COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
www.transportation.ky.gov/

Andy Beshear
GOVERNOR

Jim Gray
SECRETARY

May 18, 2021

CALL NO. 300
CONTRACT ID NO. 211020
ADDENDUM # 1

Subject: Floyd County, FD04 SPP 036 0680 NEW LOC
Letting May 21, 2021

(1) Added - Special Note 604 for Bearing Piles – Pages 1-7 of 7
(2) Revised - Proposal Bid Items – Pages 86-89 of 89
(3) Revised – Plan Sheets – R1, R2, R2C, R2D, R2E, R9, R11, R13, R15, R19, R70, R71, R72, R73, R74, R79, S1, S19, S20, S22, S24 and T1

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Rachel Mills,

Rachel Mills

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:mr
Enclosures

Special Note 604 for BEARING PILES

604.01 DESCRIPTION. Furnish and drive prestressed concrete, precast concrete, cast-in-place concrete, or HP shape structural steel bearing piles.

604.02 MATERIALS AND EQUIPMENT.

604.02.01 Concrete. Conform to Subsection 601.02 and 601.03.

604.02.02 Structural Steel. Conform to Section 812.

604.02.03 Welded Steel Pipe Piles (Cast-In-Place Pile Shells). Conform to ASTM A 252, Grade 3.

604.02.04 Miscellaneous Metals. Conform to Section 813.

604.02.05 Polypropylene Sleeves. Conform to the manufacturer's recommendations.

604.02.06 Pile Points. Conform to AASHTO M 103, Grade 65/35 or ASTM A 148. Furnish pile points from a supplier on the Department's List of Approved Materials.

604.02.07 Equipment for Driving.

A) Hammers. Provide hammers for driving precast or prestressed concrete piles that develop a minimum energy per blow at each full stroke of the piston of more than one foot-pound per each pound weight of pile being driven. Use 150 pounds per cubic foot as the weight of concrete in the pile being driven. Use a hammer that develops a total energy of 12,000 or more foot-pounds per blow.

Provide hammers for driving steel piles or steel shells for cast-in-place piles that develop a minimum energy of 5,000 foot-pound for each ton of steel in the pile or shell being driven and in no case develop less than 10,000 foot-pounds of total energy.

Use diesel powered pile hammers with a ram weighing at least 2,000 pounds to drive steel piles, concrete piles, and steel shells for cast-in-place piles. For hammers that do not restrict the rebound of the ram use a ram 2,000 pounds or more.

If hammers with an enclosed ram are used, they will have a rated equivalent energy of no less than 250 foot-pounds per blow per ton of the required bearing. For driving concrete piles, use hammers that have a rated equivalent energy of 15,000 foot-pounds or more per blow. Equip hammers of this type with a gage and charts that will evaluate the equivalent energy actually produced under any driving conditions.

When the Engineer determines the size of the hammer to be unsatisfactory, correct or replace it to produce satisfactory results. Provide the Engineer with the manufacturer's specifications regarding hammers on request.

B) Leads. Use pile driver leads that allow freedom of movement to the hammer and ensure proper distribution of hammer blows on the head of piles. Hold leads in position with guys, stiff braces, templates, or other Engineer approved means for supporting the pile during driving.

C) Followers. Avoid driving piles with followers if possible. Use followers only with the Engineer's written permission or when driving piles through water. If using followers, drive one long pile from every group of 10 without a follower, and use this pile to determine the average bearing power of the group.

D) Water Jets. The Department will allow the use of water jets alone or in combination with a hammer. Provide sufficient water volume and pressure at the jet nozzles and number of jets to freely erode materials adjacent to the pile.

When using water jets and a hammer for driving, withdraw external jets or stop jetting, and drive the piles with the hammer to secure final penetration. Consider the difficulties encountered in driving when determining the time of withdrawal of jets. Vary this procedure until obtaining the desired results.

604.03 CONSTRUCTION.

604.03.01 General.

A) Precast and Prestressed Concrete Piles. Construct according to Section 605.

B) Cast-In-Place Piles. Construct according to Section 601. Use Class D or D Modified concrete, according to the Contract. Use welded steel pipe pile shells of the design and dimensions specified in the Plans. Select a wall thickness for steel shells that is sufficient to withstand driving without injury and to resist harmful distortion and buckling due to soil pressure after driving. Use only watertight shells to exclude water during the placement of the concrete. For pile shells with a fluted or corrugated section, measure the diameter of the shells from crest to crest of flutes or corrugations. Use only shells equipped with heavy steel ends and with welded joints.

C) Steel Piles. Use HP shape piles.

604.03.02 Limitations of Use. Penetrate 10 feet or more into original ground and 10 feet or more below stream bed, or to rock. In all cases, develop the required bearing value with the pile penetration.

For foundation work, do not penetrate a very soft upper stratum overlying a hard stratum unless the piles penetrate the hard material a sufficient distance to rigidly fix the ends.

The Department will allow the driving of precast concrete piles and prestressed concrete piles 3 calendar days after casting or any time thereafter provided that samples of concrete taken from the respective mixture indicate a compressive strength of at least 4,000 psi for Class D concrete or 5,000 psi for Class D Modified concrete.

604.03.03 Storage and Handling. Store and handle piles in a manner that avoids injury to the piles.

604.03.04 Preparation for Driving.

A) Excavation. Do not drive piles until after completing excavation, except for test piles and for piles that extend above the ground in the completed structure. Sufficiently excavate the area in the vicinity of the test piles before driving them to ensure that the test piles are driven only through material that will not be excavated later in constructing the footing. Ensure that the Department allows driving test piles before excavating for the entire footing. Remove all material forced up between the piles to the correct elevation before placing concrete for the foundation.

B) Caps. Protect the heads of all precast concrete piles and prestressed concrete piles with caps of approved design having suitable cushion next to the pile head and fitting into a casting which in turn supports a timber shock block.

Cut the heads of steel piles squarely. Provide a driving cap or head that has been properly grooved or made in some manner to fit and hold firmly the head of the pile being driven so that the axis of the pile is in line with the axis of the hammer.

Protect tops of steel shells for cast-in-place piles with driving heads, mandrels, or other devices properly sized for the hammer according to the hammer manufacturer's recommendations to properly distribute the hammer blow and to prevent damage to the shell during driving.

C) Pointing. For steel piles, provide cast steel points when specified or directed in

order to obtain penetration. Use pile points of the type specified in the Contract or by the Engineer. Weld pile points to the pile with a minimum 5/16 inch groove weld along the full outside width of each flange on the pile. Install pile points in the shop or in the field. Furnish a mill test report according to Subsection 607.03.13 C). Furnish the Engineer with the manufacturer's specifications.

D) Extensions, Build-Ups, and Splices. The Engineer may allow extensions, splices, or build ups when necessary as follows:

1) Precast and Prestressed Concrete Piles. Perform extension or build-ups according to the Standard Drawings. If alternate methods for extensions or build-up are desired, submit proposal to the Engineer for consideration.
2) Cast-in-Place Piles. Make extensions, splices, or build-ups on steel shells as specified in the Plans or as directed.
3) Steel Piles. Make extensions or splices according to the standard drawings or the Division of Construction's Guidance Manual. Weld according to Subsection 607.03.07. Never begin driving with a spliced pile. When splicing is necessary, use a length that will reasonably assure that bearing will be attained without additional splicing.

604.03.05 Methods of Driving and Placing. With the Engineer's written permission, water jet or core holes for prestressed, precast, or cast-in-place concrete piles, and then place piles in the holes and drive them to secure the last few feet of their penetration. Do not jet or core holes for steel piles unless the Engineer directs. Unless otherwise specified in the Plans or directed, prepare jetted or cored holes in compacted fills as necessary to secure the required penetration. Core holes to a maximum diameter equal to the least cross sectional dimension of the piles driven. Fill all voids that occur around a driven pile with free flowing sand.

Do not drive piles in the vicinity of recently placed concrete until the concrete is sufficiently cured to prevent damage, in the judgment of the Engineer.

For cast-in-place piles, drive the shells using steel heads having a projecting ring fitting inside the shell. Provide a 1/4 inch clearance between the ring and the shell. The Department will allow the use of other types of driving heads if the Engineer approves. The Department will not require painting the steel shells. Provide an inspection light before and during the shell filling operation. Remove and replace improperly driven, broken, or otherwise defective shells, or otherwise correct them to the Engineer's satisfaction by driving an additional pile. The Engineer will inspect all driven shells. When the Engineer approves the driven shells, cut them off to a horizontal plane at the required elevation.

Before placing concrete, remove all water or debris from the shell. Place concrete in an approved manner that will ensure against segregation. Do not place concrete until completely driving all piles within a radius of 16 feet of the shell to be filled or until completely driving all the shells for any one bent or foundation. Continuously place the concrete in each pile, and exercise proper care to fill every part of the shell and to ensure a dense, homogeneous mixture.

The Engineer will not require steel reinforcement in cast-in-place piles unless specified in the Plans. When specified, use the type and design of reinforcement specified in the Plans.

Ensure that the finished tops of piles are at the elevation specified in the Contract or directed by the Engineer and that they project no less than 6 inches into pier footings and no less than 3 feet into end bents.

604.03.06 Test Piles. Drive test piles of a length and at the location designated on the plans or determined by the Engineer. These piles shall be of greater length than the length assumed in the design in order to provide for any variation in soil conditions.

Test Piles are for the Engineer's use in determining capability of the Contractor's equipment and adequacy of design. The Engineer will determine when an adequate

bearing value has been obtained. The Contractor shall be responsible for determining pile lengths that may be necessary to obtain the required bearing values. No claim shall be made against the Department for costs of construction delays, or any materials, labor, or equipment that may be necessary due to the Contractor's failure to furnish piles of a length sufficient to obtain the required bearing values, or for variations in length due to subsurface conditions that may be encountered.

The same model and size pile hammer shall be used to drive the remaining piles in the structure as the one used to drive the test pile. The same type of piles shall be used in the remainder of the group as the type tested for the group.

Soundings, boring logs, soil profiles, or other subsurface data included in the Contract documents are used by the Department for making preliminary estimates of quantities and should not be used for determining equipment, materials, or labor necessary for driving piles as required by the contract. All test piles shall be accurately located so they may be used in the finished structure.

604.03.07 Determination of Bearing Values. The Engineer will determine when each pile in the structure has obtained an adequate bearing value. Determine the pile lengths necessary to obtain the required bearing values. The Department will determine bearing values by the specified formulas. When specified in the Contract or directed by the Engineer, the Department will determine the bearing values by static load test. Drive piles to develop a bearing value of no less than that specified in the Plans, directed by the Engineer, or determined by static load testing. When using water jets or cored holes in connection with driving, withdraw the jets or drive the piles in the cored holes, then the Department will determine the bearing value.

A) Static Load Tests. When specified in the Contract or required by the Engineer, the Department will determine the size, number, and bearing value of piles by actual loading tests. Perform load test according to plans or proposal notes.

B) Formula. In the absence of load tests, the Department will determine the allowable bearing values for piles by the following formulas:

$$P = \frac{2\,WH}{S + 1.0}$$ for gravity hammers

$$P = \frac{2\,WH}{S + 0.1}$$ for single acting steam-air hammers

$$P = \frac{2\,E}{S + 0.1}$$ for double acting steam-air hammers

$$P = \frac{2\,WH}{S + 0.1}$$ for diesel hammers (having unrestricted rebound of ram)

$$P = \frac{2\,E}{S + 0.1}$$ for diesel hammers (having enclosed ram)

Where:

P = allowable bearing capacity in pounds;
W = weight in pounds, of striking parts of hammer;
H = height of fall in feet;
S = the penetration in inches per blow for the last 5 to 10 blows for gravity hammers and the last 10 to 20 blows for steam, air, or diesel hammers; and
E = 90 percent of the average equivalent energy in foot-pounds as determined by gage attached to pile hammer and recorded during the period when the penetration per blow is being observed.

The Department will use the preceding formulas only when:

1) the hammer has a free fall,
2) the head of the pile is not broomed or crushed,
3) the penetration is reasonably quick and uniform, and
4) there is no observed appreciable bounce after the blow.

604.03.08 Allowable Variation in Driving. Use templates when specified or directed.

A) Exposed Piles. The Engineer will not accept exposed piles in the finished structure when:

1) during driving, the pile varies more than 1/4 inch per foot from vertical or the batter position specified in the Plans;
2) the driven pile varies more than 4 inches from plan position at the pile cut-off elevation; or
3) the driven pile varies more than 2 inches from a stringline stretched between exterior piles in the exposed portion of the pile bent or group.

B) Unexposed Piles. The Engineer will not accept unexposed piles in the finished structure when:

1) during driving, the pile varies more than 1/4 inch per foot from vertical or the batter position specified in the Plans; or
2) the driven pile varies more than 6 inches from plan position at the pile cut-off elevation.

For either case, the Engineer will reference the plan position of the pile cut-off elevation to determine the variation of 1/4 inch per foot. For all piling that is unacceptable because of variations, remove and replace or redrive them in an acceptable position or correct them in a manner the Engineer directs. Furnish and place all additional concrete and steel reinforcement required to meet plan clearance and dimensions in footings, caps, or bridge seats due to variations in driving, even when variations are within allowable tolerances.

604.03.09 Design Modifications. When it is not possible to obtain the capacity required by the Plans, the Department will redesign the structure based on the actual bearings obtained by test piles or pile load tests. The redesign will be at Department expense and time will not accrue during redesign.

604.03.10 Ordering Piles. Order piles of the number and lengths necessary to complete the work.

604.03.11 Pile Protection. When specified in the Contract, provide protection from negative skin friction as the Contract specifies.

604.03.12 Unused Pile Lengths. Take ownership of unused lengths of piles and pile cutoffs, and remove such lengths and cutoffs from the project.

604.04 MEASUREMENT.

604.04.01 Piles. The Department will measure the quantity in linear feet for the total lengths of the various types and sizes. Splices are incidental to this item of work.

For precast or prestressed concrete piles having concrete removed in order to expose the reinforcing steel, the Department will consider the end of the exposed reinforcing steel

as the pile end for purposes of measurement.

The Department will not measure unused lengths of piles or pile cutoffs for payment.

The Department will not measure corrective work or redriven piles.

The Department will not measure any additional concrete or steel reinforcement required to meet plan clearance and dimensions in footings, caps, or bridge seats due to variations in driving, even when variations are within allowable tolerances.

604.04.02 Pile Points. When included as a bid item, the Department will measure the quantity by each individual unit.

604.04.03 Test Piles. For test piles actually used as a pile in the structure, the Department will measure the quantity according to Subsection 604.04.01 except that the minimum measured length for test piles will be the length specified in the Plans or directed by the Engineer. The Department will not measure unsatisfactory test piles that are not used as a pile in the structure.

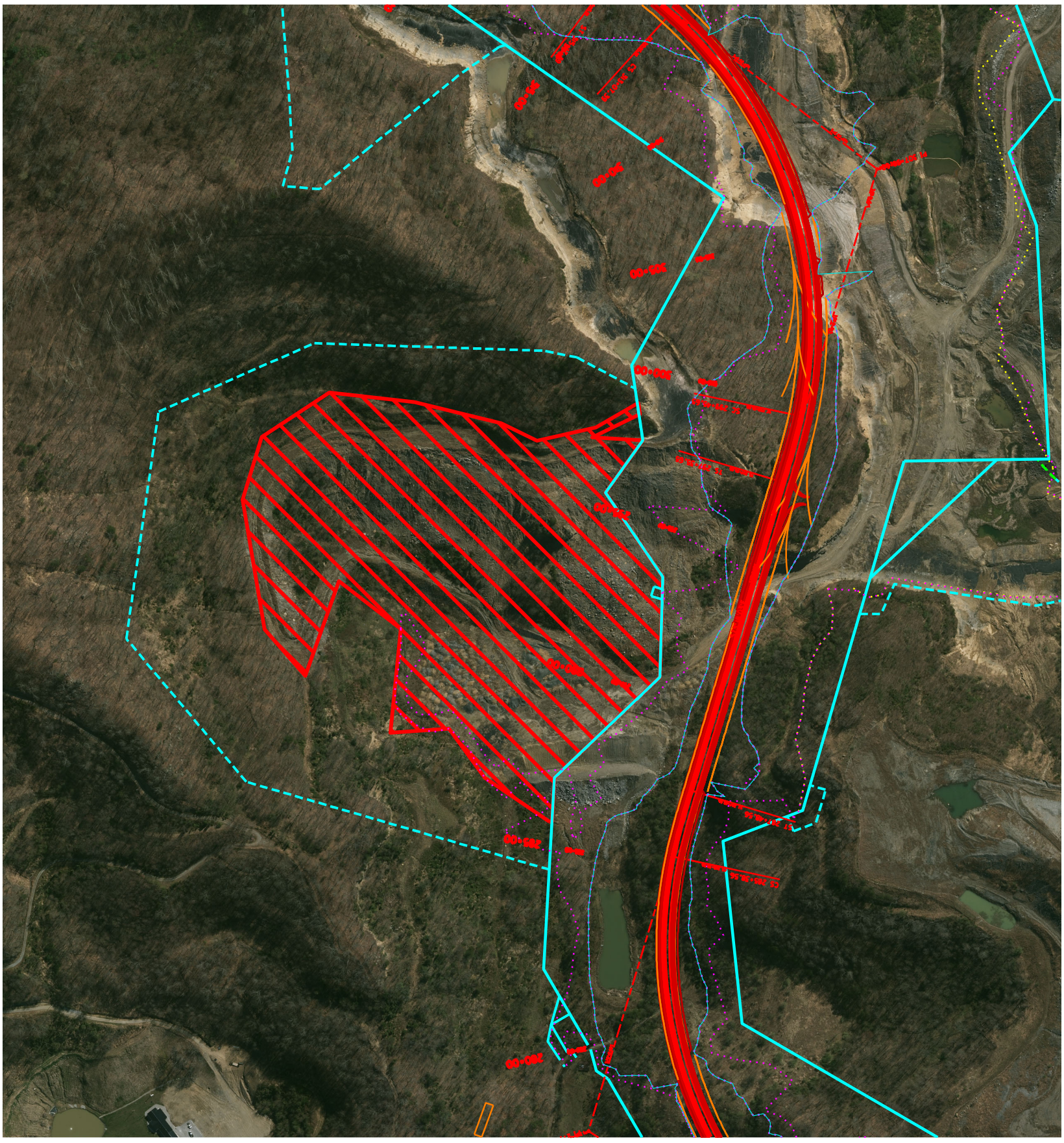
Length of test piles specified in the Plans are approximate only. The Department will not measure necessary splices for payment and will consider them incidental to this item of work.

604.04.04 Loading Tests. The Department will measure the quantity by each individual unit. The Department will not measure for payment load tests made at the option of the Contractor.

604.05 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
08080, 08082, 08086, 08096	Piles, Prestressed Concrete, Size	Linear Foot
08072	Piles, Cast-in-Place, Size	Linear Foot
08042-08056	Piles Steel, Size	Linear Foot
08093-08095	Pile Points	Each
08033	Test Piles	Linear Foot
08040	Loading Tests	Each
08060-08066	Piles-Precast Concrete, Size	Linear Foot

The Department will consider payment as full compensation for all work required under this section.



X-Hatched Area to be regraded and reseeded.

PROPOSAL BID ITEMS

Report Date 5/18/21

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	51,072.00	TON		$	
0020	00020		TRAFFIC BOUND BASE	718.00	TON		$	
0030	00078		CRUSHED AGGREGATE SIZE NO 2	107.00	TON		$	
0040	00100		ASPHALT SEAL AGGREGATE	127.00	TON		$	
0050	00103		ASPHALT SEAL COAT	16.00	TON		$	
0060	00190		LEVELING & WEDGING PG64-22	985.00	TON		$	
0070	00212		CL2 ASPH BASE 1.00D PG64-22	4,881.00	TON		$	
0080	00214		CL3 ASPH BASE 1.00D PG64-22	25,411.00	TON		$	
0090	00221		CL2 ASPH BASE 0.75D PG64-22	658.00	TON		$	
0100	00301		CL2 ASPH SURF 0.38D PG64-22 (REVISED: 5-18-21)	2,013.00	TON		$	
0110	00388		CL3 ASPH SURF 0.38B PG64-22	5,215.00	TON		$	
0120	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0130	02677		ASPHALT PAVE MILLING & TEXTURING	1,546.00	TON		$	
0140	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	72.00	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0150	01010		NON-PERFORATED PIPE-4 IN	4,000.00	LF		$	
0160	01691		FLUME INLET TYPE 2	2.00	EACH		$	
0170	01890		ISLAND HEADER CURB TYPE 1	99.00	LF		$	
0180	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	87.00	EACH		$	
0190	02159		TEMP DITCH	7,164.00	LF		$	
0200	02160		CLEAN TEMP DITCH	3,582.00	LF		$	
0210	02230		EMBANKMENT IN PLACE	7,541,988.00	CUYD		$	
0220	02242		WATER	100.00	MGAL		$	
0230	02360		GUARDRAIL TERMINAL SECTION NO 1	31.00	EACH		$	
0240	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH		$	
0250	02367		GUARDRAIL END TREATMENT TYPE 1	8.00	EACH		$	
0260	02369		GUARDRAIL END TREATMENT TYPE 2A	5.00	EACH		$	
0270	02381		REMOVE GUARDRAIL	1,125.50	LF		$	
0280	02429		RIGHT-OF-WAY MONUMENT TYPE 1	134.00	EACH		$	
0290	02432		WITNESS POST	134.00	EACH		$	
0300	02482		CHANNEL LINING CLASS IA (REVISED: 5-18-21)	93.00	TON		$	
0310	02488		CHANNEL LINING CLASS IV (REVISED: 5-18-21)	36,091.00	CUYD		$	
0320	02545		CLEARING AND GRUBBING APPROX. 98 ACRES	1.00	LS		$	
0330	02562		TEMPORARY SIGNS	521.50	SQFT		$	
0340	02602		FABRIC-GEOTEXTILE CLASS 1	3,883.00	SQYD		$	
0350	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0360	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0370	02696		SHOULDER RUMBLE STRIPS	28,645.00	LF		$	

PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0380	02701		TEMP SILT FENCE	7,164.00	LF		$	
0390	02703		SILT TRAP TYPE A	175.00	EACH		$	
0400	02704		SILT TRAP TYPE B	175.00	EACH		$	
0410	02705		SILT TRAP TYPE C	175.00	EACH		$	
0420	02706		CLEAN SILT TRAP TYPE A	175.00	EACH		$	
0430	02707		CLEAN SILT TRAP TYPE B	175.00	EACH		$	
0440	02708		CLEAN SILT TRAP TYPE C	175.00	EACH		$	
0450	02726		STAKING	1.00	LS		$	
0460	05950		EROSION CONTROL BLANKET	39,633.00	SQYD		$	
0470	05952		TEMP MULCH	564,334.00	SQYD		$	
0480	05953		TEMP SEEDING AND PROTECTION	423,251.00	SQYD		$	
0490	05963		INITIAL FERTILIZER	39.00	TON		$	
0500	05964		MAINTENANCE FERTILIZER	23.50	TON		$	
0510	05985		SEEDING AND PROTECTION	754,747.00	SQYD		$	
0520	05992		AGRICULTURAL LIMESTONE	468.00	TON		$	
0530	06406		SBM ALUM SHEET SIGNS .080 IN	62.00	SQFT		$	
0540	06410		STEEL POST TYPE 1	194.00	LF		$	
0550	06510		PAVE STRIPING-TEMP PAINT-4 IN	46,500.00	LF		$	
0560	06514		PAVE STRIPING-PERM PAINT-4 IN	75,795.00	LF		$	
0570	06568		PAVE MARKING-THERMO STOP BAR-24IN	115.00	LF		$	
0580	06569		PAVE MARKING-THERMO CROSS-HATCH	5,092.00	SQFT		$	
0590	06573		PAVE MARKING-THERMO STR ARROW	5.00	EACH		$	
0600	06574		PAVE MARKING-THERMO CURV ARROW	27.00	EACH		$	
0610	06576		PAVE MARKING-THERMO ONLY	6.00	EACH		$	
0620	10020NS		FUEL ADJUSTMENT	1,315,119.00	DOLL	$1.00	$	$1,315,119.00
0630	10030NS		ASPHALT ADJUSTMENT	149,261.00	DOLL	$1.00	$	$149,261.00
0640	20071EC		JOINT ADHESIVE	56,628.00	LF		$	
0650	20458ES403		CENTERLINE RUMBLE STRIPS	16,485.00	LF		$	
0660	20667ED		PNEUMATIC BACKSTOWING	4,000.00	TON		$	
0670	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	13,675.00	LF		$	
0680	24412EC		DURABLE SANDSTONE UNDERDRAIN	4,350.00	LF		$	
0690	24489EC		INLAID PAVEMENT MARKER	610.00	EACH		$	
0700	24631EC		BARCODE SIGN INVENTORY	11.00	EACH		$	
0710	24843EC		VIBRATING WIRE PIEZOMETER	6.00	EACH		$	
0720	24846EC		GABION MATTRESS DITCH (REVISED: 5-18-21)	1,447.00	CUYD		$	
0730	40024		ASPHALT PAVEMENT REMOVAL(ALL DEPTHS)	1,069.00	SQYD		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0740	00441		ENTRANCE PIPE-18 IN (REVISED: 5-18-21)	85.00	LF		$	
0750	00445		ENTRANCE PIPE-30 IN	80.00	LF		$	
0760	00462		CULVERT PIPE-18 IN	325.00	LF		$	
0770	00464		CULVERT PIPE-24 IN (REVISED: 5-18-21)	526.00	LF		$	
0780	00466		CULVERT PIPE-30 IN (REVISED: 5-18-21)	1,046.00	LF		$	

PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0790	00468		CULVERT PIPE-36 IN	516.00	LF		$	
0800	00470		CULVERT PIPE-48 IN	362.00	LF		$	
0810	00472		CULVERT PIPE-60 IN	446.00	LF		$	
0820	00522		STORM SEWER PIPE-18 IN	91.00	LF		$	
0830	00524		STORM SEWER PIPE-24 IN	239.00	LF		$	
0840	00526		STORM SEWER PIPE-30 IN	90.00	LF		$	
0850	01002		PERFORATED PIPE-8 IN	508.00	LF		$	
0860	01012		NON-PERFORATED PIPE-8 IN	283.00	LF		$	
0870	01022		PERF PIPE HEADWALL TY 1-8 IN	3.00	EACH		$	
0880	01030		PERF PIPE HEADWALL TY 3-8 IN	4.00	EACH		$	
0890	01204		PIPE CULVERT HEADWALL-18 IN (REVISED: 5-18-21)	6.00	EACH		$	
0900	01208		PIPE CULVERT HEADWALL-24 IN	4.00	EACH		$	
0910	01210		PIPE CULVERT HEADWALL-30 IN	9.00	EACH		$	
0920	01212		PIPE CULVERT HEADWALL-36 IN	6.00	EACH		$	
0930	01216		PIPE CULVERT HEADWALL-48 IN (REVISED: 5-18-21)	8.00	EACH		$	
0940	01220		PIPE CULVERT HEADWALL-60 IN	2.00	EACH		$	
0950	01374		METAL END SECTION TY 1-30 IN	2.00	EACH		$	
0960	01451		S & F BOX INLET-OUTLET-24 IN	1.00	EACH		$	
0970	01452		S & F BOX INLET-OUTLET-30 IN	6.00	EACH		$	
0980	01490		DROP BOX INLET TYPE 1	4.00	EACH		$	
0990	01493		DROP BOX INLET TYPE 2	3.00	EACH		$	
1000	01505		DROP BOX INLET TYPE 5B	3.00	EACH		$	
1010	02607		FABRIC-GEOTEXTILE CLASS 2 FOR PIPE (REVISED: 5-18-21)	11,274.00	SQYD	$2.00	$	$22,548.00
1020	21257ED		ENTRANCE PIPE-48 IN (REVISED: 5-18-21)	366.00	LF		$	
1030	22581EN		ENTRANCE PIPE-36 IN	102.00	LF		$	
1040	24814EC		PIPELINE INSPECTION (REVISED: 5-18-21)	3,838.00	LF		$	

Section: 0004 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1050	02231		STRUCTURE GRANULAR BACKFILL	356.80	CUYD		$	
1060	02602		FABRIC-GEOTEXTILE CLASS 1	1,000.00	SQYD		$	
1070	02998		MASONRY COATING	2,357.00	SQYD		$	
1080	03299		ARMORED EDGE FOR CONCRETE	124.00	LF		$	
1090	08001		STRUCTURE EXCAVATION-COMMON (REVISED: 5-18-21)	338.10	CUYD		$	
1100	08002		STRUCTURE EXCAV-SOLID ROCK (REVISED: 5-18-21)	387.20	CUYD		$	
1110	08019		CYCLOPEAN STONE RIP RAP	1,000.00	TON		$	
1120	08033		TEST PILES	96.00	LF		$	
1130	08046		PILES-STEEL HP12X53	888.00	LF		$	
1140	08094		PILE POINTS-12 IN	18.00	EACH		$	
1150	08100		CONCRETE-CLASS A	580.20	CUYD		$	
1160	08104		CONCRETE-CLASS AA (REVISED: 5-18-21)	568.70	CUYD		$	

PROPOSAL BID ITEMS

Report Date 5/18/21

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1170	08150		STEEL REINFORCEMENT	57,681.00	LB		$	
1180	08151		STEEL REINFORCEMENT-EPOXY COATED	161,653.00	LB		$	
1190	08160		STRUCTURAL STEEL 1340 LBS	1.00	LS		$	
1200	08471		EXPANSION DAM-2.5 IN NEOPRENE	124.00	LF		$	
1210	08637		PRECAST PC I BEAM TYPE 7	1,841.80	LF		$	
1220	21532ED		RAIL SYSTEM TYPE III (REVISED: 5-18-21)	740.00	LF		$	

Section: 0005 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1230	04820		TRENCHING AND BACKFILLING	20.00	LF		$	
1240	04844		CABLE-NO. 14/5C	1,870.00	LF		$	
1250	04885		MESSENGER-10800 LB	500.00	LF		$	
1260	04932		INSTALL STEEL STRAIN POLE	4.00	EACH		$	
1270	04953		TEMP RELOCATION OF SIGNAL HEAD	24.00	EACH		$	
1280	20188NS835		INSTALL LED SIGNAL-3 SECTION	10.00	EACH		$	
1290	20266ES835		INSTALL LED SIGNAL- 4 SECTION	2.00	EACH		$	
1300	20390NS835		INSTALL COORDINATING UNIT	1.00	EACH		$	
1310	23157EN		TRAFFIC SIGNAL POLE BASE	22.00	CUYD		$	
1320	26119EC		INSTALL RADAR PRESENCE DETECTOR TYPE A (REVISED: 5-18-21)	4.00	EACH		$	
1330	24901EC		PVC CONDUIT-2 IN-SCHEDULE 80	60.00	LF		$	
1340	24908EC		INSTALL SIGNAL CONTROLLER-TY ATC	1.00	EACH		$	
1350	24955ED		REMOVE SIGNAL EQUIPMENT	1.00	EACH		$	
1360	26120EC		INSTALL RADAR ADVANCE DETECTOR TYPE B	2.00	EACH		$	

Section: 0006 - DEMOBILIZATION &/OR MOBILIZATION

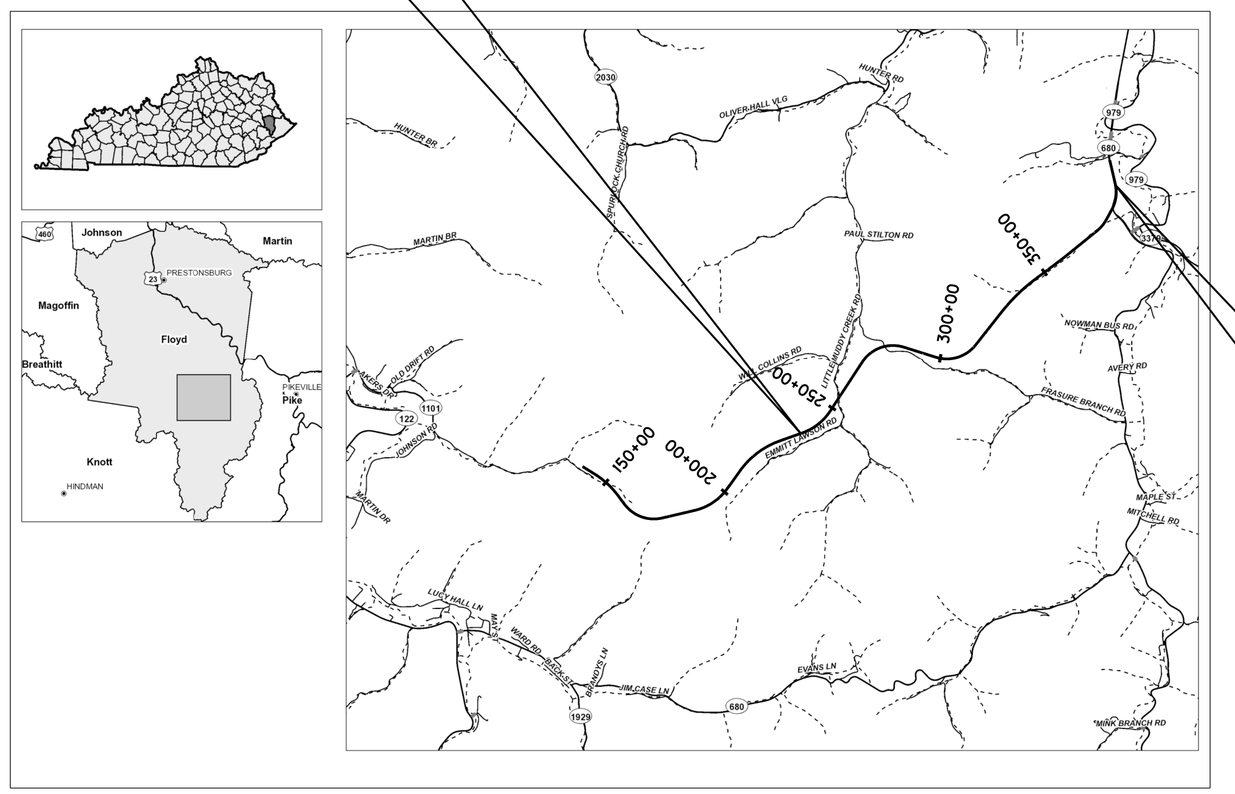
LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1370	02568		MOBILIZATION	1.00	LS		$	
1380	02569		DEMOBILIZATION	1.00	LS		$	

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R1

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT
MINNIE TO HAROLD ROAD SECTION 2A
(LITTLE MUD CREEK TO TACKETT BRANCH)
FLOYD COUNTY
FD04 SPP 036 0680 NEW LOCATION

STA. 246+00
BEGIN CONSTRUCTION



SCALE 1"=4000'

THIS PROJECT IS NOT ON
THE NATIONAL HIGHWAY SYSTEM

THE CONTROL OF ACCESS ON THIS
PROJECT SHALL BE BY PERMIT

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
R1	LAYOUT SHEET
R2 - R2F	TYPICAL SECTIONS-SUMMARY OF QUANTITIES
R3 - R22	PLAN AND PROFILE SHEETS
R23	RIGHT OF WAY SUMMARY SHEETS
R24 - R25	RIGHT OF WAY STRIP MAP SHEETS
R25A - R25F	DETAIL SHEETS
R26 - R30A	TRAFFIC CONTROL SHEETS
R31 - R40	EROSION CONTROL SHEETS
R41 - R43	COORDINATE CONTROL SHEETS
R44 - R62	SOIL PROFILE SHEETS
R63 - R80	PIPE DRAINAGE SHEETS
M1 - M44	MINE RECLAMATION PLANS
S1 - S28	STRUCTURE PLANS
T1 - T4	TRAFFIC PLANS (SIGNALS)
X1 - X323	CROSS SECTION SHEETS

SHEETS NOT INCLUDED IN TOTAL SHEETS

R2A, R2B, R2C, R2D, R2E, R2F, R9A-R9E, R11A, R11B, R15A, R16A, R25A, R25B, R25C, R25D, R25E, F25F, R30A, R34A, R35A, R35B, R37A, R41A, R80A, X255A-X255F, X298A-X298M

