

Pre-Bid Conference

Marshall-Trigg Counties

Contract ID 12-1354

Grade & Drain with Bridge

October 19, 2012 Letting



Baker

Palmer *Kentucky*
ENGINEERING UNBRIDLED SPIRIT

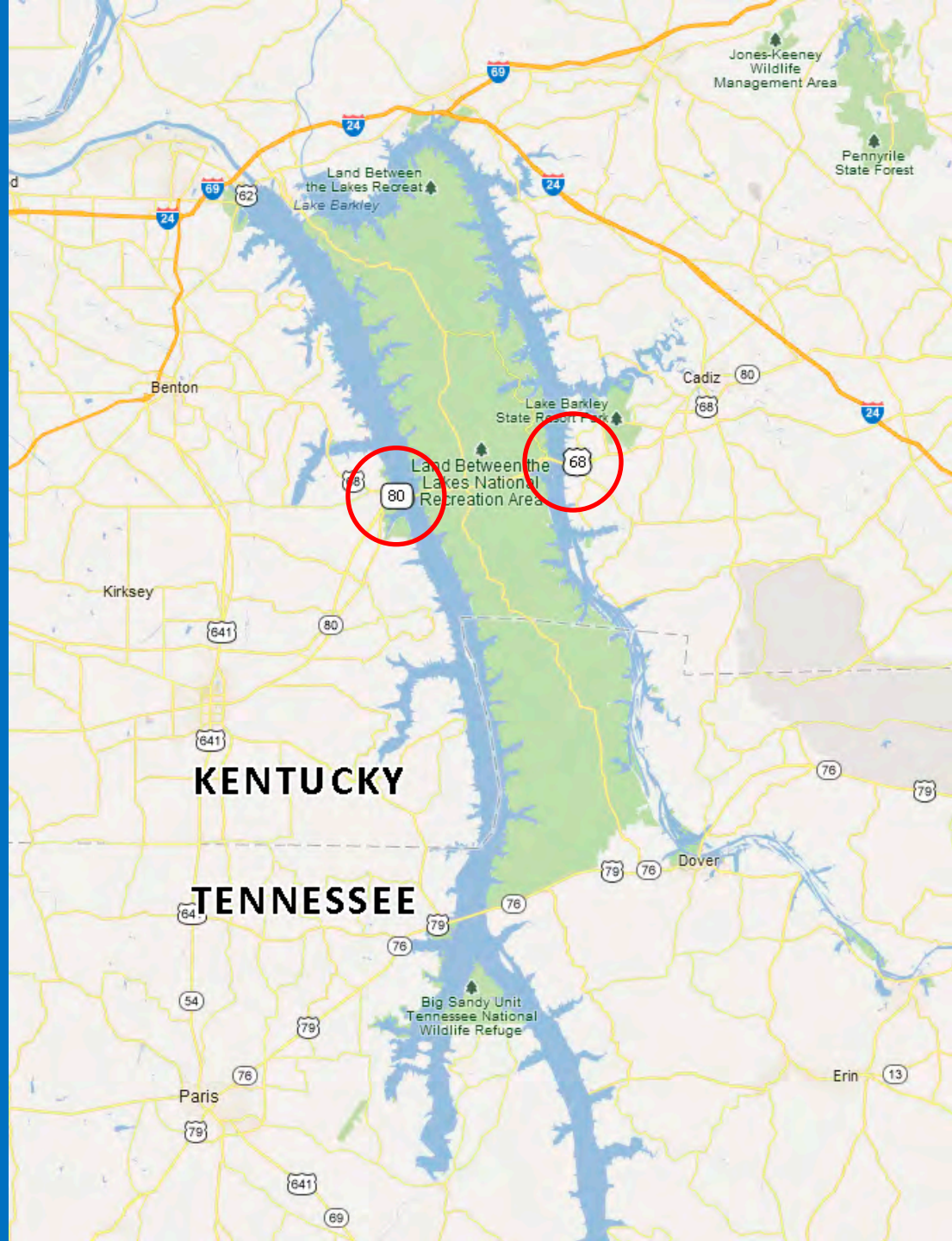


Pre-Bid Conference

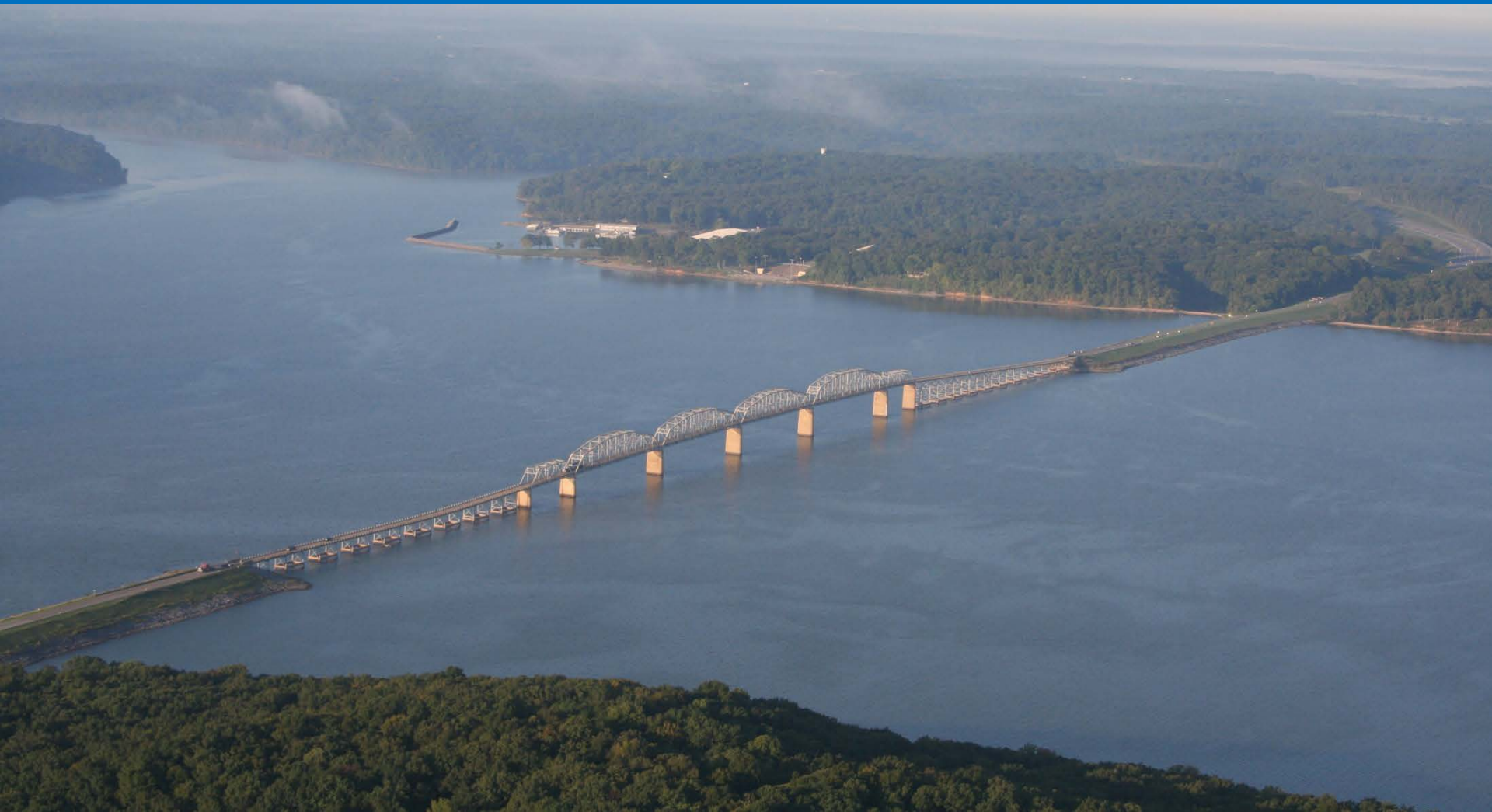
October 4, 2012

A detailed map of Western Kentucky and its surrounding regions. The map shows the Mississippi River flowing through the western part of the state. Major cities like Paducah, Mayfield, and Fulton are labeled. A red circle highlights the 'Land Between the Lakes National Recreation Area' in the southeastern part of the state. The map also shows the borders of Missouri to the west and Tennessee to the south.

