



**Lincoln Trail**

Area Development District  
~ established 1968 ~



750 S. Provident Way • Elizabethtown, KY 42701  
Phone: 270-769-2393 • TDD: 800-247-2510 • Fax: 270-769-2993  
Equal Opportunity Employer M/F/D/V/SO

**Invitation for Bid: SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038) (078C00102N)  
BID NO: 2026-04**

**Date Issued: April 22nd, 2026**

Bids shall be accepted until **Thursday, May 7th, 2026 AT 4:00 PM EST**. Bids will be opened and publicly read on **May 7th, 2026 at 4:01 PM EST** at the May Fiscal Court Meeting

**Contract term agreement: UPON APPROVAL OF MARION COUNTY FISCAL COURT**

The undersigned certifies that he/she has the authority to bind this company in an agreement/contract to supply the commodity or service in accordance with all terms, conditions, and pricing specified. By signing and submitting this bid, the Vendor acknowledges that they have read, understand and agree to all aspects of the specification and bid requirements as presented without reservation or alteration. This Bid, if accepted, will constitute an Agreement and Contract with Marion County, Kentucky, upon approval of Marion County Fiscal Court. Prices are firm during this agreement term, unless agreed upon in writing by the County.

Company Name	Authorized Agent (Print)
Signature	Title
Address	City/State/Zip Code
E-mail Address	Phone Number
Date	


Office: (270) 769-2393 • Fax: (270) 769-2993 • E-mail: charlie@ltadd.org  
*Locally Based...Regionally Focused*

**Instructions to Bidders: SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038)  
(078C00102N)**

**Bid No: 2026-04**

*Please include the following items with each Bid Submission:*

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- Invitation for Bid
  - Bid form
  - Designated Contact information
  - Detailed exceptions to bid, if applicable.
  - Kentucky Department of Transportation Bridge Construction Certification
- 

**Bid Form: SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038) (078C00102N)**

**Bid No: 2026-04**

**Bidders Name:** \_\_\_\_\_

**do/does hereby propose to perform all work described as listed in this CONTRACT PROPOSAL, any identified addendum, and the Contract Specifications for the removal of the existing concrete deck, Steel I-beams and asphalt surface and properly dispose. Install five (5) W18x192 Steel I Beams on existing abutments and pour a new 8" concrete deck. Approximately 36 feet in length out-to-out, 16 feet wide on abutments. The deck will be an 8" concrete slab (AA Concrete), with a 7" integral curb according to the current 1.25HL93 design standards provided by the Kentucky Transportation Cabinet.**

Bid Section	
<u>Superstructure Only</u> , (5- W18x192 Steel I Beams) field cut to approximately 36 feet in length out-to-out, 16 feet wide (17'6" including deck overhang), with a 8" Concrete Deck and 7" integral curb.	
<b>LUMP SUM Bid Amount</b>	<b>\$ _____</b>

**Please provide any and all applicable information regarding specific details in the manner of your choosing. If you include a binder or booklet, please include this bid sheet.**

Any Exceptions to Bid?      Yes      No

IF YES, PLEASE INCLUDE DOCUMENTATION DENOTING ANY EXCEPTION AND WHAT SECTION(S) IT PERTAINS TO. FAILURE TO PROPERLY RECORD EXCEPTIONS COULD RESULT IN IMMEDIATE REJECTION OF THE BID.

**Bid Specifications: SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038) (078C00102N)**  
**Bid No: 2026-04**

- I. **Scope:** Marion County Fiscal Court is seeking a qualified contractor to complete a **BRIDGE SUPERSTRUCTURE REPLACEMENT –HORAN LANE (CR 1038) (078C00102N)**. Marion County Fiscal Court will accept sealed bids for furnishing all labor, equipment, and material to remove the existing concrete deck, Steel I-Beams, and asphalt surface crossing Casey Branch, on Horan Lane, and replace with: sixteen (16) feet wide and thirty-six (36) feet long, steel I-Beam (W18x192) bridge superstructure. See Attachments A, B and C.
- II. **Point of Contact:** Any questions concerning bid requirements should be directed to Charlie Allen, Director of Engineering at [charlie@ltadd.org](mailto:charlie@ltadd.org).
- III. **Bid Submission:** All bid submissions must include the signed Invitation for Bid form, Bid Form, Designated contact information and detailed exceptions to bid if applicable. All bids must be dropped off in person to the Marion County Judge Executive’s Office, 223 North Spalding Ave, Lebanon, KY until **Thursday, May 7th, 2026 AT 4:00 PM EST**. Bids must be submitted in sealed envelopes with the words **SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038) (078C00102N), Thursday, May 7th 2026, AT 4:00 EST**, prominently displayed on the front of the envelope. Respondents shall include one (1) original and three (3) copies of the entire bid response.
- IV. **Late Submittal and Late Modifications:** Submittals received after the due date and time will not be considered. Modifications received after the opening date will not be considered. Marion County Fiscal Court assumes no responsibility for the premature opening of a proposal not properly addressed and identified, and/or delivered to an improper designation.
- V. **Rejection or Cancellation of Bids:** Marion County Fiscal Court reserves the right to act in its best interest in this determination process, to waive all technicalities, and to select the most responsible and responsive bidder. Marion County Fiscal Court shall be the sole judge of the bidder’s ability to meet the requirements set forth. Its decision in determining responsible and responsive bidder(s) will be final.
- VI. **Minimum Acceptance Period:** Bids shall be valid and may not be withdrawn for a period of 120 days from the date specified for receipt of bids. All expenses involved with the preparation and submission of the bid to Marion County Government, or any work performed in connection therewith, is the responsibility of the bidder(s).
- VII. **Designated Contact:** The awarded Vendor shall appoint a person or persons to act as a primary contact with the County. This person or back-up shall be readily available during normal work hours by phone or in person, and shall be knowledgeable of the terms and procedures involved.
- VIII. **Taxes:** Marion County Fiscal Court is tax exempt. It is understood that prices quoted are to be exclusive of taxes (Marion County will furnish an exemption certificate as required.)

**Bid Specifications: SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038) (078C00102N)**  
**Bid No: 2026-04**

- IX. **Open Records Act:** All materials submitted in connection with this bid will be public documents and subject to the Open Records Act and all other laws of the Commonwealth of Kentucky, the United States of America and the open records policies of Marion County Government. All such materials shall remain the property of Marion County and will not be returned to the respondent.
  
- X. **Addendums to Bid:** In the event it becomes necessary to revise any part of these Bid Specifications any potential bidder who requested the bid specifications will be provided any and all addendums to bid information.
  
- XI. **Bid Evaluation:** Any potential bidder or interested party may attend bid opening, committee meeting and/or fiscal court meeting in which bid evaluations take place and selections are completed.
  
- XII. **Fulfillment of Terms:** The awarded Vendor shall not be held responsible for any losses resulting if the fulfillment of the terms of the contract shall be delayed or prevented by wars, acts of public enemies, strikes, fires, floods, or acts of God, or for any other acts not within the control of the Vendor and which by the exercise of reasonable diligence he is unable to prevent.
  
- XIII. **Pre-Bid Meeting / Questions:** All pre-bid questions must be submitted prior to May 4th at 4:00 PM Eastern Time.

Written questions can be submitted by emailing them to Charlie Allen, Director of Engineering at charlie@ltadd.org. Responses to the questions will be emailed to all bid holders.

XIV. **Timeline: All Times are posted in Eastern Standard Time**

a)	Issue Date	4/22/2026
	Pre-Bid Questions Cut Off	5/4/2026 at 4:00 pm
	Bids Due	5/7/2026 at 4:00 pm
	Bids Opened	5/7/2026 at 4:01 pm
	Review of Bids	5/7/2026
	Anticipated Resolution to Fiscal Court	5/7/2026
	Notification of contractor selection	5/8/2026

**Bid Specifications: SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038) (078C00102N)**  
**Bid No: 2026-04**

XV. **Insurance Requirements:** The Vendor/Contractor shall purchase and maintain insurance with an insurance company licensed to do business in the State of Kentucky, at all times during the term of any contract with the County, in full force and effect. Vendor/Contractor shall provide said insurance at its own expense. Such insurance shall be provided and will protect the Vendor/Contractor from claims which may arise out of or result from the Vendor/Contractor’s execution of the work, whether such execution be by himself, his employees, agents, or by anyone for whose acts any of them may be liable. All policies must name the County as an additional insured. Where applicable, the Marion County Fiscal Court requires a current and valid certificate or binder showing required insurance coverage as follows:

	Each Occurrence	Aggregate
Workers Compensation	\$ 500,000	
Commercial General Liability	\$1,000,000	\$1,000,000
Professional Liability	\$5,000,000	\$5,000,000
Automotive Liability	\$ 500,000	

XVI. **Bond:** Approved security such as a performance bond shall be required by the contractor by the OWNER prior to issuance of Notice to Proceed. Within one week of issuance of contract award, the bond/surety shall be required. The Performance Bond shall be the penal sum at least equal to the Amount of the Contract Bid Price, as security for the faithful performance of all the Contractor’s obligations.

XVII. **Bridge Location:** CR 1038 (078C00102N) – Horan Lane Bridge is located 3/4 mile east of KY 55 over Casey Branch in Marion County, KY

XVIII. **Contract Time:** The time period for completion of this contract shall be 90 calendar days from the Notice to Proceed. The Notice to Proceed shall be issued after the Contractor has been given Notice of Contract Award and the Contractor has provided all performance and insurance documents. The Notice to Proceed date can be negotiated to allow for contractor scheduling. If weather and flow conditions do not allow for completion of the project within the specified time frame, the Contractor shall provide in writing an extension request to the Marion County Fiscal Court.

XIX. **Utilities / Storage Space:** Storage space at the site for trailers will be the responsibility of the Contractor who must coordinate and obtain approval when storing equipment on adjoining property. Equipment may be stored at the site at the Contractor’s own discretion with the construction easement area only (unless written authorization is obtained from the adjoining property owner). No utilities for use during construction are available at this site.