STANDARD DRAWINGS

NUMBER

RBB-001-09	RDH-120-02	RGX-100-07
RBC-003-09	RDH-210-03	RGX-105-09
RBC-005-01	RDH-220-02	RGX-200-01
RBC-005N	RDH-310-04	RPM-100-11
RBI-001-12	RDH-350-03	RPM-110-07
RBI-002-07	RDI-001-10	TPM-100-03
RBI-004-06	RDI-002-05	TPM-115-03
RBR-001-13	RDI-005-04	TPM-120-03
RBR-010-06	RDI-006-04	TPM-145-03
RBR-015-06	RDI-011-03	TPM-203
RBR-016-05	RDI-012-03	TPM-206
RBR-020-07	RDI-020-10	TPR-100
RBR-025-06	RDI-025-06	TPR-105
RBR-055-01	RDI-026-01	TPR-115
RDB-001-12	RDI-035-02	TPR-125
RDB-002-12	RDP-001-06	
RDB-105-06	RDP-006-04	
RDB-106-05	RDP-010-09	
RDB-150-02	RDX-060-04	
RDD-030-08	RDX-210-03	
RDD-040-05	RDX-220-05	
RDH-020-03	RDX-230-01	
RDH-110-02	RGS-001-07	
RDH-400-02	RGX-001-06	
RDH-425-02	RGX-010-04	
RDH-430-02		

66

DESIGN CRITERIA

CLASS OF HIGHWAY	RURAL COLLECTOR
TYPE OF TERRAIN	MOUNTAINOUS
DESIGN SPEED	60 MPH
REQUIRED NPSD	490 (MIN) 635 (DES)
REQUIRED PSD	
LEVEL OF SERVICE	
ADT PRESENT (1996)	3,600
ADT FUTURE (2026)	7,600
DHV	(2026) 790
D %	
T %	10

GEOGRAPHIC COORDINATES

LATITUDE 37 DEGREES 29 MINUTES 01 SECONDS NORTH
LONGITUDE 82 DEGREES 40 MINUTES 28 SECONDS WEST

DESIGNED

% RESTRICTED SD
LEVEL OF SERVICE
MAX. DISTANCE W/O PASSING

LAYOUT MAP

LENGTH 15,316 LIN. FT. 2.901 MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES
ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.
NOT INCLUDED	NOT INCLUDED	NOT INCLUDED	NOT INCLUDED
RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.
BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

FLOYD

MINNIE TO HAROLD ROAD

ITEM NO. 12-301.20
PROJECT NUMBER: FD04 SPP 036 0680 NEW LOCATION
LETTING DATE:

RECOMMENDED BY: JOHN MICHAEL JOHNSON (PROJECT MANAGER) 04/02/21 (DATE:)

PLAN APPROVED BY: (STATE HIGHWAY ENGINEER) 04-30-2021 (DATE:)

DESIGNED AND SUBMITTED BY:
H. A. SPALDING ENGINEERS, INC
651 SKYLINE DRIVE
HAZARD, KENTUCKY 41701

BY Lisa A. Townes
DATE 04/02/2021
KY. REGISTRATION NO. 16771

LISA A. TOWNES 16771 LICENSED PROFESSIONAL ENGINEER

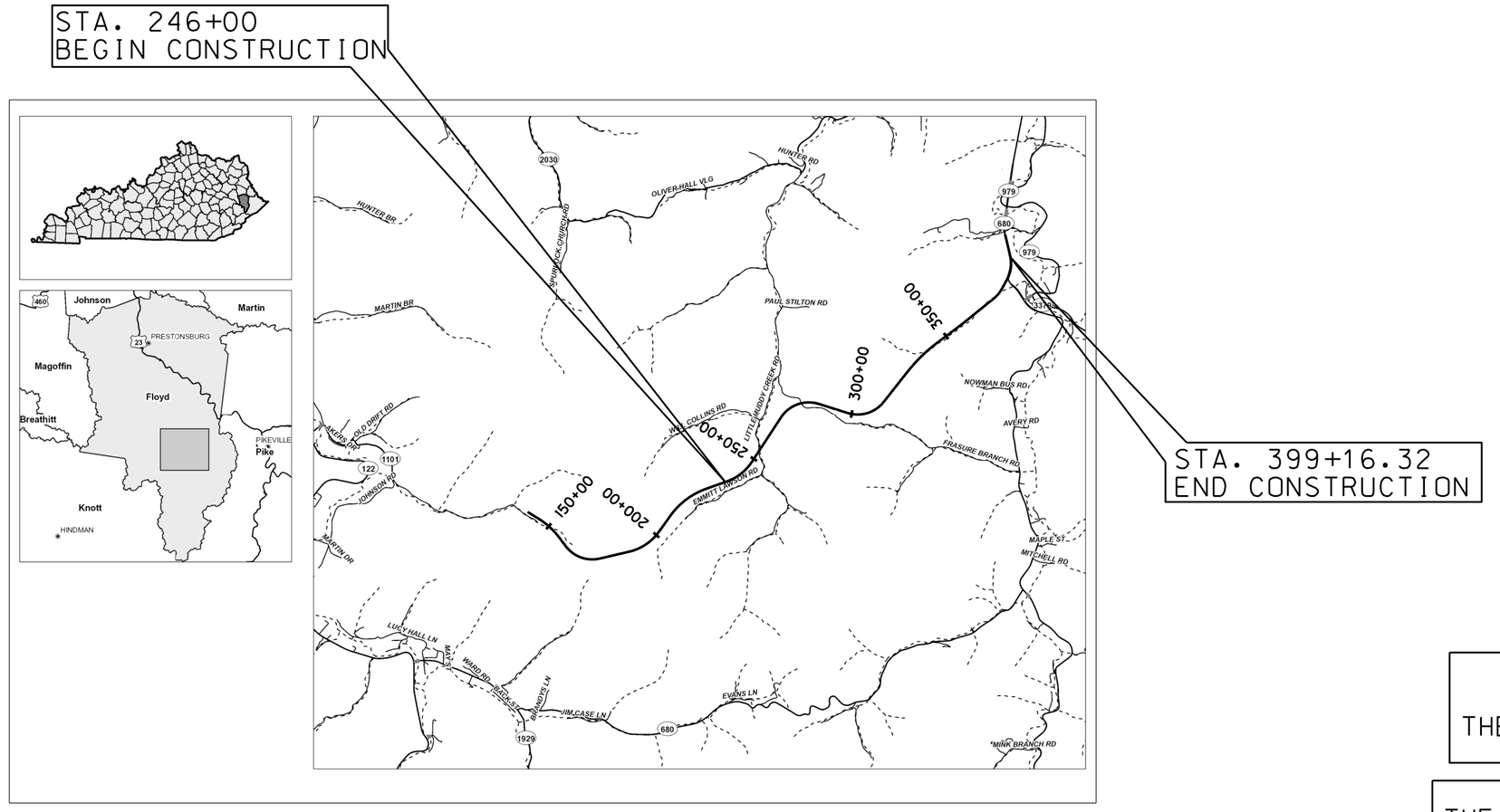
FILE NAME: X:\HIGHWAYS\PROJECTS\12301.2E\2013\12-301.20 2015\R0010OLS.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R1

REVISED 5-16-2021

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT
MINNIE TO HAROLD ROAD SECTION 2A
(LITTLE MUD CREEK TO TACKETT BRANCH)
FLOYD COUNTY
FD04 SPP 036 0680 NEW LOCATION



0′ 4000′ 8000′ 16000′

SCALE 1"=4000′

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BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

FLOYD

MINNIE TO HAROLD ROAD

ITEM NO. 12-301.20
PROJECT NUMBER: FD04 SPP 036 0680 NEW LOCATION
LETTING DATE:

RECOMMENDED BY: JOHN MICHAEL JOHNSON 04/02/21
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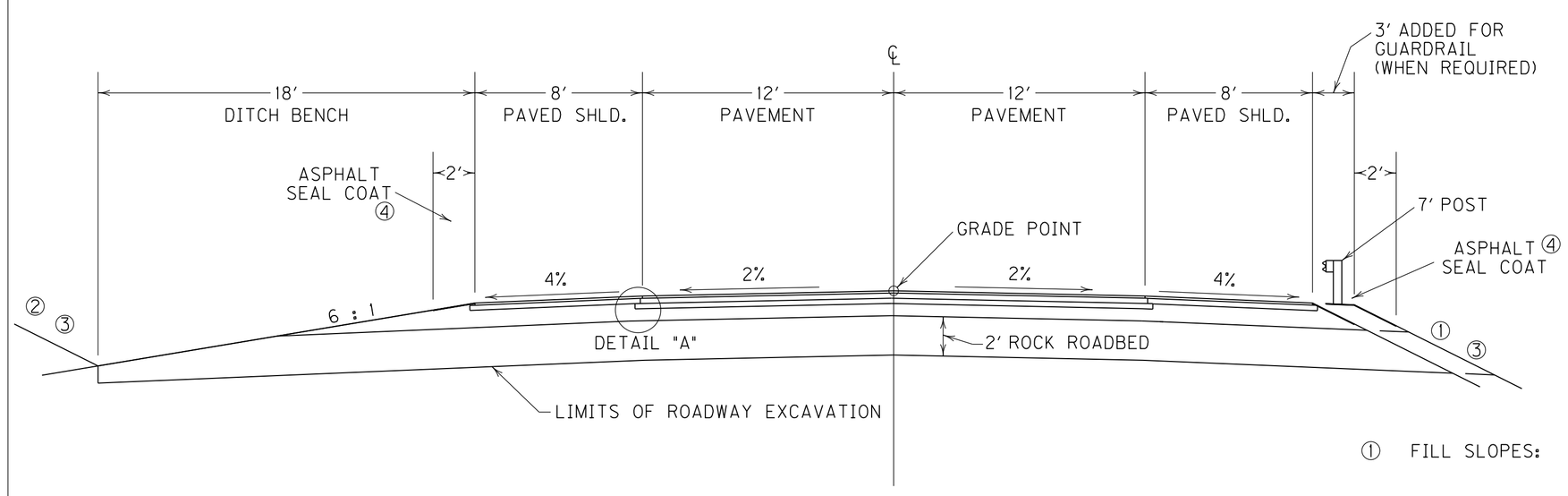
STATE OF KENTUCKY
LISA A. TOWNES
16771
LICENSED
PROFESSIONAL ENGINEER

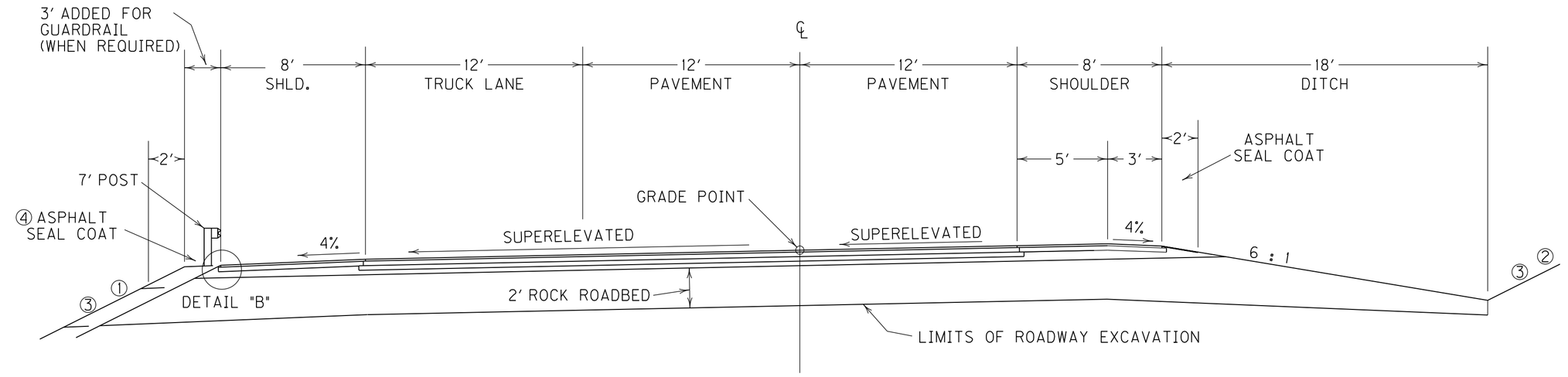
COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2

TYPICAL SECTIONS
MINNIE TO HAROLD ROAD



NORMAL SECTION

STA. 255+16.00 - STA. 257+75.00



SUPERELEVATED SECTION
TRUCK LANE LEFT

STA. 246+00.00 - STA. 249+64.14
STA. 376+39.23 - STA. 378+12.48

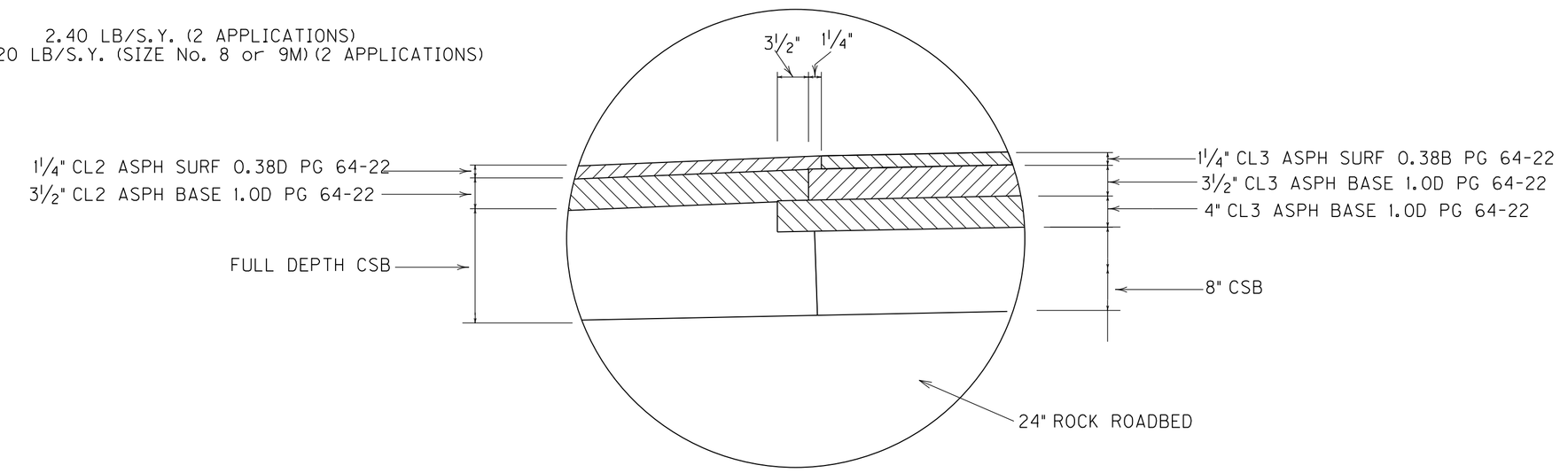
① FILL SLOPES: 4 : 1, UNDER 10'
2 : 1 - 4 : 1, 10' TO 20'
2 : 1, OVER 20'

② CUT SLOPES: 4 : 1, UNDER 4'
2 : 1, OVER 4'

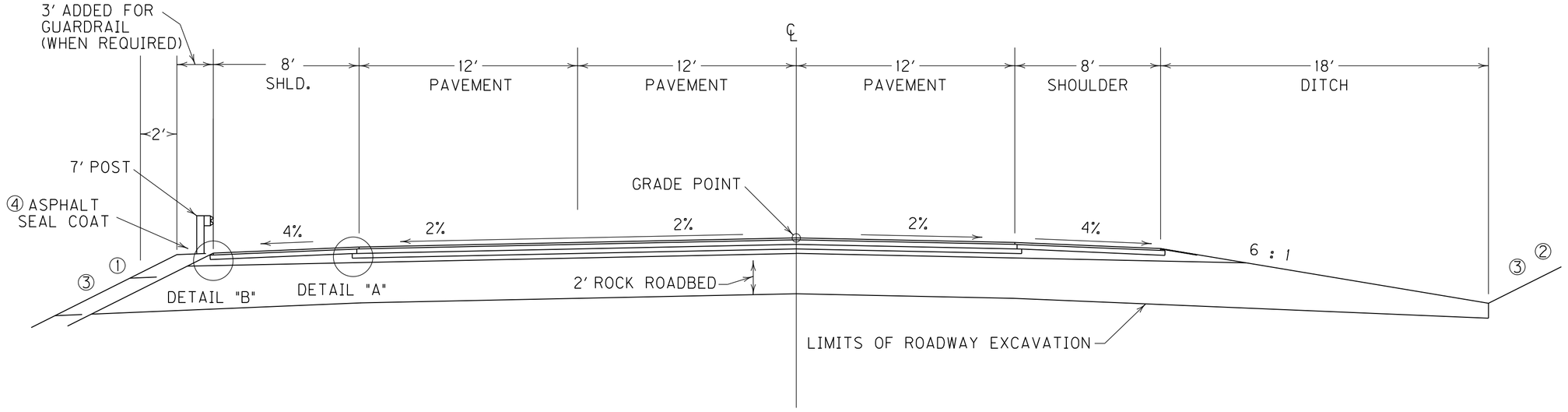
③ SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER

④ ASPHALT SEAL REQUIRED FOR THE OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2'-0" DOWN THE DITCH OR FILL SLOPE.

103 ASPHALT SEAL COAT 2.40 LB/S.Y. (2 APPLICATIONS)
100 ASPHALT SEAL AGGREGATE 20 LB/S.Y. (SIZE No. 8 or 9M) (2 APPLICATIONS)

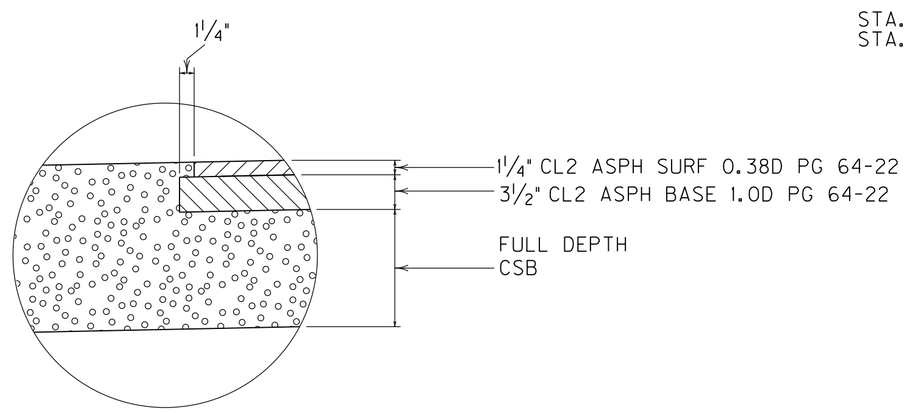


DETAIL "A"

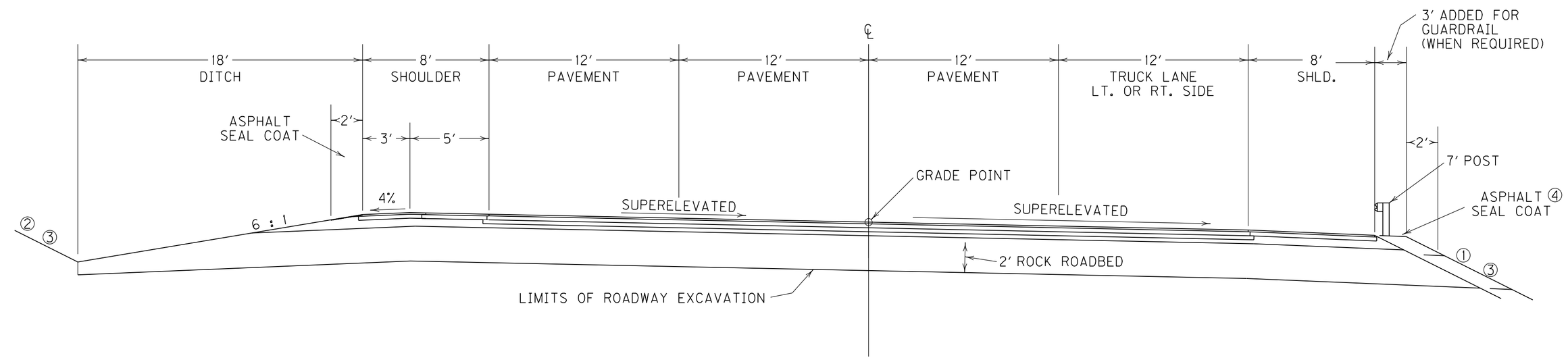


NORMAL SECTION
TRUCK LANE LEFT

STA. 249+64.14 - STA. 251+72.00
STA. 346+00.00 - STA. 376+39.23



DETAIL "B"



SUPERELEVATED SECTION
AUXILIARY LANE LEFT & RIGHT

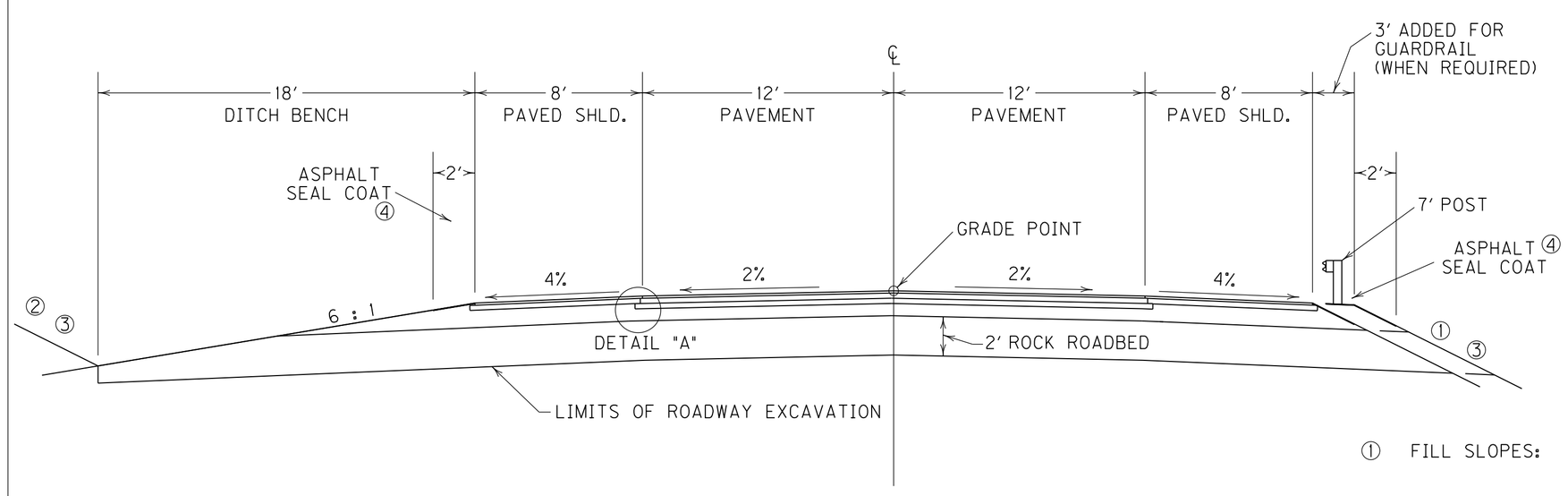
STA. 378+12.48 - STA. 383+00.39
STA. 385+17.87 - STA. 389+27.10

TYPICAL SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2

REVISED 5-16-2021

TYPICAL SECTIONS
MINNIE TO HAROLD ROAD



NORMAL SECTION

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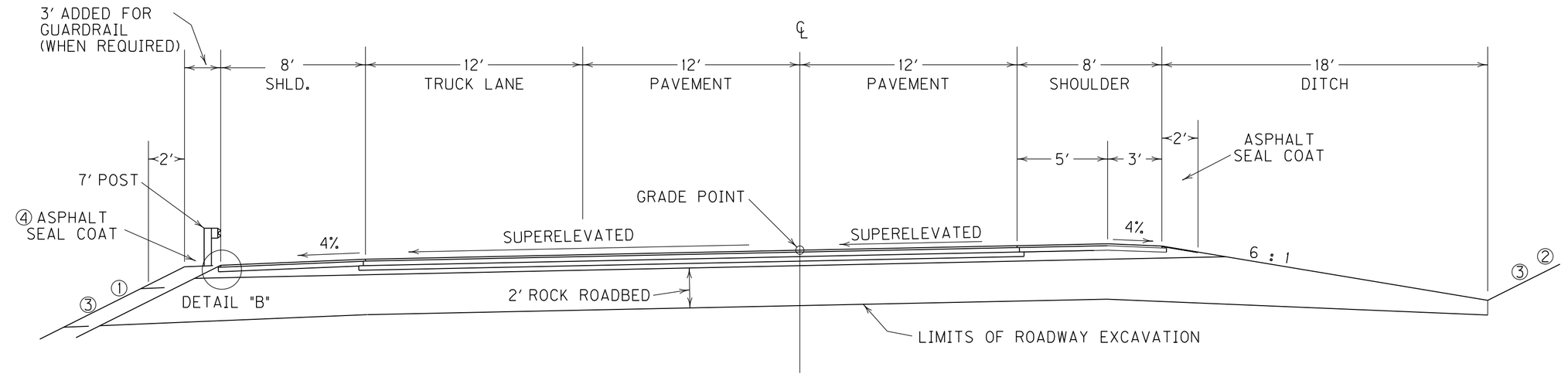

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TRUCK LANE LEFT

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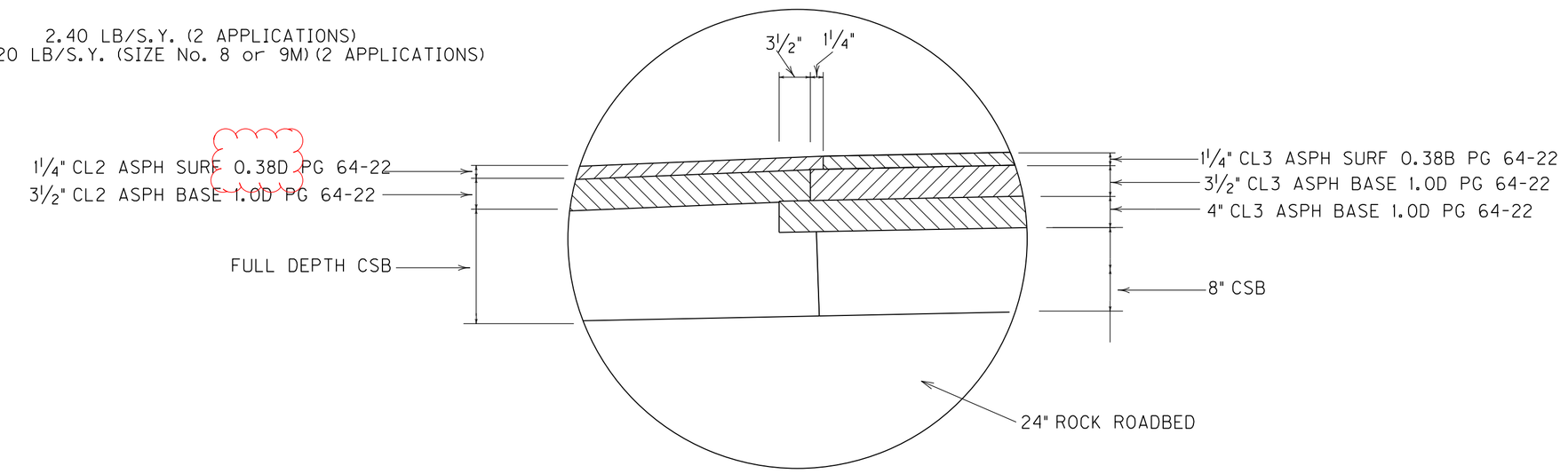
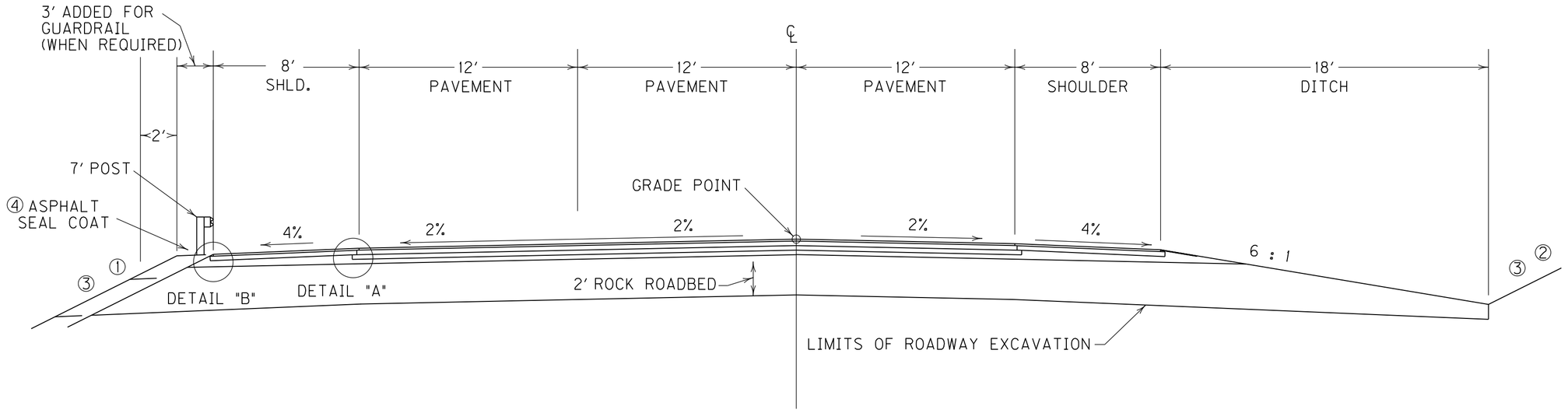
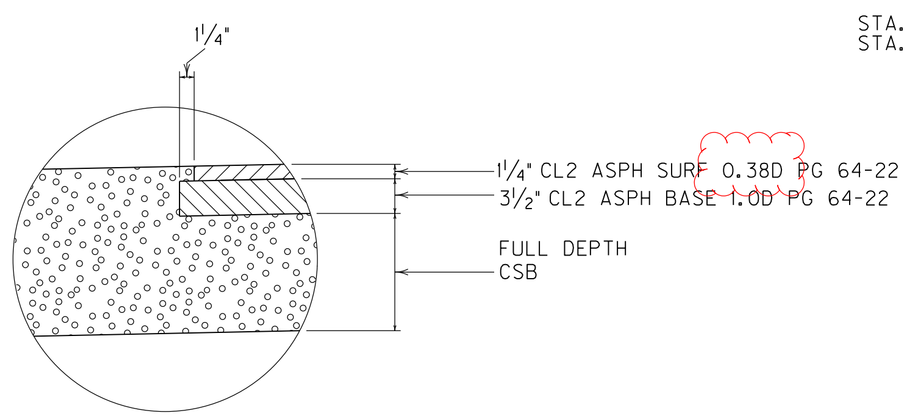


DETAIL "A"

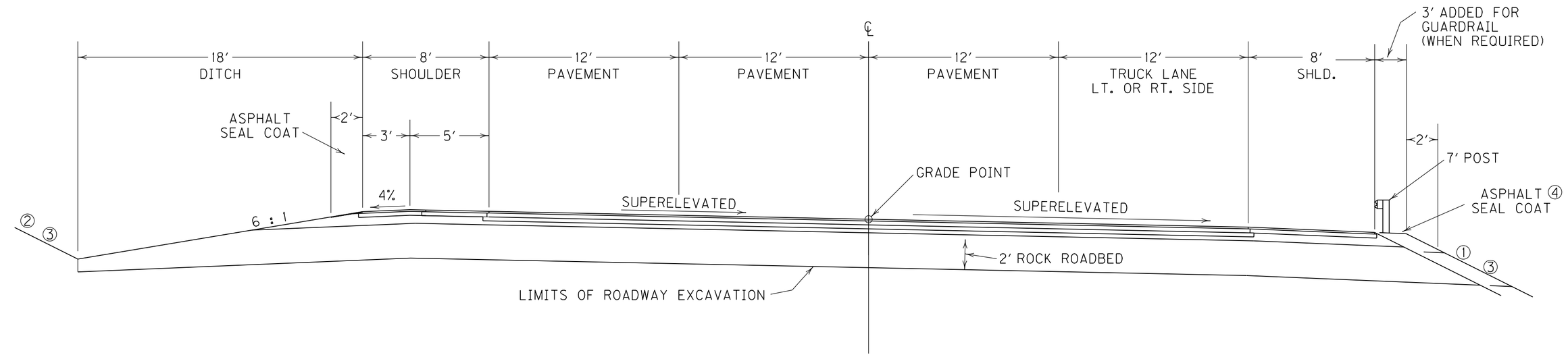


NORMAL SECTION
TRUCK LANE LEFT

STA. 249+64.14 - STA. 251+72.00
STA. 346+00.00 - STA. 376+39.23



DETAIL "B"



SUPERELEVATED SECTION
AUXILIARY LANE LEFT & RIGHT

STA. 378+12.48 - STA. 383+00.39
STA. 385+17.87 - STA. 389+27.10

TYPICAL SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2C

GENERAL SUMMARY

ITEM CODE	ITEM	UNIT	MAINLINE	MINNIE INTER-SECTION							PROJECT TOTAL							
0078	CRUSHED AGGREGATE SIZE NO. 2 ⑤	TON	107								107							
1010	NON-PERFORATED PIPE 4 IN ⑥	LIN FT	4000								4000							
1691	FLUME INLET TYPE 2	EACH	2								2							
1890	ISLAND HEADER CURB TYPE 1	LIN FT	99								99							
1987	DELINEATOR FOR GUARDRAIL B/W	EACH	87								87							
2159	TEMPORARY DITCH	LIN FT	7164								7164							
2160	CLEAN TEMP DITCH	LIN FT	3582								3582							
2230	EMBANKMENT IN PLACE ②	CU YD	7541988								7541988							
2242	WATER ③	M GAL	100								100							
2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	31								31							
2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH	4								4							
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	8								8							
2369	GUARDRAIL END TREATMENT TYPE 2A	EACH	5								5							
2381	REMOVE GUARDRAIL	LIN FT	1125.5								1125.5							
2429	RIGHT-OF-WAY MONUMENT TYPE 1	EACH	134								134							
2432	WITNESS POST	EACH	134								134							
2482	CHANNEL LINING CLASS IA	TON	93								93							
2488	CHANNEL LINING CLASS IV ④	CU YD	36091								36091							
2545	CLEARING & GRUBBING ①	LP SUM	1								1							
2562	TEMPORARY SIGNS	SQ FT	521.5								521.5							
2568	MOBILIZATION	LP SUM	1								1							
2569	DEMOBILIZATION	LP SUM	1								1							
2602	FABRIC - GEOTEXTILE CLASS 1	SQ YD	3883								3883							
2650	MAINTAIN & CONTROL TRAFFIC	LP SUM	1								8400							
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2								2							
2696	SHOULDER RUMBLE STRIPS - SAWED	LIN FT	28645								28645							
2701	TEMP SILT FENCE	LIN FT	7164								7164							
2703	SILT TRAP TYPE A	EACH	175								175							
2704	SILT TRAP TYPE B	EACH	175								175							
2705	SILT TRAP TYPE C	EACH	175								175							
2706	CLEAN SILT TRAP TYPE A	EACH	175								175							
2707	CLEAN SILT TRAP TYPE B	EACH	175								175							
2708	CLEAN SILT TRAP TYPE C	EACH	175								175							
2726	STAKING	LP SUM	1								1							
5950	EROSION CONTROL BLANKET	SQ YD	39633								39633							
5952	TEMPORARY MULCH	SQ YD	564334								564334							
5953	TEMP SEEDING AND PROTECTION	SQ YD	423251								423251							
5963	INITIAL FERTILIZER	TON	39								39							
5964	MAINTENANCE FERTILIZER	TON	23.5								23.5							
5985	SEEDING AND PROTECTION ⑨	SQ YD	754747								754747							
5992	AGRICULTURAL LIMESTONE	TON	468								468							
6406	SBM ALUM SHEET SIGNS .080 IN	SQ FT	62								62							
6410	STEEL POST TYPE 1	LIN FT	194								194							
6510	PAVE STRIPING - TEMP PAINT 4-IN	LIN FT	43000	3500							46500							
6514	PAVE STRIPING - PERM PAINT 4-IN	LIN FT	72295	3500							75795							
6568	PAVE MARKING - THERMO STOPBAR - 24 IN	LIN FT	24	91							115							
6569	PAVE MARKING - THERMO CROSS-HATCH	SQ FT	3650	1442							5092							
6573	PAVE MARKING - THERMO STR ARROW	EACH		5							5							
6574	PAVE MARKING - THERMO CURV ARROW	EACH	12	15							27							
6576	PAVE MARKING - THERMO ONLY	EACH	6								6							
40024	ASPHALT PAVEMENT REMOVAL	SQ YD	1069								1069							
10020NS	FUEL ADJUSTMENT	DOLL	1315119								1315119							
10030NS	ASPHALT ADJUSTMENT	DOLL	149261								149261							
20071EC	JOINT ADHESIVE	LIN FT	56628								56628							
20458ES	403 CENTERLINE RUMBLE STRIPS	LIN FT	14510	1975							16485							
20667ED	PNEUMATIC BACKSTOWING	TON	4000								4000							
21802EN	G/R - STEEL BEAM-S FACE (7 LF POST)	LIN FT	13675								13512.5							
24412EC	DURABLE SANDSTONE UNDERDRAIN	LIN FT	4350								4350							
24489EC	INLAID PAVEMENT MARKER ⑩	EACH	519	91							610							
24631EC	BARCODE SIGN INVENTORY	EACH	11								11							
24843EC	VIBRATING WIRE PIEZOMETER	EACH	6								6							
24846EC	GABION MATTRESS DITCH ⑧	CU YD	1447								1447							

① AREA IS APPROXIMATELY 174 ACRES.

