract, directing a change in the Work or an adjustment in the Contract Amount or the Contract Time. A Change Order may be an agreed change by the Contractor and the Owner or it may be an unilateral change by the Owner.
4. **CONSTRUCTION MANAGER** - The term "Construction Manager" means the person or entity employed by the Owner under a separate contract to provide professional and managerial services to the Project.
5. **CONTRACT** - The "Contract" consists of all Contract Documents as defined in this Article 1 of the General Conditions.
6. **CONTRACT AMOUNT** - The term "Contract Amount" means the sum stated in the Agreement which represents the total amount payable by the Owner to the Contractor for the performance of the Work under the Contract Documents, plus or minus adjustments as provided for in the Contract Documents.
7. **CONTRACT TIME** - The term "Contract Time," unless otherwise provided, means the period of time, including authorized adjustments, for the Substantial Completion of the Work. The time begins as directed in the Work Order and continues for the time specified in the Agreement.
8. **CONTRACT DOCUMENTS** - The "Contract Documents" include the Invitation for Bid, the General Conditions, the Special Conditions, the Contractor's Form of Proposal, the Contractor's Bonds, the Specifications, Drawings and Addenda issued prior to Execution of the Contract, together with any Change Orders subsequently issued and Notice of Award. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Owner and any Subcontractor, or any person or entity other than the Contractor. The Contract Documents do not include the Notice of Advertisement, instructions to bidders, sample forms or portions of bid addenda relating to bidding requirements.
9. **CONTRACTOR** - The term "Contractor" means the person, company, corporation, joint venture or other legal entity with whom the Owner has executed the Contract.
10. **FIELD ORDER** - The term "Field Order" means a written order issued by the Consultant which clarifies or interprets the Contract Documents, or orders minor changes in the Work and which does not require a Change Order.
11. **KRS REFERENCES** - "KRS References" means the "Kentucky Revised Statutes" adopted by the Commonwealth of Kentucky, including all laws that may have been revised, amended, supplemented or new laws enacted.
12. **OWNER** - The term "Owner" means Northern Kentucky University, a statutory body corporate existing pursuant to Sections 164.100 et seq. of the Kentucky Revised Statutes.
13. **PROGRESS MEETINGS** – Scheduled on-site meetings for the progress review of a Construction Contract.
14. **PROJECT** - The term "Project" means the total construction of the Work performed under the Contract Documents, which may be the whole or a part, and which may include construction by the Owner or by separate contracts.

15. **PROJECT MANAGER** - The term "Project Manager" means the Owner's representative responsible for administration and management of the Project.
16. **PROVIDE** - The term "Provide," as used throughout the specifications, shall mean furnish, install and pay for.
17. **SHOP DRAWINGS** - The term "Shop Drawings" means drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.
18. **SUBCONTRACTOR** - The term "Subcontractor" means a person, company, corporation, joint venture or other legal entity having a direct contract with the Contractor for the performance of a part of the Work.
19. **SUBSTANTIAL COMPLETION** - The term "Substantial Completion" means the stage or progress of the Work whereby the Project or a designated portion thereof is sufficiently complete in accordance with the Contract Documents, including, but not limited to, the provisions of ARTICLE 28 of these General Conditions, so that the Owner can occupy or utilize the Project or the designated portion for its intended use or purpose without interruptions.
20. **WORK** - The term "Work" means the scope of construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to perform and complete the Contractor's obligations under the Contract in an expeditious, orderly and workmanlike manner. The Work may constitute the whole or a part of the Project.
21. **WORK ORDER** - The term "Work Order" means a written notice by the Owner to the Contractor authorizing the Contractor to commence Work under the Contract and establishing the beginning date from which the time for Substantial and Final Completion shall be established.
22. **UNIT PRICE** - The term "Unit Price" means the amount per unit of measurement for materials or services as described in the bid documents.

ARTICLE 2 – CONSULTANT

1. The Consultant will be the Owner's representative during construction and until the Work is complete. The Consultant will advise and consult with the Owner. The Owner's instructions to the Contractor may be forwarded through the Consultant.
2. The Consultant will periodically visit the site to become familiar with the progress of the Work, the quality of the Work being provided and to determine if the Work is proceeding in accordance with the Contract Documents. On the basis of these on-site inspections, the Consultant will keep the Owner informed of the progress of the Work, and will guard the Owner against defects and deficiencies in the Work by the Contractor and will certify to the Owner that the Work in place equals or exceeds the amount requested by the Contractor on all applications for progress payments.
3. The Consultant will be the interpreter of the requirements of the drawings and specifications and any changes made to the drawings and specifications.
4. Claims, disputes, and other matters in question that arise relating to the execution or the progress of the Work shall be referred in writing to the Consultant. The Consultant will provide a response and decision in writing within a reasonable time.
5. The Consultant will have the authority to reject Work which does not conform to the Contract Documents or to the required level of quality and performance.
6. The Consultant will review and take appropriate action upon receipt of the Contractor's submittals, such as Shop Drawings, product data, and samples. The review of submittals will be for conformance with the design concept of the work, and for compliance with the information provided by the Contract Documents.
7. The Consultant's review and response will be completed with reasonable promptness. The Consultant's review of a specific item shall not indicate approval of an assembly of which the item is a component.
8. The Consultant will prepare Change Orders for the Owner to direct changes in the Work. Minor changes in the Work, not involving modifications to the contract cost or completion times and that are consistent with the purpose of Work may be directed by the Consultant through Field Orders.

9. The Consultant will conduct inspections to determine the dates of Substantial Completion and Final Completion and will receive and forward to the Owner for the Owner's review, written warranties and related documents required by the Contract and assembled by the Contractor.
10. The Contractor will accept direction for the Work on the Project only from the Owner's Project Manager or Consultant. Requests for information from the Contractor shall be directed to the Consultant.

ARTICLE 3 – CORRELATION AND INTENT OF CONTRACT DOCUMENTS

1. Execution of the Contract by the Contractor is a representation that the Contractor has thoroughly and carefully examined the site of the of Work, investigated and understands all conditions which can affect the Work or its cost, including but not limited to, availability of labor, materials, supplies, water, electrical power, roads, access to the site, uncertainties of weather, water tables, the character of equipment and facilities needed to perform the Work, local conditions under which the Work is to be performed, and further, that the Contractor has inspected all documents and finds the documents to be adequate to complete the Work. It is the responsibility of the Contractor to be familiar with and comply with all Federal, State, and local laws, ordinances, and regulations which might affect those engaged in the Work, and to be familiar with the materials, equipment, or procedures used in the Work, or which in any other way could affect the completion of the Work. Any failure by the Contractor or any Subcontractor or material supplier to properly familiarize themselves with the proposed Work shall not relieve the Contractor from the responsibility for completing the Work in accordance with the Contract Documents.
2. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. Labor or materials which are necessary to produce the desired result, even though not specifically mentioned in the Contract Documents, shall be included in the Work.
3. In the event a question arises regarding the meaning or intent of the Contract Documents, the Contractor shall report it at once to the Consultant. The Consultant shall furnish, with reasonable promptness by whatever means as may be appropriate, additional instructions necessary for the proper execution of the Work. All such drawings and instructions shall be consistent with the Contract Documents, true developments thereof and reasonably inferable there from. The Work shall be executed in conformity therewith and the Contractor shall do no Work without proper drawings and instructions. Items indicated on drawings as "N.I.C." or "Not In Contract" are shown for explanation purposes only and are not to be included in this Contract.
4. The Contract Documents are complementary, and what is required by one shall be binding as if required by all. In case of conflicts between the various documents, the order of precedence will be as follows: (1) Addenda, (2) Special Conditions, (3) General Conditions, (4) Technical provisions of the Specifications and (5) Drawings.
5. Any notice to the Contractor from the Owner regarding this Contract shall be in writing and delivery and service of such notice shall be considered complete when sent by registered mail to the Contractor at Contractor's last known address. Such notice may also, at the Owner's election, be hand-delivered to the Contractor or his authorized representative.

ARTICLE 4 – PRE-CONSTRUCTION CONFERENCE

Following the execution of the Contract, a pre-construction conference will be held. Representatives of the University Department of Architecture, Design and Construction Management, Consultant, Contractor, and all major Subcontractors will be present to discuss the time for construction, methods and plan of operation, authority of the Consultant, procedures for handling shop drawings, progress estimates and requests for payments, and other relevant issues. The time and location of this meeting will be the responsibility of the Consultant in consultation with other interested parties.

ARTICLE 5 – SHOP DRAWINGS

1. The Contractor shall submit a shop drawing and product sample submittal schedule to the Consultant establishing dates for the submission of Shop Drawings and product samples prior to the submittal of the Contractor's first application for payment. The schedule shall have been coordinated with all Subcontractors and material suppliers as well as the construction schedule and shall allow for adequate and reasonable time for review of the samples and submittals by the Consultant. The Contractor shall be responsible for compliance with the submittal schedule and shall insure that the Submittal Schedule is maintained in order to accurately reflect the status of processing all required submittals.
2. The Contractor shall review, approve, and submit product samples and shop drawings to the Consultant, in accordance with submittal procedure and schedule established. The Contractor's stamp of approval on any shop drawing or sample

shall constitute a representation to the Owner and Consultant that the Contractor has determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or assumes full responsibility for doing so, and that each shop drawing or sample has been reviewed or coordinated with the requirements of the Work and the Contract Documents. Shop drawings and submittal requirements shall not be deemed satisfied until approvable documents are received by the Consultant. Incorrect or incomplete submittals will be returned to the Contractor without action. No claim for additional time or extension of the contract will be considered if such claim is the result of failure by the Contractor to provide correct, accurate, complete and approvable submittals.

3. The Consultant will review submittals with reasonable promptness, and take appropriate action or return submittals to the Contractor for corrections as may be required. The Contractor shall make any corrections required by the Consultant for compliance with the Contract and shall return the required number of corrected copies of shop drawings and resubmit new samples until approved. The Contractor shall direct specific attention, in writing, or on resubmitted shop drawings, to revisions other than the corrections called for by the Consultant on previous submissions.
4. Where a shop drawing or sample submission is required by the specifications, no related Work shall be commenced until the submission has been accepted by the Consultant. The review and acceptance shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The acceptance of a separate item will not indicate acceptance of the assembly in which the item functions. A copy of each accepted shop drawing and product sample shall be kept in good order by the Contractor at the site and shall be made available to the Consultant on request.
5. The Consultant's acceptance of Shop Drawings or samples shall not relieve the Contractor from the responsibility for any deviations from the requirements of the Contract Documents unless the Contractor has in writing called the Consultant's attention to such deviation at the time of submission and the Consultant has given written approval to the specific deviation. Any acceptance by the Consultant does not relieve the Contractor from responsibility for errors or omissions in the Shop Drawings.

ARTICLE 6 – LAYING OUT WORK

1. The Contractor shall be responsible for all lines, levels and measurements of all Work executed under the Contract. The Contractor shall verify the figures before laying out the Work and will be held responsible for any error resulting from failure to do so. Working from lines and levels established by the property survey or by other Contract Documents, and as shown in relation to the Work, the Contractor will establish and maintain bench marks and other dependable markers to set lines and levels for Work at each area of construction and elsewhere on the site as needed to properly locate each element of the entire Project. The Contractor shall calculate and measure from the bench marks and dependable markers required dimensions as shown (within recognized tolerances if not otherwise indicated), and shall not scale drawings to determine dimensions. The Contractor shall advise Subcontractors and trades persons performing Work of marked lines and levels provided for their use in layout Work. The Contractor shall verify layout information shown on drawings as required for the Work.
2. The Contractor shall be responsible for coordination of the installation of all elements of the Work, including preparation of coordination drawings if required by the Contract Documents or deemed necessary by the Contractor for performance of the Work.

