

STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED  
**STATE HIGHWAY**  
FEDERAL AID PROJECT NO. ACNHPP1-4400-(014)SS  
BRIDGE REHABILITATION  
GILCREASE EXPRESSWAY RAMP  
**TULSA COUNTY**

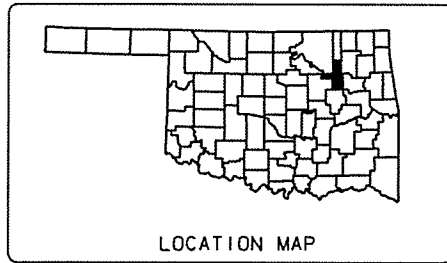
CONTROL SECTION NO. P&S 72-87P  
STATE JOB NO. 29773(04)  
BRIDGE "A" LOCATION NO. 7287-0000SXR, NBI NO. 19499 (TO REMAIN)

MANDATORY TIE:  
THIS PROJECT IS MANDATORILY  
TIED TO JP 29775(04)

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	DATE
6	OKLA.	29773(04)				
DESCRIPTION						REVISIONS

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DESIGN DATA

ADT 2016	= 2,400
ADT 2036	= 3,200
DHV (2-WAY)	= 320
K (DHV/ADT)	= 10%
T (% DHV)	= 11%
T (% ADT)	= 9%
T* (% ADT)	= 7%
V	= 40MPH

SCALES

PLAN 1" = 50'

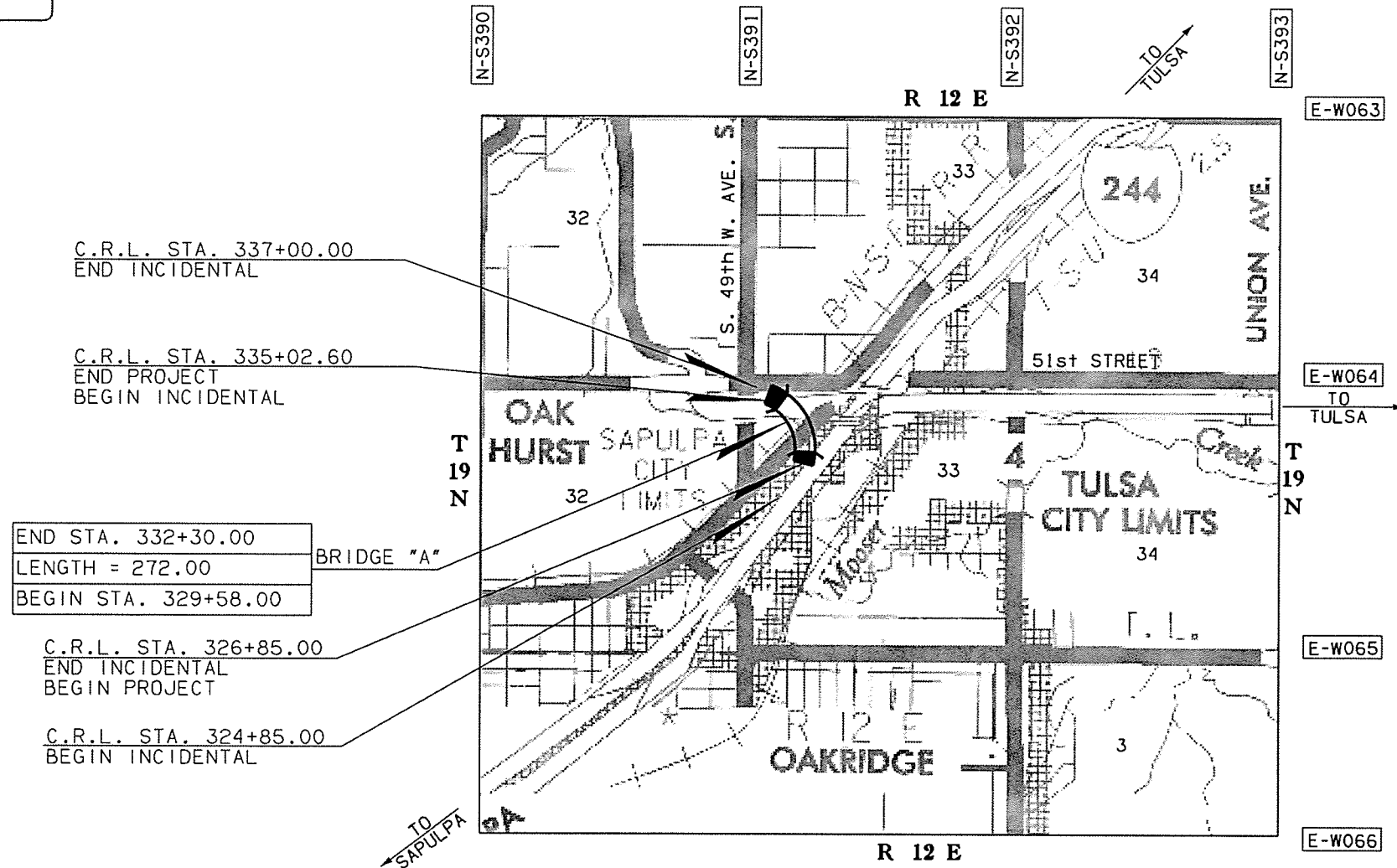
PROFILE HOR. 1" = 50'

VER. 1" = 5'

LAYOUT MAP 1" = 2,640'

CONVENTIONAL SYMBOLS

	PROPOSED ROAD
	RAILROADS
	RANGE & TOWNSHIP
	SECTION LINES
	QUARTER SECTION LINES
	FENCES
	GROUND LINE
	EXISTING ROADS
	BASE LINE
	GRADE LINES
	TELEPHONE & TELEGRAPH
	POWER LINES
	BUILDINGS
	OIL WELL
	DRAINAGE STRUCTURES - IN PLACE
	DRAINAGE STRUCTURES - NEW
	RIGHT-OF-WAY LINES - EXISTING
	RIGHT-OF-WAY LINES - NEW
	CONTROLLED ACCESS
	RIGHT-OF-WAY FENCE



THE FOLLOWING STANDARDS WILL BE REQUIRED:  
ODOT STANDARDS

ROADWAY	TRAFFIC	BRIDGE
TSD-2-0	PM4-1-01	EJ-SQ-03E
CSCD-5-3	MSD1-1-00	EJ-DTL-01E
LECS-4-1	MSD3-1-01	
LTU-4-0	TCS1-1-01	
	TCS2-1-00	
	TCS3-1-01	
	TCS4-1-01	
	TCS5-1-00	
	TCS6-1-02	
	TCS7-1-02	
	TCS9-1-01	
	TCS14-1-00	
	THRI-1-02	
	SKT-1-00	
	GA31-1-00	
	GHW1-1-00	
	GHW2-1-00	

PREPARED BY:

**G GARVER**

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Digitally Signed  
2016.07.07 11:39:50-05'00"  
KEVIN M. MOORE, P.E.  
OKLA. REG. NO. 22545  
RESPONSIBLE FOR SHEETS:  
1-2, 7-11, 25-26

**Kevin M. Moore**  
22545  
OKLAHOMA

Digitally Signed  
2016.07.07 10:58:24-05'00"  
BRADLEY R. THOMPSON, P.E.  
OKLA. REG. NO. 22868  
RESPONSIBLE FOR SHEETS:  
3-6, 12-24

**Bradley R. Thompson**  
22868  
OKLAHOMA

PROJECT LENGTH BASED ON C.R.L. STATIONING

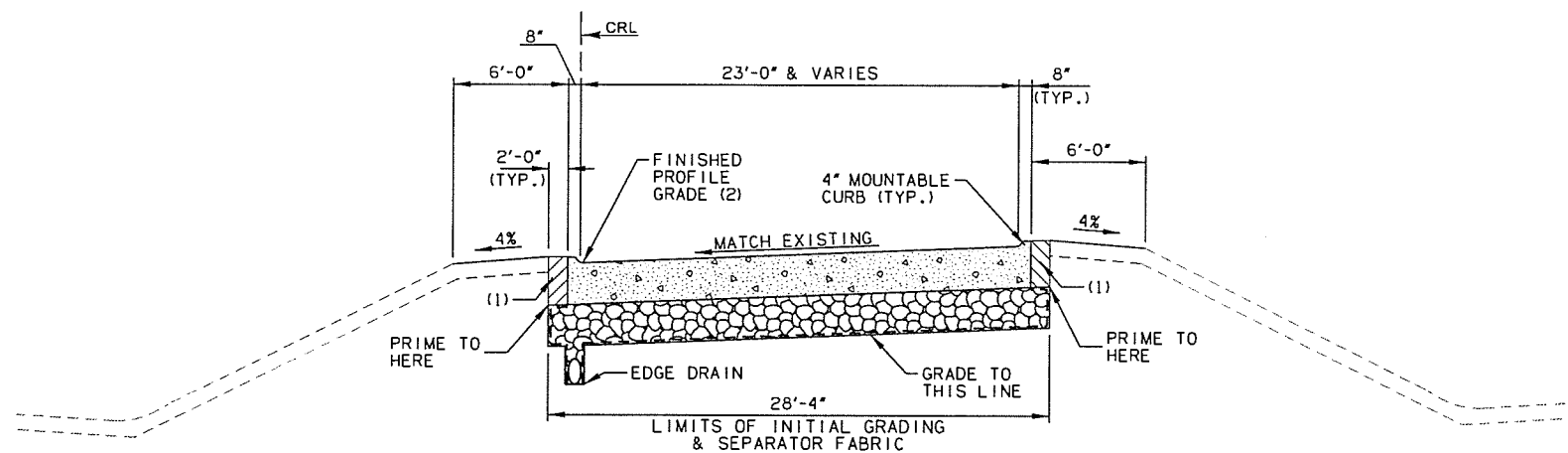
ROADWAY LENGTH	90.16	FT.	0.017	MI.
BRIDGE LENGTH	272.00	FT.	0.052	MI.
PROJECT LENGTH			0.069	MI.

EQUATIONS : NONE  
EXCEPTIONS : NONE

CERTIFICATE OF AUTHORIZATION NO. 4193 P.E., L.S. RENEWAL DATE: 6-30-2018

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR
SWO	PROJECT NO. ACNHPP1-4400-(014)SS
COUNTY TULSA	HIGHWAY GILCREASE EXPY. RAMP SHEET NO. 1

P.E. NO.: 29773(01)

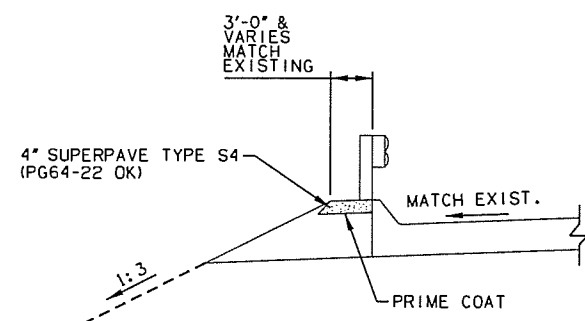


**TYPICAL SECTION NO. 1**

NOT TO SCALE

C.R.L. STA. 329+12.92 TO C.R.L. STA. 329+37.92  
 C.R.L. STA. 332+50.08 TO C.R.L. STA. 332+75.08

PAVT. STRUCTURE	DRIVING LANES
SURFACE COURSE	12" DOWEL JOINTED P.C. CONCRETE PAVEMENT
BASE COURSE	12" AGGREGATE BASE, TYPE A



**GUARD RAIL WIDENING**

NOT TO SCALE

C.R.L. STA. 326+94.17 TO C.R.L. STA. 329+37.92 LT  
 C.R.L. STA. 327+44.17 TO C.R.L. STA. 329+37.92 RT  
 C.R.L. STA. 332+50.08 TO C.R.L. STA. 333+98.00 RT  
 C.R.L. STA. 332+50.08 TO C.R.L. STA. 335+02.60 LT

(1) BACKFILL NOTE:  
 TO BE BACKFILLED AND COMPACTED AS PART OF THE FINISHING OPERATIONS.  
 QUANTITY IS MEASURED IN OTHER ITEMS OF WORK.

(2) PROPOSED PROFILE GRADE SHALL MEET AND MATCH EXISTING.

DESIGN	MDF	3/16	GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD
DRAWN	JWJ	3/16	
CHECKED	KMM	6/16	
APPROVED			
SQUAD	<b>GARVER</b>		

TYPICAL SECTIONS

STATE JOB NO. 29773(04) SHEET NO. 2

**GENERAL NOTES FOR BRIDGE "A"**

**SPECIFICATIONS:**

Comply with the requirements of the 2009 Oklahoma Standard Specifications for Highway Construction, except as modified by the Plans and Special Provisions.

**VERIFICATION OF EXISTING CONDITIONS:**

All dimensions of the existing components shown on the plans are approximate. The Contractor shall verify all data necessary to connect the new material and shall be solely responsible for the accuracy thereof.

Bidders shall fully inform themselves of the nature of the work and conditions under which it will be performed. The Contractor shall adopt methods consistent with good construction practice and shall take all necessary precautions to prevent damage to the existing bridges or attachments. Any damage to the existing bridge structures or roadway due to the Contractor's negligence shall be repaired at the Contractor's expense, to the satisfaction of the Engineer.

Contractor shall be aware of existing conditions and potential hazards during construction. Contractor shall take precautions to maintain the integrity of any existing utilities and structures. Any damage to these items during construction shall be repaired and/or replaced at the Contractor's expense to the Engineer's satisfaction.

**PLANS:**

The original project plans are available from:  
 Reproduction Branch  
 Oklahoma Department of Transportation  
 200 N.E. 21st Street  
 Oklahoma City, Oklahoma 73105

The bridge was constructed under the following Project No.  
 Bridge "A" (Str. 3) F.A.P. No. 1-44-2(1681087)

**SURVEYING AND CONSTRUCTION STAKING:**

The Contractor will be required to conduct all surveying and construction staking necessary for the completion of the project as directed by the Engineer. The surveying and construction staking required for completion of the project may include, but is not limited to, the following:

1. Establishing horizontal control including the staking of centerline bridge and approach roadway and assigning stationing as directed by the Engineer.
2. Establishing vertical control including the setting of benchmarks.
3. Measuring the elevations along the existing bridge deck slab at centerline, edges of driving lanes and edges of shoulders.
4. Measuring the elevations along the existing approach roadway at centerline, edges of driving lanes and edges of shoulders.
5. Measuring and setting construction stakes as necessary for conducting the grading and surfacing work on the approach roadway.

All survey data, proposed adjustments in the new finish grades from original, and forming data shall be provided to the Engineer for approval before constructing the new approach slabs and new approach roadway pavement.

All cost of the surveying and construction staking necessary for completion of the project as directed by the Engineer including the cost of materials, labor, equipment, and incidentals shall be included in the price bid per Lump Sum of "CONSTRUCTION STAKING LEVEL 11".

**ESTABLISHMENT OF VERTICAL GEOMETRY:**

The new bridge deck surfaces at the joint replacements and the approach roadway match the existing. The finished surface elevations will not change and will match the existing profile geometry. If the actual finish surface elevations differ from what is shown in the plans, the Contractor shall notify the Engineer prior to placement of concrete at the new joints and approach roadway for adjustment to maintain acceptable approach transitions.

In order to record the vertical geometry of the existing deck and approach roadway, the Contractor shall field survey the top of existing concrete deck overlay prior to removal of the overlay and deck.

The Contractor shall record all survey data and adjust as required to match the existing finish surface elevations. The adjusted elevations shall be submitted for review prior to performing the work.

**HORIZONTAL GEOMETRY & VERTICAL CURVE DATA:**

The information shown on the "GENERAL PLAN AND ELEVATION" drawing regarding horizontal geometry and vertical profile was taken from the original construction plans. This information is included for informational purposes only. The Contractor shall field verify the existing horizontal and vertical geometry. The reconstruction of the bridge decks joints are intended to match the profile of the existing bridge deck.

**CLEANING BRIDGE SEATS:**

All Bridge Seats shall be power washed & cleaned of all debris and allowed to dry before application of Special Concrete Finish.

All cost of Cleaning the Bridge Seats including the cost of materials, labor, equipment and incidentals shall be included in other items of work.

**REMOVAL OF BRIDGE ITEMS:**

The pay item "REMOVAL OF BRIDGE ITEMS" shall include the removal and disposal of all items to be removed from the existing bridge as specified or shown in the plans including the following:

1. Portions of Parapets at the joints specified on Sheet No. 12.
2. Portions of Abutment Nos. 1 & 2 caps, backwalls, wingwalls as shown in the plans.
3. Portions of the existing Approach Slabs necessary for the installation of the new Approach Slabs.
4. Existing Inlet Grate at Southwest corner of the bridge.

When performing "CLASS C BRIDGE DECK REPAIR", the Contractor shall take every precaution necessary to prevent damaging the existing concrete overlay, bridge deck, steel I-beams, existing diaphragms or other superstructure members, unless otherwise specified on the plans. Any damages caused by the Contractor to existing concrete overlay, bridge deck, steel I-beams, reinforcement, diaphragms or other superstructure members shall be repaired or completely replaced at the Contractor's expense to the satisfaction of the Engineer. The Engineer will determine if the damaged component can be satisfactorily repaired or if the component shall be completely replaced.

The existing structural steel may contain lead-based paint. The Contractor must take all necessary precautions and follow all specifications and regulations in handling and transporting lead-based paint. The removal shall be in accordance with Section 619.04.B.2 of the Standard Specifications and in a manner approved by the Engineer.

When removing the portions of the existing abutments as shown in the plans, the Contractor shall take every precaution necessary to prevent damaging the remaining components of the existing bridge or any new construction attached to the bridge. Only hand tools or hand operated power tools will be allowed to make the removals. No vehicle mounted tools or equipment will be allowed to make removals. Before making any removals with impact tools, all concrete components shall be uniformly saw cut along the removal lines or cut lines shown on the plans. Any damages caused by the Contractor to the existing abutments shall be repaired or completely replaced at the Contractor's expense to the satisfaction of the Engineer. The Engineer will determine if the damaged components can be satisfactorily repaired or if the components shall be completely replaced.

Before making any removals, the Contractor shall submit to the Engineer a plan for removing each item or portions of items to be removed from the existing bridge. The Contractor shall not make any removals until the plan has been approved by the Engineer. The plan shall include a list of all the equipment that will be used to make the removals, a description of how the equipment will be used to make the removals and a sequential list of steps that will be followed by the Contractor to make removals.

Items damaged by the Contractor shall be replaced by the Contractor at no additional cost to ODOT. All materials removed shall become the property of the Contractor and be disposed of in a manner approved by the Engineer.

All costs necessary to complete the work as specified or as shown in the plans including the cost of safety platforms, sawing, cutting, demolition, cleaning and straightening reinforcing steel, containment and removal of debris, materials, labor, equipment and incidentals shall be included in the price bid per Lump Sum of "REMOVAL OF BRIDGE ITEMS".

**SUBSTRUCTURE REPAIR:**

The existing Abutments and Piers, and any other concrete structure associated with the bridge, shall be repaired with Pneumatically Placed Mortar in a manner approved by the Engineer and in accordance with Section 521 of the Standard Specifications for Highway Construction. The removal of loose concrete shall be done using hand tools only, no power tools will be allowed. Power tools will be allowed only if hand tools prove to be incapable of removing all unsound concrete and if their use is approved by the Engineer. Any damage done to the existing reinforcing steel during the removal process shall be repaired at the Contractor's expense to the satisfaction of the Engineer. Any deteriorated reinforcing steel with a section loss greater than 25%, as determined by the Engineer, shall be reported to the Bridge Engineer for remedial action. Prior to mortar application, blast clean the concrete surface and reinforcing steel free of debris and corrosion. Apply Pneumatically Placed Mortar to replace deteriorated concrete. Build up mortar to patch the original lines and grades of the member being repaired. All mortar repairs shall be sealed with a water repellent substance.

The Contractor may propose and use as an alternate one of the following repair methods:

1. Cast-in-place concrete
2. Pre-placed aggregate concrete
3. Formed and pumped concrete and mortar
4. Troweling and dry-packing of repair mortar
5. Class A Concrete (to be used under the existing beams)

The actual location and extent of the repairs shall be determined in the field by the Engineer. The repairs shall only be made in the areas selected by the Engineer. Payment will be made only for the actual repairs performed.

If the Contractor elects to use a method other than Pneumatically Placed Mortar, they shall submit to the Engineer, for their approval, a proposed work plan. The work plan should include surface preparation methods, patching material, bonding agents, material placing methods, compatibility with Corrosion Inhibitors and finishing methods. The Contractor shall repair a test area to verify the effectiveness of their proposed repair methods prior to commencement of the work on the entire structure. Faulty repairs shall be replaced by the Contractor at no expense to the State. The cost for all patching methods will be included in the price bid per Square Yard of "PNEUMATICALLY PLACED MORTAR".

**REPAIR OF CRACKS IN SUBSTRUCTURE:**

The existing Abutments and Piers contain cracks that shall be repaired. The cracks shall be repaired by cleaning and injecting with epoxy. The crack repairs shall be performed in accordance with Section 520 of the Standard Specifications. The actual location and extents of the crack repairs shall be determined in the field by the Engineer. Payment will only be made for the actual crack repairs performed.

All cost to complete the crack repairs as specified or as shown in the plans including the cost of materials, labor, equipment and incidentals shall be included in the price bid per Linear Foot of "PREPARATION OF CRACKS, ABOVE WATER" and the price bid per Gallon of "EPDXY RESIN, ABOVE WATER".

**EXPOSURE OF DETERIORATED STRUCTURAL STEEL:**

If any deteriorated structural steel (including but not limited to flanges, webs, connection plates, stiffeners, bearings and diaphragms) is exposed during any construction activity, the Contractor shall be responsible for notifying the Engineer who in turn shall notify the Bridge Engineer as to the extent of the damage. The Bridge Engineer shall determine if any repairs are necessary; and if so, what method of repair shall be used.

**STRUCTURAL STEEL:**

All structural steel for diaphragms shall conform to AASHTO M270 (ASTM A709), Grade 50W (Weathering Steel, Non-Fracture Critical Charpy V-Notch tested for Zone 2), unless otherwise noted. High strength bolts shall be used at all connection locations. Fabrication and erection shall be done in accordance with Section 506 of the Standard Specifications.

All shop and field welding shall be arc welding and shall be done in accordance with the current ANSI/AWS D1.5 Bridge Welding Code. Field welders shall be pre-qualified by the Oklahoma Department of Transportation.

High Strength Bolted Connections shall conform to the provision of the Section 506.04.F.6 of the Standard Specifications.

**CLASS B & C BRIDGE DECK REPAIR:**

The quantities of "CLASS B BRIDGE DECK REPAIR", & "CLASS C BRIDGE DECK REPAIR" are for estimating purposes only. Actual areas to be repaired using Class B or C Bridge Deck Repair shall be determined by the Engineer during the construction process.

Payment only for actual repairs performed will be allowed. Payment will not be made for repairs not made. The repair shall be in accordance with Section 505 of the Standard Specifications.

All costs of the repair including labor, equipment, materials and incidentals necessary to complete the work as shown shall be included in the price bid per Square Yard of "CLASS B BRIDGE DECK REPAIR" or "CLASS C BRIDGE DECK REPAIR".

**CONCRETE:**

All concrete shall be placed in the dry. All exposed edges shall have a 3/4" chamfer unless noted or shown on plans. All chamfer strips shall be sized lumber. All Class "A" and Class "AA" Concrete shall be air-entrained.

All concrete in the High Density Concrete Overlay, Bridge Deck, Approach Slabs & Parapets shall be Class "AA" Concrete, f'c = 4,000 p.s.i. minimum strength at 28 days. All concrete in the Substructure shall be Class "A" Concrete, f'c = 3,000 p.s.i. minimum strength at 28 days.