② INCLUDES 73,751 CU YD FROM EMBANKMENT BENCHING, AND 113,798 CU YD FROM TRANSVERSE BENCHING.

③ FOR CONTROLLING DUST CAUSED BY MAINTAINING TRAFFIC ONLY

④ INCLUDES 10503 CU.YDS. FROM DRAINAGE SUMMARY

⑤ INCLUDES 7 TONS FOR USE WITH PERFORATED PIPE HEADWALLS AND 100 TONS CARRIED OVER FROM THE PAVING SUMMARY

⑥ FOR DRAINING BACKSTOWED MINE OPENINGS

⑦ TRANSVERSE BENCHING OVERLAPS EMBANKMENT BENCHING IN MANY LOCATIONS. FOR THESE OVERLAP LOCATIONS, THE EMBANKMENT BENCHING COVERS THE EXCAVATION QUANTITY, WITH THE EXCEPTION OF THE TOP BENCH WHICH IS INCLUDED IN THE TRANSVERSE BENCHING QUANTITY.

⑧ INCLUDES 160 CU. YDS. FROM DRAINAGE SUMMARY.

⑨ INCLUDES 126,315 SQ YD FROM THE MINE RECLAMATION PLANS.

⑩ INCLUDES 348 BI-DIRECTIONAL YELLOW FOR MAINLINE, 171 MONO-WHITE FOR MAINLINE, 62 BI-DIRECTIONAL YELLOW FOR KY122 INTERSECTION AND 29 MONO-WHITE FOR KY122 INTERSECTION.

TOTAL PROJECT EARTHWORK

1,507,144 COMMON
4,756,659 ROCK
62,727 DITCHES
113,798 TRANSVERSE BENCHING
7,279,793 EMBANKMENT
73,751 EMBANKMENT BENCHING
74,646 ROCK ROADBED

ALL EARTHWORK QUANTITIES ARE FOR DESIGN PURPOSES ONLY

GENERAL SUMMARY

GENERAL SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2C

REVISED 5-16-2021

ITEM CODE	ITEM	UNIT	MAINLINE	MINNIE INTER-SECTION							PROJECT TOTAL							
0078	CRUSHED AGGREGATE SIZE NO. 2 ⑤	TON	107								107							
1010	NON-PERFORATED PIPE 4 IN ⑥	LIN FT	4000								4000							
1691	FLUME INLET TYPE 2	EACH	2								2							
1890	ISLAND HEADER CURB TYPE 1	LIN FT	99								99							
1987	DELINEATOR FOR GUARDRAIL B/W	EACH	87								87							
2159	TEMPORARY DITCH	LIN FT	7164								7164							
2160	CLEAN TEMP DITCH	LIN FT	3582								3582							
2230	EMBANKMENT IN PLACE ②	CU YD	7541988								7541988							
2242	WATER ③	M GAL	100								100							
2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	31								31							
2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH	4								4							
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	8								8							
2369	GUARDRAIL END TREATMENT TYPE 2A	EACH	5								5							
2381	REMOVE GUARDRAIL	LIN FT	1125.5								1125.5							
2429	RIGHT-OF-WAY MONUMENT TYPE 1	EACH	134								134							
2432	WITNESS POST	EACH	134								134							
2482	CHANNEL LINING CLASS IA	TON	93								93							
2488	CHANNEL LINING CLASS IV ④	CU YD	36091								36091							
2545	CLEARING & GRUBBING ①	LP SUM	1								1							
2562	TEMPORARY SIGNS	SQ FT	521.5								521.5							
2568	MOBILIZATION	LP SUM	1								1							
2569	DEMOBILIZATION	LP SUM	1								1							
2602	FABRIC - GEOTEXTILE CLASS 1	SQ YD	3883								3883							
2650	MAINTAIN & CONTROL TRAFFIC	LP SUM	1								8400							
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2								2							
2696	SHOULDER RUMBLE STRIPS - SAWED	LIN FT	28645								28645							
2701	TEMP SILT FENCE	LIN FT	7164								7164							
2703	SILT TRAP TYPE A	EACH	175								175							
2704	SILT TRAP TYPE B	EACH	175								175							
2705	SILT TRAP TYPE C	EACH	175								175							
2706	CLEAN SILT TRAP TYPE A	EACH	175								175							
2707	CLEAN SILT TRAP TYPE B	EACH	175								175							
2708	CLEAN SILT TRAP TYPE C	EACH	175								175							
2726	STAKING	LP SUM	1								1							
5950	EROSION CONTROL BLANKET	SQ YD	39633								39633							
5952	TEMPORARY MULCH	SQ YD	564334								564334							
5953	TEMP SEEDING AND PROTECTION	SQ YD	423251								423251							
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6569	PAVE MARKING - THERMO CROSS-HATCH	SQ FT	3650	1442							5092							
6573	PAVE MARKING - THERMO STR ARROW	EACH		5							5							
6574	PAVE MARKING - THERMO CURV ARROW	EACH	12	15							27							
6576	PAVE MARKING - THERMO ONLY	EACH	6								6							
40024	ASPHALT PAVEMENT REMOVAL	SQ YD	1069								1069							
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10030NS	ASPHALT ADJUSTMENT	DOLL	149261								149261							
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20667ED	PNEUMATIC BACKSTOWING	TON	4000								4000							
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24412EC	DURABLE SANDSTONE UNDERDRAIN	LIN FT	4350								4350							
24489EC	INLAID PAVEMENT MARKER ⑩	EACH	519	91							610							
24631EC	BARCODE SIGN INVENTORY	EACH	11								11							
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24846EC	GABION MATTRESS DITCH ⑧	CU YD	1447								1447							

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GENERAL SUMMARY

MicroStation v8.11.9.919	E-SHEET NAME:	USER: Lisa DATE PLOTTED: May 16, 2021	FILE NAME: X:\HIGHWAYS\PROJECTS\12301_2E\2013\12-301.20 2015\PAVESUM.DGN

PAVING AREAS

ITEM	MAINLINE	MAINLINE SHOULDERS	MINNIE INTERSECTION								ENTRANCES	TOTAL PROJECT
	S	Q	U	A	R	E		Y	A	R	D	S
1¼" CL3 ASPH SURF 0.38B PG64-22	65320		10529									75849
1¼" CL2 ASPH SURF 0.38D PG64-22		25356									3915	29271
3½" CL3 ASPH BASE 1.0D PG64-22	61180											61180
4" CL3 ASPH BASE 1.0D PG64-22	61972											61972
3" CL2 ASPH BASE 0.75D PG64-22											3987	3987
3½" CL2 ASPH BASE 1.0D PG64-22		25356										25356
8" CRUSHED STONE BASE	64349										4158	68507
12" CRUSHED STONE BASE		25356										29552
5" TRAFFIC BOUND BASE											2872	2872
ASPHALT SEAL COAT		6339										6339
1¼ASPHALT PAVE MILLING & TEXTURING	4536		10529									15065
16¾" ASPHALT PAVE MILLING & TEXTURING	554											554
ASPHALT MATERIAL FOR TACK NON-TRACKING	127688	25356	10529								3907	167480

PAVING SUMMARY

NOTES

ALL ASHALT MIXTURES SHALL BE ESTIMATED AT 110 LBS. PER SQ. YD. PER INCH OF DEPTH, UNLESS NOTED OTHERWISE.

① ESTIMATED AT 115 LBS. PER SQ. YD. PER INCH OF DEPTH.

② ESTIMATED AT 100 LBS. PER SQ. YD. PER INCH OF DEPTH.

③ BOTTOM 4 INCHES OF CRUSHED STONE BASE HAS BEEN INCREASED 10% BY WEIGHT FOR ROCK ROADBED CONSTRUCTION.

④ INCLUDES 100 TONS OF #2 STONE FOR POSSIBLE ROADWAY FAILURES OR OTHER MISCELLANEOUS USES. FOR USE AT THE ENGINEER'S DISCRETION FOR ADDRESSING UNSUITABLE MATERIALS. TOTAL IS CARRIED OVER AND INCLUDED IN THE GENERAL SUMMARY

⑤ PAVEMENT MARKER REMOVAL AT THE MINNIE INTERSETION IS INCIDENTIAL TO MILLING AND TEXTURING.

⑥ ESTIMATED AT 0.84 LBS. PER SQ. YD.

ITEM CODE	ITEM	UNIT	MAINLINE	MAINLINE SHOULDERS	MINNIE INTERSECTION							ENTRANCES	TOTAL PROJECT
388	CL3 ASPH SURF 0.38B PG64-22	TON	4491		724								5215
301	CL2 ASPH SURF 0.38D PG64-22	TON		1743								270	2013
214	CL3 ASPH BASE 1.0D PG64-22	TON	25411										25411
221	CL2 ASPH BASE 0.75D PG64-22	TON										658	658
212	CL2 ASPH BASE 1.0D PG64-22	TON		4881									4881
3	CRUSHED STONE BASE ①	TON	31081	18079								1912	51072
20	TRAFFIC BOUND BASE ②	TON										718	718
100	ASPHALT SEAL AGGREGATE	TON		127									127
103	ASPHALT SEAL COAT	TON		16									16
78	CRUSHED AGGREGATE NO. 2 ④	TON											100
190	LEVELING & WEDGING PG64-22	TON	985										985
2676	MOBILIZATION FOR MILL & TEXT	LP SUM	1		1								2
2677	ASPHALT PAVE MILLING & TEXTURING ⑤	TON	822		724								1546
2497OEC	ASPHALT MATERIAL FOR TACK NON-TRACKING ⑥	TON	54	11	5							2	72

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2D

PAVING SUMMARY

MicroStation v8.11.9.919	E-SHEET NAME:	USER: Lisa DATE PLOTTED: May 16, 2021	FILE NAME: X:\HIGHWAYS\PROJECTS\12301_2E\2013\12-301.20 2015\PAVESUM.DGN

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REVISED 5-16-2021

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2D

PAVING SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2E

PIPE DRAINAGE SUMMARY

SHEET NO.		SKEW	DESIGN pH LEVEL	COVER HEIGHT	CULVERT PIPE 18"	CULVERT PIPE 24"	CULVERT PIPE 30"	CULVERT PIPE 36"	CULVERT PIPE 48"	CULVERT PIPE 60"	STORM SEWER PIPE 18"	STORM SEWER PIPE 24"	STORM SEWER PIPE 30"	ENTRANCE PIPE 15"	ENTRANCE PIPE 18"	ENTRANCE PIPE 30"	ENTRANCE PIPE 36" 2581EN	ENTRANCE PIPE 48" 2157ED	PERFORATED PIPE 8"	NON-PERFORATED PIPE 8" ②	PERF. PIPE HEADWALL TY 1-8"	PERF. PIPE HEADWALL TY 3-8"	SLOPED & FLARED BOX INLET - OUTLET 24"	SLOPED & FLARED BOX INLET - OUTLET 30"	DROP BOX INLET TYPE 1	DROP BOX INLET TYPE 2	DROP BOX INLET TYPE 5B	METAL END SECTION TY 1-30 IN	PIPE CULVERT HEADWALL 18 IN	PIPE CULVERT HEADWALL 24 IN	PIPE CULVERT HEADWALL 30 IN	PIPE CULVERT HEADWALL 36 IN	PIPE CULVERT HEADWALL 48 IN	PIPE CULVERT HEADWALL 60 IN	PIPELINE INSPECTION 24814EC	CHANNEL LINING CLASS IA ①	GABION MATRESS DITCH 24846EC ①	③ FABRIC-GEOTEXTILE CLASS 2 FOR PIPE ⑤	CHANNEL LINING CLASS IV ①	DITCH EXCAVATION ④	REMARKS
ITEM CODE					462	464	466	468	470	472	522	524	526	440	441	445	2258IEN	2157ED	1002	1012	1022	1030	1451	1452	1490	1493	1505	1374	1204	1208	1210	1212	1216	1220		2482		2607	2488		
UNIT TO BID ON				FT.	LIN. FT.																EACH														LF	TON	CY	SY	CY		
																					MAINLINE																				
R63	248+76	0°	M	4.1	214																					1		1										644	8	160	
R64	256+00	0°	M	7.1									90												1					1						160	335	15	245	
R64	258+66.87	33°47'44"RT	M	5.3							91	239														2											272		230	
R65	262+58	0°	M	6.6		100																	1		1												336	94	665	
R66	266+50	0°	M	6.5			100																	1		1												372	48	3954	
R67	276+00	0°	M	11.5	111																				1			1									253	41	408	
R68	280+50	0°	M	36.8				244																							2						718	2946	119	
R69	286+50	0°	M	19.5			152																		1					1						414	3029		
R70	302+39	20° LT	M	11.6		114																			1				1								285	508	57	
R71	307+00	0°	M	26.4		215																							2								538	492		
R72	311+00	0°	M	21.5			180																	1							1						490	954		
R73	319+38	30° RT	M	9.2			99																	1							1				93		270	137	232	
R74	341+65	30° LT	M	54.4						446																							2				2353	322		
R75	352+50	0°	M	55.2				272																							2						801	39		
R76	356+50	0°	M	53.1			268																							2							730	55		
R77	369+00	0°	M	31.8					178																								2				682	883		
R78	374+00	0°	M	20.8			135																							2							368	185		
R79	379+00	0°	M	13.6			112																	1						1							305	583		
R80	383+00	0°	M	7.0		97																			1				1								326	164	733	
R80A	299+00	34° 30′	M	38					184																								2					782			Entrance Lt.
	SUBTOTAL				325	526	1046	516	362	446	91	239	90										1	6	4	3	3		2	4	9	4	4	2		93	160	11274	10503	6803	
																					MISCELLANEOUS																				
	ENTRANCES													85	80	102	366										2	4			2	4								
	TRANSVERSE BENCHING DRAINS																	508	283	3	4																			
	EDGE DRAINS																																							
	PROJECT TOTALS				325	526	1046	516	362	446	91	239	90	85	80	102	366	508	283	3	4	1	6	4	3	3	2	6	4	9	6	8	2	3838	93	160	11274	10503	6803	

① TOTALS FOR THESE ITEMS ARE CARRIED OVER AND INCLUDED IN THE GENERAL SUMMARY
② SHALL BE SAME ALTERNATE AS PERFORATED PIPE
③ FOR WRAPPING PIPE TRENCH BACKFILL
④ INCIDENTAL TO EXCAVATION
⑤ ALL REFERENCES TO "FABRIC GEOTEXTILE TYPE IV FOR PIPE" ON SHEETS R63 THRU R80A SHOULD BE "FABRIC GEOTEXTILE CLASS 2 FOR PIPE"

PIPE DRAINAGE SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R2E

REVISED 5-16-2021

PIPE DRAINAGE SUMMARY

SHEET NO.		SKEW	DESIGN pH LEVEL	COVER HEIGHT	CULVERT PIPE 18"	CULVERT PIPE 24"	CULVERT PIPE 30"	CULVERT PIPE 36"	CULVERT PIPE 48"	CULVERT PIPE 60"	STORM SEWER PIPE 18"	STORM SEWER PIPE 24"	STORM SEWER PIPE 30"	ENTRANCE PIPE 15"	ENTRANCE PIPE 18"	ENTRANCE PIPE 30"	ENTRANCE PIPE 36"	ENTRANCE PIPE 48"	PERFORATED PIPE 8"	NON-PERFORATED PIPE 8" ②	PERF. PIPE HEADWALL TY 1-8"	PERF. PIPE HEADWALL TY 3-8"	SLOPED & FLARED BOX INLET - OUTLET 24"	SLOPED & FLARED BOX INLET - OUTLET 30"	DROP BOX INLET TYPE 1	DROP BOX INLET TYPE 2	DROP BOX INLET TYPE 5B	METAL END SECTION TY 1-30 IN	PIPE CULVERT HEADWALL 18 IN	PIPE CULVERT HEADWALL 24 IN	PIPE CULVERT HEADWALL 30 IN	PIPE CULVERT HEADWALL 36 IN	PIPE CULVERT HEADWALL 48 IN	PIPE CULVERT HEADWALL 60 IN	PIPELINE INSPECTION	CHANNEL LINING CLASS IA ①	GABION MATRESS DITCH ①	FABRIC-GEOTEXTILE CLASS 2 FOR PIPE ③ ⑤	CHANNEL LINING CLASS IV ①	DITCH EXCAVATION	REMARKS
ITEM CODE					462	464	466	468	470	472	522	524	526	440	441	445	2258IEN	2125TED	1002	1012	1022	1030	1451	1452	1490	1493	1505	1374	1204	1208	1210	1212	1216	1220	24814EC	2482	24846EC	2607	2488	④	
UNIT TO BID ON				FT.	LIN. FT.																EACH														LF	TON	CY	SY	CY		
MAINLINE																																									
R63	248+76	0°	M	4.1	214																						1		1									644	8	160	
R64	256+00	0°	M	7.1									90													1					1						160	335	15	245	
R64	258+66.87	33°47′44"RT	M	5.3							91	239															2											272		230	
R65	262+58	0°	M	6.6		100																	1		1													336	94	665	
R66	266+50	0°	M	6.5			100																	1		1												372	48	3954	
R67	276+00	0°	M	11.5	111																				1				1									253	41	408	
R68	280+50	0°	M	36.8				244																								2						718	2946	119	
R69	286+50	0°	M	19.5			152																			1					1							414	3029		
R70	302+39	20° LT	M	11.6		114																			1					1								285	508	57	
R71	307+00	0°	M	26.4		215																								2								538	492		
R72	311+00	0°	M	21.5			180																	1							1							490	954		
R73	319+38	30° RT	M	9.2			99																	1							1					93		270	137	232	
R74	341+65	30° LT	M	54.4						446																								2				2353	322		
R75	352+50	0°	M	55.2				272																								2						801	39		
R76	356+50	0°	M	53.1			268																								2							730	55		
R77	369+00	0°	M	31.8					178																								2					682	883		
R78	374+00	0°	M	20.8			135																								2							368	185		
R79	379+00	0°	M	13.6			112																	1							1							305	583		
R80	383+00	0°	M	7.0		97																			1					1								326	164	733	
R80A	299+00	34° 30′	M	38					184																								2					782			Entrance Lt.
	SUBTOTAL				325	526	1046	516	362	446	91	239	90										1	6	4	3	3		2	4	9	4	4	2		93	160	11274	10503	6803	
MISCELLANEOUS																																									
	ENTRANCES														85	80	102	366										2	4			2	4								
	TRANSVERSE BENCHING DRAINS																		508	283	3	4																			
	EDGE DRAINS																																								
	PROJECT TOTALS				325	526	1046	516	362	446	91	239	90		85	80	102	366	508	283	3	4	1	6	4	3	3	2	6	4	9	6	8	2	3838	93	160	11274	10503	6803	

① TOTALS FOR THESE ITEMS ARE CARRIED OVER AND INCLUDED IN THE GENERAL SUMMARY
② SHALL BE SAME ALTERNATE AS PERFORATED PIPE
③ FOR WRAPPING PIPE TRENCH BACKFILL
④ INCIDENTAL TO EXCAVATION
⑤ ALL REFERENCES TO "FABRIC GEOTEXTILE TYPE IV FOR PIPE" ON SHEETS R63 THRU R80A SHOULD BE "FABRIC GEOTEXTILE CLASS 2 FOR PIPE"

FILE NAME: X:\HIGHWAYS\PROJECTS\12301_2E\2013\12-301.20 2015\PIPESUM.DGN
USER: Lisa
DATE PLOTTED: May 18, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

PIPE DRAINAGE SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R9

STEEL "W" BEAM GUARDRAIL CONSTRUCTION							
	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	TY 2A (Ea.)	TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
LT.	285+00 TO 292+94	812.5'	1				

DITCH CONSTRUCTION							
LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		285+00 TO 290+00	CLASS IV**	586 C.Y.	2.0'	4.0'	6' FB
X		290+00 TO 294+23	CLASS IV	239 C.Y.	1.0'	2.0'	2' FB
	X	285+00 TO 287+90	CLASS IV	170 C.Y.	1.0'	2.0'	2' FB
	X	289+25 TO 295+25	E.C. BLNK.	1398 S.Y.	2.0'	-	2' FB

d50 = 1.0' (UNLESS OTHERWISE NOTED) * d50 = 1.5' ** d50 = 2.0'

ENTRANCE	E. PIPE	MES TYPE 1	PIPE CULVERT HDWL
LT. STA. 293+00	80' - 30"	2 - 30"	
RT. STA. 299+00	184' - 48"		2 - 48"
LT. STA. 54+00 ENT. 295+00	20' - 18"		2 - 18"

CAUTION — HAZARDOUS OR FLAMMABLE MATERIALS - GAS LINES

CONST. ENTRANCE	(WID.)	CSB (TON)	ASPH. BASE (TON)	ASPH. SURF. (TON)
LT. STA. 293+00	(12')	188	65	27
RT. STA. 295+00	(11')	552	190	78
LT. STA. 54+00 ENT. 295+00	(11')	544	187	76
RT. STA. 299+00	(12')	482	166	68

PI STA 307+39.62
Δ= 69°16'20" LT
C= 1300.33'
Ts= 1003.97'
Ls= 210.00'
Lc= 1361.74'
θs= 4°37'40"
LT= 140.05'
ST= 70.04'
R= 1300.00'
E= 281.73'
e= 7.8%
Runoff= 210.00'
Runout= 54.00'

PI STA 279+43.58
Δ= 74°20'18" RT
C= 1398.56'
Ts= 1091.70'
Ls= 210.00'
Lc= 1476.68'
θs= 4°37'40"
LT= 140.05'
ST= 70.04'
R= 1300.00'
E= 242.11'
e= 7.8%
Runoff= 210.00'
Runout= 54.00'

MAINLINE STA. 285+00 - STA. 300+00

SCALE: 1"= 50'

FILE NAME: X:\HIGHWAYS\PROJECTS\12301_2E\2013\R02500PL.DGN | USER: Lisa DATE PLOTTED: May 16, 2021 | E-SHEET NAME: | MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R9

REVISED 5-16-2021

	STEEL "W" BEAM GUARDRAIL CONSTRUCTION						
	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	TY 2A (Ea.)	TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
LT.	285+00 TO 292+94	812.5'	1				

DITCH CONSTRUCTION

LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		285+00 TO 290+00	CLASS IV••	586 C.Y.	2.0'	4.0'	6' FB
X		290+00 TO 294+23	CLASS IV	239 C.Y.	1.0'	2.0'	2' FB
	X	285+00 TO 287+90	CLASS IV	170 C.Y.	1.0'	2.0'	2' FB
	X	289+25 TO 295+25	E.C. BLNK.	1398 S.Y.	2.0'	-	2' FB

d50 = 1.0' (UNLESS OTHERWISE NOTED) • d50 = 1.5' •• d50 = 2.0'

ENTRANCE	E. PIPE	MES TYPE 1	PIPE CULVERT HDWL
LT. STA. 293+00	80' - 30"	2 - 30"	
RT. STA. 299+00	184' - 48"		2 - 48"
LT. STA. 54+00 ENT. 295+00	20' - 18"		2 - 18"

CAUTION	HAZARDOUS OR FLAMMABLE MATERIALS - GAS LINES

CONST. ENTRANCE	(WID.)	CSB (TON)	ASPH. BASE (TON)	ASPH. SURF. (TON)
LT. STA. 293+00	(12')	188	65	27
RT. STA. 295+00	(11')	552	190	78
LT. STA. 54+00 ENT. 295+00	(11')	544	187	76
RT. STA. 299+00	(12')	482	166	68

MATCH LINE SHEET R9B
(NOTE SCALE CHANGE)
MATCH LINE STA. 285+00
MATCH LINE STA. 300+00
MATCH LINE SHEET R9A
P202F TEMPORARY EASEMENT FOR CONSTRUCTION
P202 TRACT E TEMPORARY EASEMENT FOR ENTRANCE CONSTRUCTION
P202 THOMAS NEIL KIDD
P204 RICHARD MOORE MADELINE * (WF)
P204 TRACT A
P202 TRACT B
P202 TRACT A
P202 TRACT D
P203 TRACT A
P203 PALMER HAMILTON JOYCE * (WF)
P212 CHESAPEAKE APPALACHIAN, LLC WELL 23465
P212 CHESAPEAKE APPALACHIAN, LLC GAS WELL ONLY
TEMPORARY EASEMENT FOR ENTRANCE CONSTRUCTION
PROPOSED R/W
EXISTING R/W
290+00
295+00
50+00
52+00
54+00
55+00
56+00
57+00
58+00
B. CH. CH.
4' F.B. OUTLET DT.
20' ROCK BERM
2' F.B. SURF. DT.
30" PIPE
IE 1012.8
OE 1000.0
OE 955.9
8" NON-PERF. PIPE
8" PERF. PIPE
2" STEEL GASLINE
GAS LINE MARKER
METER BOX
BLOWOFF
VENT
DBI TYPE 2
T/G 978.5
IE 974.7
FRASURE BR. RD.
F. BARN
STA. 290+40 END TURN LANE WIDENING TAPER LT.
STA. 297+00 END TURN LANE LT.
S 73°18'03" E
PC 57+11.52
PI 57+89.30
PI 0+45.44
PC 50+33.20
PI STA 279+43.58
Δ= 74°20'18" RT
C= 1398.56'
Ts= 1091.70'
Ls= 210.00'
Lc= 1476.68'
θs= 4°37'40"
LT= 140.05'
ST= 70.04'
R= 1300.00'
E= 242.11'
e= 7.8%
Runoff= 210.00'
Runout= 54.00'
PI STA 307+39.62
Δ= 69°16'20" LT
C= 1300.33'
Ts= 1003.97'
Ls= 210.00'
Lc= 1361.74'
θs= 4°37'40"
LT= 140.05'
ST= 70.04'
R= 1300.00'
E= 281.73'
e= 7.8%
Runoff= 210.00'
Runout= 54.00'
TS 297+35.65
SC 299+45.65
ST 287+48.56
CS 285+38.56
(A) S 27°26'46" E 19.43'
(B) S 39°35'33" E 24.96'
SEE SHEET R9C FOR COMPLETE ENTRANCE
0' 50' 100' 200'

SCALE: 1"= 50'

MAINLINE STA. 285+00 - STA. 300+00

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R11

STEEL "W" BEAM GUARDRAIL CONSTRUCTION

LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	END TREATMENT TY 2A (Ea.)	END TREATMENT TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
RT.	300+00 TO 313+00	1337.5'			2		

DITCH CONSTRUCTION

LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		305+90 TO 309+00	CLASS IV	200 C.Y.	1.0'	2.0'	2' FB
X		307+00 PIPE INLET	CLASS IV	29 C.Y.	1.5'	2.0'	2' FB
X		309+00 TO 311+00	E.C. BLNK.	179 S.Y.	1.0'	-	2' FB
X		311+00 PIPE INLET	CLASS IV	57 C.Y.	1.5'	3.0'	3' FB
X		311+00 TO 311+41	CLASS IV	33 C.Y.	1.0'	2.0'	2' FB
	X	302+39 PIPE OUTLET	CLASS IV	297 C.Y.	1.0'	2.0'	2' FB
	X	307+00 PIPE OUTLET	CLASS IV	287 C.Y.	1.0'	2.0'	2' FB
	X	311+00 PIPE OUTLET	CLASS IV	595 C.Y.	1.0'	2.0'	4' FB

d50 = 1.0' (UNLESS OTHERWISE NOTED)

SCALE: 1"= 50'

MAINLINE STA. 300+00 - STA. 315+00

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R11

REVISED 5-16-2021

STEEL "W" BEAM GUARDRAIL CONSTRUCTION							
LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	END TREATMENT TY 2A (Ea.)	END TREATMENT TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
RT.	300+00 TO 313+00	1337.5'			2		

DITCH CONSTRUCTION							
LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		305+90 TO 309+00	CLASS IV	200 C.Y.	1.0'	2.0'	2' FB
X		307+00 PIPE INLET	CLASS IV	29 C.Y.	1.5'	2.0'	2' FB
X		309+00 TO 311+00	E.C. BLNK.	179 S.Y.	1.0'	-	2' FB
X		311+00 PIPE INLET	CLASS IV	57 C.Y.	1.5'	3.0'	3' FB
X		311+00 TO 311+41	CLASS IV	33 C.Y.	1.0'	2.0'	2' FB
	X	302+39 PIPE OUTLET	CLASS IV	297 C.Y.	1.0'	2.0'	2' FB
	X	307+00 PIPE OUTLET	CLASS IV	287 C.Y.	1.0'	2.0'	2' FB
	X	311+00 PIPE OUTLET	CLASS IV	595 C.Y.	1.0'	2.0'	4' FB

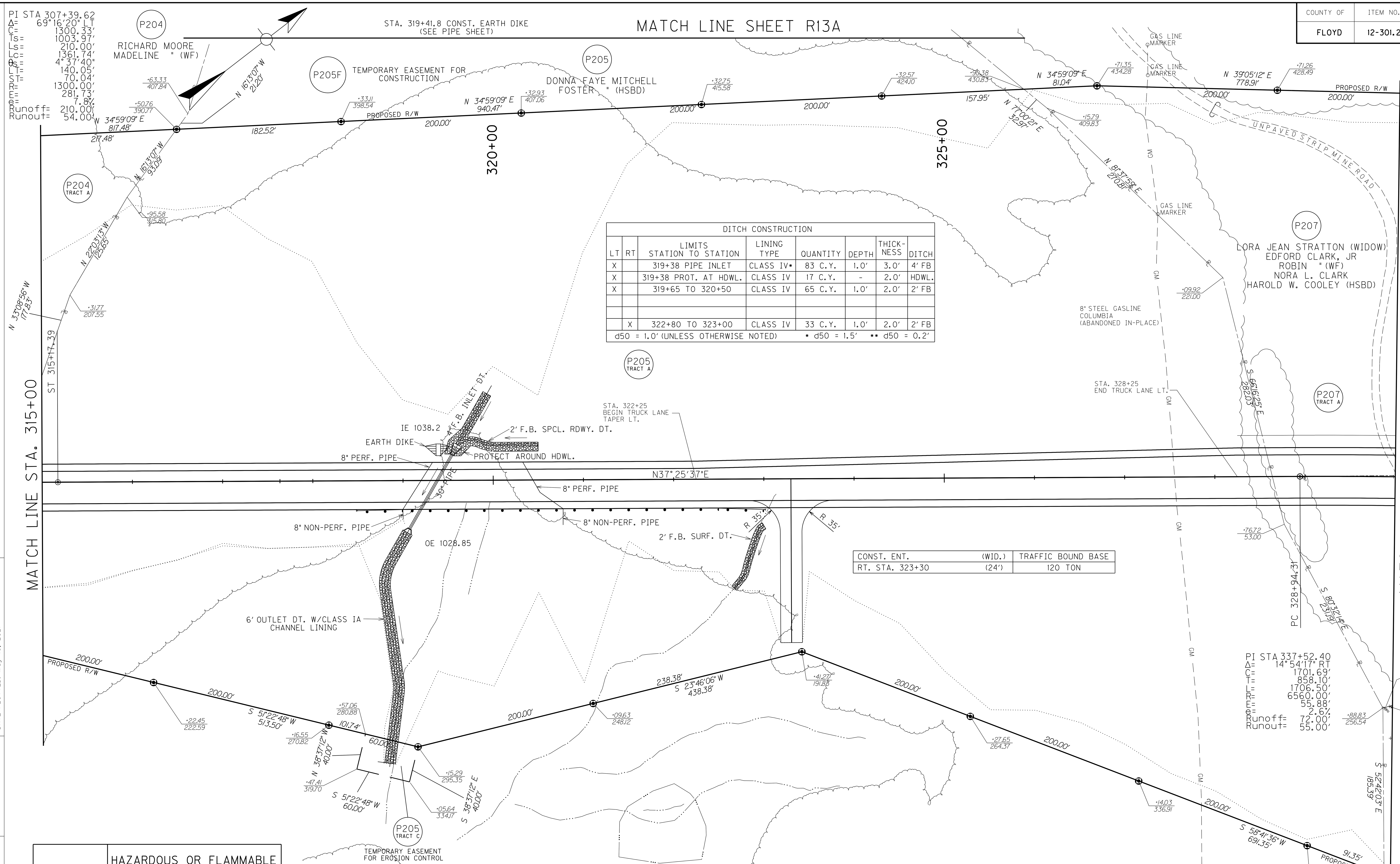
d50 = 1.0' (UNLESS OTHERWISE NOTED)

MATCH SHEET R11A

SCALE: 1"= 50'

MAINLINE STA. 300+00 - STA. 315+00

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R13



DITCH CONSTRUCTION							
LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		319+38 PIPE INLET	CLASS IV*	83 C.Y.	1.0'	3.0'	4' FB
X		319+38 PROT. AT HDWL.	CLASS IV	17 C.Y.	-	2.0'	HDWL.
X		319+65 TO 320+50	CLASS IV	65 C.Y.	1.0'	2.0'	2' FB
	X	322+80 TO 323+00	CLASS IV	33 C.Y.	1.0'	2.0'	2' FB
d50 = 1.0' (UNLESS OTHERWISE NOTED)				* d50 = 1.5'		** d50 = 0.2'	

CONST. ENT.	(WID.)	TRAFFIC BOUND BASE
RT. STA. 323+30	(24')	120 TON

STEEL "W" BEAM GUARDRAIL CONSTRUCTION							
LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	TY 2A (Ea.)	TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
RT.	319+00 TO 322+50	350.0'		2			
LT.	328+00 (BARRIER)	12.5'	2				

CAUTION	HAZARDOUS OR FLAMMABLE MATERIALS - GAS LINES

MAINLINE STA. 315+00 - STA. 330+00

FILE NAME: X:\HIGHWAYS\PROJECTS\12301_2E\2013\R02900PL.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R13

REVISED 5-16-2021

MATCH LINE SHEET R13A

STA. 319+41.8 CONST. EARTH DIKE (SEE PIPE SHEET)

PI STA 307+39.62
Δ= 69°16'20" LT
C= 1300.33'
Ts= 1003.97'
Ls= 210.00'
Lc= 1361.74'
θs= 4°37'40"
LT= 140.05'
ST= 70.04'
R= 1300.00'
E= 281.73'
e= 7.8%
Runoff= 210.00'
Runout= 54.00'

P204 RICHARD MOORE MADELINE " (WF)

P205F TEMPORARY EASEMENT FOR CONSTRUCTION

P205 DONNA FAYE MITCHELL FOSTER " (HSBD)

P204 TRACT A

P205 TRACT A

P205 TRACT C TEMPORARY EASEMENT FOR EROSION CONTROL

P207 LORA JEAN STRATTON (WIDOW)
EDFORD CLARK, JR
ROBIN " (WF)
NORA L. CLARK
HAROLD W. COOLEY (HSBD)

P207 TRACT A

PROPOSED R/W

UNPAVED STRIP MINE ROAD

GAS LINE MARKER

8" STEEL GASLINE COLUMBIA (ABANDONED IN-PLACE)

320+00

325+00

MATCH LINE STA. 315+00

MATCH LINE STA. 330+00

ST 315+17.39

DITCH CONSTRUCTION							
LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		319+38 PIPE INLET	CLASS IV•	83 C.Y.	1.0'	3.0'	4' FB
X		319+38 PROT. AT HDWL.	CLASS IV	17 C.Y.	-	2.0'	HDWL.
X		319+65 TO 320+50	CLASS IV	65 C.Y.	1.0'	2.0'	2' FB
	X	322+80 TO 323+00	CLASS IV	33 C.Y.	1.0'	2.0'	2' FB

d50 = 1.0' (UNLESS OTHERWISE NOTED) • d50 = 1.5' •• d50 = 0.2'

STA. 322+25 BEGIN TRUCK LANE TAPER LT.