Land Between the Lakes



Existing Kentucky Lake Bridge



Future Kentucky Lake Bridge



Rendering

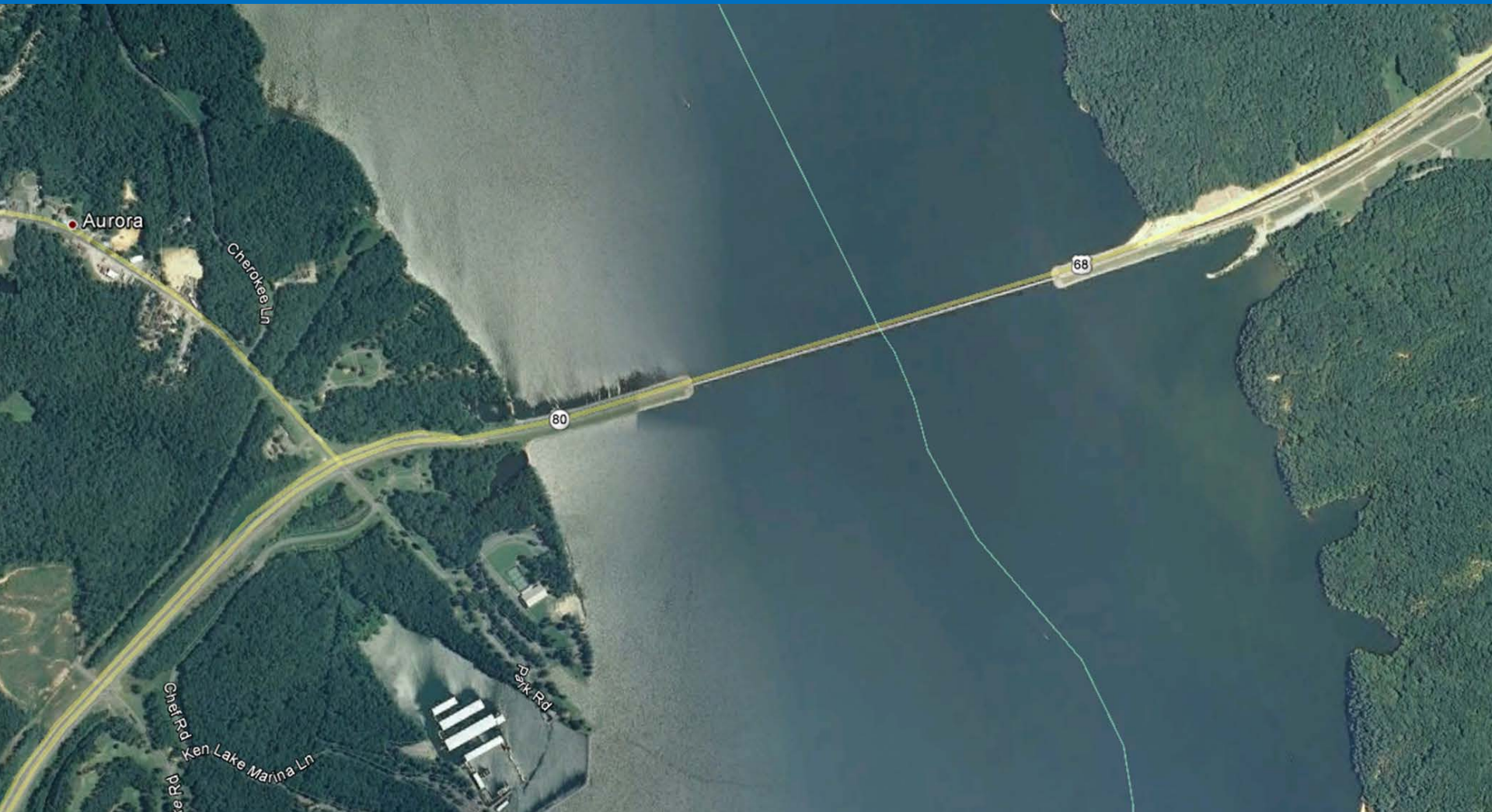
Existing Lake Barkley Bridge



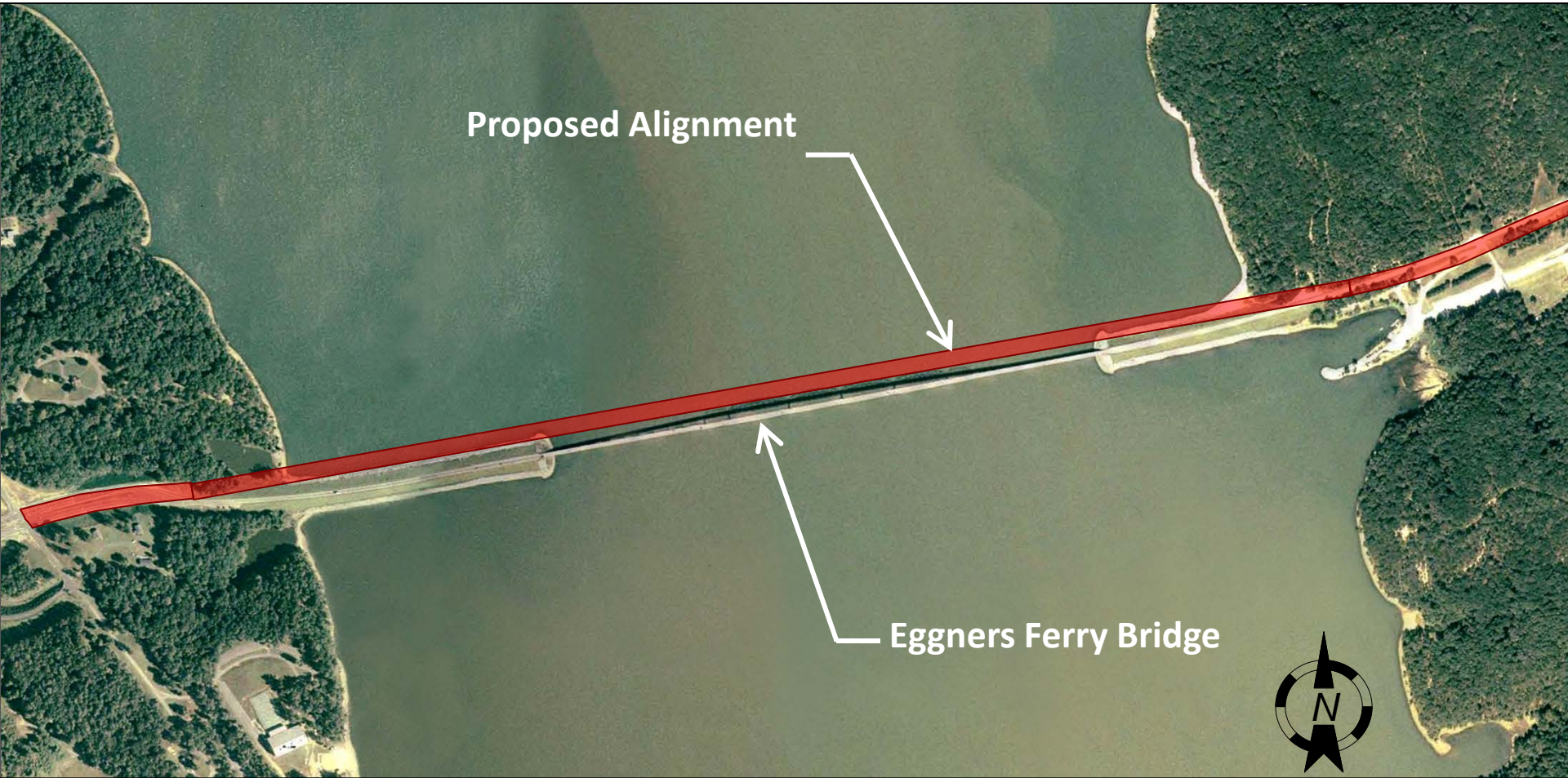
Site Map



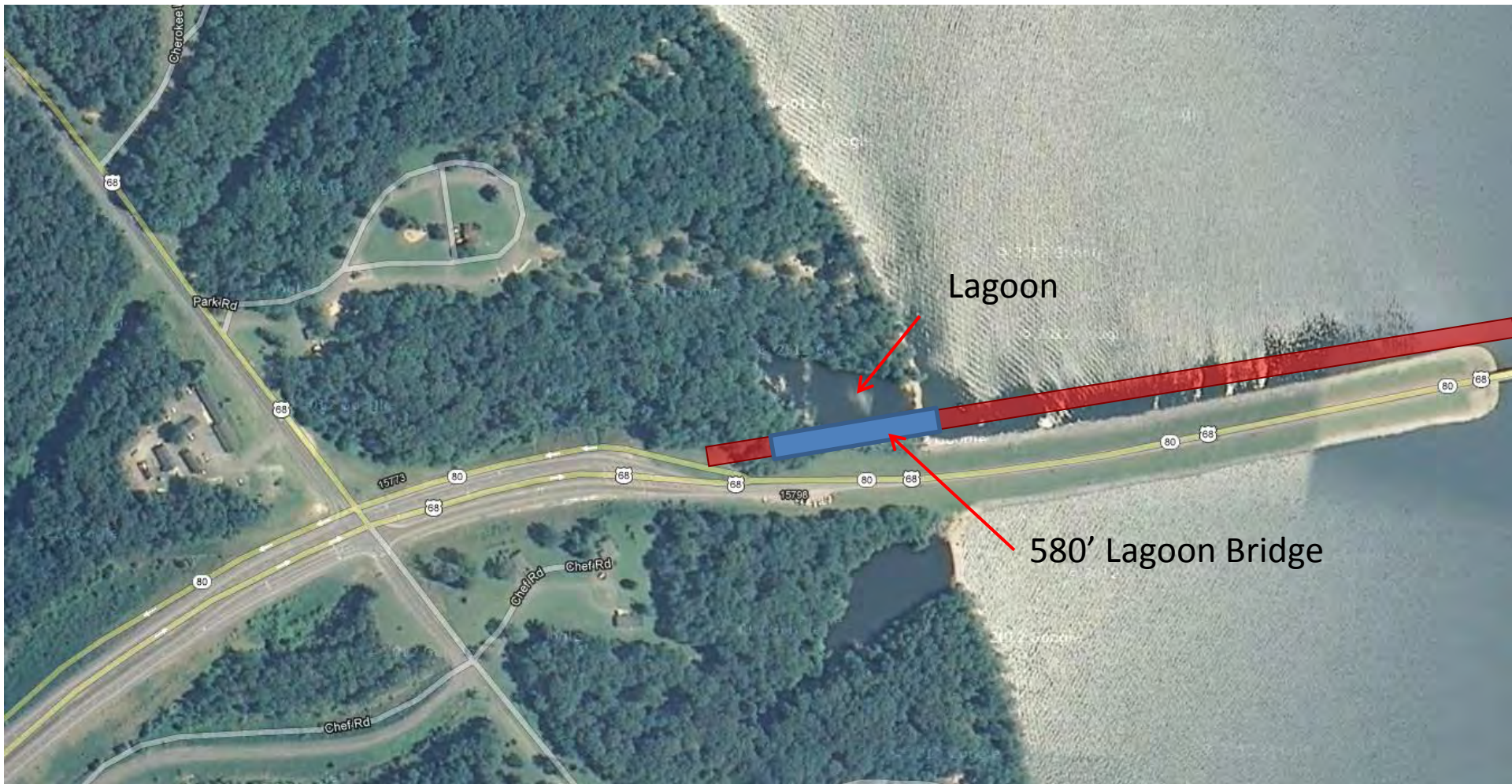
Kentucky Lake Bridge



Kentucky Lake Alignment



West Shore - Lagoon Bridge



West Shore - Causeway



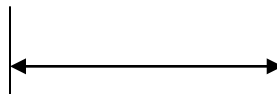
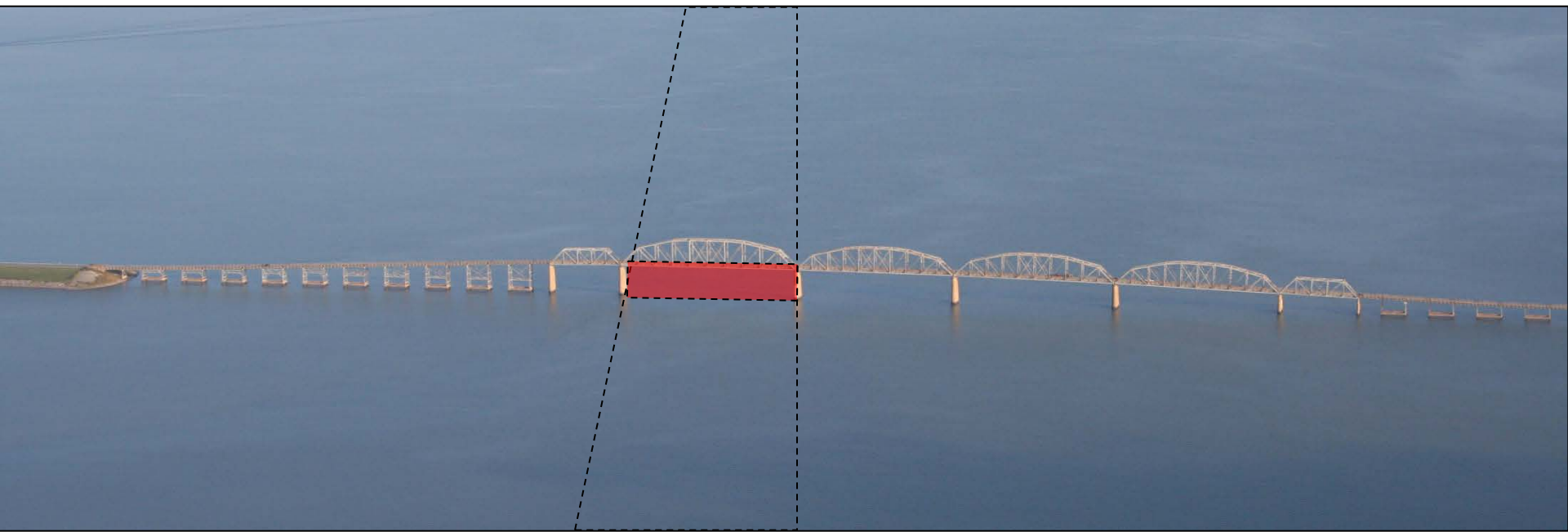
Eggner's Ferry Bridge

- Opened 1932
- Raised 1943
- Vibration Monitoring



Navigational Channel

Kentucky Lake (Looking North = Downstream)