**Bid Specifications: SUPERSTRUCTURE REPLACEMENT –Horan Lane (CR 1038) (078C00102N)**  
**Bid No: 2026-04**

- XX. **Awarded Contractor Requirements:** Prior to start of project, the Marion County Fiscal Court requires hard and electronic copies of the following components to be furnished to the Engineer:
- Performance Bonds
  - Insurance Certificates
  - Estimated Timeline

# **ATTACHMENT A**

**MARION COUNTY FISCAL COURT**

## **SPECIFICATIONS**

**BID NO: 2026-04**

**BRIDGE SUPERSTRUCTURE REPLACEMENT**

**HORAN LANE  
078C00102N**

04/2026

## TABLE OF CONTENTS

### **Title**

1. Project Description
2. Project Location
3. Project Plans
4. Project Documents/Specifications
5. Old Bridge Demolition/Traffic Control

## 1. Project Description and Contractor Qualifications:

### A. Project Description:

All interested, and qualified contractors shall submit a lump sum bid to provide all material, equipment, and manpower necessary to remove and properly dispose the existing concrete deck, and superstructure and leaving current abutments. Install five (5) W18x192 Steel I Beams on existing abutments and pour a new 8" concrete deck.

**Bridge width shall be sixteen (16) feet wide. 17' 6" including overhang of slab. Bridge/beam length shall be approximately thirty-six (36) feet (out to out) and rest on current abutments. The existing abutments have a variable skew so the beams will have to be cut in the field to fit the existing substructure.**

Steel beams shall be designed to meet KYHL-93 Steel Beam Standards according to Kentucky Department of Highways Standard Drawing BSB-002.

Bridge shall have all required connections, drains, and other appurtenances as required or referenced by the Standard Drawings.

**Due to the heavy use of farm equipment, the County has requested to use 7" integral barrier curb instead of guardrail.**

Construction of Bridge roadway approaches are included in the project. The pavement approaches may need to be extended slightly from the design to allow for a smooth transition from the end of the bridge. The intent is to not create a drag point for vehicles coming off the bridge on each end.

Install CL II Channel Lining on inlet end to protect abutments and wing footers from scour.

### B. Contractor Qualifications:

**All bidders shall be certified for bridge construction with the Kentucky Department of Transportation. Each bidder shall provide proof of certification with their bid.**

## 2. Project Location:

A. The contractor shall be totally responsible for setting centerline control of bridge.

- B. The Contractor shall be totally responsible to set initial grade control and all temporary grade elevations necessary for construction.
- C. The contractor shall coordinate/notify the Marion County Road Department Personnel and Charles Allen with the LTADD prior to any construction work or material ordered.

**3. Project Plans:**

- A. Plans to be used for construction consist of standard drawings, plans and a profile sheet that are included in Attachment C.

#### 4. Project Specifications

- A. All work shall be in accordance with the Kentucky Department of Highways, Standard Specifications for Road and Bridge Construction (Most recent version). All references to AASHTO Specifications are to the 17<sup>th</sup> Edition of the AASHTO Standard Specifications for Highway Bridges with current interims.
- B. Reference Attachment C for standard drawings, plans and profile sheet.
- C. Reinforcing steel and concrete shall be per the detailed drawings. Reinforcing steel shall be  $f_y=60,000$  psi and concrete shall be KYTC Class "A" ( $f'_c=3500$ ). The reinforcing steel in the deck shall be epoxy coated and deck concrete shall be 4000 psi with air entrainment.
- D. All steel superstructure is required to be hot dipped galvanized according to KYTC standards.
- E. Construct the new roadway approaches according to the plans. Construct an edge key on each end of the project to tie new pavement into existing.
- F. All bidders shall review the site prior and be thoroughly familiar with the site prior to bidding.
- G. Performance bonds: The successful bidder shall provide a Performance Bond prior to contract award equal to 100 percent of bid amount.

#### 5. Old Bridge Deck Demolition/Traffic Control:

- A. The existing concrete deck, steel I-beams and asphalt surface shall be demolished and properly disposed by the contractor in accordance with all local and state requirements.
- B. Protect the existing abutments from damage during the removal of the superstructure. Any damage must be repaired by the contractor prior to installing the new beams.**
- C. The road will be closed to all thru traffic, there will be no construction of a temporary diversion.
- D. Provide adequate signage and barriers in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) to warn traffic of the bridge closure. Contractor

to include in bid pricing for one message board at each end of the bridge. The board shall announce "Road closure with no thru traffic".

- E. Provide a week's notice to the Marion County Judge Executive prior to the scheduled road closure so that notice can be given to emergency services, school officials, local radio and newspaper.

**SPECIAL NOTES:**

- A. **The Contractor shall be responsible for locating all underground utilities and protection thereof. Any damages to utilities shall be the responsibility of the Contractor to repair at no cost to the Marion County Fiscal Court.**
- B. **The contractor shall be responsible to make concrete cylinders and provide the compressive strength results for the footings, abutments and deck to determine compliance with the specifications. A 7, 14 or 28-day result shall be provided. The Contractor shall obtain sufficient cylinders to provide this data.**
- C. **Concrete compressive strength, air and slump testing shall be performed by an independent, third-party testing laboratory certified for ASTM-compliant procedures. Test cylinders shall be sampled, cured, and tested in accordance with the applicable ASTM standards, and results shall be submitted directly to Cade Bowen with LTADD. ([cade@ltadd.org](mailto:cade@ltadd.org))**
- D. **Abutment Crown Requirement: Contractor shall provide a uniform 2% crown to the abutments. Crown geometry shall be coordinated with the superstructure framing such that the minimum required slab depth of 5 inches is maintained over all beams at all locations, with no reduction due to crowning or construction tolerances.**
- E. **The contractor shall not place or have equipment within the creek bed. All work with equipment shall be conducted from the banks. Any debris that may fall within the creek shall be removed and loaded directly into trucks for proper disposal.**
- F. **Contractor shall perform all work in accordance with Kentucky Division of Water Construction In and Along a Stream, Water Quality and Army Corps of Engineers Permits. See Attachment B.**

# **ATTACHMENT B**

**MARION COUNTY FISCAL COURT**

**PERMITS**

**BID NO: 2026-04**

**BRIDGE SUPERSTRUCTURE REPLACEMENT**

**HORAN LANE**

**078C00102N**

# **ATTACHMENT C**

**MARION COUNTY FISCAL COURT**

**PLANS, PROFILES AND STANDARD DRAWINGS**

**BID NO: 2026-04**

**BRIDGE SUPERSTRUCTURE REPLACEMENT**

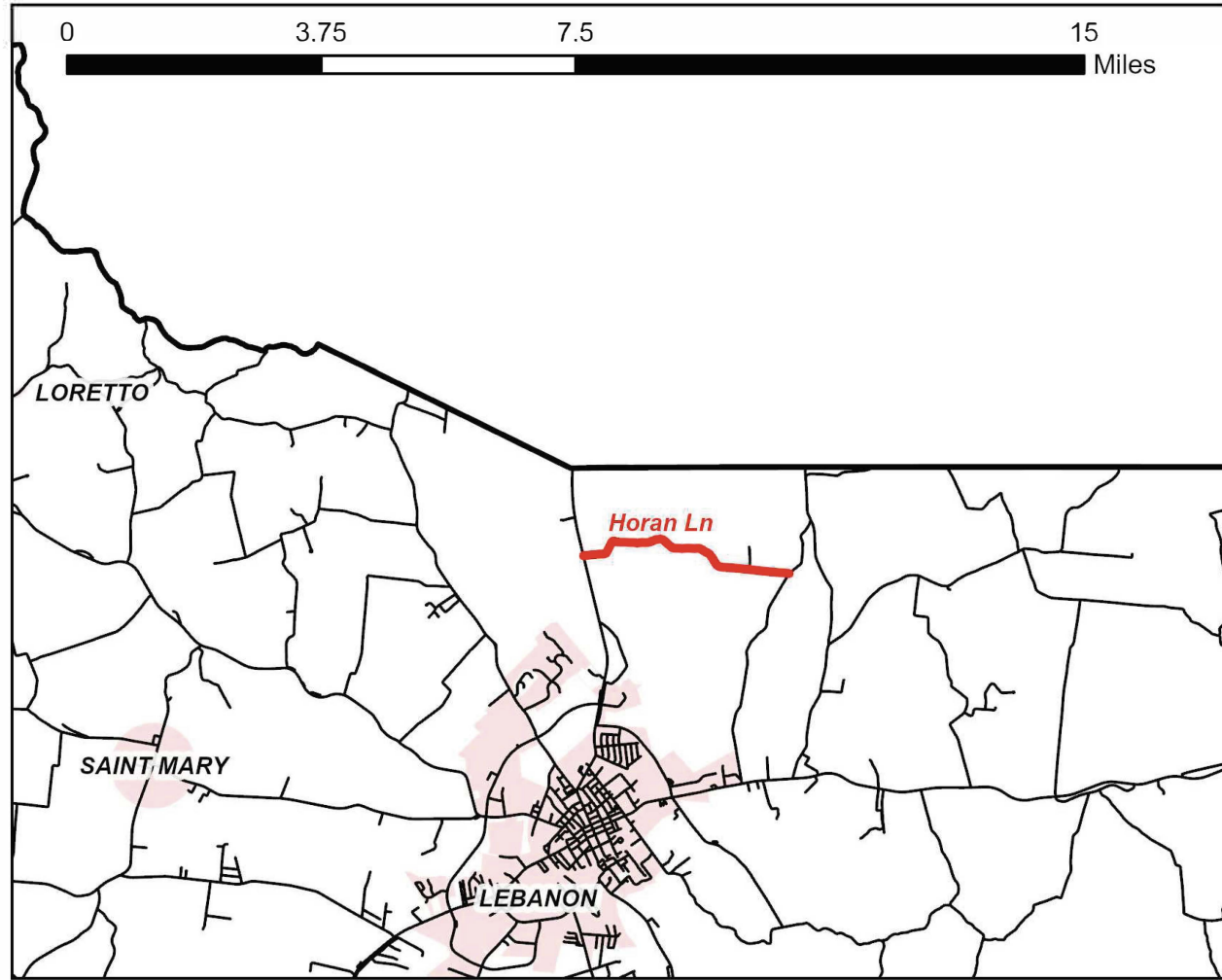
**HORAN LANE**


**078C00102N**

# Horan Ln Bridge Project Superstructure Replacement

Marion County Fiscal Court  
223 North Spalding Ave  
Lebanon, KY 40033

April 7th, 2026



 <p>LINCOLN TRAIL AREA DEVELOPMENT DISTRICT Engineering Department 250 S. President Way, Elizabethtown, KY 40020 Phone: (202) 766-3399</p>	Cover Page		DRAWN BY	AO	DATE	REVISION
	Horan Ln at Casey Branch		CHECKED BY			
	Horan Ln Bridge		APPROVED BY			
JOB#:	SCALE 1:20	DATE: 10/30/2025	Sheet 1 of 6			