STA. 328+25 END TRUCK LANE LT.

IE 1038.2

4' F.B. INLET DT.

2' F.B. SPCL. RDWY. DT.

EARTH DIKE

8" PERF. PIPE

PROTECT AROUND HDWL.

36" PIPE

8" NON-PERF. PIPE

OE 1028.85

2' F.B. SURF. DT.

6' OUTLET DT. W/CLASS IA CHANNEL LINING

CONST. ENT.	(WID.)	TRAFFIC BOUND BASE
RT. STA. 323+30	(24')	120 TON

PC 328+94.31

PI STA 337+52.40
Δ= 14°54'17" RT
C= 1701.69'
T= 858.10'
L= 1706.50'
R= 6560.00'
E= 55.88'
e= 2.6%
Runoff= 72.00'
Runout= 55.00'

STEEL "W" BEAM GUARDRAIL CONSTRUCTION							
LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	TY 2A (Ea.)	TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
RT.	319+00 TO 322+50	350.0'		2			
LT.	328+00 (BARRIER)	12.5'	2				

CAUTION	HAZARDOUS OR FLAMMABLE MATERIALS - GAS LINES

0' 50' 100' 200'

SCALE: 1"= 50'

MAINLINE STA. 315+00 - STA. 330+00

FILE NAME: X:\HIGHWAYS\PROJECTS\12301.2E\2013\R02900PL.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R15

STEEL "W" BEAM GUARDRAIL CONSTRUCTION

LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	END TREATMENT TY 2A (Ea.)	END TREATMENT TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
RT.	332+25 (BARRIER)	12.5'	2				
RT.	336+50 - 345+00	850.0'		1			
LT.	344+50 - 345+00	50.0'		1			

CONST. ENT.	(WID.)	TRAFFIC BOUND BASE	E. PIPE	PIPE CULVERT HDWL
LT. STA. 337+00	(30')	480 TON	102' - 36"	2 - 36"

SCALE: 1"= 50'

MAINLINE STA. 330+00 - STA. 345+00

FILE NAME: X:\HIGHWAYS\PROJECTS\12301.2E\2013\R03100PL.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R15

REVISED 5-16-2021

MAINLINE STA. 330+00 - STA. 345+00

SCALE: 1"= 50'

STEEL "W" BEAM GUARDRAIL CONSTRUCTION

LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	END TREATMENT TY 2A (Ea.)	END TREATMENT TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
RT.	332+25 (BARRIER)	12.5'	2				
RT.	336+50 - 345+00	850.0'		1			
LT.	344+50 - 345+00	50.0'		1			

CONST. ENT.	(WID.)	TRAFFIC BOUND BASE	E. PIPE	PIPE CULVERT HDWL
LT. STA. 337+00	(30')	480 TON	102' - 36"	2 - 36"

P207
LORA JEAN STRATTON(WIDOW)
EDFORD CLARK, JR
ROBIN " (WF)
NORA L. CLARK
HAROLD W. COOLEY (HSBD)

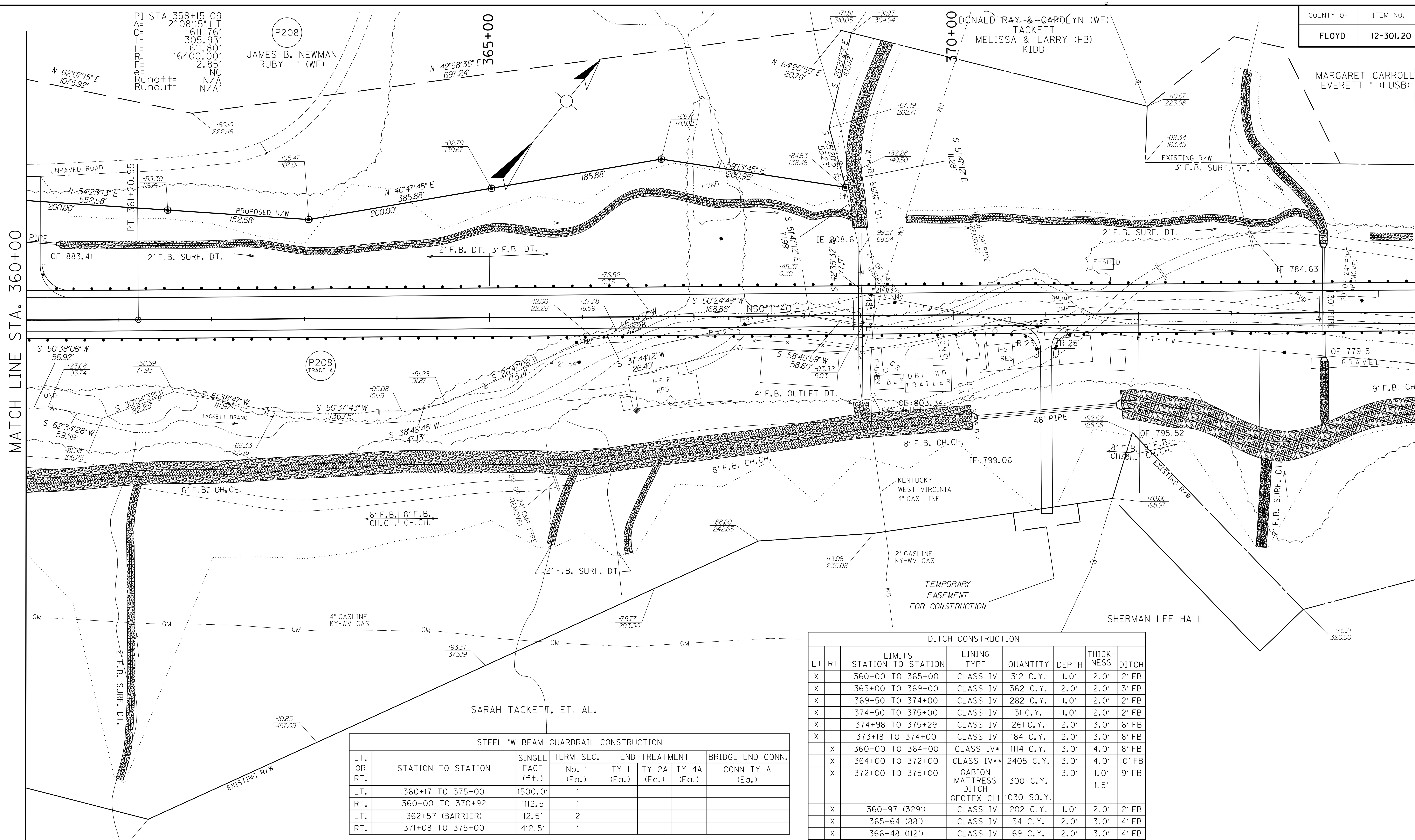
P208
JAMES B. NEWMAN
RUBY " (WF)

P206
MARIE BRANHAM TACKETT (WIDOW)

PI STA 337+52.40
Δ= 14°54'17" RT
C= 1701.69'
T= 858.10'
L= 1706.50'
R= 6560.00'
E= 55.88'
e= 2.6%
Runoff= 72.00'
Runout= 55.00'

SEE SHEET R15A FOR DITCH CONSTRUCTION NOTES

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R19



CONST. ENT.	(WID.)	TRAFFIC BOUND BASE	C.S.B	ASPH. BASE	ASPH. SURF.	E. PIPE	PIPE CULVERT HDWL
LT. STA. 360+00	(30')	118 TON				65' - 18"	2 - 18"
RT. STA. 371+00	(12')		146 TON	50 TON	21 TON	182' - 48"	2 - 48"

STEEL "W" BEAM GUARDRAIL CONSTRUCTION

LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Eq.)	END TREATMENT TY 1 (Eq.)	END TREATMENT TY 2A (Eq.)	END TREATMENT TY 4A (Eq.)	BRIDGE END CONN. CONN TY A (Eq.)
LT.	360+17 TO 375+00	1500.0'	1				
RT.	360+00 TO 370+92	1112.5	1				
LT.	362+57 (BARRIER)	12.5'	2				
RT.	371+08 TO 375+00	412.5'	1				

DITCH CONSTRUCTION

LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		360+00 TO 365+00	CLASS IV	312 C.Y.	1.0'	2.0'	2' FB
X		365+00 TO 369+00	CLASS IV	362 C.Y.	2.0'	2.0'	3' FB
X		369+50 TO 374+00	CLASS IV	282 C.Y.	1.0'	2.0'	2' FB
X		374+50 TO 375+00	CLASS IV	31 C.Y.	1.0'	2.0'	2' FB
X		374+98 TO 375+29	CLASS IV	261 C.Y.	2.0'	3.0'	6' FB
X		373+18 TO 374+00	CLASS IV	184 C.Y.	2.0'	3.0'	8' FB
	X	360+00 TO 364+00	CLASS IV•	1114 C.Y.	3.0'	4.0'	8' FB
	X	364+00 TO 372+00	CLASS IV••	2405 C.Y.	3.0'	4.0'	10' FB
	X	372+00 TO 375+00	GABION MATTRESS DITCH GEOTEX CL1	300 C.Y. 1030 SQ.Y.	3.0'	1.0' 1.5' -	9' FB
	X	360+97 (329')	CLASS IV	202 C.Y.	1.0'	2.0'	2' FB
	X	365+64 (88')	CLASS IV	54 C.Y.	2.0'	3.0'	4' FB
	X	366+48 (112')	CLASS IV	69 C.Y.	2.0'	3.0'	4' FB
	X	373+30 (107')	CLASS IV	66 C.Y.	2.0'	3.0'	2' FB

d50 = 1.0' (UNLESS OTHERWISE NOTED) • d50 = 1.5' •• d50 = 2.0'

CAUTION — HAZARDOUS OR FLAMMABLE MATERIALS - GAS LINES

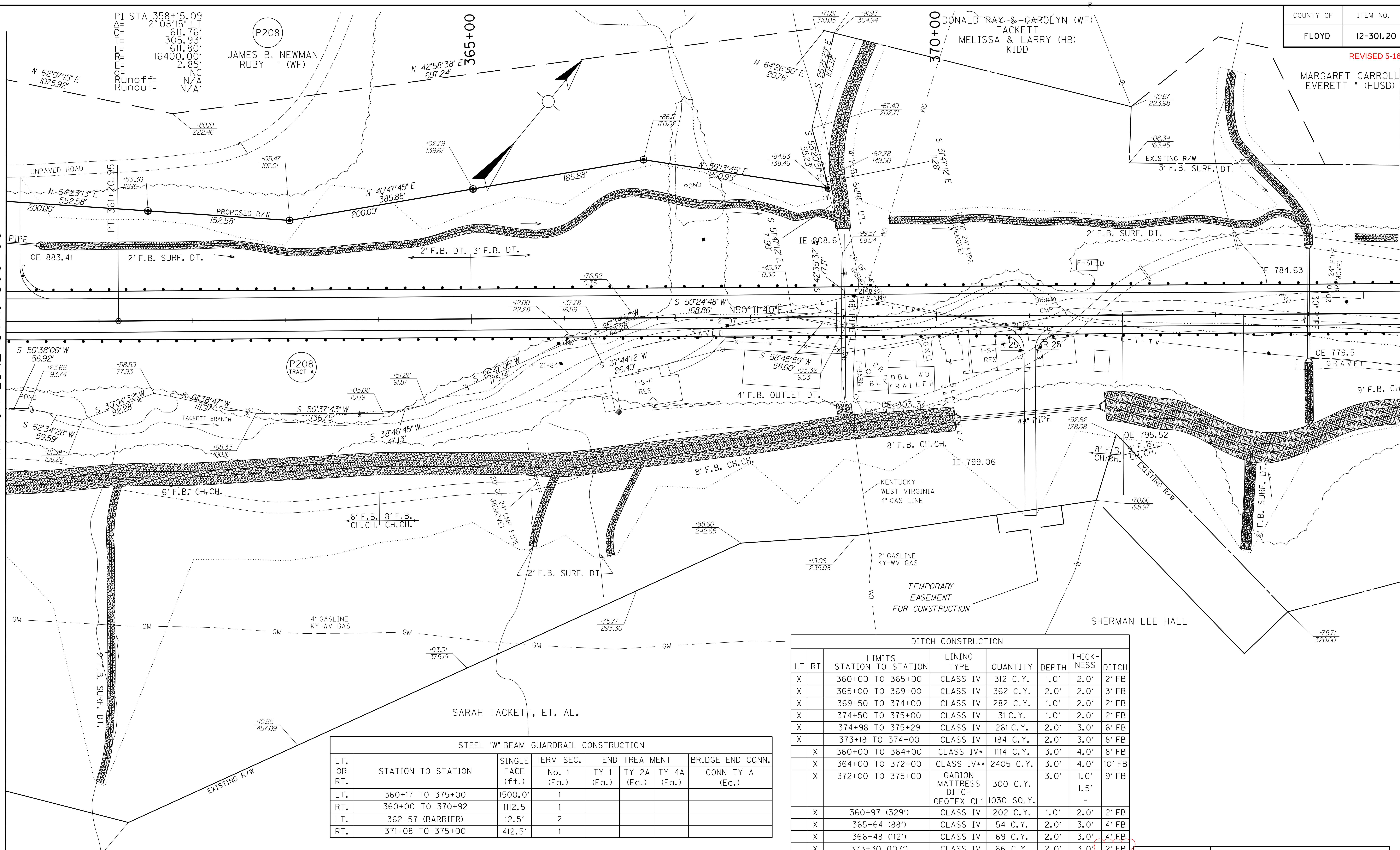
0' 50' 100' 200'

SCALE: 1"= 50'

MAINLINE STA. 360+00 - STA. 375+00

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R19

REVISED 5-16-2021



LT. OR RT.	STATION TO STATION	SINGLE FACE (ft.)	TERM SEC. No. 1 (Ea.)	END TREATMENT TY 1 (Ea.)	TY 2A (Ea.)	TY 4A (Ea.)	BRIDGE END CONN. CONN TY A (Ea.)
LT.	360+17 TO 375+00	1500.0'	1				
RT.	360+00 TO 370+92	1112.5	1				
LT.	362+57 (BARRIER)	12.5'	2				
RT.	371+08 TO 375+00	412.5'	1				

STEEL "W" BEAM GUARDRAIL CONSTRUCTION

CONST. ENT.	(WID.)	TRAFFIC BOUND BASE	C.S.B	ASPH. BASE	ASPH. SURF.	E. PIPE	PIPE CULVERT HDWL
LT. STA. 360+00	(30')	118 TON				65' - 18"	2 - 18"
RT. STA. 371+00	(12')		146 TON	50 TON	21 TON	182' - 48"	2 - 48"

DITCH CONSTRUCTION

LT	RT	LIMITS STATION TO STATION	LINING TYPE	QUANTITY	DEPTH	THICK-NESS	DITCH
X		360+00 TO 365+00	CLASS IV	312 C.Y.	1.0'	2.0'	2' FB
X		365+00 TO 369+00	CLASS IV	362 C.Y.	2.0'	2.0'	3' FB
X		369+50 TO 374+00	CLASS IV	282 C.Y.	1.0'	2.0'	2' FB
X		374+50 TO 375+00	CLASS IV	31 C.Y.	1.0'	2.0'	2' FB
X		374+98 TO 375+29	CLASS IV	261 C.Y.	2.0'	3.0'	6' FB
X		373+18 TO 374+00	CLASS IV	184 C.Y.	2.0'	3.0'	8' FB
	X	360+00 TO 364+00	CLASS IV*	1114 C.Y.	3.0'	4.0'	8' FB
	X	364+00 TO 372+00	CLASS IV**	2405 C.Y.	3.0'	4.0'	10' FB
	X	372+00 TO 375+00	GABION MATTRESS DITCH GEOTEX CL1	300 C.Y. 1030 SQ.Y.	3.0'	1.0' 1.5' -	9' FB
	X	360+97 (329')	CLASS IV	202 C.Y.	1.0'	2.0'	2' FB
	X	365+64 (88')	CLASS IV	54 C.Y.	2.0'	3.0'	4' FB
	X	366+48 (112')	CLASS IV	69 C.Y.	2.0'	3.0'	4' FB
	X	373+30 (107')	CLASS IV	66 C.Y.	2.0'	3.0'	2' FB

d50 = 1.0' (UNLESS OTHERWISE NOTED) • d50 = 1.5' •• d50 = 2.0'

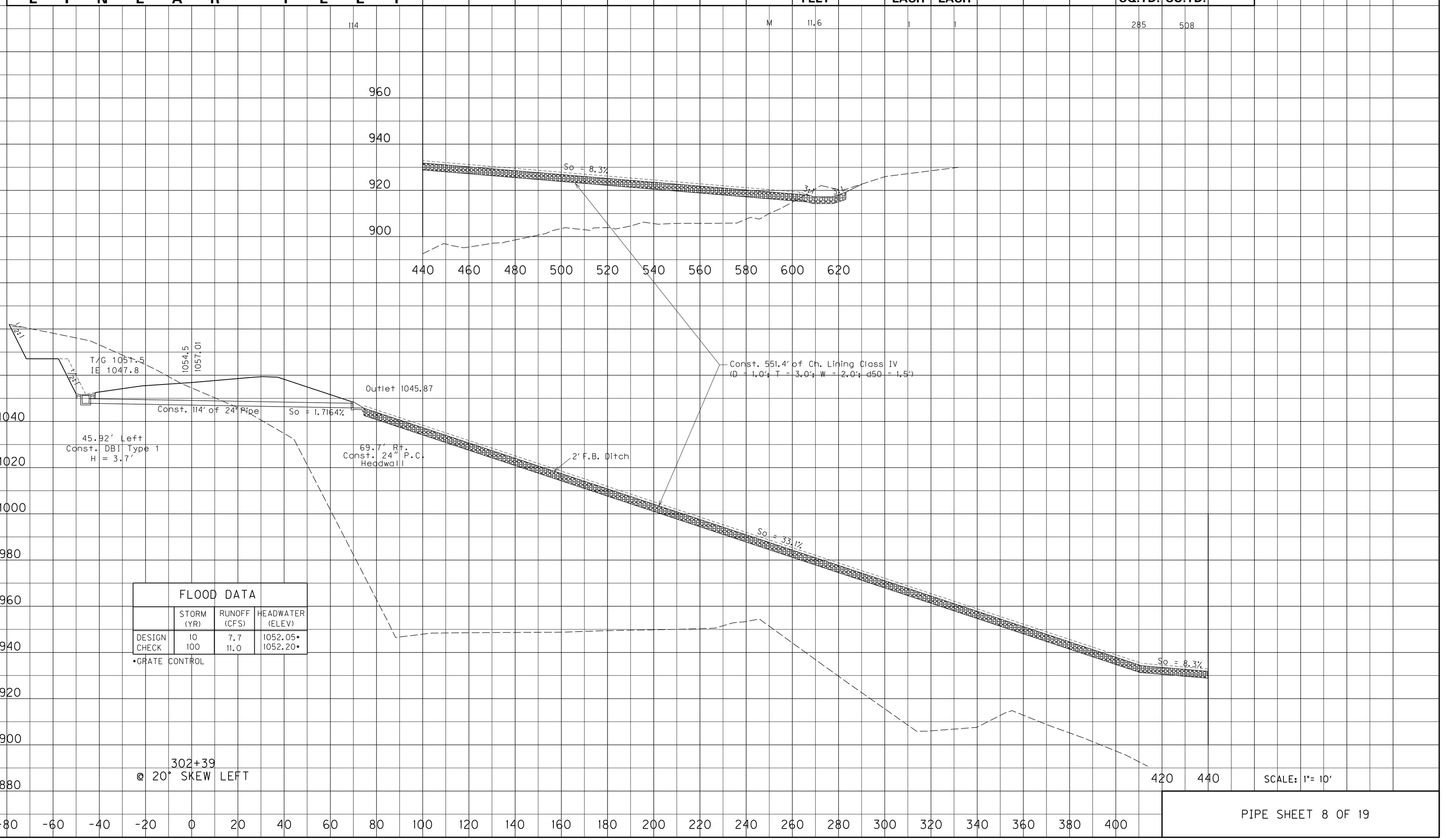
CAUTION	HAZARDOUS OR FLAMMABLE MATERIALS - GAS LINES

MAINLINE STA. 360+00 - STA. 375+00

PIPE DRAINAGE SHEET 8 of 19

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R70

CULVERT PIPE	DESIGN pH LEVEL	MAX COVER HEIGHT	DROP BOX INLET TYPE 1	P. C. HEADWALL 24 IN	FABRIC–GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV
24"						
LINEAR FEET		FEET	EACH	EACH	SQ.YD.	CU.YD.
114	M	11.6	1	1	285	508



FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	10	7.7	1052.05•
CHECK	100	11.0	1052.20•

•GRATE CONTROL

302+39
@ 20° SKEW LEFT

SCALE: 1"= 10'

PIPE SHEET 8 OF 19

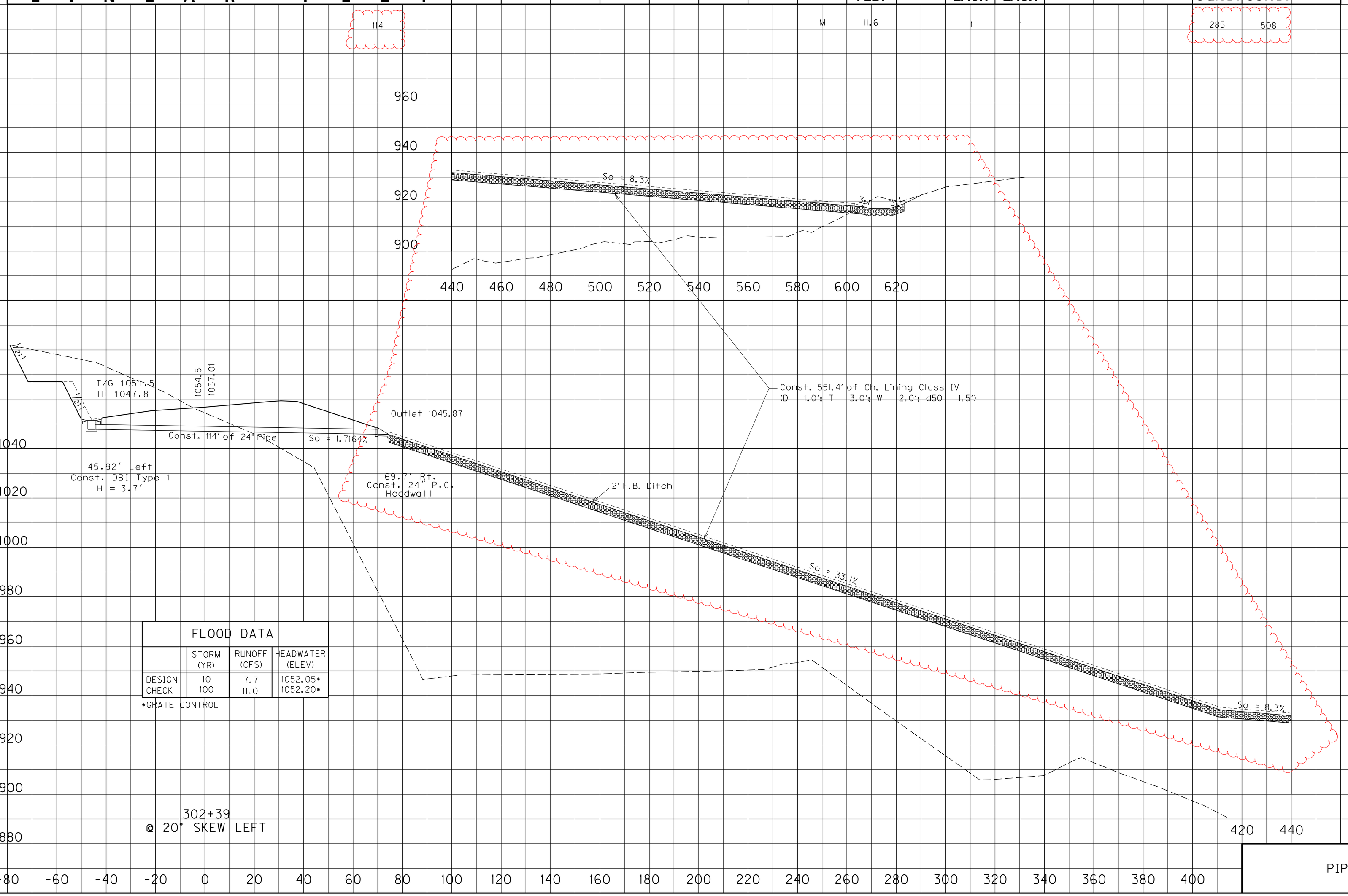
FILE NAME: X:\HIGHWAYS\PROJECTS\12301.2E\2013\12-301.20 2015\PIPESHEET 3-19-19.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

PIPE DRAINAGE SHEET 8 of 19

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R70

REVISED 5-16-2021

CULVERT PIPE	DESIGN pH LEVEL	MAX COVER HEIGHT	DROP BOX INLET TYPE 1	P. C. HEADWALL 24 IN	FABRIC–GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV
24"						
LINEAR FEET		FEET	EACH	EACH	SQ.YD.	CU.YD.
114	M	11.6	1	1	285	508



FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	10	7.7	1052.05•
CHECK	100	11.0	1052.20•

•GRATE CONTROL

SCALE: 1"= 10'

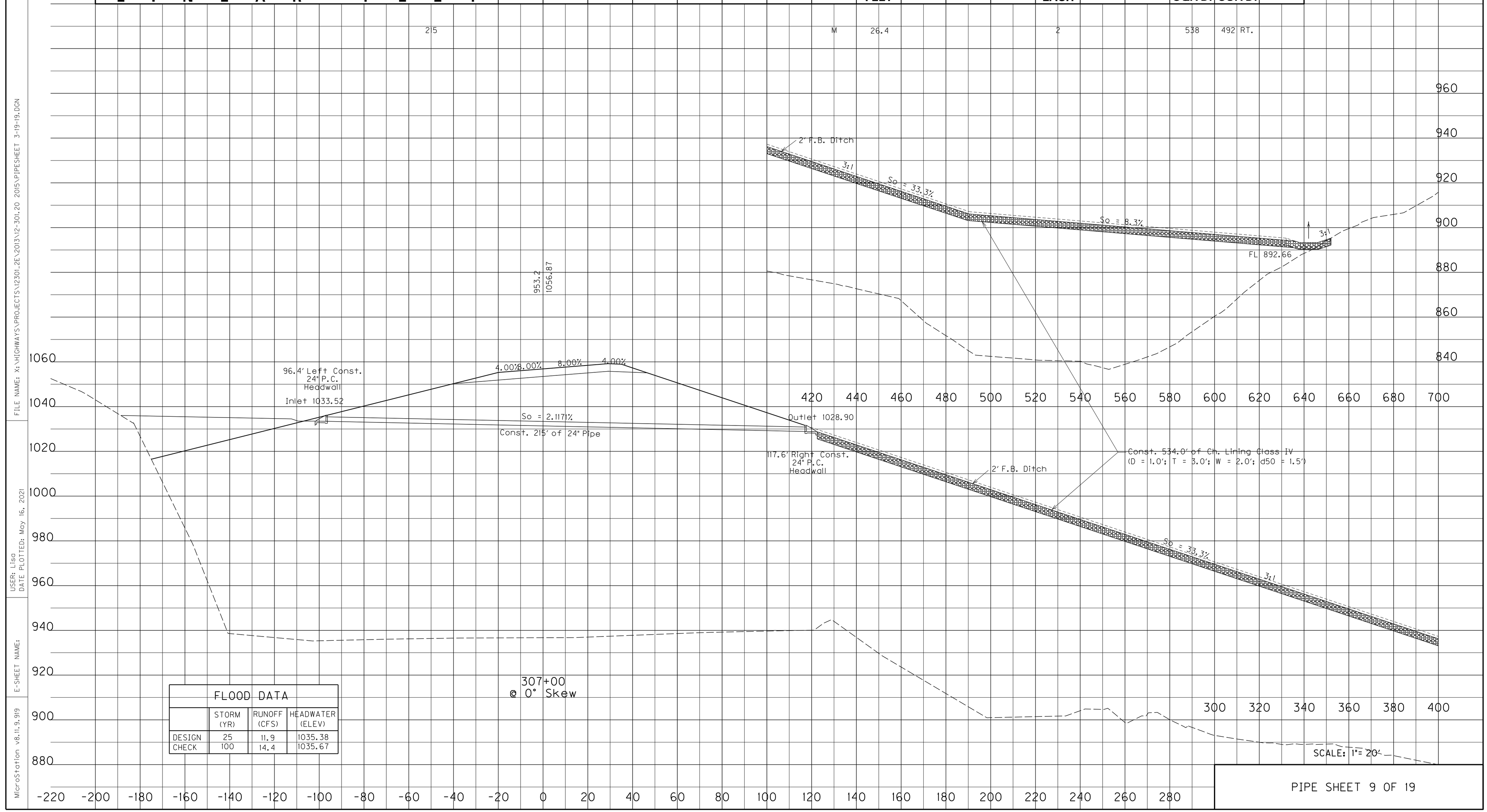
PIPE SHEET 8 OF 19

FILE NAME: X:\HIGHWAYS\PROJECTS\12301.2E\2013\12-301.20 2015\PIPESHEET 3-19-19.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

PIPE DRAINAGE SHEET 9 of 19

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R71

CULVERT PIPE	DESIGN pH LEVEL	MAX COVER HEIGHT	P. C. HEADWALL 24 IN	FABRIC–GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV
LINEAR FEET 24"		FEET	EACH	SQ.YD.	CU.YD.
215	M	26.4	2	538	492 RT.



FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	11.9	1035.38
CHECK	100	14.4	1035.67

SCALE: 1" = 20'

PIPE SHEET 9 OF 19

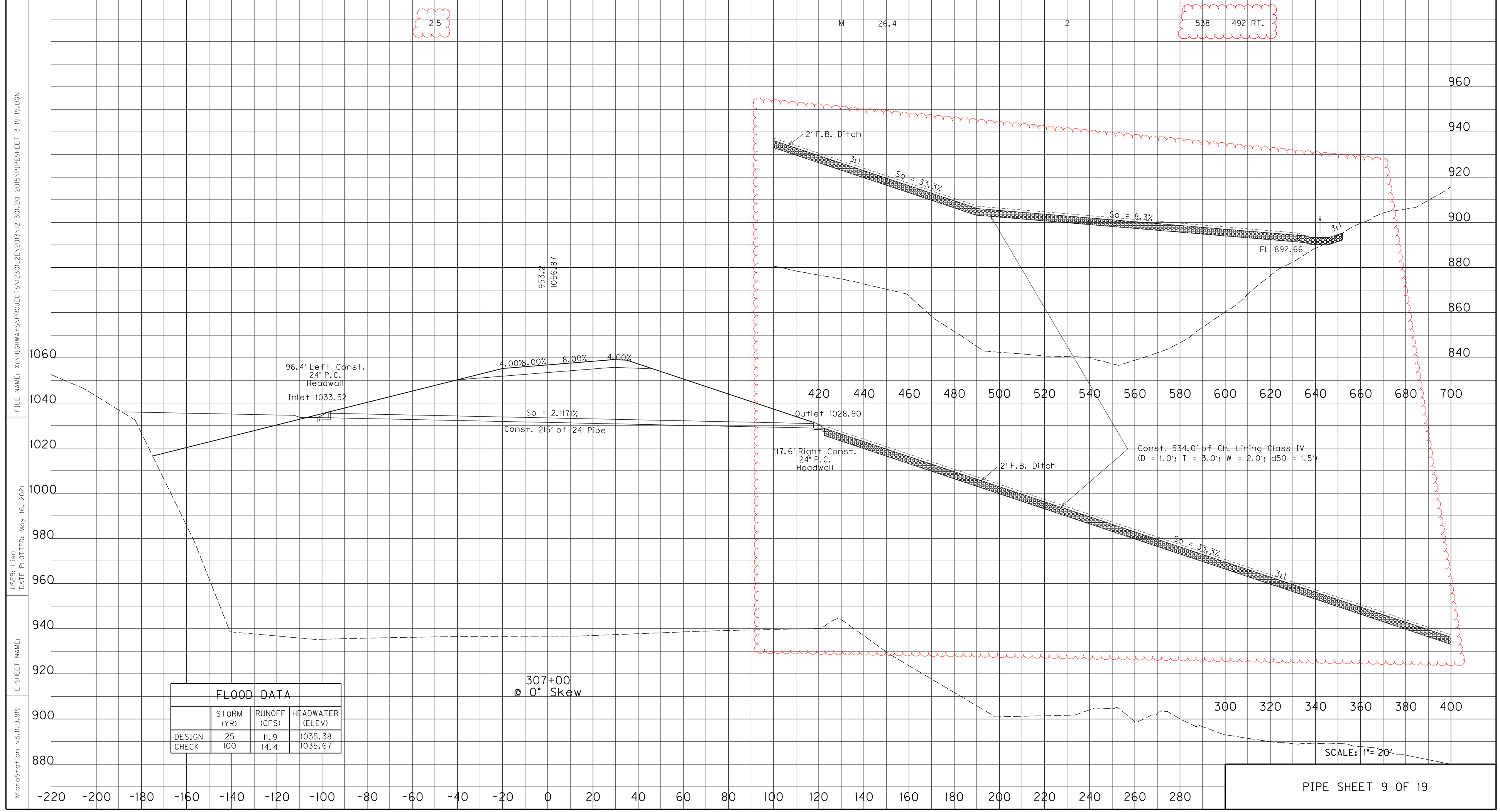
FILE NAME: X:\HIGHWAYS\PROJECTS\2301.2E\2013\12-301.20 2015\PIPESHEET 3-19-19.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

PIPE DRAINAGE SHEET 9 of 19

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R71

REVISED 5-16-2021

CULVERT PIPE	DESIGN pH LEVEL	MAX COVER HEIGHT	P. C. HEADWALL 24 IN	FABRIC–GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV
24"					
LINEAR FEET		FEET	EACH	SQ.YD.	CU.YD.
215	M	26.4	2	538	492 RT.



FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	11.9	1035.38
CHECK	100	14.4	1035.67

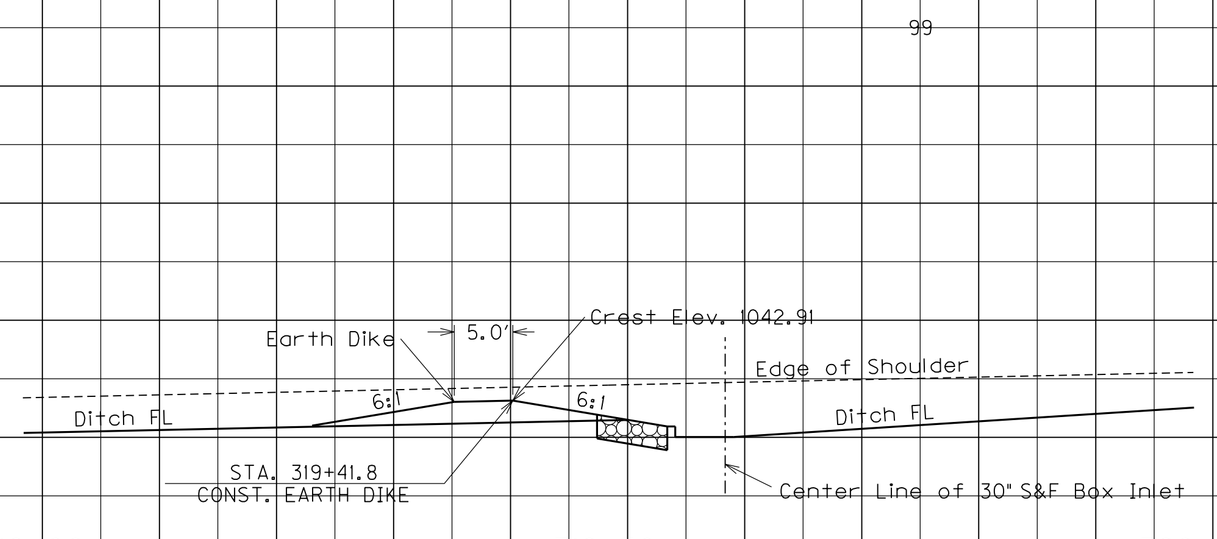
PIPE SHEET 9 OF 19

FILE NAME: X:\HIGHWAYS\PROJECTS\12301.2E\2013\12-301.20 2015\PIPESHEET 3-19-19.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

PIPE DRAINAGE SHEET 11 of 19

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R73

CULVERT PIPE	DESIGN pH LEVEL	MAX COVER HEIGHT		30" S & F BOX IN-OUT	P. C. HEADWALL 30 IN			CHANNEL LINING CLASS IA	FABRIC-GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV	DITCH EXC.
30"											
L I N E A R F E E T		FEET		EACH	EACH			TON	SQ.YD.	CU.YD.	CU.YD.
99	M	9.2		1	1			93	270		204 Rt. 28 Lt.
										83 (Lt.) (d50=1.5')	
										17 (Lt.) d50 = 1.0') Hdwl. Protection	



SECTION A-A
EARTH DIKE

319+38
@ 30° SKEW RIGHT

FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	24.1	1042.31
CHECK	100	29.5	1042.79

SCALE: 1"= 10'

PIPE SHEET 11 OF 19

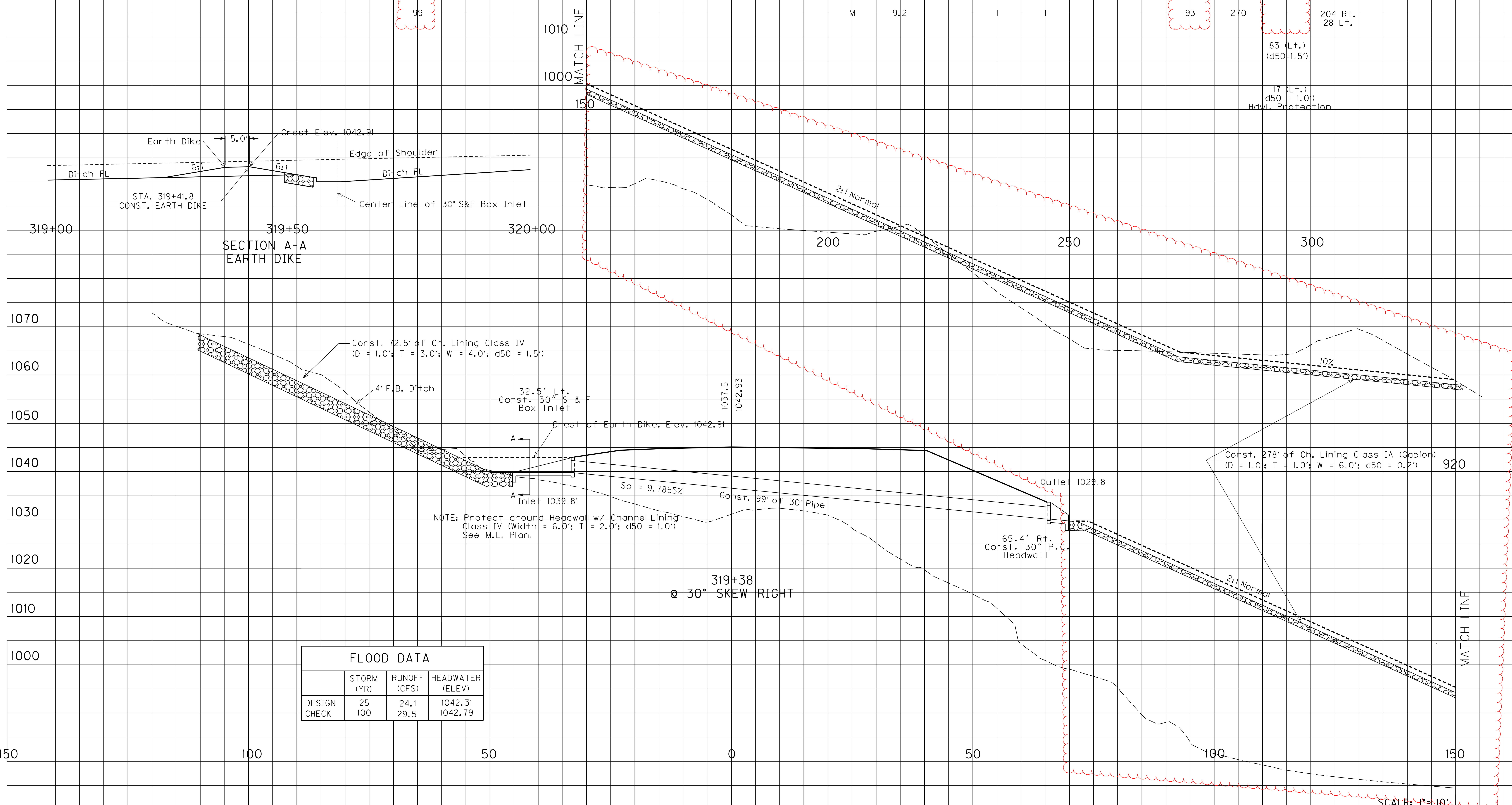
FILE NAME: X:\HIGHWAYS\PROJECTS\2301.2E\2013\12-301.20 2015\PIPESHEET 3-19-19.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R73

REVISED 5-16-2021

PIPE DRAINAGE SHEET 11 of 19

CULVERT PIPE 30" (LINEAR FEET)	DESIGN pH LEVEL	MAX COVER HEIGHT (FEET)	30" S & F BOX IN-OUT (EACH)	P. C. HEADWALL 30 IN (EACH)	CHANNEL LINING CLASS IA (TON)	FABRIC-GEOTEXTILE TYPE IV FOR PIPE (SQ.YD.)	CHANNEL LINING CLASS IV (CU.YD.)	DITCH EXC. (CU.YD.)
99	M	9.2	1	1	93	270	83 (Lt.) (d50=1.5') 17 (Lt.) d50 = 1.0') Hdwl. Protection	204 Rt. 28 Lt.



FLOOD DATA

	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	24.1	1042.31
CHECK	100	29.5	1042.79

SCALE: 1"= 10'

FILE NAME: X:\HIGHWAYS\PROJECTS\12301_2E\2013\12-301.20 2015\PIPESHEET 3-19-19.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

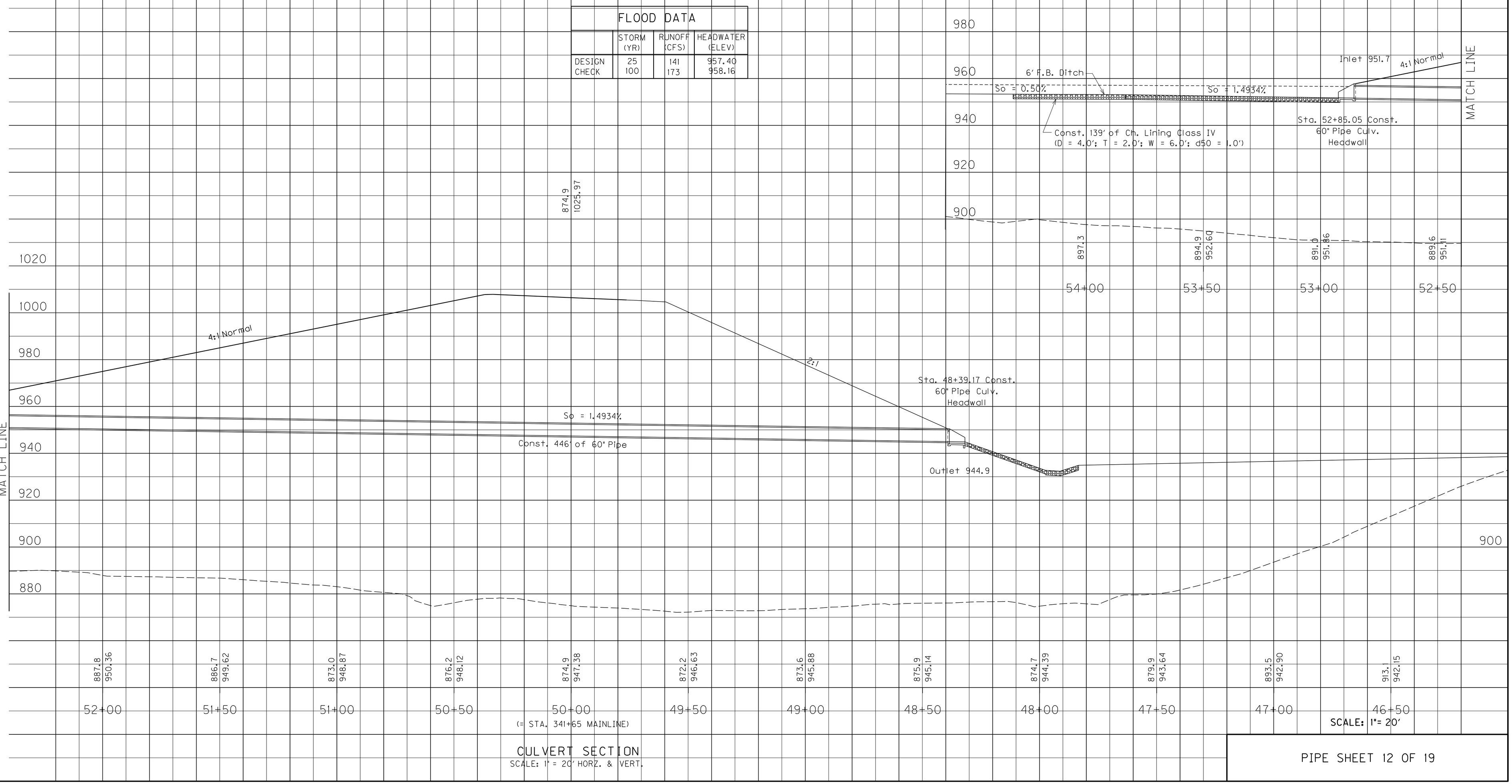
PIPE DRAINAGE SHEET 12 of 19

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R74

STORM SEWER PIPE	DESIGN pH LEVEL	MAX COVER HEIGHT	P. C. HEADWALL 60 IN	FABRIC–GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV
60"					
LINEAR FEET		FEET	EACH	SQ.YD.	CU.YD.
446	M	54.4	2	2353	322

CULVERT SITUATION
STA. 341+65 MAINLINE
446' OF 60" PIPE
@ 30° SKEW LEFT

FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	141	957.40
CHECK	100	173	958.16



CULVERT SECTION
SCALE: 1" = 20' HORZ. & VERT.

SCALE: 1"= 20'

PIPE SHEET 12 OF 19

PIPE DRAINAGE SHEET 12 of 19

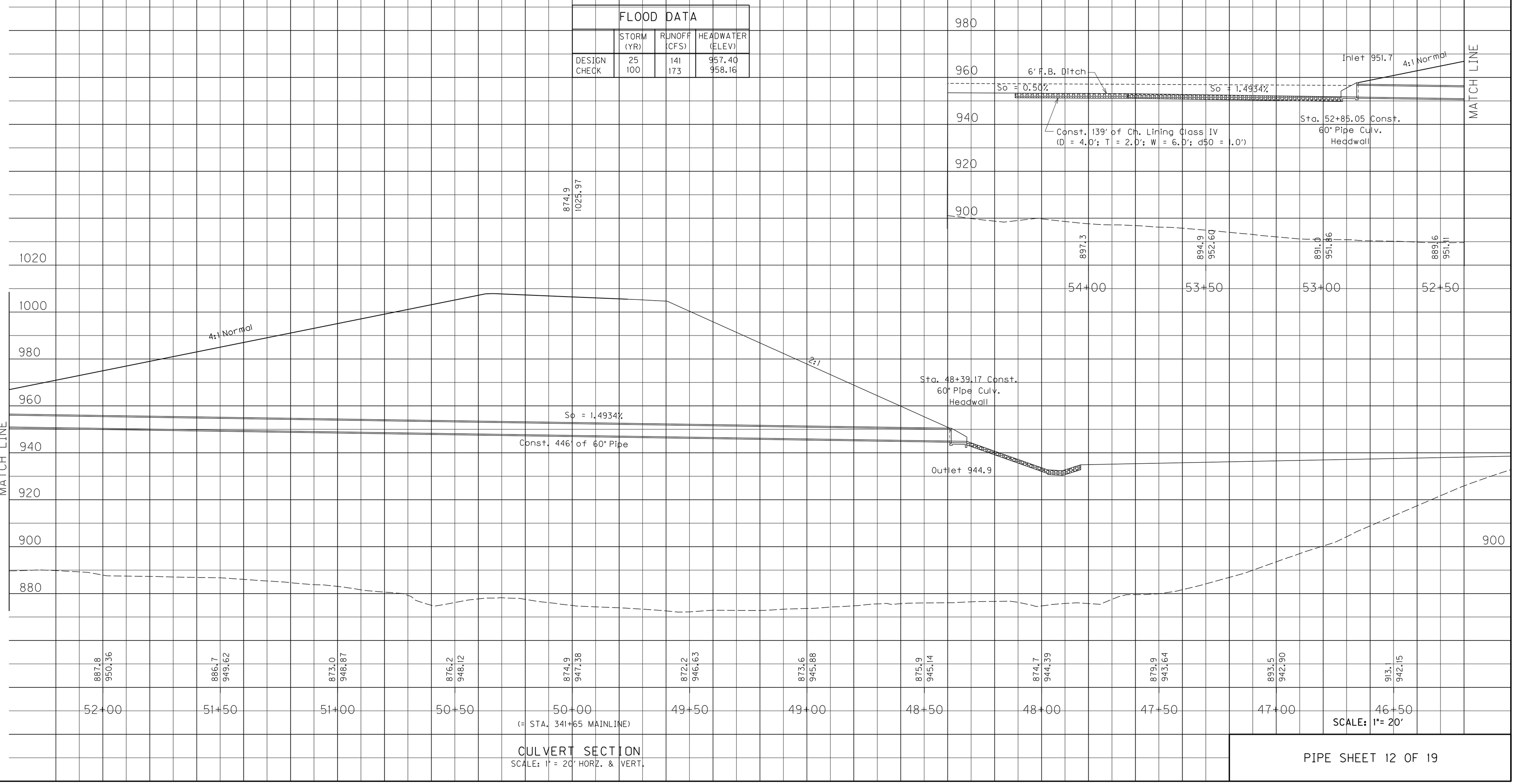
COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R74

REVISED 5-16-2021

STORM SEWER PIPE	DESIGN pH LEVEL	MAX COVER HEIGHT	P. C. HEADWALL 60 IN	FABRIC–GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV
LINEAR FEET 60"		FEET	EACH	SQ.YD.	CU.YD.
446	M	54.4	2	2353	322

CULVERT SITUATION
STA. 341+65 MAINLINE
446' OF 60" PIPE
@ 30° SKEW LEFT

FLOOD DATA	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	141	957.40
CHECK	100	173	958.16



CULVERT SECTION
SCALE: 1" = 20' HORZ. & VERT.

SCALE: 1"= 20'

PIPE SHEET 12 OF 19

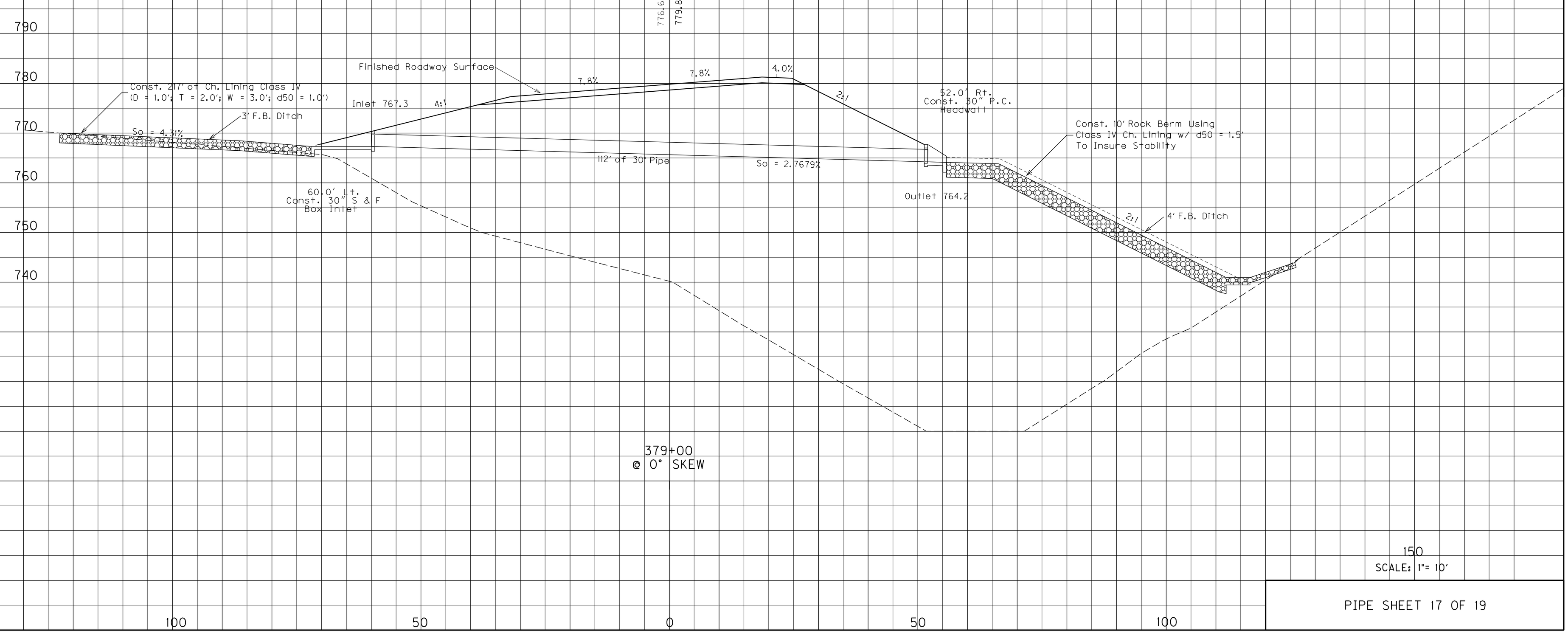
PIPE DRAINAGE SHEET 17 of 19

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R79

CULVERT PIPE

LINEAR FEET 30"	DESIGN pH LEVEL	MAX COVER HEIGHT FEET	30" S & F BOX IN – OUT EACH	P. C. HEADWALL 30 IN EACH	FABRIC–GEOTEXTILE TYPE IV FOR PIPE SQ.YD.	CHANNEL LINING CLASS IV CU.YD.
112	M	13.6	1	1	305	433 ROCK BERM 150 DITCH LT

FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	17.0	769.32
CHECK	100	20.6	769.60



PIPE SHEET 17 OF 19

PIPE DRAINAGE SHEET 17 of 19

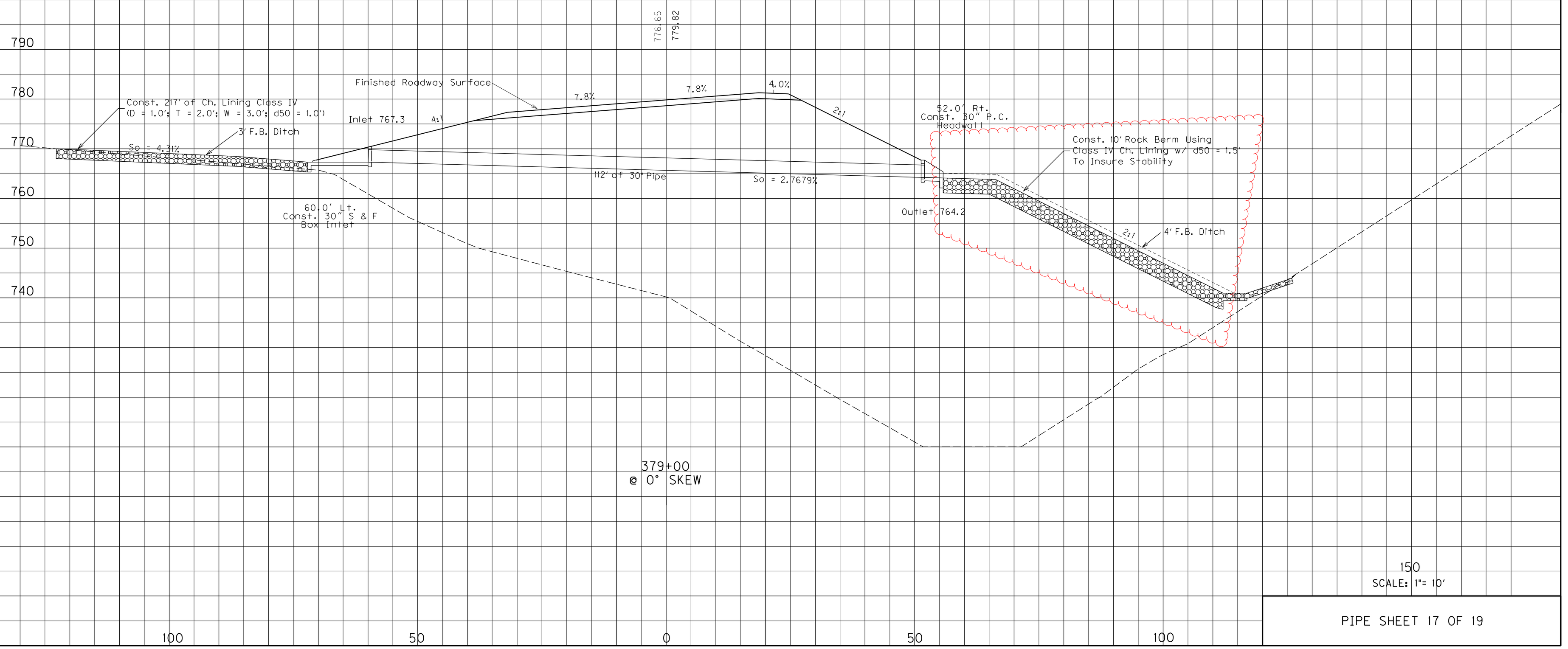
COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	R79

REVISED 5-16-2021

CULVERT PIPE

	30"	DESIGN pH LEVEL	MAX COVER HEIGHT	30" S & F BOX IN – OUT	P. C. HEADWALL 30 IN	FABRIC–GEOTEXTILE TYPE IV FOR PIPE	CHANNEL LINING CLASS IV
LINEAR FEET			FEET	EACH	EACH	SQ.YD.	CU.YD.
	112	M	13.6	1	1	305	433 ROCK BERM 150 DITCH LT

FLOOD DATA			
	STORM (YR)	RUNOFF (CFS)	HEADWATER (ELEV)
DESIGN	25	17.0	769.32
CHECK	100	20.6	769.60



PIPE SHEET 17 OF 19

FILE NAME: X:\HIGHWAYS\PROJECTS\2301.2E\2013\12-301.20 2015\PIPESHEET 3-19-19.DGN
USER: Lisa
DATE PLOTTED: May 16, 2021
E-SHEET NAME:
MicroStation v8.11.9.919

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FLOYD COUNTY
KY 979
OVER LITTLE MUD CREEK / LITTLE MUD CREEK ROAD
Station 253+59.000

ESTIMATE OF QUANTITIES

	BID ITEM CODE	08100	08104	08150	08151	08637	08019	02602	02231	08046	08033	08094	02998	03299	21532ED	08471	08001	08002	08160
	BID ITEM	Concrete Class "A"	Concrete Class "AA"	Steel Reinforcement	Steel Reinforcement Epoxy Coated	72" Precast PCI Beam Type 7	Cyclopean Stone Riprap	Fabric Geotextile Type 1	Structure Granular Backfill	Piles - Steel HP 12 x 53	Test Piles	Pile Points 12"	Masonry Coating	Armored Edge for Concrete	Railing System Type 3	Expansion Dam, 2 1/2" Neoprene	Structure Excavation Common	Structure Excavation Solid Rock	Structural Steel
	UNIT	C.Y.	C.Y.	LBS.	LBS.	L.F.	TONS	S.Y.	C.Y.	L.F.	L.F.	EACH	S.Y.	L.F.	L.F.	L.F.	C.Y.	C.Y.	L.S.
Substructure	End Bent #1	125.5	3.6		10,684		667	667	162.3	888	96	18	72	62					
Substructure	Pier #1	161.2		29,658	96								295				228.9	16.4	
Substructure	Pier #2	139.4		24,307	96								272				79.4	35.7	
Substructure	Abutment #2	154.1	4.3	3,716	9,741		333	333	194.5				134	62			29.8	335.1	
Substructure																			
Substructure																			
	Superstructure		560.8		141,036	1841.8							1,584		740.0	124			1
	BRIDGE TOTALS	580.2	568.7	57,681	161,653	1841.8	1000	1000	356.8	888	96	18	2,357	124	740.0	124	338.1	387.2	1

(1) Lump Sum Bid For Structural Steel Includes Approx. 1340 Lbs.

INDEX OF SHEETS

SPECIAL NOTES

604 – Bearing Piles

SPECIAL PROVISIONS

69 Embankment at Bridge End Bent Structures

STANDARD DRAWINGS

BGX-006-10	Stencils for Structures
RBC-003-09	Guardrail Connector to Bridge End Type A & A1
BGX-012-02	Geotechnical Legend
BJE-001-14	Neop. Exp. Dams and Armored Edges
RGX-100-07	Treatment of Embankment at Bridge End Bent Structures
RGX-105-09	Treatment of Embankment at Bridge End Bent Structures
BPS-003-09	HP 12x53 Steel Pile
BBP-001-12	Elastomeric Bearing Pads for Prestressed Beams
BGX-015-04	Bridge Drains
BHS-008-02	Rail System Type 3

SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges, 17th Edition

2019 Standard Specifications for Road and Bridge Construction

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

TITLE SHEET

PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO. S1

DRAWING NO. 25494

ITEM NO. 12-301.10

COMMONWEALTH OF KENTUCKY — HARDY L. WILLIAMS — 21676 — LICENSED PROFESSIONAL ENGINEER
5/7/21

REVISED 5-17-2021

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FLOYD COUNTY
KY 979
OVER LITTLE MUD CREEK / LITTLE MUD CREEK ROAD
Station 253+59.000

ESTIMATE OF QUANTITIES

BID ITEM CODE		08100	08104	08150	08151	08637	08019	02602	02231	08046	08033	08094	02998	03299	21532ED	08471	08001	08002	08160
BID ITEM		Concrete Class "A"	Concrete Class "AA"	Steel Reinforcement	Steel Reinforcement Epoxy Coated	72" Precast PCI Beam Type 7	Cyclopean Stone Riprap	Fabric Geotextile Type 1	Structure Granular Backfill	Piles - Steel HP 12 x 53	Test Piles	Pile Points 12"	Masonry Coating	Armored Edge for Concrete	Railing System Type 3	Expansion Dam, 2 1/2" Neoprene	Structure Excavation Common	Structure Excavation Solid Rock	Structural Steel
UNIT		C.Y.	C.Y.	LBS.	LBS.	L.F.	TONS	S.Y.	C.Y.	L.F.	L.F.	EACH	S.Y.	L.F.	L.F.	L.F.	C.Y.	C.Y.	L.S.
Substructure	End Bent #1	125.5	3.6		10,684		667	667	162.3	888	96	18	72	62					
	Pier #1	161.2		29,658	96								295				228.9	16.4	
	Pier #2	139.4		24,307	96								272				79.4	35.7	
	Abutment #2	154.1	4.3	3,716	9,741		333	333	194.5				134	62			29.8	335.1	
Superstructure			560.8		141,036	1841.8							1,584		740.0	124			1
BRIDGE TOTALS		580.2	568.7	57,681	161,653	1841.8	1000	1000	356.8	888	96	18	2,357	124	740.0	124	338.1	387.2	1

(1) Lump Sum Bid For Structural Steel Includes Approx. 1340 Lbs.

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RGX-100-07	Treatment of Embankment at Bridge End Bent Structures
RGX-105-09	Treatment of Embankment at Bridge End Bent Structures
BPS-003-09	HP 12x53 Steel Pile
BBP-001-12	Elastomeric Bearing Pads for Prestressed Beams
BGX-015-04	Bridge Drains
BHS-008-02	Rail System Type 3

SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges, 17th Edition

2019 Standard Specifications for Road and Bridge Construction

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

TITLE SHEET

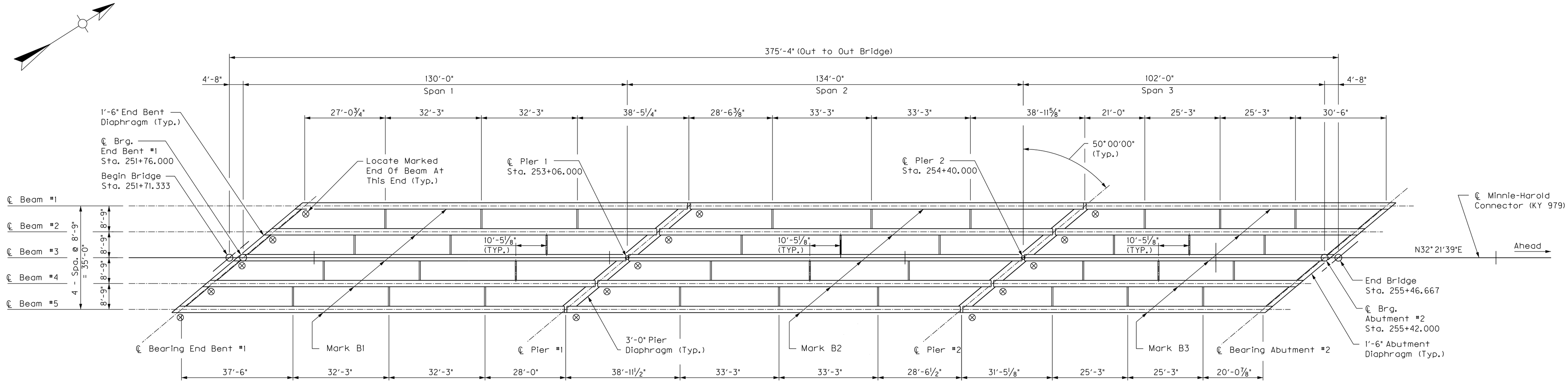
COMMONWEALTH OF KENTUCKY — HARDY L. WILLIAMS — 21676 — LICENSED PROFESSIONAL ENGINEER
5/7/21

PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

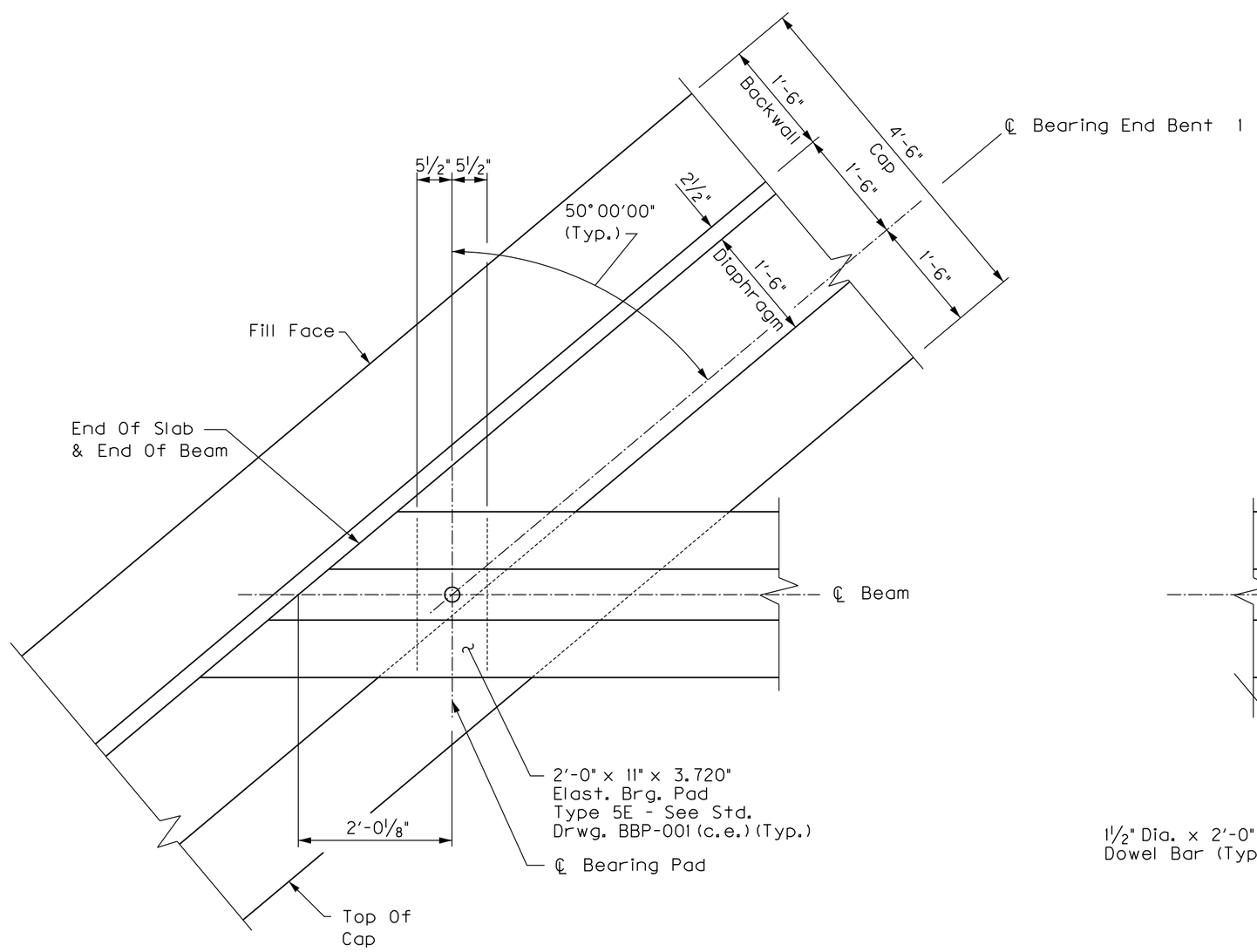
SHEET NO. S1

DRAWING NO. 25494

ITEM NO. 12-301.10

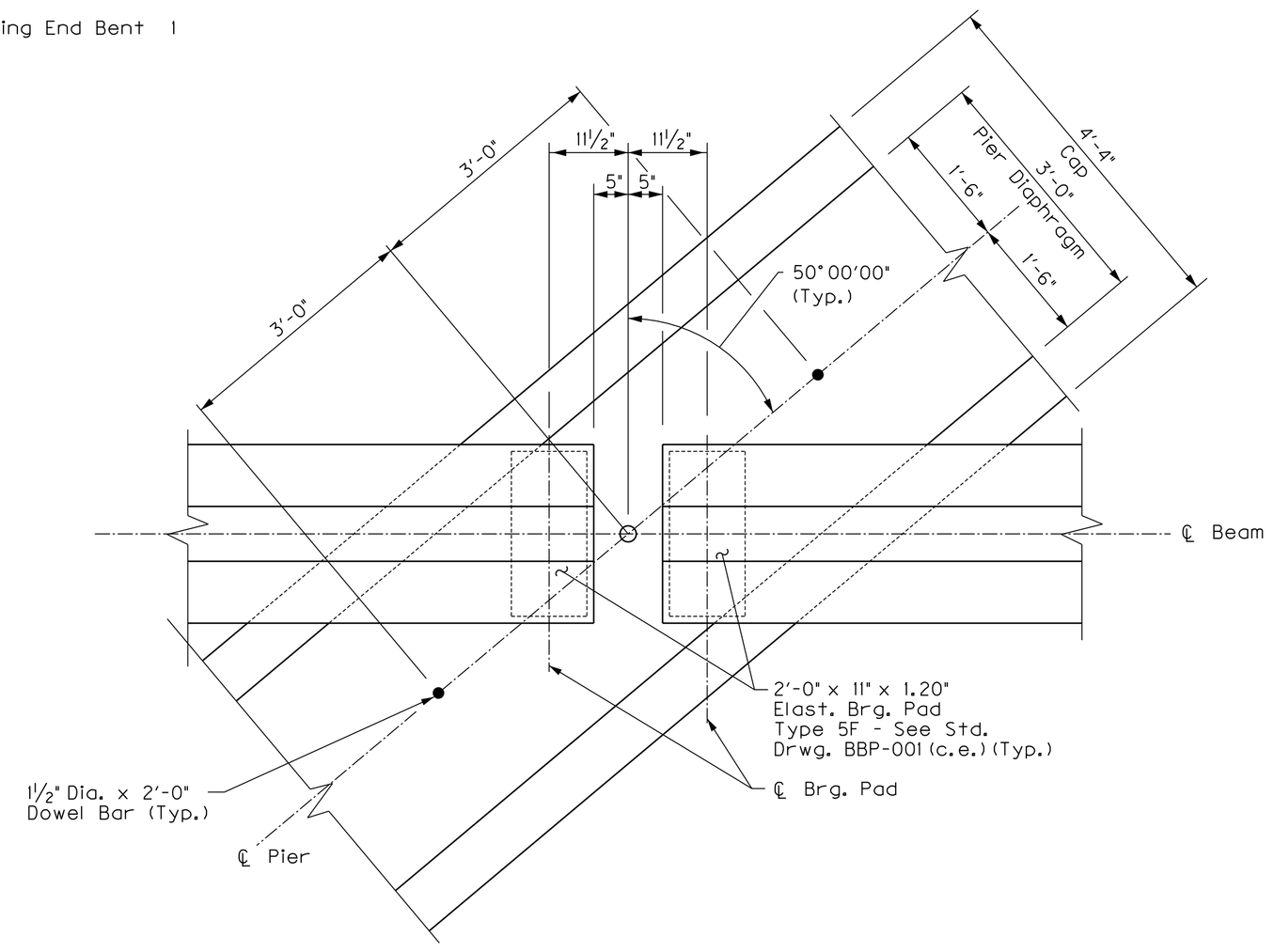


FRAMING PLAN

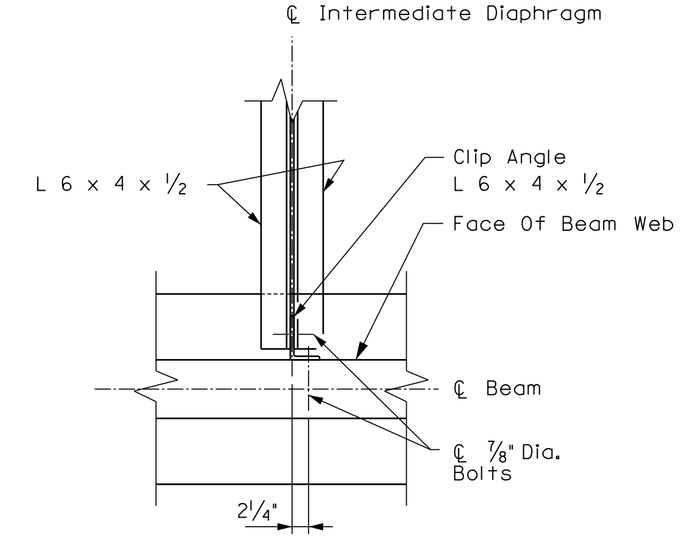


END BENT 1

End Bent 1 Shown, Abutment 2 Similar



PIERS



Note: See Sheet S23 For Details.