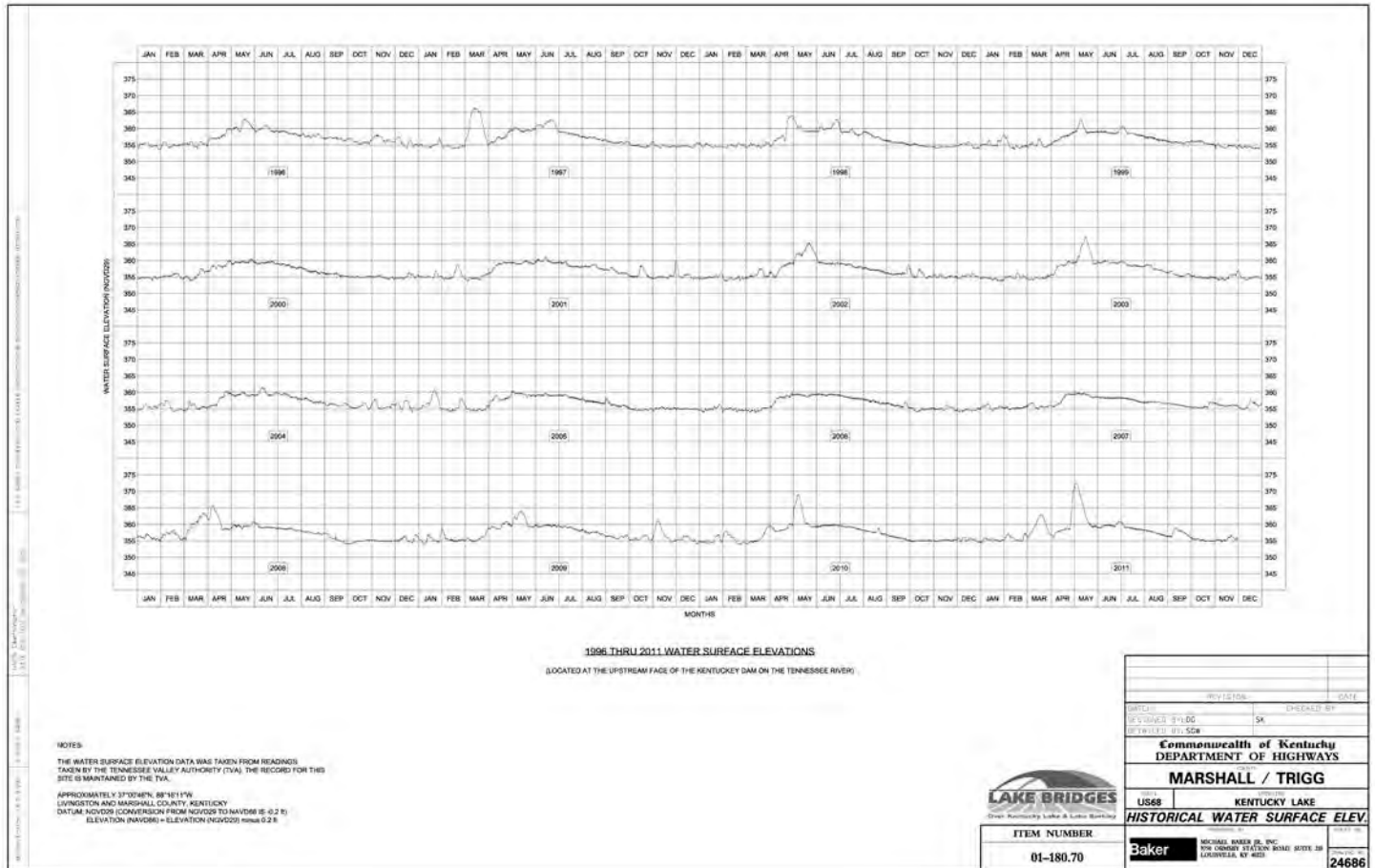


Do Not Block Navigation Channel

Kentucky Dam



Water Surface Elevation Varies



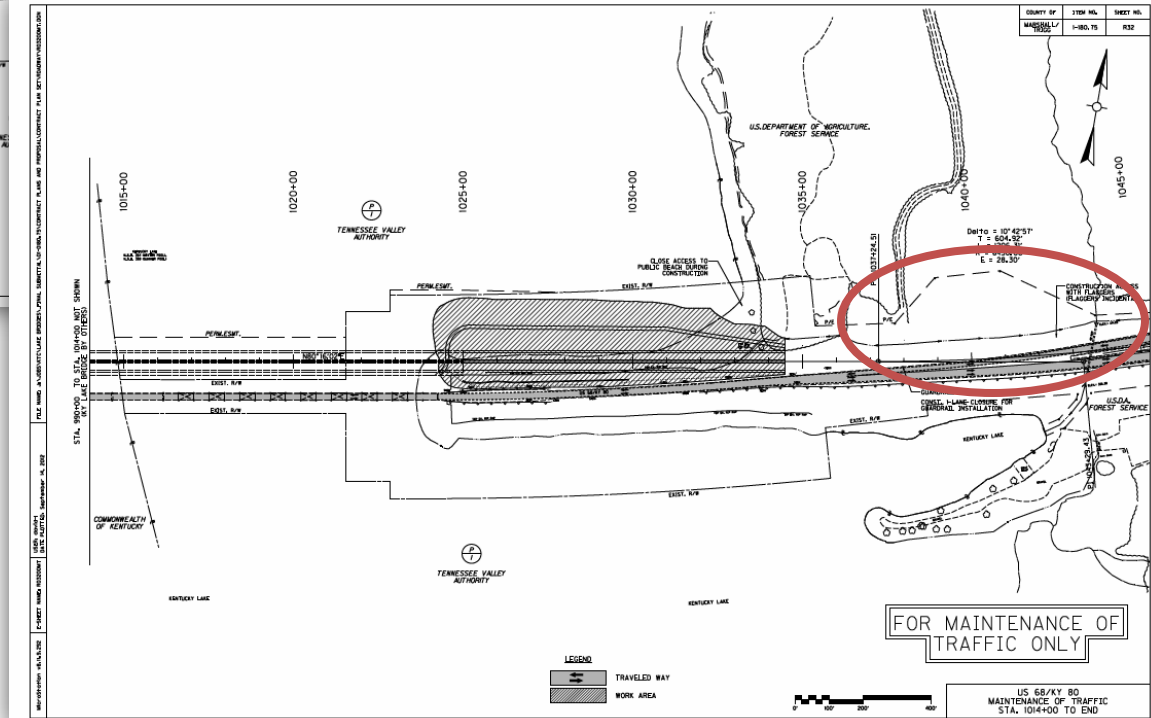
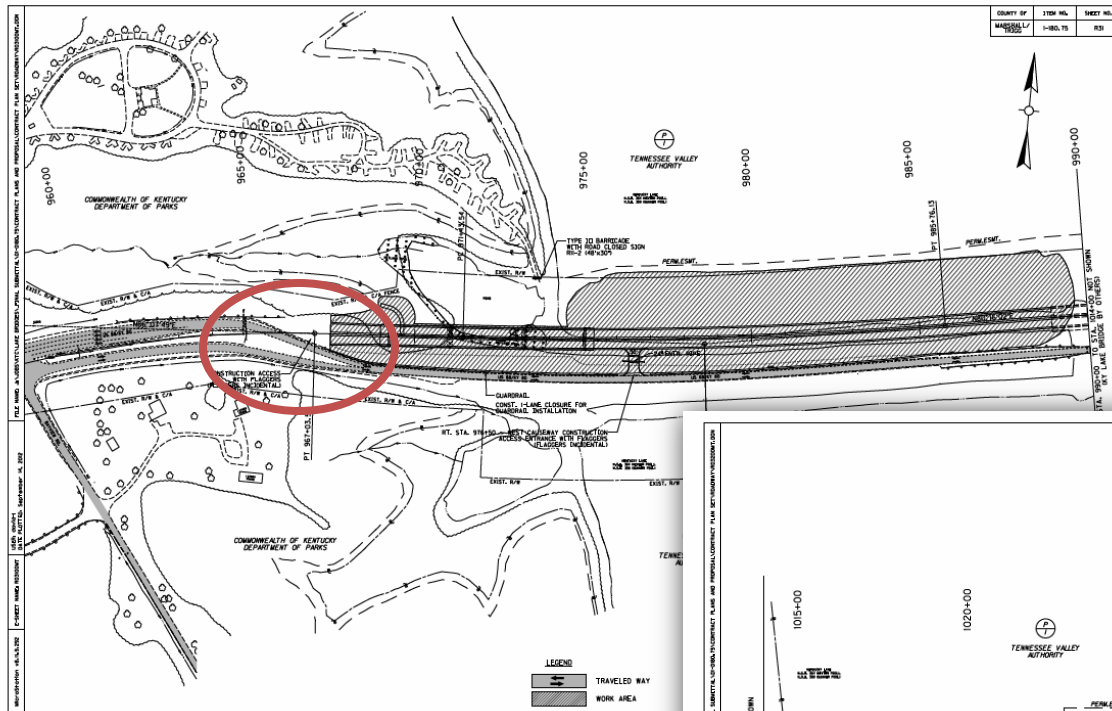
Environmental Commitments

- See Special Notes on Sheet R2C
 - Constr. Noise
 - Disturbance Areas, Clearing & Grubbing
 - Invasive Species
 - Work Hour Restrictions
 - Etc.
- See Erosion Control Notes on Sheet R33
 - Constr. In/Near the Waters of KY Lake