ARTICLE 7 – PLANS, DRAWINGS, SPECIFICATIONS AND RECORD DRAWINGS

Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, copies of drawings and specifications reasonably necessary for the execution of the Work. The Contractor shall keep one copy of all Contract Documents, including Drawings, Specifications and Shop Drawings on the site, in good order, and a qualified representative of the Contractor shall record on these documents, from day to day as Work progresses all changes and deviations from the Contract Documents. Prior to Substantial Completion, the Contractor shall complete and turn over to the Consultant the As-Built drawings. The As-Built drawings shall consist of a set of drawings which indicate all field changes that were made to adapt to field conditions, changes resulting from Change Orders and all concealed and buried installations of piping, conduit and utility services. All buried and concealed items, both inside and outside the facility, shall be accurately located on the As-Built drawings as to depth and in relationship to not less than two permanent features such as interior or exterior wall faces. The As-Built drawings shall be clean and all changes, corrections and dimensions shall be given in a neat and legible manner in a contrasting color. For any changes or corrections in the Work which are made subsequent to the Substantial Completion Inspection, revisions shall be made to the As-Built drawings and submitted to the Consultant prior to final payment. Approval of the final payment request shall be contingent upon compliance with these provisions.

1. All drawings, specifications and copies thereof, furnished by the Consultant to the Contractor are the property of Northern Kentucky University. They shall not be used by the Consultant, Contractor, or any Subcontractor on any other Project.

ARTICLE 8 – TEMPORARY UTILITIES

1. The Contractor shall provide and pay for, unless modified in the Special Conditions, all temporary conveniences including, but not limited to, wiring, lighting, power and electrical outlets, heat, water, and sanitary facilities required for construction. In the event the Owner elects to make available, at no cost to the Contractor, the electric power required for construction activities, the electric power supplied shall not be utilized as a means to provide temporary heat or for welding.
2. The Contractor is responsible for paying all utility costs, whether the costs are from an outside utility company or from the University, for utility services used in the course of completing the Work. The Contractor shall provide temporary heating, ventilation, telephones, water, electricity, portable gas, lighting for the Work, safety lighting, security lighting, trash removal/dumpster service for both Contractor and Subcontractor use during the Project. Work and safety lighting shall be provided continuously during working hours. Security lighting shall be provided at all hours of darkness.

ARTICLE 9 – MATERIALS, EQUIPMENT, APPLIANCES, AND EMPLOYEES

1. Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all materials, labor and personnel, tools, equipment, construction equipment and machinery, utilities, supplies, appliances, transportation, taxes, temporary facilities, licenses, permits and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and the proper execution and completion of the Work safely and without damage to persons and property. The Contractor shall furnish, erect, maintain, and remove at the completion of the Contract, all temporary plants as may be required during the construction period.
2. Immediately following the execution of the Contract Documents, the Contractor shall determine the source of supply for all materials and the length of time required for their delivery, including materials of all subcontractors, and order for all materials shall be placed for such materials in sufficient time for delivery to the site and incorporated into the Work when needed to comply with the schedule of Work.
3. The Contractor shall immediately notify the Consultant in writing of any problems with the fabrication or ordering of any materials. Unless changes are approved by the Consultant, the Contractor will not be excused for delays in securing materials specified.
4. The Contractor or Subcontractors shall not place purchase orders or issue contracts for materials, supplies, equipment and services necessary to complete this Project using the name of Northern Kentucky University. All orders placed by the Contractor that are related to this Project must use the name of the Contractor placing the order. The use of Northern Kentucky University's name for ordering purposes is strictly prohibited. Payment for all goods and services required for the completion of the Work is the sole responsibility of the Contractor. Any invoices received at the University that are related to this Project will be immediately forwarded to the Contractor. Copies of these invoices will be made and placed in the Contractor's file and proof must be provided that these invoices have been paid in full prior to the processing of the next scheduled application for progress payment.
5. The route for delivery of all materials to the Project shall be coordinated with the Owner's Project Manager.
6. The Contractor shall be responsible for the proper and adequate storage of materials and equipment. Unless otherwise provided in the Contract Documents, all materials shall be of good quality and new. Workmanship and materials supplied and incorporated into this Work shall be of first quality. The Contractor, if required, shall furnish satisfactory evidence as to the kind and quality of materials.
7. The Contractor shall at all times enforce strict discipline and good order among all employees and Subcontractors. The conduct of all individuals performing Work or operations related to the Work is the responsibility of the Contractor. The consumption of alcohol or drugs on the job by any workers is strictly prohibited. Any individual apprehended under the influence of alcohol or drugs on the premises at any time shall be subject to automatic removal from the Project by the Contractor, the Consultant or the Owner. Improper conduct of any kind will not be permitted and may result in the offending individual, Subcontractor or Contractor being barred from the Owner's premises. The Contractor shall not permit the employment on the Project of any person unfit or not skilled in the Work assigned.

8. Smoking is prohibited on the campus of Northern Kentucky University except in certain designated smoking areas. A smoking area will be designated at the Pre-Construction Conference. The Contractor's employees or Subcontractors violating this prohibition will be subject to dismissal from the Project.

ARTICLE 10 – ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. If a particular process, product or device is specified in the Contract Documents and it is known to be subject to patent rights or copyrights, the existence of such rights shall be disclosed in the Contract Documents and the Contractor is responsible for payment of all associated royalties. To the fullest extent permitted by law the Contractor shall indemnify, hold the Owner harmless and defend all suits, claims, losses or damages resulting from any infringement of patent rights resulting from the incorporation in the Work any design, process, or device specified in the Contract Documents.

ARTICLE 11 – SURVEYS, PERMITS, REGULATIONS, AND STANDARD CODES

1. The Owner will furnish only such surveys that are specifically required by the Contract Documents. Approvals, assessments, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified. All required utility tap-on fees payable to **nongovernmental agencies** (electric, gas, water, communications systems, etc.) shall be secured and paid for by the Contractor. **As a State agency, the University is generally exempt from utility tap-on fee assessments levied by local governmental agencies, and any such cost should not be included in the Contractor's bid.** In the event such charges are imposed, the University will reimburse the contractor for that cost by Change Order to the Contract. All construction permits, where required by local ordinances, shall be obtained by the Contractor, but no fee shall be charged to or paid by the Contractor as the Owner is exempt from such charges. A Contractor's license fee for doing business in the locale, if applicable, shall be paid for by the Contractor.
2. All branches of Work shown on the plans and specifications shall be executed in strict compliance with all state and federal regulations and codes, and shall be in compliance with all national codes when applicable.
3. Reference to standards, codes, specifications, and regulations refer to the latest edition of printing in effect at the date of issue shown in the Contract Documents unless another date is implied by the suffix number of the standard. The Contractor shall furnish a final occupancy permit from the proper agency or agencies as required.
4. The Contractor shall include in the lump sum bid and the Contractor shall pay sales, consumer, use and similar taxes for materials, equipment and supplies incorporated into the Work unless otherwise specified in the bid documents.

ARTICLE 12 – PROTECTION OF WORK, PROPERTY, AND PUBLIC

1. The Contractor shall continuously maintain adequate protection of all Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. The Contractor shall pay for any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.
2. In an emergency affecting the safety of life, or of the Work, or of adjoining property, the Contractor, without special instruction or authorization from the Consultant or Owner, is obligated to act to prevent such threatened damage, loss or injury.
3. Contractors shall maintain fire protection as required by the Kentucky Building Code. Access to the Project site and surrounding buildings must be maintained during construction for local fire truck access. Contractor shall maintain construction to allow access to new, existing or temporarily relocated standpipe, fire hydrant connections and fire alarm communication panels pursuant to Section 3018.8 of the Kentucky Building Code. If the Contractor utilizes the Owner's fire protection equipment during the Contract period, lost, consumed or misplaced during the Contract period. The Contractor is responsible for any false alarms caused by dust created in the Work area or dust traveling to areas beyond the Work area due to inadequate dust protection barriers. Should there be a need for any existing or newly installed fire alarm system or parts of a system that requires service to be removed from service or disconnected, prior approval must be obtained from the Owner and the Contractor shall provide alternate protection such as a fire watch until such systems are returned to full normal operations. When work or service is completed on a disabled fire alarm system the Owner shall be immediately notified so the system can be placed in service.
4. Contractor and subcontractors are responsible for the security of their own materials, tools and equipment at the Project site.

5. Contractor shall provide to the Owner's Project Manager a key to Contractor's field office or job trailer.

ARTICLE 13 – BLASTING

Blasting is not allowed unless permission is granted in the Special Conditions. Should blasting be allowed by the Special Conditions it shall be completed in accordance with all laws, regulations, ordinances and instructions contained in the Special Conditions.

ARTICLE 14 – CONSTRUCTION AND SAFETY DEVICES

1. The Contractor shall provide safety controls for protection of the life and health of employees and visitors. The Contractor will utilize precautionary methods for the prevention of damage to property, materials, supplies, and equipment, and for avoidance of work interruptions in the performance of this Contract. In order to provide such safety control, the Contractor shall comply with all pertinent provisions of the Kentucky Fire Prevention Code, Kentucky Building Code, Kentucky Labor Cabinet's Division of Occupational Safety and Health Program Construction Standards (29 CFR 1926 as adopted by 803 KAR 2:400 through 2:425) and Federal Occupational Safety and Health (Construction) Standards that are in effect at the time the Contract is entered into and during the period in which the Contract is to be performed.
2. The Contractor shall provide a written safety program which includes all pertinent written specialty standards such as, but not limited to, Control of Hazardous Energy Sources (Lockout/Tagout), Hazard Communications Program, First Aid, Blood Borne Pathogen Program, Respirator Use Program and Hearing Conservation Program. The Contractor shall require all Subcontractors to have an effective written safety program or be required to follow the Contractor's written safety program.
3. The Contractor shall maintain an accurate record of and shall report to Kentucky Labor Cabinet's Division of Occupational Safety and Health in the manner and on the forms prescribed by that Division, exposure data and all accidents resulting in death, traumatic injury, occupational disease. The Contractor shall maintain an accurate record of and shall report to the Owner's Project Manager, any damage to property, materials, supplies, and equipment incident to Work under this Contract.
4. The Kentucky Labor Cabinet's Division of Occupational Safety and Health or the Owner's Environmental Health and Safety Division may notify the Contractor of any noncompliance with the foregoing provisions and the corrective actions to be taken. The Contractor shall after receipt of such notice immediately correct conditions.

Notice delivered to the Contractor or the Contractor's representative at the site of the Work shall be deemed sufficient for this purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the Work until satisfactory or corrective action has been taken. Failure or refusal to comply with the order will be grounds for stopping all payments due under the Contract to the Contractor. No part of the construction time lost due to any such stop order shall be cause for, or the subject of a claim for, extension of time or for additional costs or damages by the Contractor.