**GENERAL NOTES:**

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO LOCAL AND STATE REGULATIONS AND SPECIFICATIONS.
2. ANY PART OF THE WORK THAT IS NECESSARY OR REQUIRED TO MAKE EACH INSTALLATION SATISFACTORY AND OPERABLE FOR ITS INTENDED PURPOSE TO THE SATISFACTION OF THE OWNER AND ENGINEER, EVEN THOUGH IT IS NOT SPECIFICALLY INCLUDED IN THE DRAWINGS, SHALL BE PERFORMED AS INCIDENTAL WORK AS IF IT WERE SHOWN ON THE DRAWINGS.
3. THE CONTRACTOR SHALL NOTIFY EACH RESIDENT 48 HOURS PRIOR TO EXCAVATING ON OR NEAR THEIR PROPERTY AND ADVISE THE RESIDENT ON THE ESTIMATED TIME OF CONSTRUCTION. THE CONTRACTOR SHALL CLEAN UP AS CONSTRUCTION PROGRESSES.
4. ALL PIPE AND TRENCH BACKFILL WITHIN KYTC RIGHT-OF-WAY SHALL BE CONTROLLED (FLOWABLE) LOW STRENGTH DENSITY BACKFILL AS SPECIFIED.
5. CONTACT THE ENGINEER BEFORE MAKING ANY DEVIATIONS GREATER THAN REASONABLE CONSTRUCTION TOLERANCES FROM THE PLANS OR SPECIFICATIONS.
6. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM DEEDS AND PLATS OF RECORD AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.
7. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE DISTURBED LIMITS SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY THE SANITATION DISTRICT.
8. THE CONTRACTOR SHALL CLEAN UP THE WORK SITE AT THE END OF EACH DAY, SWEEPING THE STREET OF ANY DEBRIS, DISPOSING OF TRASH, AND KEEPING THE SITE AS CLEAN TO THE SATISFACTION OF THE OWNER.
9. THE CONTRACTOR IS REQUIRED TO REPLACE ANY FENCING THAT IS REMOVED WITH AN EQUAL OR BETTER QUALITY FENCING TO THE OWNERS SATISFACTION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A 1-YEAR MAINTENANCE PERIOD BEGINNING FROM FINAL PROJECT COMPLETION.
11. CONTRACTOR WILL ESTABLISH AN ACCEPTABLE GROWTH OF GRASS (AS DEFINED IN SPECIFICATIONS) FOR ALL AREAS DISTURBED DURING THE COURSE OF CONSTRUCTION, AS APPLICABLE.
12. PRIOR TO THE SCHEDULED DATE FOR THE PRE-CONSTRUCTION MEETING THE CONTRACTOR SHALL SUBMIT TO THE OWNER FOR REVIEW A CONSTRUCTION SCHEDULE THAT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING AS REQUESTED:
  - A.) ANTICIPATED START AND COMPLETION DATES
  - B.) SEQUENCE AND PHASING OF CONSTRUCTION
  - C.) STAGING AREAS FOR MATERIALS AND EQUIPMENT
  - D.) ACCESS POINTS AND STONE CONSTRUCTION ENTRANCES
  - E.) LIST OF SUBCONTRACTORS AND MATERIAL SUPPLIERS
  - F.) POINTS OF CONTACT AND EMERGENCY PHONE NUMBERS
  - G.) PROOF OF INSURANCE AND BONDING STATUS

13. ALL NON-PERMANENT STRUCTURES (SHEDS, SWINGS, PLAY EQUIPMENT, ETC.) THAT ENCROACH ON CONSTRUCTION SHALL BE TEMPORARILY REMOVED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. IF ANY OF THESE ITEMS ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO RESTORE THE ITEMS IN AS GOOD OR BETTER CONDITION AS THEY WERE IN AT THE START OF THE PROJECT.

**UTILITY NOTES:**

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES, AS INDICATED ON THE DRAWINGS, ARE FOR INFORMATIONAL PURPOSES ONLY. NO RESPONSIBILITY IS ASSUMED FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION. ALL UTILITIES MUST BE MARKED AND THEIR HORIZONTAL AND VERTICAL LOCATION FIELD VERIFIED BY THE CONTRACTOR PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL NOT CUT OR DISCONNECT ANY EXISTING UTILITIES WITHOUT PRIOR APPROVAL FROM THE APPROPRIATE AGENCY.
2. THE EXISTING UNDERGROUND UTILITIES AND SERVICES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ACCORDING TO KNOWN INFORMATION AVAILABLE. THE LOCATIONS SHOWN ARE INTENDED ONLY AS A GUIDE AND CANNOT BE GUARANTEED TO BE ACCURATE OR COMPLETE. DURING CONSTRUCTION THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING UTILITIES, WHETHER SHOWN ON THE CONTRACT DRAWING OR NOT. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR RESTORATION OF SAME TO THE SATISFACTION OF THE OWNER OR UTILITY OWNER AT THE CONTRACTOR'S SOLE EXPENSE. ELECTRIC SERVICE, GAS SERVICE, WATER SERVICE, TELEPHONE AND CABLE SERVICE, AND OTHER UTILITY LINES MAY BE LOCATED IN THE PROXIMITY OF THE WORK AREA.

**THE CONTRACTOR SHALL BE RESPONSIBLE FOR:**

- A.) CONTACTING THE INDIVIDUAL UTILITY OWNERS TEN (10) DAYS PRIOR TO CONSTRUCTION AND ADVISING THEM OF THE WORK TO TAKE PLACE.
  - B.) SOLICITING THEIR AID IN LOCATING AND PROTECTING OR RELOCATING ANY UTILITY THAT MAY INTERFERE WITH CONSTRUCTION.
  - C.) ALL DAMAGE TO ANY EXISTING UTILITY, AND REPAIR THEREOF.
  - D.) CONTACTING THE KENTUCKY UNDERGROUND PROTECTION INC. (KUPI 1-800-752-6007 OR 811) 48 HOURS MINIMUM PRIOR TO CONSTRUCTION.
  - E.) CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO RESTORE ALL EXISTING UTILITIES WHETHER SHOWN OR NOT, ENCOUNTERED OR DISTURBED DURING CONSTRUCTION TO BEFORE CONSTRUCTION CONDITIONS OR BETTER, AS ACCEPTABLE TO THE UTILITY OWNER.
3. WHERE POTENTIAL ELEVATION CONFLICTS MAY OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR SHALL UNCOVER SUCH UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT EXACT ELEVATIONS MAY BE DETERMINED AND THE NECESSARY ADJUSTMENT MADE.
  4. THE OWNERS OF UTILITIES IN THE PROJECT AREA SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION TO FIELD-LOCATE SAID UTILITIES.
  5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SUPPORT OR TEMPORARY RELOCATION OF ALL EXISTING OVERHEAD UTILITIES AFFECTED BY THE PROPOSED CONSTRUCTION.
    - A.) WHERE HIGH-PRESSURE, OIL-FILLED PIPE-TYPE CABLE INSTALLATION ARE EXPOSED OR OTHERWISE INTERFERED WITH BY THE CONTRACTOR, PROTECTION BY THE CONTRACTOR WILL BE REQUIRED AGAINST DAMAGE TO THE COATING OR SUPPORTING THERMAL SAND ENVELOPE.
    - B.) WHERE CONCRETE ENCASED CONDUIT SYSTEMS OR DIRECT BURIED CABLE SYSTEMS ARE EXPOSED OR OTHERWISE INTERFERED WITH, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY TO PROTECT THE SYSTEM AS NECESSARY AGAINST DAMAGE. AS SOON AS FEASIBLE, THE CONTRACTOR SHALL TAKE ADDITIONAL APPROPRIATE STEPS TO PROVIDE PERMANENT MEASURES TO RESTORE SUPPORT. THE METHODS USED SHALL BE BASED ON CONDITIONS TO BE DETERMINED BY THE UTILITY.
    - C.) WHERE POLE OR ANCHORS THAT SUPPORT OVERHEAD ELECTRIC FACILITIES ARE EXPOSED OR OTHERWISE INTERFERED WITH, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY TO PROTECT THEM FROM DAMAGE AND PROVIDE TEMPORARY SUPPORT TO ENSURE THE INTEGRITY OF THE SYSTEM. AS SOON AS FEASIBLE, THE CONTRACTOR SHALL TAKE ADDITIONAL APPROPRIATE STEPS TO PROVIDE PERMANENT MEASURES TO RESTORE SUPPORT. THE METHODS USED SHALL BE BASED ON CONDITIONS TO BE DETERMINED BY THE UTILITY.
    - D.) WHERE THE DEPTH OF EXCAVATION FOR THE PROPOSED WORK IS GREATER THAN 5 FEET, THE CONTRACTOR SHALL SHEET AND SHORE THE TRENCH AND COORDINATE WITH THE UTILITY TO CONTINUOUSLY MAINTAIN THE SUPPORT OF ELECTRIC FACILITIES AT LOCATIONS WHERE THE ELECTRIC FACILITIES ARE WITHIN THE ZONE OF INFLUENCE ADJACENT TO THE EXCAVATION AS DETERMINED BY THE NATURAL ANGLE OF REPOSE OF THE SOIL.
    - E.) ALL DAMAGE TO ELECTRIC FACILITIES AND SERVICES REQUIRING ADJUSTMENTS, RELOCATIONS AND/OR REPAIRS WILL BE MADE AT THE CONTRACTOR'S COST. CONTRACTOR SHALL NOT BACKFILL EXPOSED ELECTRIC FACILITIES UNTIL THE COMPANY HAS INSPECTED ITS FACILITY OR PERFORMED ANY ADJUSTMENTS AND/OR MAINTENANCE THAT MAY BE REQUIRED.

6. WASTEWATER FACILITIES SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE OF PIPE.
7. BEFORE PROCEEDING WITH THE WORK, THE CONTRACTOR SHALL COORDINATE WITH ANY PUBLIC OR PRIVATE COMPANIES, AGENCIES OR DEPARTMENTS THAT OWN AND OPERATE UTILITIES IN THE VICINITY OF THE CONSTRUCTION.