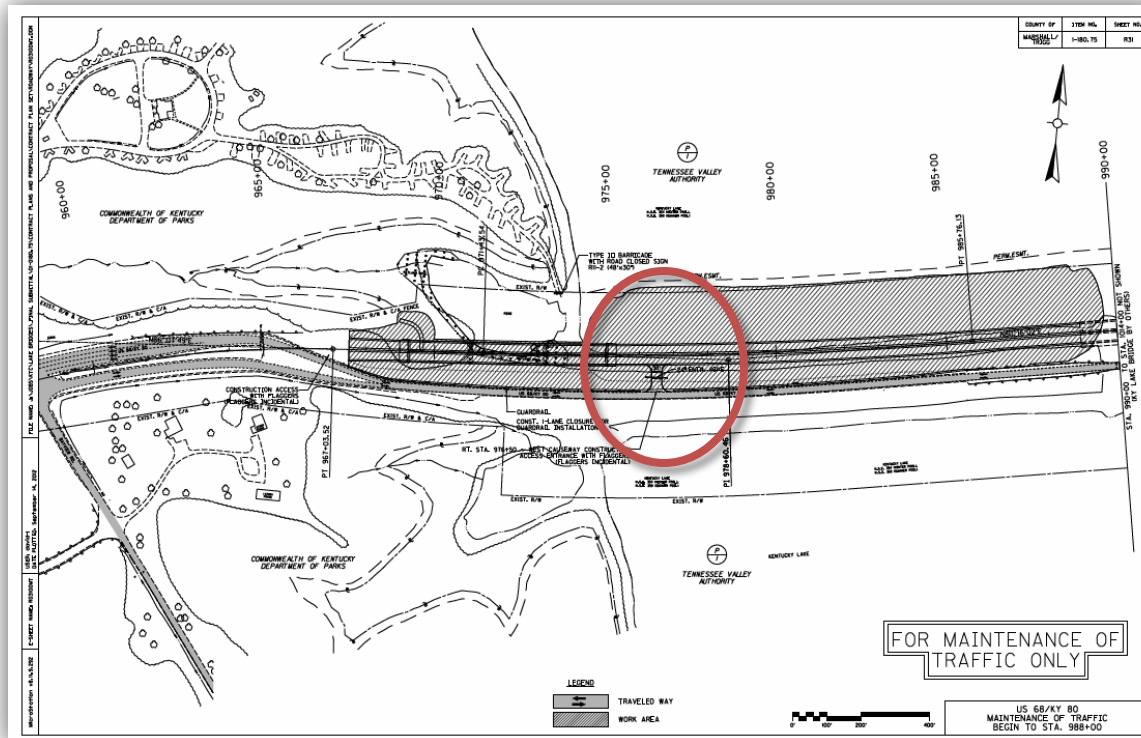
Construction Entrances

- Access Near Begin & End Constr. Sta.
- Previously Graded Areas



Construction Entrances

- West Causeway Construction Entrance



Construction Entrances

- See Note on Sheet R30

- To remain in place for future use by others during KY Lake Bridge construction

COUNTY OF		SECTION	SHEET NO.
MADISON		1-100	100

MAINTENANCE OF TRAFFIC NOTES

GENERAL NOTES

- TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE STANDARD DRAWINGS, CURRENT EDITIONS.
- EXCEPT FOR THE ROADWAY AND TRAFFIC CONTROL, NO ITEM OF WORK NECESSARY TO MAINTAIN AND CONTROL TRAFFIC WILL BE PAID AS THE LUMP SUM BID PRICE. (1) MAINTENANCE AND CONTROL TRAFFIC AS SET FORTH IN THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2) SHALL BE CONSIDERED PART OF THE LUMP SUM BID TO MAINTAIN AND CONTROL TRAFFIC SHALL ALSO INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS AND OPERATIONS:
 - ALL GRADING AND NECESSARY DRAINAGE CHANNELS (STORMWATER) IN THESE PLANS FOR TEMPORARY ROADWAYS AND REMOVAL THEREOF, WHEN IT IS NO LONGER NEEDED.
 - ALL LABOR AND MATERIALS NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES AND WARNING.
 - ALL PLACEMENTS AND TRAFFIC CONTROL DEVICES SUCH AS, BUT NOT LIMITED TO, FLAGMANS, SIGNS, UNBARRICADED AND VERTICAL PANELS, PLASTIC DRUMS, PILES, DRUMS WILL NOT BE PERMITTED AND CONES NECESSARY FOR THE CONTROL AND PROTECTION OF VEHICLES AND PREVENTION TRAFFIC, AS SPECIFIED IN THESE NOTES, THE PLANS, THE NOTES OF THE ENGINEER.
- ANY TEMPORARY TRAFFIC CONTROL DEVICES, SIGNALS, MATERIALS AND INCIDENTALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR WHEN NO LONGER NEEDED, UNLESS OTHERWISE NOTED IN THESE PLANS.
- THE CONTRACTOR SHALL MAINTAIN THE EXISTING US-45/US-40 TRAVEL WAY WITH NO REDUCTION TO THE EXISTING NUMBER OF LANES OR LANE WIDTH. HOWEVER, DURING WORKING HOURS, THE ROAD TRAFFIC MAY BE ALLOWED AT THE DISCRETION OF THE ENGINEER, PROVIDED ADEQUATE SIGNALING AND A FLAGPERSON ARE AT THE LOCATION.
- THE CONTRACTOR SHALL COMPLETELY COVER ANY EXISTING EXISTING, PERMANENT OR TEMPORARY, WHEN DO NOT PROPERLY APPLY TO THE CURRENT TRAFFIC PATTERN, AND SHALL MAINTAIN THE EXISTING LANE, THE SIGNS ARE APPLICABLE OR ARE REMOVED.
- IN GENERAL, ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED STARTING AND PROCEEDING IN THE DIRECTION OF THE PLAN OF TRAFFIC AND REMOVED STARTING AND PROCEEDING IN THE DIRECTION OPPOSITE THE PLAN OF TRAFFIC.
- THE ENGINEER AND THE CONTRACTOR, OR THEIR AUTHORIZED REPRESENTATIVES, SHALL REVIEW THE SIGNING BEFORE TRAFFIC IS ALLOWED TO USE ANY LANE CLOSURES, OVERTURNING OR DETOURS, ALL SIGNS SHALL BE APPROVED BY THE ENGINEER BEFORE WORK CAN BE STARTED BY THE CONTRACTOR.
- IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TRAFFIC CONTROL, SIGNALING OR CONSTRUCTION SCHEDULE OUTLINED IN THESE PLANS AND THIS PROPOSAL, HE SHALL PREPARE AN ALTERNATE PLAN AND PRESENT IT IN WRITING TO THE ENGINEER. THIS ALTERNATE PLAN CAN BE USED ONLY AFTER REVIEW AND APPROVAL OF THE SIGNING OF TRAFFIC, SIGNALING AND CONSTRUCTION, AND THE FEDERAL HIGHWAY ADMINISTRATION, WHEN APPLICABLE.
- IF TRAFFIC SHOULD BE STOPPED DUE TO CONSTRUCTION OPERATIONS AND AN EMERGENCY REMOVED ON AN SPECIAL EMERGENCY PLAN APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL MAKE THE PROVISIONS FOR THE PASSAGE OF THAT VEHICLE AS QUICKLY AS POSSIBLE.

NOT REVISIONS

NO LANE CLOSURES WILL BE ALLOWED DURING THE OBSERVANCE OF ALL NATIONAL HOLIDAYS IDENTIFIED IN SECTION 101.0 OF THE STANDARD SPECIFICATIONS. SPECIAL EVENTS ARE ALSO HELD ON THE SITE AREA AND AT NEARBY STATE PARKS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SCHEDULE CONSTRUCTION ACTIVITIES SUCH THAT IMPACTS TO THE EVENTS ARE AVOIDED. A CLOSING OF EVENTS CAN BE OBTAINED FROM THE EAST AND NEARBY STATE PARKS. KVA RESERVES THE RIGHT TO RESTRICT THE USE OF LANE CLOSURES DUE TO UNFORESEEN SPECIAL EVENTS.

GUARDRAILS

INSTALLATION OF THE PROPOSED GUARDRAILS ALONG THE EXISTING ROAD, AS DEPICTED ON THE PLANS, SHALL BE PERFORMED PRIOR TO OTHER CONSTRUCTION ACTIVITIES TO PROVIDE PROTECTION FOR THE WORK AREA. MAINTENANCE OF THE GUARDRAILS, INCLUDING REPAIRS AFTER COLLISIONS, WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PERFORMED AT THE DISCRETION OF THE ENGINEER.

TEMPORARY SIGNS

PLACE THE FOLLOWING SIGNS AS REQUIRED BY THE MUTCD, STANDARD DRAWINGS AND THE PLANS:

MUTCD CODE	DESCRIPTION	SIZE	QTY	TOTAL
W2-1	ROAD AHEAD	48" x 36"	2	2
W2-2	THE ROAD AHEAD WITH VEHICLE	48" x 36"	2	2
W2-3	BE PREPARED TO STOP	48" x 36"	2	2
W2-4	FLALED CLOSURE	48" x 36"	2	2
W2-5	BE READY TO STOP	36" x 24"	2	2
W2-6	LANE CLOSED	36" x 24"	2	2

THE ROAD WORK AHEAD SIGN SHALL BE PLACED AT THE BEGINNING OF THE ROADWORK AND THE BARRICADE BY THE ROAD CLOSURE DIVISION WILL BECOME THE PROPERTY OF THE DEPARTMENT UPON COMPLETION OF THE CONTRACT FOR FUTURE USE BY OTHERS UNDER THE SUBSEQUENT KY LAKE BRIDGE REPLACEMENT CONTRACT. ALL OTHER SIGNS REQUIRED FOR LANE CLOSURES DURING GUARDRAIL INSTALLATION WILL REMAIN THE PROPERTY OF THE CONTRACTOR.

WEST CAUSWAY CONSTRUCTION ACCESS ENTRANCE

THE WEST CAUSWAY CONSTRUCTION ACCESS ENTRANCE SHALL REMAIN IN PLACE BEYOND THE COMPLETION OF THE PROJECT FOR FUTURE USE BY OTHERS UNDER THE SUBSEQUENT KY LAKE BRIDGE REPLACEMENT CONTRACT. IT SHALL BE CONSTRUCTION IN ACCORDANCE WITH SECTION 101.0 OF THE STANDARD SPECIFICATIONS. (1) GRADE AND DRAIN QUANTITIES FOR THE ENTRANCE HAVE BEEN DELIVERED IN THE PLANS. (2) OTHER ITEMS WILL BE CONSIDERED INCIDENTAL TO THE END ITEM "MAINTENANCE AND CONTROL TRAFFIC."

WEST CAUSWAY CONSTRUCTION ACCESS ENTRANCE

THE WEST CAUSWAY CONSTRUCTION ACCESS ENTRANCE IS SHOWN ON THESE PLANS AS A 10' x 10' SIGN. FOR INFORMATION ONLY, THE CONTRACTOR MAY WISH TO ENLARGE THE ENTRANCE ALONG THE WEST CAUSWAY WITH THE APPROVAL OF THE ENGINEER, PROVIDED THAT THE ENTRANCE IS NO CLOSER TO THE EXISTING EXISTING PAVEMENT THAN 10' FROM THE EXISTING PAVEMENT. THE ENTRANCE SHALL BE CONSIDERED INCIDENTAL TO THE END ITEM "MAINTENANCE AND CONTROL TRAFFIC."

CONTRACTOR COOPERATION

THE KY LAKE BRIDGE REPLACEMENT CONTRACT IS ANTICIPATED TO BE LET AS EARLY AS FALL OF 2025. THE WEST CAUSWAY CONSTRUCTION ACCESS ENTRANCE SHALL BE REMOVED WITH THE LAKE BRIDGE CONTRACT. IT IS NOTED THAT THE CONTRACTOR SHALL PROVIDE THE LANE CLOSURE WITH UNRESTRICTED ACCESS TO THE WEST CAUSWAY VIA THE WEST CAUSWAY CONSTRUCTION ACCESS ENTRANCE. SHOULD THE CONTRACTOR USE ALTERNATE ACCESS TO THE WEST CAUSWAY, AS APPROVED BY THE ENGINEER, IN LIEU OF THE WEST CAUSWAY CONSTRUCTION ACCESS SHOWN ON THESE PLANS, THEN THESE MEASUREMENTS WILL APPLY TO THE ALTERNATE ACCESS.

COOPERATE WITH THE LAKE BRIDGE CONTRACTOR IN ACCORDANCE WITH SECTION 101.0 OF THE STANDARD SPECIFICATIONS.

U.S. 68/KY 80
MAINTENANCE OF TRAFFIC NOTES



- Share Access to West Causeway Work Area
- Cooperate with KY Lake Bridge Contractor

Contractor Coordination

- Misc. items to remain in place for future use by others during KY Lake Bridge construction
 - Selected Temporary Signs
 - See Sheet R30
 - Erosion Control Devices
 - See Sheet R33



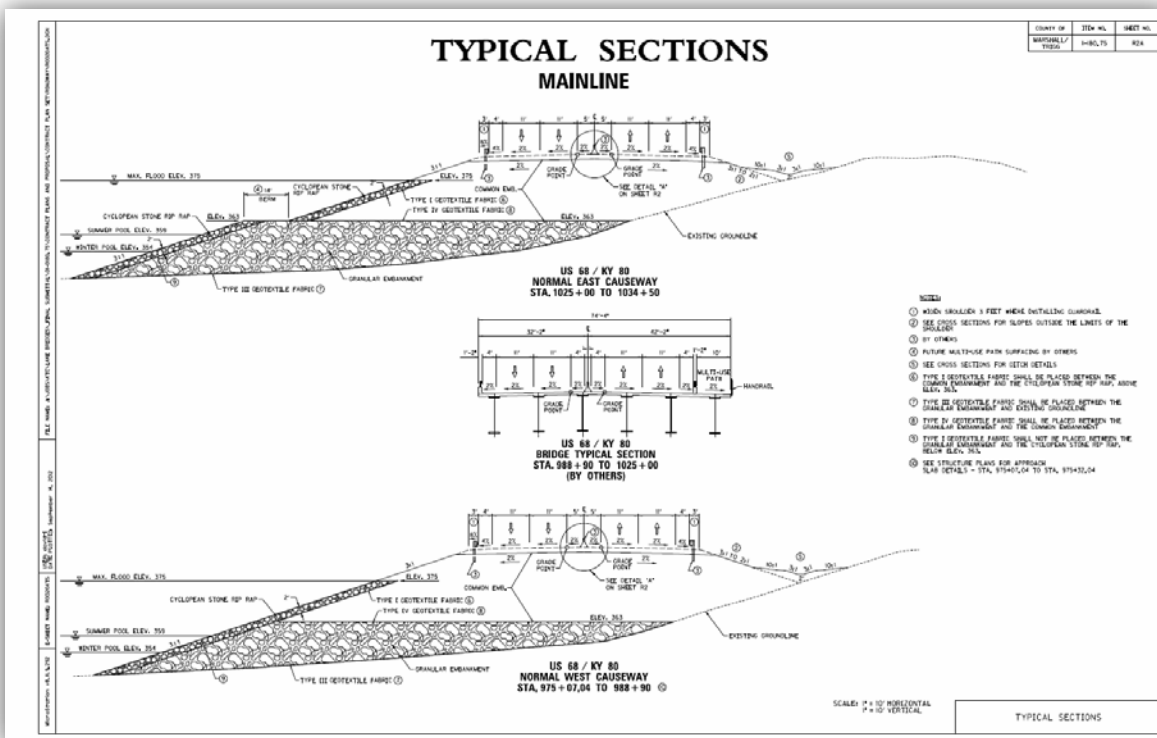
Roadway and Causeway

- Grade and Drain Construction
 - West Approach to Lagoon Bridge
 - West KY Lake Causeway Widening
 - East KY Lake Causeway Widening
- Work area is outside the limits of existing roadway
- Paving not included; will be in future construction package



Causeway Widening

- Proposed Causeway Material
 - Granular Embankment from existing lake bottom up to min. elev. of 363 ft.
 - Common Emb. above elev. 363 ft.
 - Cyclop. Stone Rip Rap slope protection up to elev. 375 ft.