5. The Contractor or any Subcontractor shall immediately contact the University of Kentucky's Department of Occupational Health and Safety should they be selected for an inspection by the Kentucky Occupational Safety and Health Compliance Division.
6. Compliance with the provisions of the foregoing sections by Subcontractors shall be the responsibility of the Contractor.
7. Nothing in the provisions of this ARTICLE 14 shall prohibit the U.S. Department of Labor or the Kentucky Department of Labor Division of Occupational Safety and Health from enforcing pertinent occupational safety and health standards as authorized under Federal or State Occupational Safety and Health Standards.
8. The Contractor shall take all necessary precautions for the safety of employees on the Work, and shall comply with all applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed. If the Contractor or any Subcontractor has questions related to the health or safety required by their written safety program, they should contact the Kentucky Labor Cabinet Occupational Safety and Health Program Division of Education and Training. The Contractor shall designate a responsible member of the on site Work force as the safety officer and shall report to the Consultant the name of the person selected. The duties of the safety officer include the enforcement of safety regulations.

ARTICLE 15 – HAZARDOUS MATERIALS

1. If the Contractor encounters material reasonably believed to be or suspected to be asbestos containing material, lead, polychlorinated biphenyls (PCBs), or other hazardous material, the following procedures must be followed:
 - A. The Contractor shall immediately stop Work in the affected area and notify the Owner's Project Manager. The Project Manager will contact the Owner's Environmental Health and Safety unit to arrange for collection of samples, review of existing data, or other testing necessary to confirm the presence of hazardous materials. The Project Manager will notify the Contractor in writing of the results. Until that notification is received, the Work must not continue in the affected area.
 - B. If the material is confirmed to be asbestos, lead, polychlorinated biphenyls (PCBs), or other hazardous material, the Owner will take appropriate action to remove the material before the Contractor can continue Work in the affected area.
 - C. Unless specified otherwise in the bid documents, the Contractor shall not be required to perform any Work related to asbestos, lead, polychlorinated biphenyls, or other hazardous material. Contractors are advised that certain classes of building materials (thermal system insulation, sprayed or troweled surfacing materials, and resilient flooring) installed before 1981 are required by law to be treated as asbestos containing until proven otherwise. These presumed asbestos containing materials must not be disturbed without confirmation from the Owner that asbestos is not present.
2. The Owner, the Contractor, and Subcontractors will be under the requirements of the OSHA Hazard Communication Standard (29) CFR 1910.1200. The Contractor and Subcontractors must provide their own written Hazard Communication Program. The Hazard Communication Standard must include: (1) A list of the hazardous chemicals to which the Contractor's employees may be exposed; (2) Statement of the measures that Contractor's employees and Subcontractors may take to lessen the possibility of exposure to the hazardous materials; (3) The location of and access to the MSDSs related to the hazardous chemicals located in the Work area; (4) Procedures that the Contractor's employees and Subcontractors are to follow if they are exposed to hazardous chemicals above the Permissible Exposure Limit (PEL). Material Safety Data Sheets (MSDS) may be reviewed upon request by the Contractor or any subcontractor as they pertain to the Work areas of the Project. Photocopies of the MSDSs may be made by Contractor at its expense.
3. The Contractor and Subcontractors shall provide the Owner with a list of any hazardous materials that will be used on the job site that may be exposed to the Owner's employees. The Contractor and Subcontractors shall provide the Owner with copies of Material Data Sheets for materials to be used.
4. It is the policy of the Owner that PCB containing equipment will be treated by the Contractor and the Owner in a manner that conforms to the intent of all applicable laws and regulations (primarily 40 CFR Part 761). The following procedures shall be followed by the Contractor and Subcontractors while present on the Owner's Project or other property: (1) Only authorized, trained personnel may inspect, repair, or maintain PCB transformers; and (2) No combustible materials may be stored within a PCB transformer room or within five meters of a PCB transformer. Such materials include, but are not limited to, paints, solvents, plastic, paper, and wood. The Contractor shall not use rooms containing PCB transformers for storage rooms, staging areas, job site offices or break rooms. Violation of this policy may be grounds for dismissal of the offending Contractor from the Project. All PCB transformers at the University of Kentucky are identified by a PCB label as defined in federal regulations. If the Contractor should have a question as to the location of a PCB transformer, it should contact the Owner's Project Manager.
5. The contractor shall ensure that NO asbestos-containing materials (including but not limited to: drywall, joint compound, roof mastic and floor tile adhesive) will be install on any University project without prior written approval of the University's Environmental Health and Safety Division. Additionally, the contractor shall submit MSDS sheets and have prior approval before installing any materials that contains hazardous substances or could pose an environmental hazard. If any environmental hazardous materials are installed without written approval of the University, the contractor will be responsible for all material replacement cost, all removal and all other associated damages. Any materials removed shall be taken out in accordance with all applicable federal, state and local regulations.

ARTICLE 16 – INSPECTION OF WORK

1. Inspections, tests, measurements or other acts of the Consultant are for the sole purpose of assisting the Consultant determine if the Work, materials, rate of progress, and quantities comply with the Contract Documents. These acts or

functions shall not relieve the Contractor from performing the Work in full compliance with the Contract Documents nor relieve the Contractor from any of the responsibility for the Work assigned to it by the Contract Documents. No inspection by the Consultant shall constitute or imply acceptance. Approval of material is general and shall not constitute waiver of the Owner's right to demand full compliance with Contract Documents.

2. All Work completed and all materials incorporated for the Project are subject to inspection by the Owner, the Consultant or their representatives to determine conformance with the Contract Documents. The Owner, Consultant and their representatives shall at all times have access to the Work whenever it is in preparation or progress. The Contractor shall provide any facilities necessary for sufficient and safe access to the Work to complete any inspections required. The Consultant shall be given timely notification in order to arrange for the proper inspections to be performed on any Work outside of the normal working day or week.
3. If the Specifications, the Consultant's instructions, laws, ordinances, or any public authority require any Work to be specially tested or approved, the Contractor shall give the Consultant timely notice of the readiness of the Work for inspection. The Consultant shall promptly make all required inspections. If any portion of the Work should be covered contrary to the request of the Consultant, or to the requirements specifically expressed in the Contract Documents, the Work must be uncovered for inspection and observation and shall be uncovered and replaced at the Contractor's expense.
4. If any other portion of the Work has been covered, which the Consultant has not specifically requested to observe prior to being covered, the Consultant, with the Owner's approval, may request to see such Work and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such uncovered Work is not in accordance with the Contract Documents, the Contractor shall pay all costs for uncovering and replacement of such Work.

ARTICLE 17 – SUPERINTENDENT – SUPERVISION

1. The Contractor shall completely and thoroughly direct and superintend the Work in accordance with the highest standard of care for the Contractor's profession so as to ensure expeditious, workmanlike performance in accordance with requirements of the Contract Documents. The Contractor shall be solely responsible for and have control over all construction means, methods, techniques, sequences and procedures. The Contractor shall be responsible for the acts and omissions of all Subcontractors and persons directly or indirectly employed by the Contractor in the completion of the Work. The Contractor shall be responsible for coordinating and scheduling all portions of the Work unless the Contract Documents give other specific instructions. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by the activities of the Consultant in the administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.
2. The Contractor shall have a competent superintendent on the Project site at all times during the process of the Work. The superintendent shall have authority to act on the Contractor's behalf with regard to all aspects of performance of this Contract. The superintendent shall have such assistants with individual specialized competencies as may be necessary to fully understand and oversee all aspects of the Work. The Contractor shall also provide administrative, supervisory and coordinating personnel required to fully perform the Work and for interfacing the Work with other work of the Project. The superintendent and all assistants shall be physically fit for their work and capable of going to all locations where Work is being performed. A communication given to the superintendent shall be binding on the Contractor. Immediately after the award of Contract, the Contractor shall submit to the Consultant a list of Contractor's employees and consultants, including names, positions held, addresses, telephone numbers, cell phone numbers and emergency contact numbers.
3. The superintendent assigned shall not be changed except under the following circumstances: (1) Where the superintendent ceases to be employed by the Contractor, in which case the Contractor shall give timely written notice to the Owner of the impending change of the superintendent and a reasonable explanation for the change; or (2) Where the Owner or the Consultant have reasonable grounds for dissatisfaction with the performance of the superintendent and give written notice to the Contractor of the grounds. In either case, the Contractor shall receive approval from the Owner of the qualifications of the proposed replacement superintendent.
4. If the Owner or Consultant determines that the superintendent is not performing, or is incompetent to perform the required Work, the Owner may direct the Contractor to remove the superintendent from the Project and replace the superintendent with an employee who has the necessary expertise and skills to satisfactory perform the Work.

ARTICLE 18 – CHANGES IN THE WORK

1. The Owner, at any time after execution of the Contract, may make changes within the general scope of the Contract or issue additional instructions, require additional Work or direct the deletion of Work. The Owner's right to make changes shall not invalidate the Contract or relieve the Contractor of any obligations under the Contract Documents. All such changes to the Work shall be authorized in writing by Change Order and shall be executed under the conditions of the Contract Document. Any adjustment of the Contract Amount or Time of completion shall be made at the time of ordering such change.
2. The cost or credit to the Owner resulting from a change in Work shall be determined in one or more of the following ways:
 - A. By unit prices named in the Contract or additional unit prices subsequently agreed upon;
 - B. By agreement on a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - C. By an amount agreed upon by the Contractor and the Owner as a mutually acceptable fixed or percentage fee.
3. All lump sum proposals shall include a detailed cost breakdown satisfactory to the Consultant for each component of Work indicating both labor and material costs. In addition, there may be added an amount agreed upon, but not to exceed fifteen percent (15%) of the actual cost, for overhead and profit. This cost breakdown shall be submitted to the Consultant within seven (7) calendar days after receipt of the proposal request.
4. If none of the above methods are mutually agreed upon or if the Contractor does not respond promptly, a change may be made by unilateral determination by the Consultant of reasonable costs or savings attributable to the change, including a reasonable allowance for overhead and profit. If this method is utilized, the Contractor shall promptly proceed with the Work involved in the change, upon receipt of a written order signed by the Owner. In such case, the Contractor shall keep and present an itemized accounting of labor, equipment, material and other costs, in such form as may be prescribed by the Consultant.
5. In determining the cost or credit to the Owner resulting from a change, the allowances for all overhead (including home office and field overhead) and profit combined, shall be negotiated and shall not exceed (15%) fifteen percent.
6. In all cases where Change Orders are covered by unit prices set forth in the Contract, the value of such changes shall be determined only upon the basis of such unit prices and no additional amount is to be added for extended overhead and profit.
7. The Contractor shall keep and present in such form as the Consultant may direct, a correct account of all items comprising the net cost of such Work, together with vouchers. The determination of the Consultant shall be final upon all questions of the amount and cost of extra Work and changes in the Work, and it shall include in such cost, the cost to the Contractor of all materials used, the cost of all labor (including social security, old age and unemployment insurance, fringe benefits to which the employee is entitled, and Worker's compensation insurance), and the fair rental of all machinery used upon the extra Work, for the period of such use, which was upon the Work before or which shall be otherwise required by or used upon the Work before or after the extra Work is done. If the extra Work requires the use of machinery not already on the Project site, or to be otherwise used upon the Work, then the cost of transportation of such machinery to and from the Project site shall be added to the fair rental value. Transportation costs shall not be allowable for distances exceeding one hundred (100) miles.
8. The Contractor shall not include in the cost of change of Work any cost or rental of small tools, or any portion of the time of the Contractor or the superintendent, or any allowance for the use of capital, insurance or bond premium or any actual or anticipated profit, or job or office overhead not previously mentioned. These items are considered as being covered under the added amount for general overhead.
9. Pending final determination of value, partial payments on account of changes in the Work may be made on recommendation of the Consultant. All Change Orders shall be in full payment and final settlement of all claims for direct, indirect and consequential costs, including costs for delays and time extensions related to items covered and affected. Any such claim not presented by the Contractor for inclusion in the Change Order shall be waived.
10. The Consultant may authorize minor changes in the Work which do not involve additional cost or extension of the Contract Time, and which are not inconsistent with the intent of the Contract Documents. Such changes shall be made by a Field Order issued by the Consultant, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such orders promptly. If the Contractor should claim that a Field Order involves additional cost or delay to the completion of the Work, the Contractor shall give the Consultant written notice thereof within ten (10) calendar days

after receipt of the written Field Order. If this notification does not occur, the Contractor shall be deemed to have waived any right to claim or adjustment to the contract sum or to the contract completion time.