The Class AA Concrete used for the 1 1/4" High Density Concrete Overlay shall have steel and polypropylene fiber blend additives such as Novomesh 850 manufactured by Propex, PSI Crimped Steel Fiber FB manufactured by Euclid Chemical or approved equal. Fiber additives shall conform to Section 701.15 of the Standard Specifications and Special Provision Section 435 "Fiber Reinforced, Bonded Portland Cement Concrete Overlay". Application rate shall be a minimum of 40 pounds of fiber reinforcement per cubic yard of concrete. Fiber reinforcement to be included in the price bid per Square Yard of "BRIDGE DECK CONCRETE OVERLAY".

When vibrating concrete containing epoxy coated reinforcing steel, the vibrator shall be equipped with a plastic tip designed to prevent damage to the epoxy coating.

High Early Strength (HES) Concrete shall be used for deck/joint repairs. Deck repairs shall obtain a minimum compressive strength of 3,000 p.s.i. prior to placement of loads on repaired areas. Payment of HES Concrete is included in the price bid per Square Yard of "CLASS C BRIDGE DECK REPAIR".

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION				REVISIONS	DATE	

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JTR	4/16
		DETAIL	JTR	4/16
SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE) (SHEET 1 OF 4)		CHECK	BRT	5/16
		<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION			
	JOB PIECE NO. 29773(04)	SHEET NO. 3		

GENERAL NOTES FOR BRIDGE "A" CONTINUED

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION				REVISIONS	DATE	

**REINFORCING:**

All reinforcing steel shall have 2" clearance unless shown or noted otherwise. All reinforcing steel shall be deformed bars, cold bent with no welds. Bar bend dimensions are out to out, unless noted otherwise. All reinforcing steel to be Grade 60.

Field welding of crossing reinforcing bars shall not be permitted. Tack welding of reinforcing bars shall be prohibited in all cases.

All longitudinal top reinforcing in the bridge slab shall be supported on approved continuous metal high chairs spaced at 4'-0" maximum on centers and the bottom layer of reinforcing steel shall be supported on approved metal slab bolsters spaced at 4'-0" maximum on centers.

**APPROACH SLAB:**

Class AA concrete shall be used in the Approach Slabs with epoxy coated reinforcing. The quantity given is based on the actual Square Yards of the Approach Slabs. All casts of concrete, reinforcing steel, longitudinal construction joint sealant, sawed and sealed construction joint between new deck and approach slab, sawing of joints, excavation, labor, equipment, and incidentals necessary to complete the work as specified shall be included in the price bid per Square Yard of "APPROACH SLAB".

**SEALED EXPANSION JOINT:**

The Sealed Expansion Joints located on Sheet No. 12 shall be constructed as shown on the plans and in accordance with Standards EJ-SQ-03E & EJ-DTL-01E & in a manner approved by the Engineer except that Bars W1 & W2 on Standard EJ-DTL-01E shall be modified to fit within the limits of the slab with appropriate clearances.

All cost necessary to complete the work as specified or as shown in the plans including the cost of materials, labor, equipment and incidentals shall be included in the price bid per Linear Foot of "SEALED EXPANSION JOINT".

**SPECIAL CONCRETE FINISH**

The Special Concrete Finish shall be a liquid applied urethane coating such as CIM 1000 as manufactured by CIM Industries, Inc., IM-129 as manufactured by Custom Linings, or an approved equal. Product information for CIM 1000 can be obtained from Laster Castor Corp. of Tulsa, Oklahoma, phone number 918-234-7777. Product information for IM129 can be obtained from Custom Linings, phone number 719-395-4414.

The Special Concrete Finish shall be applied to the following concrete surfaces of the bridge:

- (a) Front, sides and exposed areas of the Abutment Seats and Backwalls.
- (b) Top, sides and ends of Pier Caps.

The equipment and methods of applying the urethane coating shall be in accordance with the product coating profile and instruction guides for application to concrete. Precautionary measures shall be in accordance with the Material Safety Data Sheets as provided by the manufacturer.

The coating shall be 60 mils dry thickness and 68 mils wet thickness. In addition to applying the coating to the concrete substructure units as shown in the plans, the coating shall return up the vertical surfaces of the pier and abutment bearing pads to provide a water tight seal with the concrete pedestals. Surface preparations and product mixing shall be per the manufacturer's recommendations and all new concrete shall have a minimum strength of 3000 psi at the time of application. Primer shall be applied to the concrete surfaces prior to applying the coating. All concrete work shall be completed prior to the application of the Special Concrete Finish.

Water repellent will not be required on surfaces that are coated with Special Concrete Finish.

Payment will be made at the Contract unit price bid per Square Yard of "SPECIAL CONCRETE FINISH", which price shall be full compensation for all materials, labor, tools, equipment and incidentals necessary to complete the work as specified.

**PENETRATING WATER REPELLENT SURFACE TREATMENT:**

A penetrating water repellent surface treatment shall be applied to the following concrete surfaces of the bridge:

- (a) Edges and underside cantilever portion of the existing & new bridge deck.
- (b) Outside face of the existing and new concrete parapets.
- (c) Front, sides and exposed areas of the Abutment Seat, Backwall and Wingwalls not covered with Special Concrete Finish.
- (d) Top, bottom, sides and ends of the Pier Cap not covered with Special Concrete Finish.

All costs associated with the use of Penetrating Water Repellent Surface Treatment including the cost of materials, labor, equipment and incidentals shall be included in the price bid per Square Yard of "WATER REPELLENT (VISUALLY INSPECTED)".

**FLOOD COATING TREATMENT:**

A Flood Coat Deck Seal shall be applied to the following concrete surfaces of the bridge:

- (a) The driving surfaces of the bridge deck.
- (b) The roadway faces and top of the existing and new concrete parapets.

The Contractor must prevent the Flood Coat Deck Seal from penetrating any joint that has been sealed with Silicone. If the Flood Coat Deck Seal penetrates any Silicone joint, the Contractor, at his own expense, will be required to:

- (1) After bulk cure, remove all Flood Coat Deck Seal from these joints.
- (2) Remove and replace the Silicone Joint Sealant.

This work will be performed after all other work on the bridge has been completed.

All cost to seal the bridge decks with Flood Coat including the cost of materials, labor, equipment and incidentals shall be included in the price bid per Square Yard of "DECK AREA SEALED (FLOODCOATS)".

**RAILROAD PROTECTION:**

Contractor shall use extreme care and take any measure necessary to insure that no debris is dropped onto railroad R.O.W. at the bridges. This shall be accomplished by the use of baskets, netting, wrapping, work platform, or other similarly effective means. Cost of protection system and removing and disposing of debris shall be included in other items of work.

**SAWED AND SEALED JOINTS:**

The new Sawed & Sealed Construction Joints at Pier Nos. 1-4 as shown on Sheet Nos. 12 & 16 and all joints in the existing Slope Walls shall be sealed with Rapid Cure Joint Sealant in accordance with Subsection 701.08.G and as shown on the plans.

All costs including materials, labor, equipment and incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Linear Foot of "RAPID CURE JOINT SEALANT".

The Deck Slab Construction Joints within the spans, as shown on Sheet Nos. 12 & 16, shall be sealed with High Molecular Weight Methacrylate in accordance with Section 523 of the specifications & as shown in the plans.

All costs of sealing Deck Slab Construction Joints within the spans including materials, labor, equipment & incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Linear Foot of "SEALER CRACK PREPARATION" & per Gallon of "SEALER RESIN".

**DRAINS AT END OF BRIDGE:**

The Asphalt Widening for the bridge guardrailing shall be in accordance with Standards THRI-1-02, SKI-1-00, GHW1-1-00 & GHW2-1-00. All costs of Asphalt Widening shall be included in Roadway Pay Items.

There are 6.40 cubic yards of Class C Concrete required to construct the Slope Drains, Splash Basins and 6" Concrete Curbs at the ends of the Bridge. All costs of the Slope Drains, Splash Basins and 6" Concrete Curbs including material, labor, equipment and incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Cubic Yard of "CLASS C CONCRETE".

**UTILITY LINE RE-ATTACHMENT:**

The Contractor shall provide temporary support to the existing electrical conduit during construction at the existing parapets. The Contractor shall also re-connect the existing conduit within the parapets once the repairs are completed as shown on the plans.

All costs of temporary support, connection, labor, equipment, and incidentals necessary to complete the work as shown on in the plans shall be included in other items of work.

**(PL) REPAIR BRIDGE ITEM (TYPE A):**

Item "(PL) REPAIR BRIDGE ITEM (TYPE A)" shall consist of resetting existing Expansion Bearings at Abutment Nos. 1 & 2 and Pier Nos. 1 & 4.

The number and location of bearings to be reset shall be determined by the Engineer. The bearings shall be reset such that the roller bearing stiffener is vertical. Care shall be taken when the beam is jacked up so the bridge deck and diaphragms are not damaged. All falsework shall be in accordance with Section 502 of the Standard Specifications.

All costs including falsework, jacking, engineering services, resetting, labor, equipment, and incidentals necessary to complete the work shown in the plans shall be included in the price bid per Each of "(PL) REPAIR BRIDGE ITEM (TYPE A)".

**FALSEWORK AND JACKING:**

The Contractor will be required to install falsework at locations specified in the plans to support the existing superstructure while the expansion roller bearings at Abutment Nos. 1 and 2 and Pier Nos. 1 and 4 (to be determined by the Engineer) are reset. Care shall be taken when the beams are jacked up so the bridge deck and diaphragms are not damaged.

The Contractor shall submit to the Bridge Engineer of the Oklahoma Department of Transportation a falsework and jacking plan. The plan shall include a layout of falsework and any required jacking, structural calculations for the design of the falsework, jacking scheme, jacking sequence and jack capacities. The falsework and jacking shall have the capacity to support the dead loads of the bridge and all construction loads carried by the bridge. The Contractor shall install the falsework in manner so as not to damage the existing bridge or any new construction attached to the bridge. The submitted plan shall be designed and sealed by a Professional Engineer registered in the State of Oklahoma. The plan and structural calculations shall be prepared in accordance with the AASHTO Standard Specifications for Highway Bridges, latest edition and Section 502 of the Standard Specifications. Installation of the falsework and jacking shall not begin until the Contractor has received approval of the submitted plan from the Bridge Engineer.

All cost necessary to complete the work as specified or as shown in the plans including the cost of falsework, jacking, engineering services, materials, labor, equipment, and incidentals shall be included in the price bid per Lump Sum of "(PL) FALSEWORK JACKING".

**STAY-IN-PLACE FORMS:**

Stay-In-Place Steel Deck Forms will not be allowed.

**(PL) REPAIR BRIDGE ITEMS:**

Unsound concrete in the piers and abutments of the existing bridge shall be repaired as described here. Prior to repairing an area, ensure that all unsound concrete has been removed from the area and the newly exposed surface has been prepared in accordance with Section 521.04.C of the Standard Specifications. Repair any deteriorated reinforcing steel bars with section loss greater than 25%, and apply corrosion inhibitor to the repair areas in accordance with Special Provision 535-1.

The removed concrete shall be replaced with one of the following materials as specified in Section 701 of the Standard Specifications:

1. High Density Concrete (HDC)
2. Latex Modified Concrete (LMC)
3. Very Early Strength Type I Concrete (VES I)
4. Very Early Strength Type III Concrete (VES III)
5. Rapid Setting Latex Modified Concrete (RSLMC)

The concrete temperature shall not exceed 85°F. Cold weather practices shall be implemented under any of the following conditions:

The air temperature was less than 55°F within 24 hours before placement of concrete, or the substrate temperature is less than 55°F during placement of concrete, or the air temperature will be less than 55°F within 6 hours after placement of concrete.

Cold weather practices shall be as follows:

Maintain a concrete mix temperature of 75°F during placement, and ensure the air temperature is rising during placement, and complete placement during the warmest part of the day.

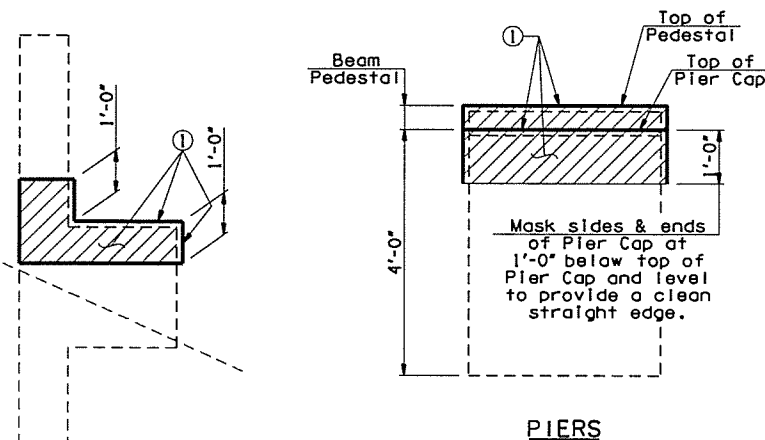
Air temperatures shall be greater than 45°F when placing early strength concrete.

Alternatively, the removed concrete may be replaced with one of the following commercially available shotcrete products used in accordance with the Manufacturer's recommendations and as approved by the Engineer:

6. QUIKRETE SHOTCRETE MS with polypropylene fibers
7. SIKACEM 103F
8. SIKACEM 133
9. SIKACRETE 211 SCC PLUS
10. BASF MASTEREMACO S 210SP
11. BASF MASTEREMACO S 211SP
12. PROSPEC SHOTCRETE 300V
13. EUCSHOT F

The new concrete shall be placed to the original neat lines of the structural component under repair and finished to provide a surface texture matching that of the adjacent existing concrete.

All costs to complete the repairs including all costs of removals, cleaning, surface preparation, corrosion inhibitor, new concrete, proportioning, mixing, formwork, placing concrete, finishing concrete, material, labor, equipment and incidentals shall be included in the unit price bid per Square Yard of "(PL) REPAIR BRIDGE ITEMS".



① Apply CIM 1000, Special Concrete Finish, to all surfaces shown with heavy lines and hatch (including Pedestal steps and ends of cap).

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JTR	4/16
SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE) (SHEET 2 OF 4)		DETAIL	JTR	4/16
		CHECK	BRT	5/16
		<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION			
JOB PIECE NO. 29773(04)		SHEET NO. 4		

**BNSF RAILWAY CO. NOTES:**

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	29773(04)			
DESCRIPTION					DATE
REVISIONS					

**NOTIFICATION OF WORK:**

The Contractor is required to give the BNSF Railway Company at least 10 working days advance notice, in writing, before any work is started on the site. To avoid hazards, the BNSF Railway Company may have a representative present, if deemed necessary, for the purpose of inspection and the issuance of any appropriate instructions for railway operations during the bridge rehabilitation on portion of Gilcrease Expressway ramp in Tulsa County as it relates to the BNSF Railway Company's property. (AARDOT 669 491C, Milepost 429.15)

The Contractor Shall notify:

Walter Lee Miller BNSF Roadmaster BNSF Railway Company 1200 Frisco Road Sherman, TX 75090 Phone: 806-672-4561 Email: walter.miller2@bnsf.com	Ms. Kamie Young Manager Public Projects BNSF Railway Company 4515 Kansas Avenue Kansas City, Kansas 66106 Phone: 913-551-4484 Email: kamalah.young@bnsf.com
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**FLAGGING AND INSURANCE:**

Flagging and insurance shall be provided as specified in Section 107 of the Standard Specifications and in the Special Provisions for RAILROAD FLAGGING (See Proposal for Special Provisions) and what is stated in the BNSF Railway Company Contractor's General Construction Agreement, Exhibits C and C-1. BNSF Railway Company, at their discretion, shall provide flagging for the railway during construction operations.

The Contractor is required to reimburse BNSF Railway Company for flagging services provided.

The Contractor shall also furnish satisfactory evidence to the State of Oklahoma that they have provided insurance of the kinds and amounts as specified in the Special Provisions for RAILROAD INSURANCE and in the BNSF Railway Contractor's General Construction Agreement, Exhibits C and C-1.

The Contractor will be required to enter into a Contractor's General Construction Agreement, Exhibits C and C-1, with the BNSF Railway Company before they will be allowed on the railroads right-of-way.

**PRE-WORK MEETING:**

Prior to working on the BNSF Railway Company's Right-Of-Way or in the vicinity of their tracks, you MUST contact the local roadmaster for the BNSF Railway Company to coordinate your work. It is VITAL that you have contact with the BNSF Railway Company Roadmaster prior to getting on the railroad's property.

**COORDINATION WITH RAILROADS:**

The contractor shall conduct construction operations in a manner which will not delay or interfere with train operations. Construction activity within 25 (twenty-five) feet of active tracks will require a flagman to be provided by the BNSF Railway Company at the contractor's expense.

The contractor shall give written notice to the BNSF Railway Company Roadmaster, a minimum of 30 (thirty) calendar days in advance of when flagging is required.

Special permission must be obtained from the BNSF Railway Company before moving any equipment or other object which could make the track impassable if it fell within the area shown on the construction clearance diagram.

Railroad flaggers, protective services, and protective devices will be required, but not limited to, events when:

- The Contractor work activities are within 25 (twenty-five) feet of the track, measured from the track centerline.
- Activities are over or under the track.
- Cranes or similar equipment will be positioned where they could foul the track if they tipped over or experienced some other catastrophic event.
- In the opinion of the BNSF Railway Company Representative:
  - 1) It is necessary to safeguard the BNSF Railway Company's property, employees, trains, engines, and facilities.
  - 2) When any excavation is performed below the bottom of the elevations and track or other BNSF Railway Company facilities may be subject to movement or settlement.
  - 3) When work in any way interferes with the safe operation of trains and timetable speeds.
  - 4) When any hazard is presented to railroad track, signals, communications, electrical, or other facilities either due to person, material, equipment, or blasting in the area.

**PROTECTION OF RAILROAD UNDER BRIDGE:**

The Contractor shall be responsible for protecting the railroad track bed during all construction operations. Prior to any work being started, a proposed method of preventing debris from falling on the railroad track bed shall be submitted to the railroad representative for his approval. Allow four weeks for BNSF Railway Company to review.

The contractor shall not be permitted to leave any worker scaffolding in place in working position. At the end of each workday, the scaffolding shall be removed and set a safe distance from any operating railway line. Scaffolding shall at all times maintain the minimum clearance as shown on the "Falsework Diagram" on the plans.

**DEMOLITION OF STRUCTURES OVER RAILROAD:**

ALL DEMOLITION PLANS FOR REMOVAL OF STRUCTURES OVER RAILROAD LINES SHALL BE REVIEWED AND APPROVED BY THE BNSF RAILWAY COMPANY BEFORE ANY REMOVAL MAY BEGIN. The contractor shall allow a minimum of four weeks for review by the BNSF Railway Company.

Demolition of structures will be performed in accordance with the Railway's "INSTRUCTIONS FOR PREPARATION OF DEMOLITION PLANS FOR STRUCTURES OVER THE BNSF RAILROAD."

**EROSION CONTROL AND DRAINAGE:**

The contractor will install, maintain, and remove all erosion control measures deemed necessary within the railroad right of way.

The contractor will maintain the railroad drainage at all times when working within the railroad right of way.

**RAIL TRAFFIC:**

The BNSF Railway Company has 10 trains per day at 25 MPH, on the Creek Subdivision. Rail traffic is for information purposes only. Actual rail traffic may vary.

**BNSF FALSEWORK CLEARANCE DIAGRAM:**

Clearance of Falsework required by railroad for operation during construction.

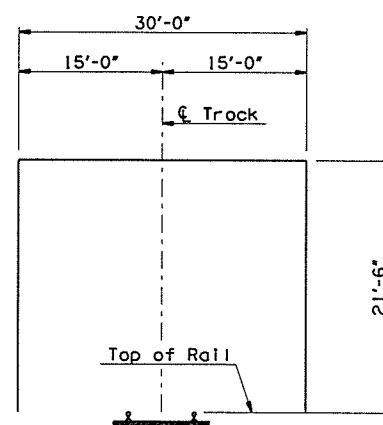
On Curves, add 1/2 inches per degree of track curvature to the horizontal clearance distance.

Horizontal dimensions shown are measured at right angles to the C of R.R. track.

Vertical dimension shown is perpendicular to plane of top of rails.

No construction activities or other obstructions can occur, or be placed within these clearance limits without preapproval or the BNSF Railway Company permission.

Clearances shown are a minimum. Deflections of falsework/scaffolding shall be included in clearance calculations. No material, form work, scaffolding, or other physical obstructions may be left in place within the clearance zone shown.



GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/6
SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE) (SHEET 3 OF 4)			DETAIL	JTR	4/6
			CHECK	BRT	5/16
		<b>GARVER</b>			
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION				
JOB PIECE NO. 29773(04)		SHEET NO. 5			

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
REVISIONS				DESCRIPTION	DATE	

JP 29773(04) PAY QUANTITIES GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD					
ITEM	DESCRIPTION	UNIT	QUANTITY		
501(G) 6309	CLSM BACKFILL	(BR-10) C.Y.	20.000		
502(C) 6116	(PL) FALSEWORK JACKING	LSUM	1.000		
504(A) 1304	APPROACH SLAB	(BR-1) S.Y.	119.400		
504(B) 1305	SAW-CUT GROOVING	(BR-1) S.Y.	102.200		
504(C) 6250	SEALED EXPANSION JOINT	(BR-1) L.F.	46.800		
504(E) 1381	CONCRETE PARAPET	(BR-1) L.F.	202.800		
504(G) 6390	RAPID CURE JOINT SEALANT	(BR-9) L.F.	552.300		
506(A) 1322	STRUCTURAL STEEL	(BR-3) LB.	6,000.000		
509 6152	SPECIAL CONCRETE FINISH	(BR-1)(BR-2) S.Y.	86.000		
509(B) 1328	CLASS A CONCRETE	C.Y.	0.500		
509(D) 1331	CLASS C CONCRETE	(BR-4) C.Y.	6.400		
511(B) 6010	EPOXY COATED REINFORCING STEEL	LB.	18,911.000		
513(B) 6019	CLASS B BRIDGE DECK REPAIR	S.Y.	28.000		
513(C) 6020	CLASS C BRIDGE DECK REPAIR	S.Y.	185.000		
515(A) 6013	WATER REPELLENT (VISUALLY INSPECTED)	(BR-1)(BR-5) S.Y.	472.000		
520(A) 6058	PREPARATION OF CRACKS, ABOVE WATER	(BR-6) L.F.	228.000		
520(C) 6060	EPOXY RESIN, ABOVE WATER	(BR-7) GAL.	7.600		
521(A) 6210	PNEUMATICALLY PLACED MORTAR	(BR-8) S.Y.	90.300		
523(A) 6550	SEALER CRACK PREPARATION	(BR-1) L.F.	252.000		
523(B) 6560	SEALER RESIN	(BR-1) GAL.	3.000		
523(C) 6570	DECK AREA SEALED (FLOODCOATS)	(BR-1) S.Y.	785.300		
540 4501	(PL) REPAIR BRIDGE ITEMS	(BR-11) S.Y.	11.300		
540 4515	(PL) REPAIR BRIDGE ITEM (TYPE A)	EA.	12.000		
619(B) 2500	REMOVAL OF BRIDGE ITEMS	LSUM	1.000		

**NOTE:**

This project is mandatorily tied with JP 29775(04). The cost of Mobilization and Construction Staking for this project is included in the price bid for Mobilization and Construction Staking on JP 29775(04).

**BR-1:**

Payment for this item will be based on the plan quantities only. See Section 109.01.B of the 2009 Standard Specifications.

**BR-2:**

To be used at the Abutments and Piers after all other repairs have been completed. Includes 15.00 S.Y. at each Abutment and 14.00 S.Y. at each Pier.

See General Note "SPECIAL CONCRETE FINISH" for more information.

**BR-3:**

Quantity shown is for diaphragm replacement.

Also includes token quantity to be used at the discretion of the Engineer for the purpose explained in the General Note "EXPOSURE OF DETERIORATED STRUCTURAL STEEL" on Sheet No. 3.

**BR-4:**

Includes 6.40 C.Y. for drains at bridge ends.