**PAVING NOTES:**

1. ALL BITUMINOUS PAVEMENT CUTS SHALL BE SAW CUT AND NEATLY PATCHED TO MATCH EXISTING PAVEMENT SECTION.
2. ALL CONCRETE PAVEMENT CUTS SHALL BE SAW CUT AND REPLACED FROM EXPANSION JOINT TO EXPANSION JOINT.
3. CONTRACTOR SHALL RESTORE DISTURBED PAVEMENT AFTER CONSTRUCTION, SHALL MINIMIZE INCONVENIENCE TO TRAFFIC DURING CONSTRUCTION, AND SHALL PROVIDE SMOOTH TRANSITIONS TO EXISTING PAVEMENT. PAVING MATERIALS AND CONSTRUCTION THEREOF SHALL BE IN ACCORDANCE WITH THE KYTC STANDARD SPECIFICATIONS AND THE PROJECT SPECIFICATIONS.
4. CONSTRUCTION ACCESS ROADS, EXISTING PAVEMENT OR GRAVEL ROADS, AND DRIVEWAYS AND PARKING LOTS IF REMOVED, DISTURBED, OR DAMAGED BY CONTRACTOR'S WORK SHALL BE MAINTAINED BY CONTRACTOR AND RESTORED OR REPLACED TO EXISTING OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AFTER WORK IS COMPLETE.

**SAFETY ADVISORY NOTES:**

1. PROTECTION OF PERSONS AND PROPERTY: BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AS REQUIRED TO MAINTAIN VEHICULAR AND PEDESTRIAN SAFETY. PROVIDE ALL NECESSARY BARRIERS, WARNING LIGHTS, SIGNAGE, FLAGMEN, AND OTHER MEASURES AS REQUIRED TO MAINTAIN PUBLIC SAFETY AS DESIGNATED ON THE PLANS, DIRECTED BY THE OWNER, AND AS RECOMMENDED BY OTHER AUTHORITIES HAVING JURISDICTION.

**EROSION, SEDIMENT, & ENVIRONMENTAL IMPACT NOTES:**

1. THE CONTRACTOR MUST PROVIDE AN EROSION PREVENTION & SEDIMENT CONTROL PLAN FOR APPROVAL FROM LINCOLN TRAIL AREA DEVELOPMENT DISTRICT.

**TRAFFIC CONTROL NOTES:**

1. CONTRACTOR SHALL COMPLY WITH THE APPLICABLE ENCROACHMENT PERMIT.
2. ACCESS STREETS SHALL BE MAINTAINED CLEAN AND FREE OF MUD AND ROCKS.

**UTILITIES AND JOB SITE SAFETY:**

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY DURING CONSTRUCTION. JOB SITE SAFETY IS OUTSIDE THE SCOPE OF WORK OF LTADD. THE UTILITIES SHOWN REPRESENT OBSERVABLE FEATURES ALONG WITH INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES, AND IS THEREFORE NOT WARRANTED. PRIOR TO CONSTRUCTION THE CONTRACTOR IS TO FIELD VERIFY ALL UTILITY LOCATIONS, SIZES, TYPE ETC. NEEDED TO COMPLETE THE WORK OF THE CONTRACT. NEITHER THE PROFESSIONAL ACTIVITIES OR THE PRESENCE OF LTADDEMPLOYEES OR SUBCONSULTANTS AT THE CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR OR ANY OTHER ENTITY OF THEIR OBLIGATION, DUTIES, AND RESPONSIBILITIES INCLUDED, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCES, TECHNIQUES TO PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH AND SAFETY PRECAUTIONS REQUIRED BY GOOD CONSTRUCTION PRACTICES OR ANY REGULATORY AGENCIES. ANYONE USING INFORMATION FROM THESE PLANS ACKNOWLEDGES AND WARRANTS THAT LINCOLN TRAIL AREA DEVELOPMENT DISTRICT, IS NOT RESPONSIBLE FOR SITE SAFETY IN ANY WAY.

THE UTILITIES ARE SHOWN ON THE DRAWINGS AS ACCURATELY AS THEY HAVE BEEN PROVIDED TO THE ENGINEER. THEIR LOCATIONS ARE NOT GUARANTEED. IT IS THE CONTRACTORS RESPONSIBILITY TO HAVE ALL UTILITIES FIELD LOCATED. THE CONTRACTOR IS TO CONTACT ALL UTILITY COMPANIES PRIOR TO STARTING CONSTRUCTION.

THE CONTRACTOR IS TO HAVE ALL UTILITIES FIELD LOCATED PRIOR TO BEGINNING CONSTRUCTION.

THE CONTRACTOR IS TO NOTIFY THE ENGINEER IF A PROBLEM COULD EXIST. IF THE CONTRACTOR PROCEEDS WITHOUT CONTACTING THE UTILITY COMPANIES AND DOES NOT NOTIFY THE ENGINEER OF POTENTIAL PROBLEMS, THEY DO SO AT THEIR OWN RISK.

**CONSTRUCTION NOTES:**

1. ALL CONSTRUCTION INCLUDING EXCAVATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE LATEST OSHA GUIDELINES AND STANDARDS.
2. ENGINEERED FILL IN BUILDING PADS SHALL EXTEND 3' OUTSIDE THE BUILDING AND BE COMPACTED TO A MINIMUM OF 68% OF THE STANDARD PROCTOR.
3. ENGINEERED FILL IN PAVING AREAS SHALL BE COMPACTED TO A MINIMUM OF 65% OF THE STANDARD PROCTOR.
4. ALL AREAS ADJACENT TO PAVING AND BUILDING PADS SHALL BE MAINTAINED TO DRAIN WATER AWAY AT A MINIMUM OF 1%. ALL BUILDING PADS AND PAVING AREAS SHALL BE DRAINED AND DE-WATERED AS NECESSARY TO PREVENT WATER FROM PONDING.
5. ALL STORM SEWER PIPE SHALL BE ADS N-12 DUAL WALL HIGH DENSITY POLYETHYLENE (HDPE) PLASTIC PIPE.
6. ALL UTILITIES CROSSING PAVEMENTS SHALL BE BACKFILLED AND COMPACTED TO SUBGRADE WITH DGA.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBEY ALL TEMPORARY TRAFFIC CONTROL GUIDELINES PER THE LATEST MUTCD AND/OR KYTC STANDARD DRAWINGS.
8. IF THE DISTURBED SITE AREA IS OVER 1 ACRE, IT IS THE CONTRACTORS RESPONSIBILITY TO PROCURE THE KEPSC "NOI" PERMIT, PERFORM THE REQUIRED INSPECTIONS, AND FILE THE REQUIRED "NOT" ONCE COVERAGE HAS BEEN ACHIEVED.
9. THE EROSION CONTROL BMP'S NOTED ON THIS PLAN ARE MINIMUMS THAT MUST BE INSTALLED PRIOR TO LAND DISTURBANCE. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN AND ADAPT TO CHANGING SITE CONDITIONS. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO ADD ADDITIONAL BMP'S IF THEY ARE NEEDED.
10. ANY DISTURBANCE TO CITY/STATE RIGHT OF WAY OR ADJOINER PROPERTIES SHALL BE RETURNED TO THE ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
11. ALL SLOPES GREATER THAN 3:1 SHALL BE BLANKETED WITH EROSION CONTROL BLANKETS.

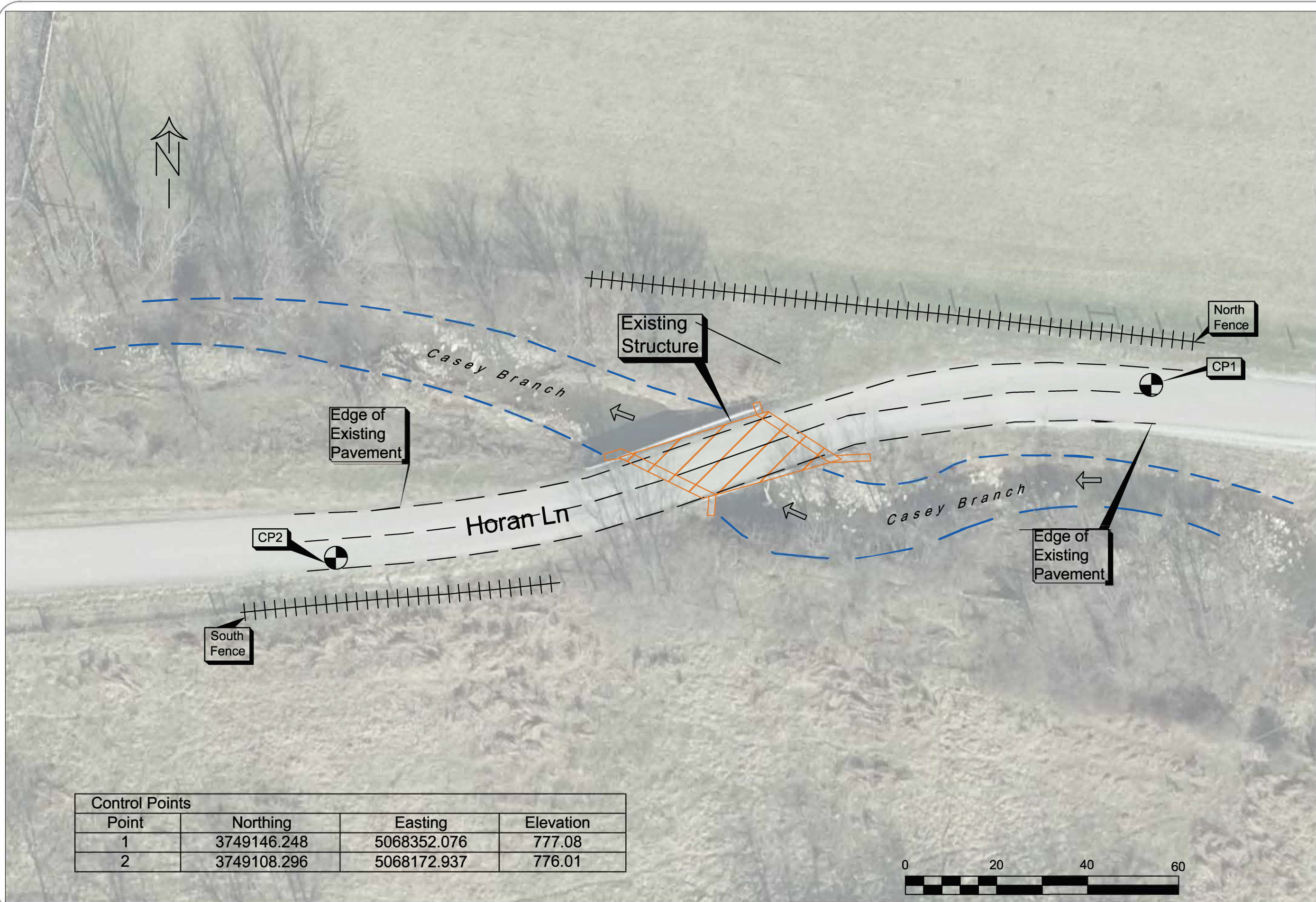
FLOODPLAIN INFORMATION: THE PARCELS DEPICTED HEREON DO NOT LIE WITHIN A FLOOD ZONE AREA AS PER THE 'FIRM' MAP NUMBER 21155C0180D, SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED 'FIRM'. EFFECTIVE DATE: MAY 23, 2023

NOTE: THIS IS NOT A BOUNDARY SURVEY. THIS INSTRUMENT SHALL NOT BE USED FOR CONVEYANCE OR RECORDING. THE BOUNDARY DEPICTED HEREON IS APPROXIMATE FOR ILLUSTRATION ONLY.