A. If the Contractor claims that any instructions by the Consultant involve additional cost or time extension, the Contractor shall give the Consultant written notice thereof within ten (10) calendar days after the receipt of such instructions and before proceeding to execute the change in Work. The written notice shall state the date, circumstances, whether a time extension will be requested, and the source of the order that the Contractor regards as a Change Order. Unless the Contractor acts in accordance with this procedure, any oral order shall not be treated as a change and the Contractor hereby waives any claim for an increase of the Contract amount or extension of the contract time.

11. Requests for extension of time related to changes in the Work shall be submitted in accordance with the requirements of ARTICLE 21-8.

ARTICLE 19 – RULES AND MEASUREMENTS FOR EXCAVATION

If applicable, the following Rules and Measurements shall apply to the use of Unit Prices for the excavation portion of the Work:

- A. Except as provided in this ARTICLE 19 for arbitrary measurements, the quantity of excavation shall be its in-place volume before removal.
- B. No allowance will be made for excavating additional material of any nature taken out for the convenience of the Contractor beyond the quantity computed under these "Rules and Measurements."
- C. The quantities of excavation shall be computed from instrument readings taken by the Owner Representative in vertical cross sections located at such intervals that will assure accuracy.
- D. "Trench Excavation" for pipes shall arbitrarily be assumed to be two feet (2') wider than the outside diameter of the pipe barrel and with sides vertical.
- E. The quantities shall be computed from plan size, or if there are no drawings, from actual measurements of the Work in place.
- F. Each unit price shall cover, among other things, engineering (surveying) costs and keeping excavating dry.
- G. Earth excavation for structures will be measured between the vertical planes passing 18 inches beyond the outside of the footings and from the surface of the ground to the neat lines of the bottom of the structure.
- H. Rock excavation for structures will be measured between the vertical planes passing 18 inches beyond the outside of the footings and from the surfaces of the rock to the neat lines of the bottoms of the structures or the actual elevation of the rock ledge.
- I. Rock excavation for pipelines trenches, unless otherwise provided for in the Specifications, shall be measured as follows: An arbitrary width of 18 inches plus the nominal diameter of the pipe multiplied by the depth from the surface the rock to six (6) inches below the invert for pipe 24 inches in diameter or less and eight (8) inches below the invert for all pipe greater than 24 inches in diameter. No additional compensation will be allowed for excavation for bell holes, gates or other purposes. The measurement of rock excavation for manholes shall be in accordance with ARTICLE 19-H above.
- J. Unclassified excavation shall be measured in the same manner as earth excavation.

ARTICLE 20 – CONCEALED CONDITIONS

1. The Contract Drawings show the approximate location of the existing and new utility lines. These lines have been identified and located as accurately as possible using available information. However, the Contractor is responsible for verifying all actual locations. If utilities require relocation or rerouting that is not shown or indicated to be relocated or rerouted, the Contractor shall contact and cooperate with the Consultant to make the required adjustments. Any request for change in the Contract Amount by the Contractor shall be made pursuant to ARTICLE 18 of the General Conditions.
2. If any charted, uncharted or miss located Utility service is interrupted for any reason, the Contractor will work continuously to restore service to the satisfaction of the Owner at no additional cost to the Owner. Should the Contractor fail to proceed with appropriate repairs in an expedient manner, the Owner reserves the right to have the

work/repairs completed and the cost of such work/repairs deducted from the monies due or to become due to the Contractor pursuant to ARTICLE 22 of the General Conditions.

- A. If any charted Utility Service, or any uncharted or miss located Utility Service the existence of which could have been discovered by careful examination and investigation of the site of the Work by the Contractor, is interrupted for any reason, the entire cost to restore service to the satisfaction of the Owner shall be paid by the Contractor.
3. The Contractor shall promptly, but in no case more than ten (10) days from the time of discovery, and before the conditions are disturbed, notify Consultant in writing of:
 - A. Subsurface or latent physical conditions or any condition encountered at the site which differ materially from those indicated in the Contract Documents and which were not known by Contractor or could not have been discovered by careful examination and investigation of the site of the proposed Work;
 - B. Unknown and unexpected physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered in the locale or generally recognized as inherent in the Work provided for in this Contractor.
 - C. Concealed or unknown conditions in an existing structure which are at variance with the conditions indicated by the Contract Documents, which are of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the Work provided for in this Contract, and which were not known by the Contractor and could not have been discovered by careful examination and investigation of the site of the Work.
4. The Consultant shall promptly investigate the conditions discovered. If the Consultant finds that conditions, which are materially different from those ordinarily encountered and generally recognized as inherent in the Work provided for in this Contract, were not known by the Contractor, and could not have discovered by careful examination and investigation of the site of the Work, have caused or would cause a material increase or decrease in the Contractor's cost of construction or the time required for performance of any part of the Work under this contract, the Consultant will recommend and the Owner will make an equitable adjustment in the Contract Amount or the time allotted for performance in the Contract Documents. Failure by the Contractor to provide written notice to the Owner of such claims for additional compensation or time for performance within 10 days of discovery of such conditions shall constitute a waiver by the Contractor of the right to make such claims. The Owner will not pay claims made for lost opportunities, claims made for lost production or production inefficiencies or claims made that are formula based.
5. If the Consultant determines that changed conditions do not exist or are not materially different and no adjustment in the Contract Amount or time is warranted, the Contractor shall continue performance of the Contract as directed by the Consultant. No claim of the Contractor under this clause shall be allowed unless the required written notice is given and the Consultant is given adequate opportunity to investigate the conditions encountered prior to disturbance. The failure of the Contractor to give the Consultant proper notice of a differing site condition shall not affect the Owner's right to an equitable adjustment of the contract price or time if there is a decrease in the Contract Amount or time required to perform the Work.

ARTICLE 21 – DELAYS AND EXTENSION OF TIME

1. It is agreed that time is of essence for each and every portion of this Contract and where additional time is allowed for the completion of any part of the Work under this Contract, the new time limit fixed by such extension shall be of the essence of this Contract. An extension of time shall not be cause for extra compensation under this Contract.
2. The Contractor may be granted an extension of time and/or relief from liquidated damages when the delay in completion of the Work is due to:
 - A. Any preference, priority, or allocation order duly issued by the government;
 - B. Unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, but not limited to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, floods, epidemics, quarantine restrictions, strikes, and freight embargoes.
3. Claims for extensions of time and/or relief from liquidated damages, except for weather related claims, must be made in writing not later than ten (10) Calendar Days after the beginning of the delay. Claims for extension of time due to unusual inclement weather shall be made in writing not later than the tenth day of the month following the month in which the delay occurred. Claims for extension of time or relief from liquidated damages shall be stated in numbers of whole or half Calendar Days. The actual dates on which the delay(s) occurred must be stated. In case of weather related

claims for extension of time, time extensions shall be granted only because such unusual inclement weather prevented the execution of critical items of the Work.

4. The Contract completion time will not be extended for inclement weather or weather claims on Projects where the completion time exceeds (365) three hundred and sixty five calendar days. Extensions of the completion time may be granted for abnormal inclement weather on Projects that have completion times of (365) three hundred and sixty five calendar days or less. Unusual inclement weather as used herein means unusually severe weather which is beyond the normal weather recorded and expected for the locality and/or the season or seasons of the year. Normal weather for the location of the Project shall be determined by records maintained by the United States Environmental Data Service. For the purpose of this Contract, "Unusual Inclement Weather" will be interpreted as those days in excess of the average number of days on which rainfall is 0.01 inch or more or those days in excess of the average number of days on which the maximum temperature is 32 degrees F or below.
5. Any claim for extension of time for strikes or lockouts shall be supported by a written statement of facts concerning the strike, including, but not limited to, the dates, the craft concerned, the reason for the strike, efforts to resolve the dispute, and efforts to minimize the impact of the strike on progress.
6. Any claim for extension of time for delays in transportation or for failures of suppliers shall be supported by a written statement of facts demonstrating that the delays are beyond the Contractor's control, including, but not limited to, the Contractor's efforts to overcome such delays.
7. The time extensions for changes in the Work will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The Change Order granting the time extension may provide the Contract Completion Date may be extended only for those specific elements so delayed and that the remaining Work will not be altered or may further provide for an equitable readjustment of liquidated damages pursuant to the new Contract completion dates.
8. The Contract time will only be adjusted for causes specified above. Extension of time will only be approved by the Consultant if the Contractor can prove such justification supported by CPM data if applicable, and other supporting data that such changes, in fact, are on the critical path and extend the contract completion, and that the Contractor has expended all reasonable effort to minimize its effect on the construction schedule. No additional extension of time will be granted subsequently for claims having the basis in previously approved extensions of time.
 - A. In support of requests for an extension of time, the contractor shall submit to the University a written time impact analysis showing the influence of each such request on the project substantial completion date as shown in the most recent updated and approved project CPM schedule. The analysis shall include a partial network diagram ("fragnet") showing the critical path tasks for the project which are impacted by the event giving rise to the request and showing the schedule both prior to and after the event. This "fragnet" shall include the new activities and/or activity revisions proposed to be added to the existing schedule and shall demonstrate the claimed impact on critical path and the project substantial completion date. Time extensions will not be considered in the event such adjustments do not exceed the total or remaining "float" associated with the impacted activities at the time of delay. Requests for an extension of time which are not supported by this information shall not be considered for approval.
9. No Change Orders will be approved unless they are incorporated in a revised schedule at the time of Work. All changes and/or additions to the schedule must meet the approval of the Consultant.
10. Extensions of time shall be the Contractor's sole remedy for any and all delays. No payment or compensation of any kind shall be made to the Contractor for damages because of impacts, hindrance in the orderly progress of the Work or delay from any cause in the progress of the Work, whether such hindrances or delays be avoidable or unavoidable. The Contractor expressly agrees not to make, and hereby waives, any claim for damages on account of any delay, obstruction, or hindrance for any cause whatsoever, including but not limited to the aforesaid causes. The Contractor agrees that the sole right and remedy in the case of any delay shall be an extension of the time fixed for completion of the Contract. Without limitation, the Owner's exercise of its rights under the changes clause, regardless of the extent or number of such changes, shall not under any circumstances be construed as compensable delays. The Contractor acknowledges that the Contract Amount includes and anticipates any and all delays whatsoever from any cause, whether such delays be avoidable or unavoidable.

ARTICLE 22 – CORRECTION OF WORK BEFORE FINAL PAYMENT

1. The Contractor shall promptly remove from the site and replace any material or correct any Work found by the Consultant to be defective or that fails to conform to the requirements of the Contract, whether incorporated in the

Work or not, and whether observed before or after Substantial or Final Completion. The Contractor shall bear all costs of correcting such Work or material including the cost of additional professional services necessary, and the cost of repairing or replacing all Work of separate contractors damaged by such removal or replacement.