**BR-5:**

Includes 9.00 S.Y. at each Abutment, 19.00 S.Y. at each Pier, and 346.00 S.Y. for the Superstructure.

**BR-6:**

Includes 24.00 L.F. at each Abutment, 36.00 L.F. at Pier Nos. 1 - 3 and 72.00 L.F. at Pier No. 4.

**BR-7:**

Includes 0.80 GAL. at each Abutment, 1.20 GAL at Pier Nos. 1 - 3 and 2.40 GAL. at Pier No. 4.

**BR-8:**

Includes 2.70 S.Y. at each Abutment, 3.40 S.Y. at Pier Nos. 1 - 3, & 6.70 S.Y. at Pier No. 4.

Also includes 13.60 S.Y. at each construction joint at Span Nos. 1, 2 & 5 (68.00 S.Y. total) that are not being replaced.

**BR-9:**

Includes 100.80 L.F. for the joints at the Piers and 451.50 L.F. for resealing the joints at the existing Slope Walls.

**BR-10:**

To be used at the discretion of the Engineer for filling any voids prior to placement of the new Approach Slabs.

**BR-11:**

Quantity shown is for repair to the abutment and pier concrete.

To be used at the discretion of the Engineer in locations where substructure concrete deterioration is severe. This pay item may be used in lieu of or in conjunction with Pneumatically Placed Mortar. For additional information, see the General Note "(PL) REPAIR BRIDGE ITEMS" on Sheet No. 4.

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JTR	4/16
SUMMARY OF PAY QUANTITIES AND NOTES (BRIDGE) (SHEET 4 OF 4)		DETAIL	JTR	4/16
		CHECK	BRT	5/16
		<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION			
		JOB PIECE NO. 29773(04)	SHEET NO. 6	

GENERAL CONSTRUCTION NOTES

IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, OR OTHER DISFIGUREMENT.

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. \*CALL OKIE\* 1-800-522-6543 OR 811.

DEBRIS SHALL NOT BE BURIED WITHIN LIMITS OF RIGHT-OF-WAY.

THE STORM WATER MANAGEMENT PLAN CONFIRMED IN THE PRE-WORK MEETING SHALL BE MADE AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT.

CONTRACTOR TO MAKE EVERY EFFORT TO LOCATE AND PROTECT ALL UTILITIES AND STRUCTURES, WHETHER SHOWN OR NOT, PRIOR TO ANY CONSTRUCTION OPERATIONS. CONTRACTOR SHALL CARRY ON CONSTRUCTION SUCH THAT NO DAMAGE WILL OCCUR TO ANY UTILITIES OR STRUCTURES REMAINING IN PLACE.

PAY ITEM NOTES

- (R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.
- (R-31) PRICE BID TO INCLUDE COST OF 40 GALLONS OF PRIME COAT, MEETING THE REQUIREMENTS OF SECTION 408 OF THE STANDARD SPECIFICATIONS, AND ESTIMATED AT 0.35 GAL. PER SQ.YD. ON TOP OF COMPLETED SUBGRADE, AND 0.25 GAL. PER SQ.YD. ON TOP OF THE AGGREGATE BASE. THE ACTUAL CUTBACK PRIME COAT REQUIRED FOR PLACEMENT OPERATIONS WILL BE DETERMINED BY THE CONTRACTOR, AND SHALL CONSIDER THE RESIDUE FROM DISTILLATION PERCENTAGE SHOWN IN SECTION 708.03 OF THE STANDARD SPECIFICATIONS.
- (R-32) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.
- (R-49) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- (R-50) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.
- (1) PRICE BID SHALL INCLUDE COST OF MAINTENANCE AND REMOVAL OF SILT DURING CONSTRUCTION WHEN HALF FULL, OR AS DIRECTED BY THE ENGINEER.
- (2) PRICE BID TO INCLUDE COST FOR SAW CUTTING PAVEMENT AT TIE IN LOCATIONS.
- (3) THIS ITEM WILL INCLUDE THE SKT-SP-MGS OR APPROVED SUBSTITUTE. THE ET-PLUS WILL NOT BE ALLOWED.
- (4) PRICE BID TO INCLUDE CLEARING AND GRUBBING AROUND BRIDGE FRONT SLOPES.
- (5) ESTIMATED QUANTITY TO BE USED IN AREAS AS DIRECTED BY THE ENGINEER.
- (6) PRICE BID TO INCLUDE TRENCHING AND BACKFILL MATERIAL PER PED-3.

JP29773(04)		PAY QUANTITIES		GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RR	
0100 ROADWAY					
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY	
201(A)	0102	CLEARING AND GRUBBING	(4) LSUM	1	
202(A)	0183	UNCLASSIFIED EXCAVATION	(R-1) CY	60	
221(C)	2801	TEMPORARY SILT FENCE	(1) LF	1010	
221(F)	0100	TEMPORARY SILT DIKE	(1) LF	50	
303(A)	2100	AGGREGATE BASE TYPE A	(R-1)(R-31) CY	54	
325	5271	SEPARATOR FABRIC	(R-1) SY	202	
411(C)	5960	SUPERPAVE. TYPE S4 (PG 64-22 OK)	(R-32) TON	69	
414(B)	5725	DOWEL JOINTED P.C. CONCRETE PAVEMENT (PLACEMENT)	(R-1) SY	131	
414(G)	5275	P.C. CONCRETE FOR PAVEMENT	(R-1) CY	44	
609(A)	0287	CONCRETE CURB (4" MNTBLE-INTEGRAL)	(R-1) LF	102	
613(H)	0450	6" PERFORATED PIPE UNDERDRAIN ROUND	(6) LF	50	
613(I)	1096	6" NON-PERF. PIPE UNDERDRAIN RND.	(6) LF	50	
613(Q)	5946	OUTLET LATERAL HEADWALL	(5) EA	2	
619(B)	4727	REMOVAL OF CONCRETE PAVEMENT	(2)(R-49)(R-50) SY	131	
619(B)	4780	REMOVAL OF GUARDRAIL	(R-49) LF	807	
623(A)	0932	BEAM GUARDRAIL W-BEAM SINGLE	LF	675	
623(F)	8300	GUARDRAIL TRAIL END TURNDOWN (31")	EA	2	
623(G)	8590	GUARDRAIL END TREATMENT (31")	(3) EA	1	
623(I)	8700	GUARDRAIL BRIDGE CONN-THRIE BEAM (31")	EA	2	

DESIGN	MDF	3/16	GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD <b>SUMMARY OF PAY QUANTITIES AND NOTES (ROADWAY)</b>
DRAWN	JWJ	3/16	
CHECKED	KMM	6/16	
APPROVED			
SQUAD	<b>GARVER</b>	STATE JOB NO. 29773(04)	SHEET NO. 7

**TRAFFIC GENERAL CONSTRUCTION NOTES**

REMOVED MATERIAL TO BECOME PROPERTY OF CONTRACTOR AND IT SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

ALL BROKEN CONCRETE INCLUDING OLD SIGN FOOTINGS WITH STUBS, WASTE MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FROM THE DISPOSAL OF THIS MATERIAL. ANY PIPE POST OR WIDE FLANGE POST ABOVE THE OLD SIGN FOOTINGS SHALL BE CUT AND HANDLED AS PROPERTY OF THE STATE AND SHALL BE NEATLY STACKED ON THE JOB SITE, AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

CONTRACTOR SHALL VERIFY THE TYPE AND ALL DIMENSIONS OF EXISTING SIGNS NECESSARY TO REFURBISH THE SIGNS PRIOR TO ORDERING THE MATERIAL FOR FABRICATION AND SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY THEREOF.

CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN SUCH A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION", AND APPLICABLE ODOT STANDARD DRAWING. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK IF A CHANGE TO THE TRAFFIC CONTROL PLAN IS PROPOSED.

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET ODOT'S "QUALITY STANDARDS FOR TEMPORARY TRAFFIC CONTROL DEVICES."

**TRAFFIC CONTROL PAY QUANTITY NOTES**

(TC-23) QUANTITY SHOWN FOR THIS ITEM INCLUDES THOSE SIGNS WHICH COMPRISE THE ROUTE MARKER ASSEMBLIES USED TO INDICATE THE DETOUR ROUTE.

(TC-26) ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS, AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.

(TC-28) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-29) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.

(TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION).

THE MANUFACTURER SHALL FURNISH A TYPE 'D' CERTIFICATION IN ACCORDANCE WITH O.D.O.T. STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.

(TC-52) ANY USED CHANGEABLE MESSAGE TO BE PLACED ON THIS PROJECT SHALL BE SUBJECT TO INSPECTION AND APPROVAL, BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, TO ASSURE THAT THEY ARE IN GOOD WORKING CONDITION, PRIOR TO PLACEMENT ON THE PROJECT.

(TC-84) 60 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.

(TC-85) THESE SIGNS MUST BE ON THE OKLAHOMA DEPARTMENT OF TRANSPORTATION LIST OF APPROVED CHANGEABLE MESSAGE SIGNS. FOR A LIST OF THE APPROVED SIGNS GO TO THE OKLAHOMA DEPARTMENT OF TRANSPORTATION WEBSITE AT: <http://www.okladot.state.ok.us/traffic/qpl/index.php>

(SP-1) MESSAGE SIGN TO BE IN PLACE 14 DAYS IN ADVANCE OF CONSTRUCTION ACTIVITIES.

(SP-2) QUANTITY SHOWN INCLUDES 835 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND 808 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF SIX INCH (6") WIDE TRAFFIC STRIPE

**TRAFFIC SIGNING & STRIPING PAY QUANTITY NOTES**

(TS-41) "REMOVAL OF EXISTING SIGNS" SHALL INCLUDE THE REMOVAL OF A COMPLETE SIGN ASSEMBLY WHICH MAY INCLUDE MULTIPLE SIGNS, POSTS, FOOTINGS, AND ANY FOOTINGS ADJACENT TO THE SIGN ASSEMBLY. WHEN APPROVED BY THE ENGINEER, FOOTINGS MAY BE OBLITERATED TO A POINT BELOW GROUND LEVEL IN LIEU OF BEING COMPLETELY REMOVED. SEE GENERAL CONSTRUCTION NOTES FOR DISPOSAL OF OLD CONCRETE FOOTING MATERIAL.

JP29773(04)		PAY QUANTITIES		GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RR	
0300 PERMANENT TRAFFIC					
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY	
104	0955	(SP) RAILROAD FLAGGING (NON-BIDDABLE)	DAY	60	
805(A)	8724	(PL)REMOVAL OF EXISTING SIGNS	(TS-41) EA	2	
853	9069	GUARDRAIL DELINEATORS(TYPE 2, CODE 1)	EA	22	
856(A)	8535	TRAFFIC STRIPE(MULTI-POLY.)6" WIDE	(SP-2) LF	1643	

JP 29773(04)		PAY QUANTITIES		GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RR	
0301 TEMPORARY TRAFFIC					
DESCRIPTION			UNIT	QUANTITY	
CONSTRUCTION SIGNS 0 TO 6.25 SF			(TC-23,26,28,33,84) SD	2025	
CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF			(TC-23,26,29,33,84) SD	675	
CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF			(TC-26,30,33,84) SD	75	
CONSTRUCTION BARRICADES(TYPE III)			(TC-26,84) SD	225	
DRUMS			(TC-26,33,84) SD	2475	
PORT. CHANGEABLE MESSAGE SIGN			(SP-1)(TC-26,52,84,85) SD	89	

NOTE: TEMPORARY TRAFFIC CONTROL QUANTITIES ARE FOR THIS PROJECT ONLY AND FOR INFORMATION ONLY. BIDDING WILL BE UNDER MANDATORILY TIED JP 29775(04)

DESIGN	JKJ	3/16	GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD <b>SUMMARY OF PAY QUANTITIES AND NOTES (TRAFFIC)</b>
DRAWN	JKJ	3/16	
CHECKED	KMM	6/16	
APPROVED			
SQUAD	<b>GARVER</b>		
STATE JOB NO. 29773(04)			SHEET NO. 8



SUMMARY OF SURFACING QUANTITIES						
C.R.L. STATION TO STATION	AGGREGATE BASE TYPE A 303(A)	SEPARATOR FABRIC 325	PRIME COAT * 408	DOWEL JOINTED P.C.C. PAVT. (PLACEMENT) 414(B)	P.C. CONCRETE FOR PAVEMENT 414(G)	CONCRETE CURB (4" MNTBLE- INTEGRAL) 609(A)
	CY	SY	GAL	SY	CY	LF
MAINLINE						
324+85.00 TO 337+00.00	54	202	40	131	44	102
<b>TOTALS</b>	<b>54</b>	<b>202</b>	<b>40</b>	<b>131</b>	<b>44</b>	<b>102</b>

\* FOR CONTRACTOR INFORMATION ONLY. PRICE TO BE INCLUDED IN PRICE BID FOR AGGREGATE BASE.

SUMMARY OF REMOVALS		
C.R.L. STATION TO STATION	REMOVAL OF CONCRETE PAVEMENT 619(B)	REMOVAL OF GUARDRAIL 619(B)
	SY	LF
MAINLINE		
324+85.00 TO 337+00.00	131	807
<b>TOTALS</b>	<b>131</b>	<b>807</b>

SUMMARY OF GUARDRAIL						
C.R.L. STATION TO STATION	PRIME COAT * 408	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)	BEAM GUARDRAIL W-BEAM SINGLE 623(A)	GUARDRAIL END TREATMENT (31") 623(G)	GUARDRAIL BRIDGE CONN-THREE BEAM (31") 623(I)	GUARDRAIL TRAIL END TURNDOWN (31") 623(F)
	GAL	TON	LF	EA	EA	EA
MAINLINE						
327+44.17 TO 329+37.92 RT	18	16	150.00	-	1	1
326+94.17 TO 329+37.92 LT	22	20	200.00	-	1	1
332+50.08 TO 333+78.00 RT	14	13	87.50	1	1	-
332+50.08 TO 335+02.60 LT	23	20	237.50	-	1	-
<b>TOTALS:</b>	<b>77</b>	<b>69</b>	<b>675.00</b>	<b>1</b>	<b>4</b>	<b>2</b>

\* FOR CONTRACTOR INFORMATION ONLY. PRICE TO BE INCLUDED IN OTHER ITEMS OF WORK.

EDGE DRAIN SUMMARY			
C.R.L. STATION TO STATION	6" PERFORATED PIPE UNDERDRAIN ROUND 613(H)	6" NON-PERF. PIPE UNDERDRAIN RND. 613(I)	OUTLET LATERAL HEADWALL 613(Q)
	LF	LF	EA
MAINLINE			
324+85.00 TO 337+00.00	50	50	2
<b>TOTALS:</b>	<b>50</b>	<b>50</b>	<b>2</b>

SIGN SUMMARY						
SIGN NO.	ALIGNMENT	STATION	SIGN TYPE	(PL) REMOVAL OF EXISTING SIGNS	GUARDRAIL DELINEATORS (TYPE 2, CODE 1)	
				805(A)	853	
				(EA.)	(EA.)	
1	C.R.L.	332+28	L&R	OM3	2	REMOVE OBJECT MARKER
2	C.R.L.	327+44.17 TO 329+37.92	R	TYPE 2, CODE 1	5	INSTALL GUARDRAIL DELINEATOR UNITS
3	C.R.L.	326+94.17 TO 329+37.92	L	TYPE 2, CODE 1	6	INSTALL GUARDRAIL DELINEATOR UNITS
4	C.R.L.	332+50.08 TO 333+98.00	R	TYPE 2, CODE 1	4	INSTALL GUARDRAIL DELINEATOR UNITS
5	C.R.L.	332+50.08 TO 335+02.60	L	TYPE 2, CODE 1	7	INSTALL GUARDRAIL DELINEATOR UNITS
				SUB TOTALS:	2	22
				TOTALS:	2	22

SUMMARY OF STRIPING	
TYPE	L.F.
YELLOW (MULTI-POLYMER)	
6" SOLID	808
WHITE (MULTI-POLYMER)	
6" SOLID	835

# STORM WATER MANAGEMENT PLAN

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	29773(04)			
DESCRIPTION				REVISIONS	DATE

## SITE DESCRIPTION

PROJECT LIMITS: GILCREASE EXIT RAMP, 0.1 MILES DOWN GILCREASE EXIT RAMP SOUTH BOUND.

PROJECT DESCRIPTION: REHAB EXISTING BRIDGE, AND REPLACE APPROACH PAVEMENT.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: \_\_\_\_\_  
 PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED. PRESERVE AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL AND/OR MAINTAIN TEMPORARY SEDIMENT CONTROL ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF THE DATES OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: DENNIS COMPLEX

AREA TO BE DISTURBED: 0 ACRES

OFFSITE AREA TO BE DISTURBED: \_\_\_\_\_  
 (FOR CONTRACTOR USE)

MAXIMUM ACRES TO BE DISTURBED AT ANY ONE TIME: \_\_\_\_\_  
 (FOR CONTRACTOR USE)

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 36°05'17"N, 96°02'34"W

NAME OF RECEIVING WATERS: UNNAMED TRIBUTARY TO MOOSER CREEK

SENSITIVE WATERS OR WATERSHEDS: YES  NO

303(d) IMPAIRED WATERS: YES  NO

NOTE:  
 THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

## EROSION AND SEDIMENT CONTROLS

### SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

### STRUCTURAL PRACTICES:

- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DIKES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BERMS
- TEMPORARY STREAM CROSSINGS

### OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD REMOVED DAILY

### NOTES:

SILT SHALL BE REMOVED FROM TEMPORARY EROSION CONTROL DEVICES WHEN HALF FULL. COST TO BE INCLUDED IN THE PRICE BID FOR EROSION CONTROL DEVICE.  
NO SINGLE OUTFALL RECEIVES MORE THAN 10 ACRES OF DISTURBED AREA RUNOFF PER PHASE.

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

### MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

### WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

### HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

### GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
  - 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
  - 221 TEMPORARY SEDIMENT CONTROL

### IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2012.

DESIGN	MDF	3/16	GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD  <b>STORM WATER MANAGEMENT PLAN</b>
DRAWN	JWJ	3/16	
CHECKED	KMM	6/16	
APPROVED			
SQUAD	<b>GARVER</b>		

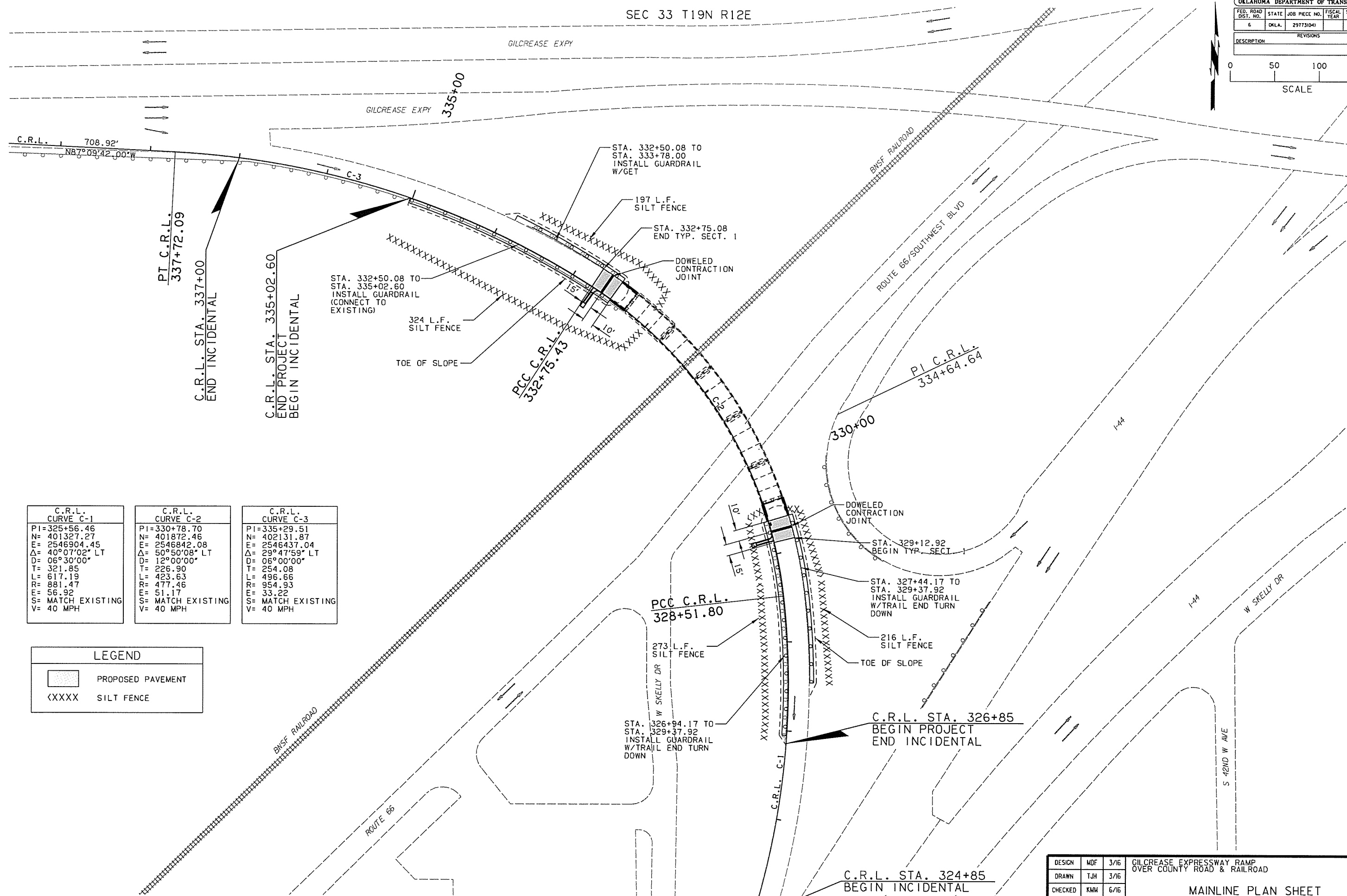
STATE JOB NO. 29773(04) SHEET NO. 10

REVISED 06/28/2016

SEC 33 T19N R12E

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	29773(04)			
DESCRIPTION			REVISIONS	DATE	

0 50 100 150  
SCALE



C.R.L. CURVE C-1	C.R.L. CURVE C-2	C.R.L. CURVE C-3
PI=325+56.46	PI=330+78.70	PI=335+29.51
N= 401327.27	N= 401872.46	N= 402131.87
E= 2546904.45	E= 2546842.08	E= 2546437.04
Δ= 40°07'02" LT	Δ= 50°50'08" LT	Δ= 29°47'59" LT
D= 06°30'00"	D= 12°00'00"	D= 06°00'00"
T= 321.85	T= 226.90	T= 254.08
L= 617.19	L= 423.63	L= 496.66
R= 881.47	R= 477.46	R= 954.93
E= 56.92	E= 51.17	E= 33.22
S= MATCH EXISTING	S= MATCH EXISTING	S= MATCH EXISTING
V= 40 MPH	V= 40 MPH	V= 40 MPH

LEGEND	
	PROPOSED PAVEMENT
	SILT FENCE

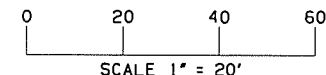
DESIGN	MDF	3/16	GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD
DRAWN	TJH	3/16	
CHECKED	KMM	6/16	
APPROVED			
SQUAD	<b>GARVER</b>		

STATE JOB NO. 29773(04) SHEET NO. 11

7/7/2016 TULSA COUNTY

All information included in these plans is based on the existing As-Built drawings. It is solely the Contractor's responsibility to accurately verify this information prior to any demolition or construction. For additional information, see the General Notes "VERIFICATION OF EXISTING CONDITIONS", "SURVEYING AND CONSTRUCTION STAKING", & ESTABLISHMENT OF VERTICAL GEOMETRY" on Sheet No. 3.