INTERMEDIATE DIAPHRAGM

BEARING DETAILS

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

FRAMING PLAN

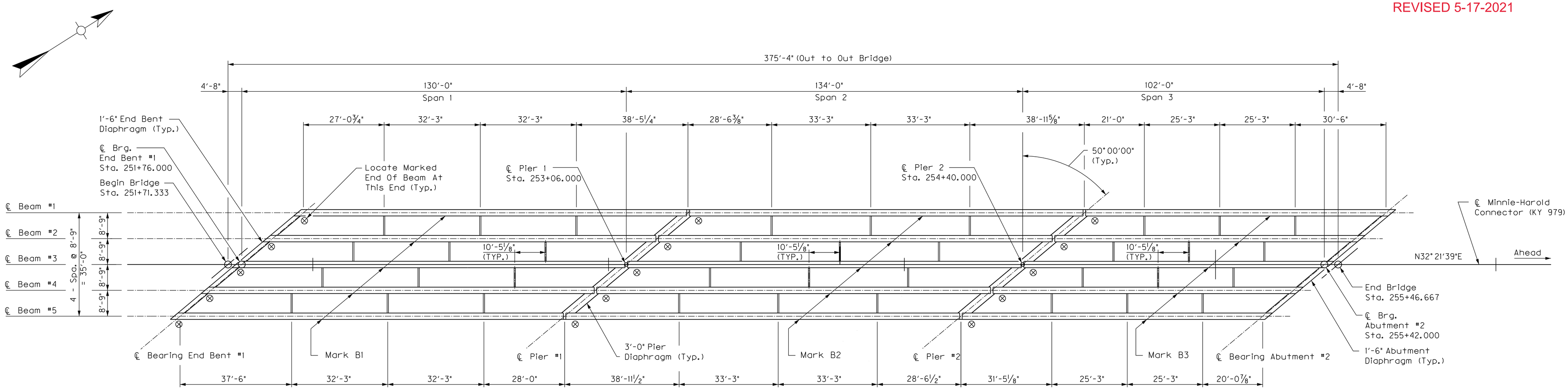
PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO. S19

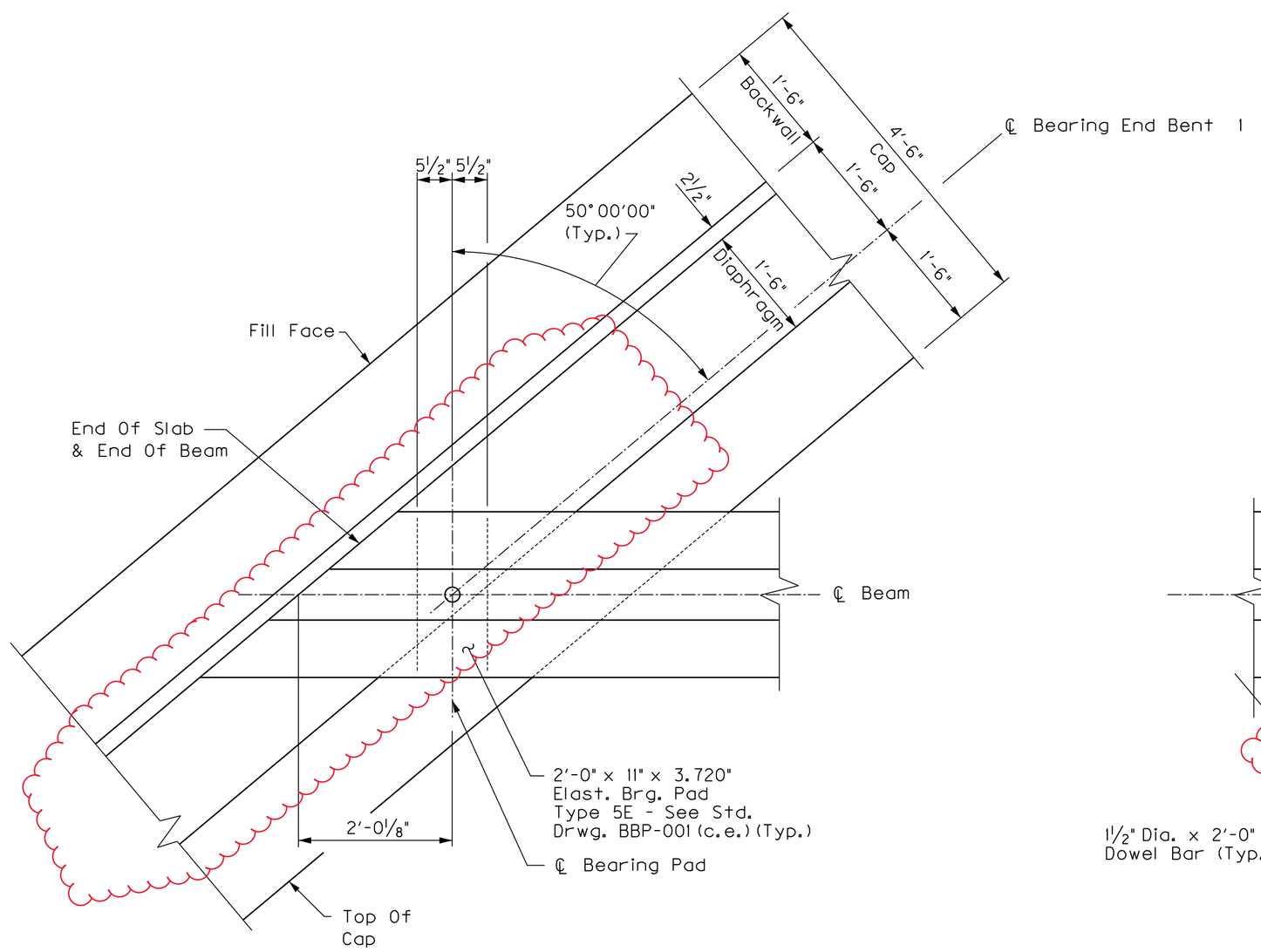
DRAWING NO. 25494

ITEM NO. 12-301.10

REVISED 5-17-2021

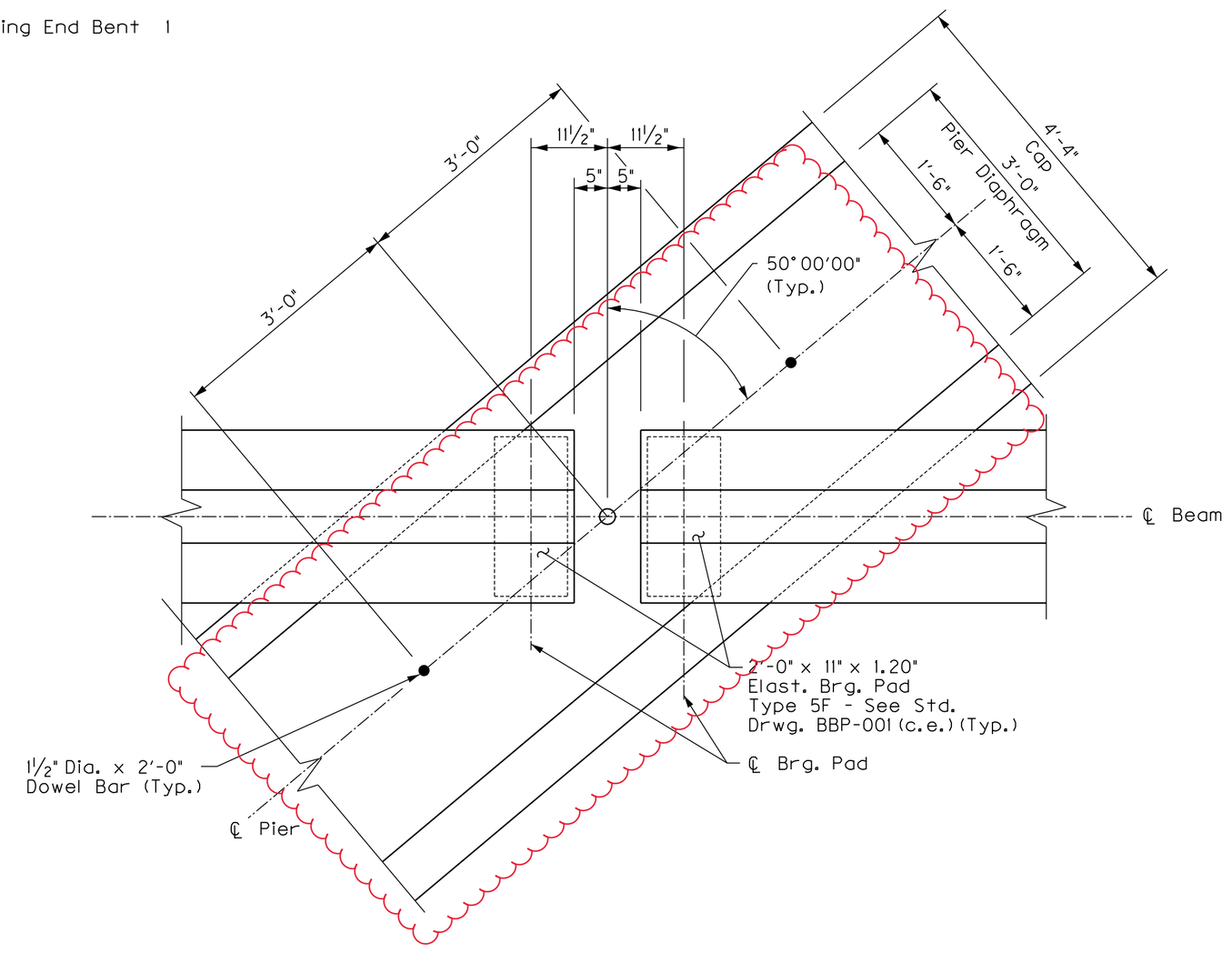


FRAMING PLAN

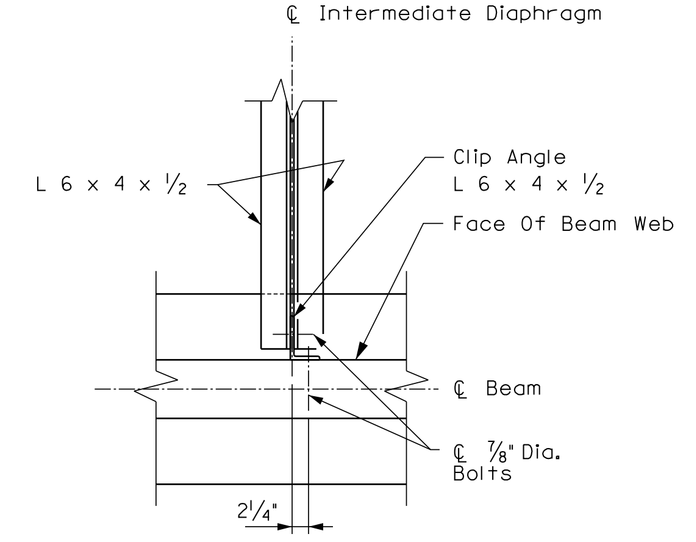


END BENT 1

End Bent 1 Shown, Abutment 2 Similar



PIERS



Note: See Sheet S23 For Details.

INTERMEDIATE DIAPHRAGM

BEARING DETAILS

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

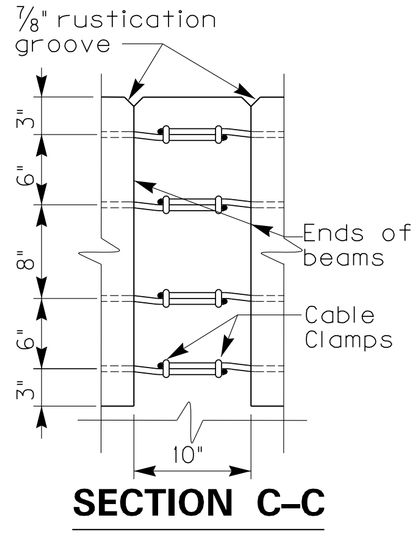
FRAMING PLAN

PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

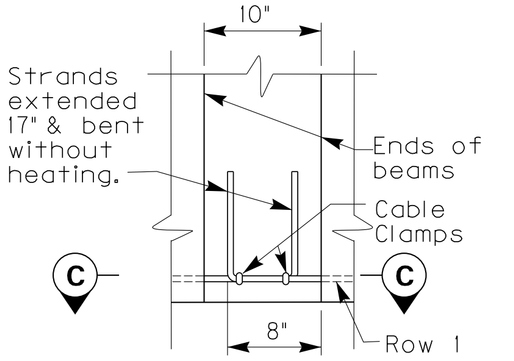
SHEET NO. S19

DRAWING NO. 25494

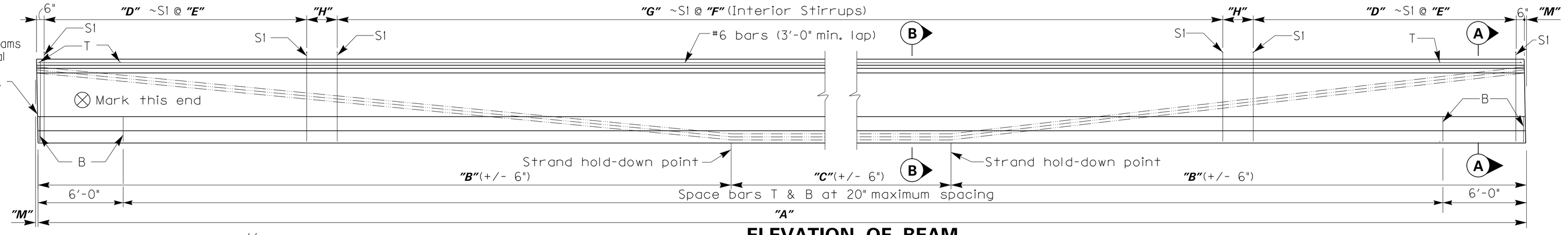
ITEM NO. 12-301.10



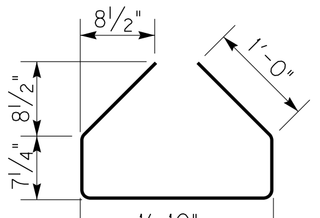
SECTION C–C



STRAND SPLICE DETAIL

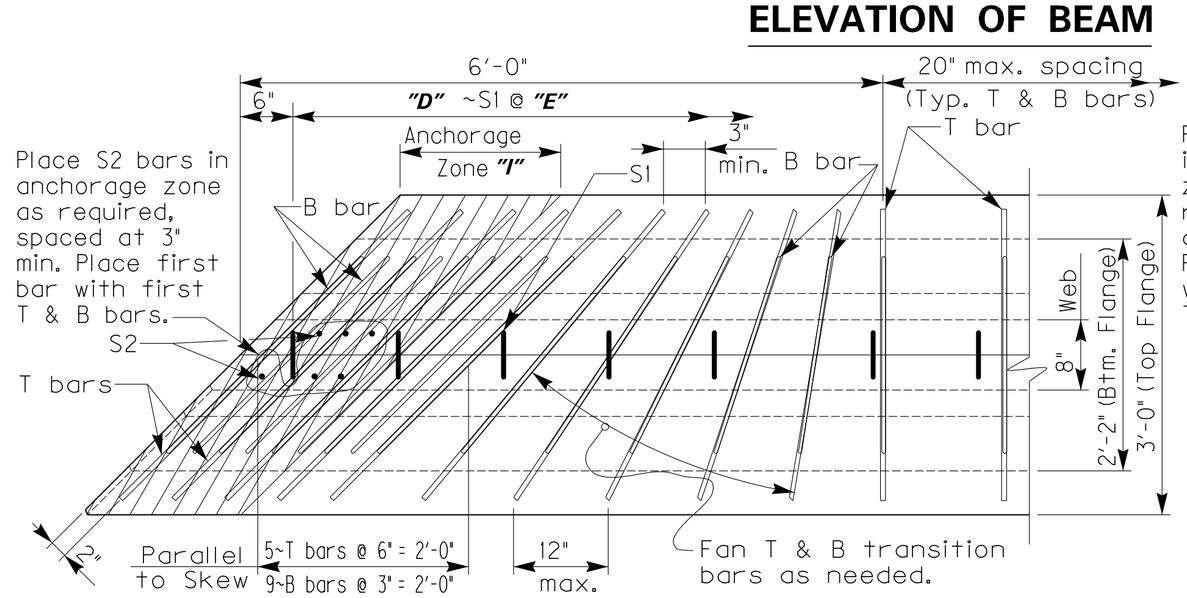


ELEVATION OF BEAM

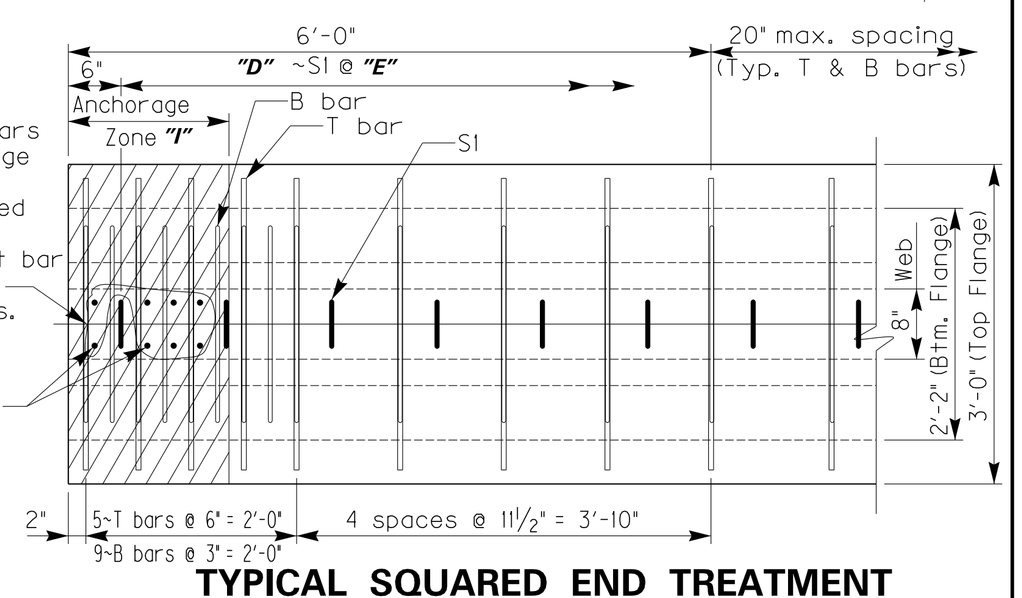


B Bar

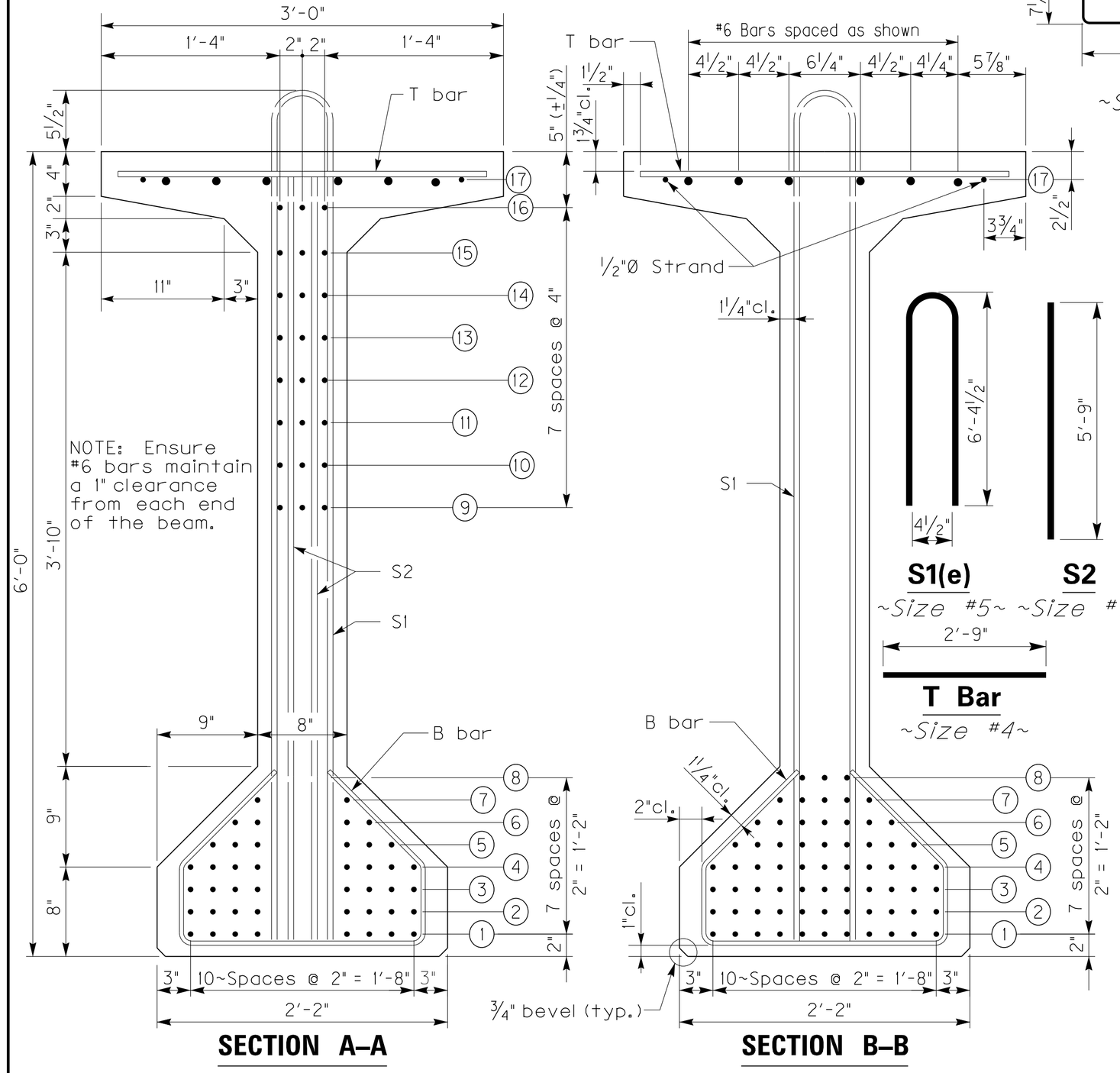
~Size #3~



TYPICAL SKEWED END TREATMENT



TYPICAL SQUARED END TREATMENT



SECTION A–A

SECTION B–B

S1(e) ~Size #5~ S2 ~Size #7~

T Bar

~Size #4~

General Notes

CONCRETE: Ensure prestressed girder concrete is in accordance with these plans and the specifications.

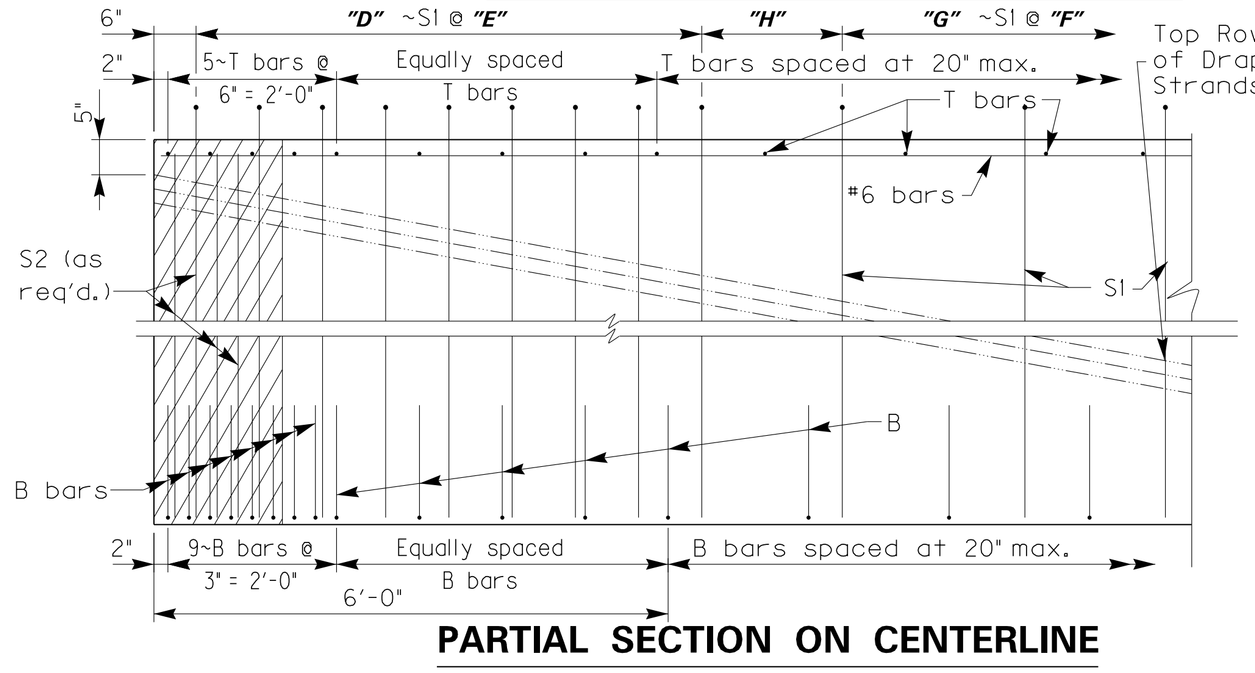
MATERIALS DESIGN SPECIFICATIONS: For prestressed beams:
FY = 60,000 psi F'S = 270,000 psi

PRESTRESSING REINFORCEMENT: Ensure that strands are 1/2" (nominal diameter, 0.153 sq. in.), uncoated seven-wire stress relieved, low-relaxation conforming to AASHTO M 203, Grade 270. Billing of the cost for redesign of beam and subsequent plan modifications will be made for any request of alternate strand type or arrangement. The designer of the original plans is responsible for the billing and work.

CONSTRUCTION METHOD: Pretension all beams. Ensure concrete has attained f'ci (shown in the table) in standard test cylinders that are made and cured identically with the beams without bond stresses being transferred to the concrete or releasing the end anchors. Attain f'c (shown in the table) at or prior to 28 days. Apply an initial force of 31,003 lbs. per low-relaxation strand to develop a stress of 202,500 psi. No beam will be accepted that is honeycombed to the extent that strength of the beam or resistance to deterioration has been affected. An allowance of 0.0005L is made for shortening of beams due to shrinkage and elastic change. Show a detensioning plan by sequential numbering of the strand pattern on the shop plans.

LIFTING DEVICES: Detail lifting devices on the shop plans. Loads are to be distributed equally to each device.

BEARING DEVICES: Include the price for lead plates and/or bearing pads in the bid for precast beams.



PARTIAL SECTION ON CENTERLINE

Strand Data with number indicated in rows

Mark	Midspan (SECTION B–B)								End (SECTION A–A)																Total No.	Concrete Stress (psi)		No. of S Bars		Hold-Down Capacity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(17)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)			f'ci	f'c	S1	S2	lbs.
B1	11	11	11	11	7	7	5	2	8	8	8	8	4	4	2	3	3	3	3	3	3	3	2	65	5500	7600	97	12	41841
B2	11	11	11	11	7	7	5	2	8	8	8	8	4	4	2	3	3	3	3	3	3	3	2	65	5500	7700	99	12	41384
B3	11	11	9	3				2	11	8	6								3	3	3		2	36	4500	6000	77	6	26227

Beam Data (measured along centerline)

Total No.	Dimensions										End Treatment		Approx. Weight (Lb./Each)	Maximum Allowable Camber
	A	B	C	D	E	F	G	H	I	M	Marked	Unmarked		
5	131'-7 1/8"	59'-9 9/16"	12'-0"	9	9"	18"	79	9 9/16"	12"	1 5/8"	Skewed	Square	131,041	4"
5	133'-2"	61'-1"	11'-0"	10	9"	18"	79	10"	12"	1 1/4"	Square	Square	132,607	4"
5	103'-7 1/8"	45'-9 9/16"	12'-0"	8	9"	18"	61	1'-0 9/16"	12 3/4"	5/8"	Square	Skewed	103,159	2 1/2"

REVISION	DATE:
DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE **KY 979** | CROSSING **LITTLE MUD CREEK /LITTLE MUD CR. RD.**

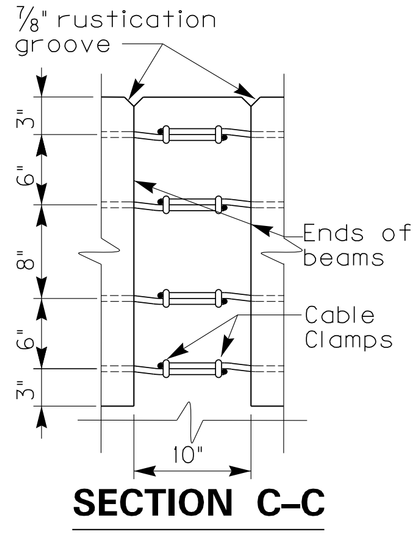
PCI BEAM TYPE 7

ITEM NO. 12-301.10

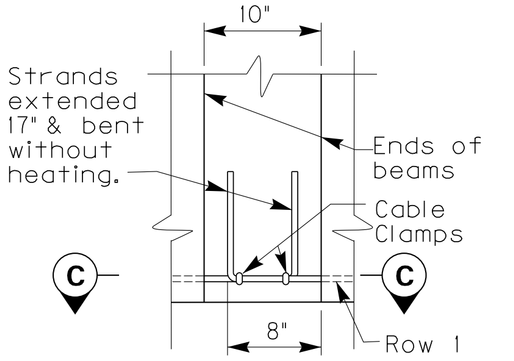
PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO. S20