2. The Consultant will notify the Contractor and the Owner immediately upon its knowledge that additional services will be necessary. The Owner may consent to accept such non conforming Work and materials with an appropriate adjustment in the Contract Amount. Otherwise, the Contractor shall promptly replace and re-execute the Work in accordance with the Contract and without expense to the Owner and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement. If the Contractor fails to correct non conforming Work within a reasonable time, the Owner may take any necessary action to make the necessary corrections. If the Owner makes required corrections for non conforming Work or materials, a Change Order will be issued reflecting an equitable deduction from the Contract Amount. This amount will be deducted from payments due to the Contractor or, if no additional payments are due, Contractor or the Contractor's surety will be responsible for payment of this amount.

ARTICLE 23 – CORRECTION OF WORK AFTER FINAL PAYMENT

1. Neither the final certificate of payment nor any provisions in the Contract Documents shall relieve the Contractor of responsibility for materials and equipment incorporated into the Work that fail to meet specification requirements, or for use of faulty materials or poor quality workmanship. If within one year after the date of Substantial Completion of the Work or designated portion thereof, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so. The Contractor shall correct any defects due to these conditions and pay for any damage to other Work resulting from their use. Nothing contained in this clause shall be construed to establish a period of limitation with respect to any obligation of the Contractor under the Contract. The obligation of the Contractor under this ARTICLE shall be in addition to and not in limitation of any obligations imposed by special guarantees or warranty required by the Contract, given by the Contractor, or otherwise recognized or prescribed by law.
2. In addition to being responsible for correcting the Work and removing any non conforming Work or materials from the job site, the Contractor shall bear all other costs of bringing the affected Work into compliance with the Contract requirements. This includes costs of any required additional testing and inspection services, Consultant's services and any resulting damages to other property or to work of other Contractors or of the Owner.
3. If the Contractor fails to correct non conforming Work within a reasonable time, the Owner may take necessary actions to make the necessary corrections. If the Owner makes required corrections for non conforming Work or materials after Final Payment to the Contractor the Owner shall be entitled to recover all amounts for such corrections including costs and attorney's fees from Contractor or surety.

ARTICLE 24 – TERMINATION OF CONTRACT FOR CONVENIENCE OF OWNER

The Owner, by written notice to the Contractor, may terminate this Contract in whole or in part when it is in the interest of the Owner, in the sole discretion of the Owner. In such case, the Contractor shall be paid for all Work in place and a reasonable allowance for profit and overhead on Work done, provided that such payments shall not exceed the total Contract price as reduced by the value of the Work as yet not completed. The Contractor shall not be entitled to profit and overhead on Work not performed

ARTICLE 25 – OWNER'S RIGHT TO STOP WORK

If the Contractor fails to correct defective Work as required, or persistently fails to carry out the Work in accordance with the Contract Documents, the Owner by written notice, may order the Contractor to stop the Work or any portion of the Work, until the cause for the order has been eliminated to the satisfaction of the Owner. The Consultant may stop Work without written notice for 24 hours whenever in its professional opinion such action is necessary or advisable to insure conformity with the Contract Documents. The Contractor shall not be entitled to an adjustment in the Contract Time or Amount under this clause since such stoppages are considered to be the fault of the Contractor. The right of the Owner or Consultant to stop Work shall not give rise to a duty on the part of the Owner or Consultant to exercise this right for the benefit of the Contractor or others.

ARTICLE 26 – TERMINATION OF CONTRACT FOR DEFAULT ACTION OF CONTRACTOR

1. In addition to its rights under ARTICLE's 24 and 25, the Owner may terminate the contract upon the occurrence of any one or more of the following events:

- A. If the Contractor refuses or fails to prosecute the Work (or any separable part) with such diligence as will insure its completion within the agreed upon time; or if the Contractor fails to complete the Work within such time;
 - B. If the Contractor is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of creditors, or if the Contractor or a third party files a petition to take advantage of any debtor's act or to reorganize under the bankruptcy or similar laws concerning the Contractor, or if a trustee or receiver is appointed for the Contractor or for any of the Contractor's property on account of the Contractor's insolvency, and the Contractor or its successor in interest does not provide adequate assurance of future performance in accordance with the Contract within 10 days of receipt of a request for assurance from the Owner;
 - C. If the Contractor repeatedly fails to supply sufficient skilled Workmen or suitable materials or equipment;
 - D. If the Contractor repeatedly fails to make prompt payments to Subcontractors or suppliers at any tier, or for labor, materials or equipment;
 - E. If the Contractor disregards laws, ordinances, rules, codes, regulations, orders or similar requirements of any public entity having jurisdiction;
 - F. If the Contractor disregards the authority of the Consultant or the Owner;
 - G. If the Contractor performs Work which deviates from the Contract Documents, and neglects or refuses to correct rejected Work; or
 - H. If the Contractor otherwise violates in any material way any provisions or requirements of the Contract Documents.
2. Once the Owner determines that sufficient cause exists to justify the action, the Owner may terminate the Contract without prejudice to any other right or remedy the Owner may have, after giving the Contractor and its Surety three days notice by issuing a written Declaration of Default. The Owner shall have the sole discretion to permit the Contractor to remedy the cause for the contemplated termination without waiving the Owner's right to terminate the contract.
3. In the event that the Contract is terminated, the Owner may demand that the contractor's Surety take over and complete the Work on the Contract. The Owner may require that in so doing, the Contractor's Surety not utilize the Contractor in performing the Work. Upon the failure or refusal of the Contractor's Surety to take over and begin completion of the Work within twenty days after the demand, the Owner may take over the Work and prosecute it to completion as provided below.
- A. In the event that the Contract is terminated and the Contractor's Surety fails or refuses to complete the Work, the Owner may take over the Work and prosecute it to completion in accordance with the laws of the Commonwealth, by contract or otherwise, and may exclude the Contractor from the site. The Owner may take possession of the Work and of all of the Contractor's tools, appliances, construction equipment, machinery, materials, and plant which may be on the site of the Work, and use the same to the full extent they could be used by the Contractor, without liability to the Contractor. In exercising the Owner's right to prosecute the completion of the Work, the Owner may also take possession of all materials and equipment stored at the site or for which the Owner has paid the Contractor but which are stored elsewhere, and finish the Work as the Owner deems expedient. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished.
 - B. If the unpaid balance of the Contract Price exceeds the direct and indirect costs and expenses of completing the Work including compensation for additional professional and Consultant services, such excess shall be used to pay the Contractor for the cost of the Work it performed and a reasonable allowance for overhead and profit. If such costs exceed the unpaid balance, the Contractor or the Contractor's Surety shall pay the difference to the Owner. In exercising the Owner's right to prosecute the completion of the Work, the Owner shall have the right to exercise its sole discretion as to the manner, methods, and reasonableness of the costs of completing the Work and the Owner shall not be required to obtain the lowest figure for Work performed in completing the Contract. In the event that the Owner takes bids for remedial Work or completion of the Project, the Contractor shall not be eligible for the award of such Contract.
 - C. The Contractor shall be liable for any damage to the Owner resulting from the termination or the Contractor's refusal or failure to complete the Work, and for all costs necessary for repair and completion of the Project above the amount of the Contract. The Contractor shall be liable for all attorney's fees, costs and expenses incurred by the Owner to enforce the provisions of the Contract.

- D. If liquidated damages are provided in the Contract and the Owner terminates the Contract, the Contractor shall be liable for such liquidated damages until final completion of the Work is achieved.
- E. In the event the Contract is terminated, the termination shall not affect any rights of the Owner against the Contractor. The rights and remedies of the Owner under this ARTICLE are in addition to any other rights and remedies provided by law or under this Contract. Any retention or payment of monies to the Contractor by the Owner will not release the Contractor from liability.
- F. In the event the Contract is terminated under this Article, and it is determined for any reason that the Contractor was not in default under the provisions of this ARTICLE, the termination shall be deemed a Termination for Convenience of the Owner pursuant to ARTICLE 24 and the rights and obligations of the parties shall be determined in accordance with ARTICLE 24.

ARTICLE 27 – SUSPENSION OF WORK

The Owner or the Consultant may, at any time and without cause, order the Contractor in writing or cause the Contractor to suspend, delay or interrupt all or any part of the Work for such period of time as the Owner may determine to be appropriate for its convenience. Adjustment may be made for any increase in the Contract time necessarily caused by such suspension or delay, in accordance with ARTICLE 21.

ARTICLE 28 – TIME OF COMPLETION

1. The Contract Time is the specified number of consecutive calendar days following the stipulated commencement of the Work as stated in the Work Order within which the Contractor has to complete the Contract. The Contractor shall begin the Work on the date of commencement as specified in the Work Order. All time limits stated in the Contract Documents are of the essence of the Contract. The end of the Contract Time shall be the date specified by the Consultant on the certificate of Substantial Completion. The time for completion set forth in the Contract is a binding part of the Contract upon which the Owner may rely in planning the use of the facilities to be constructed and for all other purposes.
2. Substantial Completion shall mean when the stage of Work is reached that all Work is complete, accessible, operable and usable for its intended use by the Owner; all parts, systems and site Work is 100% complete and cleaned for the Owners full use. Only incidental corrective Work under punch lists and final cleaning (if required) for Owner's full use may remain for Final Completion. The ability to occupy or utilize shall include regulatory authority approval. When the Owner accepts and occupies a portion of the Project, the operation, maintenance, utilities, and insurance of that portion of the Project become the responsibility of the Owner.
3. The date of Substantial Completion shall be that date certified by the Consultant in accordance with the following procedures that the Work is sufficiently complete to occupy or utilize as defined above.
 - A. When the Contractor considers the entire Work ready for its intended use, the Contractor shall notify the Consultant in writing and request an inspection. The declaration and request shall be accompanied by a list prepared by the Contractor of those items of Work still to be completed or corrected. The failure of the Contractor or Consultant to include any item or items on such list not completed or needing correction shall not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
 - B. The Consultant shall, within a reasonable time after receipt of notification from the Contractor of a declaration of Substantial Completion and request for inspection, make such inspection. Prior to the Substantial Completion Inspection and within sufficient time to allow the Consultant's review, the Contractor shall submit all record drawings, catalog data, complete operating and maintenance instructions, manufacturer specifications, certificates, warranties, written guarantees and related documents required by the contract. The Consultant shall review said documents for accuracy and compliance with the Contract Documents and incorporate them into complete operating instructions and deliver them to the Owner.
 - C. If the Consultant considers the Work substantially complete, the Consultant shall prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion and the responsibilities between the Owner and Contractor for security, maintenance, heat, utilities and insurance, if not otherwise provided for in the Contract Documents, and a tentative list of items to be completed or corrected, and shall fix the time within which the Contractor shall complete the items listed therein. This time shall not exceed thirty (30) calendar days. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of the responsibilities assigned to them in the certificate. The Project shall not be deemed substantially complete until

the certificate is issued. If, after making the inspection, the Consultant does not consider the Work substantially complete, he will notify the Contractor in writing, giving the reasons therefore.

4. The Consultant, upon receipt of written notice from the Contractor that the Work is complete and is ready for final inspection and acceptance, will promptly make such inspection and when the Consultant finds the Work completed and acceptable under the Contract Documents and the Contract fully performed, the Consultant will so notify the Contractor in writing and promptly certify a final Certificate for Payment to the Owner. If the Contractor does not complete the punch items within the time designated, the Owner retains the right to have these items corrected at the expense of the Contractor including all architectural, engineering and inspection costs and expenses incurred by the Consultant and the Owner, and to deduct such costs and expenses from the funds being held in retainage. The Owner shall not be required to release the retainage until such items have been completed.