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	DATE
6	OKLA.	29773(04)		12		
DESCRIPTION		REVISIONS		DATE		



**INDEX OF SHEETS**

SHEET NO.	TITLE
3	Summary of Pay Quantities and Notes (Bridge) (Sheet 1 of 4)
4	Summary of Pay Quantities and Notes (Bridge) (Sheet 2 of 4)
5	Summary of Pay Quantities and Notes (Bridge) (Sheet 3 of 4)
6	Summary of Pay Quantities and Notes (Bridge) (Sheet 4 of 4)
12	General Plan and Elevation
13	Abutment Demolition Details
14	Abutment Repair Details
15	Typical Section
16	Longitudinal Section
17	Superstructure Details (Sheet 1 of 4)
18	Superstructure Details (Sheet 2 of 4)
19	Superstructure Details (Sheet 3 of 4)
20	Superstructure Details (Sheet 4 of 4)
21	Superstructure Repair Details
22	Approach Slab Details (Sheet 1 of 2)
23	Approach Slab Details (Sheet 2 of 2)
24	Drain Details at Ends of Bridge

**STANDARDS**  
EJ-S0-03E  
EJ-DTL-01E

**LOAD AND RESISTANCE FACTOR DESIGN DATA**

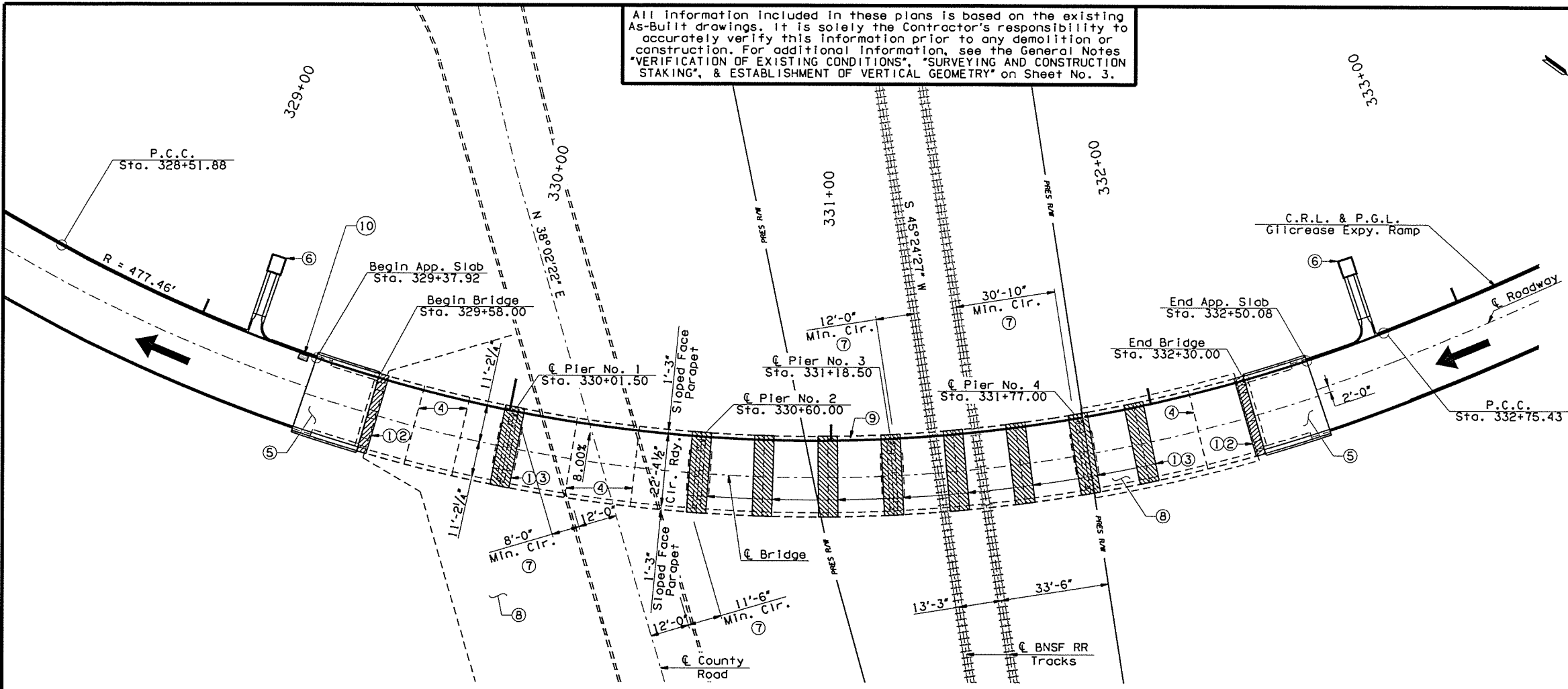
Class AA Concrete  $f'_c = 4,000$  p.s.i.  
 Class A Concrete  $f'_c = 3,000$  p.s.i.  
 Reinforcing Steel (Grade 60)  $f_y = 60,000$  p.s.i.  
 Stainless Steel A240 (Type 316)  $f_y = 30,000$  p.s.i.  
 Structural Steel (M270, Gr. 50W)  $f_y = 50,000$  p.s.i.

Loading: HL93 or Oklahoma Overload Truck and 20 p.s.f. Future Wearing Surface.

Deck Design: AASHTO LRFD Bridge Design Specifications, 7th Edition with Interims through 2015.

ANSI/AASHTO/AWS: D1.5 Bridge Welding Code  
 AANSI/AASHTO/AWS: D1.6 Structural Welding Code - Stainless Steel

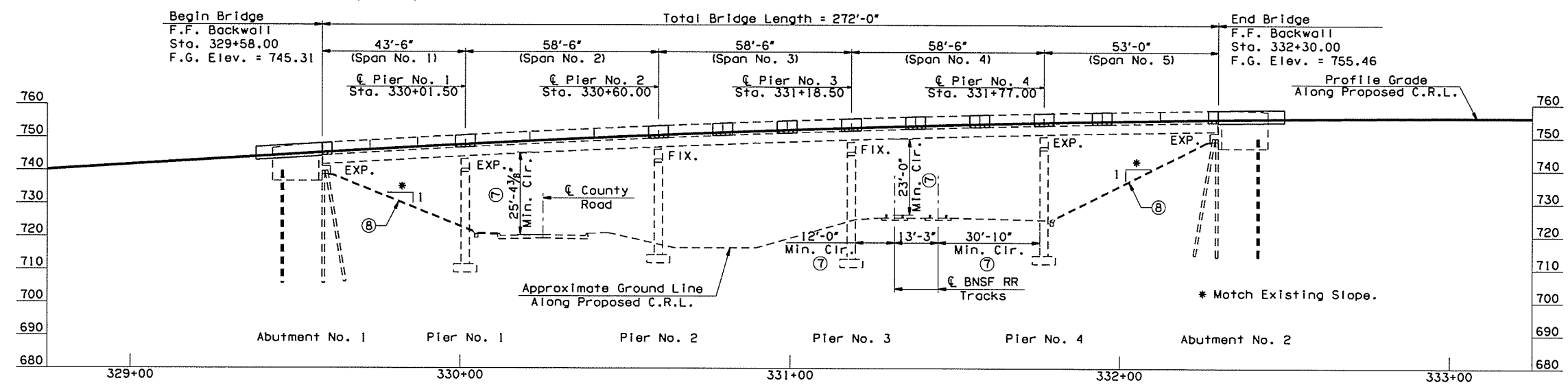
LFD Operating Rating: HS 55.2



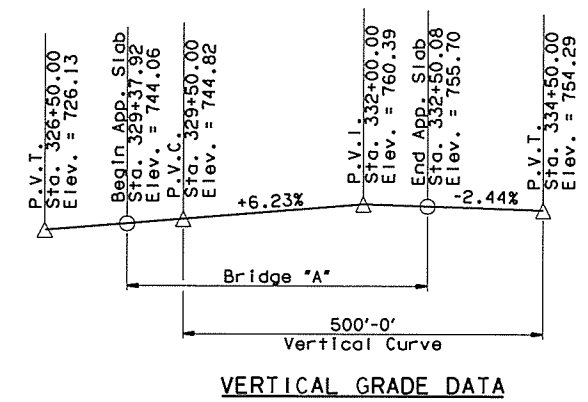
- ① Class C Bridge Deck Repair Area, see Sheet Nos. 17 - 18 for details.
- ② New Sealed Expansion Joint. See Sheet No. 18.
- ③ New Construction Joint. See Sheet No. 18.
- ④ Clean and Reseal Joint.
- ⑤ New Approach Slab, see Sheet No. 22.
- ⑥ New Slope Drains and curb, See Sheet No. 24.
- ⑦ Vertical and Horizontal Clearances shown are taken from As-Built plans.
- ⑧ Clean and Reseal Joints in existing Slope Walls.
- ⑨ 2" Diameter Existing Conduit in Poropet to remain.
- ⑩ Remove Inlet & 5'-0" of existing pipe. Cap with CLSM Backfill. All costs associated with this work shall be included in the price bid per Lump Sum of "REMOVAL OF BRIDGE ITEMS".

**PLAN**

**NOTE:**  
Stations and elevations shown are along C.R.L.



**ELEVATION**



**VERTICAL GRADE DATA**

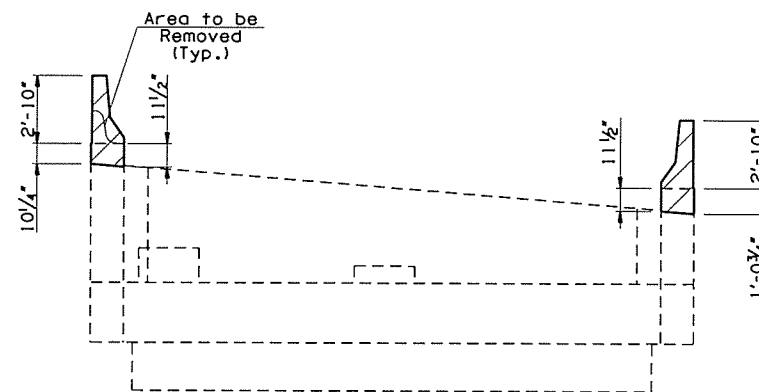
GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	3/16
			DETAIL	SJL	4/16
			CHECK	BRT	5/16
GENERAL PLAN AND ELEVATION		<b>GARVER</b>			

STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	JOB PIECE NO. 29773(04)	SHEET NO. 12
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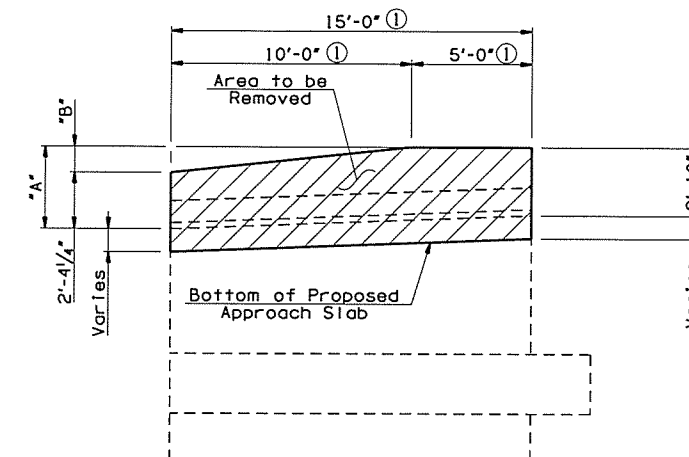
**NOTE:**

All incidental construction required for the removal of existing Wing/Back wall, including concrete removal, excavation, saw cutting, labor and equipment shall be included in the price bid per Lump Sum of "REMOVAL OF BRIDGE ITEMS".

All dimensions of the existing components shown on the plans are approximate. The Contractor shall verify all data necessary to remove portions of the existing abutments and shall be solely responsible for the accuracy thereof. See "VERIFICATION OF EXISTING CONDITIONS" requirements on Sheet No. 3.

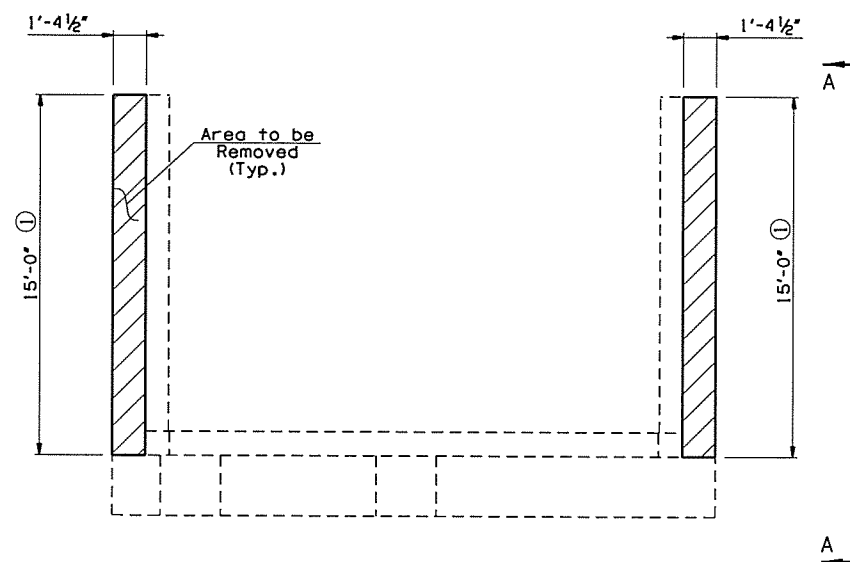


**ELEVATION VIEW**



**SECTION A-A**

① Dimension shown is along Inside Face of Wing.



**PLAN VIEW**  
(Typical for both Abutments)

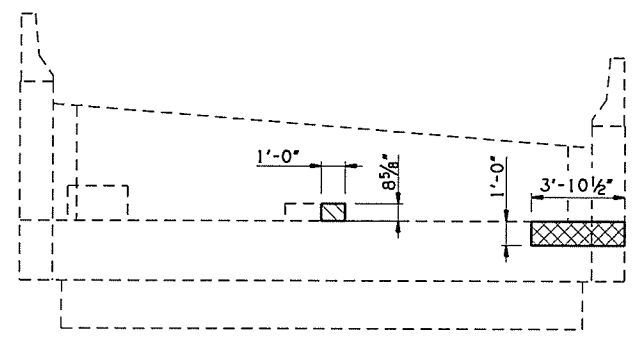
TABLE OF VARIABLES			
LOCATION		"A"	"B"
ABUTMENT NO. 1	N. WING	3'-5 7/8"	1'-0 7/8"
	S. WING	3'-5 7/16"	1'-1 7/16"
ABUTMENT NO. 2		2'-8 1/2"	4 1/4"

**LEGEND**

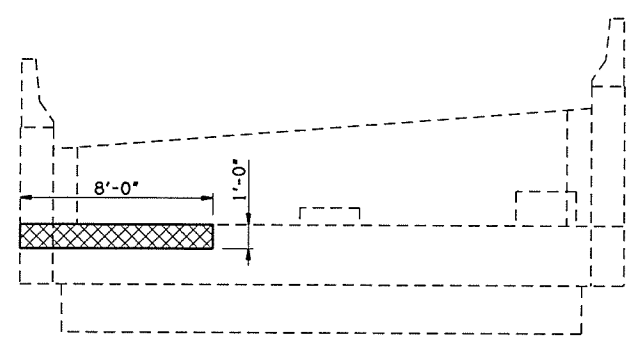
- Existing Structure Demolition
- Existing Structure

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/16
			DETAIL	SJL	4/16
			CHECK	BRT	5/16
ABUTMENT DEMOLITION DETAILS			<b>GARVER</b>		

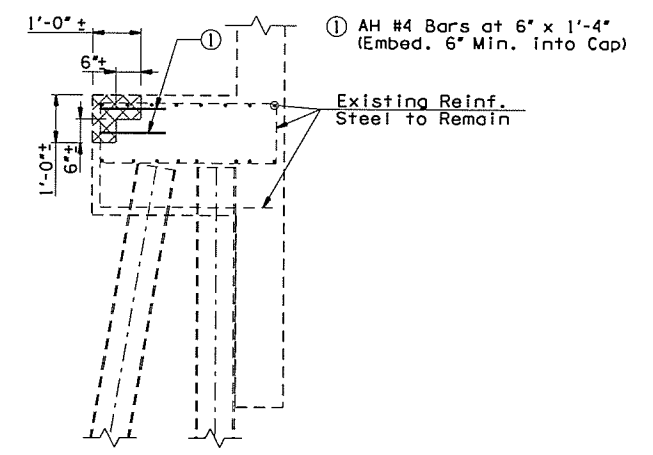
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 29773(04)	SHEET NO. 13



**ELEVATION**  
(Looking Back Station)



**ELEVATION**  
(Looking Forward Station)

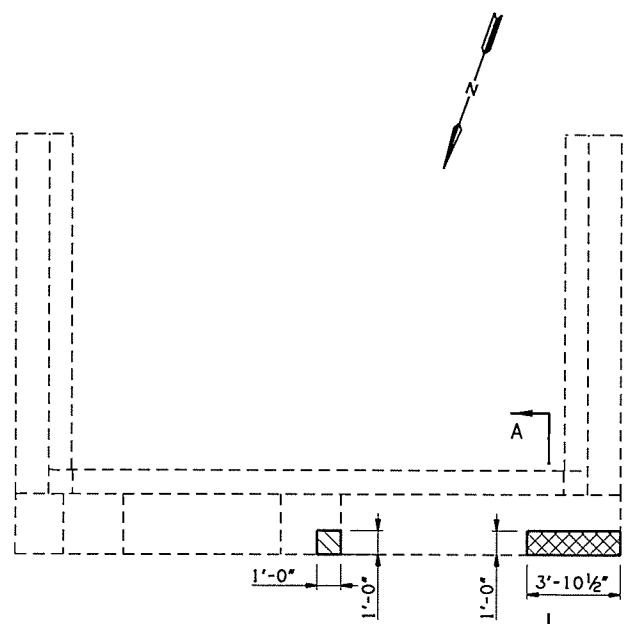


**SECTION A-A**

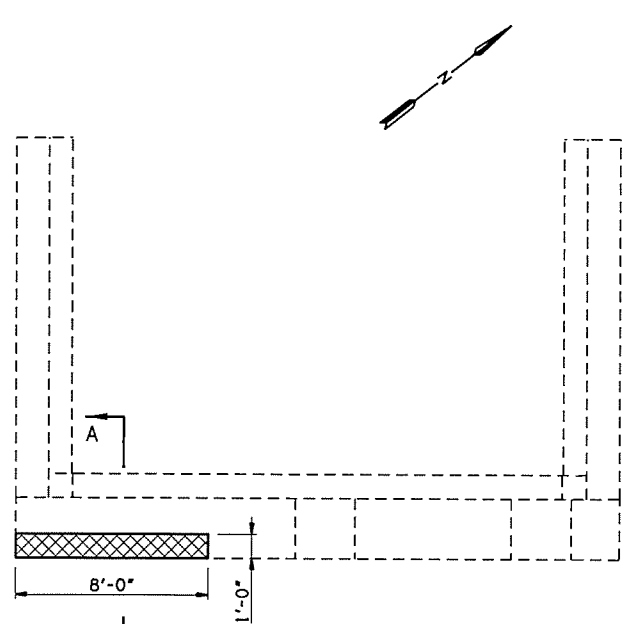
**NOTES:**  
All costs for the AH #4 bars including labor, materials, drilling, and incidentals necessary to complete the work shown in the plans shall be included in the price bid per Cubic Yard of "CLASS A CONCRETE".

SUMMARY OF QUANTITIES - ABUTMENT NO. 1		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	S.Y.	15.00
CLASS A CONCRETE	C.Y.	0.20
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	9.00
PREPARATION OF CRACKS, ABOVE WATER	L.F.	24.00
EPOXY RESIN, ABOVE WATER	GAL.	0.80
PNEUMATICALLY PLACED MORTAR	S.Y.	2.70
(PL) REPAIR BRIDGE ITEMS	S.Y.	1.40

SUMMARY OF QUANTITIES - ABUTMENT NO. 2		
ITEM	UNIT	TOTAL
SPECIAL CONCRETE FINISH	S.Y.	15.00
CLASS A CONCRETE	C.Y.	0.30
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	9.00
PREPARATION OF CRACKS, ABOVE WATER	L.F.	24.00
EPOXY RESIN, ABOVE WATER	GAL.	0.80
PNEUMATICALLY PLACED MORTAR	S.Y.	2.70
(PL) REPAIR BRIDGE ITEMS	S.Y.	1.40



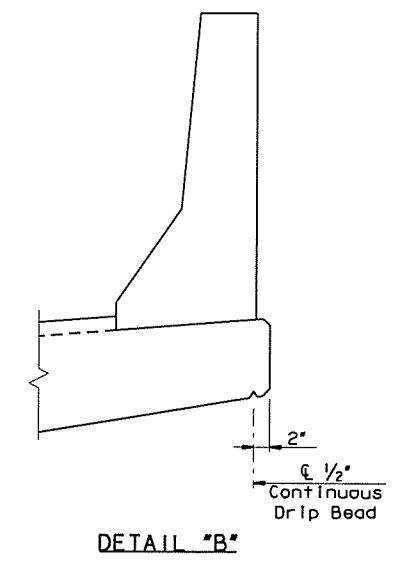
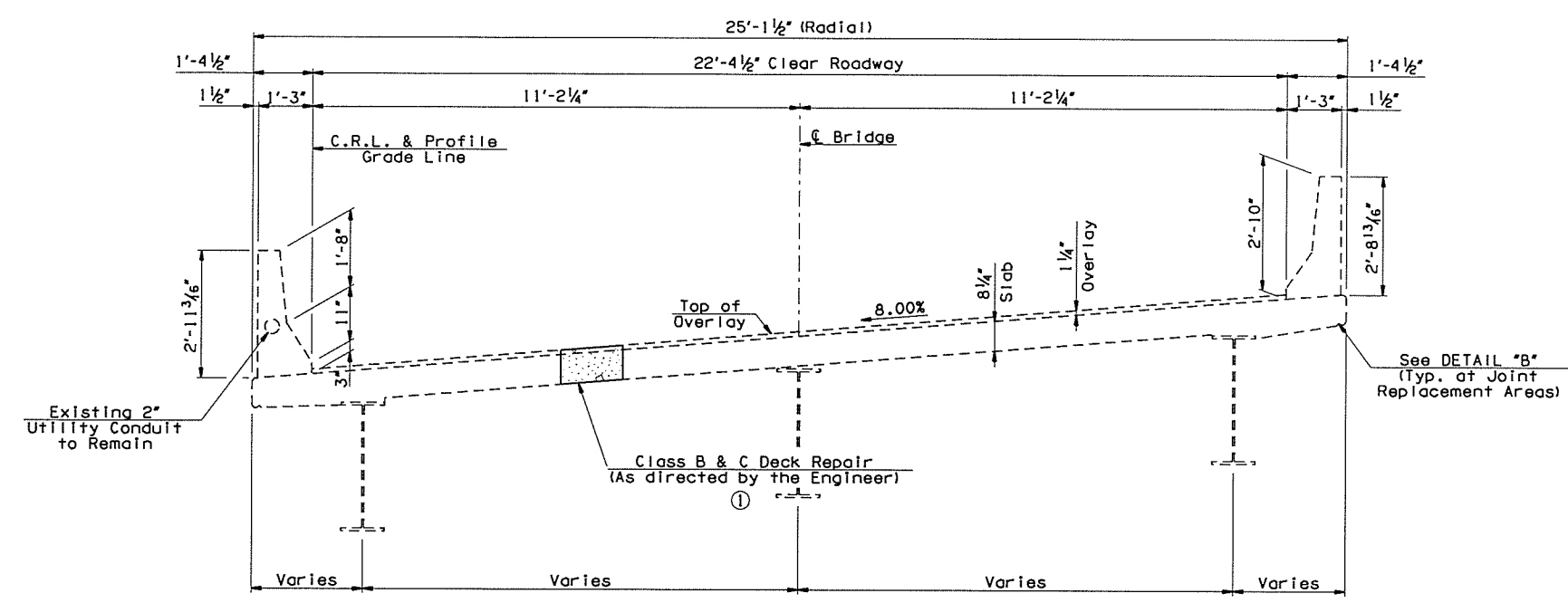
**PLAN**  
**ABUTMENT NO. 1 REPAIR DETAILS**



**PLAN**  
**ABUTMENT NO. 2 REPAIR DETAILS**

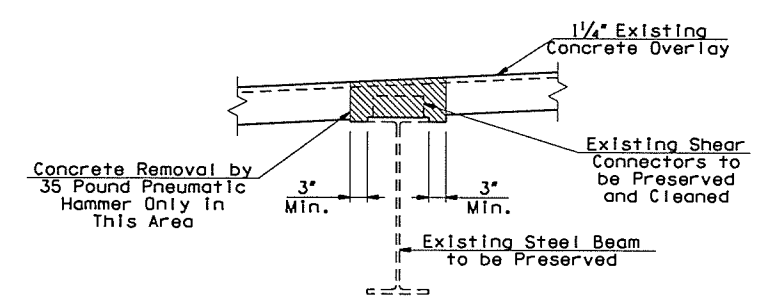
- LEGEND**
- Pneumatically Placed Mortar
  - Class A Concrete
  - Existing Structure

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JTR	4/16
ABUTMENT REPAIR DETAILS		DETAIL	S.JL	4/16
		CHECK	BRT	5/16
		<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION			
	JOB PIECE NO. 29773(04)	SHEET NO. 14		



TYPICAL SECTION - PROPOSED

① In addition to repair areas, as directed by the Engineer, Class C Bridge Deck Repair shall be used to replace the existing expansion and construction joints at the Abutments and Piers.