ENGINEERING COPYRIGHT: THESE DRAWINGS, THE DESIGN, DATA AND INFORMATION SHOWN HEREON SHALL REMAIN THE PROPERTY OF THE ENGINEER AND OWNER NAMED IN THE TITLE BLOCK. USE OF THIS INFORMATION AND/OR DATA BY OTHERS IN ANY FORM IS EXPRESSLY PROHIBITED UNLESS PERMISSION IS OBTAINED, IN WRITING, FROM THE ENGINEER AND THE OWNER.

NOTE: EXISTING UTILITIES SHOWN ARE BASED ON ABOVE GROUND EVIDENCE AND INFORMATION AVAILABLE. CONTRACTOR SHALL CONTACT ALL LOCAL UTILITY PROVIDERS TO VERIFY THE EXISTENCE AND LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL USE CAUTION NOT TO DISTURB EXISTING UTILITIES AND ASSUMES ALL RESPONSIBILITY FOR DAMAGE TO EXISTING UTILITIES WHETHER SHOWN ON THESE DRAWINGS OR NOT. CONTACT ENGINEER IF CONFLICTS WITH PROPOSED WORK AND EXISTING UTILITIES ARISE.

Notes	REVISION				
	DATE				
DRAWN BY CHECKED BY APPROVED BY	AO				
Lincoln Trail Area Development District Engineering Department 150 S. President Way, Elizabethtown, KY 40020 Phone: (607) 762-3893	Horan Ln at Casey Branch		DATE: 10/30/2025	Sheet 2 of 6	
	Horan Ln Bridge		JOB#:	SCALE 1:20	



Control Points			
Point	Northing	Easting	Elevation
1	3749146.248	5068352.076	777.08
2	3749108.296	5068172.937	776.01

  
 LINCOLN TRAIL AREA DEVELOPMENT DISTRICT  
**Engineering Department**  
256 S. President Way, Elizabethton, TN 37603  
 Phone: (603) 769-3898

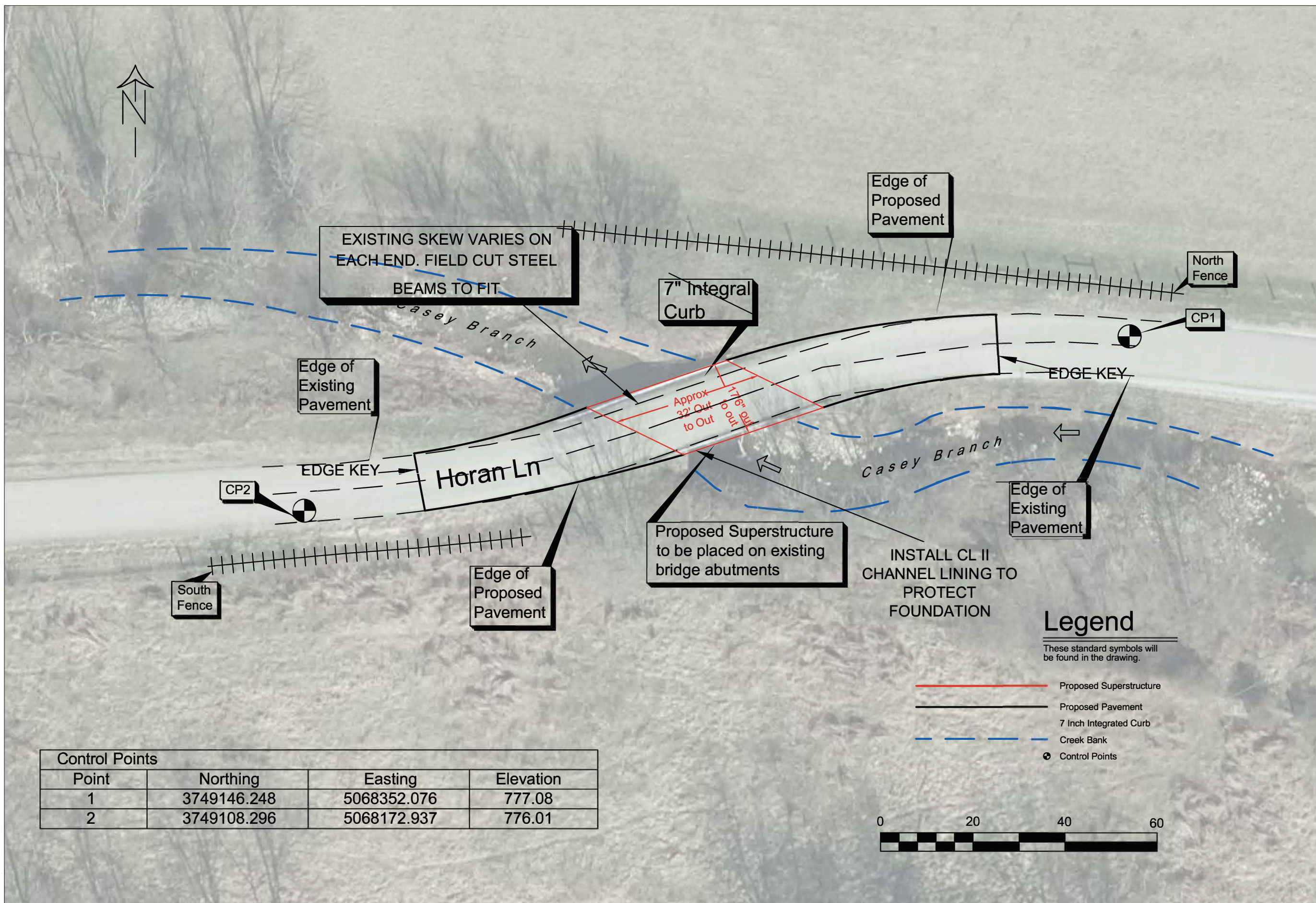
**Horan Ln Bridge**  
 DATE: 10/30/2025  
 Sheet 3 of 6

JOB#: \_\_\_\_\_  
 SCALE 1:20

DRAWN BY	AO	REVISION
CHECKED BY		DATE
APPROVED BY		

**Existing Bridge**

**Horan Ln at Casey Branch**



Control Points			
Point	Northing	Easting	Elevation
1	3749146.248	5068352.076	777.08
2	3749108.296	5068172.937	776.01

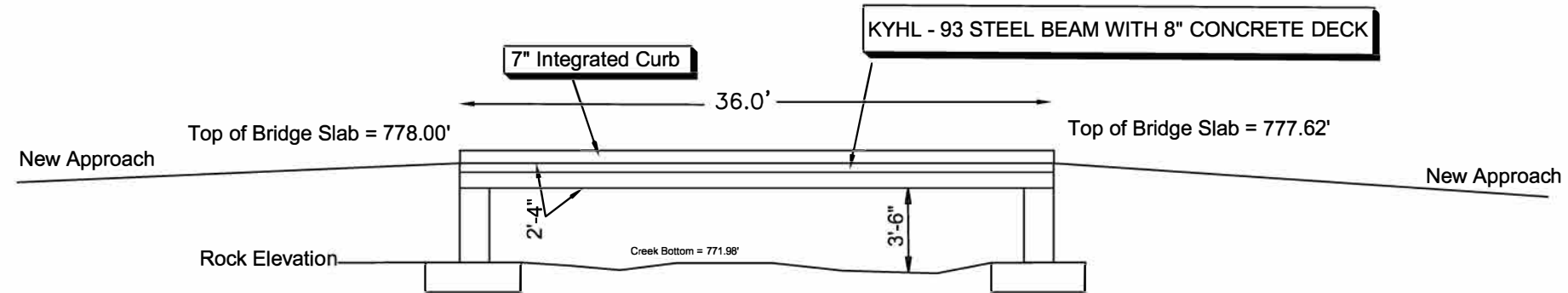
- Legend**  
 These standard symbols will be found in the drawing.
- Proposed Superstructure
  - Proposed Pavement
  - 7 Inch Integrated Curb
  - - - - - Creek Bank
  - Control Points



 LINCOLN TRAIL AREA DEVELOPMENT DISTRICT <b>Engineering Department</b> <small>250 S. President Way, Elizabethton, TN 37643          Phone: (615) 769-3399</small>	DATE: 10/30/2025	REVISION	
	JOB#: Horan Ln Bridge	DRAWN BY: AO	DATE
	SCALE: 1:20	CHECKED BY:	REVISION
Horan Ln at Casey Branch		APPROVED BY:	DATE
Proposed Superstructure			DATE
Horan Ln at Casey Branch			DATE
Horan Ln Bridge			DATE
Sheet 4 of 6			DATE