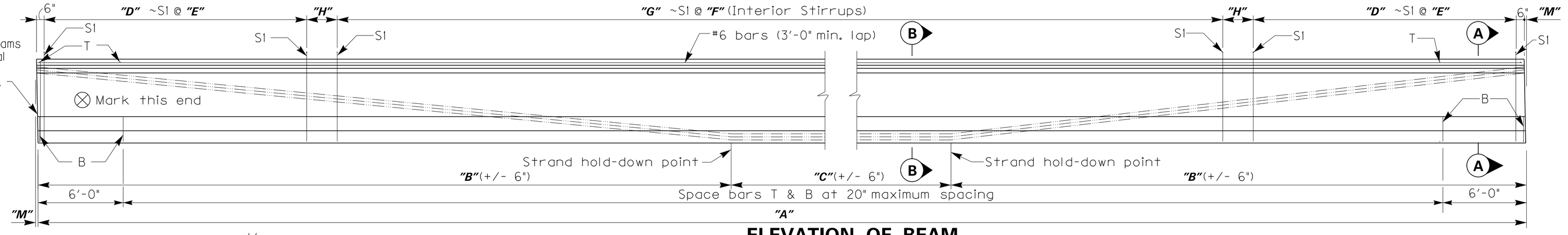
DRAWING NO. 25494



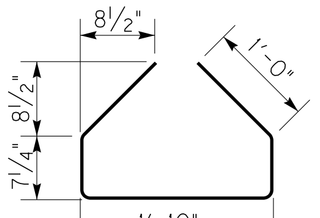
SECTION C–C



STRAND SPLICE DETAIL

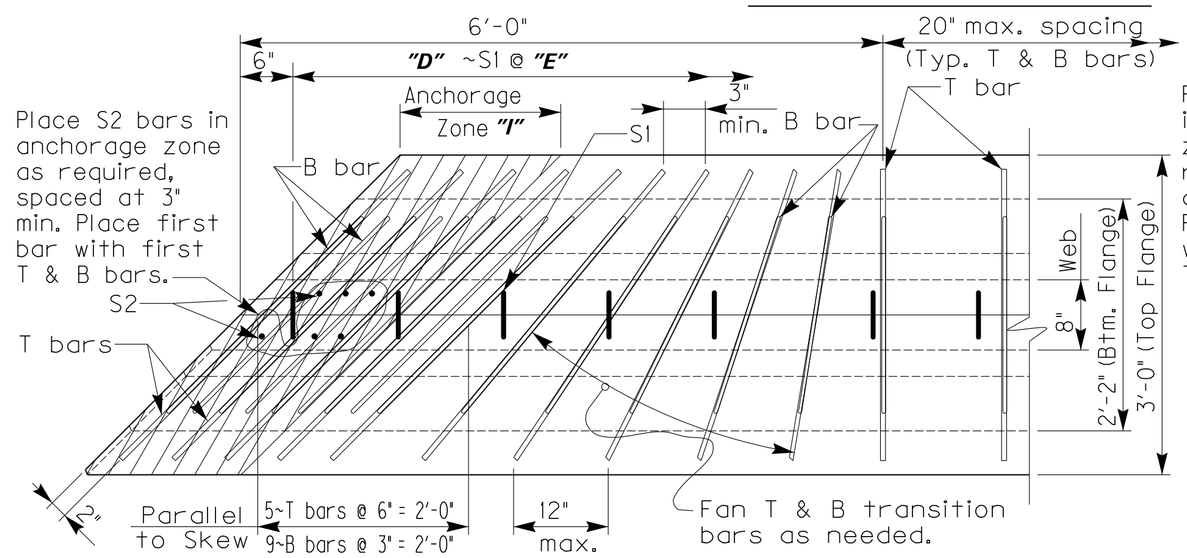


ELEVATION OF BEAM

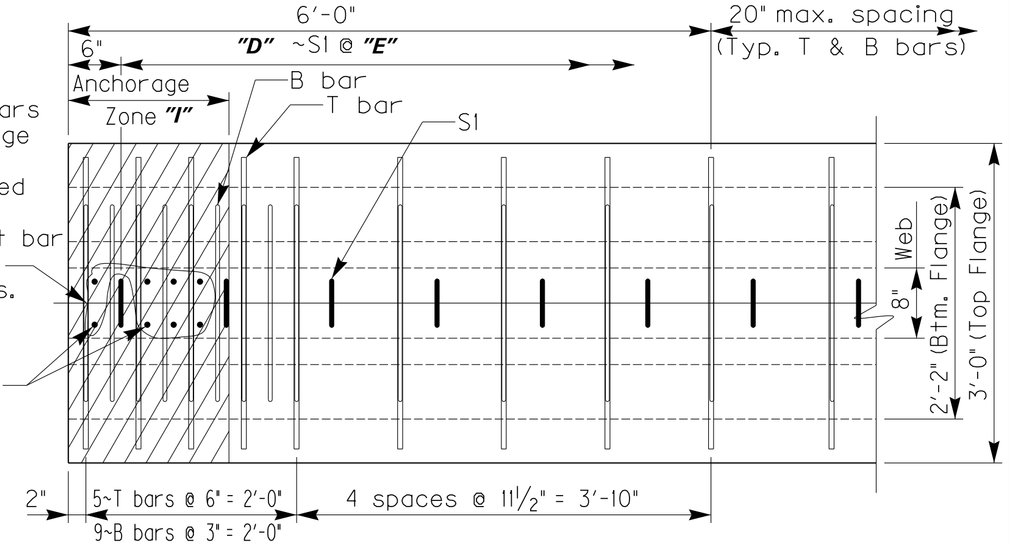


B Bar

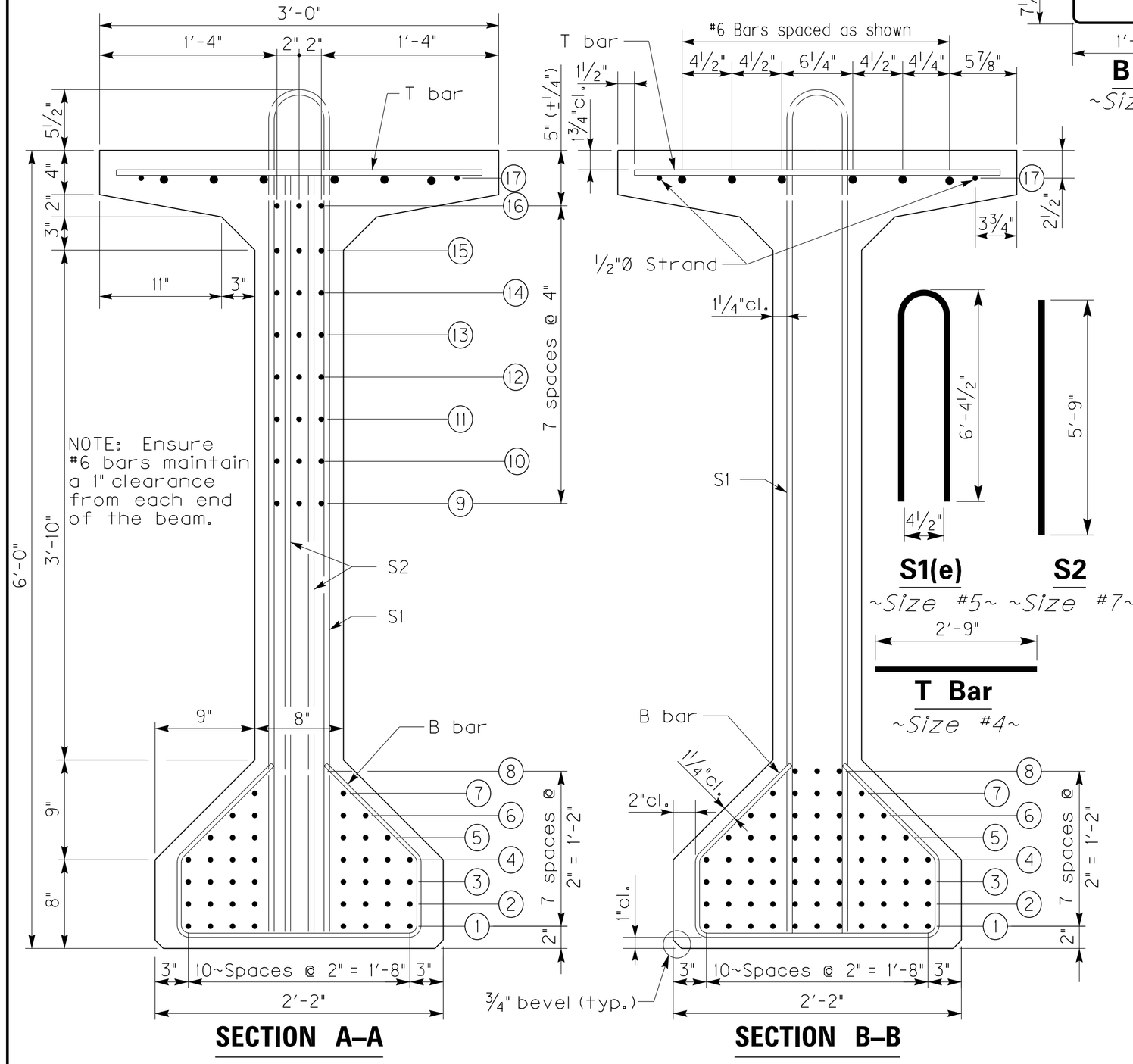
~Size #3~



TYPICAL SKEWED END TREATMENT



TYPICAL SQUARED END TREATMENT



SECTION A–A

SECTION B–B

S1(e) S2

~Size #5~ ~Size #7~

T Bar

~Size #4~

General Notes

CONCRETE: Ensure prestressed girder concrete is in accordance with these plans and the specifications.

MATERIALS DESIGN SPECIFICATIONS: For prestressed beams:
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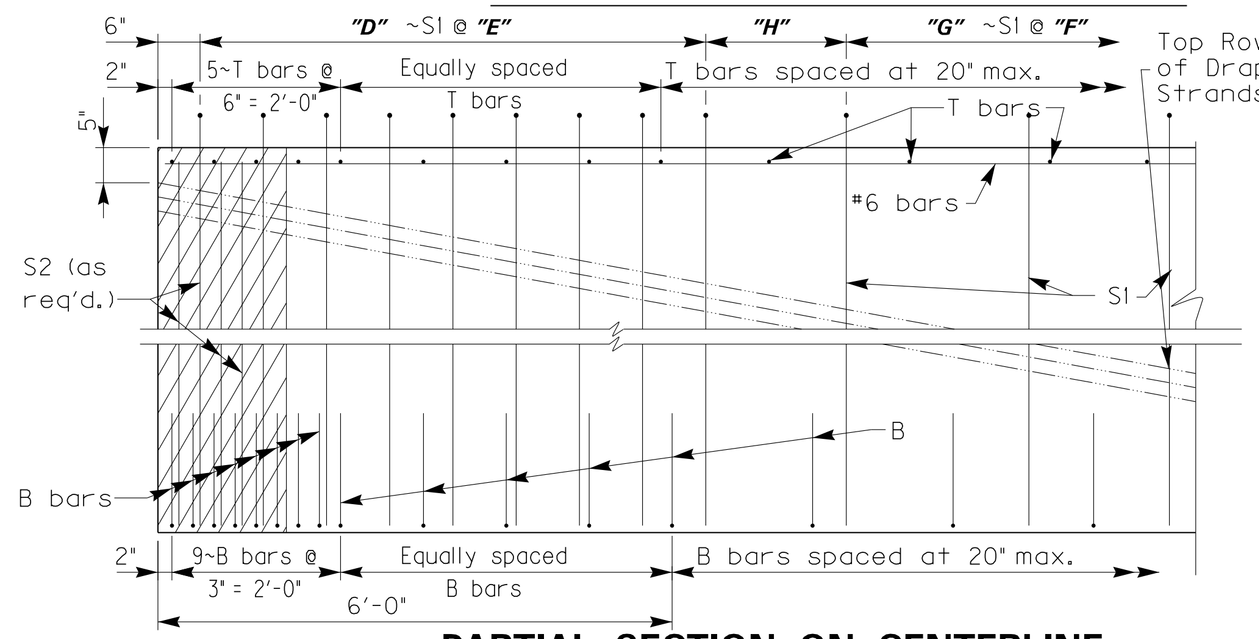

PARTIAL SECTION ON CENTERLINE

REVISED 5-17-2021

Strand Data with number indicated in rows

Mark	Midspan (SECTION B–B)								End (SECTION A–A)																Total No.	Concrete Stress (psi)		No. of S Bars		Hold-Down Capacity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(17)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)			f'ci	f'c	S1	S2	lbs.
B1	11	11	11	11	7	7	5	2	8	8	8	8	4	4	2	3	3	3	3	3	3	3	2	65	5500	7600	97	12	41841
B2	11	11	11	11	7	7	5	2	8	8	8	8	4	4	2	3	3	3	3	3	3	3	2	65	5500	7700	99	12	41384
B3	11	11	9	3				2	11	8	6								3	3	3		2	36	4500	6000	77	6	26227

Beam Data (measured along centerline)

Total No.	Dimensions										End Treatment		Approx. Weight (Lb./Each)	Maximum Allowable Camber
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5	133'-2"	61'-1"	11'-0"	10	9"	18"	79	10"	12"	1 1/4"	Square	Square	132,607	4"
5	103'-7 1/8"	45'-9 9/16"	12'-0"	8	9"	18"	61	1'-0 9/16"	12 3/4"	5/8"	Square	Skewed	103,159	2 1/2"

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

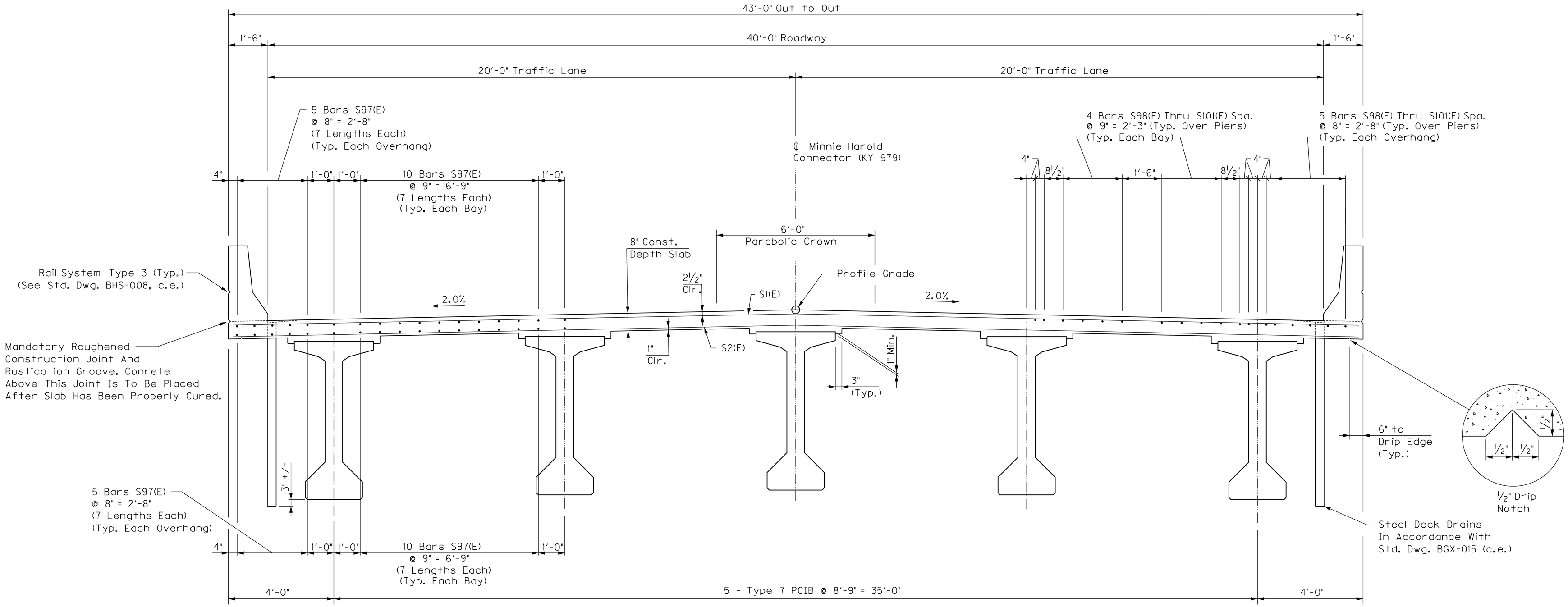
PCI BEAM TYPE 7

ITEM NO. 12-301.10

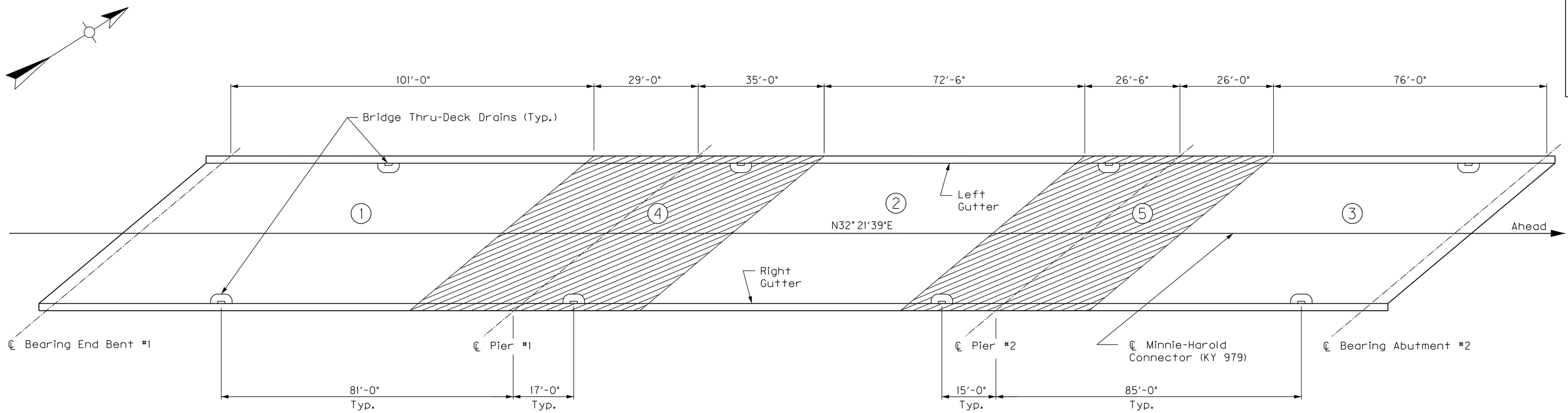
PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO. S20

DRAWING NO. 25494



SECTION A-A



SLAB POURING SEQUENCE AND DECK DRAIN SPACING

ESTIMATE OF QUANTITIES

ITEM	QUANTITY	UNIT
CONCRETE CLASS 'AA'	560.8	CU. YD.
EPOXY COATED REINFORCEMENT	141036	LBS.

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE **KY 979** | CROSSING **LITTLE MUD CREEK /LITTLE MUD CR. RD.**

SUPERSTRUCTURE DETAILS

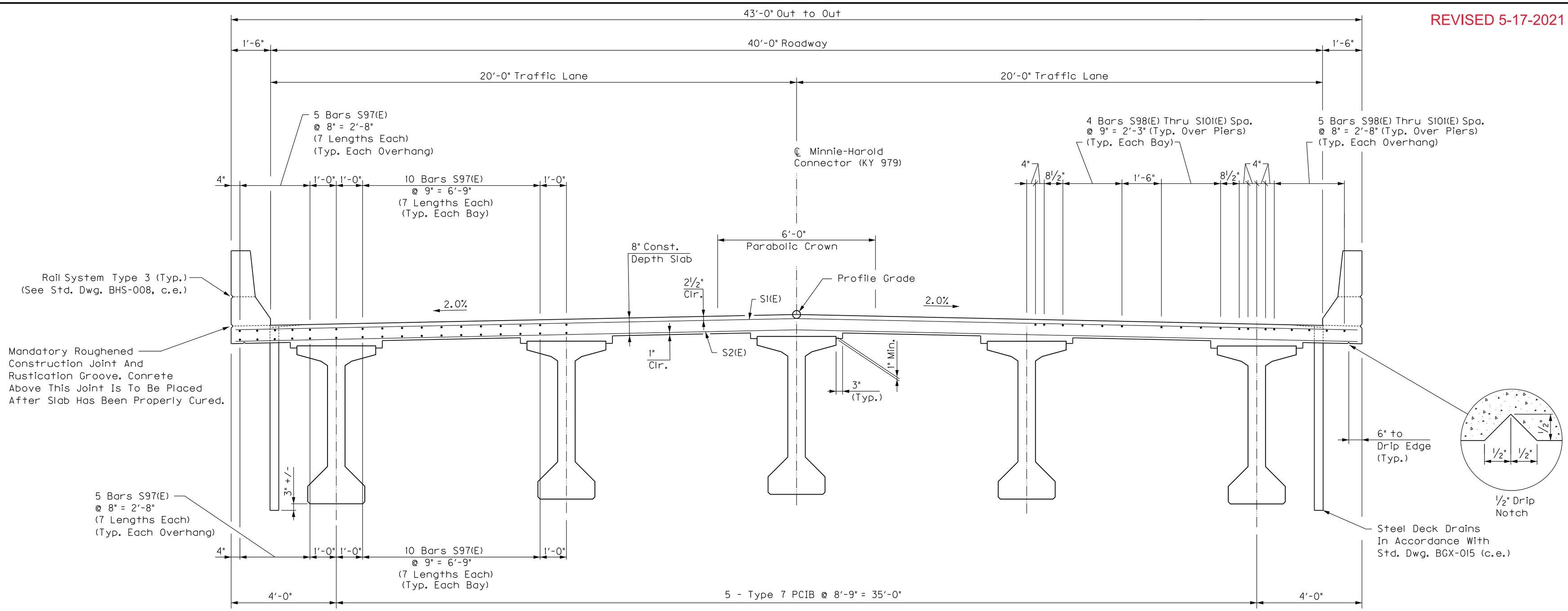
PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO. S22

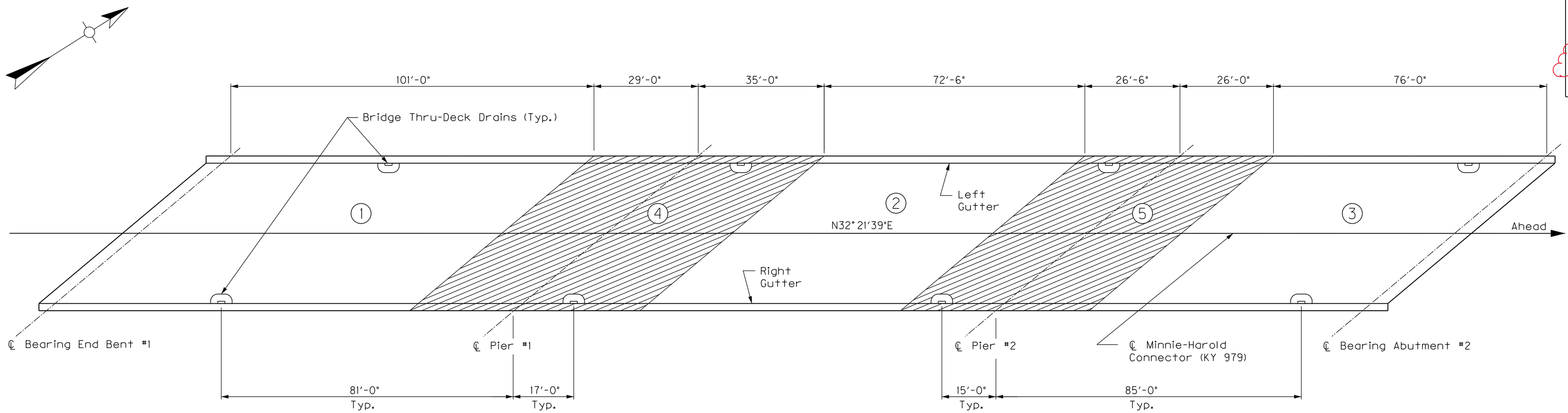
DRAWING NO. 25494

ITEM NO. 12-301.10

REVISED 5-17-2021



SECTION A-A



SLAB POURING SEQUENCE AND DECK DRAIN SPACING

ESTIMATE OF QUANTITIES

ITEM	QUANTITY	UNIT
CONCRETE CLASS 'AA'	560.8	CU. YD.
EPOXY COATED REINFORCEMENT	141036	LBS.

REVISION	DATE:

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Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

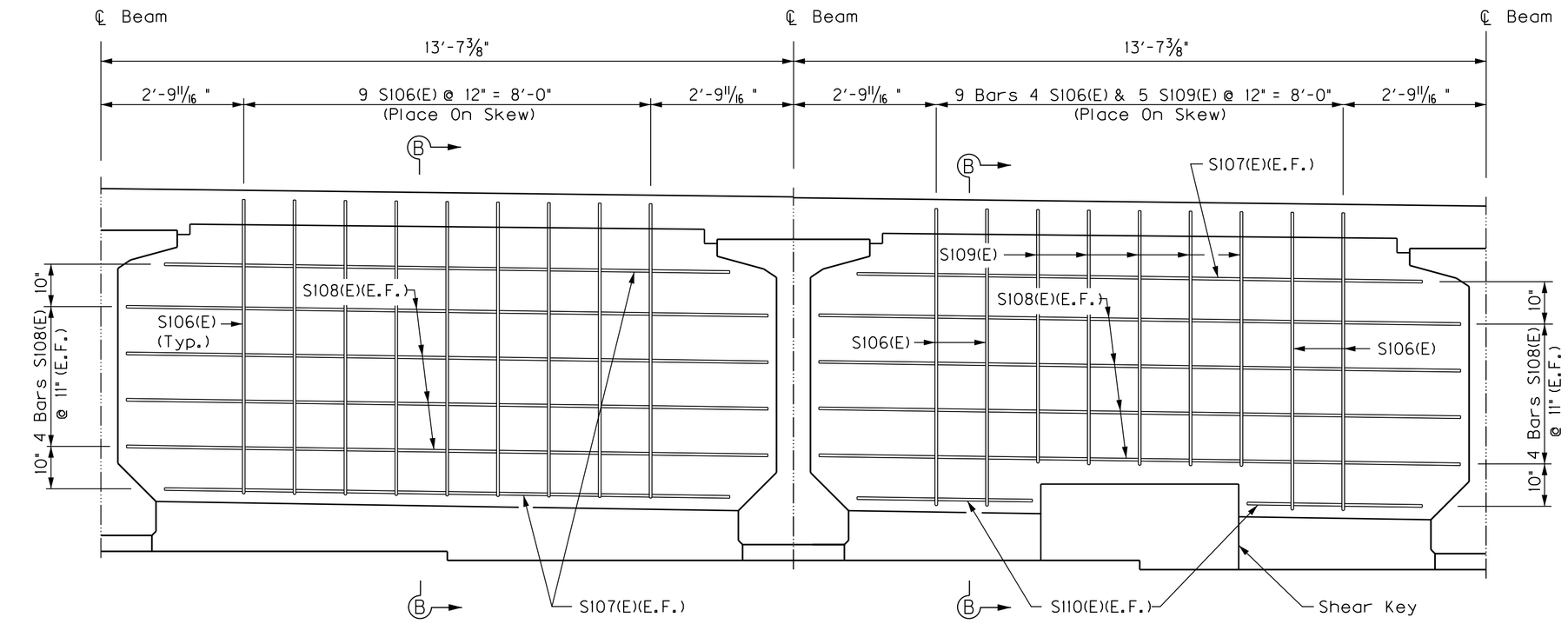
SUPERSTRUCTURE DETAILS

PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO.
S22

DRAWING NO.
25494

ITEM NO.
12-301.10

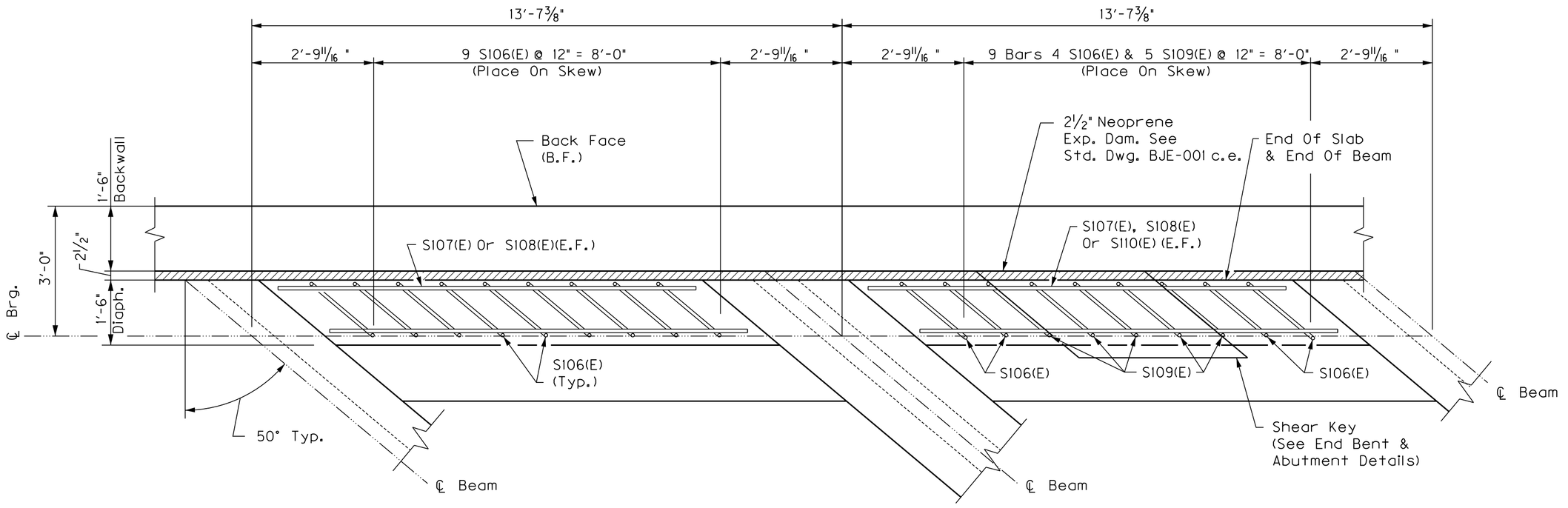


NO SHEAR KEY

AT SHEAR KEY

ELEVATION

(Taken Along ℄ Bearing)



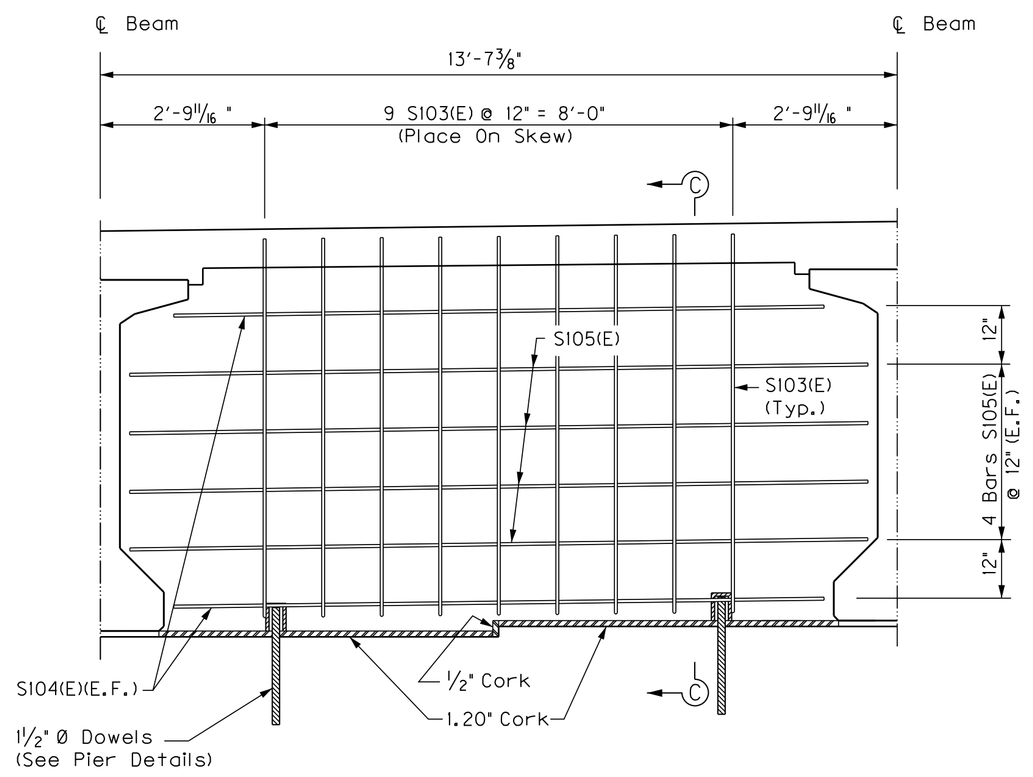
NO SHEAR KEY

AT SHEAR KEY

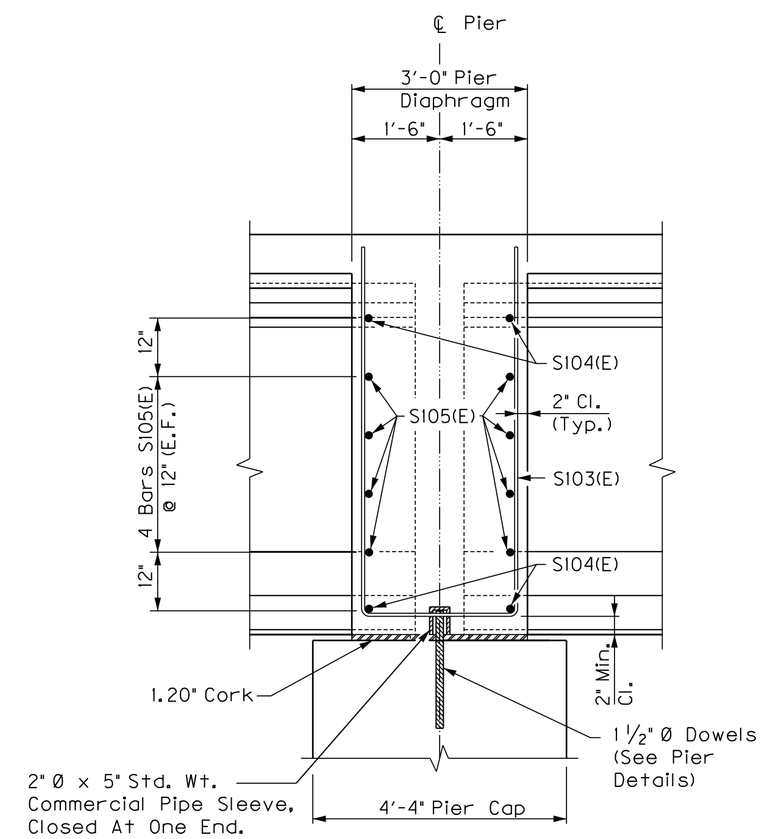
PLAN

END BENT DIAPHRAGM DETAILS

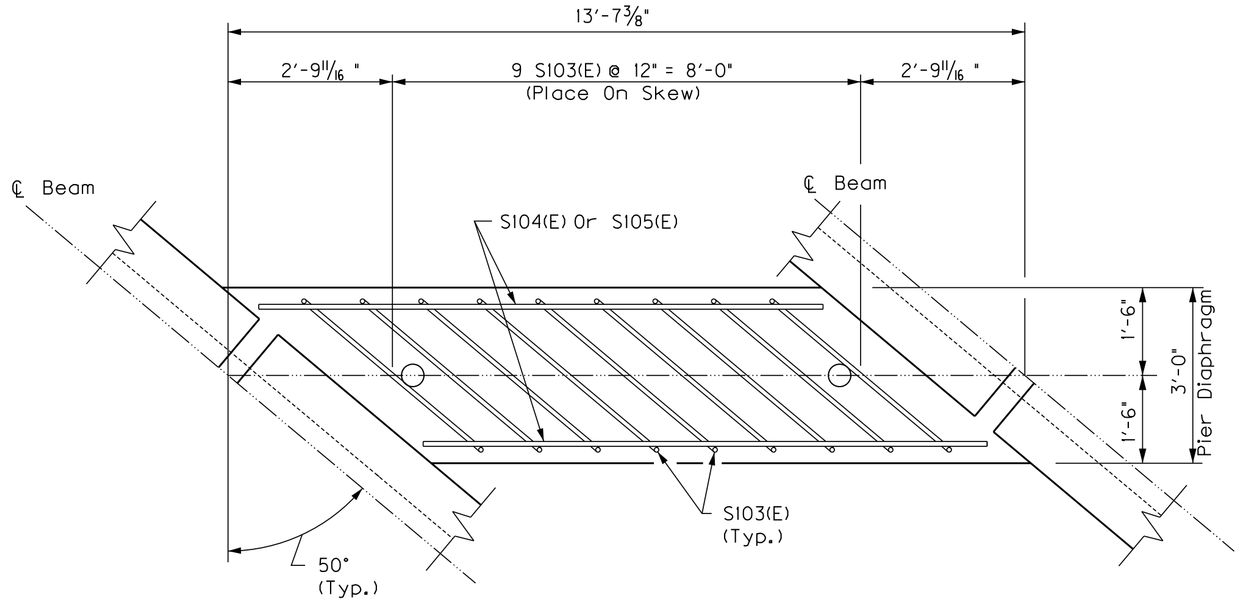
Note: Pour End Bent Diaphragm Monolithic With Slab.



ELEVATION



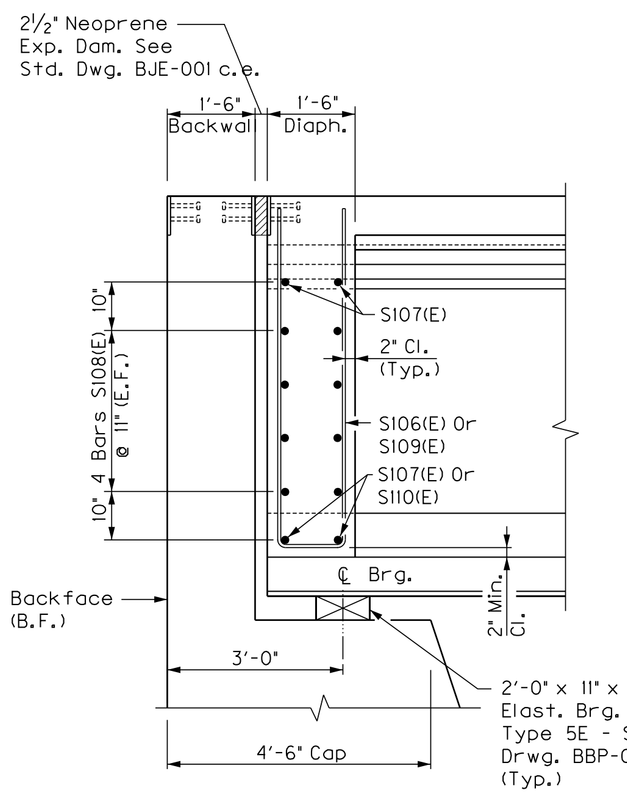
SECTION C-C



PLAN

PIER DIAPHRAGM DETAILS

Note: Pour Pier Diaphragm Monolithic With Slab.