DETAIL "A"

**NOTES:**  
 Detail is shown for beam location at Transverse Construction Joint. Typical at all locations where saw cutting occurs over beams.  
 Concrete removal over beams shall be restricted to 35 Pound Pneumatic Hammer. The concrete removal in this area shall be performed after the slab has been cut.

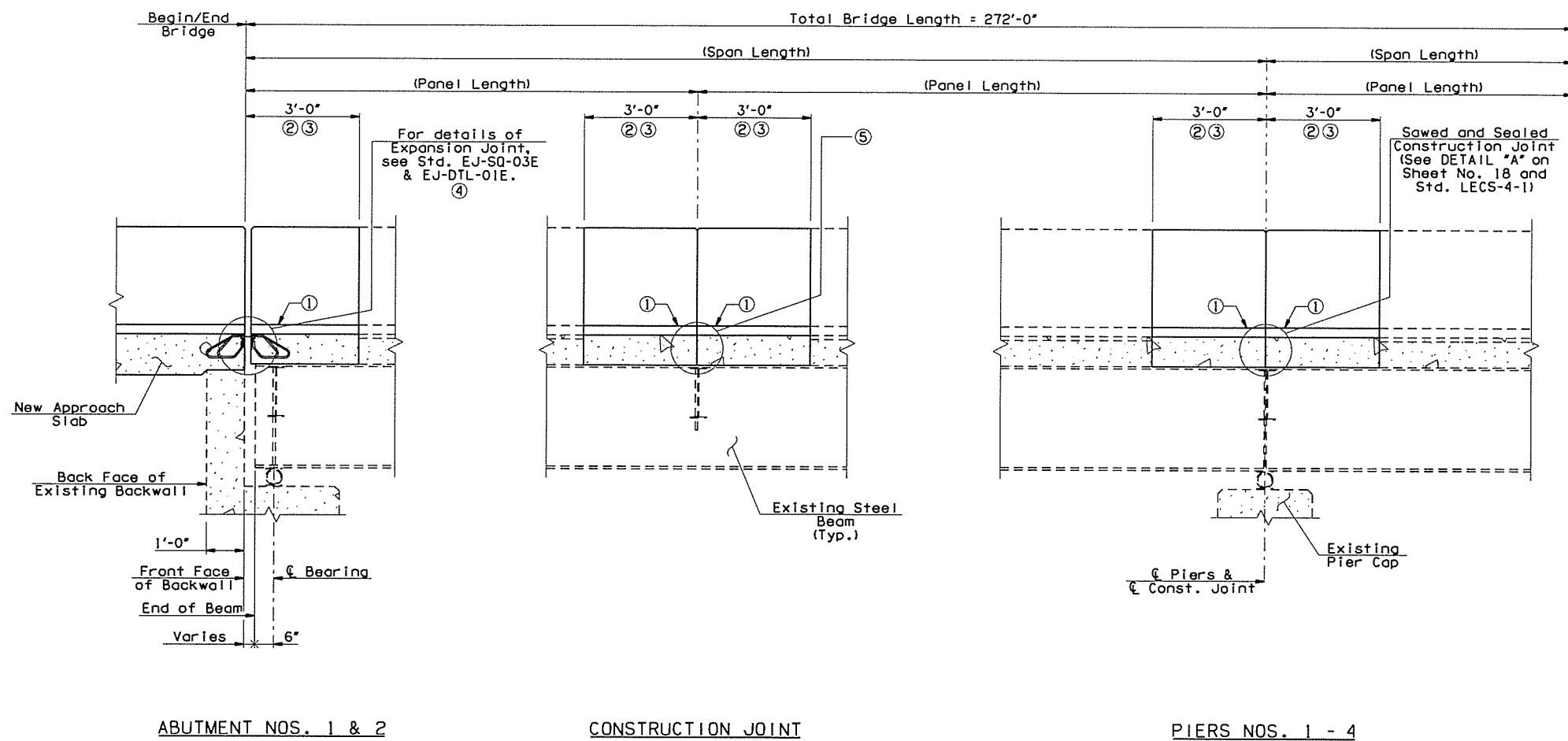
SUMMARY OF QUANTITIES - SUPERSTRUCTURE		
ITEM	UNIT	TOTAL
SEALED EXPANSION JOINT	L.F.	46.80
CONCRETE PARAPET	L.F.	120.00
RAPID CURE JOINT SEALANT	L.F.	100.80
STRUCTURAL STEEL	LB.	6,000.00
EPOXY COATED REINFORCING STEEL	LB.	18,911.00
CLASS B BRIDGE DECK REPAIR	S.Y.	28.00
CLASS C BRIDGE DECK REPAIR	S.Y.	185.00
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	346.00
PNEUMATICALLY PLACED MORTAR	S.Y.	68.00
SEALER CRACK PREPARATION	L.F.	252.00
SEALER RESIN	GAL.	3.00
DECK AREA SEALED (FLOODCOATS)	S.Y.	785.30
(PL) REPAIR BRIDGE ITEM (TYPE A)	EA.	12.00

LEGEND

- Existing Structure
- Proposed Structure

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/15
			DETAIL	SJL	4/16
			CHECK	BRT	5/16
TYPICAL SECTION					
<b>GARVER</b>					
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION				
		JOB PIECE NO. 29773(04)	SHEET NO. 15		

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION				REVISIONS	DATE	



- ① Expansion and Construction Joint Repairs. See Sheet Nos. 17 - 20.
- ② See Sheet Nos. 17 - 20 for limits of demolition and construction at the Abutment and Piers for new Sloped Face Parapets.
- ③ Dimensions shown perpendicular to joint.
- ④ Sealed Expansion Joints shall be constructed as shown in the plans and in accordance with Standards EJ-SQ-03E and EJ-DTL-01E.
- ⑤ Required Construction Joint. Seal with High Molecular Weight Methacrylate.

**LONGITUDINAL SECTION**  
 (All dimensions shown are along  $\bar{C}$  Beam)  
 (Do not Groove within 6" of any Construction Joints)

**DECK SLAB NOTES:**

Epoxy-coat or galvanize steel items used to facilitate construction, such as Deck Form Hangers, Ty-Bar Clips, Insert Weld Anchors, or other appurtenances that will remain in place in the Deck Slab. Epoxy-coat in accordance with AASHTO M284 or galvanize in accordance with AASHTO M111.

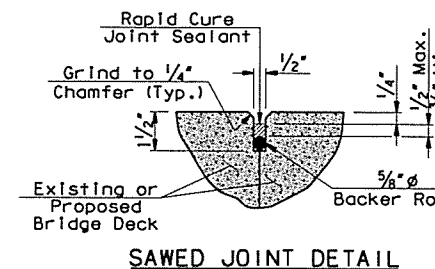
In the event of an emergency, halt the placement of concrete by forming a Construction Joint made perpendicular to the direction of traffic or as directed by the Engineer. Do not place any heavy equipment on the finished Deck Slab within 5' of any Construction Joint until concrete is in place on both sides of the respective joint and at least 48 hours has elapsed since concrete placement.

Seal all Deck Slab Construction Joints with High Molecular Weight Methacrylate in accordance with Section 523 of the Specifications. Include all cost of equipment and labor for the installation of the High Molecular Weight Methacrylate Sealer in the contract unit price of "SEALER CRACK PREPARATION". Include all cost of the High Molecular Weight Methacrylate Sealer in the contract unit price of "SEALER RESIN". The Department will not measure the preparation and sealer of emergency construction joints for payment.

All dimensions of the existing components shown on the plans are approximate. The Contractor shall verify all data necessary to connect the new material and shall be solely responsible for the accuracy thereof.

The Contractor shall fully inform themselves of the nature of the work and conditions under which it will be performed. The Contractor shall adopt methods consistent with good construction practice and shall take all necessary precautions to prevent damage to the existing bridge or attachments. Any damage to the existing bridge structure or roadway due to the Contractor's negligence shall be repaired at the Contractor's expense, to the satisfaction of the Engineer.

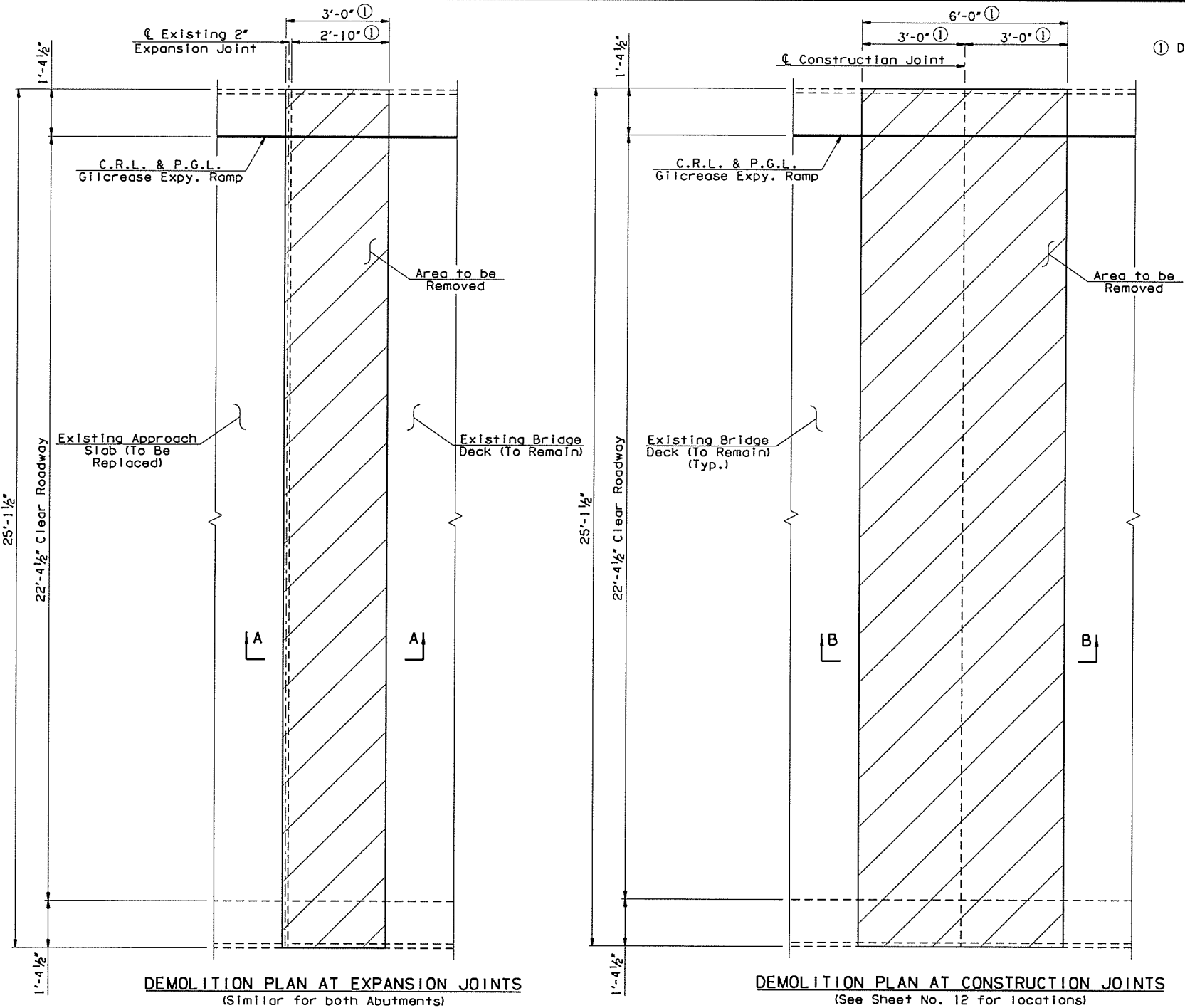
The Contractor shall be aware of existing conditions and potential hazards during construction. Contractor shall take precautions to maintain the integrity of any existing utilities and structures. Any damage to these items during construction shall be repaired and/or replaced at the Contractor's expense, to the Engineer's satisfaction.



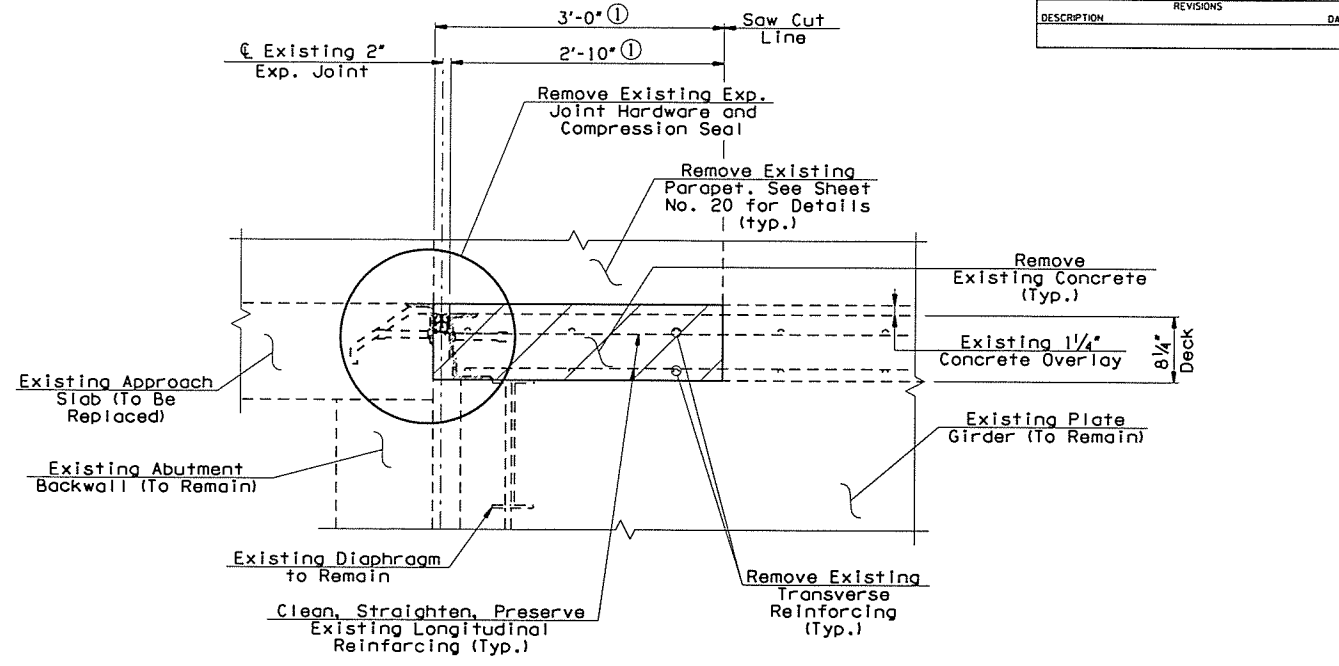
GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/16
			DETAIL	SJL	4/16
			CHECK	BRT	5/16
LONGITUDINAL SECTION					
<b>GARVER</b>					
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION				
	JOB PIECE NO. 29773(04)	SHEET NO. 16			



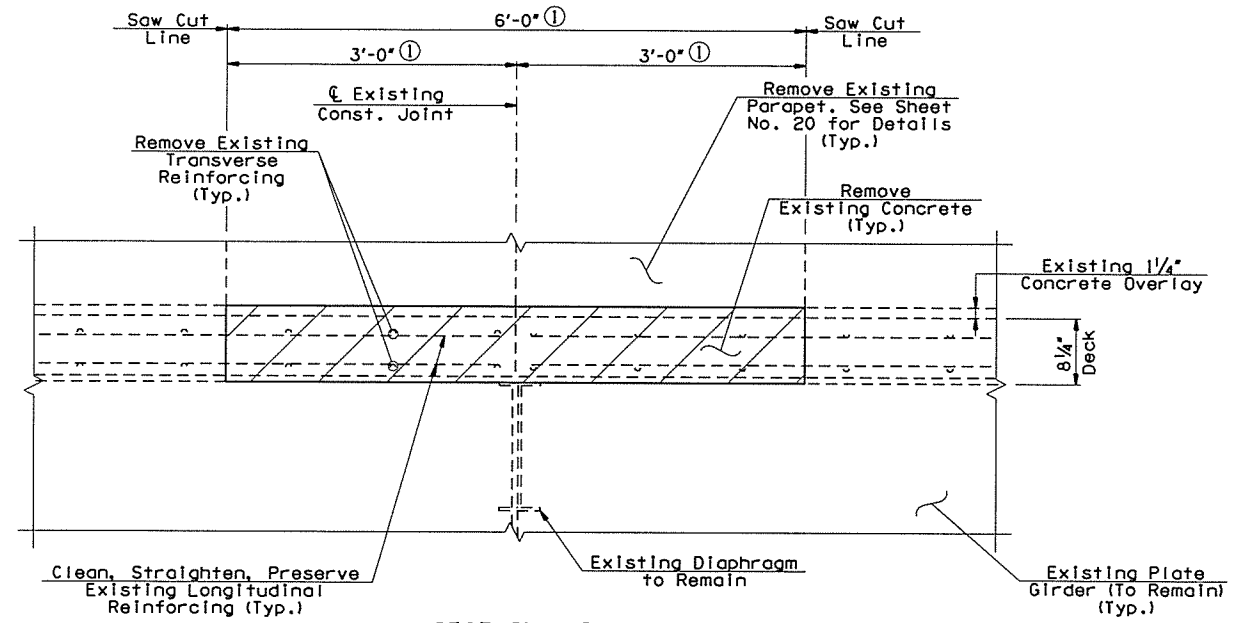
OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	DATE
6	OKLA.	29773(04)				
DESCRIPTION		REVISIONS		DATE		



① Dimensions shown perpendicular to joint.