Causeway Widening

- See Geotechnical Notes Sheet R40 for causeway embankment material specifications

COUNTY OF		ITEM NO.	SHEET NO.
MADISON		1-180,75	R40

GEOTECHNICAL NOTES

- Clearing and grubbing of embankment areas shall be completed in accordance with Section 202 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- Removal of existing structures and other obstructions shall be completed in accordance with Section 203 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- Based upon available soil testing performed along this project, some soil horizons are considered to be erodible. Procedures shall be performed as required to control erosion and water pollution in accordance with Sections 202 and 203 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- All water wells and/or clusters within the limits of construction, whether shown on the plans or not, shall be plugged in accordance with Section 708 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
- All channel changes and special ditches shall be constructed prior to placement of any embankment materials adjacent to them in accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Materials excavated from these areas may be utilized in construction of the embankments, but may require special authorization prior to placement operations. No extra payment shall be permitted for re-handling, hauling, stockpiling and/or manipulating these materials.
- In accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, the moisture content of embankment and subgrade materials shall not vary from the optimum moisture content, as determined by KM 64-50, by more than plus or minus two percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment and subgrade construction. Embankment materials that are constructed above Elevation 363 feet shall be compacted to at least 95 percent of the standard proctor maximum dry density as determined by KM 64-50. Refer to the family of curves for moisture-density relationships.
- The Contractor is responsible for conducting any operations necessary to excavate the cut areas to the required typical sections. These operations shall be incidental to Embankment in Place.
- All soils, whether from roadway excavation or borrow, may require manipulation to obtain proper moisture contents prior to compaction. Direct payment shall not be permitted for re-handling, hauling, stockpiling and/or manipulating soils.
- Existing stone riprap in the footprint of the proposed embankment shall be removed and/or stockpiled prior to any embankment construction or ground improvement being constructed. This will include the existing stone riprap above and below the waterline. These operations shall be incidental to Granular Embankment below Elevation 363 feet and incidental to Embankment in Place above Elevation 363 feet.
- Ground Improvement shall be constructed in accordance with the "Special Note for Wet Deep Soil Mixing." Construct Wet Deep Soil Mixing at the following station intervals before any of the embankment is constructed:
 - Station 974+50 to Station 976+04
 - Station 987+40 to Station 989+56
 - Station 1026+50 to Station 1028+02
- The embankment from the existing ground line to a minimum elevation of 363 feet shall be constructed of Granular Embankment meeting the requirements of Section 805.0 of the Standard Specifications for Road and Bridge Construction, current edition. This portion shall be constructed by end-dumping and grading the material in accordance with Section 805 of the Standard Specifications for Road and Bridge Construction into the loose side until a firm working platform is constructed above the water, upon which normal embankment construction can take place. As per Section 805.03.04 of the Standard Specifications for Road and Bridge Construction, the granular embankment shall be non-erodible and stable material and is required to be quarry-processed limestone. The outside geometry of this portion of embankment should be such that the toe of the construction here should extend to the approximate location of the projected roadway embankment toe, resulting in an effective geometry from top of slope to toe of slope. Prior to placement of granular embankment, Type III geotextile fabric shall be placed beneath the granular embankment, and at the interfaces of the granular embankment and existing ground line. Also, in accordance with Section 240.03.03 of the Standard Specifications for Road and Bridge Construction, it will be required to limit the drop height of the lowest 2 feet of granular embankment to no greater than 3 feet to avoid damaging the Type III geotextile fabric. Prior to placement of the embankment materials above Elevation 363 feet and after placement of the granular embankment, Type IV geotextile fabric shall be placed on the granular embankment to serve as a separator. Both Type III and Type IV geotextile fabrics shall be in accordance with Section 244 and 843 of the current Kentucky Department of Highways Standard Specifications. This work shall be done as shown on the project cross-sections and as directed by the Engineer.
- All fill slopes shall be protected with a minimum two feet of Cyclopean Stone Riprap meeting the requirements of Section 805 of the Standard Specifications for Road and Bridge Construction, current edition. The riprap shall be placed as an integral part of the embankment and not as an additional thickness on the outside face of final embankment geometries. The riprap shall extend from the toe of the embankment upward to Elevation 375 feet. The riprap shall be placed in accordance with Section 703 of the current standard specifications for Road and Bridge Construction and as directed by the Engineer. A Type I geotextile fabric, meeting the requirements of Sections 244 and 843 of the Standard Specifications for Road and Bridge Construction, current edition, shall be placed between the embankment above Elevation 363 feet and the slope protection.
- The geotechnical engineer has performed a geotechnical investigation and program of soil testing. The geotechnical engineer has performed a geotechnical investigation and program of soil testing. The geotechnical engineer has performed a geotechnical investigation and program of soil testing. Refer to the "Special Note for Pile Load Testing Program" for specific details, locations, and required coordination with roadway construction.
- The Contractor is allowed to construct portions of the embankments on this project prior to and/or concurrently with pile load testing, and bent construction and the ground improvement that is being constructed in the intervals mentioned in the Geotechnical Note Number 10, if desired. These embankment areas include the following:
 Division of Project to station 984+75
 Station 1026+00 to end of Project
- Materials used for embankment construction above Elevation 363 feet shall have the following minimum effective strength parameters:
 Cohesion $c' \geq 50$ PSF
 Friction Angle $\Phi \geq 30^\circ$
 The friction angle of 30° as shown above is an absolute minimum for the embankment materials above Elevation 363 feet. Also, if the cohesion of the embankment materials is found to have a cohesion value less than 50 PSF, then the friction angle has to be a minimum of 32° . These minimum strength parameters shall be verified through the use of laboratory tests on collected samples to obtain source approval. The Contractor is responsible for obtaining the necessary samples through the use of either test pits or auger borings, performing the required laboratory tests and presenting these results in advance for KYTC's approval prior to beginning construction of the embankment above Elevation 363 feet. Laboratory testing on these samples shall include Consolidated Undrained (CU) triaxial in accordance with ASTM D297 for determining the material's strength. Prior to performing the CU triaxial tests, the lab samples are to be compacted to a minimum of 95 standard proctor maximum dry density as determined by KM 64-50. Also, the moisture content of the lab samples shall not vary from the optimum moisture content, as determined by KM 64-50, by more than plus or minus two percent. It is required that all necessary CU triaxial tests be performed and approved by KYTC prior to beginning construction of the embankment above Elevation 363 feet. A minimum of one (1) set of triaxial tests shall be completed for up to 50,000 cubic yards of embankment or for every change in either material type or borrow source. One (1) CU set constitutes three (3) individual triaxial tests or points. After completion of the CU triaxial tests, index testing shall also be performed on each of the samples. These index tests will include Atterberg Limits in accordance with ASTM D287 and 170 and Gradation in accordance with ASTM D287. Soils that classify as nonplastic (NP) will not require Atterberg Limits. Laboratory testing needs to be performed by a firm pre-qualified by KYTC for Geotechnical Laboratory Testing and ASTM Materials Reference Laboratory (MRL) Accredited for ASTM D297, T88, T89 and T90. Prior to beginning testing, consult the Geotechnical Branch to ensure that a lab is accredited or certified. The cost of obtaining the samples and performing the laboratory tests shall be incidental to the unit price for Embankment in Place.

GEOTECHNICAL NOTES

Causeway Widening

- Other Activities within Causeway Footprint
 - Wet Soil Mixing
 - See Special Note for Wet Deep Soil Mixing
 - See Sheets R83-R90
 - Pile Load Testing
 - See Special Note for Pile Load Testing Program
 - Granular Pile Cores
 - Lagoon Bridge
 - See Sheet S12 for embankment construction sequence at End Bent 2
 - KY Lake Bridge
 - See Sheet R25-R26 for embankment construction sequence at end bents



Summary of Deep Soil Mixing

- Deep Soil Mixing is Needed to Improve Subsurface Soils based on Seismic Design Considerations
- Deep Soil Mixing – Initial submittals required including Qualifications, Schedule, Construction Plan and Shop Drawings
- QC Requirements including the use of Pre-Qualified Drilling and Lab Consultants
- Wet Deep Soil Mixing Introduces a Binder in Slurry Form with Existing Soils
- Creates a Column of Improved Soil



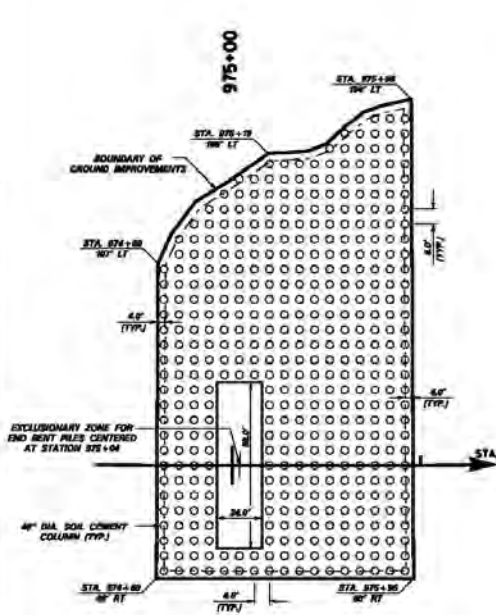
Summary of Deep Soil Mixing

- Project Limits:
 1. STA 974+60 to STA 976+04
 2. STA 987+40 to STA 989+56
 3. STA 1024+50 to STA 1026+02
- Total Plan Quantity = 57,500 CY of Soil-Cement
- Possibility of Chert Encountered above Plan Column Tip
- Work on Barge for Soil-Cement Columns Under Water
- Exclusion Zones for Pile Installation at 3 End Bents

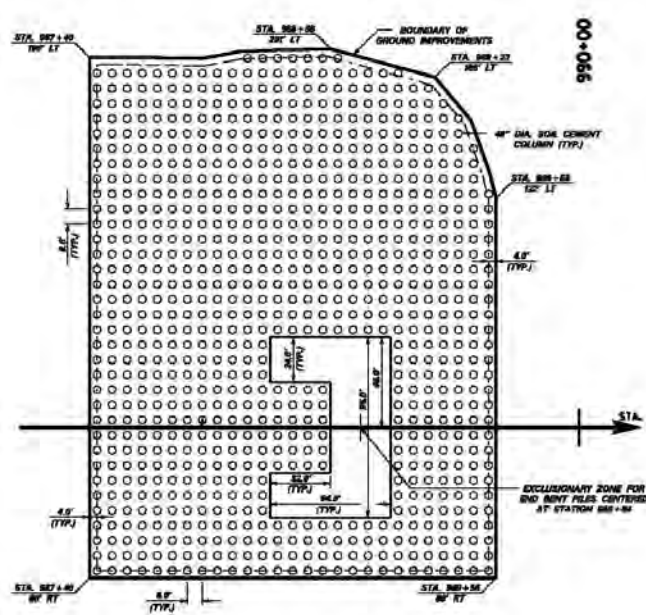


Deep Soil Mixing

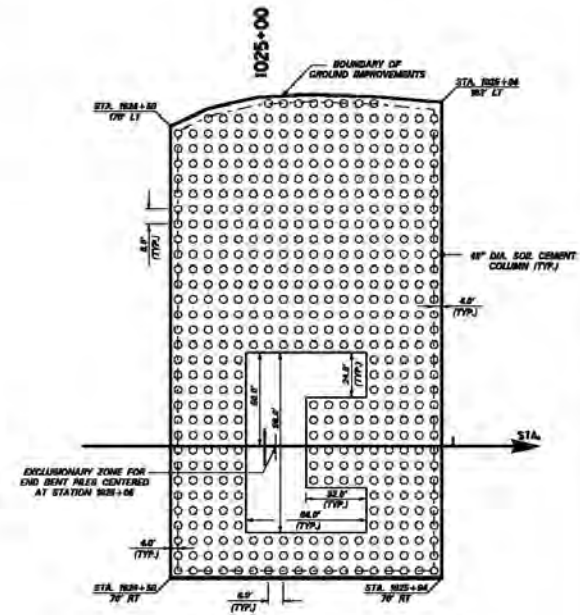
COUNTY OF	ITEM NO.	SHEET NO.
MARSHALL TRIGG	1-180.75	



LAGOON BRIDGE - END BENT 2
ESTIMATED QUANTITY = 10,000 C.Y.