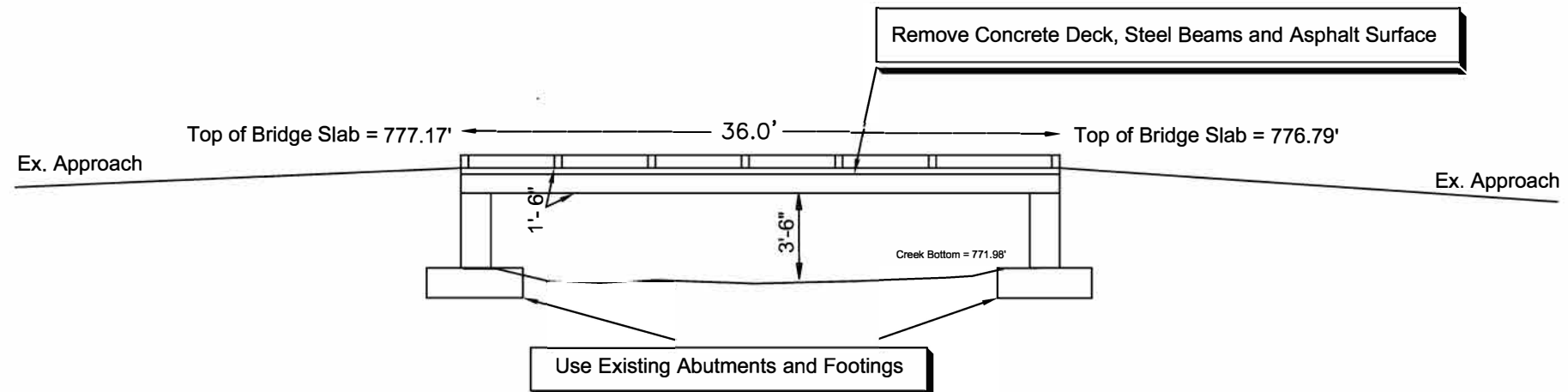
## PROPOSED SUPERSTRUCTURE

STEEL BEAMS WITH CONCRETE DECK  
 KYHL - 93 STEEL BEAM STANDARDS  
 8" CONCRETE DECK  
 17' 6" WIDE OUT TO OUT  
 36' LONG OUT TO OUT



## EXISTING BRIDGE

STEEL GIRDER  
 5" CONCRETE DECK  
 15.1' WIDE OUT TO OUT  
 36.0' LENGTH OUT TO OUT ON 34 DEGREE SKEW



REVISION

DATE

DRAWN BY

AO

CHECKED BY

APPROVED BY

Elevation View

Horan Ln at Casey Branch

LINCOLN TRAIL AREA DEVELOPMENT DISTRICT  
**Engineering Department**  
150 S. President Way, Elizabethtown, KY 40120  
 Phone: (270) 769-3898

DATE: 10/30/2025

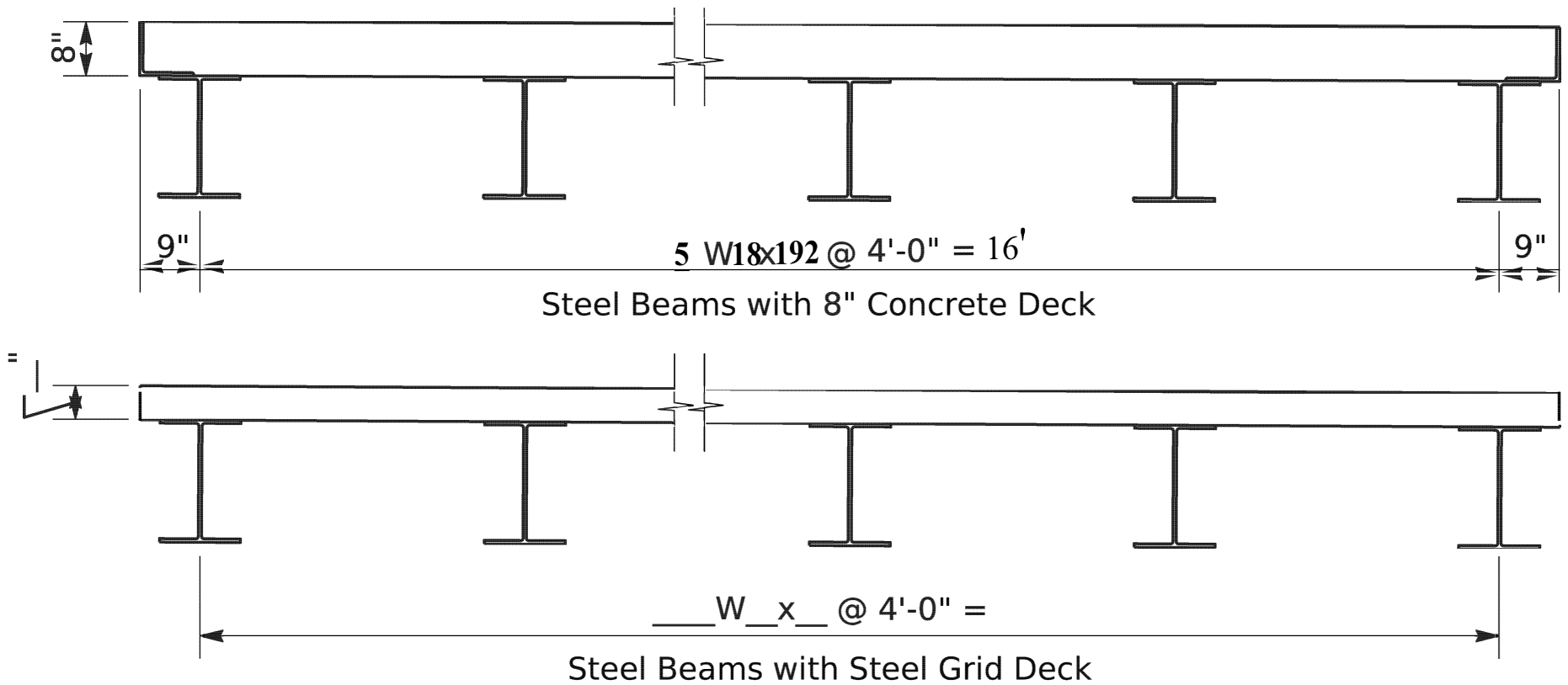
Sheet 5 of 6

Horan Ln Bridge

JOB#:  
 SCALE 1:20



# Non-Composite Steel Superstructure Details (Slab or Steel Grid Deck) Span



Applicable Standard Drawings (Circle All that apply)

- BSB-002 KYHL-93 Beam Standards
- BSB-003 Slab and End Diaphragm Details
- BSB-004 Rolled Steel Diaphragm Details
- BSB-005 Rolled Steel Diaphragm Details
- BSB-006 Rolled Steel Diaphragm Details

# General Notes

**SPECIFICATIONS:** All references to the standard Specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, with current supplemental specifications. All references to the AASHTO Specifications are to the current edition of the AASHTO LRFD Bridge Design Specifications, with interims.

**DESIGN LOADS:** Beam sections are designed for 1.25\*HL93 (KYHL93) Live Load.

**DESIGN LOAD DISTRIBUTION:** Contrary to AASHTO LRFD Bridge Design Specification, the design moment and shear distribution for all beams is 0.6 lanes.

**FUTURE WEARING SURFACE:** These beams are designed for a 15 PSF future wearing surface load.

**SUBSTRUCTURE DESIGN LOADS:** Unfactored design reaction forces per beam end.

DC (kips): Beam, Slab, and assumed Type III railing dead loads.

DW (kips): Future wearing surface.

LL+I (kips): LL with Dynamic load allowance.

**MATERIAL DESIGN SPECIFICATIONS:**

for Beam Steel FY = 50000 PSI  
for Steel Reinforcement FY = 60000 PSI  
for Class "AA" Deck Concrete FC = 4000 PSI

**MATERIAL STEEL**

High Strength Low Alloy Structural Steel

**A.S.T.M**

\*A709 GR 50

**AASHTO**

\*M270 GR 50

High strength bolts, nuts, and washers F3125 Grade A325 M-164 Type 1 Sheet lead and Pig lead B29-79

All steel in longitudinal rolled wide flange beams shall meet the longitudinal Charpy V-Notch toughness test for non-fracture critical components Zone 2 in accordance with the following:

M270 GR 50 (up to 2" thickness) of 15 ft-lbs at 40°F.

Sampling and testing procedures shall be in accordance with AASHTO T243 current edition, utilizing (H) frequency testing. When plate thickness exceeds 1 1/2", frequency of testing shall be (P).

**HIGH STRENGTH BOLT CONNECTIONS:** Unless otherwise specified on the plans, all bolted connections shall be ASTM F3125 Grade A325 3/4" diameter high strength bolts, nuts, and washers. Open holes shall be 1 3/16" diameter. Type 1 galvanized bolts shall be used as described in AASHTO M164. All high strength bolted field connections are to be installed with "direct tension indicators" (DTI's) in accordance with the Standard Specifications and ASTM F959. All DTI's shall be manufactured from a steel conforming to the chemical requirements of ASTM A325 for Type 1 galvanized steel. DTI's shall be installed under the bolt head with the bumps facing the underside of the bolt head. Put a hardened washer under the nut and tension from the nut.

**BEVELED EDGES:** Bevel all exposed edges 3/4".

**REINFORCEMENT:** Dimensions shown from the face of concrete to reinforcement are clear distances. Spacing of reinforcement is from center to center of reinforcement. All steel reinforcement is to be epoxy coated in accordance with Section 811.10 of the Specifications.

**CORROSION PROTECTION:** These beams and all steel components are to be hot dip galvanized. If hot dip galvanizing is cost prohibitive then all steel components must be painted. Unpainted weathering steel is not recommended within 10 feet of moving water. Additionally these beams do not meet fatigue design requirements of unpainted weathering steel.

**BRIDGE DECK:** A galvanized steel metal grid deck may be substituted for the 8" concrete deck. This will improve the load rating, but smaller beams are not to be used.