SECTION A-A



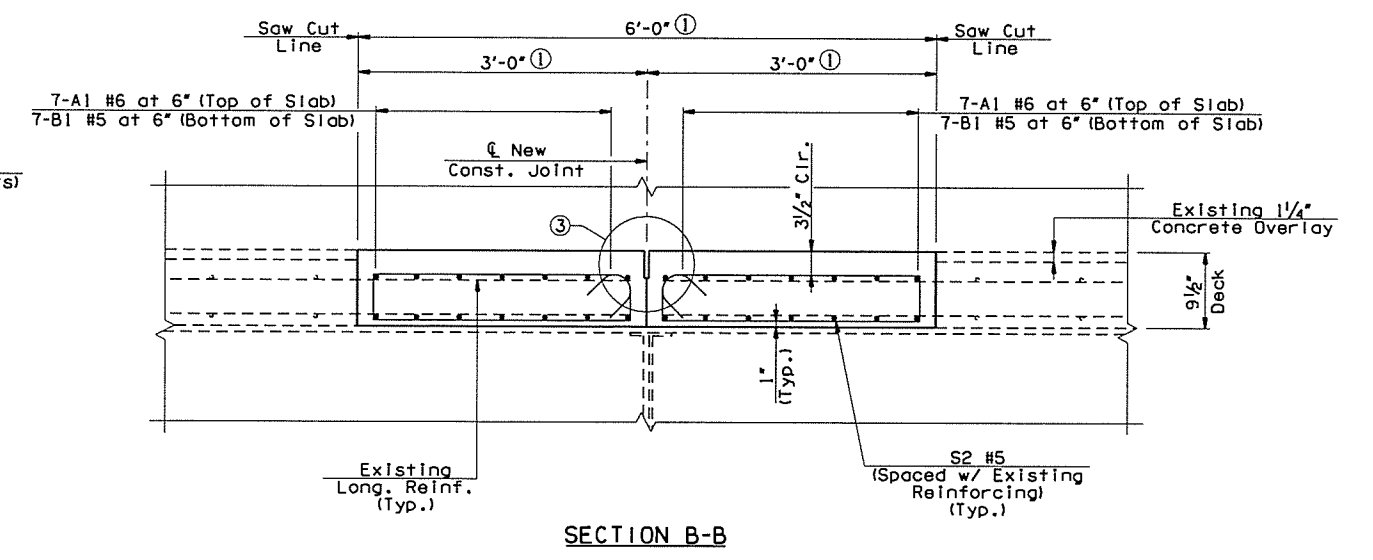
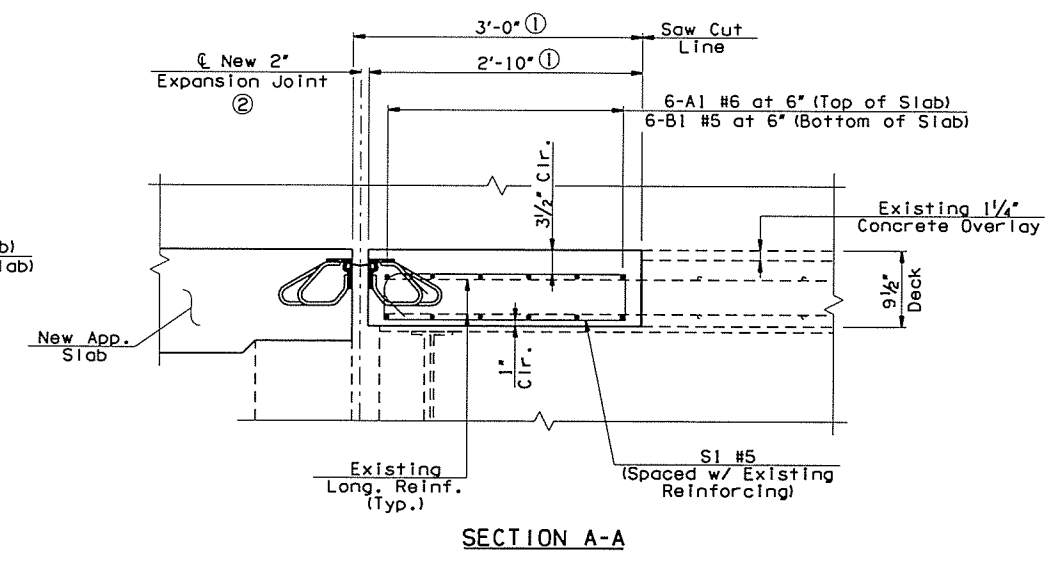
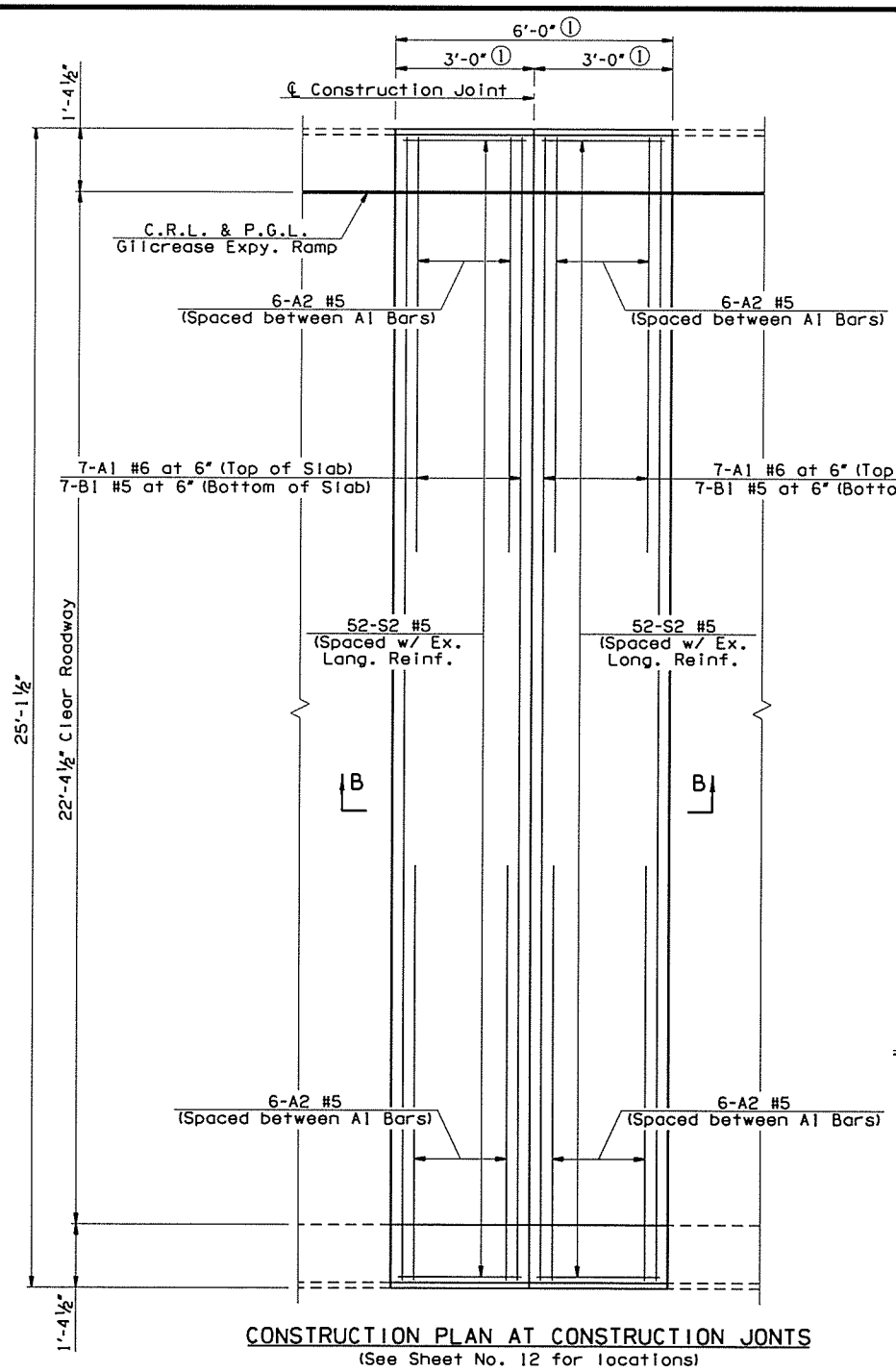
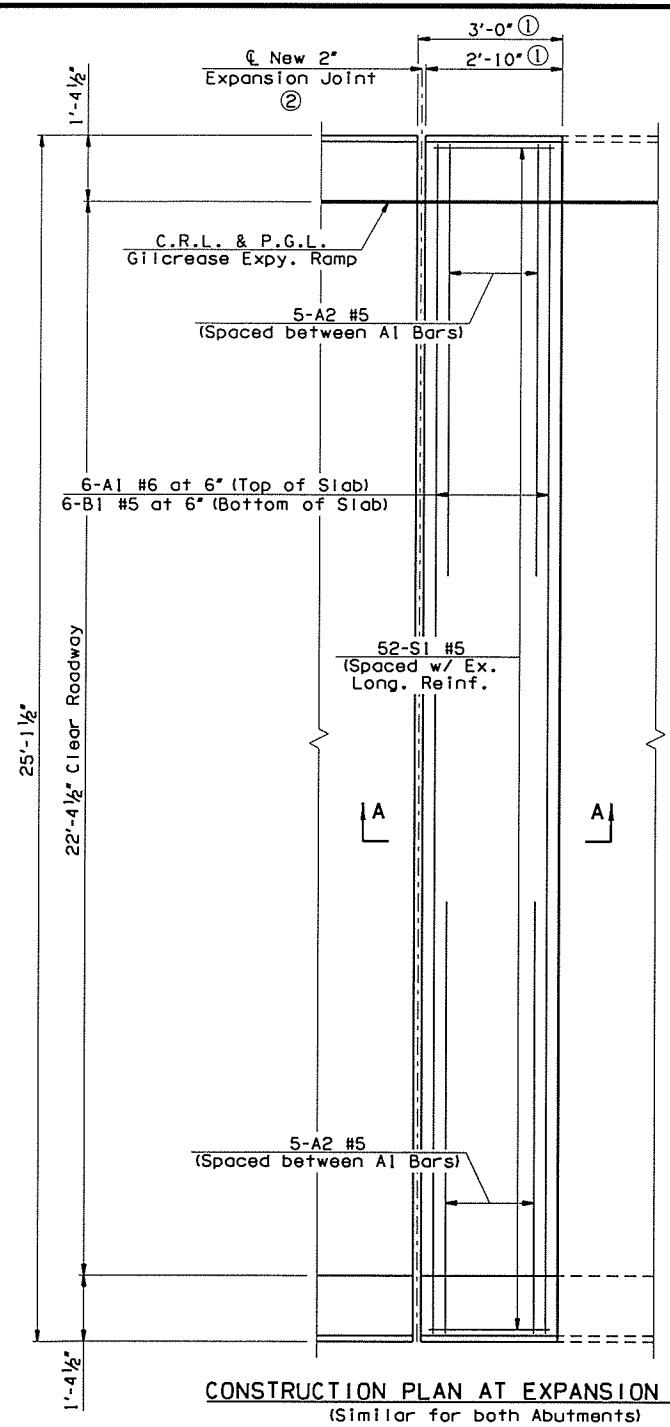
SECTION B-B

**NOTES:**  
 See Sheet No. 18 for details of construction of the existing Expansion and Construction Joints.  
 See Sheet No. 19 for bar lists, bar bends, Flood Coat detail, and summary of quantities.  
 All costs associated with removing the existing concrete deck and replacement with Class AA concrete for Sealed Expansion Joint and Sawed and Sealed Construction Joint repairs including cleaning, straightening, and preserving existing reinforcing steel, saw cutting, materials, labor, and any incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Square Yard of "CLASS C BRIDGE DECK REPAIR".  
 High Early Strength (HES) Concrete shall be used for deck/joint repairs. Deck repairs shall obtain a minimum compressive strength of 3,000 p.s.i. prior to placement of loads on repaired areas. Payment of HES Concrete is included in the price bid per Square Yard of "CLASS C BRIDGE DECK REPAIR".  
 All costs associated with the installation of Sealed Expansion Joints of Abutment Nos. 1 & 2 shall be included in the price bid per Linear Foot of "SEALED EXPANSION JOINT".  
 All costs associated with the installation of Sawed and Sealed Construction Joint at Pier Nos. 1-4 shall be included in the price bid per Linear Foot of "RAPID CURE JOINT SEALANT".  
 All costs associated with sealing Deck Slab Construction Joints within the spans shall be included in the price bid per Linear Foot of "SEALER CRACK PREPARATION" & per Gallon of "SEALER RESIN".

**LEGEND**  
 Demolition cost to be included in the price bid per Square Yard of "CLASS C BRIDGE DECK REPAIR".  
 - - - Existing Structure

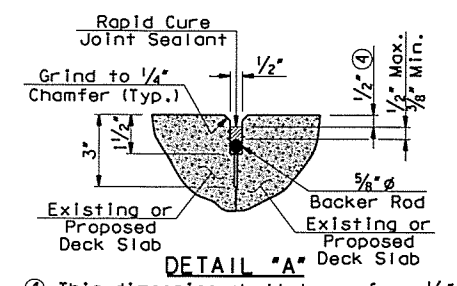
GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JTR	4/16
SUPERSTRUCTURE DETAILS (SHEET 1 OF 4)		DETAIL	SJL	4/16
		CHECK	BRT	5/16
		<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION			
JOB PIECE NO. 29773(04)		SHEET NO. 17		

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	DATE
6	OKLA.	29773(04)				
DESCRIPTION						REVISIONS
						DATE



**NOTES:**  
 See Sheet No. 17 for details of demolition of the Expansion and Construction Joints.  
 See Sheet No. 19 for bar lists, bar bends, Flood Coat detail, and summary of quantities.  
 All costs associated with removing the existing concrete deck and replacement with Class AA concrete for Sealed Expansion Joint and Sowed and Sealed Construction Joint repairs including cleaning, straightening, and preserving existing reinforcing steel, saw cutting, materials, labor, and any incidentals necessary to complete the work as shown in the plans shall be included in the price bid per Square Yard of "CLASS C BRIDGE DECK REPAIR".  
 High Early Strength (HES) Concrete shall be used for deck/joint repairs. Deck repairs shall obtain a minimum compressive strength of 3,000 p.s.i. prior to placement of loads on repaired areas. Payment of HES Concrete is included in the price bid per Square Yard of "CLASS C BRIDGE DECK REPAIR".  
 All costs associated with the installation of Sealed Expansion Joints at Abutment Nos. 1 & 2 shall be included in the price bid per Linear Foot of "SEALED EXPANSION JOINT".  
 All costs associated with the installation of Sowed and Sealed Construction Joint at Pier Nos. 1-4 shall be included in the price bid per Linear Foot of "RAPID CURE JOINT SEALANT".  
 All costs associated with sealing Deck Slab Construction Joints within the spans shall be included in the price bid per Linear Foot of "SEALER CRACK PREPARATION" & per Gallon of "SEALER RESIN".

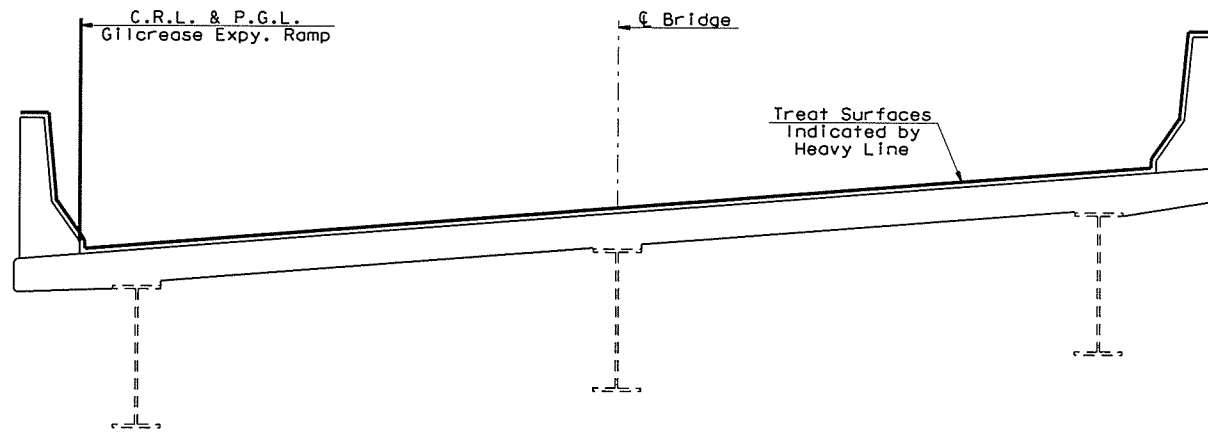
- ① Dimensions shown perpendicular to joint.
- ② The Expansion Joint Openings shall be set at the time the Deck Slab Concrete is poured. The width of the opening, calculated in inches, shall be as follows:  
 At Abutment No. 1 : Opening = 2.6143 - (0.01024 x T)  
 At Abutment No. 2 : Opening = 2.6587 - (0.01098 x T)  
 Where \*T\* equals the ambient air temperature in Degrees Fahrenheit at the time the Deck Slab Concrete is poured. (10°F < T < 120°F)  
 Note that the Expansion Joint Opening shall be measured perpendicular to the centerline of the joint.
- ③ New Sowed and Sealed Construction Joint at Pier Nos. 1-4 only. See DETAIL "A".



④ This dimension shall taper from 1/2" at edge of driving lane/shoulder to 1/8" at rail for Transverse Joints only.

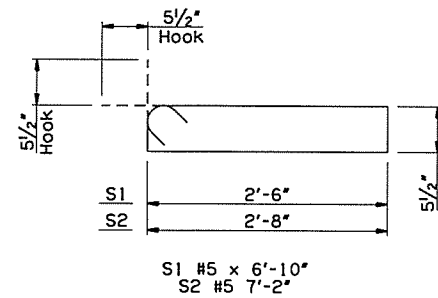
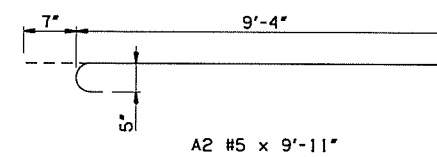
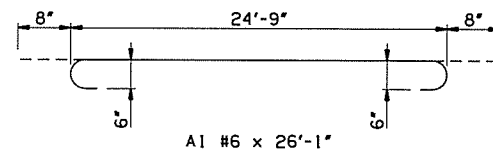
GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JGS	4/16
SUPERSTRUCTURE DETAILS (SHEET 2 OF 4)		DETAIL	SJL	4/16
		CHECK	BRT	5/16
		<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	JOB PIECE NO. 29773(04)	SHEET NO. 18	

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION			REVISIONS		DATE	



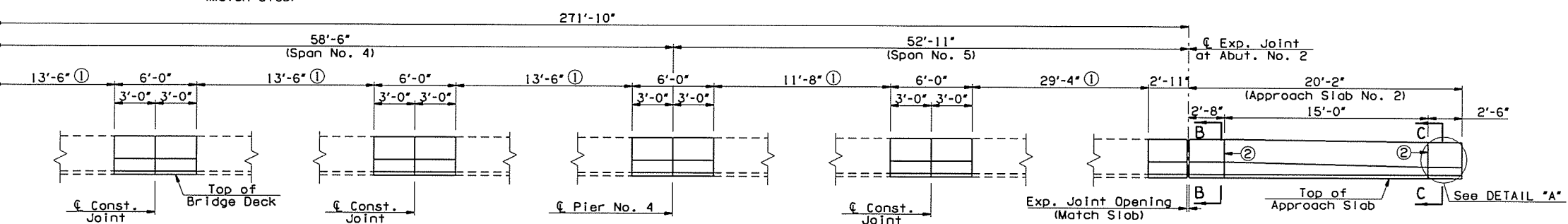
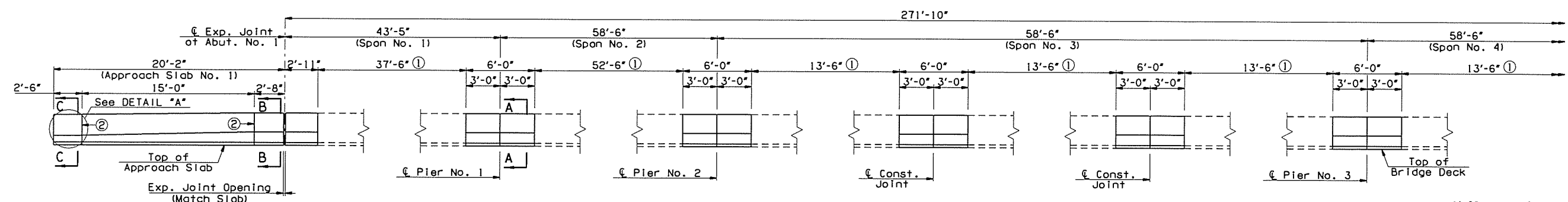
FLOOD COAT TREATMENT DETAIL

SUPERSTRUCTURE BAR LIST				
MARK	SIZE	NO.	FORM	LENGTH
EPOXY COATED REINFORCING STEEL				
A1	#6	138	BENT	26'-1"
A2	#5	236	BENT	9'-11"
B1	#5	138	STR.	24'-9"
EP1	#5	160	BENT	5'-4"
S1	#5	104	BENT	6'-10"
S2	#5	936	BENT	7'-2"

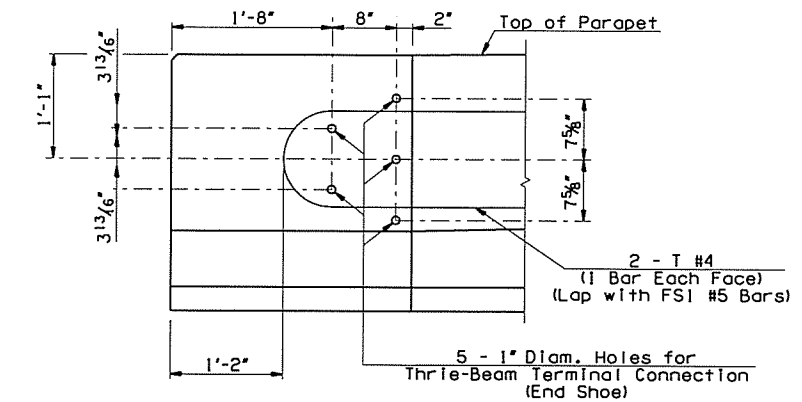


GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/16
SUPERSTRUCTURE DETAILS (SHEET 3 OF 4)			DETAIL	SJL	4/16
			CHECK	BRT	5/16
		<b>GARVER</b>			
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION				
		JOB PIECE NO. 29773(04)	SHEET NO. 19		

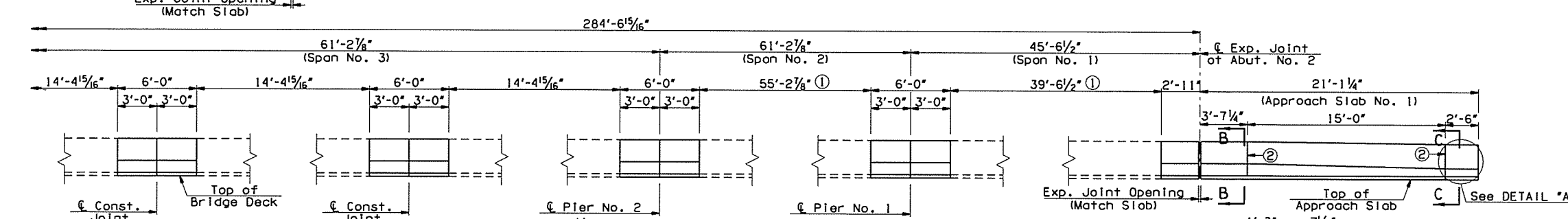
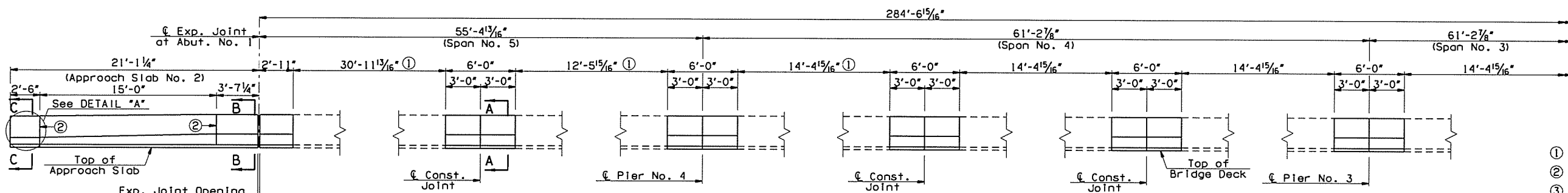
OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	DATE
6	OKLA.	29773(04)				
DESCRIPTION						REVISIONS



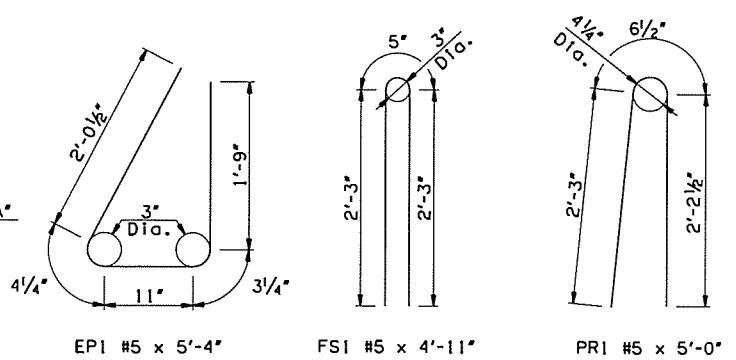
**ELEVATION - SOUTH PARAPET**  
(Looking at inside face of Parapet)



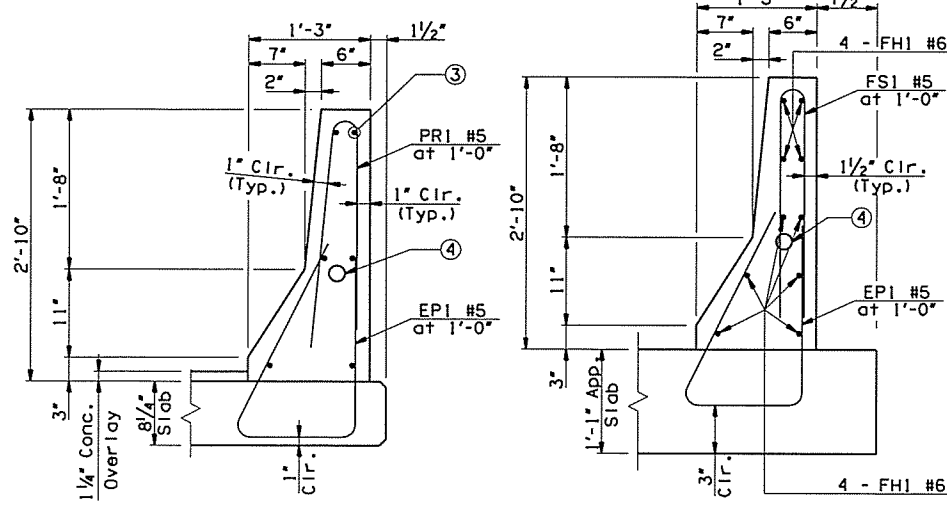
**DETAIL "A"**



**ELEVATION - NORTH PARAPET**  
(Looking at inside face of Parapet)

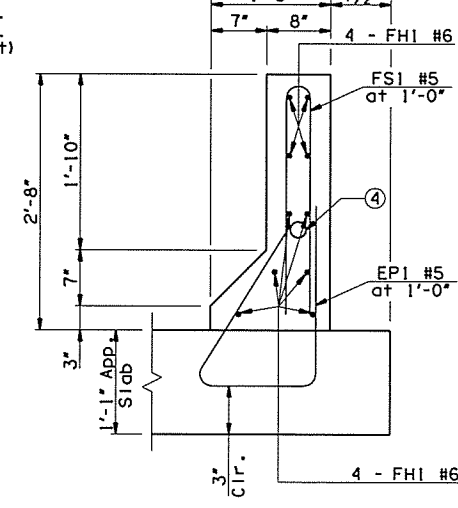


- ① Existing Parapet to Remain.
- ② Crack Control Joints
- ③ Existing Reinforcing to be cleaned and preserved.
- ④ Existing 2"Ø Conduit to Remain (South Parapet Only)



**SECTION A-A**

**SECTION B-B**



**SECTION C-C**

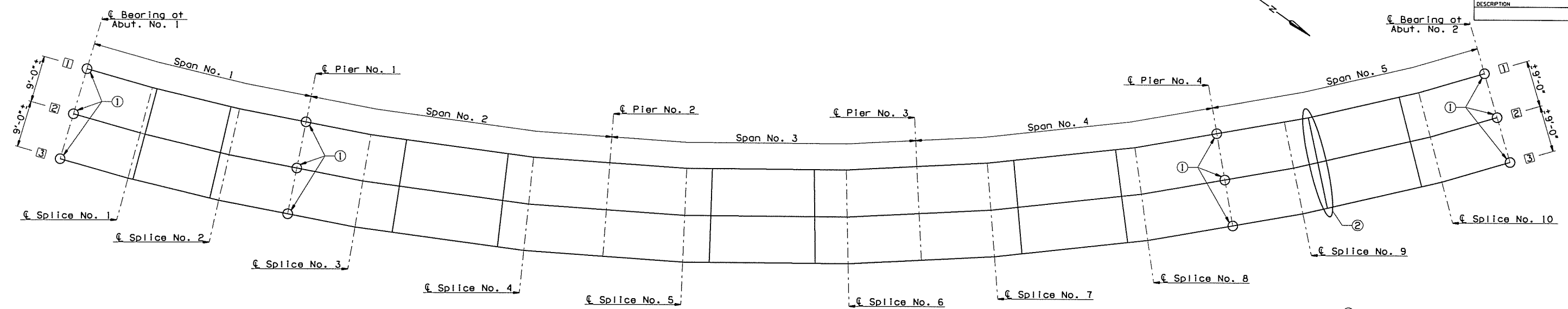
**NOTES:**  
Dimensions measured along roadway face of Parapet.