ARTICLE 29 – LIQUIDATED DAMAGES

1. The Owner and the Contractor recognize and agree that time is of the essence of this Contract and that the Owner will suffer financial loss if the Work is not completed within the time specified in the Contract plus any extensions that may be allowed. The parties further recognize the delays, expense and difficulties involved in proving the actual loss suffered by the Owner should the Work not be completed on time. The Owner and the Contractor agree on the amounts stated as liquidated damages in the Agreement. The Owner and Contractor agree that the amount stated as liquidated damages are not intended to be penalties.
2. Should the Contractor fail to satisfactorily complete the Work under Contract on or before the date stipulated for Substantial Completion, the Contractor will be required to pay liquidated damages to the Owner for each consecutive Calendar Day that the Owner is deprived of full use of the area beyond the date specified unless otherwise stipulated elsewhere by Owner. After the date for Substantial Completion has been certified by the Consultant the Contractor shall cease to owe liquidated damages until the date established for Final Completion.
3. If Final Completion is not achieved by the date established for Final Completion, liquidated damages in the amount stipulated in the Agreement will become due and collectable. The Contract will be considered complete when all Work has been completed and the Certificate of Final Completion has been issued by the Consultant. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire Contract. Permitting the Contractor to continue and finish the Work, or any part of it, after expiration of the Contract Time, shall in no way constitute a waiver on the part of the Owner of any liquidated damages due under the Contract.

ARTICLE 30 – PAYMENT TO THE CONTRACTOR

1. Payments on account of this Contract shall be made monthly as Work progresses. The Contractor shall submit to the Consultant, in the manner and form prescribed, an application for each payment, and, if required, receipts or other vouchers showing payments made for materials and labor, including payments to Subcontractors. All payments shall be subject to any withholding or retainage provisions of this contract. All pay request documents, except the final payment, shall be submitted in whole dollar amounts. All payment applications from the Contractor shall include line items for overhead, profit and general condition costs.
2. The Consultant shall, within ten (10) working days after receipt of each application for payment, certify approval of payment in writing to the Owner and present the application to the Owner, or return the application to the Contractor indicating in writing its reasons for refusing to approve payment. The Owner, provided no exception is taken to the application for payment submitted by the Consultant, will generally issue payment on or within twenty (20) working days from the date received from the Consultant. A reasonable delay on the part of the Owner in making payment to the Contractor for any given payment shall not be grounds for breach of Contract. The Consultant may refuse to approve the whole or any part of any payment if it would be incorrect to make such presentation to the Owner.
3. Neither the final payment nor any part of the remaining retained percentage shall become due until the Contractor delivers to the Owner an affidavit that all payrolls, bills for materials, supplies and equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied.
4. If payment is requested on the basis of materials and equipment not incorporated in the Work, but delivered and suitably stored at the site or at another location agreed to in writing, the Contractor must furnish the following:
 - A. A list of the materials consigned to the Project (which shall be clearly identified), giving the place of storage, together with copies of invoices.

- B. Certification that all items have been tagged for delivery to the Project and that they will not be used for any other purpose.
 - C. A letter from the Surety indicating that the Surety agrees to the arrangements and that payment to the Contractor shall not relieve either the Contractor or its Surety of their responsibility to complete the Work.
 - D. Evidence of adequate insurance listing the Owner as an additional insured covering the material in storage.
 - E. Evidence that representatives of the Consultant have visited the Contractor's place of storage and checked all items listed on the Contractor's certificate. They shall certify, insofar as possible, that the items are in Agreement with the Specifications and approve their incorporation into the Project.
5. The Owner will pay 80% of the invoiced value less retainage for materials stored off site providing the above conditions are met.
 6. The Contractor's signature on each subsequent application for payment shall certify that all previous progress payments received on account of the Work have been applied to discharge in full all of the Contractor's obligations reflected in prior applications for payment.
 7. Each payment made to the Contractor shall be on account of the total amount payable to the Contractor and the Contractor warrants and guarantees that the title to all materials, equipment and Work covered by the paid partial payment shall become the sole property of Owner free and clear of all encumbrances. Nothing in this Article shall be construed as relieving Contractor from the sole responsibility for care and protection of materials, equipment and Work upon which payments have been made or restoration of any damaged Work or as a waiver of the right of Owner to require fulfillment of all terms of the Contract Documents.
 8. Within thirty (30) days of the award of the Contract, and prior to submitting the first application for payment, the Contractor shall submit to the Consultant and the Owner for approval a detailed breakdown of the Contract Amount pursuant to CSI 2004 specification divisions divided so as to facilitate payment and correlated to the schedule required by the Contract Documents. The total value of all activities shall add up to the Contract Amount. When approved by the Consultant and the Owner this schedule shall be used as a basis for Contractor's applications for payment and may be used by the Owner to determine costs or credits resulting from changes in the Work. Failure to obtain the approval of the Schedules of Values shall be a basis for withholding payment to the Contractor.
 9. Payments Withheld - The Owner may withhold any payment in whole or in part or back charge the Contractor to such extent as it may deem advisable to protect the Owner on account of:
 - A. Defective Work not remedied;
 - B. Failure of the Contractor to make payment properly to Subcontractors for material or labor;
 - C. Claims filed or reasonable evidence indicating probable filing of claims by Subcontractors, laborers, suppliers, or others;
 - D. A reasonable doubt that the Contract can be completed for the balance then unpaid;
 - E. The Contractor's failure to perform any of its contractual obligations, default under Contract Documents, or failure to maintain the agreed upon time schedule; or
 - F. Failure to present pay requests in the prescribed form. When the Owner is satisfied that the Contractor has remedied any such deficiency, payment of the amount withheld will be paid.
 10. Final Payment - When all Work is complete and acceptable and the Contract is fully performed, the Contractor will be directed to submit a final payment application for certification and the entire balance shall be due and payable upon a certification of completion by the Consultant that the Work is in accordance with the Contract Documents.
 11. Retainage - The Owner will retain 10% of the Contractor's progress payments until Final Completion and acceptance of all Work covered by this Contract as collateral security to insure successful completion of the Work. In no event shall any reduction to retainage be permitted prior to the issuance of the Consultant's Certificate of Substantial Completion. Subsequent to the issuance of such certificate and depending upon the cost involved for the completion and/or correction of punch list items the Consultant may recommend to the Owner, and if so approved by Owner, the amount of retainage might then be reduced and a sufficient sum retained by Owner to cover the uncompleted Work.

- A. Upon issuance of the Certificate of Final Completion by the Consultant and submittal by the Contractor of all required documents and releases, all retained amounts shall be paid to the Contractor as part of the Final Payment.
- B. In addition to the retainage set forth above, the Owner may withhold from any monthly progress payments or nullify any progress payments in whole or in part as necessary to protect the Owner from loss on account of:
- 1) Defective Work which has not been remedied or completed Work which has been damaged requiring correction or replacement;
 - 2) If the Owner has been required to correct Defective Work or complete Work which the Contractor has failed or refused to correct or complete;
 - 3) If the Contractor has failed to perform any of its obligations under the Contract;
 - 4) If the Contractor has failed to make payment properly to Subcontractors, suppliers, material suppliers, or laborers.
 - 5) Amounts to be withheld as liquidated damages for failure to complete the Project in the allotted contract time. When the Owner is satisfied that the Contractor has remedied any such deficiency, payments shall be made of the amount being withheld on the next scheduled application for payment.

ARTICLE 31 – CONTRACTOR’S PAYMENT TO SUBCONTRACTOR

1. The Contractor shall promptly pay each Subcontractor upon receipt of payment from the Owner the amount to which said Subcontractor is entitled, reflecting the percentage actually retained from payments to the Contractor on account of such Subcontractor's work. The Contractor shall, by an appropriate Agreement with each Subcontractor, require each Subcontractor to make payments to their Subcontractors, vendors and suppliers in similar manner.
2. The Consultant may, on request, furnish to any Subcontractor information regarding the percentages of completion applied for by the Contractor and the action thereon by the Consultant.
3. Neither the Owner nor the Consultant shall have any obligation to make payment to any Subcontractor except as may otherwise be required by law.

ARTICLE 32 – PROGRESS & SCHEDULING

1. Within ten days after the award of the Contract, the Contractor shall prepare and submit to the Owner and the Consultant a construction schedule for the Work. The schedule shall not exceed time limits current under the Contract. Schedules which reflect a duration less than the Contract Time are for the convenience of the Contractor and shall not be the basis of any claim for delay or extension of time. Documents shall be revised at appropriate intervals as required by the condition of the Work and the Project, shall be related to the entire Project to the extent required by the Contract Documents and shall provide for expeditious and practicable execution of the Work. The Contractor shall also submit a payment schedule indicating the percentage of the Contract Amount and the anticipated monthly payments the Owner may make during the Project. The Owner may withhold approval of progress payments until the progress payment schedule and construction schedule have been submitted by the Contractor.
2. The Contractor shall prepare and keep current, for the Consultant's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Consultant reasonable time to review submittals.
3. The Contractor shall conform to the most recent schedules.

ARTICLE 33 – USE OF COMPLETED PORTIONS

Upon mutual Agreement between the Owner, Contractor, and Consultant, the Owner may use a completed portion of the Project after an inspection is made. Such possession and use shall not be deemed as acceptance of any Work not completed in accordance with the Contract Documents nor shall such possession and use be considered to alter warranty obligations.

ARTICLE 34 – INDEMNIFICATION

1. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, the Consultant and their agents and employees from and against all claims, damages, losses and expenses, including attorney's fees, provided that any such claim, loss, damage or expense: (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom,

and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. This basic obligation to indemnify shall not be construed to nullify or reduce other indemnification rights which the Owner would otherwise have.

2. In any and all claims against the Owner, the Consultant or any of their agents or employees, by any employee of the Contractor, any Subcontractor, any one directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Worker's Compensation acts, disability benefit acts or other employee acts.
3. The obligations of the Contractor under this Article shall not extend to the liability of the Consultant, his agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Consultant, his agents or employees, provided such giving or failure to give is the primary cause of injury or damage.

ARTICLE 25 – INSURANCE

1. The Contractor shall furnish the Owner the Certificates of Insurance or other acceptable evidence that insurance is effective, and guarantee the maintenance of such coverage during the term of the Contract. Each policy of insurance, except Workers Compensation, shall name Northern Kentucky University and the directors, officers, trustees and employees of the University as additional insureds on a primary and non-contributory basis as their interest appears. Waiver of subrogation in favor of the Northern Kentucky University shall apply to all policies.
2. The Contractor shall not commence, nor allow any Subcontractor to commence Work under this Contract, until the Owner has reviewed the certificates and approved coverages and limits as satisfying the requirements of the bidding process.
3. Worker's Compensation and Employers' Liability Insurance

The Contractor shall acquire and maintain Workers' Compensation insurance with Kentucky's statutory limits and Employers' Liability insurance with at least \$100,000 limits of liability for all employees who will be working at the Project site. In the event any Work is sublet, the Contractor shall require any Subcontractor to provide proof of this insurance for the Subcontractors' employees, unless such employees are covered by insurance provided by the Contractor.