KENTUCKY LAKE BRIDGE - END BENT 1
ESTIMATED QUANTITY = 27,000 C.Y.



KENTUCKY LAKE BRIDGE - END BENT 2
ESTIMATED QUANTITY = 13,000 C.Y.

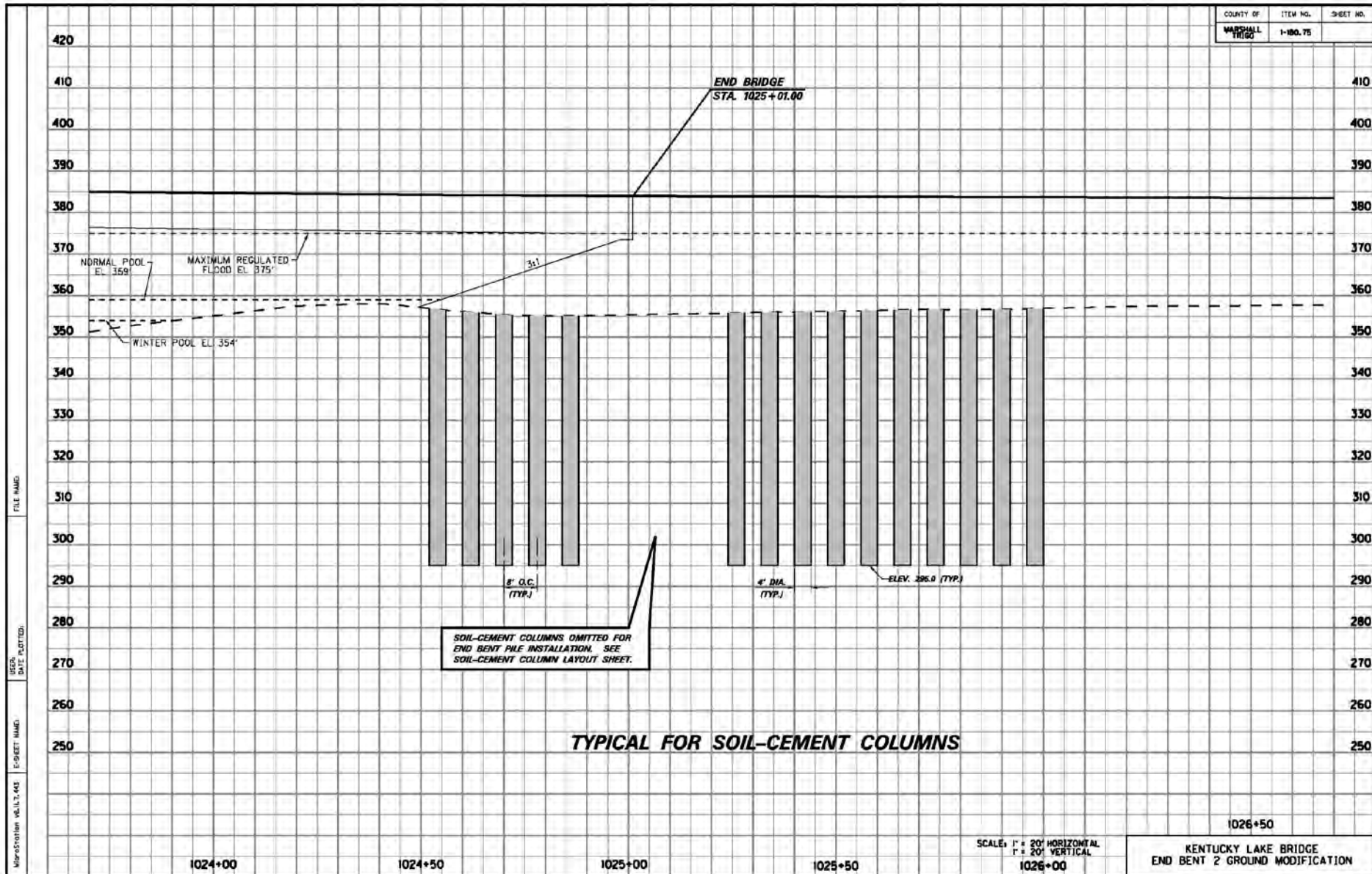
CONTINGENCY QUANTITY = 7,500 C.Y.
TOTAL PLAN QUANTITY = 57,500 C.Y.

REVISION		DATE
DATE: AUGUST 2012	CHECKED BY:	
DESIGNED BY:	DETAILED BY:	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY TRIGG AND MARSHALL		
ROUTE US 68	CROSSING KENTUCKY LAKE	
SOIL CEMENT COLUMNS		
PREPARED BY Florence & Hutcherson An ICM Company		
ITEM NUMBER 1-180.75		SHEET NO. DRAWING NO.

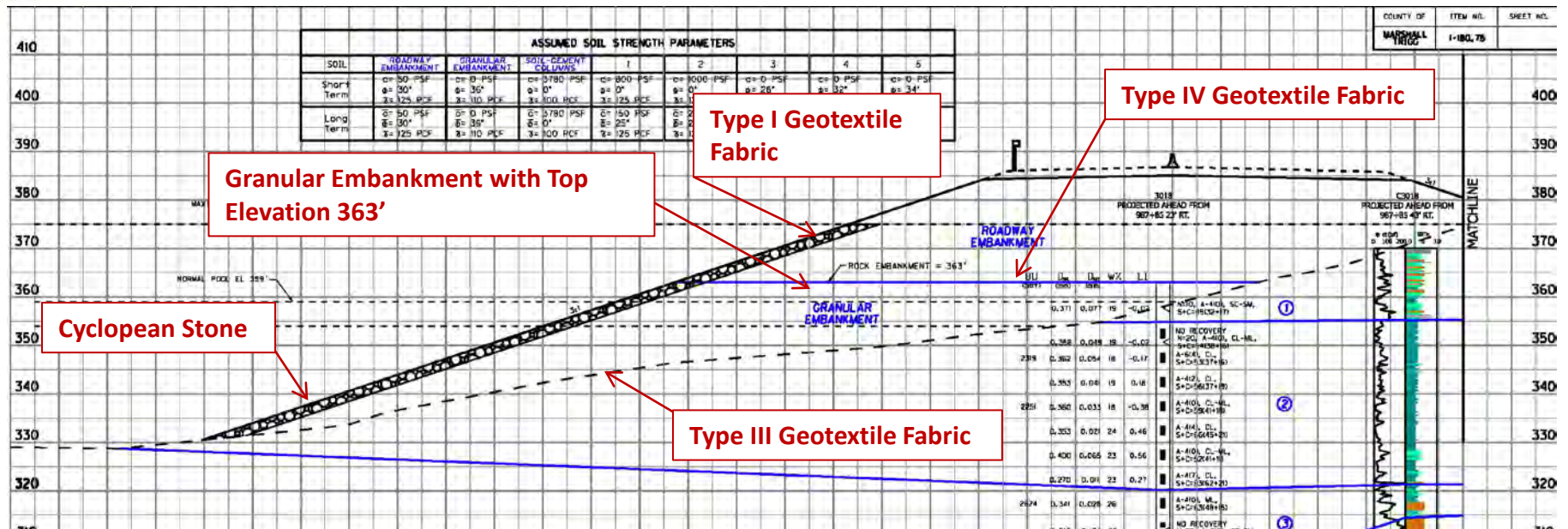


1-180.75

Deep Soil Mixing



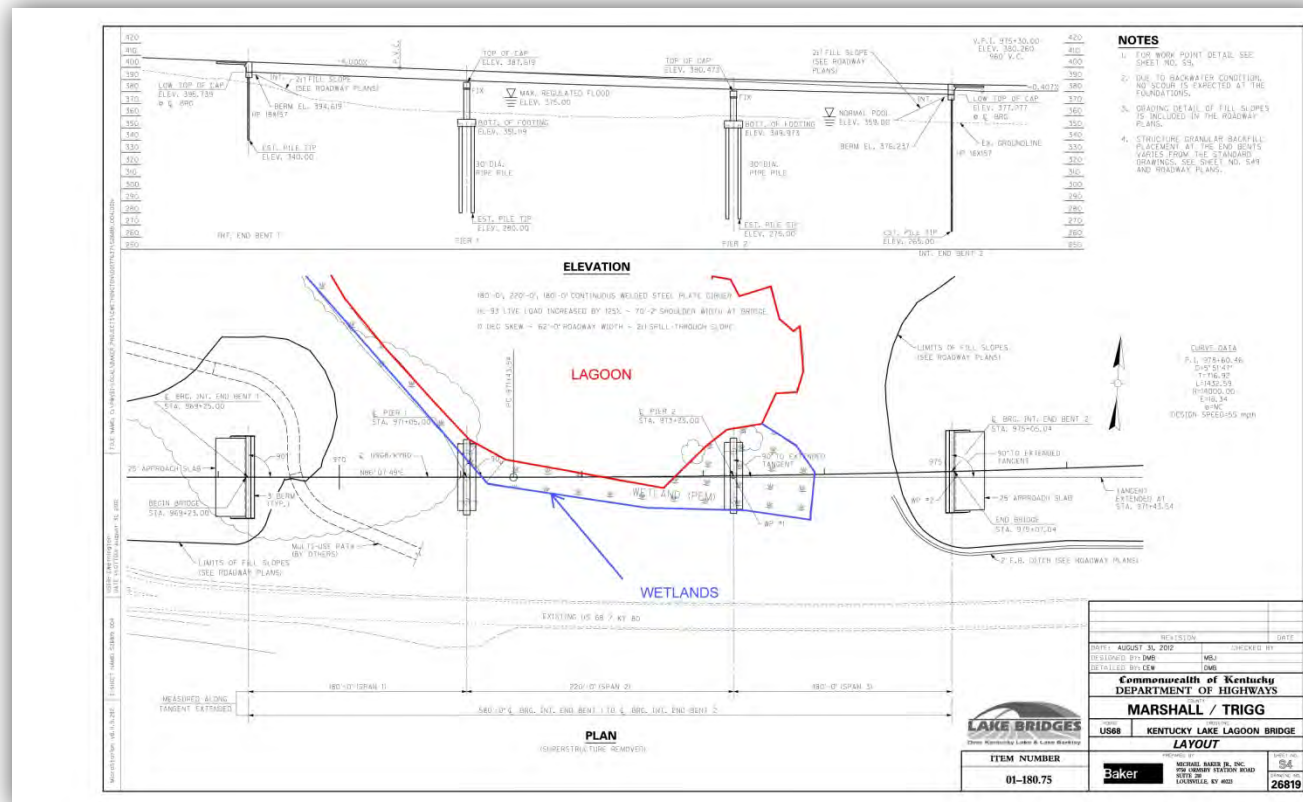
Causeway Construction



- Prior to placement of Granular Embankment, Type III Geotextile Fabric shall be placed between Granular Embankment and existing ground line
- Granular Embankment up to Elevation 363' by End Dumping Method as per Geotechnical Notes
- Type IV Geotextile Fabric shall be placed on top of Granular Embankment as a separator
- Acceptance Requirements in Geotechnical Notes for Embankment Materials Above Elevation 363'
- Lab Tests to be completed by Pre-Qualified Geotechnical Labs - Refer to Geotechnical Notes