For further information about the Joint replacement, see Sheet Nos. 17 & 18.

Field Bend EPI Bars to maintain clear distances.

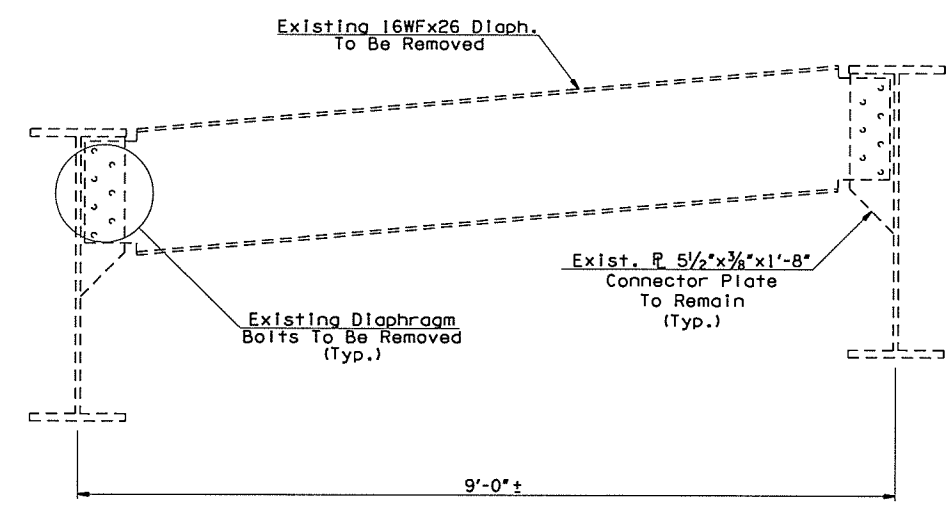
GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"	TULSA COUNTY	DESIGN	JTR	4/16
		DETAIL	SJL	4/16
		CHECK	BRT	5/16
<b>SUPERSTRUCTURE DETAILS</b> (SHEET 4 OF 4)				
<b>GARVER</b>				

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	297731041			
DESCRIPTION		REVISIONS		DATE	

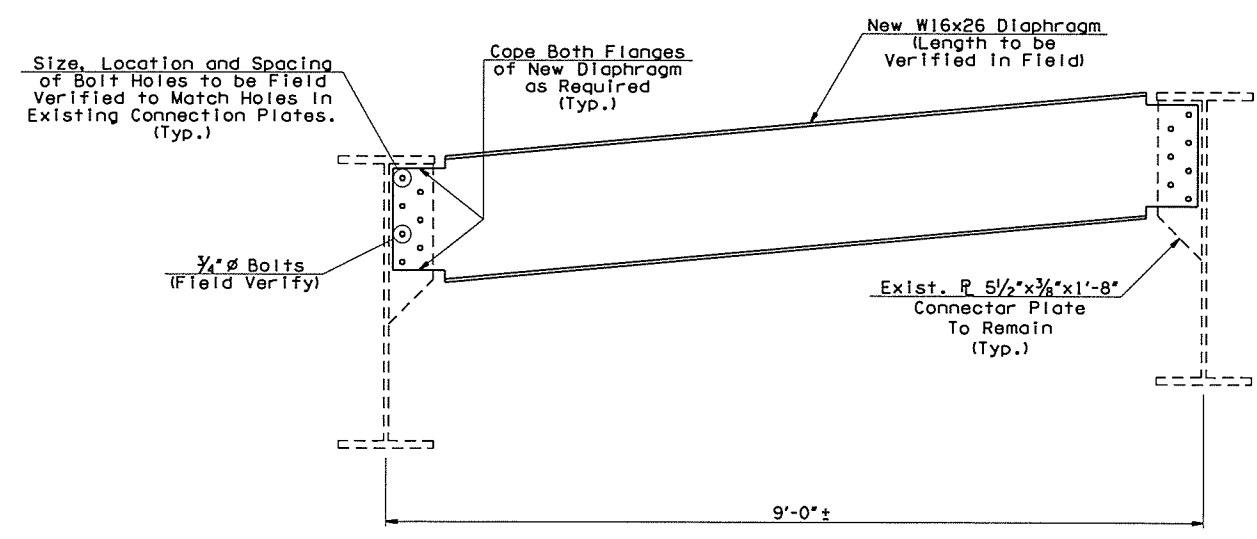


FRAMING PLAN

- ① Existing Expansion Bearings to be reset.
- ② Existing Intermediate Diaphragms to be replaced, see details on this sheet.



EXISTING DIAPHRAGM  
(All Intermediate Diaphragms at Span No. 5, Const. Jt. No. 1)



PROPOSED DIAPHRAGM  
(All Intermediate Diaphragms at Span No. 5, Const. Jt. No. 1)

**GENERAL NOTES:**

Repair locations shall be as specified in the plans and at any additional locations as determined by the Field Engineer.

All information shown was obtained from record drawings, the Contractor shall field verify before ordering and starting work.

See the As-Built drawings for the layout of the existing Diaphragms. The Contractor shall remove the existing Diaphragms as needed to perform the work shown on the plans and re-attach or replace after the work is completed.

**REMOVAL OF STRUCTURAL STEEL:**

The Contractor shall remove the existing Diaphragms as needed to perform the work shown on the plans. Any components of the existing Plate Girders that are damaged during removal activities shall be replaced in like-kind.

**STRUCTURAL STEEL REPLACEMENTS:**

Replacement structural steel shall be AASHTO M270 Grade 50.

All existing bolts are 3/4" diameter. Attach diaphragm replacements with 3/4" diameter bolts unless otherwise approved by the Engineer. Reuse existing bolt or rivet hole patterns whenever possible. New and replacement bolts shall be 3/4" diameter conforming to AASHTO M164 (ASTM A325). Use direct tension indicator washers as directed by the Engineer. The Contractor shall determine the hole pattern at locations without existing holes.

The Contractor shall not remove and replace more than one existing diaphragm at a time.

**WELDING TO EXISTING STRUCTURES:**

All welds must be made to sound steel. Adjust weld locations and extents of new structural steel if sound steel is not found at the locations shown in the plans. All removal and welding of steel shall conform to current ODOT and AWS Specifications.

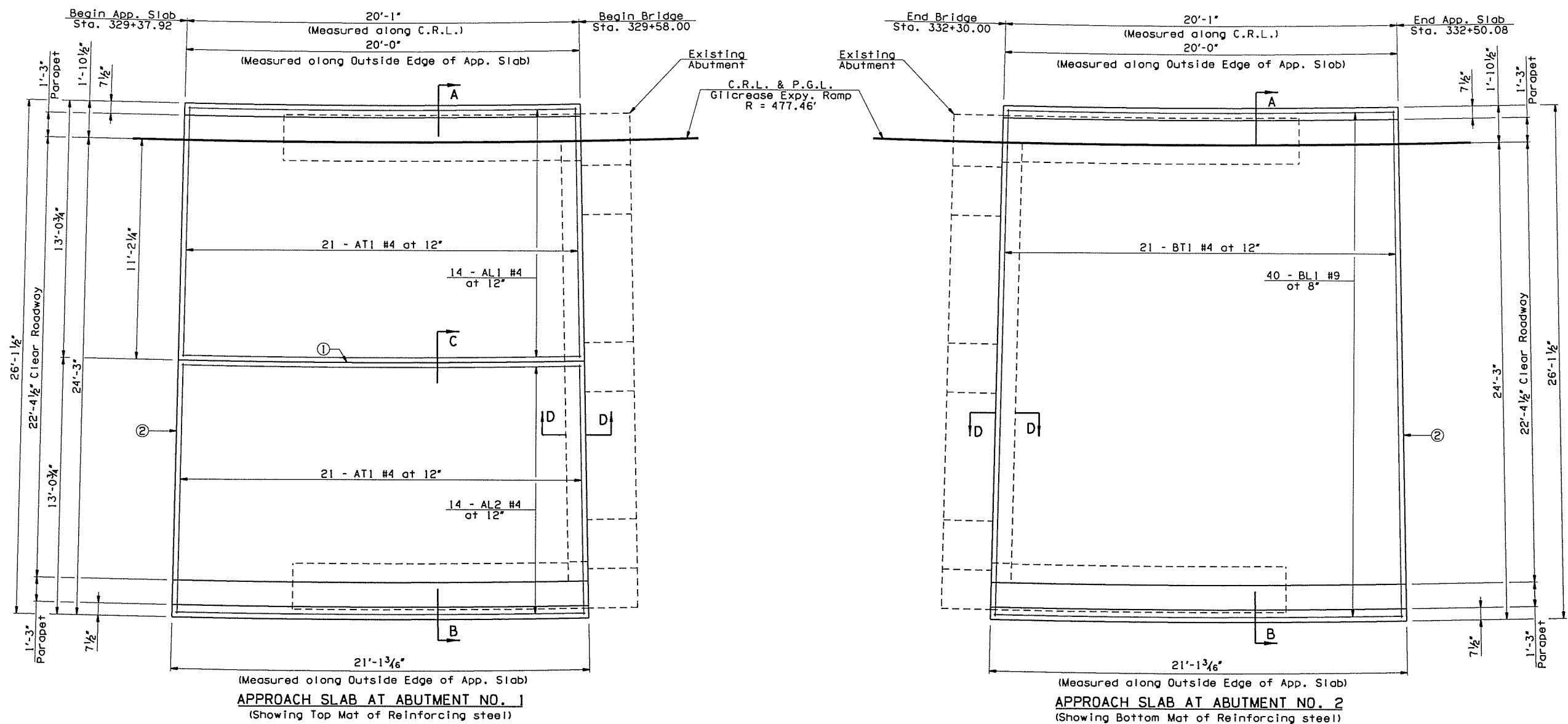
All field welds are to be inspected by the ODOT Materials Division or their representative and shall be in accordance with the current ANSI/AASHTO/AWS D1.5 Bridge Welding Code. Contact the ODOT Materials Division at (405) 522-4999 at least 72 hours prior to the anticipated completion of field welds.

**DETERIORATED EXISTING STRUCTURAL STEEL:**

Notify the Engineer of any deteriorated structural steel during operations. The Engineer will in turn notify the Bridge Engineer to the extent of the damage. The Bridge Engineer shall then determine if any repairs are necessary, and if so, what method of repair shall be used.

All Costs for Diaphragm replacement including labor, materials, tools and incidentals necessary to complete the work shown in the plans shall be included in the price bid per Pound of "STRUCTURAL STEEL".

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/16
SUPERSTRUCTURE REPAIR DETAILS			DETAIL	SJL	4/16
			CHECK	BRT	5/16
			<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION				
JOB PIECE NO. 29773(04)		SHEET NO. 21			

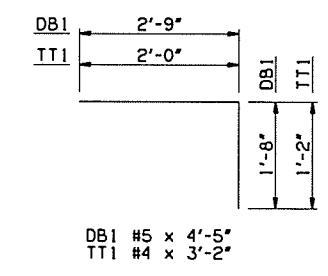


**NOTES:**  
 Do not groove within 6" of the Expansion Joint between the Approach Slab and the Deck Slab.  
 All transverse reinforcement shall be placed along radial lines to C.R.L. and are measured along edge of slab.  
 All longitudinal reinforcement shall be oriented along a curve concentric with C.R.L.  
 Parapet reinforcement not shown for Clarity. See Sheet No. 20 for details.  
 See Sheet No. 23 for SECTIONS A, B, C & D-D.

ITEM	UNIT	APP. SLAB NO. 1	APP. SLAB NO. 2	TOTAL
③ CLSM BACKFILL	C.Y.	10.00	10.00	20.00
④ APPROACH SLAB	S.Y.	59.70	59.70	119.40
SAW-CUT GROOVING	S.Y.	51.10	51.10	102.20
CONCRETE PARAPET	L.F.	41.40	41.40	82.80
④ CLASS AA CONCRETE	C.Y.	21.60	21.60	43.20
④ EPDXY COATED REINFORCING STEEL	LB.	4,321.00	4,321.00	8,642.00
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	16.00	16.00	32.00

③ CLSM Backfill shall be used at the discretion of the Engineer, to fill any voids prior to placement of the new Approach Slabs.  
 ④ The contract unit price for "APPROACH SLAB" shall be full compensation for Concrete, Epoxy Coated Reinforcing Steel (including EP1 bars), Backer Rod, Rapid Cure Joint Sealant, Type III Terminal Joints, labor, equipment and other incidentals necessary to complete the work as specified on the plans.

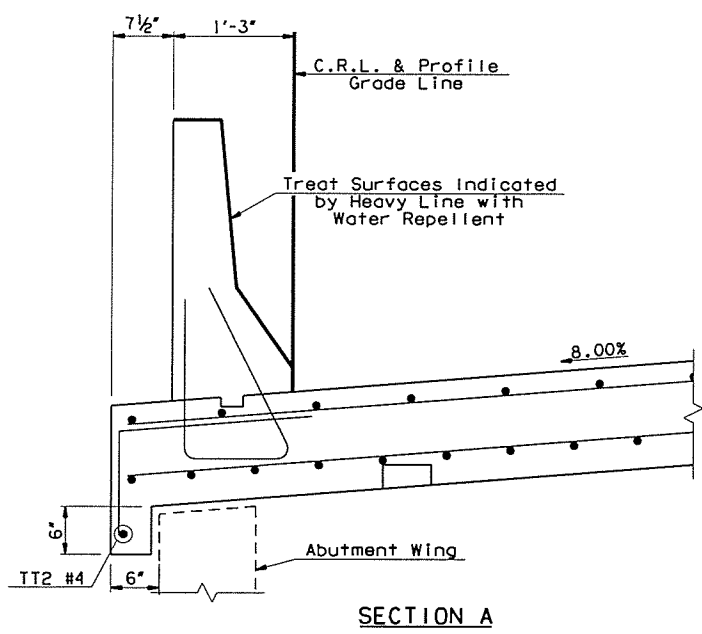
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
EPOXY COATED REINFORCING STEEL					
AL1	#4	14	STR.	19'-11" AVG.	19'-8" TO 20'-2"
AL2	#4	14	STR.	20'-5 1/2" AVG.	20'-2" TO 20'-9"
AT1	#4	42	STR.	12'-8"	-
BL1	#9	40	STR.	20'-2 1/2" AVG.	19'-8" TO 20'-9"
BT1	#4	21	STR.	25'-9"	-
DB1	#5	28	BENT	4'-5"	-
EP1	#5	42	STR.	5'-4"	-
TT1	#4	42	BENT	3'-2"	-
TT2	#4	1	STR.	19'-8"	-
TT3	#4	1	STR.	20'-9"	-



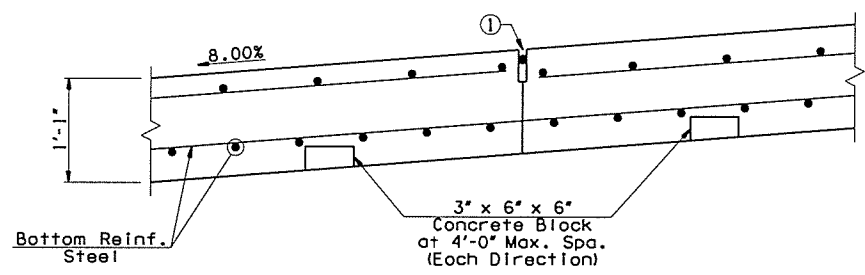
① 1/2" Longitudinal Sawed and Sealed Joint in the top of Approach Slab (See DETAIL "A" on Sheet No. 23).  
 ② Type III Terminal Joint. See DETAIL "B" on Sheet No. 23.

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		DESIGN	JTR	4/15
APPROACH SLAB DETAILS (SHEET 1 OF 2)		DETAIL	SJL	4/15
		CHECK	BRT	5/16
		<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION			
JOB PIECE NO. 29773(04)		SHEET NO. 22		

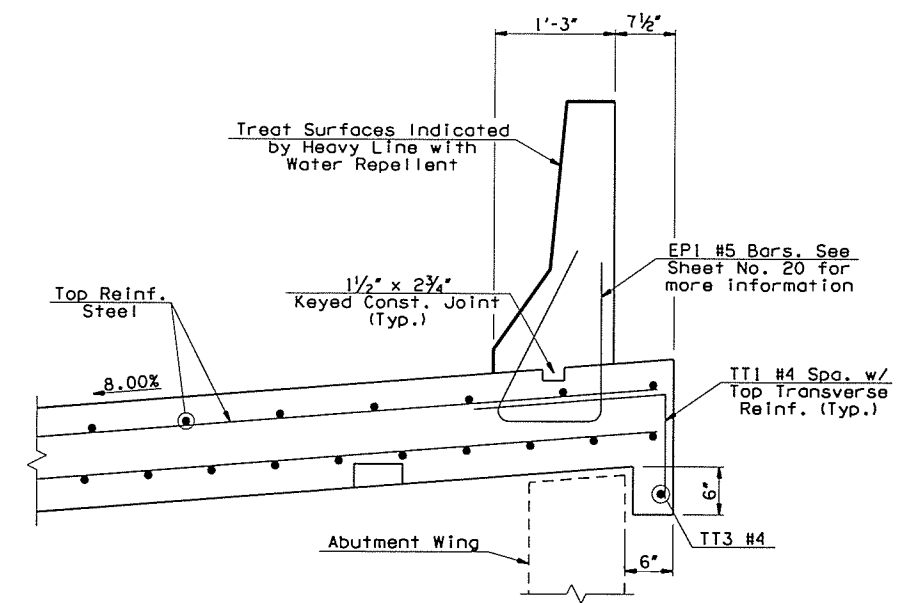
OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION		REVISIONS		DATE		



SECTION A



SECTION C THRU APPROACH SLAB



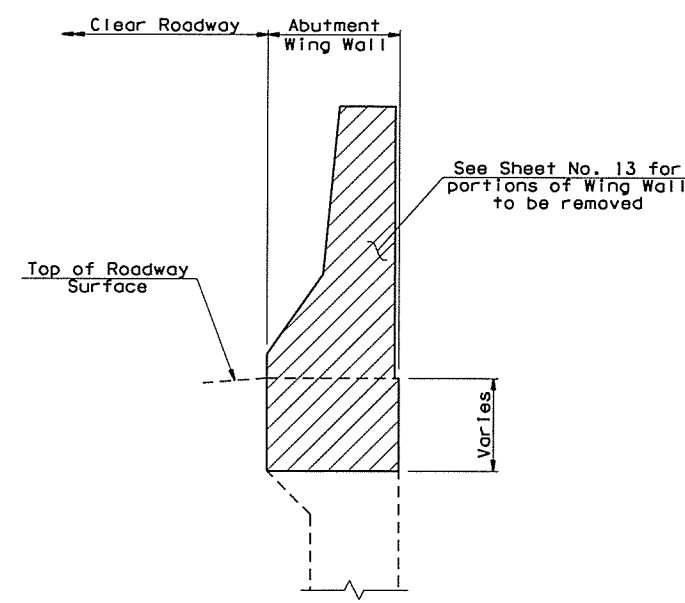
SECTION B

④ ANCHORAGE SYSTEM:

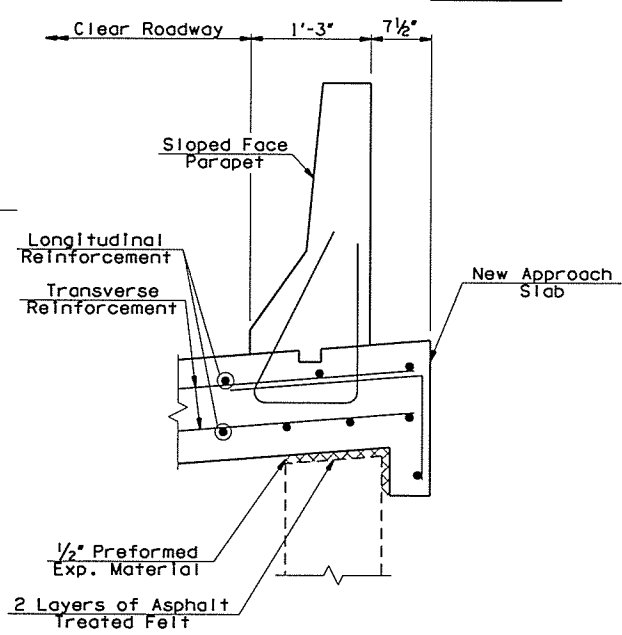
The Contractor shall use an Anchorage System that has been approved by ODOT's materials division. The Anchorage System shall be capable of developing the full strength of the reinforcing steel that is to be anchored. The embedment depth shown is to be adjusted in accordance with the Manufacturer's specifications for the system used.

Drilling into the existing concrete to install the anchorage shall be accomplished without cutting existing concrete reinforcing steel bars. Prior to drilling, the Contractor shall locate and mark the existing concrete reinforcing steel bars with non-destructive tools, equipment and methods approved by the Engineer. If existing reinforcing steel bars are encountered during drilling, the drilling shall cease and the hole shall be grouted. The hole shall then be relocated to clear the existing reinforcing steel bars. Any adjustment in the locations of the new DB1 Bars from the plan locations shown shall be the minimum amount necessary to avoid cutting the existing concrete reinforcing steel bars and shall be approved by the Engineer.

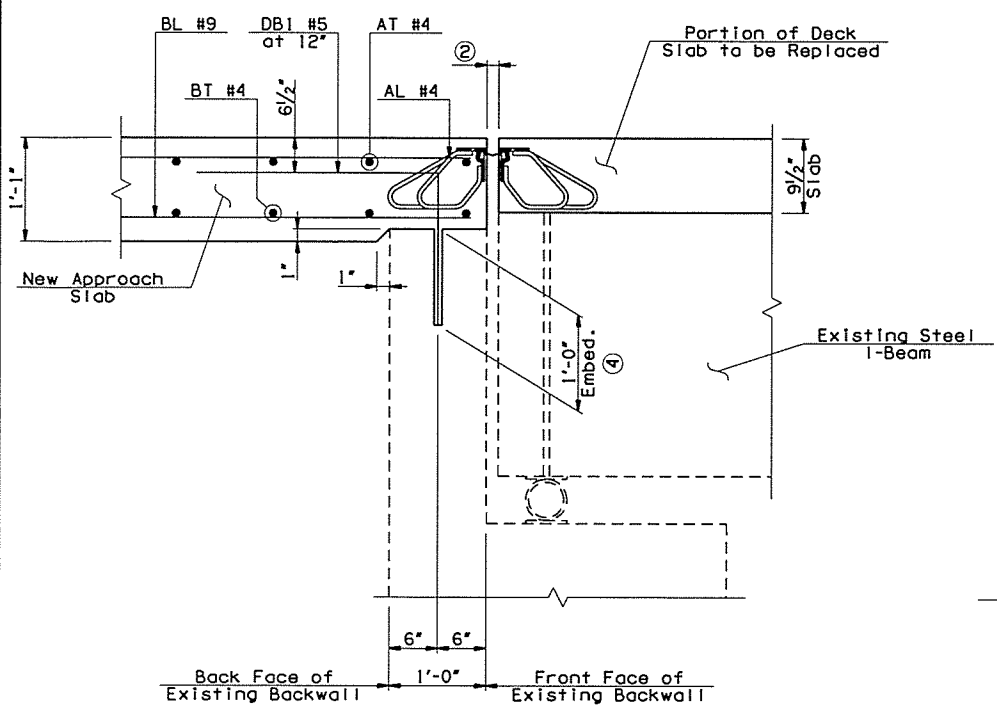
All costs of the Anchorage Assemblies including labor, materials, tools, drilling, and incidentals necessary to complete the work shown in the plans shall be included in the price bid per Square Yard of "APPROACH SLAB".