SECTION B-B

END BENT DIAPHRAGM DETAILS

(Typ. Each End Of Bridge)

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

SUPERSTRUCTURE DETAILS

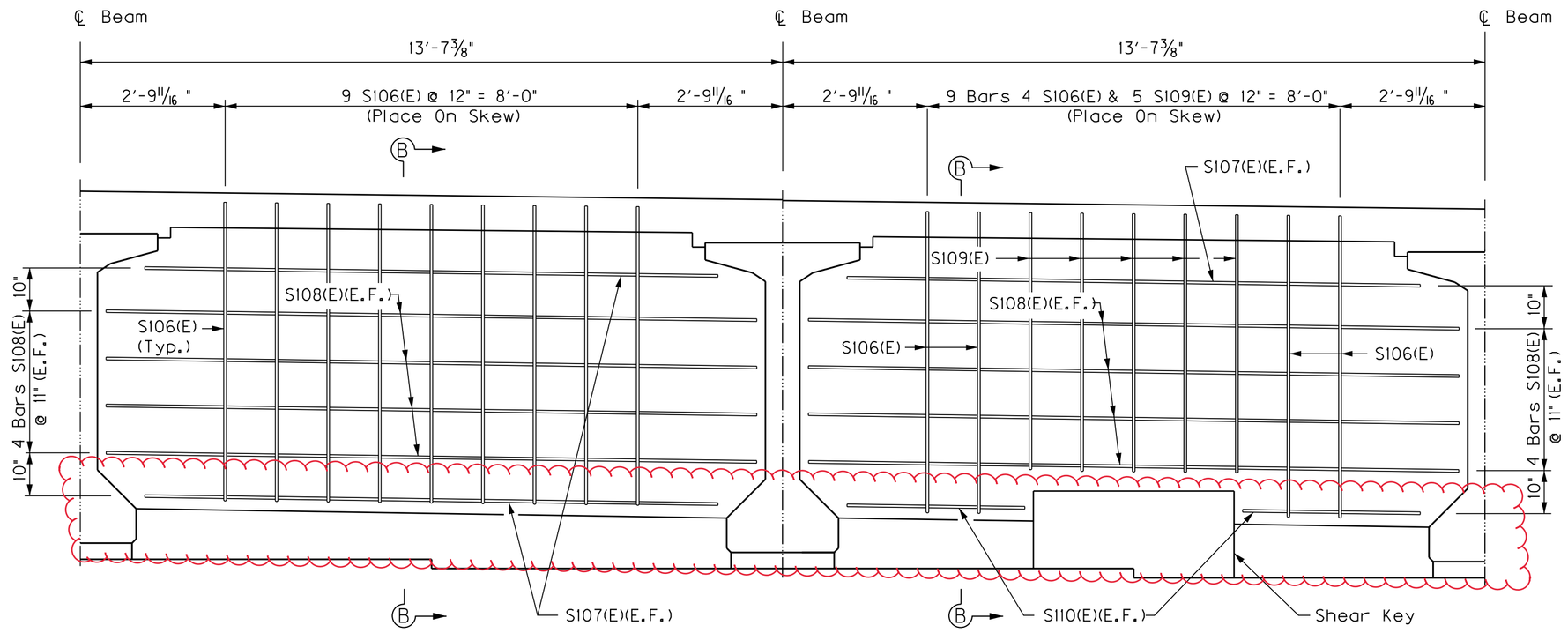
PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO. S24

DRAWING NO. 25494

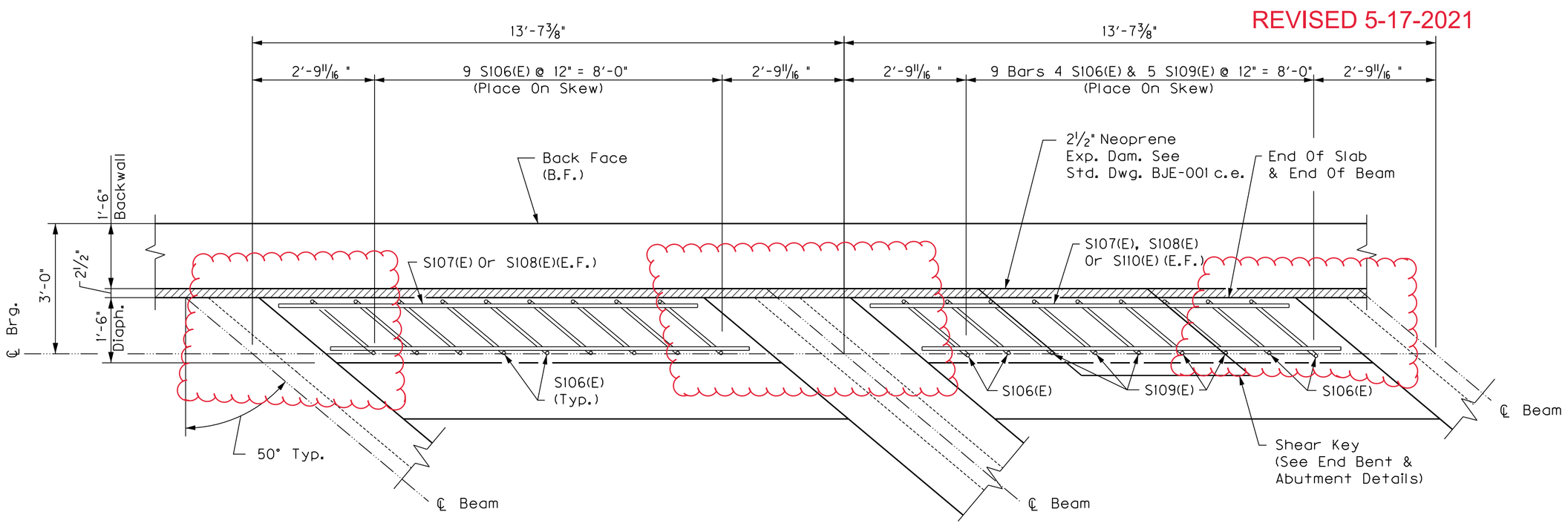
ITEM NO. 12-301.10

REVISED 5-17-2021



NO SHEAR KEY — AT SHEAR KEY

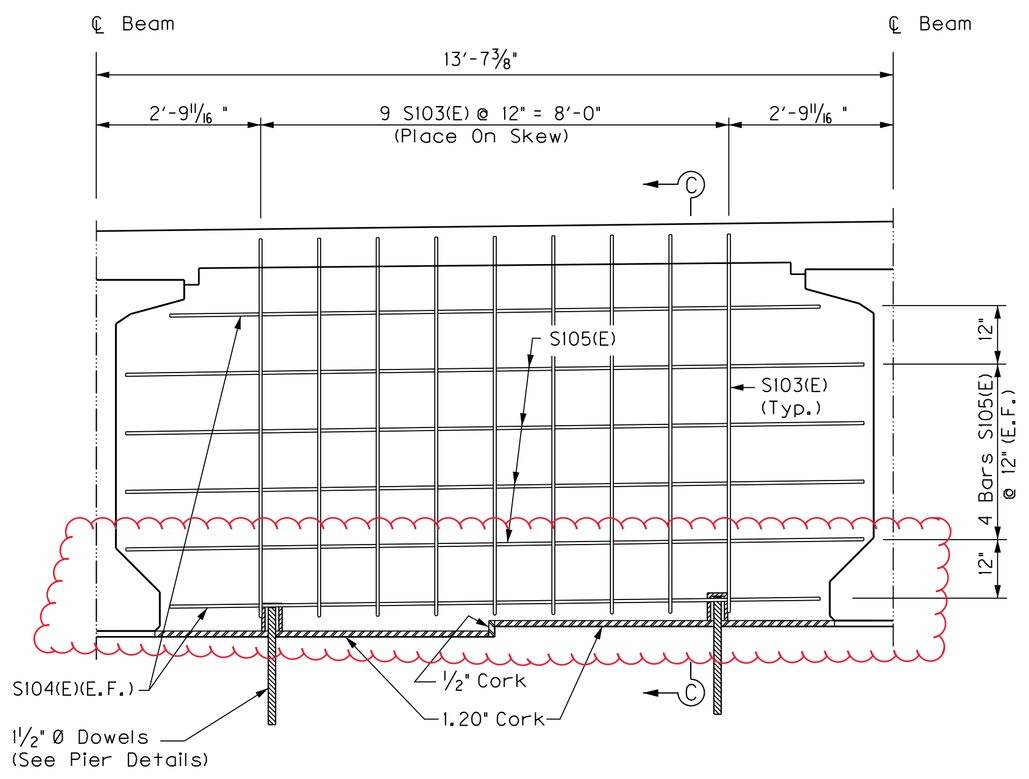
ELEVATION
(Taken Along ℄ Bearing)



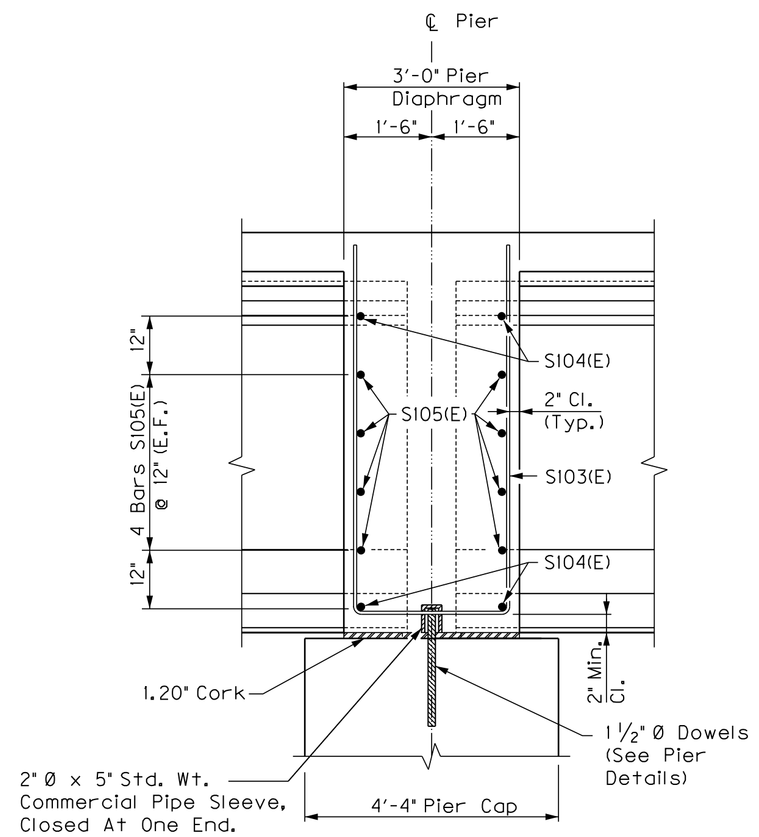
NO SHEAR KEY — AT SHEAR KEY

PLAN

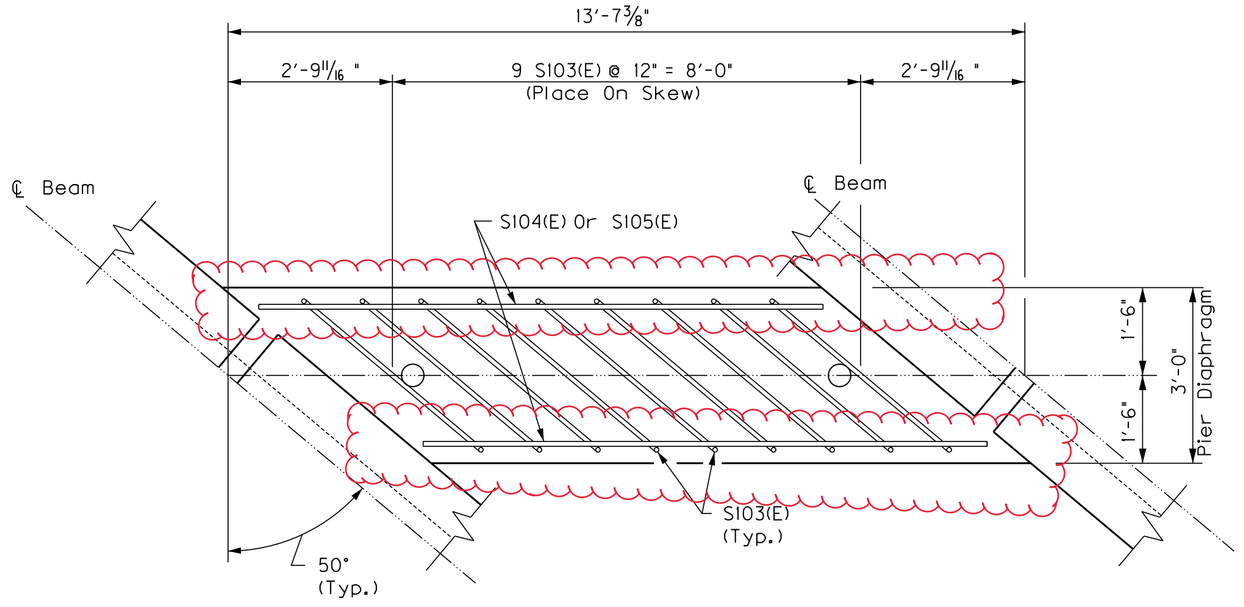
END BENT DIAPHRAGM DETAILS
Note: Pour End Bent Diaphragm Monolithic With Slab.



ELEVATION

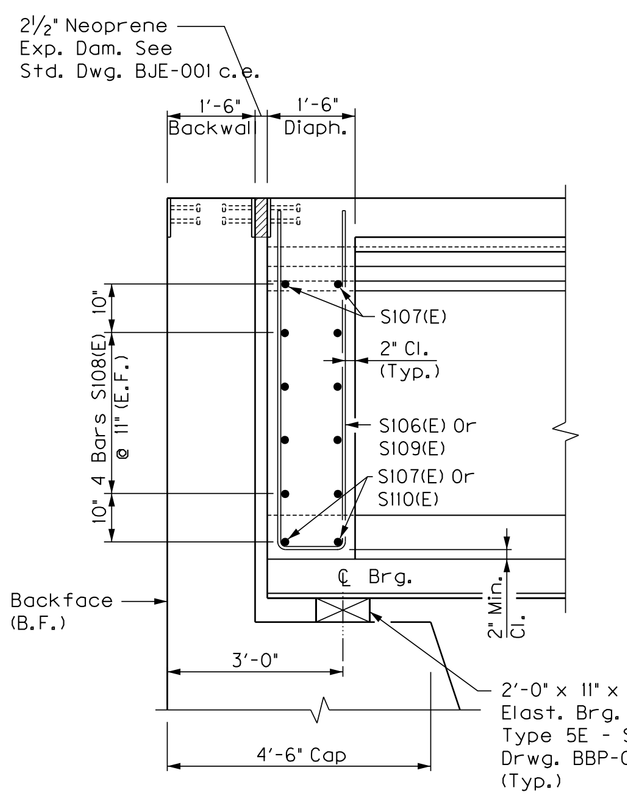


SECTION C-C



PLAN

PIER DIAPHRAGM DETAILS
Note: Pour Pier Diaphragm Monolithic With Slab.



SECTION B-B

END BENT DIAPHRAGM DETAILS
(Typ. Each End Of Bridge)

REVISION	DATE:

DATE: 12/2004	CHECKED BY:
DESIGNED BY: HLW	JAC
DETAILED BY: SF	HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
FLOYD

ROUTE	CROSSING
KY 979	LITTLE MUD CREEK /LITTLE MUD CR. RD.

SUPERSTRUCTURE DETAILS

PREPARED BY
Vaughn & Melton
Consulting Engineers (Kentucky), Inc.

SHEET NO. S24
DRAWING NO. 25494

ITEM NO. 12-301.10

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES

TOTAL	UNITS	CODE	ITEM DESCRIPTION
20	LIN FT	4820	TRENCHING AND BACKFILLING
1,870	LIN FT	4844	CABLE-NO. 14/5C
500	LIN FT	4886	MESSENGER-15400 LB
1	EACH	24955ed	REMOVE SIGNAL EQUIPMENT
4	EACH	4932	INSTALL STEEL STRAIN POLE
24	EACH	20094ES835	TEMPORARY RELOCATION OF SIGNAL HEAD
10	EACH	20188NS835	INSTALL SIGNAL-3 SECTION LED
2	EACH	20266ES835	INSTALL SIGNAL-4 SECTION LED
1	EACH	20390NS835	INSTALL COORDINATING UNIT
22	CU YD	23157EN	TRAFFIC SIGNAL POLE BASE
60	LIN FT	24901EC	PVC CONDUIT - 2 INCH - SCHEDULE 80
1	EACH	24908EC	INSTALL SIGNAL CONTROLLER-TY ATC
4	EACH	26119EC	INSTALL RADAR PRESENCE DETECTOR TYPE A
2	EACH	26120EC	INSTALL RADAR PRESENCE DETECTOR TYPE B

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND OTHER SPECIAL NOTES AND SPECIFICATIONS WILL APPLY ON THIS PROJECT. SEE SECTION 706, 723, AND 112 FOR MEASUREMENT AND OTHER DETAILS. SEE SECTION 602 FOR SPRIAL REINFORCEMENT SPLICING.

THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE PROJECT SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIARIZED WITH EXISTING CONDITIONS. SUBMISSIONS OF A BID WILL BE CONSIDERED AN AFFIRMATION OF THIS INSPECTION HAVING BEEN COMPLETED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PICKING UP MATERIALS FOR INSTALL ITEMS AT KYTC'S DIVISION OF EQUIPMENT WAREHOUSE (1239 WILKINSON BOULEVARD, FRANKFORT, KY 40622). THE FOLLOWING PROCEDURES SHALL BE FOLLOWED FOR MATERIAL RELEASE. FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN LONG DELAYS OR REFUSAL TO DISTRIBUTE MATERIALS UPON ARRIVAL.

1. CONTRACTOR SHALL SECURE THE SIGNATURES OF KYTC'S PROJECT ENGINEER AND THE ELECTRICAL CONTRACTOR'S FOREMAN ON THE PROJECT MATERIALS RELEASE FORM. IF THE RELEASE FORM IS NOT IN THE PROPOSAL, CONTACT TED SWANSEGAR OR KERRY ROBERTS WITH THE DIVISION OF TRAFFIC OPERATIONS BY PHONE (5502-782-5540/502-782-5536) OR EMAIL (TED.SWANSEGAR@KY.GOV/KERRY.ROBERTS@KY.GOV).
2. CONTRACTOR SHALL CONTACT THE WAREHOUSE TO PREARRANGE PICK UP OF MATERIALS. CONTRACTOR SHALL EMAIL THE PROJECT MATERIALS RELEASE FORM WITH REQUIRED SIGNATURES TO THE WAREHOUSE AT KIM.STAMPER@KY.GOV AND SHALL NOTIFY THE WAREHOUSE BY PHONE (502-782-8994/502-330-8153) OR EMAIL KIM.STAMPER@KY.GOV AT LEAST TWO (2) WORKING DAYS PRIOR TO ARRIVAL.
3. CONRACTOR SHALL ALSO CONTACT THE SIGNAL SYSTEM BRANCH OF THE DIVISION OF TRAFFIC OPERATIONS BY PHONE (502-782-5543/502-782-5547) OR EMAIL (JOE.THOMPSON@KY.GOV/LARRY.IRISH@KY.GOV) AT LEAST TWO (2) WORKING DAYS PRIOR TO ARRIVAL TO FACILITATE PROGRAMMING OF ROUTERS.
4. CONTRACTOR SHALL ARRIVE AT THE KYTC'S DIVISION OF EQUIPMENT WAREHOUSE (1239 WILKINSON BOULEVARD, FRANKFORT, KY 40622) AT THE PREARRANGED DATE/TIME FOR MATERIAL PICK UP. TO FACILITATE THIS PROCESS, ENSURE CONTRACTOR'S DELIVERY DRIVER HAS A COPY OF THE PROJECT MATERIALS RELEASE FORM WITH THE REQUIRED SIGNATURES.

INSTALL RADAR PRESENCE DETECTION TYPE A

INSTALL RADAR PRESENCE DECTECTOR TYPE A SHALL CONSIST OF INSTALLATION OF A POLE MOUINTED RADAR PRESENCE SENSOR, SENSOR MOUNTING BRACKET, SENSOR CABLES, INTERFACE BOXES, LEAD-IN CABLE, CONNECTORS (FURNISHED BY THE CONTRACTOR), AND CONTROLLER INTERFACE ASSEMBLY. RADAR PRESENCE DETECTOR TYPE A BID ITEM SHALL INCLUDE ALL LABOR REQUIRED TO PROVIDE A FUNCTIONAL DETECTION SYSTEM. RADAR PRESENCE DETECTOR TYPE A SHALL BE INSTALLED AND WIRED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. AFTER THE DETECTOR IS INSTALLED AND BEFORE THE DETECTOR IS POWERED ON, THE CONTRACTOR SHALL COORDINATE WITH THE DISTRICT TRAFFIC DIVISION'S REPRESENTIVE TO SCHEDULE A TIME TO PERFORM THE DETECTOR SETUP. THE CONTRACTOR SHALL DOUBLE CHECK TO VERIFY THAT ALL WIRING IS CORRECTLY INSTALLED AND CONNECTED BEFORE SCHEDULING THE SETUP WORK. REPRESENTATIVES FROM KYTC AND/OR THE MANUFACTURER OR SALES REPRESENTATIVE WILL ASSIST WITH THE SETUP AND CALIBRATION. THE CONTRACTOR SHALL PROVIDE A BUCKET TRUCK AND OPERATORS AT THIS TIME FOR FINAL AIMING OF THE SENSORS. THE CONTRACTOR SHALL PROVIDE INDIVIDUALS CAPABLE OF OPERATING THE SETUP SOFTWARE AND LEARNING THE SETUP PROCESS SO THAT FUTURE INSTALLATIONS MAY BE COMPLETED WITHOUT ASSISTANCE FROM OTHERS

INSTALL RADAR PRESENCE DETECTION TYPE B

INSTALL RADAR PRESENCE DECTECTOR TYPE B SHALL CONSIST OF INSTALLATION OF A POLE MOUINTED RADAR PRESENCE SENSOR, SENSOR MOUNTING BRACKET, SENSOR CABLES, INTERFACE BOXES, LEAD-IN CABLE, CONNECTORS (FURNISHED BY THE CONTRACTOR), AND CONTROLLER INTERFACE ASSEMBLY. RADAR PRESENCE DETECTOR TYPE B BID ITEM SHALL INCLUDE ALL LABOR REQUIRED TO PROVIDE A FUNCTIONAL DETECTION SYSTEM. RADAR PRESENCE DETECTOR TYPE B SHALL BE INSTALLED AND WIRED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. AFTER THE DETECTOR IS INSTALLED AND BEFORE THE DETECTOR IS POWERED ON, THE CONTRACTOR SHALL COORDINATE WITH THE DISTRICT TRAFFIC DIVISION'S REPRESENTIVE TO SCHEDULE A TIME TO PERFORM THE DETECTOR SETUP. THE CONTRACTOR SHALL DOUBLE CHECK TO VERIFY THAT ALL WIRING IS CORRECTLY INSTALLED AND CONNECTED BEFORE SCHEDULING THE SETUP WORK. REPRESENTATIVES FROM KYTC AND/OR THE MANUFACTURER OR SALES REPRESENTATIVE WILL ASSIST WITH THE SETUP AND CALIBRATION. THE CONTRACTOR SHALL PROVIDE A BUCKET TRUCK AND OPERATORS AT THIS TIME FOR FINAL AIMING OF THE SENSORS. THE CONTRACTOR SHALL PROVIDE INDIVIDUALS CAPABLE OF OPERATING THE SETUP SOFTWARE AND LEARNING THE SETUP PROCESS SO THAT FUTURE INSTALLATIONS MAY BE COMPLETED WITHOUT ASSISTANCE FROM OTHERS

4-13-2020

CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 723

SUBSECTION: 03.02 POLES AND BASES INSTALLATION. B)
REVISION: REPLACE ENTIRE TABLE WITH THE FOLLOWING:

MAXIMUM SERVICE FORCES		DRILLED SHAFT DATA							
MAX SERVICE MOMENT (FT-KIPS)	DIAMETER (IN.)	DEPTH (FEET)				VERTICAL BARS		TIES OR SPIRAL	
		< 2:1 GROUND SLOPE		2:1 GROUND SLOPE"				BAR SIZE	SPACING OR PITCH (IN.)
		SOIL	ROCK	SOIL	ROCK	SIZE	TOTAL		
0-9.9	36	6	6	6.5	6	13	#8	#4	12
10-19.9	36	7	6	8	6	13	#8	#4	12
20-29.9	36	8	6	9	6	13	#8	#4	12
30-39.9	36	9	6	10	6	13	#8	#4	12
40-49.9	36	9.5	6	10.5	6	13	#8	#4	12
50-59.9	36	10	6	11	6	13	#8	#4	12
60-69.9	36	11	6	12	6	13	#8	#4	12
70-99.9	36	12.5	6	13.5	6	13	#8	#4	12
100-149.9	36	14.5	6	16	6	13	#8	#4	12
150-199.9	36	15.5	6	17.5	6	13	#8	#4	12
200-249.9	36	17	6	19.5	6	13	#8	#4	12
250-299.9	36	18.5	6.5	21	6.5	13	#8	#4	12
300-399.9	36	21	7	25	7	18	#8	#4	6
400-499.9	42	21.5	7.5	25	7.5	18	#8	#4	12
500-600	48	22.5	7.5	25.5	7.5	19	#9	#4	12

SUBSECTION: 04.22 REMOVE SIGNAL (FLASHER) EQUIPMENT. (CONSTRUCTION ONLY)
REVISION: REPLACE THE PARAGRAPH WITH THE FOLLOWING:
THE DEPARTMENT WILL MEASURE THE QUANTITY BY EACH. THE DEPARTMENT WILL NOT MEASURE BACKFILLING AND THE DISPOSAL OR TRANSPORTATION OF EQUIPMENT AND MATERIALS ASSOCIATED WITH ANY STRUCTURAL OR ELECTRICAL COMPONENT OF THE SIGNAL SYSTEM INCLUDING, BUT NOT LIMITED TO POLE BASES, POLES, JUNCTION BOXES, CABINETS, AND WOOD POLES FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

ADD SENTENCE TO SECTION 835.15: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES : "PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

MEASUREMENT NOTES THAT ARE IN ADDITION TO SECTION 723

INSTALL SIGNAL CONTROLLER TYPE ATC. THE DEPARTMENT WILL MEASURE THE QUANTITY AS EACH INDIVIDUAL UNIT INSTALLED. THE DEPARTMENT WILL NOT MEASURE THE CONCRETE BASE, MOUNTING THE CABINET, CONNECTING THE SIGNAL AND DETECTORS, EXCAVATION, BACKFILLING, RESTORATION, ANY NECESSARY POLE MOUNTING HARDWARE, ELECTRIC SERVICE, ELECTRICAL INSPECTION FEES, AND REQUIRED BUILDING FEES INVOLVING UTILITY SECONDARY/PRIMARY SERVICE FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL ALSO NOT MEASURE CONNECTING THE INDUCTION LOOP AMPLIFIERS, PEDESTRIAN ISOLATORS, LOAD SWITCHES, MODEL 400 MODEM CARD FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL ALSO NOT MEASURE FURNISHING AND INSTALLING ELECTRICAL SERVICE CONDUCTORS, CONDUITS, ANCHORS, METER BASE, FUSED CUTOUT, FUSES, GROUND RODS, GROUND LUGS, AND GROUND WIRES FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

DESIGNED BY: Grant DeRossett
DATE SUBMITTED: 6/8/2020

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

FLOYD

PROJECT NUMBERS: FD04 SPP 036 0680 NEW LOC

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES MEASUREMENT, CONST, AND MISC NOTES

COUNTY OF	ITEM NO.	SHEET NO.
FLOYD	12-301.20	T01

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES

TOTAL	UNITS	CODE	ITEM DESCRIPTION
20	LIN FT	4820	TRENCHING AND BACKFILLING
1,870	LIN FT	4844	CABLE-NO. 14/5C
500	LIN FT	4886	MESSENGER-15400 LB
1	EACH	24955ed	REMOVE SIGNAL EQUIPMENT
4	EACH	4932	INSTALL STEEL STRAIN POLE
24	EACH	20094ES835	TEMPORARY RELOCATION OF SIGNAL HEAD
10	EACH	20188NS835	INSTALL SIGNAL-3 SECTION LED
2	EACH	20266ES835	INSTALL SIGNAL-4 SECTION LED
1	EACH	20390NS835	INSTALL COORDINATING UNIT
22	CU YD	23157EN	TRAFFIC SIGNAL POLE BASE
60	LIN FT	24901EC	PVC CONDUIT - 2 INCH - SCHEDULE 80
1	EACH	24908EC	INSTALL SIGNAL CONTROLLER-TY ATC
4	EACH	26119EC	INSTALL RADAR PRESENCE DETECTOR TYPE A
2	EACH	26120EC	INSTALL RADAR PRESENCE DETECTOR TYPE B

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND OTHER SPECIAL NOTES AND SPECIFICATIONS WILL APPLY ON THIS PROJECT. SEE SECTION 706, 723, AND 112 FOR MEASUREMENT AND OTHER DETAILS. SEE SECTION 602 FOR SPRIAL REINFORCEMENT SPLICING.

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INSTALL RADAR PRESENCE DETECTION TYPE A

INSTALL RADAR PRESENCE DECTECTOR TYPE A SHALL CONSIST OF INSTALLATION OF A POLE MOUINTED RADAR PRESENCE SENSOR, SENSOR MOUNTING BRACKET, SENSOR CABLES, INTERFACE BOXES, LEAD-IN CABLE, CONNECTORS (FURNISHED BY THE CONTRACTOR), AND CONTROLLER INTERFACE ASSEMBLY. RADAR PRESENCE DETECTOR TYPE A BID ITEM SHALL INCLUDE ALL LABOR REQUIRED TO PROVIDE A FUNCTIONAL DETECTION SYSTEM. RADAR PRESENCE DETECTOR TYPE A SHALL BE INSTALLED AND WIRED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. AFTER THE DETECTOR IS INSTALLED AND BEFORE THE DETECTOR IS POWERED ON, THE CONTRACTOR SHALL COORDINATE WITH THE DISTRICT TRAFFIC DIVISION'S REPRESENTIVE TO SCHEDULE A TIME TO PERFORM THE DETECTOR SETUP. THE CONTRACTOR SHALL DOUBLE CHECK TO VERIFY THAT ALL WIRING IS CORRECTLY INSTALLED AND CONNECTED BEFORE SCHEDULING THE SETUP WORK. REPRESENTATIVES FROM KYTC AND/OR THE MANUFACTURER OR SALES REPRESENTATIVE WILL ASSIST WITH THE SETUP AND CALIBRATION. THE CONTRACTOR SHALL PROVIDE A BUCKET TRUCK AND OPERATORS AT THIS TIME FOR FINAL AIMING OF THE SENSORS. THE CONTRACTOR SHALL PROVIDE INDIVIDUALS CAPABLE OF OPERATING THE SETUP SOFTWARE AND LEARNING THE SETUP PROCESS SO THAT FUTURE INSTALLATIONS MAY BE COMPLETED WITHOUT ASSISTANCE FROM OTHERS

INSTALL RADAR PRESENCE DETECTION TYPE B

INSTALL RADAR PRESENCE DECTECTOR TYPE B SHALL CONSIST OF INSTALLATION OF A POLE MOUINTED RADAR PRESENCE SENSOR, SENSOR MOUNTING BRACKET, SENSOR CABLES, INTERFACE BOXES, LEAD-IN CABLE, CONNECTORS (FURNISHED BY THE CONTRACTOR), AND CONTROLLER INTERFACE ASSEMBLY. RADAR PRESENCE DETECTOR TYPE B BID ITEM SHALL INCLUDE ALL LABOR REQUIRED TO PROVIDE A FUNCTIONAL DETECTION SYSTEM. RADAR PRESENCE DETECTOR TYPE B SHALL BE INSTALLED AND WIRED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. AFTER THE DETECTOR IS INSTALLED AND BEFORE THE DETECTOR IS POWERED ON, THE CONTRACTOR SHALL COORDINATE WITH THE DISTRICT TRAFFIC DIVISION'S REPRESENTIVE TO SCHEDULE A TIME TO PERFORM THE DETECTOR SETUP. THE CONTRACTOR SHALL DOUBLE CHECK TO VERIFY THAT ALL WIRING IS CORRECTLY INSTALLED AND CONNECTED BEFORE SCHEDULING THE SETUP WORK. REPRESENTATIVES FROM KYTC AND/OR THE MANUFACTURER OR SALES REPRESENTATIVE WILL ASSIST WITH THE SETUP AND CALIBRATION. THE CONTRACTOR SHALL PROVIDE A BUCKET TRUCK AND OPERATORS AT THIS TIME FOR FINAL AIMING OF THE SENSORS. THE CONTRACTOR SHALL PROVIDE INDIVIDUALS CAPABLE OF OPERATING THE SETUP SOFTWARE AND LEARNING THE SETUP PROCESS SO THAT FUTURE INSTALLATIONS MAY BE COMPLETED WITHOUT ASSISTANCE FROM OTHERS

4-13-2020

CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 723

SUBSECTION: 03.02 POLES AND BASES INSTALLATION. B)
REVISION: REPLACE ENTIRE TABLE WITH THE FOLLOWING:

MAXIMUM SERVICE FORCES		DRILLED SHAFT DATA							
MAX SERVICE MOMENT (FT-KIPS)	DIAMETER (IN.)	DEPTH (FEET) < 2:1 GROUND SLOPE SOIL	DEPTH (FEET) < 2:1 GROUND SLOPE ROCK	DEPTH (FEET) 2:1 GROUND SLOPE" SOIL	DEPTH (FEET) 2:1 GROUND SLOPE" ROCK	VERTICAL BARS SIZE	VERTICAL BARS TOTAL	TIES OR SPIRAL BAR SIZE	TIES OR SPIRAL SPACING OR PITCH (IN.)
0-9.9	36	6	6	6.5	6	13	#8	#4	12
10-19.9	36	7	6	8	6	13	#8	#4	12
20-29.9	36	8	6	9	6	13	#8	#4	12
30-39.9	36	9	6	10	6	13	#8	#4	12
40-49.9	36	9.5	6	10.5	6	13	#8	#4	12
50-59.9	36	10	6	11	6	13	#8	#4	12
60-69.9	36	11	6	12	6	13	#8	#4	12
70-99.9	36	12.5	6	13.5	6	13	#8	#4	12
100-149.9	36	14.5	6	16	6	13	#8	#4	12
150-199.9	36	15.5	6	17.5	6	13	#8	#4	12
200-249.9	36	17	6	19.5	6	13	#8	#4	12
250-299.9	36	18.5	6.5	21	6.5	13	#8	#4	12
300-399.9	36	21	7	25	7	18	#8	#4	6
400-499.9	42	21.5	7.5	25	7.5	18	#8	#4	12
500-600	48	22.5	7.5	25.5	7.5	19	#9	#4	12

SUBSECTION: 04.22 REMOVE SIGNAL (FLASHER) EQUIPMENT. (CONSTRUCTION ONLY)
REVISION: REPLACE THE PARAGRAPH WITH THE FOLLOWING:
THE DEPARTMENT WILL MEASURE THE QUANTITY BY EACH. THE DEPARTMENT WILL NOT MEASURE BACKFILLING AND THE DISPOSAL OR TRANSPORTATION OF EQUIPMENT AND MATERIALS ASSOCIATED WITH ANY STRUCTURAL OR ELECTRICAL COMPONENT OF THE SIGNAL SYSTEM INCLUDING, BUT NOT LIMITED TO POLE BASES, POLES, JUNCTION BOXES, CABINETS, AND WOOD POLES FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

ADD SENTENCE TO SECTION 835.15: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES : "PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

MEASUREMENT NOTES THAT ARE IN ADDITION TO SECTION 723

INSTALL SIGNAL CONTROLLER TYPE ATC. THE DEPARTMENT WILL MEASURE THE QUANTITY AS EACH INDIVIDUAL UNIT INSTALLED. THE DEPARTMENT WILL NOT MEASURE THE CONCRETE BASE, MOUNTING THE CABINET, CONNECTING THE SIGNAL AND DETECTORS, EXCAVATION, BACKFILLING, RESTORATION, ANY NECESSARY POLE MOUNTING HARDWARE, ELECTRIC SERVICE, ELECTRICAL INSPECTION FEES, AND REQUIRED BUILDING FEES INVOLVING UTILITY SECONDARY/PRIMARY SERVICE FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL ALSO NOT MEASURE CONNECTING THE INDUCTION LOOP AMPLIFIERS, PEDESTRIAN ISOLATORS, LOAD SWITCHES, MODEL 400 MODEM CARD FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK. THE DEPARTMENT WILL ALSO NOT MEASURE FURNISHING AND INSTALLING ELECTRICAL SERVICE CONDUCTORS, CONDUITS, ANCHORS, METER BASE, FUSED CUTOUT, FUSES, GROUND RODS, GROUND LUGS, AND GROUND WIRES FOR PAYMENT AND WILL CONSIDER THEM INCIDENTAL TO THIS ITEM OF WORK.

DESIGNED BY: Grant DeRossett
DATE SUBMITTED: 6/8/2020

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

FLOYD

PROJECT NUMBERS: FD04 SPP 036 0680 NEW LOC

TRAFFIC SIGNAL ESTIMATE OF QUANTITIES MEASUREMENT, CONST, AND MISC NOTES