Lagoon Bridge

- Why a Bridge vs Causeway
 - Lagoon
 - Wetlands



Specific Site Issues

- Seismic
 - High Seismic Zone
 - Essential Bridge
- Environmental Concerns
 - Mitigation Area for Wetlands
 - Span Arrangement set by Lagoon and Wetlands
 - Concrete Spillage due to Construction Activities into Lagoon and Waters of Kentucky Lake



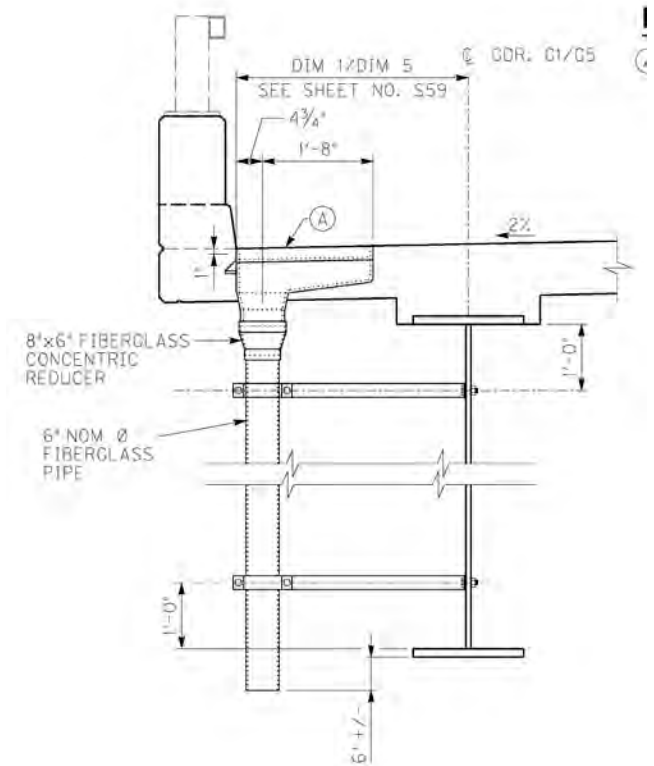
Non-Standard Specifications

- Material Specification contrary to KYTC Std Spec Book
 - Steel Reinforcement (General Notes – Sht S2)
 - ASTM A706/Grade 60 – Pier Columns and Piling Spirals
 - ASTM A615/Grade 60 – All other areas
 - Painting of Structural Steel (General Notes–Sht S3)
 - Contractor has the option to apply all painting system in shop. (Touch – up in the Field).



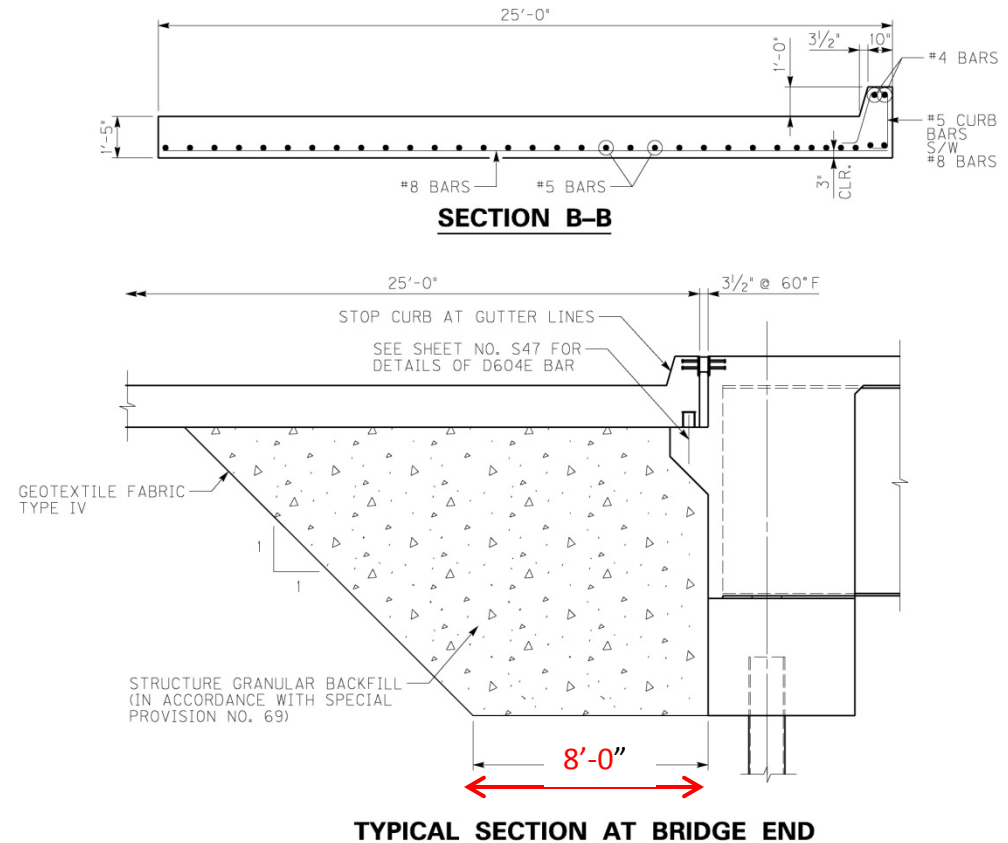
Non-Standard Details

- Deck Drains – Sht S39
 - Neenah R-3922 Drain
 - Additional Slab Reinforcement @ Drain (Sht S42)



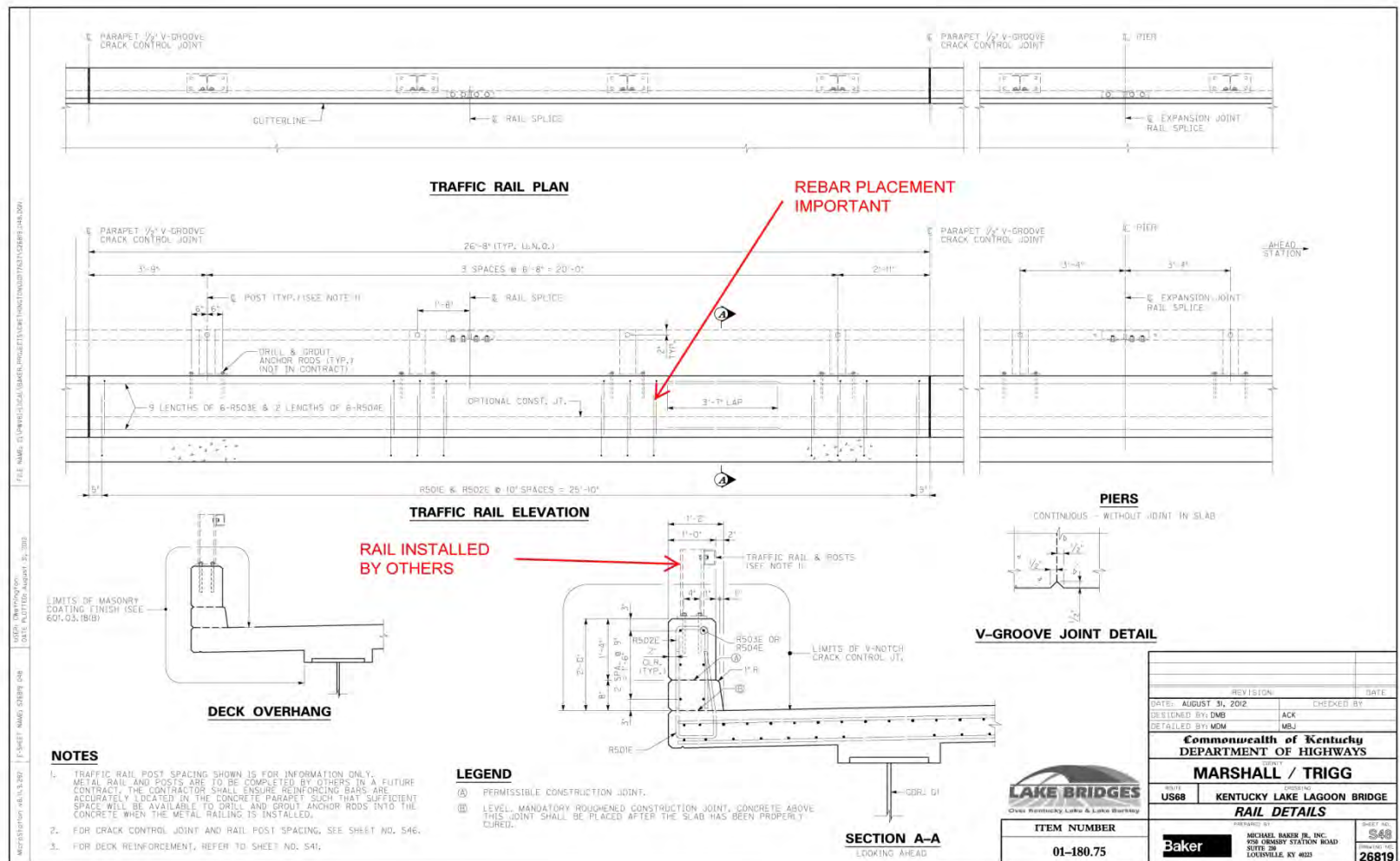
Non-Standard Details

- Approach Slab
Sheet S49
 - Expansion Joint
 - Curb
 - Non-standard
extents of
structure
granular backfill



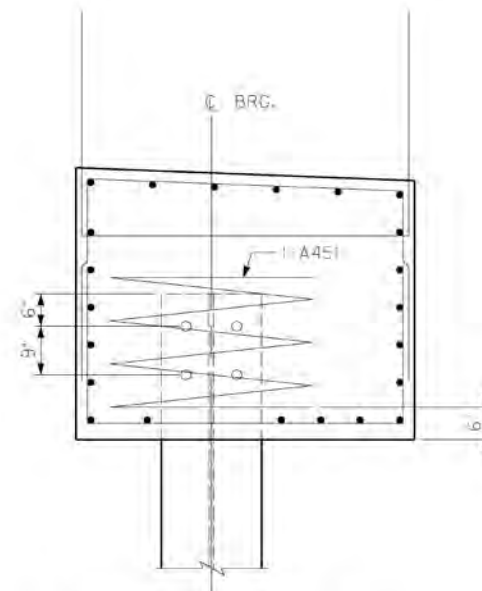
Non-Standard Details

- Barrier (Sheet S48)

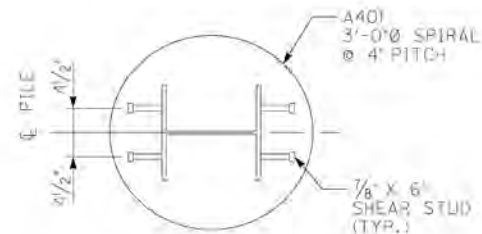


Seismic Related Details

- Pile Fixity Detail at End Bents (Shts S17 & S26)
 - Shear Studs
 - Spiral Rebar