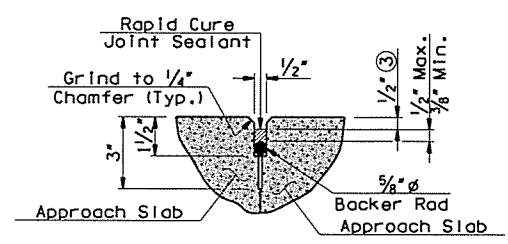
EXISTING CONDITIONS AT WINGWALL



NEW APPROACH SLAB AT ABUTMENT WING

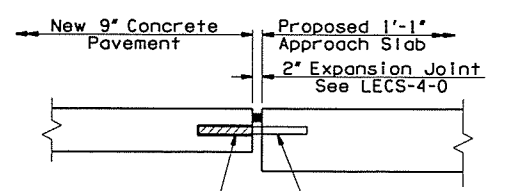


SECTION D-D



DETAIL "A"

③ This dimension shall taper from 1/2" at edge of driving lane/shoulder to 1/8" at rail for Transverse Joints only.



DETAIL "B"

NOTES:

All costs of installation of Terminal Joint, including dowel bars, epoxy, expansion joint, materials, labor, equipment, and any incidentals necessary to complete the work as shown shall be included in "APPROACH SLAB".

For details of dowel bars, see Std. CRCP2-3-0.

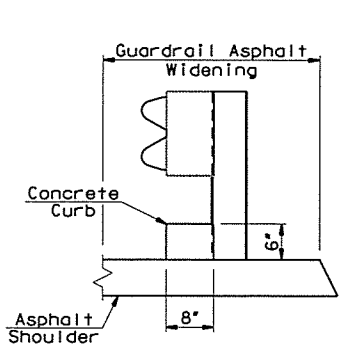
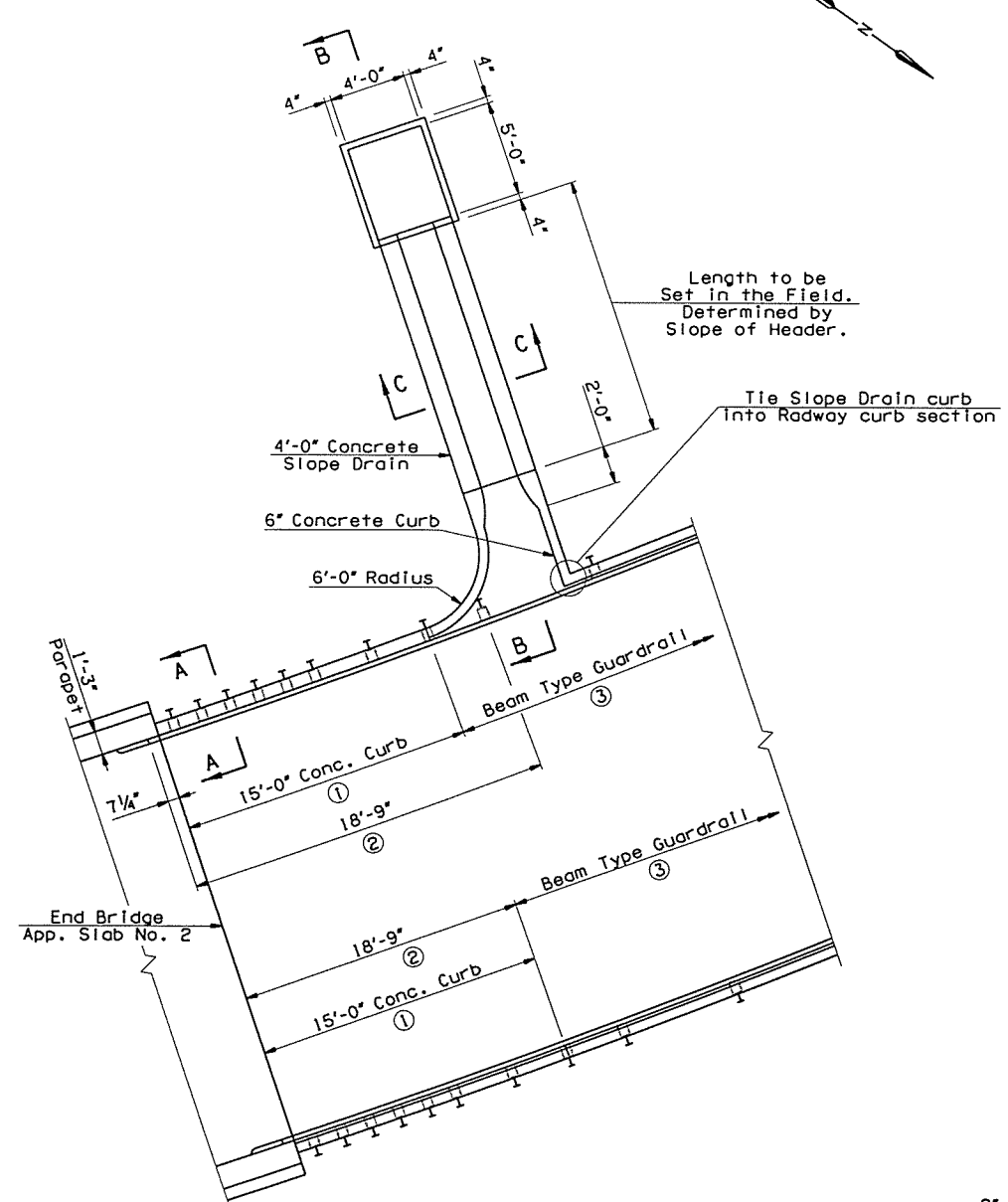
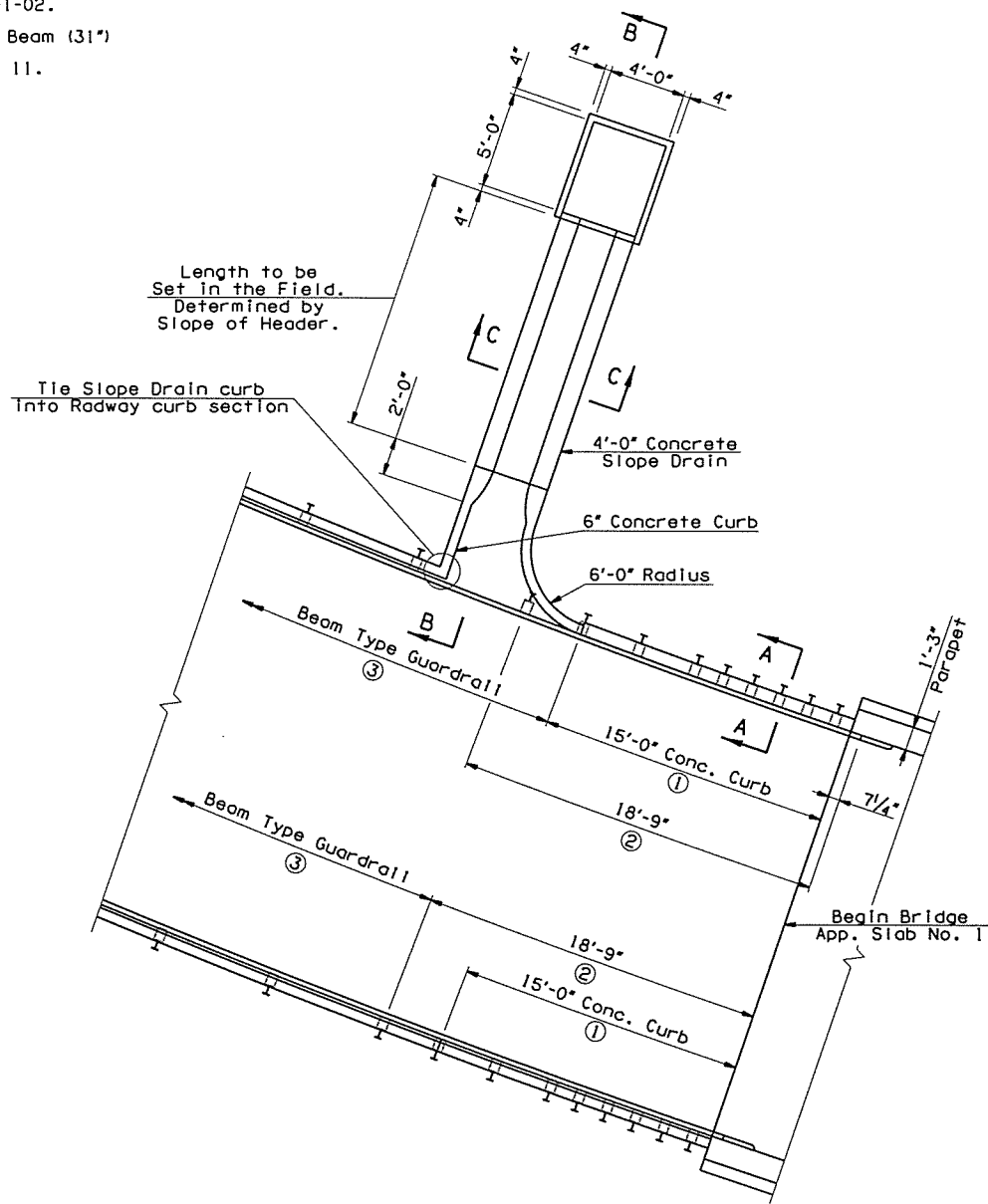
Exposed 9" of Dowel Bar shall be coated with form release agent or grease before Expansion Cap is installed to insure that the bond between Dowel Bar and Concrete Pavement is broken.

Dowel Bars shall be epoxied (non-capped end) into 1 1/8" (max.) by 9" deep drilled holes, spaced at 1'-0" centers, placed at mid-slab. Drilled holes and Dowel Bars shall be placed parallel to the driving surface. Sufficient epoxy shall be used to completely fill the void between the Dowel Bar and the hole.

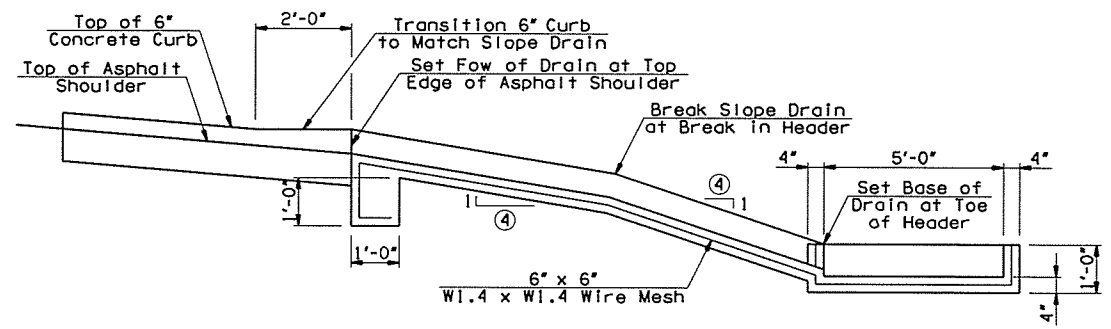
GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"		TULSA COUNTY	DESIGN	JTR	4/16
APPROACH SLAB DETAILS (SHEET 2 OF 2)			DETAIL	SJL	4/16
			CHECK	BRT	5/16
			<b>GARVER</b>		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION				
	JOB PIECE NO. 29773(04)	SHEET NO. 23			

- ① 8" Concrete Curb. See Standard THRI-1-02.
- ② Guardrail Bridge Connection - Three Beam (31')
- ③ For Guardrail limits, see Sheet No. 11.

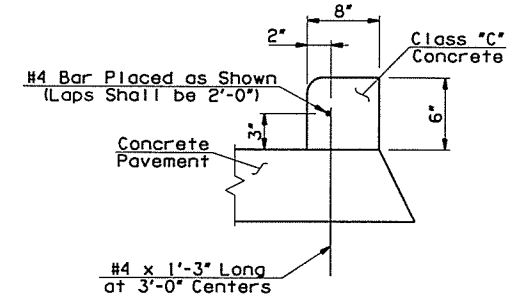
OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION			REVISIONS		DATE	



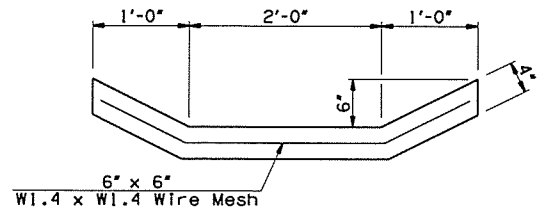
SECTION A-A



SECTION B-B  
④ Slope to Match Slope of Header



DETAIL OF CONCRETE CURB



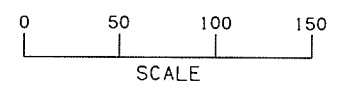
SECTION C-C

GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & BNSF RR BRIDGE "A"	TULSA COUNTY	DESIGN	JTR	4/16
		DETAIL	SJL	4/16
		CHECK	BRT	5/16
DRAIN DETAILS AT ENDS OF BRIDGE			<b>GARVER</b>	

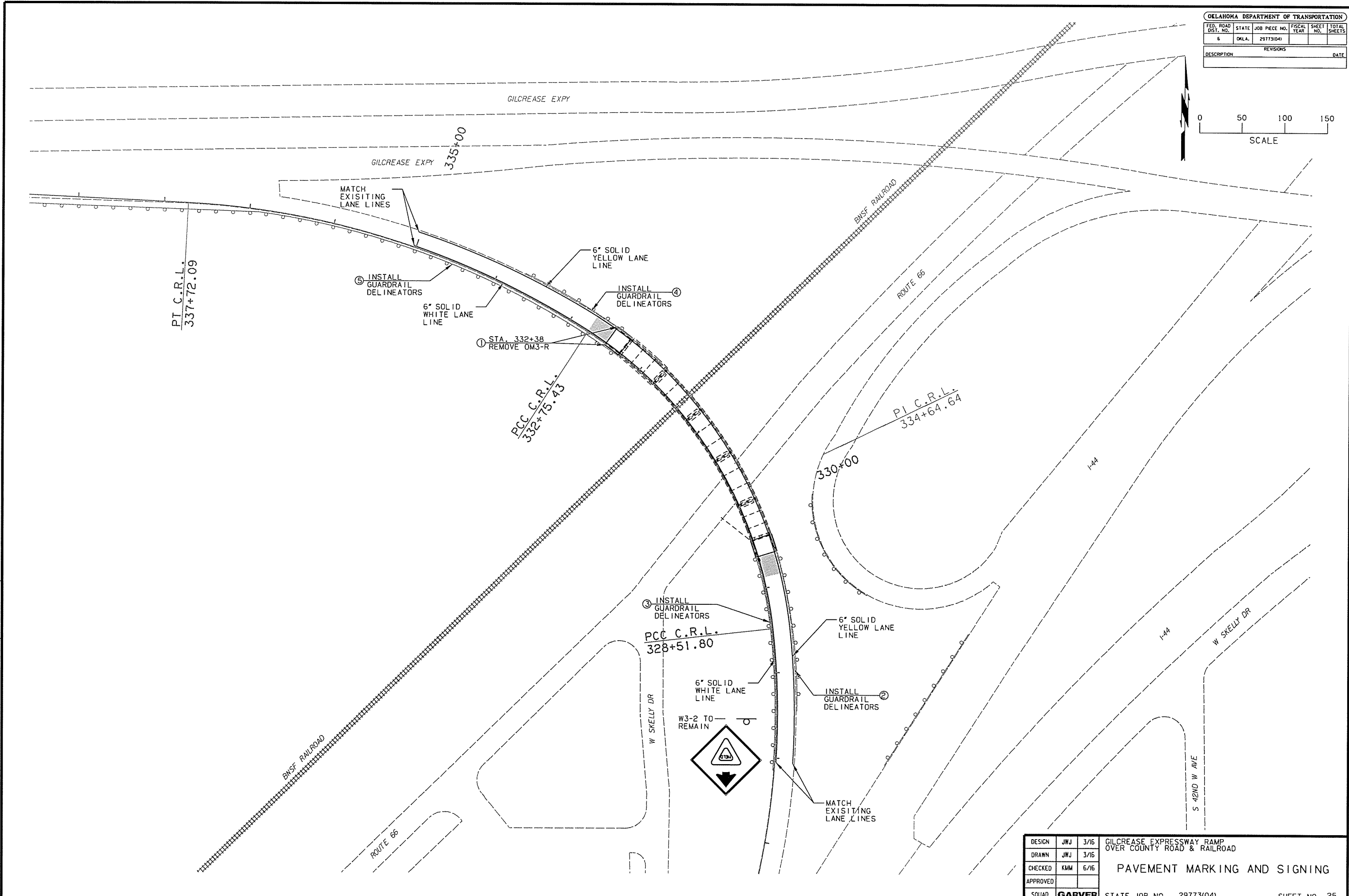
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION
JOB PIECE NO. 29773(04)	SHEET NO. 24



OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION				REVISIONS	DATE	



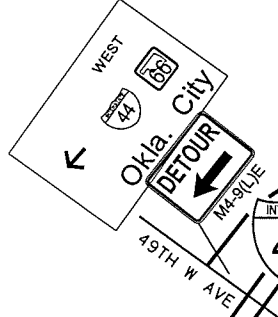
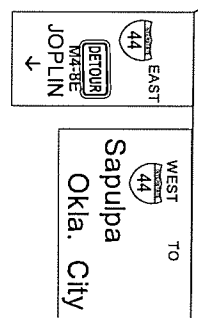
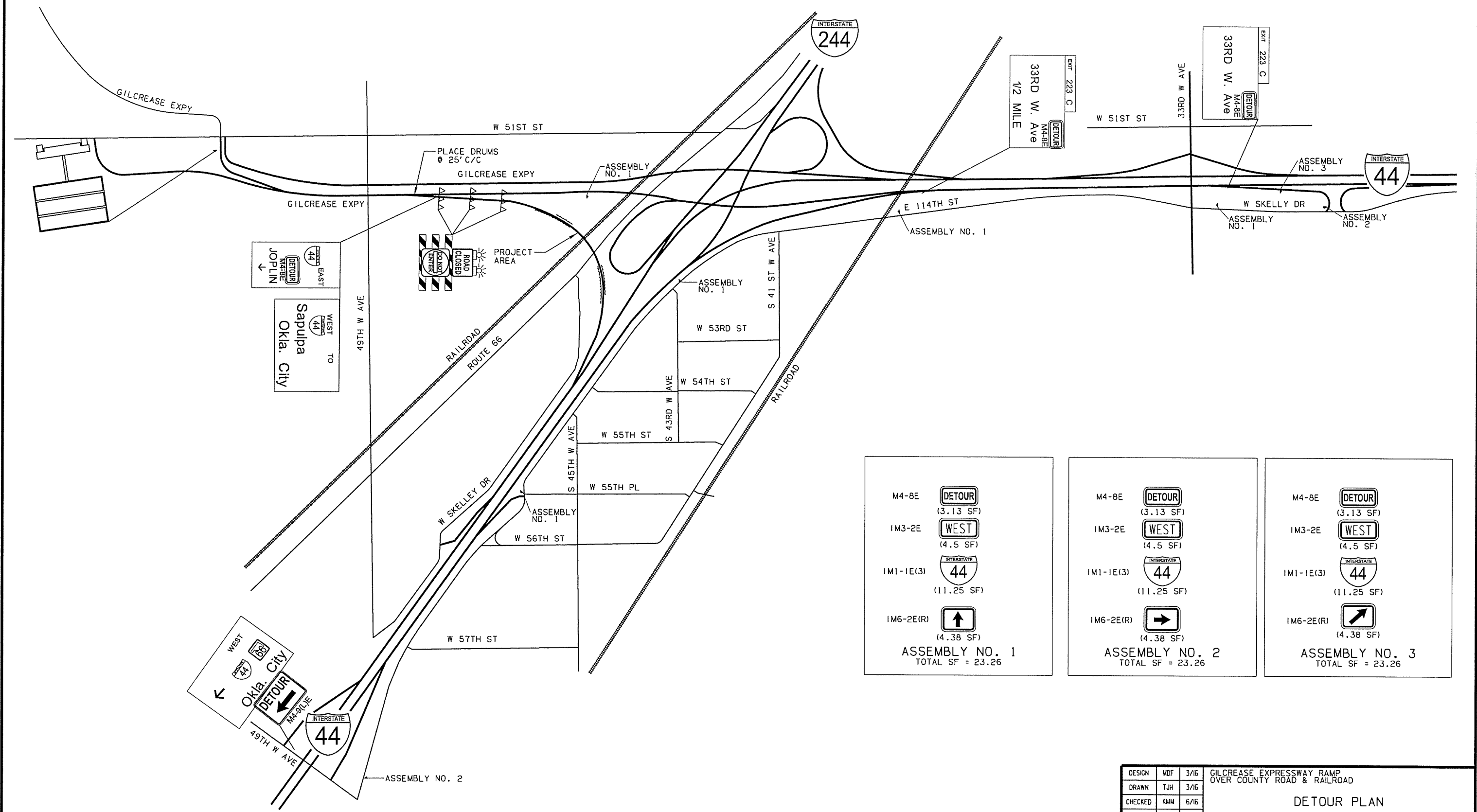
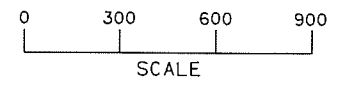
SCALE:  
HORIZ.: 1"=50'  
VERT.: 1"=5'



DESIGN	JWJ	3/16	GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD  PAVEMENT MARKING AND SIGNING
DRAWN	JWJ	3/16	
CHECKED	KMM	6/16	
APPROVED			
SOLID	<b>GARVER</b>		

STATE JOB NO. 29773(04) SHEET NO. 25

OKLAHOMA DEPARTMENT OF TRANSPORTATION						
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
6	OKLA.	29773(04)				
DESCRIPTION				REVISIONS	DATE	



M4-8E (3.13 SF)  
 IM3-2E (4.5 SF)  
 IM1-1E(3) (11.25 SF)  
 IM6-2E(R) (4.38 SF)  
**ASSEMBLY NO. 1**  
 TOTAL SF = 23.26

M4-8E (3.13 SF)  
 IM3-2E (4.5 SF)  
 IM1-1E(3) (11.25 SF)  
 IM6-2E(R) (4.38 SF)  
**ASSEMBLY NO. 2**  
 TOTAL SF = 23.26

M4-8E (3.13 SF)  
 IM3-2E (4.5 SF)  
 IM1-1E(3) (11.25 SF)  
 IM6-2E(R) (4.38 SF)  
**ASSEMBLY NO. 3**  
 TOTAL SF = 23.26

DESIGN	MDF	3/16	GILCREASE EXPRESSWAY RAMP OVER COUNTY ROAD & RAILROAD  <b>DETOUR PLAN</b>
DRAWN	TJH	3/16	
CHECKED	KMM	6/16	
APPROVED			
SQUAD	<b>GARVER</b>		

STATE JOB NO. 29773(04) SHEET NO. 26