## TABLE OF BEAM SIZES AND DESIGN DATA (4 FT. MAX. BEAM SPACING)

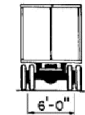
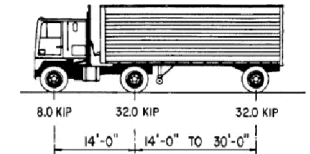
BEAM SPAN	ROLLED BEAM		DEFLECTION IN INCHES		UNFACTORED BEAM END REACTION		
	BEAM MEMBER	BEAM DEPTH (IN.)	STEEL ONLY	TOTAL DL	DC (kips)	DW (kips)	LL+I (kips)
15' Max.	W18x50	18.0	0.00	0.03	5.54	0.45	46.82
	W16x50	16.3	0.00	0.03	5.54		
	W14x53	13.9	0.01	0.06	5.56		
	W12x58	12.2	0.01	0.06	5.60		
	W10x77	10.6	0.01	0.07	5.76		
20' Max.	W18x65	18.2	0.00	0.08	7.41	0.60	49.69
	W16x67	16.3	0.00	0.09	7.44		
	W14x74	14.2	0.00	0.11	7.51		
	W12x79	12.4	0.00	0.13	7.56		
	W10x100	11.1	0.00	0.14	7.79		
25' Max.	W24x76	23.9	0.02	0.11	9.29	0.75	51.96
	W21x93	21.6	0.02	0.11	9.52		
	W18x76	18.2	0.02	0.18	9.29		
	W16x89	16.8	0.03	0.18	9.47		
	W14x99	14.2	0.03	0.21	9.59		
30' Max.	W24x103	24.5	0.03	0.16	11.49	0.90	56.68
	W21x101	21.4	0.03	0.20	11.46		
	W18x97	18.6	0.04	0.28	11.39		
	W14x145	14.8	0.06	0.31	12.16		
	W27x129	27.6	0.04	0.20	13.79		
35' Max.	W24x117	24.3	0.05	0.26	13.57	1.05	61.07
	W21x122	21.7	0.06	0.32	13.67		
	W18x143	19.5	0.07	0.35	14.05		
	W14x176	15.2	0.10	0.47	18.33		
	W27x129	27.6	0.06	0.32	13.67		
40' Max.	W30x148	30.7	0.05	0.25	16.09	1.20	64.66
	W27x146	27.4	0.06	0.30	16.06		
	W24x146	24.7	0.07	0.36	16.06		
	W21x147	22.1	0.09	0.46	16.07		
	W18x192	20.4	0.11	0.45	17.01		
45' Max.	W33x130	33.1	0.07	0.39	17.63	1.35	67.72
	W30x132	30.3	0.08	0.45	17.68		
	W27x129	27.6	0.10	0.54	17.59		
	W24x146	24.7	0.11	0.58	18.00		
	W21x166	22.5	0.14	0.63	18.46		
50' Max.	W36x150	35.9	0.10	0.45	20.05	1.50	70.41
	W33x152	33.5	0.10	0.50	20.1		
	W30x148	30.7	0.12	0.60	19.98		
	W27x146	27.4	0.14	0.71	19.95		
	W24x162	25.0	0.17	0.80	20.35		
55' Max.	W36x160	36.0	0.13	0.62	22.27	1.65	72.83
	W33x169	33.8	0.14	0.65	22.51		
	W30x173	30.4	0.17	0.74	22.66		
	W27x178	27.8	0.20	0.87	22.80		
	W24x192	25.5	0.24	0.99	23.17		
60' Max.	W36x194	36.5	0.18	0.73	25.3	1.80	75.05
	W33x201	33.7	0.19	0.77	25.52		
	W30x173	30.4	0.24	1.05	24.66		
	W27x194	28.1	0.28	1.13	25.31		

## KY-HL93 (1.25XHL93)

### DESIGN LOAD

From AASHTO design code -> Vehicular Live Loading designated HL-93 shall consist of design truck or design tandem plus design lane load.

#### DESIGN TRUCK



#### DESIGN TANDEM

Shall consist of a pair of 25,000 pound axles spaced at 4'-0" apart. Transverse wheel spacing is 6'-0".

#### DESIGN LANE LOAD

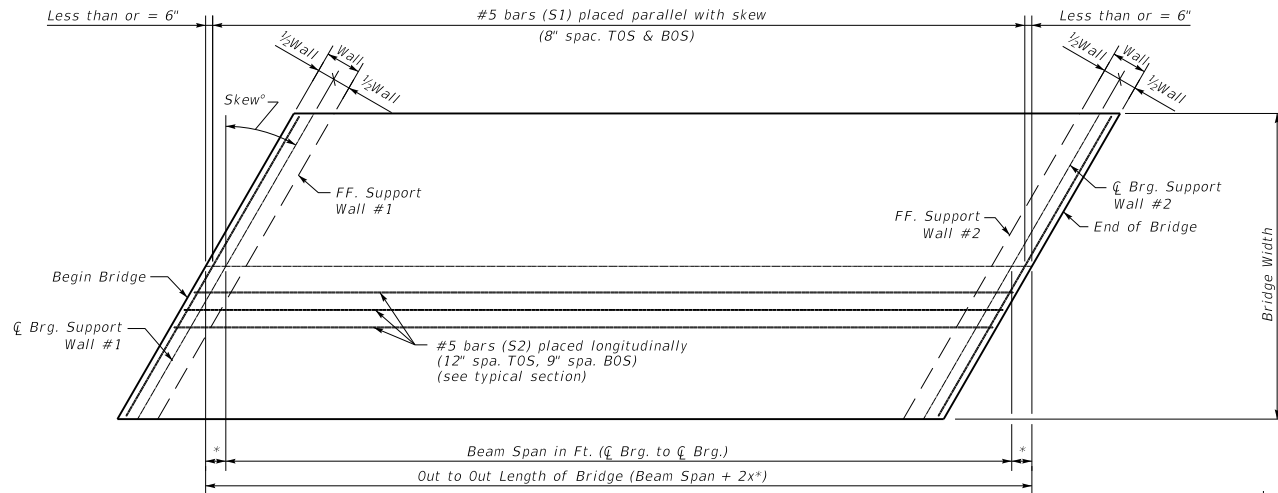
The design lane load shall consist of a load of 640 pound/ foot uniformly distributed in the longitudinal direction. Transversely the load is to be uniformly distributed over a 10'-0" width.

The current KY design standard for state roads is to increase the federal minimum (HL-93) by 25% (KY-HL93).

KENTUCKY  
DEPARTMENT OF HIGHWAYS  
KYHL-93 STEEL  
BEAM  
STANDARDS

STANDARD DRAWING NO. BSB-002

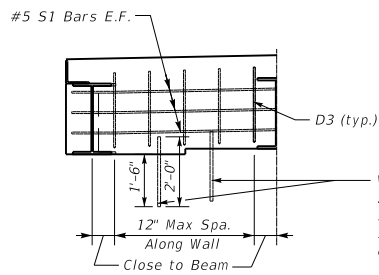
SUBMITTED *Bob Adams* 02-26-20  
DIRECTOR DIVISION OF STRUCTURAL DESIGN DATE  
APPROVED *[Signature]* 02-26-20  
STATE ENGINEER DATE



**PLAN OF SLAB**

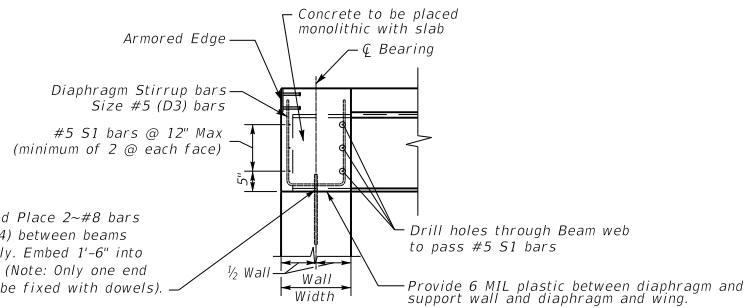
NOTE: All reinforcing steel shall be epoxy coated.

- NOTES: 1.) Diaphragm stirrups are to project into the slab regardless of slab forming method.  
 2.) Place stirrup bars parallel to face of beams.



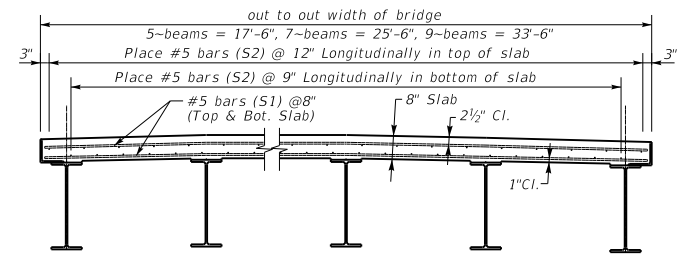
**DIAPHRAGM**

NOTE: End Diaphragms are required on both Grid Deck and Slabs.



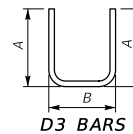
**DIAPHRAGM X-SECTION**

(Perpendicular to Diaphragm)



**TYPICAL SECTION**

NOTE: It is recommended a crash tested barrier be attached to the Superstructure to contain all vehicles within the roadway. Recommended barriers include the Type T631 guardrail, Type 3, or 32\"/>

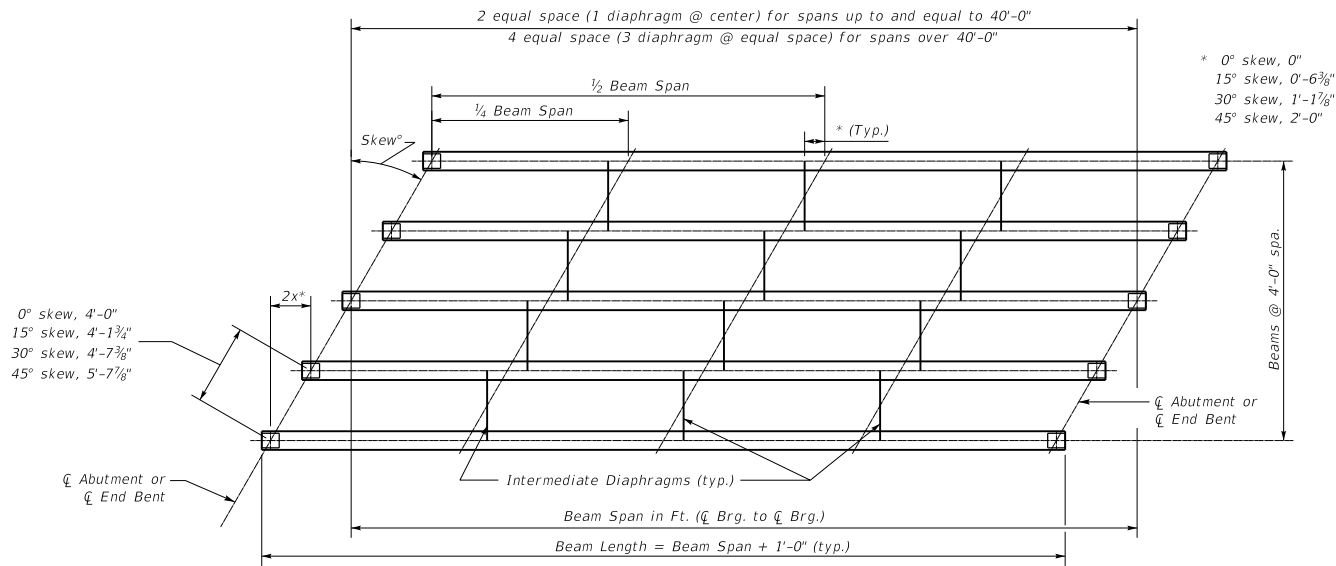


Dim. "A" = Beam Depth + 4" for Slab  
 Dim. "A" = Beam Depth - 4" for Grid Deck.  
 Dim. "B" = 0° Skew -> (Wall Width - 4")  
 15° Skew -> (Wall Width - 4") x 1.035  
 30° Skew -> (Wall Width - 4") x 1.155  
 45° Skew -> (Wall Width - 4") x 1.414