PILE FIXITY DETAIL
TYPICAL EACH PILE

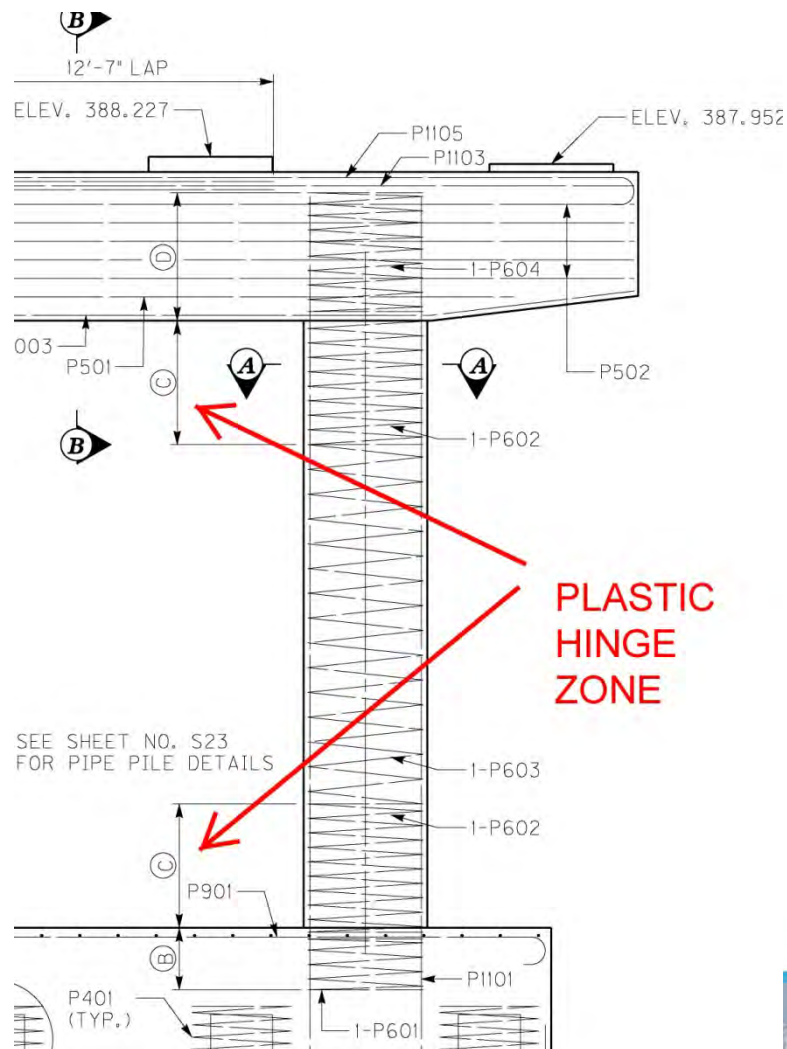


PILE FIXITY SECTION



Seismic Related Details

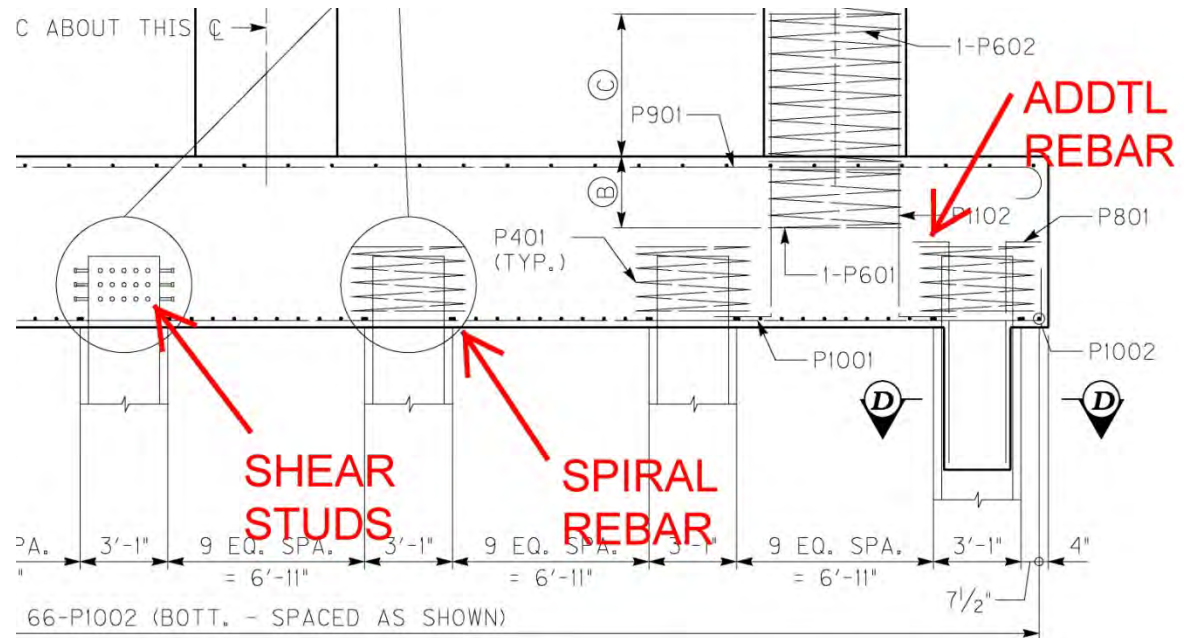
- Plastic Hinge Zone @ Pier Columns
 - Spiral Rebar – 3 ½" pitch
 - Spiral Embedment
 - Spiral Splice
- Restrictions – See General Note on Sht S2



Seismic Related Details

- Pipe Pile Detail at Pier Footings

- Shear Studs
- Spiral Rebar
- Addtl Rebar for Corner Piles @ P2



Lagoon Bridge Geotechnical Considerations

- Special Note for Subsurface Conditions - Very Dense Chert Soils present at varying elevations
- Pre-Probing and Pre-Drilling Required at Specified Locations
- H-Piles for End Bents
- Pipe Piles for Interior Piers



Lagoon Bridge Geotechnical Considerations

- End Bent 2 Construction Sequence
- End Bent 2 Ground Modification
- Dynamic and Static Pile Load Tests
- Highest allowable pile tip elevations specified



Pile Load Test Special Notes

- Pile Load Test Program – overview with initial submittals, schedule importance, test pile driving criteria, summary of program – initial driving criteria to get to test depths, very large test loads required, final, extended driving criteria
- Dynamic Pile Testing - details on qualifications, submittals, approach, etc.
- Static and Pseudo-Static Pile Testing - details on qualifications, submittals, approach, instrumentation, etc.
- Vibration Monitoring – Pre-Condition Survey and Vibration Monitoring requirements





Pile Load Test Special Notes

- Artificial Plugs
- Special Pile Testing Consultant



Pile Load Test Program Summary

					Pile Testing Summary			
Test Pile No.	Location	Pile Type	Pile Size	Nominal Pile Wall Thickness inches	Dynamic	Static	Pseudo-Static Axial	Pseudo-Static Lateral
L-1	End Bent 1	H-Pile	HP 18x157	-	X	X		
L-2	Pier No. 2	OEPP	30"	1.0	X	X		
K-1	Shallow Water	OEPP	48"	1.5	X	X		
K-2	Shallow Water	OEPP	48"	1.5	X		X	
K-3	Shallow Water	OEPP	72"	2.0	X		X	X
K-4	Shallow Water	OEPP	48"	1.0	X			
K-5	Shallow Water	OEPP	72"	1.5	X			
K-6	Deep Water	OEPP	72"	2.0	X			
K-7	Deep Water	OEPP	96"	2.0	X			

Pile Load Test Schedule

Item	Test Pile No.	Calendar Days From Notice to Begin Work
Submit Detailed Test Program Schedule, Testing Firms/Subcontractors, Test Locations, Artificial Plug Locations and Design	K-1 to K-7	30
Start of Test Pile Driving	K-1 to K-7	135
Completion of Testing on Piles That Receive Dynamic Testing Only	K-4, K-5, K-6, K-7	170
Completion of all Dynamic, Static, and Pseudo-Static Load Tests	K-1 to K-7	185
Final Submittal of ALL Test Results	K-1 to K-7	195

Liquidated Damages Apply – refer Special Note
Be ready to order Piles upon Notice To Begin Work

Site Visit Logistics





Questions?



Mandatory Pre-Bid Meeting
Marshall-Trigg Counties
US 68 Over Tennessee River



Sign-In (KYTC District 1 Office)
October 4, 2012

Contract ID 12-1354
Grade & Drain with Bridge
October 19, 2012 Letting

NAME (PRINT)	SIGNATURE	COMPANY	PHONE #	EMAIL
Bobby Hamilton	<i>Bobby Hamilton</i>	Jim Smith Contracting LLC	270/362-8661	bhamilton@jscopy.com
BRIAN McBRIDGNS	<i>Brian McBridgns</i>	JIM SMITH CONTRACTING LLC	270/362-8661	brian@jscopy.com
Justin Myers	<i>Justin Myers</i>	Jim Smith Contracting LLC	270/362-8661	jmyers@jscopy.com
BEN BALDOCK	<i>Ben Baldock</i>	SCOTT & MURPHY, INC	270-781-9944	BBALDOCK@SCOTTANDMURPHY.COM
PHILLIP CARTER	<i>Phillip Carter</i>	" "	270-781-9544	PCARTER@SCOTTANDMURPHY.COM
STEPHEN K. GERLACH	<i>Stephen K. Gerlach</i>	HALL CONTRACTING OF KY, INC	502-367-6151	SGERLACH@HALLKY.COM
Doug Smith	<i>Doug Smith</i>	Certified Construction	270-351-2441	desmith@bbtel.com
Tyler Owen	<i>Tyler Owen</i>	Kytc D1	270 293 7313	Tyler.owen@ky.gov
Bryan Black	<i>Bryan Black</i>	KYTC D-1	270-753-2993	Bryan.Black@ky.gov
Ron Triplett	<i>Ron Triplett</i>	Hayward Baker	336 601 0381	retriplett@haywardbaker.com
Danny HINES	<i>Danny Hines</i>	CALX RESOURCES	278-519-2884	dhines@calxresources.com
Don Robertson	<i>Don Robertson</i>	Applied Foundation Testing	904-284-1337	DRobertson@Testpile.com
BEN WHITE	<i>Ben White</i>	GRL ENGINEERS INC	216-831-6131	bwhite@grlengineers.com
Kyle Hawley	<i>Kyle Hawley</i>	Skyline Steel	513-509-9059	kyle.hawley@skylinesteel.com
KEVIN WOLFE	<i>Kevin Wolfe</i>	HAYDON BRIDGE CO., INC.	859-336-7533	kwolfe1@haydonbridgecompany.com
JIM MOLDOVAN	<i>Jim Moldovan</i>	C.J. MAHAN CONSTRUCTION COMPANY	614-875-8200	jmolldovan@cjmahan.com
Hal Coffey	<i>Hal Coffey</i>	Harold Coffey Congl. Co.	270 236 3102	Coffey Const & Bell South
SHANE STEELE	<i>Shane Steele</i>	C.J. MAHAN CONST. CO.	614-875-8200	SSTEELE@CJMAHAN.COM

**Mandatory Pre-Bid Meeting
Marshall-Trigg Counties
US 68 Over Tennessee River**



Sign-In (KYTC District 1 Office)
October 4, 2012

Contract ID 12-1354
Grade & Drain with Bridge
October 19, 2012 Letting

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Mandatory Pre-Bid Meeting
Marshall-Trigg Counties
US 68 Over Tennessee River



Sign-In (Project Site)
October 4, 2012

Contract ID 12-1354
Grade & Drain with Bridge
October 19, 2012 Letting

NAME (PRINT)	SIGNATURE	COMPANY	PHONE #	EMAIL
PHILLIP CARTER		SCOTT & MURPHY		
BEN BALDOCK		SCOTT & MURPHY, INC.		
Don Robertson		Applied Foundation Testing		
Brian McReynolds		Jim Smith Contracting		
Jason Piper		American Contracting & Services		
David Keller		Richard Goettle, Inc.		
Doug Smith		Certified Const.		
BEN WHITE		GRL ENGINEERS		
MICHAEL ROLLINS		WALSH CONSTRUCTION II		
KEVIN WOLFE		HAYDON BRIDGE CO., INC.		
Lori Harper		ROBBERS GROUP INC.		
GARY JOHNSON		" "		
STEPHEN GERLACH		HALL CONTRACTING OF KY, INC.		
Hal Coffey		COFFEY CONST.		
Ron Triplett		Hayward Baker		
Malcolm White		CJMCC		
SHANE STEELE		CJ MAHAN CONST CO.		
JIM MOLDOVAN		CJ MAHAN CONSTRUCTION CO.		