4. Public Liability Insurance

The Contractor shall acquire and maintain a Broad Form Comprehensive General Liability (CGL) Insurance Policy including premises - operations, products/completed operations, blanket contractual, broad form property damage, real property fire legal liability and personal injury liability coverage. The Insurance Policy must be on an "occurrence" form only, unless approved by the Owner. Contractual liability must be endorsed to include defense costs. Products and completed operations insurance must be carried for two years following completion of the Work. Policies which contain Absolute Pollution Exclusion endorsements are not acceptable. Coverage must include pollution from "hostile fires". Where required by the risks involved, Explosion, Collapse and Underground (XCU) coverages shall be added by endorsement. If the Work involved requires the use of aircraft or helicopters, a separate aviation liability policy with limits of liability of at least \$10,000,000 will be required.

A. The limits of liability shall not be less than \$500,000 each occurrence combined single limits for bodily injury and property damage. If split limits are used, they shall not be less than \$500,000 for each person and each occurrence for bodily injury and \$250,000 for each occurrence for property damage.

B. The Contractor shall either:

- 1) Require each Subcontractor to procure and maintain insurance of the type and limits stated during the terms of the Contract, or,
- 2) insure the activities of such Subcontractors under a blanket form as shown above.

5. Comprehensive Automobile Liability Insurance

The Contractor shall show proof and guarantee the maintenance of insurance to cover all owned, hired, leased or non-owned vehicles used on the Project. Coverage shall be for all vehicles including off the road tractors, cranes and

rigging equipment and include pollution liability from vehicle upset or overturn. Policy limits shall not be less than \$500,000 for combined single limits for bodily injury and property damage for each occurrence. As an alternative, split limits of not less than \$500,000 for bodily injury and \$100,000 for property damage for each occurrence shall be maintained.

6. Excess Liability Insurance

The Contractor shall acquire and maintain a policy of excess liability insurance in an umbrella form for excess coverages over the required primary policies of broad form comprehensive general liability insurance, comprehensive automobile liability insurance and employers' liability insurance. This policy shall have a minimum of \$1,000,000 combined single limits for bodily injury and property damage for each occurrence in excess of the applicable limits in the primary policies. The excess liability policy shall not contain an absolute pollution exclusion and shall include coverages for pollution that may occur due to hostile fires and vehicle upset and overturn. The limits shall be increased as appropriate to cover any anticipated special exposures.

7. Builders Risk Insurance

Contractor shall procure and maintain builders risk insurance to cover "all risk" perils on a completed value form in an amount of protection of not less than 100% of the Contract amount. Builders Risk Insurance shall include coverage for the perils of earth movement and flood and the coverage shall not be voided in the event of partial occupancy. The testing exclusion must be deleted from the policy.

8. Insurance Agent and Company Insurance as required in the bidding process of the Project, shall be written according to applicable state law in Kentucky. The policies shall be written by an insurer duly authorized to do business in Kentucky in compliance with KRS:304.1-110.

ARTICLE 36 – PERFORMANCE AND PAYMENT BONDS

1. The Contractor shall furnish a Performance Bond in the form provided in the Contract Documents in the full amount of the Contract Amount as security for the faithful performance of the Contract. The Contractor shall also furnish a Payment Bond in the form provided in the Contract Documents in the full amount of the Contract Amount for the protection of all persons performing labor or furnishing materials, equipment or supplies for the Contractor or its Subcontractors for the performance of the Work provided for in the Contract, including security for payment of all unemployment contributions which become due and payable under Kentucky Unemployment Insurance Law. The Performance and Payment Bonds shall be executed by the Contractor and a surety company authorized to conduct business in this Commonwealth.
2. Unless the Project is exempt from the prevailing wage requirements of KRS 337.505 through 337.550, the Contractor's bonds shall include a provision to guarantee the faithful performance and payment of the prevailing hourly wage as set forth in the schedule incorporated in the bid documents.

ARTICLE 37 – DAMAGED FACILITIES

1. The Contractor shall repair or replace, at no expense to the Owner, any damaged section of existing buildings, paving, landscaping, streets, drives, utilities, etc. caused by Work performed under the Contract or incidental thereto, whether by the Contractor's own forces, Subcontractors or by material suppliers. Such repair or replacement shall be performed by craftsmen skilled and experienced in the trade or craft for the original Work.
2. Water damage to the interior of any building, whether a new or existing building, shall be repaired and any materials damaged inside the building, including personal property, shall be repaired or replaced at the full replacement cost.
3. For existing buildings, the Contractor, along with the Owner's Representative and Consultant, will tour the Project site to evaluate existing conditions and determine any existing damage before any Work on this Contract is done.
4. Should the Contractor fail to proceed with appropriate repairs in an expedient manner, the Owner reserves the right to have the Work/repairs completed and deduct the cost of such Work/repairs from amounts due or to become due to the Contractor. If the Owner deems it not expedient to repair the damaged Work, or if repairs are not done in accordance with the Contract, an equitable deduction from the Contract price shall be made.

ARTICLE 38 – DISPUTE RESOLUTION

1. All Contractor's claims and disputes shall first be referred to the Consultant for review and decision. All claims shall be made in writing to the Consultant and Owner, not more than ten days from the occurrence of the event which gives rise

to the claim or dispute, or not more than ten days from the date that the Contractor knew or should have known of the claim or dispute. Unless the claim is made in accordance with these requirements, it shall be waived. Any claim not submitted before Final Payment shall be waived. The Consultant shall render a written decision within fifteen days following receipt of a written demand for the resolution of a claim or dispute.

2. The Consultant's decision shall be final and binding on the Contractor unless the Contractor submits to the Owner a written notice of appeal within fifteen calendar days of the Consultant's decision. The Contractor must present within fifteen calendar days of the notice to appeal a narrative claim in writing with complete supporting documentation. After receiving the written claim, the Owner will review the materials relating to the claim and may meet with the Contractor to discuss the merits of the claim. The Owner will render a decision within 30 calendar days after receiving the written claim and supporting documentation. The decision of the Owner shall be final and binding. Any failure of the Consultant or Owner to make a decision within the time limit set forth shall not result in the granting of the Contractor's claim.
3. If the Owner does not agree with the Consultant's decision on a claim by the Contractor, the Owner shall notify the Contractor and the Consultant and direct the Contractor to perform the Work about which the claim was made and the Contractor shall proceed with such Work in accordance with the Owner's instruction. If the Contractor disagrees with a decision of the Owner concerning a Contractor's claim, the Contractor shall proceed with the Work as indicated by the Owner's decision.
4. The Contractor shall continue to diligently pursue Work under the Contract pending resolution of any dispute.

ARTICLE 39 - CLAIMS FOR DAMAGE

1. Should either party to the Contract suffer damage because of wrongful act or neglect of the other party, or of anyone employed by them, or others for whose act they are legally liable, or other controversy arising under the Contract, such claim or controversy shall be made in writing to the other party within 30 days after the first occurrence of the event. Prior to the institution of any action in court, the claim or controversy (together with supporting data) shall be presented in writing to the Vice President for Finance and Administration for Northern Kentucky University. The Vice President is authorized, subject to any limitations or conditions imposed by regulations, to settle, comprise, pay, or otherwise adjust the claim or controversy with the Contractor. The Vice President, or designee, shall promptly issue a decision in writing. A copy of the decision shall be mailed or otherwise furnished to the Contractor. The decision rendered shall be final and conclusive unless the Contractor files suit pursuant to KRS 45A.245. If the Vice President does not issue a written decision within one hundred and twenty (120) days after written request for a final decision, or within a longer period as may be established by the parties to the Contract in writing, then the Contractor may proceed as if an adverse decision had been received.
2. Any legal action on the Contract shall be brought in the Campbell County Circuit Court and shall be tried by the court sitting without a jury. All defenses in law or equity, except the defense of government immunity, shall be preserved to the Owner. The Owner shall recover from the Contractor all attorney's fees, costs and expenses incurred if the Owner prevails in the litigation of disputes under the Contract. The Contractor shall be liable to the Owner for all attorney's fees, costs and expenses incurred by the Owner to enforce the provisions of the Contract.

ARTICLE 40 – LIENS

1. The filing and perfection of liens for labor, materials, supplies, and rental equipment supplied on the Work are governed by KRS 376.195 et seq.
2. Statements of lien shall be filed with the Campbell County Clerk and any action to enforce the same must be instituted in the Campbell County Circuit Court, pursuant to KRS 376.250 (2).
3. The lien shall attach only to any unpaid balance due the Contractor for the improvement from the time a copy of statement of lien, attested by the Campbell County Clerk, is delivered to the Owner, pursuant to the provisions of KRS 376.240.

ARTICLE 41 – ASSIGNMENT

Neither party to the Contract shall assign the Contract, or any portion thereof without the written consent of the other. The Contractor shall not assign any amount or part of the Contract or any of the funds to be received under the Contract unless the Contractor has the prior written approval of the Owner and the Surety on the Contractor's bond has given written consent to any such assignment.

ARTICLE 42 – SEPARATE CONTRACTS

1. The Owner reserves the right to enter into other Contracts in connection with the Project or to perform any work with the Owner's forces. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate its Work with theirs in such manner as the Consultant may direct.
2. Upon request of the Contractor, the Consultant or the Owner will provide the Contractor a copy of all available plans, specifications, and other data relating to other contracts or work related to this Work. The Contractor shall examine these documents and shall promptly notify the Consultant or the Owner of any work conflicting with Work to be performed by the Contractor.
3. Should the Contractor sustain any damage through any act or omission of any other contractor having a contract with the Owner, the Contractor shall have no claim or cause of action against the Owner for such damage and hereby waives such claim. The Contractor does not waive any claim or cause of action against the other contractor to recover any and all damages sustained by reason of the acts or omissions of such separate contractor. The phrase "acts or omissions" as used in this Article shall be defined to include, but not limited to, any unreasonable delay on the part of any such separate contractor.
4. Should the Contractor cause damage to any separate contractor on the Work, and the separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Contractor shall be responsible for all costs, fees and expenses incurred by the Owner for defending such proceedings and if any judgment against the Owner arises therefrom, the Contractor shall pay or satisfy it and shall pay all costs, fees and expenses incurred by the Owner.
5. If any part of the Contractor's Work depends upon the work of any other contractor, the Contractor shall promptly report to the Consultant any observed defects in such work that render it unsuitable for proper execution connection. The failure to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of the work, except as to defects which may develop in the other contractor's work after the execution of the work.
6. Whenever work being done by the Owner's forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various parties involved shall be established by the Consultant to secure the completion of the various portions of the Work in general harmony.

ARTICLE 43 – CONTRACTOR/SUBCONTRACTOR RELATIONSHIP

1. The Contractor is fully responsible to the Owner for the acts and omissions of the Subcontractors and of persons either directly or indirectly employed by them. The Contractor is responsible for the acts and omissions of persons employed directly by the Contractor and for the coordination of the Work, including placement and fittings of the various component parts. No claims for extra costs as a result of the failure to coordinate the Work, or by acts or omissions of the various Subcontractors will be paid by the Owner.
2. The Contractor agrees to bind every Subcontractor by the terms and conditions of the Contract Documents as far as applicable to their portion of the Work. Upon request, the Contractor shall provide copies of any subcontracts and purchase orders to the Owner or Consultant.
3. The Contractor shall make no substitution or change in any Subcontractor listed and accepted by the Consultant or Owner except as approved in writing by the Owner. The Contractor shall not employ any Subcontractor or supplier against whom the Owner or the Consultant has made reasonable and timely objection.
4. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner and any Subcontractor. The Contractor is hereby notified that it is the Contractor's contractual obligation to settle disputes between Subcontractors. Neither the Owner nor the Consultant will settle disputes between the Contractor and the Subcontractors or suppliers or between Subcontractors or suppliers.