#5 Skewed Transverse Bar (S1) Length  
 0° Skew -> Bridge Width - 4"  
 15° Skew -> ((Bridge Width - 4")) x 1.035  
 30° Skew -> ((Bridge Width - 4") x 1.155) - 3/8"  
 45° Skew -> ((Bridge Width - 4") x 1.414) - 5/8"

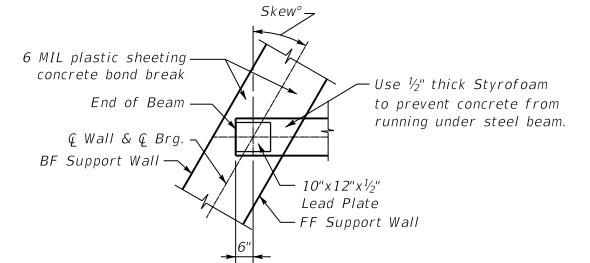
\* 0° skew, 1/2 Wall  
 15° skew, 1/2 Wall x 1.035  
 30° skew, 1/2 Wall x 1.155  
 45° skew, 1/2 Wall x 1.414

<b>KENTUCKY          DEPARTMENT OF HIGHWAYS</b>	
<b>SLAB AND END          DIAPHRAGM          DETAILS</b>	
STANDARD DRAWING NO. <b>BSB-003</b>	
SUBMITTED <i>[Signature]</i> DIRECTOR DIVISION OF STRUCTURAL DESIGN	DATE <b>02-26-20</b>
APPROVED <i>[Signature]</i> STATE ENGINEER	DATE <b>02-26-20</b>



\* 0° skew, 0"  
 15° skew, 0'-6 3/8"  
 30° skew, 1'-1 1/8"  
 45° skew, 2'-0"

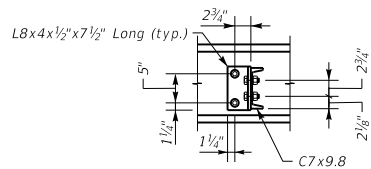
**NOTE:** Place girders with any mill or shop camber bowed up in the middle. Heat cambering is not required.



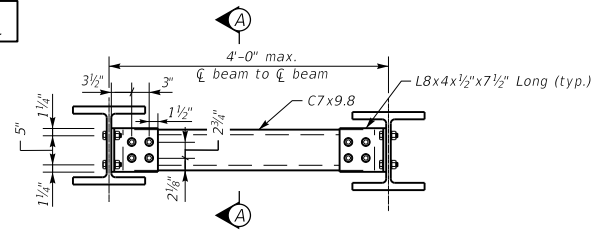
**END OF BEAM DETAIL @ SUPPORTS**

**FRAMING PLAN**

**NOTE:** Use 3/4" O Bolts with 1 3/16" O Holes Throughout.

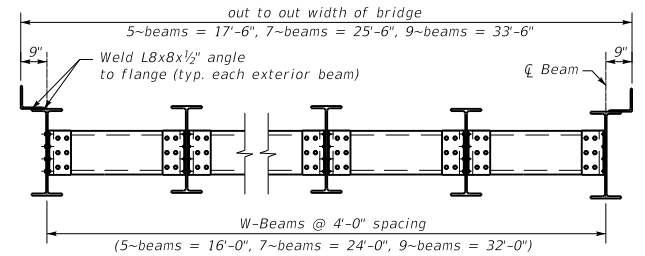


**SECTION A-A**



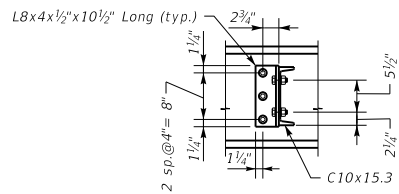
**INTERMEDIATE DIAPHRAGM**

(for up to 14" beam depth)

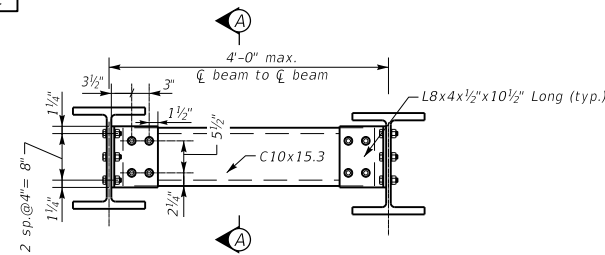


**FRAMING TYPICAL**

**NOTE:** Use 3/4" O Bolts with 1 3/16" O Holes Throughout.



**SECTION A-A**



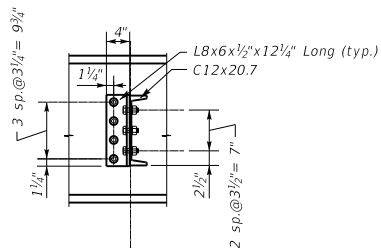
**INTERMEDIATE DIAPHRAGM**

(for up to 20" beam depth)

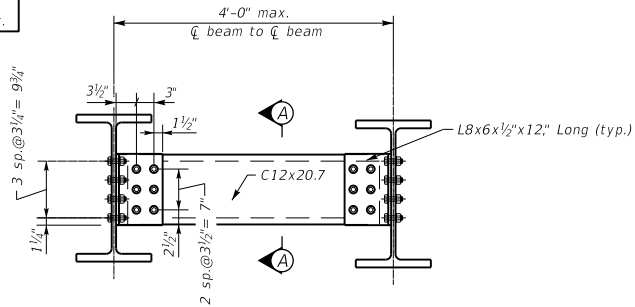
KENTUCKY  
 DEPARTMENT OF HIGHWAYS  
 ROLLED STEEL  
 DIAPHRAGM  
 DETAILS

STANDARD DRAWING NO. BSB-004  
 SUBMITTED BY *Bob Adams* DATE 02-26-20  
 DIRECTOR DIVISION OF STRUCTURAL DESIGN  
 APPROVED BY *Bob Adams* DATE 02-26-20  
 STATE ENGINEER

**NOTE:** Use  $\frac{3}{4}$ "  $\odot$  Bolts with  $\frac{13}{16}$ "  $\odot$  Holes Throughout.

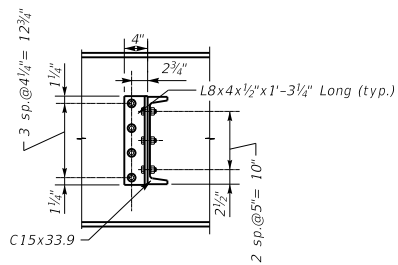


**SECTION A-A**

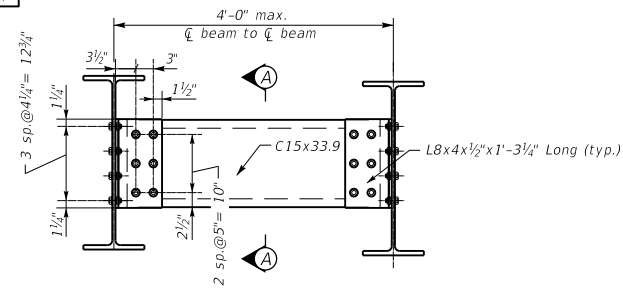


**INTERMEDIATE DIAPHRAGM**  
(for up to 24" beam depth)

**NOTE:** Use  $\frac{3}{4}$ "  $\odot$  Bolts with  $\frac{13}{16}$ "  $\odot$  Holes Throughout.

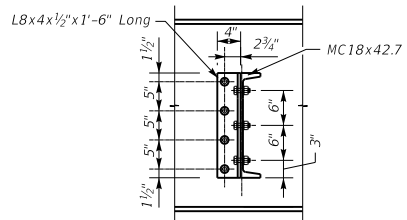


**SECTION A-A**

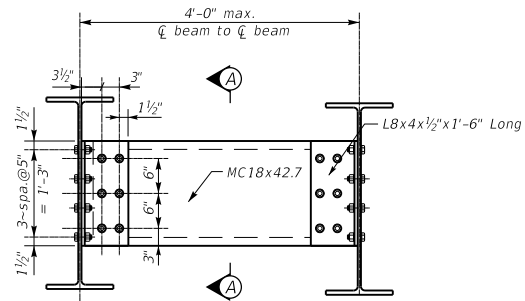


**INTERMEDIATE DIAPHRAGM**  
(for up to 30" beam depth)

**NOTE:** Use  $\frac{3}{4}$ "  $\odot$  Bolts with  $\frac{13}{16}$ "  $\odot$  Holes Throughout.



**SECTION A-A**



**INTERMEDIATE DIAPHRAGM**  
(for up to 36" beam depth)

<b>KENTUCKY DEPARTMENT OF HIGHWAYS</b>	
<b>ROLLED STEEL DIAPHRAGM DETAILS</b>	
STANDARD DRAWING NO. <b>BSB-005</b>	
SUBMITTED <i>Bob Adams</i> DIRECTOR DIVISION OF STRUCTURAL DESIGN	DATE <b>02-26-20</b>
APPROVED <i>[Signature]</i> STATE ENGINEER	DATE <b>02-26-20</b>