ARTICLE 44 – CASH ALLOWANCE

The Contractor shall have included in the Contract Amount all allowances stated in the Contract Documents and shall cause the Work so covered to be done as the Consultant may direct. If the actual price for purchasing the "allowed materials" is more or less than the "cash allowance", the Contract Amount shall be adjusted by Change Order accordingly. The adjustment in Contract Amount shall be made on the basis of the purchase price without additional charges for overhead, profit, insurance or any other incidental expenses. The cost of installation of the "allowed

materials", unless specifically provided for in the allowance, shall be included in the Contract Amount and not in the allowance.

ARTICLE 45 – PROJECT SITE LIMITS

The Contractor shall confine the apparatus, the storage of materials, and the operations of Workmen to Project site limits indicated in and permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials and equipment.

ARTICLE 46 – CLEAN UP

The Contractor shall at all times keep the premises free from accumulation of waste material or rubbish caused by the operations in connection with the Work. At the completion of the Work, and prior to final inspection and acceptance, the Contractor shall remove all remaining waste materials, rubbish, Contractor's construction equipment, tools, machinery, and surplus materials and shall leave the Work in a clean and usable condition, satisfactory to the Consultant and the Owner. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may perform the cleaning tasks and charge the cost to the Contractor.

ARTICLE 47 – POINTS OF REFERENCE

The Contractor shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, the Contractor shall be charged with the resulting expense of replacement and shall be responsible for any mistake that may be caused by their loss or disturbance.

ARTICLE 48 – SUBSTITUTION – MATERIALS AND EQUIPMENT

1. Specific references in the Contract Documents to any article, device, equipment, product, material, fixture, patented process, form, method or type of construction, by name, make, trade name, or catalog number, with or without the words "or equal" shall be interpreted as establishing a minimum standard of quality, and shall not be construed as limiting competition.
2. Substitution of equipment and materials previously submitted by the Contractor and approved by the Consultant will be considered only for the following reasons:
 - A. Unavailability of the materials or equipment due to conditions beyond the control of the supplier.
 - B. Inability of the supplier to meet Contract Schedule.
 - C. Technical noncompliance to specifications.
3. Substitution of other equipment and materials named in the specifications will be allowed provided the proposed substitution will perform the functions called for by the general design, be similar and of equal quality to that specified and be suited to the same use and capable of performing the same function of that specified. The Contractor has burden to prove equality of any substitution requested.
4. Inclusion of a certain make or type of materials or equipment in the Contractor's bid proposal shall not obligate the Owner to accept such materials or equipment if they do not meet the requirements of the plans and specifications.

ARTICLE 49 – TEST AND INSPECTION

1. Regulatory agencies of the government having jurisdiction may require any Work to be inspected, tested or approved. The Contractor shall assume full responsibility therefore, pay all costs in connection therewith, and furnish the Consultant the required certificates of inspection, testing or approval.
2. The Contractor shall give the Consultant timely notice of readiness of the Work for all inspections, tests or approvals.
3. The technical specifications may indicate specific testing requirements to be performed by the Contractor. The cost of all such testing shall be the responsibility of the Contractor. Testing shall be completed using a testing facility or laboratory approved by the Owner.
4. The costs of all inspection fees as may be required to construct and occupy the Work shall be the responsibility of the Contractor.

ARTICLE 50 – WARRANTY

1. The Contractor warrants to the Owner and the Consultant that all materials and equipment furnished under this Contract shall be new and of the most suitable grade for the purpose intended and that all Work shall be of good quality, free from faults and defects and in conformance with the Contract Documents. If required by the Consultant or the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. Where there is an approved substitution of material or equipment, the Contractor warrants that such installation, construction, material, or equipment will equally perform the function for which the original material or equipment was specified. The Contractor explicitly warrants the merchantability, the fitness for a particular purpose, and quality of all substituted items in addition to any warranty given by the manufacturer and/or supplier. Prior to the Substantial Completion inspection, the Contractor shall deliver to the Consultant all warranties and operating instructions required under the Contract or to which the Contractor is entitled from manufacturers, suppliers, and Subcontractors. All warranties for products and materials incorporated into the Work shall begin on the date of Substantial Completion.
2. Neither the final payment, any provision in the Contract Documents nor partial or entire use or occupancy of the premises by the Owner shall constitute an acceptance of Work not done in accordance with Contract Documents or relieve the Contractor or its Sureties of liability with respect to any warranties or responsibilities for faulty materials and workmanship. The Contractor or its sureties shall remedy any defects in Work and any resulting damage to Work at its own expense. The Contractor shall be liable for correction of all damage resulting from defective Work. If the Contractor fails to remedy any defects or damage, the Owner may correct Work or repair damages and the cost and expense incurred in such event shall be paid by or be recoverable from the Contractor or the surety. The Owner will give notice of observed defects with reasonable promptness.
3. The Contractor shall guarantee that labor, material, and equipment will be free of defects for a period of one (1) year from the date shown on the Certificate of Substantial Completion unless special conditions or additional warranty periods are required by the contract. The Owner will give notice of observed defects with reasonable promptness. Expendable items and wear from ordinary use are excluded from this warranty.
4. Should the Contractor be required to perform tests that must be delayed due to climate conditions, it is understood that such tests will be accomplished by the Contractor at the earliest possible date with provisions of the general warranty beginning upon satisfactory completion of said test. The responsibility of the Contractor under this Article will not be abrogated if the Owner should elect to initiate final payment. If the Owner initiates final payment, consent of Contractor's surety acknowledging that Work not yet tested is excepted is required. The Contractor shall warrant that the entire Project will conform to the Contract Documents.
5. All costs, attorney's fees and expenses incurred by the Owner as a result of the Contractor's failure to honor any warranty for the Work shall be paid by or recoverable from the Contractor.

ARTICLE 51 – PREVAILING WAGE LAW REQUIREMENTS

1. In performing the Work, the Contractor and Subcontractors are required to comply with the wage and hour requirements of KRS 337.505- 337.550, except where the contract meets exemption requirements of KRS 337.010.
2. On Projects not exempted under KRS 337.010, the Contractor and Subcontractor shall pay all laborers, workers and mechanics performing Work under this Contract not less than the wages set fourth in the prevailing wage schedule, incorporated as part of the bid and Contract Documents, as determined by the Kentucky Department of Labor in accordance with provisions of KRS 337.505 through KRS 337.550.
3. On covered Projects, the Contractor shall post and keep posted in a conspicuous place or places at the site of the Work a copy or copies of the prevailing rates of wages and the working hours as prescribed in the Contract Documents. Any laborer, worker, or mechanic working in excess of eight (8) hours per day or forty (40) hours per week, except in cases of emergency caused by fire, flood, or damage to life or property, shall be paid not less than one and one-half (1 1/2) times the basic hourly rate of pay fixed by law for all overtime worked. The determination of when an emergency exists shall be made by the Consultant or Owner as provided by law. Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated base rate for all hours worked in excess of eight (8) per day, or in excess of forty (40) hours per week. KRS 337.540 permits an employee and employer to agree in writing that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one workday but not more than ten (10) hours worked in any one workday; if such written Agreement is prior to the over actual work or

where provided for a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. This applies to all prevailing wage determinations issued by the Labor Cabinet. As a point of clarification, if no collective bargaining agreement exists, employers must have a signed agreement with each employee on the Project. These agreements must be maintained at the employer's office along with the payroll records.

4. The Contractor and all Subcontractors shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than prevailing rate of wages. Records shall indicate the hours worked each day by each employee in each classification of Work and amount paid each employee for his work in each classification. Payroll records are to be maintained within the state for one year after completion of the Contract. These records are to be open for inspection and transcript by the Department of Labor at any reasonable time.

ARTICLE 52 – APPRENTICES

Apprentices (for all classifications of work) shall be permitted to work only under an apprenticeship agreement approved by the Kentucky Supervisor of Apprenticeship and by the Kentucky Apprenticeship and Training, United States Department of Labor.

ARTICLE 53 – GOVERNING LAW

This Contract shall be governed by the laws of the Commonwealth of Kentucky.

ARTICLE 54 – NONDISCRIMINATION IN EMPLOYMENT

1. During the performance of the Contract, the Contractor agrees as follows:
 - A. Northern Kentucky University is committed to equal employment opportunity, affirmative action, and eliminating discrimination. The university is also committed to providing equal job opportunities on public contracts and prohibiting discrimination based upon protected status, which is defined as age, color, disability, gender, national origin, race, religion, sexual orientation, or veteran status. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
 - B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to protected status as detailed in paragraph A.
 - C. The Contractor will send to each labor union or representatives of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representatives of the Contractor's commitments under this Article, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - D. Use of Minority and Women Owned Business Enterprises. The utilization of minority and women owned business enterprises is encouraged in all construction and renovation projects at Northern Kentucky University. All Contractors should make full efforts to locate and use minority and women owned business enterprises in the bidding of this project. For assistance in identifying minority and women vendors and subcontractors, the contractors may contact the Office of EEO and Contract Compliance, Room 395, New Capitol Annex, Frankfort, KY 40601, phone 502-564-2874.
2. Failure to comply with the above nondiscrimination clause constitutes a material breach of Contract.

ARTICLE 55 – AFFIRMATIVE ACTION; REPORTING REQUIREMENTS

1. The Contractor and any Subcontractor is exempt from any affirmative action or reporting requirements, under the Kentucky Equal Employment Act of 1978, KRS 45.550 to KRS 45.640 "The Act", if any of the following conditions are applicable:
 - A. The Contract or subcontract awarded is in the amount of five hundred thousand dollars (\$500,000.00) or less, and the amount of the Contract is not a subterfuge to avoid compliance with the provisions of the Act;
 - B. The Contractor or Subcontractor utilizes the services of fewer than eight (8) employees during the course of the Contract;

- C. The Contractor or Subcontractor employs only family members or relatives;
 - D. The Contractor or Subcontractor employs only persons having a direct ownership interest in the business and such interest is not a subterfuge to avoid compliance with the provisions of The Act.
2. The Contractor and any Subcontractor, not otherwise exempted, shall:
 - A. For the length of the Contract, hire minorities from within the drawing area to satisfy the agreed upon goals and timetables. Should the union with which the Contractor has collective bargaining agreements be unwilling to provide sufficient minorities to satisfy the agreed upon goals and timetables, the Contractor shall hire minorities from other sources within the drawing area;
 - B. The equal employment provisions of The Act may be met in part by the Contractor subcontracting to a minority contractor or Subcontractor. A minority Contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.
 - C. Each Contractor shall, for the length of the Contract, furnish such information as required by The Act and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to its employment practices and Work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with The Act and such rules, regulations and orders issued pursuant thereto.
 3. If the Contractor is found to have committed an unlawful practice against a provision of The Act during the course of performing under this Contract or subcontract covered under The Act, the Owner may cancel or terminate the Contract, conditioned upon a program for future compliance approved by the Owner. The Owner may also declare such Contractor ineligible to bid on further contracts until such time as the Contractor complies in full with the requirements of The Act.
 4. Any provisions of The Act notwithstanding, no Contractor shall be required to terminate an existing employee, upon proof that employee was employed prior to the date of the Contract nor hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

End of General Terms & Conditions